# IT Documentation

Lost of Time or strategic value?



System Thinking in IT - Part 1. The Journey

Model Driven Book

## 7D - Seven Disciplines for Successful Solutions



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x- Right Information

y- in Right Time

z- for Right Role







# 'Dokumentation'1 in IT

Lost of Time Or

# STRATEGIC VALUE?

System Thinking in IT Part one

Journey to goal:

7D-7 Disciplines for successful solution

How can a manager decide without credible information? How can we achieve our goals? How to deal with a great number of details, risks, intrigues on the journey to reaching the goal? How to learn from mistakes from past projects? How to face constant change in the team? How to build metadata-based knowledge systems?

<sup>&</sup>lt;sup>1</sup> The word Documentation can be changed for communication, understanding, trust, information, knowledge, experience ...

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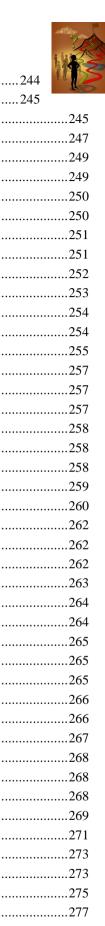
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In memory of Ferdinand Kazička (1932-2016)

# Whom is this publication intended for?

PACKAGE NAME-PCG\_00048\_EN-03.DEDICATION PAGE, STEREOTYPE-"

The book is intended for top management of companies, middle management, IT architects, technicians, testers, project managers, developers, expert texts authors, individuals, small teams, large teams, large companies, but also start-ups and educational institutions.

The book is intended for the *Enterprise Architect* system manufacturer, the SparxSystems. It includes many suggestions on how to use their application in practice and how to encourage wider use of the tool.

The book is intended for young people. Young not with their age, but with their approach to solutions. The more we are mentally older, the more we come with prejudices, the more habits we have, the harder we change our habits.

The book was inspired, designed and prepared in a modeler. It is actually the notebook of the creator on his way to solving it. The solution described in this book is the creation of a 7D methodology publication with a practical example. It is supposed to serve as an inspiration to the reader as a source of instruction.

This book and this particular version, is just a photo of the moment. Information included within corresponds to the state of knowledge at the time of publication. At the moment of publishing, this book is already out of date. It contains thousands of concepts, each of which has its life cycle. It is not possible to take a picture of the river and think that it is already described and "documented".

"Documentation" is considered to be the least interesting and almost the most inferior activity in IT solutions. As part of the new way of work, the information creation - modelling – is considered a highly creative work. Routine activities can be automated and the solver concentrates on the creative process itself and not on the "tedious" writing of inaccurate documentation that he or she knows that nobody reads, or that it will never be up to date, and prepares it just because someone has ordered it.

There is however another view:

Do you need to meet the terms of European Union Regulation 5419/1/16 also called *GDPR*? And you do not know what it is? There is a threat of a fine in the amount of 20 mil. € or 4% of your worldwide turnover. Your business is not affected? The opposite is true. Every legal entity in the EU will have to adapt its processes and information systems to comply with this directive. The directive was adopted on 27 April 2016 and will become effective on 25 May 2018. In addition to many, difficult-to-achieve points, it will also require changes in information system architectures and workflows when working with personal data. This will not be possible without a good analysis of the current state. Where and how are your data stored? How are these data transferred between different systems within one business location, but also across the entire business with all affiliates. Even with quality documentation, this will not be easy. But changing the way of working under the threat of a liquidation fine is not the best motivation for change. Even though it is probably the most effective. The industry has already introduced processes that try to minimize the costs of poor quality. There is a "PLM" - 'Product Lifecycle Management' approach and "BIM" - Building Information Modelling approach. In the field of information technology this has not become the rule. With great pleasure, I can say that even in the production of embedded systems, projects are emerging that can help solve these problems. For example, LieberLieber company and its partners are leading the EUROSTARS project, which aims to reduce the cost of critical systems maintenance by 50%. From my experience, the costs of poor IT and the unnecessary waste of time in restoring business critical systems after a downtime are huge. These result from misunderstandings in the definition of the content of the solutions provided. Both financial and non-financial losses are certainly greater than preventive



investments in processes, people, and technology that provide management and other technical roles with reliable information about the delivered and managed solutions.

This and the following publications offer methodologies and their implementation that can help solvers, large teams and individuals build a **trustworthy knowledge data base** that they can rely on in a wide range of applications. Such a knowledge database will also include its own mistakes and experience. It is the most valuable thing we can acquire in our professional and managerial practice.

## **Prologue**

PACKAGE NAME-PCG\_00050\_EN-05.PROLOGUE PAGE, STEREOTYPE- "

"The Right information in the Right time for the Right role." -3R

Of such a situation dream of every manager, every technician, every "amateur" enthusiast who self-builds a small island of **IoT** (Internet Of Things).

"Without communication there is no understanding, with no understanding there is no trust, with no trust there is no..."

You can enter your topic after the ellipsis. This will apply for almost all areas of human relations. An ideal state that almost everyone dreams about. The complexity of the current world, the tsunami of information, the immense dynamics of change, different threats and measures against them, modern technologies, new social phenomena, new entrepreneurial opportunities, are pushing us to find new ways of work and especially new ways and forms of cooperation. An integral part of management and co-operation at every level is communication, decision-making based on the information gathered, often without the additional possibility of verifying the quality of the resources of this information. How can one decide about a strategy, an operation where the manager does not have information to make a responsible decision and how to avoid any unnecessary risks? The manager is suddenly put into a position of a seer with a crystal ball. This is proven wrong not only by himself, but often by the whole firm. It's only a matter of time, but then the damage is so great that no one will let you say it was a wrong decision. With doing nothing there can do no harm. Making mistakes is not a sin. But going through the same mistakes repeatedly, that's stupid.

In many cases even the technicians cannot provide the management or for themselves, important information about the current state of the systems they keep operational. Often there is a culture of blaming in companies where the mistakes are punished, blamed person are trying to provide excuses and the problems are not addressed. Often the same problems are repeated. In the companies there are "irreplaceable" managers, "irreplaceable" experts and without them simply nothing is possible. Why is it that we often hear a sentence like: "I will finish the documentation when the work is done?" or, "Now we cannot waste time with documentation, we have fixed deadlines." Are we lazy? Incompetent? Are we worried for our positions? Is this the time we live in? All must be agile and quick? "Time to market". Is that crucial? Or, do we really have too much work for too few resources?

But this does not have to be contradictory. There may be a way to create space for the creation and sharing of knowledge during the process of solution and day-to-day activities. By creating current sources of information, each role in a company can gain access to usable information to support its decisions and activities. Managers, technicians, operators, assistants, we're all overwhelmed by information. Information from all sides. The complexity of systems and the amount of information about systems grows exponentially, no matter what social, scientific, professional, cultural scope it is. It is no longer possible to work more, with more verve and higher engagement. You need to think about how to do things differently. We need to change our habits that we have cultivated for many years. This is the most difficult process, the most difficult internal projects. These changes affect most of the roles and their working habits.

This publication is supposed to point out new possibilities for creating and updating information sources, which in the past were referred to as technical documentation and the process of creating technical documentation. Documentation, as understood before (in the form of various pdf, docx and similar formats), can no longer serve as a primary source of information. Documentation in this classical form will still be of great importance, but it will be created for a particular purpose at a particular time. At the moment of printing (whether in paper form or its electronic form) the documentation is no longer up to date.

Today, the primary information carries is the living data, concentrated in several databases. Each piece described in the classic documentation has its own life cycle, independent of the other concepts in the document. Keeping the current document in a classic way, with manual updating of documents is impossible. Everything is interconnected with everything else. Each term in the documentation has many relationships to many other elements. This cannot be even expressed in classic documentation. The industry has introduced holistic approaches in the form of systems called **product lifecycle management (PLM)**. There are several products for modelling 2D, 3D, xD reality in the field of engineering. In the building industry the is a concept of **Building Information Management (BIM)** emerging. It represents a holistic approach to building solutions where itis pre-modelled, what and where things will be placed, what state of construction will the building be at a given time, how much material and its composition, and so on.



And what about the information systems? Without information systems, our society is no longer able to function. The era of artificial intelligence is coming, cooperation of humans and intelligent technical systems, the so-called "artificial intelligence". There are no only technical issues at stake. What type of product is characteristic for IT today? Text Processor? Command line? MS Visio? Everything is interconnected with everything. IT is a nerve network of everything around us. Energy, transport, health, economy, logistics, education, entertainment. Everything is in some way dependent on IT. How does IT react to this development?

There are holistic approaches, the so-called architectural frameworks. The architectural framework provides policies and procedures for creating and using the system architecture description. (ZACHMANN, *TOGAF*,, DoDAF, and similar). There are efforts to standardize system descriptions at different levels - ARCHIMATE, SysUML, UML, and many other approaches to standardizing communication tools among professionals. For example, the graphical languages like "UML", "Archimate", "BPMN" and "SysML". Today, there are a number of technologies that support these standards, best practices and practices and "frameworks". They are not yet used to the extent necessary This publication builds on several years of experience in the following areas and roles:

- small and large companies in the field of automobile production, application development for quality assurance of final products on the production line of components for the automotive industry,
- implementation and operation of IT based on ITIL processes in a large manufacturing company
- acting in different technical managerial positions
- architect of solutions for computer-aided measurement and automation (CBMA)
- design of test procedures in the field of IT systems for the automotive industry
- senior IT Architect for the support of the implementation of enterprise architectural principles and processes (TOGAF) The publication describes the original methodologies and their implementation. The publication itself is one example of the implementation of the 7D methodology. The methodologies are aimed at supporting the creation of information sources for key players in two main areas:
- the process of creating a solution (7D method- Seven discipline for successful solutions)
- description of the current state and new state of the solution (APV Methodology –Assets Perspectives-Views) This methodology is described in a separate publication (IT Documentation?–Waste of time or Strategic Value, Part 2 Targets and Milestones). The book is currently being prepared.

Interestingly, the publication on the 7D methodology itself was developed based on this methodology. The reult is this publication.

# Typographical rules

 ${\it Package Name-PCG\_00052\_EN-06.} Typographics \ {\it rules}, \ {\it Stereotype-"}$ 

Very often it is difficult to distinguish in professional texts which words belong to a specific professional domains and should be understood in a different context. Therefore, words from application domains will be distinguished in this publication both typographically and in color.

- The term "7Ds-Terms- SK" should be understood in the context of the 7Ds methodology the Slovak version, the concept introduced by the 7D methodology and the specific meaning in the context of the given methodology
- The term "7Ds-Terms-EN" should be understood in the context of the 7Ds methodology the English version, the concept introduced in the context of 7D methodology, expressed in English
- This is the term "*Enterprise Architect*" Concept used in the context of the "Enterprise architect"
- The term "*EU-Terms-SK*", should be understood in the context of EU, SK, Term used by Regulators, Legislation, Standards, "Best Practice"
- This is the "**English term**" English term,

The terms used in technical practice and translation into Slovak would be unnatural.

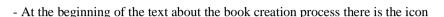
- This is a term ,, APV-Term-EN" the APV methodology English version, a concept introduced or used in the context of the APV methodology
- Automatic numbering of selected elements
- Referencing specific texts simplifies a unique identifier at the beginning of the term. For example, "PCG\_XXXX\_" is a prefix which is at the beginning of each "Package". When communicating, it's easier to say "please see the



contents of the XXXX package" than to quote the whole text. In this book, you can see this numbering under the main title of every chapter and under the names of the elements described. We assume that this reference method is a reasonable compromise. An uninvolved person may be surprised, but should not be disturbed by it, and this allows the person concerned to accurately address the content in the communication, either in writing or during an interview.

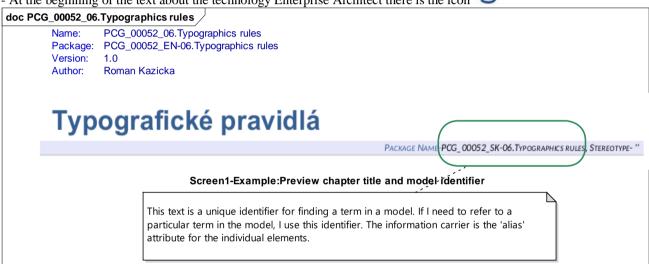
In order to make it easier for the reader to navigate the publications and to distinguish individual areas, we have introduced the following rules and visual aids:

- - on the pages of chapters belonging to individual themes there are icons with text. These icons are also used in the *EA* plug-in, the so-called *MDG*..
- At the beginning of the text related to the 7D methodology is the icon **3**





- At the beginning of the text about the technology Enterprise Architect there is the icon



Obr. 1:PCG\_00052\_06.Typographics rules

### How To read this book?

PACKAGE NAME-PCG\_00441\_HOW TO READ THIS BOOK?, STEREOTYPE-"

This publication is to be understood as a project notebook that was created as a by-product during the preparation of a specific solution. In this case, the solution was a book on the "7D-Seven Disciplines for Successful Solutions" methodology. It is not about fiction but about systematically recording of procedures, plans, analyses, designing solutions, implementation, testing, evaluation and recording of experiences. It is a demonstration of one example, with all the positive but mainly negative experiences. For me, and I firmly believe it also applies to others, such practical demonstrations have a great significance. We can learn the most when we are not succeeding and when things do not work the way they should. As we would expect them to. One learns best from own mistakes. Maybe that is why there is little published about these mistakes and failures. We like to talk and describe how we were successful. But the most valuable thing for others is the knowledge that this success was preceded by a lot of mistakes and failures. The most successful people tend to be the most enduring and not the smartest. Those who took partial failures as the next step on their way to the ultimate goal. The book can be read sequentially or according to what the reader is most interested in. Practice is important. To check whether or not everything makes sense for you, it is very important to try it out. Ideally, in an alternative as use by me. UML modeller with shared database storage. But I can imagine that the methodology is implemented above the file system, in an editorial system, in an existing system for project management support. In this case, however, there are no synergies between methodologies that complement each other. In our case this is the methodology of 7D and APV. This publication is an unfinished process. You have a version in your hands that is definitely out of date at the moment of reading. I am aware of the fact that it still has many shortcomings, which I gradually reveal and the result is better with each edition. I'm lucky it's an electronic book. Any new edition is relatively simple. This book is like a chronicle. It captures moments that the author considers important for some reason. In order for the reader to better understand what this book is about, it must be understood in several levels:

- it describes the methodology of 7D- Seven disciplines for successful solutions



- using the methodology, the book was created as a separate solution to present the usability of the methodology
- this is a chronicle, capturing real events as they were occurring
- the book is an figure of a model, so we call it a "Model-controlled book", that is, first is the model and second comes the document

# **Chapters Overview**

PACKAGE NAME-PCG\_00013\_EN-CHAPTERS OVERVIEW, STEREOTYPE-"

#### Introduction

What is more important? The Journey or The Goal? The goal is static, but the Journey is dynamic and twisted. Reaching the goal euphoria ends quite quickly after reaching your goal. However, we are on way our whole lifetimes. Does it not make more sense to devote more time appropriately to the Journey itself than to the goal? Whoever organizes a trip to climb Everest can arrange an expedition to Everest over time or any other trip. Anyone who can achieve a small goal, acquires habits and skills to achieve other bigger goals. These philosophical considerations are transposed into two specific methodologies. The first describes the Journey, the second describes the state. The first one is called "7D - seven disciplines for successful solutions" and the other "APV - Assets - Perspectives – Views". Further methodologies and their implementation into *EA* are being developed. For example, a methodology called "Q12 - 12 quadrants for successful start-up". It uses both of the above-mentioned methodologies (7D and APV) to support the company's launch from marketing strategy, the way for product or service development, sales strategy and maintenance of customers with quality service and their definition at business, system and technology levels. These methodologies have been developed on the basis of years of experience from large companies as well as from individual projects. Both methodologies support each other and are implemented in Sparxsystems *Enterprise Architect*. Methodologies are not technology-dependent but have been developed and are very well implemented in it.

This publication also shows that it is not a pure theory. It is written according to the 7D methodology in the Enterprise Architect environment. "Seven D" means the Seven Disciplines. Therefore, the titles of the chapters are the names of the main disciplines described in the methodology. An interesting recursion has thus occurred. Using the methodology, a book on the methodology itself was developed using technology that was primarily developed for software developers to support application development. Everything changes and this tool can also be used to create content for different publications. For example, semestral work, annual projects, acceptance protocols, lists of service objects, just about anything that contains storage. A document can be generated automatically with a push of a button, in addition to being a by-product of everyday work. If daily activities are performed under certain rules. This book will also focus on the extent to which a full-fledged publication can be created.

#### • Structure of chapters

The content of the book follows several intentions and the content has to be understood in the following context:

- the book is the chronicle of one solving project a practical book on the "7D-Seven discipline for successful solutions"
- the book contains concrete steps for how the methodology was used to write the book itself

In addition to that, the book also contains:

- failures and experience from the Journey to the goal. It is likely that in the current release, the errors will not be there, they will only be included for future lessons
- the book is an introduction to a broad theme that can be harnessed by systemic thinking. It implies the perception of solutions in their entire lifecycle
- the book is created using UML modeler and automatically generated in pdf format we call it "Model-driven book"
- the book is only secondary carrier of information. It's like a photo at a given time. It captures the state of the model at a given moment. The primary source of information is the model. Every element in the model has its own life cycle, independent of its surroundings
- the book is outdated at the time of its release, so its content will be regularly updated
- current status information and current copy owner, the owner of the copy will be able to download the current version for a period of 12 months

#### • · Chapter: D2 –Second discipline- Motivation



Paradoxically, we start with the second discipline. But it is the most important for the whole solution. Without a motivation, every Journey will be very difficult to achieve and the goal will be unreachable. Motivation speaks of the inner need to realize what we have set our mind onto. It provides energy when we fail. It is the reason that we are



making a difficult journey. If individual motivations can be harmonized and we can find a common motivation for the whole team, then there is a chance that the Journey and the outcome will be successful. Without communication there is no understanding, with no understanding there is no trust and with no trust there cannot be solution. Knowing the motivation of key players in our solutions is the foundation for success. If we do not recognize or ignore the motivation of our partners, customers, co-workers, employees, the outcome of our solution is jeopardized.



This part of chapter D2 deals with the specific situation in the book development. What motivated the author to write this publication.

#### • Chapter: D1 -First discipline - Management



One would expect the first discipline to be in first place. It is the first in terms of organizing the whole solution, considering of goals, available resources, risks, defining rules and principles, resource planning, task allocation, effort tracking, cost tracking, decision making, quality tracking, content creation, and single source of solution truth. The management turns the goal driven by motivation into real, measurable, scheduled and verifiable steps. Motivation without management is just dreaming with open eyes.

Note: Initially, there was a version of the "6 Disciplines" methodology. Management was missing. But I quickly realized that I needed to manage my job explicitly. And so the relatively large D1 discipline arose.



To implement the intention to write a series of practical guides on system thinking, I focused on presenting the key elements in the 7D methodology management discipline. Given that the implementation team includes only a few people who do not work directly in the model, I could not fully show the work of a wider team.

#### Chapter: D3 –Third discipline - Analyses



Rarely, the solution is clear at first sight or with the first idea. Although many enthusiasts will begin to type the code immediately, it is reasonable to first think about the whole context of the solution. Who is it intended for? Whose expectations are to be fulfilled? Is it a "just" a hobby? Just a nice passing of time, or is there a potential for a new product or service? It is worthwhile to look at the initial thoughts and see how someone has solved it. All the information needed to solve our problem belongs to this discipline. Let it be file system storage, one branch in Xmind (an idea modelling application, or some text editor. It is good to keep each information that comes across us with some of our remarks to give us a chance to use it in the future for ourselves and others in our team.



In order to write a book, you need to master a couple of skills and consider a variety of questions. In addition to substance issues, the issue of content-making tools, marketing strategy, copyrights - of both parties and stakeholders, dissemination of the book and book sales should be considered. In this section, a basic analysis of the IT documentation process is made, as well as the creation of document management systems from a lifecycle point of view.

#### • Chapter: D4 –Fourth discipline - Solution design



Full of inspiration and creative enthusiasm our ideas are stored in this part. There is rarely only one solution. More often there are several variants. Especially when there is no clear motivation of key players and the developer is inventing the perfect solutions for a non-existent customer. Only to satisfy own ego. In the management chapter there is a section called "Decisions". This is the place to consider the overall context of the solution. Based on background material from previous disciplines, key players will decide how to proceed. It's good to keep track of when, who and why decided just the way they decided.





The chapter contains a story based on a simple example of Journey and Goal. Following is the proposal of 7D methodology, its logical structure, which leads to the proposal of the structure of the main chapters of the book. This section also includes a description of the technical solutions for the book creation infrastructure. This part also briefly describes the APV methodology and its relation to the 7D methodology.

#### • Chapter: D5 –Fifth discipline - Implementation



This chapter includes all implementation steps and implementation mapping. The methodology does not define how to implement something. It's the responsibility of solvers. For example, the APV methodology is devoted to a way of describing the current asset status from different perspectives and generating detailed views of assets across defined perspectives. Implementation is again at EA. Other solutions will require a specific implementation method.



This section describes the book's development environment, the directory structure, the "package" structure in "Project browsers" and examples of possible access to the content of the model via a static html, "CMS" Joomal! and via "WebEA". There are also demonstrations of the navigation charts of EA property extension using the so-called "MDG" to automate the routine steps in the 7D methodology.

#### • Chapter: D6 – Sixth discipline - Verification of the correctness of the solution



How do we know that we have achieved success or just a lesson? If we have performed a sufficiently deep analysis of key players and their motivations that have turned into objective measurable goals, this will not be a problem. Even at this point, it will be possible to work in parallel with the discipline D3, D4, and D5. I know only a few projects where testers had usable documents at the same time along with developers.



This part includes some experience with generating of the book.

#### • Chapter: D7 – Lessons learned



The most valuable chapter of our journey. What was done well, what was done less well, what should we avoid in future. According to the methodology "7D - Seven disciplines for successful solutions", there is no unsuccessful solution. Assuming we can learn from not achieving the goal. This is the purpose of this discipline. Self-reflection, analysis of success but especially failure. In order to avoid the same mistakes and deficiencies.



A large part of this chapter is devoted to the experience with use of EA as a tool for generating technical documentation. There are also some lessons of the methodology and book preparation.

#### • Chapter: Glossary

An extremely important chapter. Very often, it is difficult to separate terms specific to the application area from the common language. This glossary defines concepts that are part of the methodologies themselves. Using technical concepts from English to another language, but also in the English language, it is necessary to distinguish the concept from the application domain and the concept of spoken English. This greatly enhances the clarity of the text.

#### • Chapter: Information sources



Everything is interconnected to everything. In this chapter, there are some sources that have been an inspiration and source of information for the author, and which can also be useful for the reader.

### Introduction

PACKAGE NAME-PCG\_00002\_EN-INTRODUCTION, STEREOTYPE-"

"Roman, I will provide the documentation when the work is done". "Documentation is a side-product of my everyday work"

Who is right? And what is that thing - documentation? Printed heaps of paper? Electronic formats like Pdf, Docx, ppt, vsd, xls or rtf? Something I look at only occasionally and put it down with disappointment – "not up-to-datet. How is it even possible to maintain the documentation up-to date and meaningful? How to meet the needs of a large number of positions? Each position sees the reality through the perspective of its corporate responsibility.

There are some many more questions. Depending on who asks. Different roles in companies have different needs and expectations. But some basic characteristics that the correct "documentation" should have, can be recognized. Without any extensive theories, we can characterize good documentation using the following principles:

"The right information for the right role at the right time"

"Without communication there is no understanding, with no understanding there is no trust, with no trust, all activities are much more complicated"

Less can be sometimes more. This also applies to sources of "truth" about the reality concerned. I emphasize the term Trust. Not only between relationships but also the trustworthiness of data sources. One without the other is not even possible.

Based on my personal experience, I came to the conclusion that a significant part of problems was related to shortcomings in meeting these principles. For the past 20 years, I have been working in manufacturing companies, consumer electronics, automotive components, IT infrastructure management at a car factory and in the banking sector. Despite the great differences in the area of major business of each company, we have always addressed the same questions. How can a manager at any management level decide and manage if he/she does not have the up-to-date information when he/she needs to make the decision? How can a technician make any actions with equipment and technology that he/she does not have documentation about or the documentation is not up to date. How can an IT architect propose new solutions if he/she does not have trustworthy information about the current state? Costs associated with shortcomings in this area are hardly quantifiable and are at many occasions deliberately silenced so as not to endanger the reputation of specific people. But everyone feels that decisions based on incomplete, incorrect information lead to great time and financial losses. For example in case of strategic investment planning, capacity planning, life cycle planning of system elements and introduction of new concepts. When managing and running IT solutions in manufacturing factories, every minute of production costs a lot of money. Lack of information about the operational system architecture prolongs the time to restore the service. These are the measurable costs of poor quality due to shortcomings in the documentation. Based on many years of experience, a number of methodologies have emerged and these are based on the basic principles defined above.

These methodologies take into account the best practices and recommendations in the field of Enterprise Architecture (OPEN GROUP - *TOGAF*) and IT Services Management (*ITIL*). New methodologies and their implementation are being developed in parallel and implementation experiences are immediately introduced into the methodology. The methodologies are independent of the implementation tool, but the first implementations were made in the Sparxsystems "*Enterprise Architect*" environment.

This publication addresses the 7D methodology. The second methodology - APV, will be detailed in a separate book.

- $1.\ 7D\ methodology\ \hbox{-}\ Discipline\ for\ successful\ solutions\ (not\ only\ in\ IT)\ \hbox{-}\ '7Ds\ \hbox{-}\ Seven\ Disciplines\ for\ Success\ Solutions'}$
- 2. Methodology "APV-Assets-Perspectives-Views",

The 7D methodology is inspired by the '8D - Eight Problem Solving Disciplines' methodology that was introduced at Henry Ford company, which he developed in its production factories to quickly and efficiently solve problems in the production process.

The 7D methodology is focused on the managed asset generation and delivery process. The APV methodology is focused on dynamic and continuous documentation of corporate assets. The APV methodology is inspired by the "TOGAF" methodology of the OPEN GROUP international association.



Both methodologies are independent and can be applied separately. If they are used at the same time, there is synergy, which can be expressed as a controlled process of creating trusted sources of truth about company assets. The level of knowledge about assets is increasing and the time for reaching a common understanding is reduced.

### 1 First discipline: D1 - Management

PACKAGE NAME-01.EN-D1-MANAGEMENT, STEREOTYPE- '«7DS-D1»'.

Good management is the key to a successful solution. It is not enough to have good motivation - it is "just" a fuel. Right direction, overcoming obstacles, minimizing risks, communicating and coordinating between partners, tracking progress in solving, monitoring consumed effort, time, money and other details. These are the pillars on which possible success is built. What is to be considered a success? What rules and principles will assist the solvers in decision-making and solving? There is room for all this in D1 discipline. Although we started with the D2 discipline-motivation-the impulse to get something started, but the name of D1 discipline already suggests that this is the first discipline we should address. It is a very important discipline, it is a preparatory phase and a guide through the whole solution. If there are more solvers, they can be broken down by discipline. If there is only one solver, he should attempt to switch from role to role, depending on which discipline he is currently working on. But that is not at all easy.

The process of creating a book has some specific features:

- number of key players on the side of the solver is relatively small, only several people
- the number of solution receivers readers, is initially only estimated
- result feedback is not immediate
- in case of a classic book any content changes are very hard, "once on the paper makes it right"
- in case of an e-book, the content can be changed much easier, but "what's on the Internet, it is there forever". However, the process of creating an IT solution and the process of creating a book have many common points that are captured in the 7D methodology. These points certainly include adequate management.

### 1.1 D1-01.Goals and expectations

PACKAGE NAME-01.EN-GOALS/EXPECTATION, STEREOTYPE-".

The 7D methodology is supposed to bring a certain system of work and the tool is to bring comfort and enable the implementation of the methodology. In order to define objective goals that meet the "SMART" criterion (see definition), we need to understand who is the key player in our future solution. Therefore, we should pop into Discipline 2 - Motivation where there is room for analysis of key players and their motivation. If the requirements and expectations are clearly defined in writing, one can judge whether they are inconsistent with motivation of key players. If they are, then problems can be expected. If the requirements are not explicitly defined, motivation can guide the course of the solution so that at least the implicit requirements that the solvers have estimated are met. It is good to be aware of the difference between motivation and goal. Motivation is about the emotion why we actually do it. It is a difficult matter to be measured and may vary over time. Therefore, it is important to have objective goals defined as precisely as possible in order to assess whether they have been achieved and whether other criteria such as price, time, quality and what is considered anality and the like were achieved.

The goal is to create practical methodologies that can be used in everyday practice in the implementation of various IT solutions. Methodologies must be implemented in a specific tool, in our case *EA* and tested as part of real projects.

#### 1.1.1 D1.01.01-Goals

PACKAGE NAME-01. CIELE, STEREOTYPE- ".

It is very good if the solution has its goals. Without a goal, even the best ship goes astray. But the goal can also mean wandering around.





When writing this book I defined the following goals:

- Goal-01: Write a Handbook on 7 Disciplines Methodology
- Goal-01.01: Write a Handbook on the 7 Disciplines Methodology in English Language
- Goal-01.02: Write a Handbook on Methodology 7 Disciplines in the Slovak language
- Goal-02: Create a 7-discipline methodology implementation for "Enterprise Architect"
- Goal-03: Develop a training system for the methodology and its implementation in *EA*
- Goal-04: Book will be a "Model-Driven Book"
- Goal-05: Present the EA product as a system tool for individuals and group collaboration

#### Write a Handbook on 7 Disciplines Methodology

Requirement «Goal» in package '01.Ciele'

The book should have publications features, such as having ISBN and being available in different formats and in different languages.

#### Write a Handbook on the 7 Disciplines Methodology in English Language

Requirement «Goal» in package '01.Ciele'

The book written in English is intended for a wider community. Previous experience in Slovakia shows that *EA* technology is still perceived more as a drawing tool and not as a systemic tool to support team collaboration. I suppose that if EA has so many system functions, these were implemented by the company because the customers expect and demand these features.

#### Write a Handbook on Methodology 7 Disciplines in the Slovak language

Requirement «Goal» in package '01.Ciele'

The Slovak language is important in supporting young people in a systemic approach to problem solving. Experience shows that the young generation is mentally and linguistically ready. There are trainings for young people starting at 14 years. On the other hand, I am not a "native speaker" and I am more confident in expressing these phrases in my native language and also I can do it faster in my native language.

#### Create a 7-discipline methodology implementation for "Enterprise Architect"

Requirement «Goal» in package '01.Ciele'

The *EA* technology enables you to automate routine work using plug-ins that are called MDGs. For example, such a plug-in offers the "Wizardy" to automatically create a subdirectory structure in the model, access specific search filters in the model, sample elements for creating charts and many other elements. Without this support, the methodology itself would be very cumbersome, and I would not be able to use it myself. Methodology and technology both offer the ideal combination for effective use.

#### Develop a training system for the methodology and its implementation in EA

Requirement «Goal» in package '01.Ciele'

Despite all the efforts to make it clear, it is very difficult to convey, in written form, the large amount of information that is constantly changing. Practice proves that, through personal contact and especially through real work with real solutions we can achieve maximum understanding. Support for training will also include multimedia support in the form of short videos and web materials.

#### Book will be a "Model-Driven Book"

Requirement «Goal» in package '01.Ciele'



Why a model-driven book? Because all thoughts, figures, managing of the whole process of creating and updating content was and is being supported by a software. There is quite a number of books supporting tools (see <a href="PCG\_00055\_SK-References">PCG\_00055\_SK-References</a>) which are definitely better in many ways. EA probably cannot compete with these. For me, as an IT specialist, it is natural that my everyday work tool for specific tasks of relevant roles can help me generate a rather sophisticated content. It allows me to meet one of the main goals for which this publication was written. Present that documentation does not come at the end of the solution but continuously throughout the process of solution. Why not use the technology's features, to spend the same energy used for modelling, also for the document creation for people who do not need to use such a sophisticated tool.

Originally, I was thinking to name the book – "Modelbook", but that might be mistaken for a similar concept in fashion, so I have decided for the now-used name that emphasizes the important role model and modelling process. "Model Driven Book". Such a book also has the following attributes:

- The contents of the entire book, or its essential parts, are created in a modeller
- The book creation process is supported by the modeller (in our case EA)
- Output formats are automatically generated from model storage, models
- A book on methodology itself is written according to the methodology it describes. Writing a book is a solution like any other.

#### Present the EA product as a system tool for individuals and group collaboration

Requirement «Goal» in package '01.Ciele'

Although we describe the creation of a book as a "one man show" in the book, it can be imagined that shared storage, user account management, group creation, the ability to comment on elements in charts and models, internal mailing, and many other advanced features predetermine *EA* for use in teams. In other publications, we will deal with these advanced features in more detail.



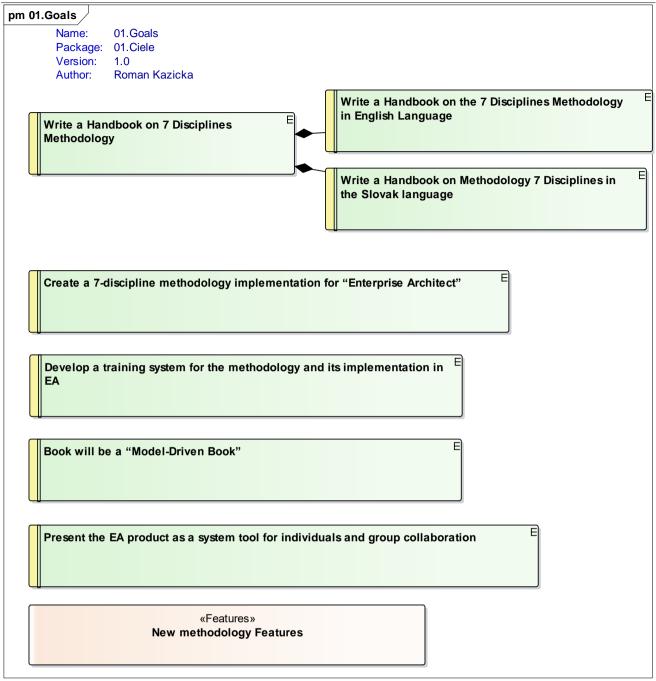


Fig. 2: 01.Goals

### 1.1.2 D1.01.02-Expectations

PACKAGE NAME-02. OČAKÁVANIA, STEREOTYPE-".

Sometimes it is not possible to define a goal, but it is almost always possible to estimate the expectations of key players. Understanding the expectations of key players is crucial to achieving satisfactory results for relationships between key players.

The expectation of the author is that the attitude towards the creation of technical documentation in IT will gradually change. This publication should help in this process



#### 1.1.3 D1.01.03-Features

#### PACKAGE NAME-03. VLASTNOSTI METODIKY KNIHY, STEREOTYPE-".



#### **Process support:**

- 1.Discipline Management
- Defining goals
- Defining strategies
- Analysis for Strategic Management "SWOT" analysis
- Project management
- Scheduling tasks
- Estimate of effort
- Assign resources to tasks
- Reporting -
- list of tasks with resources, deadlines, task status, number of tasks in time
- measuring the quality of the content of the solution model itself
- Recording of hours worked
  - recording of regular activities
  - recording of planned activities
  - recording of unplanned activities
  - minutes of meetings and other agenda
- Estimates of work, time, complexity
- Support for bid preparation
- Mapping of decisions
- Mapping of risks and correction measures
- Managing of principles and rules
- Reports
- Project management reports
  - overview of planned hours per roll, per source
  - overview of continuous hours consumed
- overview of the state of the solution from the perspective of the state of the work packages
- Reports for model quality management, organization of work
  - Definition of metrics for **KQI** quality assessment
- Overview of the current metrics status
- Publishing directly from the model
- templates to support the creation of classic documents in pdf, docx, html formats
- creating content for different events:
  - Business meetings
  - Presentations to the customer
  - Internal presentations for the implementation team
  - Presentations, as well as documents for management reports
- 2. Discipline- Motivation and expectations of key stakeholders
- analysis of key players
- 3. Discipline Analysis
- analysis of the areas needed for the solution
- 4. Discipline Proposal
- supporting all available methodologies by area of use
- creating conceptual charts
- creating detailed charts
- creating virtual screens and behavior simulation



- creating test plans
- 5. Discipline Implementation
- detailed charts
- reporting and documenting specific solutions related to the implementation of the solution
- 6. Discipline testing, verifying the results of the solution
- Test plans
- Test cases
- Troubleshooting
- Symptoms
- Cause analysis
- Proposal of solutions
- 7. Discipline guidance
- Best practices
- Worst practices
- New Principles
- New rules
- Ouestions
- Proposals
- Recommendations

#### **General features:**

- Support for a metadata-based knowledge system
- Supporting a managed, trusted data source solution information

#### **Support online team collaboration:**

- Creating shared information, "pictures" and charts
- Communication in the team
- Online communication support
- Offline communication support
- Team approval of content
- Unified resource management
- Unified user management
- Unified Administration of User Permissions

In this chapter, according to the 7D methodology, there is a place to describe the properties of the new solution. The new book should have the following features:

- the book should demonstrate the ability to generate technical documentation as the by-product of our everyday work
- the book can be characterized as a "model-driven book" its design, the entire process of its creation as well as its content is created in the model and automatically generated from the model.

#### 1.1.4 D1.01.04-Success Criteria

PACKAGE NAME-04. KRITÉRIA ÚSPECHU, STEREOTYPE-".

Defining the criteria for success is not easy. It depends on a lot of circumstances. It is specific and dependent on the solvers and other key players. Everyone will consider something else to be a success. Therefore, it is good to define success criteria in advance and separately for each stakeholder.

From the perspective of this book, I consider the following a success:

- the very creation of this publication that would meet the criteria of a book seems to me as a success



- the way the book was created as a model-driven publication
- if the presented methodology was accepted among the readers and helped them as it helps me
  The writing of this book was a rather great effort. I would say thousands of hours before the writing began and a few hundred hours of writing itself.
- I shall consider it a success if readers support the creation of other books, even financially. The price will not be set exactly. I am convinced that this book will save a considerable amount of time for the reader. The price will be set at an amount the reader values one hour of his saved time.
- if the publication also generates financial income. In section 08. Finance, a rough estimate of the cost of such a project is approximately at € 10000. From this perspective, money is not a criterion for me. But it will be an important feedback for me, if I shall invest so much time in such projects as I have done into this first project. Other books will be about specific ways of executing individual details. That is why I assume they will have a great benefit for the reader too. In addition, registered users will have access to the content on a web site which could not have been viably included in the publication.

### **1.2 D1-02.Strategy**

PACKAGE NAME-02.EN-STRATEGY, STEREOTYPE- ".

We already know "Why?" we started the solution, we know "What?" we want to do and we need to choose the "How?". How do we want to achieve our goals? Every type of solution will require your strategy.

We used the following strategy to write this book. I find writing text in a regular text editor quite unpalatable. The aim of this book is to show the possibility of producing technical documentation as a by-product of everyday activities. During writing, I've discovered some very sophisticated book making tools (for example <a href="PCG\_00173">PCG\_00173</a> Publishing on the Webe). The method of work with these professional tools for making fiction and professional books is very close to working with the modeller.

For 17 years I've been using modelling technology. Its outputs are still below the level of these professional tools. But that was not the original intention. For production of technical documentation, this is acceptable, and there is great room for improvement. For most activities in different roles, *EA* has provided me with the opportunity to change the boring routine activities to creative activities. This was also the case during writing of different documents (Test Plans, Test Protocols, ITSCM Plans, Detailed Functional Specifications, and much more). Originally, I used only figures and charts from EA that I pasted into documents in the copy-paste way. I did not have enough time to prepare for automatic document generation. Couple of times I went through different manuals on the manufacturer's website, but I've lost a lot of time and I missed the details. I have however noticed an interesting fact. Despite the large amount of information and the amount of detail, I did not manage to get the desired results quickly and with reasonable effort. When studying manuals I often understood individual words, but did not understand what they meant. And it was not just that I did not understand English. The problem was that in one document there were many concepts integrated from a number of thematic areas. The concept of spoken English is difficult to distinguish from a concept that has a special meaning in the context of technology, "Enterprise Architect" or in the TOGAF methodology. After a certain time, one can distinguish it, but it takes quite a lot of time.

#### 1. Comprehensibility

The book contains a story. Sufficiently comprehensible to a layman and sufficiently professional to allow the reader to make his own views and to assess when and under what conditions the story can help him / her on his / her journey and the realization of his / her goals.

#### 2. Independence from technology

The methodology described in the book is not technology dependent. It can be implemented in any technology and operating system. Despite that it is very strongly implemented in the Enterprise Architect product.

#### 3. Strong support for routine automation

Without EA's functional support for routine activities, some of these methodologies would be very labour-intensive and technically demanding. Methodology without technology support would be relatively difficult to use. A great deal of activity takes place automatically in EA. A rich amount of metadata is created around the content that makes it possible to maximize routine activities.



#### 4. Creative people should create and let technology do the routine work

Creative people do not like creating documentation. It seems boring, monotonous and not much creative. With the modeller it can be different. Creative people are focused on creating content that should meet some of the rules that are covered in section D1 - Rules. Generating classic documentation can then be done by people who are doing routine work.

### 1.3 D1-03.Plans, Roadmaps

PACKAGE NAME-03.EN-PLANS/ROADMAPS, STEREOTYPE-".

Even an imperfect plan is better than no plan. Plans help define priorities. Creating milestones, in more specific terms with a specific measurable goal, at a specific time and with specific outputs. Maybe we do not have to have a complicated plan with resource balancing for every minute and every cent. It's about realizing the viability of goals and consider them at least at the level of milestone. To define a rough plan, first define what we really want to deliver. This is addressed in chapter "D1-03.01. What will be delivered". We will try to divide the whole solution into reasonable parts that we can deliver separately and quickly enough. We'll get faster feedback from key players. Alternatively, if we are the end user, get the feeling that the project is slow, but still advancing. Even a partial result with defined parameters is better than trying to achieve a perfect result sometimes which is still afar. When we make clear what we actually deliver and in what parts we can consider time and quality. Thus, at least, place our outputs to the calendar for reference. This will allow us to keep track of whether we are advancing or stagnating over time. What is important is that we have some kind of support, and then we can provide an opinion and decide how to proceed. The sooner we do this mental exercise, the better.

When writing this book I made plans several times. First it was only in my mind, but then I needed to clarify what I'm going to deliver? One book? More books? A separate book for each methodology and then separately for implementing the methodology in *EA*? It's not a trivial task, clarifying with you what the final product is going to be.

#### 1.3.1 D1-03.01.Deliverables

PACKAGE NAME-01.SK-DELIVERABLES, STEREOTYPE-".

In this chapter, we should clarify what we are going to deliver, in what parts and in what quality. We anticipate that the smaller parts will be delivered sooner and understanding between the key players is achieved faster, in the sense that it is still a common solution or maybe a possible misunderstanding.

In the context of my solutions, I take into account the following products that will have their own life cycle:

- 1. A book on the "journey" to solutions explaining the essence of the "7 Discipline for Successful Solutions" methodology.
- 2. A book on the implementation of the methodology in the *EA* system.
- 3. Book describing the statuses, baseline, target status. This is the APV methodology.
- 4. A book on the implementation of the APV methodology into the EA system and synergies between 7Ds and APVs in the context of the EA system.

The first book will be created in the Slovak language and subsequently in English. The target group goes beyond Slovakia, so it is my goal to have the English versions as soon as possible.

A separate family of products include the EA extensions, the so-called *MDG*.

- 5. MDG for 7Ds support
- 6. MDG for APV support
- 7. MDG for "Model Driven Books" support

#### 1.3.1.1 Overview of planned publications



#### PACKAGE NAME-PCG 00143 PREHĽAD PLÁNOVANÝCH KNÍH, STEREOTYPE-".

- 1. Book on the "journey" to solutions explaining the essence of the 7 Discipline methodology for successful solutions.
- 2. Book on the implementation of the methodology in the *EA* system
- 3. Book of the "statuses" this is a book explaining the essence of the APV methodology
- 4. Book on the implementation of the APV methodology into the EA system and synergies between 7Ds and APVs in the context of the EA system.
- EN-1. Book on the "journey" to solutions explaining the essence of the 7 Discipline methodology for successful solutions.
- EN-2. Book on the implementation of the methodology in the EA system
- EN-3. Book of the "statuses" this is a book explaining the essence of the APV methodology
- EN-4. Book on the implementation of the APV methodology into the EA system and synergies between 7Ds and APVs in the context of the EA system



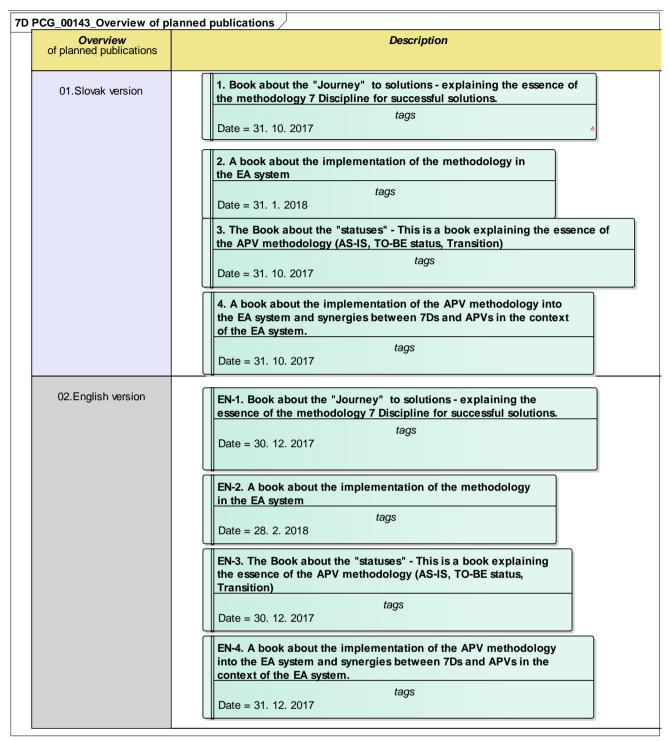


Fig. 3: PCG\_00143\_Overview of planned publications

#### 1.3.1.2 Versions of plugins to EA - MDG

PACKAGE NAME-PCG\_00144\_VERZIE DOPLNKOV DO EA - MDG, STEREOTYPE- ".

The plugins version plan needs to be formally written down. In practice, I'm already using the *MDG* for 7D and APV, but only in the work version. I assume that more sophisticated versions of MDGs will arise when there is demand from potential users.



#### 5. MDG pre podporu 7Ds

Deliverable «Deliverable» in package 'PCG 00144 Verzie doplnkov do EA - MDG'

Plugin for 7D methodology support. This includes "Wizard" for automatic directory structure creation in the model, time reporting features, model search features, easy model navigation, overview reports and so on.

#### 6. MDG pre podporu APV

Deliverable «Deliverable» in package 'PCG 00144 Verzie doplnkov do EA - MDG'

Plugin to support AVP methodology. Includes "Wizard" for automatic directory structure creation in models, abstract reference model, specific instance model, model quality assessment metrics, model element reports. The basis is:

- Defining asset structure at business level, system level, and technology level
- Defining perspectives to describe individual parts of assets and their relationships
- Creating views through relevant perspectives on selected assets

### 1.3.2 D1-03.02-Specific plans

PACKAGE NAME-02.SK-PLANS, STEREOTYPE- ".

There is this joke about a cart with square wheels being pushed by driven people. Alongside them there is a man with round wheels and offers them to exchange there for the square wheels. "We do not have time" they say, we have to push. Planning is similar. It is definitely worthwhile for the solver to find the time and to fine-tune his ideas as accurately as possible. A plan is something like a guide. According to a plan, one can move from point to point on the journey to the goal and, in particular, get feedback on whether we are approaching the target and how. 7D methodology does not specify how detailed the plan is to be created. It should be adequate to the solution.

We can use what we consider to be reasonable in the context of the solution. In this book, we use only very rough planning with milestones, phases and versions in *EA*. For larger solutions, there is nothing to prevent us from using sophisticated products, processes, and project management specialists.

#### 1.3.2.1 01.Versions/phases

PACKAGE NAME-SK-01. VERZIE/FÁZY, STEREOTYPE-".

We can divide the solution into smaller parts that we can understand as a version or phase. Depending on whether we prefer functionality or working in time. Often these are merged.

The division of the solution into smaller parts allows us to deliver solutions gradually. The solution can be divided into versions if we are considering a product. Each version is provided with some functionality. It strengthens the confidence among key players. With regard to a solution that can be broken down according to certain phases, it is good to name them and deliver them gradually in agreed times. Often these two approaches are combined, and solutions and / or parts of solutions are delivered in individual phases.

In this chapter and its subchapters, the versions of our solution will be registered, or we will divide the solution into phases. For example, divided into time segments or according to the accomplished status.

#### 1.3.2.1.1 01. Version/Phase/Release

PACKAGE NAME-01. VERZIA/FÁZA-RELEASE, STEREOTYPE-".



The following chart roughly shows when I plan to deliver the individual parts of the solution.



#### Deliverable1-Book - Documentation- Waste of time or Strategic Value-Part 1-Journey

Deliverable «Deliverable» in package '01. Verzia/fáza-Release'

An overview book on a new approach to delivering solutions across a wide range of areas. The process of writing of this book explains the basic principles of the new approach, which can be referred to as "Model-Driven Activities". The book itself can be perceived as a "model-driven book". Its content, as well as the creation process, was prepared using a special modeling tool originally designed to support software development. However, its use provides a much wider application for work in the team, as well as for individuals. The book describes the "7Ds-Seven Disciplines for Successful Solutions" methodology. The book itself is prepared using this methodology and so demonstrates the versatility of this methodology.

#### Deliverable 1.1. – Slovak version

Deliverable «Deliverable» in package '01. Verzia/fáza-Release'

The original objective to write in English immediately proved to be inappropriate. My English is not on an expert level enough for me to be able to express myself in phraseological terms. Something needs to be delivered to the market as soon as possible. If the market does not accept it, there is no point in continuing the work. I need a quick feedback.



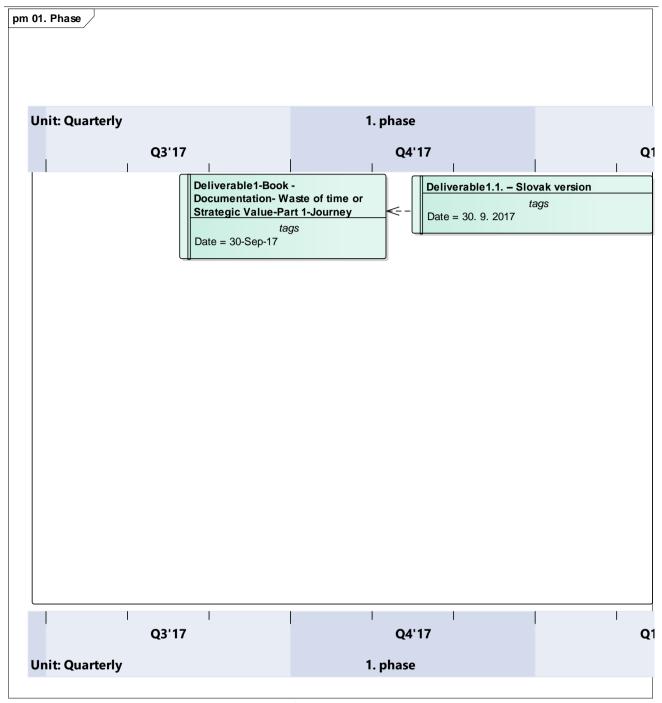


Fig. 4: 01. Phase

### 1.3.2.1.2 02.Version/Phase

PACKAGE NAME-PCG\_00140\_02.VERZIA/FÁZA, STEREOTYPE-".



In the next phases I will focus on other books.

## Deliverable 1.2. - English version

Deliverable «Deliverable» in package 'PCG 00140 02.Verzia/Fáza'

The English version is partly prepared in parallel but will be released later. All figures which will contain any text will be in English. Thus they will be useful for both mutations. I started working on the English version earlier than the Slovak



version. All preparatory work, model preparation, templates for individual book pages, and so on, were prepared first for the English mutation. The Slovak version must be made earlier. I still have to consider whether I will continue the model in the English version. Maybe I will contact an English language specialist and translate it according to the original. I'm not interested in imposing my work methods on another specialist. On the other hand, I can imagine that we could work with the translator on a shared online model, whether through EA, or through sharing the model across via web environment.

#### Deliverable 2.1. – Slovak version

Deliverable «Deliverable» in package 'PCG 00140 02.Verzia/Fáza'

#### Deliverable2-Book - Documentation- Waste of time or Strategic Value-Part 2- Goal

Deliverable «Deliverable» in package 'PCG 00140 02.Verzia/Fáza'

The book describes the "APV-Assets-Perspectives-Views" methodology. The book is written according to the 7Ds methodology and "automatically" generated in the "Enterprise architect" application.

It describes how to document assets in companies. In terms of international best practice (for example *TOGAF*) in the field of corporate architecture, it suggests how to implement:

- 1. Description of asset structure at the level of business, systems and technologies.
- 2. Definitions of perspectives views of different roles on assets
- 3. Implementing specific, detailed views of assets over defined perspectives.

From the point of view of the journey and journey goal, this methodology describes the states before and after the changes and how to model these states. The 7Ds methodology assists in making changes from the current state to the next state.

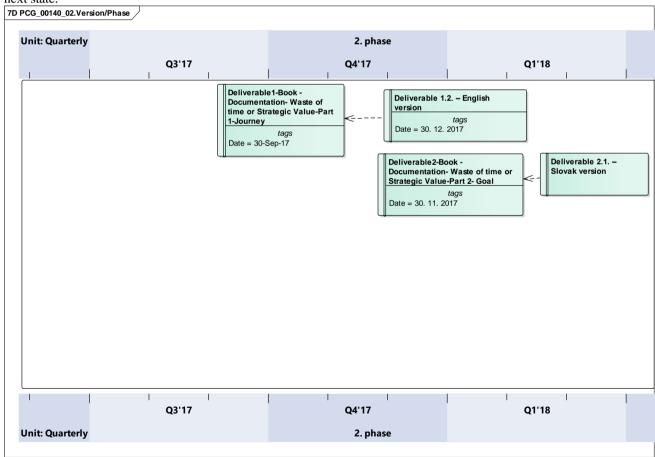


Fig. 5: PCG\_00140\_02. Version/Phase

### 1.3.2.1.3 3.Version/Phase



## PACKAGE NAME-PCG\_00141\_3.VERZIA/FÁZA, STEREOTYPE-".

In the expected third phase, we will focus on automating the routine activities for the support of the proposed methodologies.

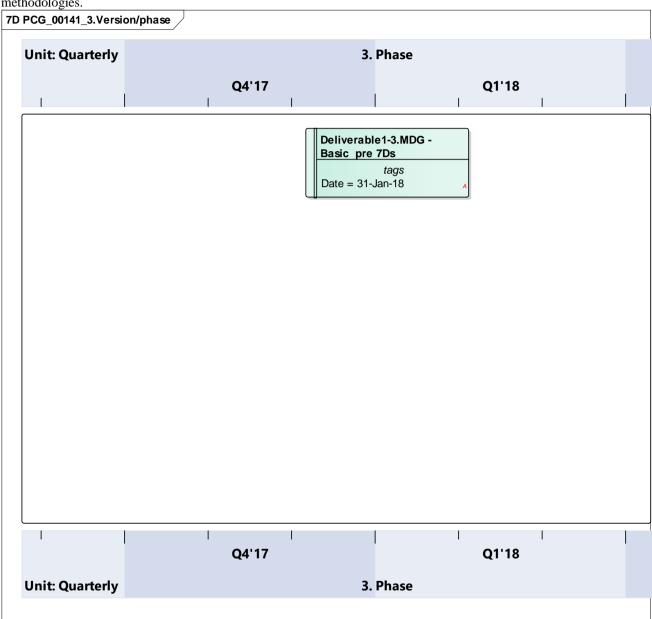


Fig. 6: PCG\_00141\_3.Version/phase

# 1.3.3 D1-03.03-Project management

PACKAGE NAME-03. PROJEKTOVÝ MENEŽMENT, STEREOTYPE-".

The 7D methodology does not prescribe the exact procedure for project management. 7D recommends investing an adequate energy into planning, management, time recording, communication and reporting. The goal of project management is to deliver a solution at a defined time and at a defined quality with all possible limitations. It's a big topic. The 7D methodology does not prescribe specific project management methods. This is defined by the solvers, according to a specific context. It depends on the specific situation, resources, size of the project, and key players and many other circumstances.



With regard to *EA* technology that supports different forms and methodologies at different levels, we have the possibility to choose. I like the way the KANBAN methodology is implemented. The next chapter includes a small preview. EA supports the classical planning methods already today. Details are described in the documentation: -- <a href="http://www.sparxsystems.com/resources/user-guides/project-management/project-management.pdf">http://www.sparxsystems.com/resources/user-guides/project-management/project-management.pdf</a>
If someone prefers to view the tasks and resources in "Gantt" charts or in calendars, it is possible. In addition, unlike the

If someone prefers to view the tasks and resources in "Gantt" charts or in calendars, it is possible. In addition, unlike the KANBAN methodology, this is done rather automatically, because all the tasks assigned to the resources through the elements are displayed as a resource in the calendar.

#### 1.3.3.1 01.Kanban

PACKAGE NAME-01. KANBAN, STEREOTYPE-".

The KANBAN methodology was originally established in Toyota company in its production, which is also referred to as "JIT-Just in Time". This methodology is aimed at ensuring the logistics of the production of automobiles with minimal flow times. Today, the term "Just in Sequence" is used. The trucks that deliver the components into the production hall are already loaded in such a way that the components are unloaded directly onto the conveyor belt. No wonder. The production line today produces a car every 60-90 seconds. At the same time this production line has to accommodate for different models with different equipment. No wonder that other areas are looking into the same methodology as well.

The essence of this methodology is to visualize the closest tasks and their status. This makes it possible to solve very operational tasks. Some details can also be found here -

http://kanbanblog.com/explained.

In the context of book preparation, <u>EA</u> technology feature is used, which has implemented this methodology in a very interesting way. Details are described in the following documentation:

http://sparxsystems.com/enterprise\_architect\_user\_guide/13.5/project\_management/kanban\_tasks.html

- http://www.sparxsystems.com/resources/user-guides/project-management/kanban-features.pdf

### 1.3.3.1.1 3 Stage Workflow-Three-step workflow

PACKAGE NAME-3 STAGE WORKFLOW, STEREOTYPE-".

In this example, we see 3 workflows and their statuses. "Backlog" includes the tasks and stocks. "Iteration" describes the workflow when the task has already commenced. "Complete" describes the end of workflow, approval, acceptance, and status change – operation.

### Feature\_003\_Generation of the timesheet into document with description

Feature «Feature» in package '3 Stage Workflow'

The MDGs need to be supplemented by functionality:

when exporting to MS Excel over the clipboard there are 2 problems:

- 1. delimiter in the record name
- 2. CR in the text desciption

this caused a problem with formatting in excel.

#### Feature 005 Add scripts for automatically filling names of Alias name from the Packages names

Feature «Feature» in package '3 Stage Workflow'

- 27-Sep-18 10:28:54
- 1. Copy text from *Package* name into Alias without prefix.
- Purpose:

In generated documents are name of Paragrahs taken from ALIAS names. Packages names in Model are generated with auto naming for name and alias as well. In generated document is visible Alias as PCG\_xxxx\_. It is very usefull to copy name of package into alias, without prefix text.

2. Generation auto name for existing packages.



#### • Purpose:

In case of copy existing Packages structure in the same model, there are duplicity in one model. Iw would be nice this feature.

Regeneration of Prefix text on all Packages and subpackages in tree based on actual template.

#### Feature 006 Automations of model navigation from Diagrams

Feature «Feature» in package '3 Stage Workflow'

• 27-Sep-18 10:54:25

#### -Purpose:

- navigation in model is crutial. Without clear navigation we can lost ourselfs in our models.

#### Rules:

- 1. script will generate hyperlink to package, wher eis diagram located.
- 2. Linking in diagram hierarchy
- 3. linking in *Package* hierarchy

#### Feature 007 One MOdel for sharing common assets

Feature «Feature» in package '3 Stage Workflow'

• 27-Sep-18 10:59:09

#### Purpose:

scripts, templates, seaeches can be deployed among models in many ways (Ref data export/import, via mdg). RAS seems to be very interresting concept for sharing/ deploying the assests among models.

#### **Proposal:**

- create special model for only one purpose:
- one reference point for sharing / deploying assets

#### Change\_0002\_The 'Package' stereotype to be implemented

Change «Change» in package '3 Stage Workflow'

The details need to defined.

## Change\_0004\_The formatting of the elements in the output document needs to be changed

Change «Change» in package '3 Stage Workflow'

The same way as in the template for each discipline.

## Change\_0005\_Element for Decision in MDG to change to standard Requirement with sterotype 'Decision'

Change «Change» in package '3 Stage Workflow'

• 27-Sep-18 11:03:45

### **Purpose:**

Current element (shape of rhombus) is not suitable. Special element from specific *MDG* (like DMN) could limit the users of lower editon of *EA*. The 7D methodlogy should stay as simple as possible for any users.



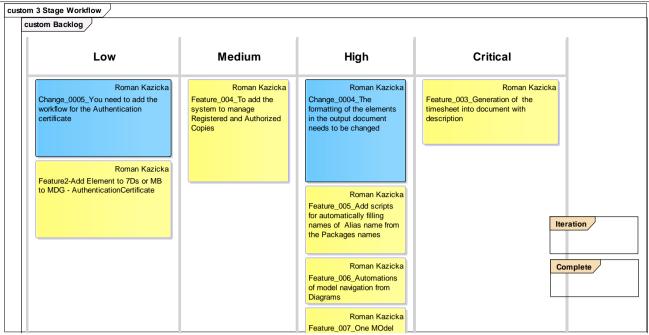


Fig. 7: 3 Stage Workflow

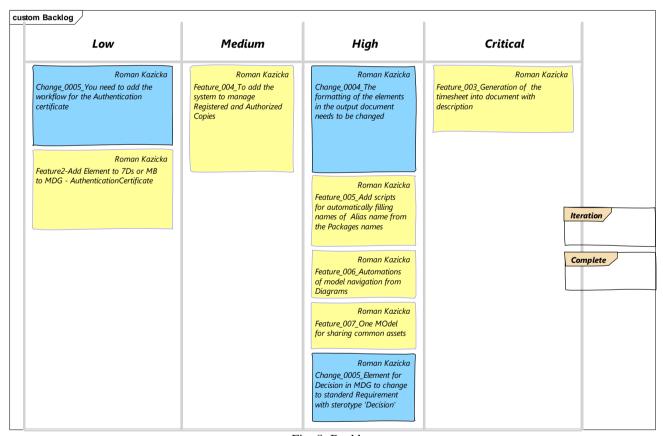


Fig. 8: Backlog



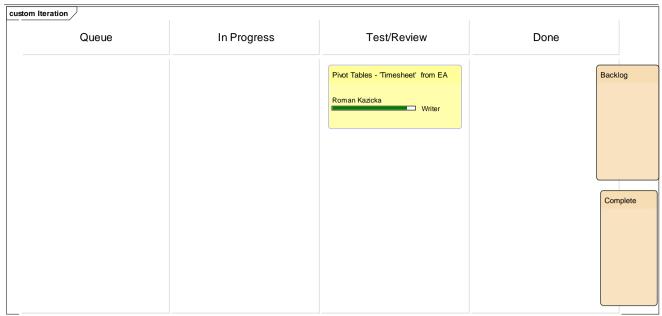


Fig. 9: Iteration

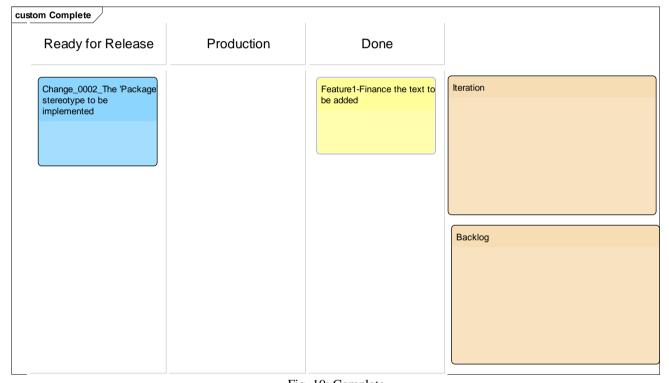


Fig. 10: Complete

# 1.3.3.2 02.Perspective on project tasks via "Gantt chart"

PACKAGE NAME-PCG\_00453\_02. GANTT DIAGRAM, STEREOTYPE-".

EA provides very interesting options for assigning tasks to the members of the team and their subsequent presentation. The following charts include some examples. Each element in the model can be assigned with a resource, that is, a person in a particular role. This resource can be assigned with a task over a given element, commencement dates, delivery dates, estimated time and real time records. Time recording during the preparation of this book can be seen as an example of this. But this technique can also be used when preparing an offer for some solution. The whole solution is prepared in the form of an figure with all the parts that make up the solution. Individual parts, blocks and areas



and processes can be evaluated by effort and time. Solution assessed in this way can be then relatively easily transferred into a document. The important thing is that the figure of the solution helps to keep the entirety of the issue and not forgetting any details. Another option is to define the so-called project tasks. These are not linked to the elements in the charts but exist in the context of the whole model.

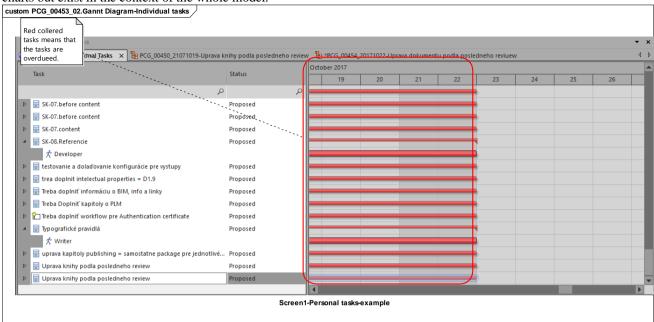


Fig. 11: PCG\_00453\_02.Gannt Diagram-Individual tasks



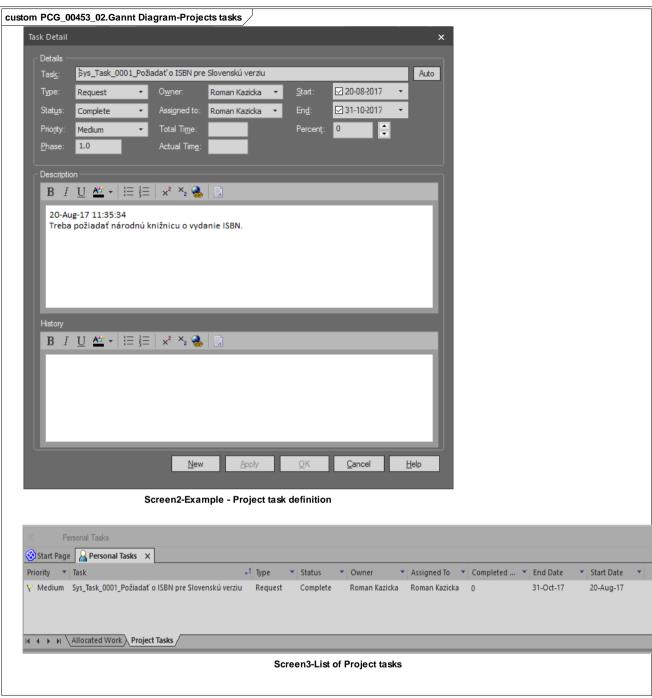


Fig. 12: PCG\_00453\_02.Gannt Diagram-Projects tasks

## 1.3.3.3 03.Tracking events within the lifecycle of elements in a model

PACKAGE NAME-PCG 00455 03.TRACKING EVENTS WITHIN THE LIFECYCLE OF ELEMENTS IN A MODEL, STEREOTYPE-".

For running solutions with existing model elements that represent real objects and can be seen as service objects, there is the ability to model and record different events and actions. These activities directly support individual **ITIL** areas. Records of the elements in the model. This includes, for example, records of Incidents, Changes, Defects, Errors, Tasks, Events, Decisions, Efforts and Risks. This creates the prerequisites for tracking the lifecycle of all relevant elements. Above each element, the relevant metadata is created, which can then be used for managerial work. For example, answers can be obtained to the following questions (the list is not limited and will depend on the specific solution):



- how many faults, problems, changes do I have in my state?
- which elements show the most common errors?
- what risks do I report in my solution
- what measures do I have for the risks involved



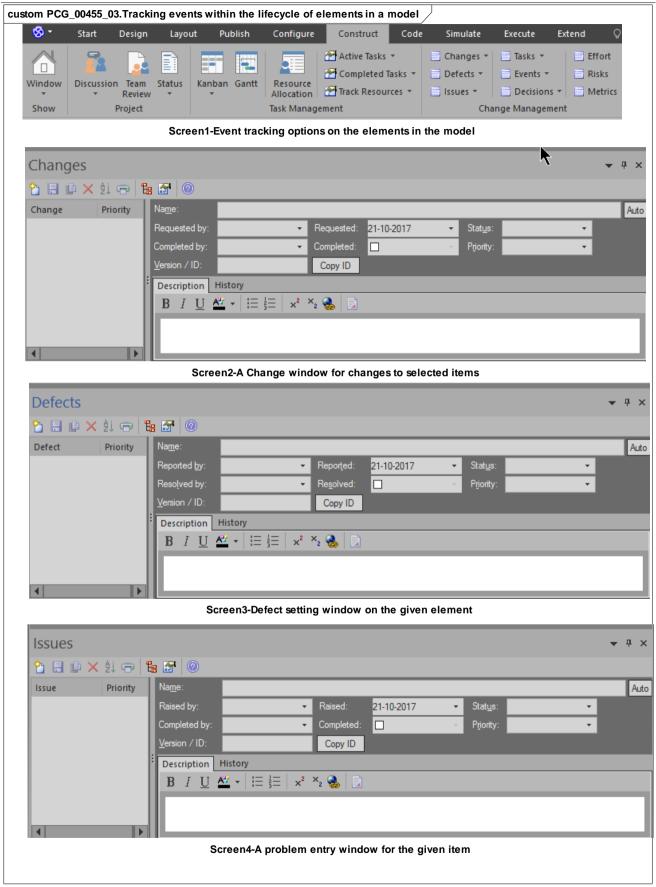


Fig. 13: PCG\_00455\_03. Tracking events within the lifecycle of elements in a model



## 1.4 **D1-04.** Decisions

PACKAGE NAME-04. DECISIONS, STEREOTYPE-".

Decisions need to be made very often. It would be a good idea to capture and record the fundamental decisions and the context in which the decision was taken. I have often encountered the situation when someone was blaming another person for coming up with something stupid. After a more in-depth investigation, it was established that the original person who made the decision had a completely different context for the decision compared to the observer a few years later. But sometimes even we cannot remember why we decided in a totally illogical way. We did not have time to slow down and write down these serious decisions. In this chapter, there is room for describing the context of our decisions during the solution. The list does not necessarily have to be complete and can be expanded as needed.



In this book, I only include the moments that are related to the writing of this book.

## 1.4.1 D1-04.00- Decisions

PACKAGE NAME-00. DECISIONS, STEREOTYPE-".

This chapter includes the decisions themselves as the culmination of the decision-making process.

Since this book is written in an EA environment, the "Decision" element shall be the bearer of decision information. But it also can be a text in a word processor, according to what the user knows best.

#### Decision1- The first book must be written in Slovak

Decision «Decision» in package '00.Decisions'

My original considerations to start writing English ended very quickly. I simply do not possess the level of language and the ability to express myself at the level I need. The original intention of saving time with writing in English was just wrong. I have to create 2 separate parts of the model for each language.

#### Decision2- The book format will be A4

Decision «Decision» in package '00.Decisions'

At first I was not interested in the format of the book at all. Gradually, as the first *EA* outputs were generated, I realized that if the first book is created in pdf format, it would also make it easier for anyone interested to print the book in A4 format.

## Decision3-Do not deal with the technology, put the priority on the content

Decision «Decision» in package '00.Decisions'

EA technology is an extraordinary technology from many perspectives. I never had time for the creation of automatically generated documents. I have to admit I have tried it almost ten years ago, but I eventually ended up working in a text editor (MS Word) with "copy-pasting" the charts from EA into the text editor. This was caused by two circumstances.

Organizations that paid my salary did not create the conditions for the automatic creation of documents to be feasible. I was an island that did not need to automatically generate documents for the support of my role. But I did use the creation of charts.

The second point was the complexity of EA and a great deal of information about every detail of EA functionality. I was no table to find an effective "for dummies" aid tool. I was able to find a lot of details, but not the whole process. I said to myself that I would fill the niche and try to summarize my experience in a book that will be written with EA support. The book is almost finished, content-wise. I thought I had already mastered most of the details for content creation and suddenly the output documents did not work as expected. Styles in newly defined templates sometimes show and sometimes not. The numbering of the right and left pages is different from what I expect, the watermark on the templates does not appear in the output document, and other similar issues. That's why I decided to focus on completing the content, and then I'm going to focus on the technical issues. For example from 7D perspective this can be seen in the



reports. Notice the skip in the chart showing the number of records of the work done. This is a section from 4.9. to 9.9. The subsequent downward change is given by deleting some assignments that did not make sense to me. One would expect a growing line from the beginning to the end of the project. As you can see, it's not true. All reports must be read with understanding so that misinterpretations do not lead to incorrect decisions.

### Decision4- Split the Analysis into parts of the original and external sources

Decision «Decision» in package '00.Decisions'



#### 25. 9. 2017 15:31:02

While generating the output document, I found that he analysis part includes a number of pages that are only informative for the publication itself and do not need to be published completely. Reader can easily find this information via the relevant links and in the current content. Therefore, it is necessary to split the content of Chapter "D3 – Analysis" into the original texts and move the part related to external texts to the end of the book, with only the overview table of the links without any extensive texts. The publication will include only a link to the original source. This is accomplished by a separate filter in the template. As a standalone template, you can use a reference chapter template.

### **Decision5-Changing the location of chapters**

Decision «Decision» in package '00.Decisions'



#### 1. 10. 2017 7:28:46

I do not want many pages from other sources in the book. In D3-Analysis there is a "Package" for external sources, but I just need to generate links, not the whole texts. These can be on the page. I moved the "External Sources" chapter from D3-Analysis to Chapter 8 - References. I did this first at the level of virtual documents where I just moved the references to "Package" and in D3 I set the filter for deleting external sources from Chapter D3 in the "Template" for Analysis. I was doing something wrong. It worked one time, the other time no. I did not understand why. "I do not have to be perfect". I let it be. Instead of filters to remove the "Package" which have the phase set to -1.0, I moved the entire "Package" References to another chapter.

## **Decision6-Switch to Windows OS**

Decision «Decision» in package '00.Decisions'



#### 09-Oct-17 11:02:47

When importing figures into the picture library, the system crashed. This is an interesting error as it only happens with some pictures. The Bad Practice chapter describes the details.

I'm not dealing with this at the moment, I'm switching to Windows 10 in this part of work. After a regular update, these are back to "normal" again.

## Decision7- The book must be more readable - what is the methodology, what is the book on methodology

Decision «Decision» in package '00.Decisions'



- The text of the book must distinguish between the methodology and the text of the book
- It must be clear that this is a practical manual with a general methodology

## Decision8- How do I use the "7D" and "Book" icons in the text

Decision «Decision» in package '00.Decisions'



• I have technical problems when inserting information icons that highlight whether it is text from the 7D methodology or text about making the book. Used technology with the "*Frame*" element is cumbersome and non-deterministic. It will be simpler not to use a frame, but simply to insert a simple figure into the flowing text.



- This decision creates the need to rearrange the parts of documents already worked on and edit all the templates concerned.
- 22-Oct-17 15:19:24
- I apply the principle "Keep things as simple as you can". The carrier of the text will remain "Note" for "package". For the text from the methodology, I will use a small icon with the 7D logo and for the book-related text I will use the book icon. It's certainly the easiest way, though less effective.

## 1.4.2 D1-04.01 Principles

PACKAGE NAME-01. PRINCIPLES, STEREOTYPE-".

In the common life, the principles motivate us to do things which seem good and right. People establish their principles by living with other people with principles and seeing the real benefits of such a life. In common life, the outside rules make us by force, by threat or punishment do things someone else considers good or right. People adhere to or violate these rules and principles. Each community defines its own principles and rules. I have rarely realized that my decisions are driven by the principles I have established by my education or my own experience, but I have considered them as natural and I expected the same from all the others as well. The misunderstandings that I have witnessed have shown me that it does not work this way and it is good that the team members declare and show at least certain principles during the solution. When the principles do not work in common life, we tend to introduce rules to modify any behavior we consider needs change.

In the context of this book, we will consider more general recommendations like "Principle" that have been created on the basis of our own experience and we recommend something that brings some added value. In the context of this book, we will consider a "Rule" to include all specific internal regulations and instructions on how to carry out some routine issues to achieve the desired synergy. For example, the rule for creating names of objects used during the solution.

## 1.4.2.1 List of principles

PACKAGE NAME-PCG\_0130\_LIST OF PRINCIPLES, STEREOTYPE-".

At this point, the 7D methodology recommends collecting a list of principles to help in situations where it is not possible to simply decide whether something is black or white. In such cases the principles can help us make the right decisions. At least this can help us decide whether we can rely on the past experience that led to the principle being recorded. It's usually better than having no principle at all. The missing principle can help us define it, and in the future, in a similar situation, use our experience.

### 1.4.2.1.1 001.Common sense is more than any methodology

PACKAGE NAME-001. COMMON SENSE IS MORE THAN ANY METHODOLOGY, STEREOTYPE- '«7DS-PRINCIPLE»'.

Supposedly the alchemists used to say that before breaking any rules, it is necessary to learn them well. I consider this to be a very pragmatic and wise principle. Therefore, even though this is a book on methodologies, these methodologies do not aim to impose anything. These should not be considered dogmas that have to be followed 100%. It is a set of lifelong practical experience to help me, and I hope even the readers and potential users of this methodology, save time on routine activities and focus on creative activities. If, in any particular case, there is a contradiction, between your common sense and the rule, it is OK to prefer your own thinking and experience.

I consider methodology being rather a tool than a dogma. Just like on a walking stick is for a pilgrim. It does not have to be used always, only where it makes sense. Without the walking stick, the road would be harder and the obstacles could not be crossed.

## 1.4.2.1.2 002.Before you break the rules, learn them well



#### PACKAGE NAME-002. BEFORE YOU BREAK THE RULES, LEARN THEM WELL, STEREOTYPE-'«7DS-PRINCIPLE»'.

This principle comes from alchemists. I can only agree. It reminded me of 4 quadrants from

- 1. I know that I know (the level of the teacher to whom we go for instruction and inspiration)
- 2. I know that I do not know (I can take action to change it)
- 3. I do not know that I know (I go and meet more experienced people or mentors to find it in me, for me)
- 4. I do not know that I do not know (I am stagnating)

The worst option for us is the area number 4. I do not know what I do not know. When I know what I do not know or I am aware of which rules I violate, I usually know how to assess the consequences of this violation in the context of the whole situation. The worst thing is if the rules are violated by key players who do not know what they are doing and who still feel and act like kings ....

Although I'm trying to implement the 7D methodology, I do not always stick to it. Sometimes knowingly, sometimes unknowingly I do ignore it. I have noticed that I do not always create an element of time recording before each work activity. This is often because it is a continuation of activity from the last day, and often it is because pressure of circumstances forces me not to be perfect.

## 1.4.2.1.3 003.Every information has its place

### PACKAGE NAME-003. EVERY INFORMATION HAS ITS PLACE, STEREOTYPE- '«7Ds-PRINCIPLE»'.

Just like any other thing, which does not have its place, becomes an obstacle or becomes lost, so too will any information that has no own place become eventually a burden, or at least it is not to our benefit. It is a big difference to have the information itself or information in a particular context. Information written on a piece of paper, on the table of a team member, is a piece of non-existent information. If the same information is included in a particular place in the model, for example in the "stakeholders" directory, we have the chance to get the information in several ways:

- systematically according to the structure, if I'm looking for people, I go to the location where information about people is stored
- intuitive via "fulltext" search based on different parameters (time, fragments of the searched term, name of the supposed author of the record, etc.)

Complying with this principle has great synergy effects for the whole team. Team members have a chance to get to information. If I am not able to specifically place the information, the "unassigned" location may be created in the model. Even that is better than just letting it be. This way there is a chance that important information will be retained. And I do not have to know the level of importance of that information at this point.

Keeping an overview of the project requires an overview of all the information. In teams, this means having a very good communication and trusting environment. For the basic orientation in the solution, a solid structure of the model or a solid structure of the book - its chapters is very important. This is a professional routine. If all the solutions contain a solid structure, the implementation team will be able to focus on their roles from the beginning, each according to their role. Everyone will understand the context and responsibility of others. Therefore, it should not be so easy to declare "I will provide the documentation when the work is done". How would the tester, for example, be able to perform his work on time and in the expected quality, if he/she is provided with the documents only after the application is ready? There is no reason why the tester and the developer should not receive the appropriate information in parallel and that any changes that are made after that are made available to the tester as well. However, it is necessary to create a working and team environment to make it possible. Therefore, the modeller is a key element of modern team communication. Each role has its context of understanding objects from the real world. These objects are modelled and saved in the model. Each member of the team works in some particular role. Or in several roles. But the important thing is that one element has the ability to store information about views of different roles. This creates the potential for synergy effects and possibilities that would otherwise not be available to the realization team.

I consider this rule as probably the most important. I use it every day. When writing this book, I tried to transform the parallel information from the model into the book that has information stored in a specific order and selected content. I have the option to select different information for the book, not just about the subject, but also about the circumstances of the book preparation, the status of individual chapters, versions of individual elements and so on. I am thinking now how to distinguish the modified parts of the elements in the new releases? Maybe with a change of the



version as it is done in software engineering. But then I should provide this information to the reader. This is not usual for ordinary books. But it is very important in technical documentation.

## 1.4.2.1.4 004. "Common understanding" is the key to success

PACKAGE NAME-004. "COMMON UNDERSTANDING" IS THE KEY TO SUCCESS, STEREOTYPE- '«7DS-PRINCIPLE»'.

It is very important for key players to achieve a status that can be called "Common Understanding". There are many techniques to achieve this situation. The entire 7D methodology is focused on achieving this state as soon as possible and as simply as possible. For example, with the 7D solid structure encouraging people to place information in specific locations that belong to a particular category. Using EA technology also supports the visualization of our vision. One figure can substitute hundreds of pages. Today, no one now has any spare time. Not for reading. I hope that this publication will not have the same fate. That's why I tried to use as many pictures as possible. This is the first book in the series where I think more words are necessary to explain, also supported by pictures. The following books will have even more figures, focusing on specific actions with specific apps. Other specific points in the methodology represent an effort for transparency in the form of recording of all important events, ideas and results. Rules are defined to help automate team habits. See <a href="Odd-Every working meeting must have a meeting minutes">Odd-Every working meeting must have a meeting minutes</a>, <a href="PCG\_00265\_005.Every working meeting must be prepared">PCG\_00265\_005.Every working meeting must be prepared</a>.

When I read one of the first preliminary versions of the book, I did not understand it at all. As I was used to look at the model views, the information in my book did not make sense. I tried to clarify what the book wants to be about, separate the definition of the 7D methodology from the book's creation process. But I will know the response only much later.

## 1.4.2.1.5 005. Without a picture there is no solution

PACKAGE NAME-005. WITHOUT A PICTURE THERE IS NO SOLUTION, STEREOTYPE-'«7DS-PRINCIPLE»'.

IT solutions are incredibly extensive and complex. Sometimes this discourages more detailed descriptions. Or, on the other hand, there is too much text and no pictures. One figure will provide more information than 1000 lines. Therefore, without contextual charts that help to tell the story, it is much harder to understand the issue. "Business Chart", "Story Board", "Comics". Call it as you want, such a chart should contain all the terms to explain the nature of the solution. This chart can be understood by more key players at all levels of detail. "Common understanding" is a key success factor, saves time, maintains relationships at the level of trust.

There are technologies that recognize the technological parts of the solution after it is implemented. For example, agents, parts of special applications that are installed on end devices, can inform the central server about any technical details. What these tools do not provide is the business dimension of this information. There are holistic methodologies (TOGAF, ZACHMANN and others), but they contain hundreds of pages and a wide focus range. For many, it is too big of a jump. Methodology is extensive, tools that were used for implementation too complex and people are unprepared. Not prepared to create content or to absorb content. Content makers do not know the methodology, they do not know the technology. Figures which have the greatest information value are drawn ad hoc by different roles and in tools that do not hold the metadata about the elements of the chart. This brings a rather nice presentation experience, but also chaos in documentation, in versions and in reliability.

I see the solution in using technologies that create metadata about elements. These are stored in central repositories that are shared across the entire team via web interface. There are methodologies and there are technologies. There are people who have experience with technology as well as with methodologies and mentoring. "Just" start.

This principle follows the previous principle. I know from experience that a good picture can save a lot of problems and misunderstandings. On the other hand, too many pictures does not automatically bring understanding. In any case, it is better to have some pictures than not to have any.

### 1.4.2.1.6 006. The generated document is already old at the moment of generation

PACKAGE NAME-006. THE GENERATED DOCUMENT IS ALREADY OLD AT THE MOMENT OF GENERATION, STEREOTYPE-'«7DS-PRINCIPLE»'.



This is the basic principle of a model driven document, which is confirmed by practice. Actual documentation exists only for a few moments from the update of the original data. If we have electronic documents, they were closest to the current status at the time of saving in the storage. It is very rare that in case of a small change in the document, a new version of all these documents, which are related to the change of the state of one element is created. If we have elements in the model and for some reason we need to generate electronic documentation, we create a model photo at a given time. Even this book is constantly evolving. each generated piece is actually a true copy of the original at a given time. There will not be 2 identical copies. Each piece will have another time of creation. This gives us the hope that the last document that will be generated will contain all the up-to-date information. The question of whether these information is true, is another story and other process. These will be aimed at raising the level of trust and reliability of the data in the model.

All published books have and will have a timestamp of the moment of their generation. Not only the book, but also every element in the book should have a time stamp. Originally, the templates were set so that each item was also given a timestamp, version and sometimes a phase. This leads to relatively unclear outputs, but it should be mandatory in the technical documentation. You only need to find the appropriate form of display. For example, the appendix could include a table of elements with details of who and when changed the element and what is current version of the element in the document. I have not used it yet for this book. I am wondering how I can highlight the changes from the last release of the book. The EA tool provides several ways to handle versioning, tracking versions and element-level changes, clone creation, and storing versions in specific repositories. I did not use these sophisticated procedures when writing this book. I did this in order to follow another principle.

## 1.4.2.1.7 007. Keep things as simple as possible

PACKAGE NAME-007. KEEP THINGS AS SIMPLE AS POSSIBLE, STEREOTYPE-'«7DS-PRINCIPLE»'.

It is not a problem to complicate things. We can see it at every step. The great art is to make things simple. Over the past 17 years, I have heard countless comments to my approach to solving, on how complicated it is, and how there is no time to do as I wish. Yes, the documentation needs to be prepared, but easier as "the \$\frac{\mathbf{N}}{\mathbf{D}}\$ has a lot of directories that cannot be used". I wondered where the problem was. In manufacturing companies the 8D methodology was used to manage production on a daily basis and it was considered complicated in IT?! It is a matter of approach and a way of work. Sometimes things seem too complicated because we are trying to understand the dynamically changing world according to our old habits and stereotypes. Somewhere I read an example for this with a chainsaw that was supposedly not working and the person showing blisters on his hands as the reason to return the goods. When the salesperson asked him how he used the chainsaw, it turned out that he was using like an axe.

In the context of the methodologies described and the method of creating books about these methodologies, I would compare the axe to the usual way of documentation. Using the model to support our routine activities should be seen as the chainsaw. You just need to start it and use it in an appropriate way. Other than a classic axe. This means we need to find time to understand new approaches and technologies. But then this time will returned back many times over. Complexity does not have to mean complicated. And by ignoring complexity, we can simplify a specific situation, but we cannot solve the problem or find the right solutions

Implementation of the methodology into the *EA* tool is not perfect. I tried to take advantage of the features of the tool everywhere I felt it made sense. But I often realized that it was not necessary to overdo it. Many times I caught myself overcomplicating something in a sophisticated way, even though it was very simple. But fortunately, all it took was a walk on a fresh air to realize the bigger picture and take a practical decision. This was also the case with the way of separating texts in the book that are related to the 7D methodology and texts describing the book making process. At first I wanted to solve this problem by modifying the templates and with physical separation of the text in the "note" elements "*Package*". I planned to position the text for the methodologies in a separate "artifact" element, with a specific formatting. Finally, I turned back to a simple, compact text. Sections for 7D methodology and for the book making process are distinguished only by an icon at the beginning of the text and with "italic" formatting for the 7D methodology.

### 1.4.2.1.8 008.The cemeteries are full of irreplaceable people

PACKAGE NAME-008. THE CEMETERIES ARE FULL OF IRREPLACEABLE PEOPLE, STEREOTYPE-'«7Ds-Principle»'.



The biggest risk for any solution is building the impression of an irreplaceable status. It is true that there are many heroes, and without them it would be difficult, but from a strategic perspective, it is more of a disadvantage than an advantage. If the solution works only thanks to the heroism of individuals, you have to consider whether it is possible to change it. Systems need to be built in which even ordinary person can execute all processes. Otherwise we will get into some problems.

This is a difficult topic for me. Does it make sense to write a book about a product that has been on the market for more than 20 years? After all, everything has already been written about this product, everything in world has been already tried and described. Nevertheless, I think the book can be of benefit. It connects technology, hands-on guide and experience into one product. The book is written in a way that anyone can use the methodology, not only in this particular technology. I myself do not like people who have placed themselves artificially and intentionally in the position of irreplaceables.

## 1.4.2.1.9 009.We do not have to be perfect

PACKAGE NAME-009. WE DO NOT HAVE TO BE PERFECT, STEREOTYPE- '«7Ds-PRINCIPLE»'.

It's always possible to do things better. However, we need to consider if we are going to focus on details and so delay the delivery time of the product or service. It is good to consider and reflect on whether we want to be "useful" or want to be "perfect". Because, there is also another principle. 80-20.

I repeat this principle to myself daily and very often. Where is the boundary between acceptable imperfection and a good enough solution? I do not have the answer, but when I remember that I thought I had this book ready more than a month ago, I have to reconsider... And we still need to build the remaining parts of the ecosystem - especially marketing strategies and their implementation.

## 1.4.2.1.10 010.Principle 80-20

PACKAGE NAME-010.PRINCIPLE 80-20, STEREOTYPE-'«7DS-PRINCIPLE»'.

This principle is also known as Pareto principle. Originally, the author's claim was about peas - only 20% of grains produce 80% of the crop. In other words, 80% of the consequences are caused by 20% of causes. This rule has different variants. For example, the last 20% of the project will require 80% of the effort. Figuratively this means that just before the end we realize that we need 80% more effort to achieve the desired status. This effect occurs almost always and we need to be prepared for it.

Looking at the process of book's completion, when I thought I had about 80% of the book ready, I began to realize that I might need another 80% of effort to actually finish it. This is probably due to the fact that in the end we are dealing with details that are always occurring and require a lot of time. I feel that in my case the ration is even more unfavorable - about 5 to 95. It is quite difficult. But it must be understood as a principle. I cannot do anything about it. I have to reconcile my dissatisfaction with the present state and the idea of an ideal solution. I am basically alone in the implementation team, so there is no one to clearly define any limitation and boundaries for me. This part is sometimes the hardest. Time is running. A rational solution is needed as soon as possible.

## 1.4.3 D1-04.02.Rules

PACKAGE NAME-02. RULES, STEREOTYPE-".

As mentioned above, the rule is used in common life as an external tool for guiding our behavior to achieve the introduction of the principle or to create the right habit. In the context of the 7Ds methodology, these will be used as practical rules for solvers to achieve the highest possible synergy and highest level of understanding in as short a time as possible. As an example, rules can be used to define new concepts necessary to implement the solution (for example, a rule for computer nomenclature, folder names, file names with certain content, and so on).



When writing this book, I tried to use only some basic rules, which are related to the possibility of automatic creation of prefixes for texts of selected elements, such as the names for the "Package" or "Decision" elements and the like. I use other process-oriented rules mainly outside of this book. I would be rather hard to record minutes from a meeting with myself. But I tried to capture some decisions - I make backups of models which I even check, in addition to working on a model of windows 10 and Linux Ubuntu 17.04. So I have a fairly large overhead, but I think it is necessary. During the process of writing I found out several times, that my model was damaged and I had to use a backup. I run daily database backups and keep backups for the last 30 days.

## **1.4.3.1** List of rules

### PACKAGE NAME-PCG\_00263\_ZOZNAM PRAVIDIEL, STEREOTYPE-".

This list contains rules that I considered reasonable for the 7D methodology at the time of writing. The list is not closed and finished and will be definitely added to. Each solver will definitely add his rules in the context of his or her solution.

Although one works on one solution alone, it makes sense to define own principles and rules. This creates working habits that save time and improve the quality of the solution.

#### 1.4.3.1.1 001.Name convention

#### PACKAGE NAME-001.NAME CONVENTION, STEREOTYPE- '«7Ds-Rule»'.

Words and terms are carriers of information. New terms are created according to certain rules. This simplifies communication and understanding. An example of a rule is that each directory created outside the methodology should have a unique prefix. This is the primary key at the storage level. This makes it easier to refer to specific content. It is considerably much easier to say "look at PCG\_12345 directory contents" than to write the entire directory name. Especially when we are working in an international team, communicating the name via telephone is quite demanding. Numbers can be recognized even during poor telephone call much easier than the whole text. This rule is related to the principle PCG\_0131\_Keep Simple As possible.

When writing this book, an automatic generator was used to generate the beginning of other elements - for example "Decision".

## 1.4.3.1.2 002. Directory names in a common repository

PACKAGE NAME-002. DIRECTORY NAMES IN A COMMON REPOSITORY, STEREOTYPE-'«7DS-RULE»'.

Directory (Package) serves to categorize content according to certain categories. Referring to the full text of the title is very impractical. It is therefore advantageous to name a specific identifier for specific content. An unambiguous identifier suitable for a common person may be a short text at the beginning of the text. For example, "Package" can begin with the prefix "PCG\_XXXX\_" where XXXX is the number. This book too includes some texts that are written in this way. Please see PCG\_00052\_SK-06.Typographics rules.

### 1.4.3.1.3 003.Back up and check backups

PACKAGE NAME-003.BACK UP AND CHECK BACKUPS, STEREOTYPE- '«7DS-RULE»'.

This rule will be understood only by those who have experienced the loss of their data and have felt the damage themselves. One cannot rely on the fact that all individuals in the team observe this rule, but we need to set up a system so that "single source of truth" is automatically backed up. But the backup itself is not enough. We also need to verify



whether we can reconstruct the original system without any more serious problems. The second point is that one backup is not enough, it is necessary to keep the backups in several places and according to my experience and currently also according to the regulations, ensure protection against abuse, especially the protection of personal data, if necessary (e.g. topic GDPR).

## 1.4.3.1.4 004. Every working meeting must have a meeting minutes

PACKAGE NAME-PCG 00264 004.EVERY WORKING MEETING MUST HAVE A MEETING MINUTES, STEREOTYPE-'«7Ds-Rule»'.

A meeting that does not have its minutes is a meeting that never happened. Minutes are temporary "documents" lifecycle of which is limited by the existence of the real problems they are concerned with. They serve to coordinate, assign tasks and plan ahead. Minutes should include a list of participants, a goal, an agenda, a description of the meeting, actions, assignments and deadlines. Without this shared memory, the meeting is inefficient and in many cases unnecessary.

## 1.4.3.1.5 005. Every working meeting must be prepared

PACKAGE NAME-PCG 00265 005. EVERY WORKING MEETING MUST BE PREPARED, STEREOTYPE-'«7Ds-Rule»'.

There is no bigger waste of time than "blabbing" at joint workshops. When there is no good tangible background documentation, pictures or charts, the discussion becomes compulsive, general, remarks of people present unresolved. Nobody has any responsibility, it is just talking about nothing. As soon as a particular situation is on the table, the conversation is limited to what is seen in front of us. The topic focuses on essential things and conversations are much more constructive. It shortens the time to reach a "Common Understanding". It saves money, energy and avoids misunderstandings. It increases motivation and faith in solving any problem.

#### 1.4.3.1.6 006.Not verified means not functional

PACKAGE NAME-006.NOT VERIFIED MEANS NOT FUNCTIONAL, STEREOTYPE- '«7Ds-Rule»'.

This rule builds on experience from manufacturing companies, but works virtually everywhere. It is not enough to perform the action, it is also necessary to check the expected result. Without this feedback, we should consider action and performance untrustworthy. Consistent control of each step ultimately saves time. You just need to create a habit. It is best if the action is controlled by someone who is not involved in the action. The so-called 4-eye control method is much more effective than when the job is checked by only the specialist. This is the first level of control. The second level of control is a deliberate control by another person.

# 1.4.4 D1-04.03-SWOT analysis

PACKAGE NAME-03.SWOT ANALYSIS, STEREOTYPE-".

## • "S"- as in "Strength"- What are the strengths of our solution?

This is an area that we can influence. Let's show it on this book. The strengths of this book could also be considered as follows:

- 1. It is original
- 1.1. "Model driven book"

It is different from other books. It is closer to technical documentation than classic reading book. This is, among other things, a form of chronicle that records the book making process. It has been modelled in a UML modelling tool, and has emerged as a by-product of everyday work. The main goal was to compile the 7D methodologies. At the moment, the book is also the target, so in this case it is not a direct by-product. But the model was present from the first idea, creation of content, figures, texts, styles and generating the electronic document. The Sparxsystems *Enterprise Architect* product version 13.x was used for modeling. As a storage, MySQL 5.5.58 datasheet was used in debian 7 environment.

- 1.2. The book on methodology is created using the methodology itself
- 2. It is different in content and aimed at understanding
- 2.1. The terms in the book are distinguished according to their domain. This greatly accelerates the process of understanding of the text.
- 2.2. The book tells a story



The story - how to write a book – itself explains the methodology on how to support the process of the journey to a successful solution

- 3. Book as a guide for writing books, technical documentation, in a specific Enterprise Architect product.
- 3.1. This first book provides examples and "screenshots" directly from the "development" environment for the "development" of the book. Next book will describe the technical steps in *EA* that make it possible to write books.
- 4. This book saves resources time, energy and money

The journey to the presented books lasted 17 years. It took a lot of effort. The pinnacle of this effort is a series of books about the experience in achieving measurable solutions and guide on how to use the EA product at a higher level. This effort should make it easier for those who will be willing and able to follow its principles.

- 4.1. Methodology helps you manage all the obstacles on your way to the goal.
- 4.2. The book helps master the techniques of using EA in specific instances.

The first book contains general information and examples of options. Other books also describe how this is done.

4.3. Book can be personalized

As this is an electronic publication, after registration via a portal, the reader receives a "copy", a certified version with specific information about the organization, or the "copy" owner for which the publication was generated.

## • "W" as in "Weakness" – our weaknesses,

what we can influence, but now we see it as our weakness. From the point of view of our context, we regard this area as a room for improvement:

#### 1. Over complexity

In practice, I have come across a lot of views that the 8Ds methodology is a very complicated methodology. We used it for several years in a factory on a daily basis. The manager had a quick overview of the problem-solving dynamics, and he was able to take action if something went wrong. From my own experience, I know that the system approach to problem solving faces resistance from people. Both on the managers' side and on the side of the team. Based also on my experience, I think this is because setting up a system approach means spending a certain amount of preparation time. Only after the necessary preparatory phase is the process effective and there is a system where each role and each information has its own place, responsibility and knows what to do and understands its role in the context of the whole process. This requires some maturity from individuals as well as organizations - their managers. We can ignore the complexity of our reality. But only for some time. Only when the price for poor quality exceeds the limits that organizations and individuals are willing to tolerate, the time for change will come.

2. Inability to express a complex subject in a simple and comprehensible way

I realize the complexity and difficulty of the subject. It also concerns the changes of habits. The model-driven book is one of the attempts to popularize another approach to document creation and, in particular, technical documentation. Based on the post-release feedback, I will consider further improvement.

## • "O" as in "Opportunity".

It's something beyond us, but also something that gives us the prerequisites for success if our goal is to succeed.

In our context, we can consider the following to be an opportunity.

- 1. Establishing a new way for content creation. Model-driven book. In the sense of a model driven technical documentation.
- 2. Increasing awareness about the "Enterprise architect" product as a system tool, not just as another drawing application.
- 3. Expanding the reputation of the author as a specialist in Systemic Thinking, Enterprise Architecture, EA Tool, Creating "Single source of Truth" Systems, Metadata Knowledge Based Systems and Professional Documentation Creation.
- 4. Creating the possibility for me to focus all my efforts on things I enjoy the most, i.e. educating myself and others.

#### • "T"- as in "Threats" - threat

Here we should consider the external circumstances that are not favourably inclined towards us, which we do not have direct control over and which, in our solution, are relevant for us in some way.

In the context of the book, we consider the following to be threats:



- 1. The situation in the business environment has not yet reached a stage where quality information in the form of knowledge repositories will be considered a strategic value.
- 2. People, technicians, content makers will resist any changes to their habits so much that they will not accept new approaches.

### Strengths useful for goal achievement (S)

Perspective «BS Perspective» in package '03.SWOT Analysis'

- 1. It is original
- 1.1. "Model-driven book"
- 1.2. The book on methodology is created using the methodology itself
- 2. It is different in content and aimed at understanding
- 2.1. The terms in the book are distinguished according to their domain.
- 2.2 The book tells a story
- 3. Book as a guide for writing books, technical documentation, in a specific *Enterprise Architect* product.
- 3.1. This first book provides examples and "screenshots" directly from the "development" environment for the "development" of the book.
- 4. This book saves resources time, energy and money
- 4.1. Methodology helps you manage all the obstacles on your way to the goal.
- 4.2 The book helps master the techniques of using *EA* in specific instances.
- 5. Personalized publication
- 5.1 The book knows who it was generated for
- 5.2 Access to other interesting content

#### Weakness for goal achievement (W)

Perspective «BS Perspective» in package '03.SWOT Analysis'

- 1. Over complexity
- 2. Inability to express a complex subject in a simple and comprehensible way

#### **Opportunities (O)**

Perspective «BS Perspective» in package '03.SWOT Analysis'

- 1. Establishing a new way of content creation. Model-driven book.
- 2. Increasing awareness of the "Enterprise architect" product as a system tool, not just as another drawing application.
- 3. Expanding the reputation of the author as a specialist in system thinking, enterprise architecture and EA tool

## Threats (T)

Perspective «BS\_Perspective» in package '03.SWOT Analysis'

- 1. In companies, documentation is not considered strategic value
- 2. People do not like changing their habits



	Strengths useful for goal achievement (S)	Weakness for goal achievement (W)
Internal potential	1. It is original	<ol> <li>Over complexity</li> <li>Inability to express a complex subject</li> </ol>
External circumstances		Threats (T)  1. In companies, documentation is not considered strategic value  2. People do not like changing their hab

Fig. 14: 03.SWOT Analysis

## 1.4.5 D1-04.04-Risks

PACKAGE NAME-04.RISKS, STEREOTYPE- ".

In this section, the 7D methodology recommends to reflect on the risks. Risks accompany us at every step. If we find time to think about what risks we are facing, it can save us a lot of time and energy, and it can be the key to success or the reason for failure. We can prepare for the risk we know about, reduce its possible consequences, or we can also accept such risk on purpose.

From the book's point of view, we mentioned some of the risks in our previous SWOT analysis. I see the greatest risk in the unprepared key players, who do not want to change their habits and also in the relatively high



demands on the new organization of teams. Whoever achieves success without sophisticated procedures, will not have any incentive to change any habits. Only time cans how if this is good in every individual case.

## 1.4.6 D1-04.05. Risk minimization measures

PACKAGE NAME-05. MEASURES, STEREOTYPE- ".

Identifying risks is only the first part of the process. It is necessary to decide whether we accept the risk and do not handle it, or take some action. Everything takes time, energy and money.

The 7D methodology and the entire book have been modelled to minimize the misunderstandings and show with a practical example the way to realize it. We have introduced a variety of formatting concepts for different meaning areas, and we have clearly separated the texts about the methodology and text about the book itself. The final part includes a list of terms used in the book.

# 1.5 D1-05. Evidence of project activities

PACKAGE NAME-05. WORKACTIVITIES EVIDENCE, STEREOTYPE-".

There are many events during the journey to the goal, which are worthwhile to record. For example, project meetings where decisions are taken, tasks are assigned and information is exchanged. At least, it is good to keep track of the time spent on various activities. I do not know one person who likes this activity. More so that one is forced to prepare the time records in multiple systems, and often reports need to be bent to different needs. Thanks to many years of experience, I have concluded that it is better to separate the process of collecting data from their evaluation. For example, I have used "MS Outlook" and its calendar for many years (about 17 years) as a primary system for keeping time records. Regardless of whether someone wanted me to do it or not. The advantage was that I had single source of truth about my worked hours collected in one table. I prepared my individual records on the day I did the activity. It just took me a few minutes of the day. Forms derived from standard forms for the calendar were supplemented with specific elements that I needed to register for the different managers. I always had information ready if they requested it. If we create records continuously, we do not have to make them up in the end. And if necessary, such data can be "flexed" more easily. But that's another story.

All these routine activities can also be performed in *EA* environment. How? The following publication will address the implementation of the methodology in this tool. This publication, which is about the methodology itself, will explain the information about the recording of time when writing this book. Meetings with customers, team meetings or special events, which I think were worth keeping for the future, were not recorded for the purposes of creation of this book. During the preparation of this book, I added special directories for estimation and especially for records of time consumption. For each day when I did something, one directory – "*Package*". There I saved a special element from EA, which I provided with a special feature (stereotype) "TimeRecord" to emphasize that it is a record of time. Using the EA standard feature, I was able to assign resources and roles to this element, recorded the beginning and end of the task, an estimate of the effort and added a few notes. During work, at the end, or even later, I was then able to evaluate the course of the book preparation process. There are some reports in reporting section - <u>PCG\_00096\_Effort\_Report\_.</u> Looking at the increasing columns gave me a certain sense of satisfaction that the work was progressing. Slowly but still progressing. As with other activities where there is no external deadline, where the scope and depth are not defined, and where things are done for the first time, it is difficult to determine the final deadline. But the record of hours worked provides one with a reflection of the amount of time that the activities required. This is an extremely valuable basis for other similar work.

# 1.5.1 Example of time records during book development

PACKAGE NAME-PCG\_00154\_20170827-NIEKTORÉ UKÁŽKY Z EVIDENICE ČASU V EA, STEREOTYPE-".

In *EA* tool you can record time above any element. For the concentration of information at one site according to the 7D methodology, there are special elements for time recording. It facilitates search and filtering for different reports.



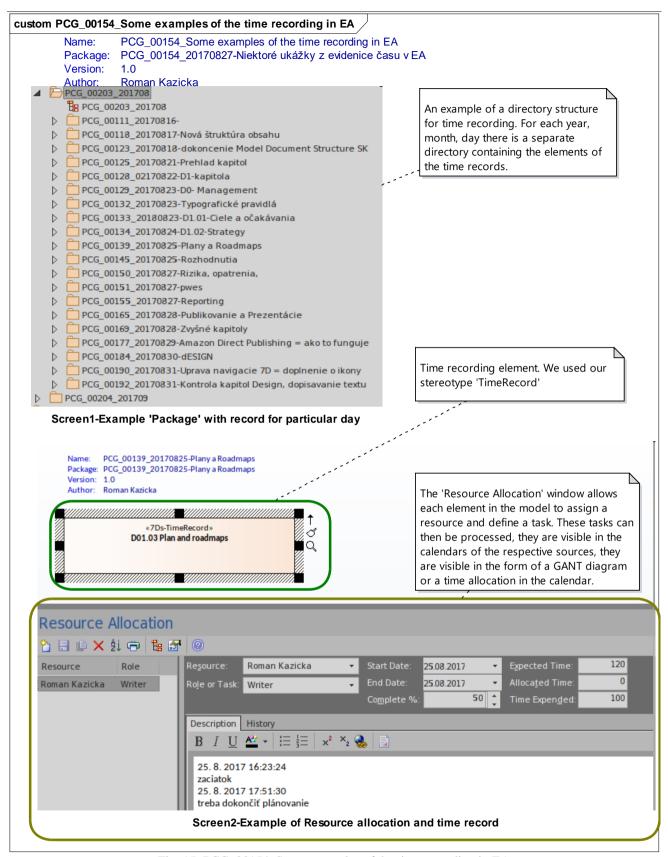


Fig. 15: PCG\_00154\_Some examples of the time recording in EA

# 1.6 D1-06.Reportings, Statements

PACKAGE NAME-06. REPORTINGS, STEREOTYPE-".



Reporting keeps a lot of managers at work, especially in larger companies. It is sometimes questionable what came first – the manager or the report? I do not want to argue about this, every manager deserves respect... Regardless of what we think of managers, the reports help us (also in the role of managers) better know our way to the solution. If we make honest recordings in individual disciplines, we create information resources that are very useful when deciding whether we are going in the right direction and at the right pace. The 7D methodology proposes two basic views on the solution. From the point of view of project management and in terms of model quality. From the project point of view, we will be interested in whether the tasks are fulfilled, whether records of time spent are prepared together with reports on hour estimates, actual hours worked, and so on. This is not mandatory, but if we monitor these activities and honestly prepare them, we will get real numbers that will help us as the basis for estimating the difficulty of future journeys. On the first journey these will have a hygienic role, they will provide us with energy to reach the goal. Otherwise, we may stop halfway and forget that we are our journey to the goal. Model quality reports will help us increase the credibility of our source of information which key players can utilize.

When writing this book I tried to record my time. I have to admit that it could have been done better. I have recorded almost all the beginnings of tasks and activities quite honestly. It got worse with their closures. That is still waiting for me. I expect a few iterations. I will go through all the open tasks and evaluate their status. Many are already finished. I will only be able to estimate the amount of hours spent for their resolution. I should introduce a control at least once a week.

## 1.6.1 D1-06.01. Reports for project management

PACKAGE NAME-01. PROJECT MANAGEMENT REPORTING, STEREOTYPE-".

From a project management perspective, we are interested in issues related to delivery if solutions in defined deadlines, acceptable price and quality.



In this chapter we will show some examples of project reporting when writing this book.

### 1.6.1.1 Number of time records in trend chart

PACKAGE NAME-PCG\_00156\_NUMBER OF TIME RECORDS IN TREND CHART, STEREOTYPE-".

This statement can provide us with an interesting perspective of our work or the work of other team members. For example, it shows us if we are working on the journey with an overview. Whether I think about the work before doing it. Or, whether the Project Manager assigns tasks to us. Of course, it is important to understand the context of the project and not to overdo it. The report can be adjusted according to the manager needs

The chart shows how many time records have been added during a specific day. It does not show quality, just activity. But it is still a very interesting information. Especially if there is more people working on the project. Even more interesting scenario would be to see the planned and real hours. I can only prepare this scenario only by using a spreadsheet with data imported from *EA*. With the current version of EA, I am no table to present the trends about calculated parameters using the "Series charts" elements.



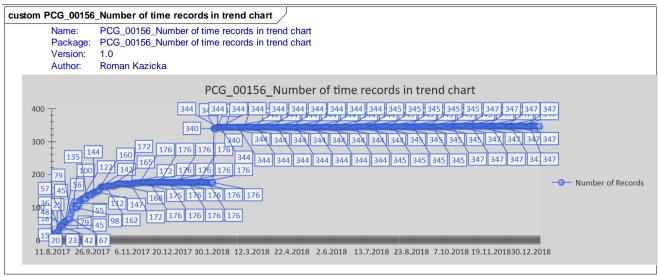


Fig. 16: PCG 00156 Number of time records in trend chart

### 1.6.1.2 List of time records

PACKAGE NAME-PCG 00157 LIST OF TIME RECORDS, STEREOTYPE-".

For practical management, it is very useful to keep track of planned and actually spent hours on the project. This is important for future resource planning. Basically, we have our monthly capacity. Very often the team members are paid a monthly lump sum. For them, this parameter is of no particular importance. It is important for those who pay for these team members.

The previous chart only showed us the number of reports. But we usually need more detailed information, for example, who? how much? when? recorded the hours. We can use the "Model View" special element in the *EA* environment, which can be seen in the following chart. The element uses an **SQL** command, which can also be used in "search". The advantage is that we can process the results in a spreadsheet (e.g. Libre Office Calc, MS Excel). The "Model View" element is shown in the figure. The content of this element is active, which means, that when generating the document, it will contain the current status at the time of generation.

Pacl Vers	Name: PCG_00157_List of time records Package: PCG_00157_List of time records Version: 1.0 Author: Roman Kazicka  ist of All Planned, Actual, Resources, by Keyword												
List of All	Planned,	Actual,	Resources, by K	Ceyword									
Keywo	Create	Reso	Role	DateStart •	Date	Allo	Ехр	Ac	Perc	Name	Alias		
	2018-0	Roma	Business Analyst	2018-06-29 00:00	2018	0,	0	0	0	Class1			
	2018-0	Roma	Writer	2018-02-05 00:00	2018	0,	90	0	100	20180205-Pokracovanie D2-vklada			
	2018-0	Roma	Developer	2018-02-04 00:00	2018	0,	240	0	0	Premos EN textov do modelu			
	2018-0	Roma	Developer	2018-02-04 00:00	2018	0,	240	0	0	Aktualizacia modelu pre EN verziu			
	2018-0	Roma	Developer	2018-02-04 00:00	2018	0,	120	0	0	Feature_004_To add the system to	Feature_004_Te		
	2018-0	Roma	Developer	2018-02-01 00:00	2018	0,	60	0	0	Book duplication and initia config			
	2018-0	Roma	Writer	2018-02-01 00:00	2018	0,	240	0	0	Copy Packages			
<u>○</u>	2018-0	Roma	Writer	2017-11-14 00:00	2017	0,	120	240	100	Oprava chýb v texte, oprava gener			

Fig. 17: PCG\_00157\_List of time records

# 1.6.1.3 Example of details in "Change Management" process

PACKAGE NAME-PCG 00158 EXAMPLE OF DETAILS IN "CHANGE MANAGEMENT" PROCESS, STEREOTYPE- ".



Each element in the model has its life cycle. Just like elements in real life. It gives us a great advantage if we have a tool in which we can monitor the lifecycle of the elements of the solution. If we had such a tool and the data in it would be trusted and up-to-date enough, all the roles, and especially the managers, will be able to rely on a reliable source of information in their decisions..

In *EA*, it is possible to model and capture these changes - such as the occurrence of a failure, a problem, events, decisions, and thus capture the essential things that have reason to be interesting for the different roles in the project.

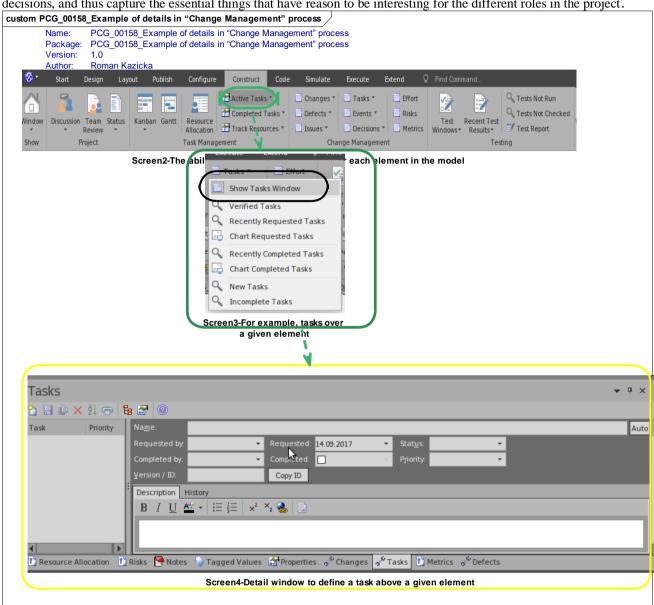


Fig. 18: PCG 00158 Example of details in "Change Management" process

## 1.6.1.4 Reports via external applications

PACKAGE NAME-PCG 00249 REPORTS VIA EXTERNAL APPLICATIONS, STEREOTYPE-".

7D methodology does not prescribe any tools or technology. It is assumed that there are a number of applications that can be effectively used in specific cases.

There is no best application for all the various uses. Table spreadsheets are very popular in reporting. And we will also use them. Using the "search" command, we can filter those records which inform us about the sources and



planned and reported hours. We can then use this primary data with a PivotTable as the basis for out reports. Background documents that were put together during the writing of this book will be used as an example. We used a spreadsheet (Libre Office-Calc) as an external application.

#### 1.6.1.4.1 LibreOffice-Calc

PACKAGE NAME-PCG 00250 LIBREOFFICE-CALC, STEREOTYPE-".



There are several types of spreadsheets. We used the free Libre Office software and the Calc calculator,

## 1.6.1.4.1.1 Timesheet report

PACKAGE NAME-PCG\_00247\_TIMESHEET REPORT, STEREOTYPE-".

Overview of used hours can be seen in the following chart.

custom PCG\_00247\_Timesheet Report

ExpectedHours - all -Year - all -

Sum - [H]ActualHours	Month	Week							
	7	8				9			Total Result
Resource	31	32	33	34	35	35	36	35	
Alžbeta Kazičková		20,00	1	0,00	0,00				20,00
Roman Kazicka	0,00	11,25	7,50	35,17	12,00	2,00	7,17	0,00	75,08
Total Result	0,00	31,25	7,50	35,17	12,00	2,00	7,17	0,00	95,08

#### Screen1-Overview of spent hours

Fig. 19: PCG\_00247\_Timesheet Report

## 1.6.1.4.1.2 Plan vs. reality

PACKAGE NAME-PCG\_00248\_PLAN VS. REALITY, STEREOTYPE- ".

The table shows how planning and implementation are going "wrong". As a project manager, I should organize a meeting and talk to the team members. I am alone, so I have to somehow sort it out by myself. But even so, it is a good feedback.

custom PCG\_00248\_Plan vs. reality

ExpectedHours - all - Year - all -

N			Week	J						
		7	8				9			Total Result
Resource	Data	31	32	33	34	35	35	36	35	
Alžbeta Kazičková	Sum - [H]ExpectedHours		11,00	)	0,67	5,00				16,67
	Sum - [H]ActualHours		20,00	)	0,00	0,00				20,00
Roman Kazicka	Sum - [H]ExpectedHours	0,00	30,17	13,00	73,33	17,50	2,00	68,50	0,50	205,00
	Sum - [H]ActualHours	0,00	11,25	7,50	35,17	12,00	2,00	7,17	0,00	75,08
Total Sum - [H]ExpectedHours		0,00	41,17	13,00	74,00	22,50	2,00	68,50	0,50	221,67
Total Sum - [H]ActualHours		0,00	31,25	7,50	35,17	12,00	2,00	7,17	0,00	95,08

Screen1-Planned hours vs real reported hours



Fig. 20: PCG 00248 Plan vs. reality

## 1.6.2 D1-06.02. Reports for monitoring model quality

PACKAGE NAME-02. MODEL QUALITY REPORTINGS, STEREOTYPE-".

We expect information sources to provide us with the right information. However, in order to trust the information source, we need to verify that it provides us with credible information. This is what our predefined metrics are for. For example, we will be interested in whether each computer in the model also has a serial number record. We are also interested in the source of the information from which the model was getting information. Sources of information include technical systems, various agents, imports, and so on. The people responsible for the area may also be the source of information. It is not possible to jump to a state where the model will have a high percentage of credibility. This needs to be a process, and therefore these information about progress or stagnation can help us identify the problem in time.

When I was writing this book, my main problem was the lacking support for checking the typing errors for the Slovak language. I had to use external applications and the time from the error creation to its detection was prolonged. Another problem for me was the consistent project management. I would need an overview notice board to see all my unfinished tasks and I was also lacking some discipline to close up my tasks.

## 1.6.2.1 Elements in model according their status

PACKAGE NAME-PCG 00160 ELEMENTS IN MODEL ACCORDING THEIR STATUS, STEREOTYPE-".

Every element as part of the solution has its life cycle. A classic document, as the primary source of information about the status of the solution, cannot function as a source of information for each element. The model-driven solution naturally holds all the information about each element. However, there is another problem, with the process of updating the state of the solution at element level. This cannot be solved by any technology. This must be taken care of by methodologies, team culture, common vision, discipline, responsibility of the individual for the whole unit. 7D methodology is aimed at contributing to gradual change and development of habits in teams in this dimension.

The following figure shows 2 things. The model does not currently work with element states. Number of elements in a model divided by element state. The second figure shows us the number of elements contributed by each author. At the time of writing of this text, 979 elements were "Proposed" and 1 was "Approved". This is because the model is constantly changing. With the next generation of the document this will change.

Generated for:Roman Kazička, SystemThinking spol. s r.o., Expiration: 10.Oct.2020



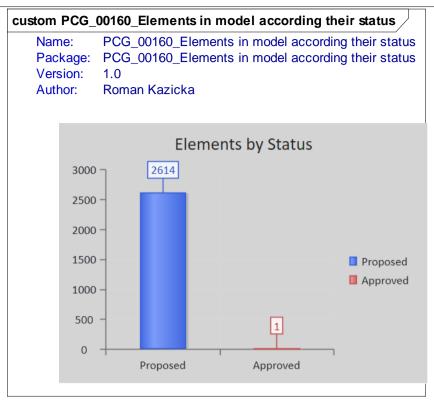


Fig. 21: PCG\_00160\_Elements in model according their status

## 1.6.2.2 Number of elements in a model by author—initial control

PACKAGE NAME-PCG\_00161\_NUMBER OF ELEMENTS IN A MODEL BY AUTHOR—INITIAL CONTROL, STEREOTYPE-".

The number of elements in the model by their authors in the team project can help us identify the number of elements each author created. It does not show however the quality of work, just the activity. It is quite interesting to sometimes identify authors who do not exist in the team. These come about as a side effect of using predefined elements, where the author is taken over from the operating system or from the "MDG" extension. Part of the inaccuracies is nevertheless the error of the content creator in cases when inconsistent classifiers are used. The "Author" property is filled in automatically. The errors in the figure occurred probably due to the "security" feature being not immediately turned on after the model was created, so login was not forced during signing in. This login is then used as the value for the "author" attribute.



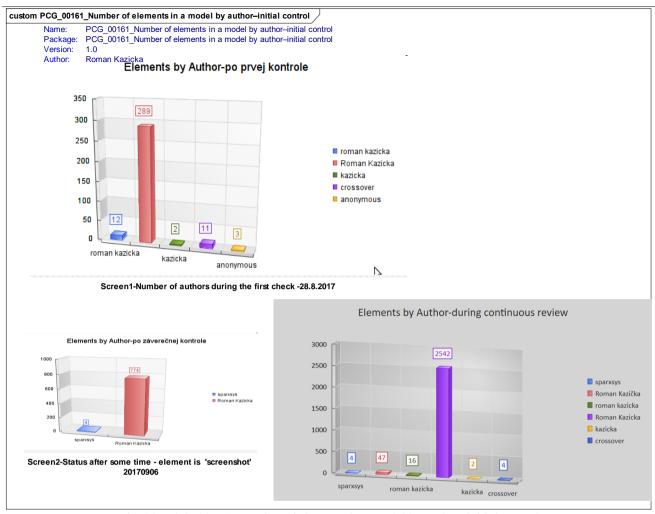


Fig. 22: PCG\_00161\_Number of elements in a model by author-initial control

## 1.6.2.3 Search for incorrect data and correction

PACKAGE NAME-PCG\_00163\_SEARCH FOR INCORRECT DATA AND CORRECTION, STEREOTYPE-".

When searching for elements with incorrect information in *EA*, we help ourselves with the search feature in the "search" model and the subsequent correction of the incorrect data. For larger volumes and bulk changes, you can use the option to program actions in scripting tools (jscript, vbscript, javascript).



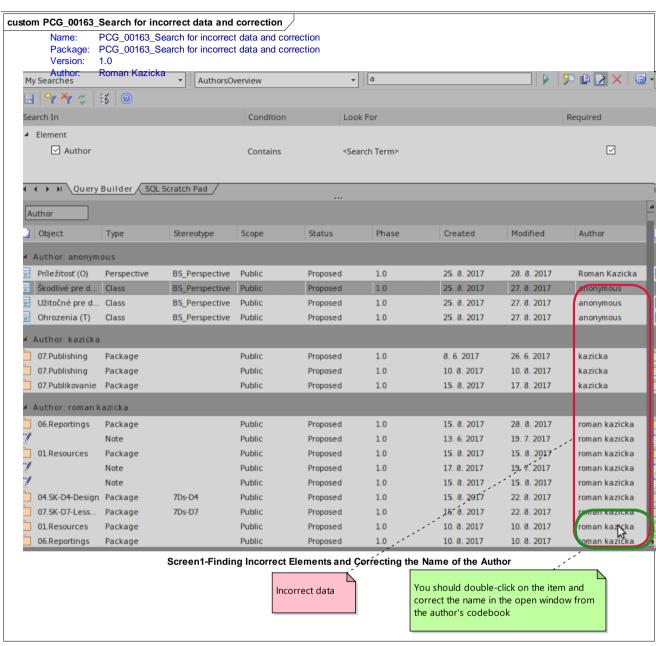


Fig. 23: PCG\_00163\_Search for incorrect data and correction

## 1.6.2.4 Subsequent model quality control from contributors to the model

PACKAGE NAME-PCG\_00164\_SUBSEQUENT MODEL QUALITY CONTROL FROM CONTRIBUTORS TO THE MODEL, STEREOTYPE-".

The status in the figure corresponds to the moment according to the time stamp 28.8.2017. The status changes and will be different in each generated document.



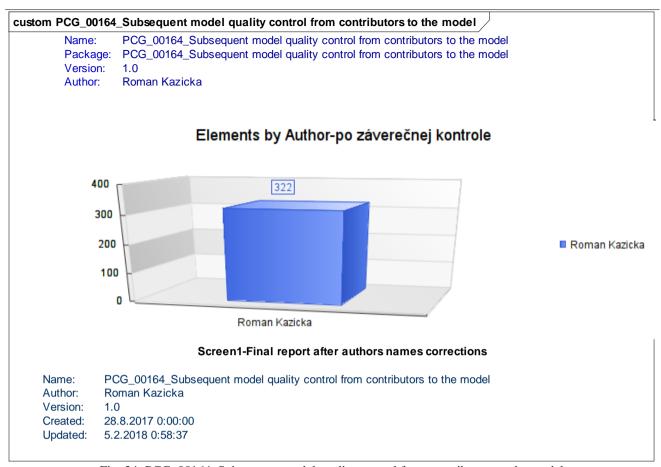


Fig. 24: PCG\_00164\_Subsequent model quality control from contributors to the model

# 1.7 D1-07.Publication, Presentations

PACKAGE NAME-D1-07. PUBLICATION, PRESENTATIONS, STEREOTYPE-".

From time to time we need to talk to other people about our work. This place in the 7D methodology is designed for the preparation of presentations and the preparation of printed outputs. EA has plenty of options to help us without the need of any additional applications. Please see <u>PCG\_00166\_EA Reporting tool</u>. Do we need to print the handover protocol for the infrastructure we are in charge of? Do we need to print an offer where the underlying materials are generated directly from the model? Do you need to write a book? Do you need to communicate the concept of our solution, milestones, phases, risks and its minimization with our customer, partners?

With the help of the EA tool we have one technology in different variants that provides us with generated documents in pdf, docx, rtf, html formats or in a direct view of the model through the web. This book is completely generated from EA and is focused on describing the methodology itself and the EA tool features. "What?" can be done with it. Details of "How?" will be described in the next book focused on how to do it.

# 1.7.1 Practical examples

PACKAGE NAME-PCG\_00218\_PRACTICAL EXAMPLES, STEREOTYPE-".



In this section, we will show you the basic options and examples of how this publication was generated.

## 1.7.1.1 "Model document" directory example

PACKAGE NAME-PCG 00217 "MODEL DOCUMENT" DIRECTORY EXAMPLE, STEREOTYPE-".



One of the ways to publish the output documents in pdf, docx or html formats in **EA** is a special technique using a directory with the "master document" stereotype. This directory contains all definitions of the subdocuments that constitute the resulting document. Formatting for all subdocuments is downloaded from the main directory. There is a comprehensive tool for creating document templates, document fragments, defining dynamic previews that display the contents of a chart with selected elements as needed by the user. The best example of EA features in terms of output documents is this publication. In section <u>07.SK-D7-LessonLearned</u> some of the experiences we have gained in creating this publication are summarized. EA is certainly not the best tool for generating book-type publications in the field of classic books. EA is a very powerful tool for generating technical documentation where metadata about every detail of the modelling reality is expected. EA is a modelling engine that produces a number of metadata about each element in the model. It is up to the user, when and what data to use and in which document.



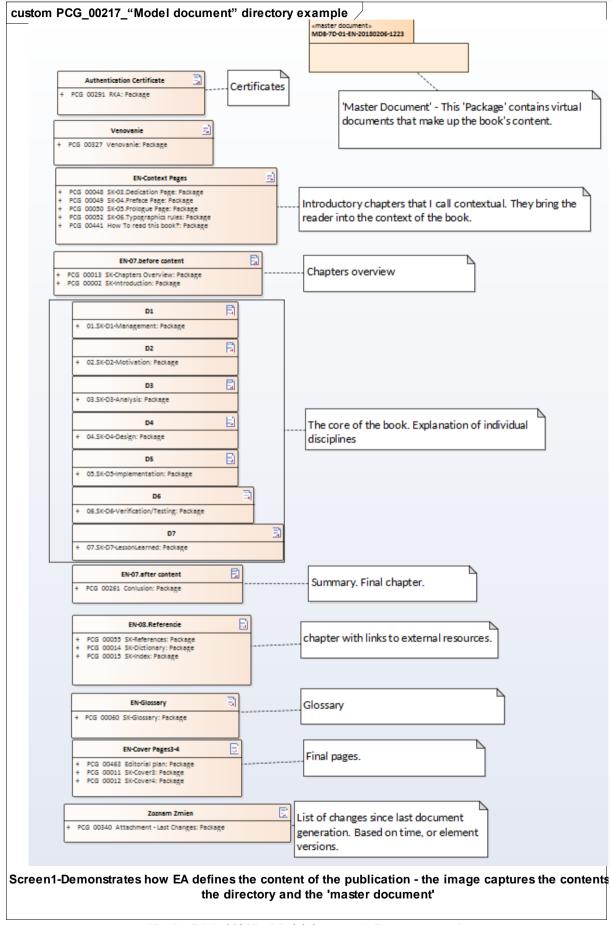


Fig. 25: PCG 00217 "Model document" directory example



### 1.7.1.2 Static and dynamic documents

PACKAGE NAME-PCG 00220 STATIC AND DYNAMIC DOCUMENTS, STEREOTYPE-".



EA allows you to create several types of documents. The following list is not complete:

- documents generated from the live content of the model by selecting metadata according to the current need using the "Generate Documentation" feature
- almost every element in the model can contain a so-called "linked document"
- document from individual elements
- document from selections after searching using the "search" command

### 1.7.1.3 Presentation options in EA

PACKAGE NAME-PCG 00222 PRESENTATION OPTIONS IN EA, STEREOTYPE-".





Content presentation in *EA* has a large number of options:

- static viewing of charts, in normal view and in "Full Screen"
- highlighting an element on a chart with a mouse click focus ("Chart Filtering")
- dynamic element filtering on charts ("Chart Filters")
- using active legends on charts which cause changes to charts
- selecting charts using special bookmarks "Model views"
- presentation mode "slide show"
- selection of charts according to predefined filters



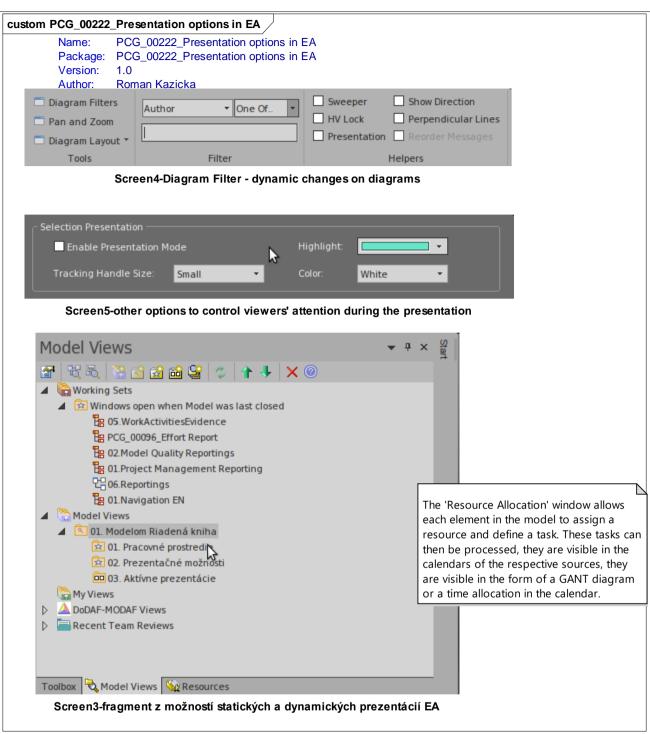


Fig. 26: PCG\_00222\_Presentation options in EA

### 1.8 D1-08.Resources

PACKAGE NAME-D1-08. RESOURCES, STEREOTYPE-".

The 7D methodology prepares us for thinking about resources as well. We might as well have motivation, goals and strategy if we do not have the necessary resources. In 7D methodology the resources shall mean human resources, time resources of individual key players and last but not least the finances.



When writing this book, resources were limited by the number of people, scarcity of finances and with the lack of time. As is the case with any solution.

### 1.8.1 D1-08.01. Human resources

### PACKAGE NAME-01. HUMAN RESOURCES, STEREOTYPE-".

"Give me people and I'll do it." This sentence is often used as mockery, but without people things just simply cannot be done. Even a fully automated factory needs people. At least those who invented the factory, and then those who supervise the whole process functions properly. What can be automated can be left to robots and what cannot be automated needs to remain the responsibility of people. The room for people is getting smaller and the share of "AI" is increasing. An interesting question is where this ratio will eventually shift. But that's a whole other topic.



I did most of the work for this book on my own. My daughter made the graphic artwork.

### 1.8.2 D1-08.02.Time resources

### PACKAGE NAME-D1-08.02. TIME RESOURCES, STEREOTYPE- ".

In order for the solution to succeed, it is essential for the key players to find time to implement it. Without allocating time the solution will simply not realize.

Writing a book has its specific problems. It is mainly a fight with yourself. Identifying priorities, arguing with yourself, discipline and self-control.

### 1.8.3 D1-08.03.Finances

### PACKAGE NAME-D1-08.03. FINANCES, STEREOTYPE-".

The finances are listed as one of the last points, but without the money, the best plans will still remain on the paper or even in the model. How to acquire finance for your journey to reach the goal? I do not know. I have no specific proposal. There are many other publications about this issue. In any case, where there is strong motivation, money always comes. As they say, "Where is the will, there is the way". In any case, whether we start a journey as part of our hobby or a business venture, we will need mental exercises to evaluate all available information to start or not to start the journey. For a special journey - starting a business, I am preparing a "Q12-12 quadrants for a successful business" methodology. But as a first step, you first need to master the 7D methodology.

Preparation to write a 7D book took several years. The writing itself took about 6 months. If I had to price it as a project, I would have estimated the cost at about 10 000 €. I finance it from my own resources. In the last 15 years, I have gained enough information - professional, human, methodical and about EA technology. In addition, I have gained a lot of opinions that the documentation in IT is being prepared only at the end of the project when the work is already done. I disagree with such practice and this is also how I am trying to change it. I am also trying some teaching. I give lectures to young people from the age of 12, the eighth and the nine-graders at primary school, grammar school students and at the university. For my part, I consider this a long-term investment. If I get a financial return of only a tenth of spent costs in the first year, I will consider it a financial success.

### 1.9 D1-09. Intellectual Property

PACKAGE NAME-09.INTELECTUAL PROPERTIES, STEREOTYPE-".



This chapter was prepared as one of the last, but it is an important part of our solutions. Perhaps not every solution will have the features that will need to be addressed in the form of copyright protection. This is an extremely wide area. In this publication, we will only deal with it in the scope of book or books that are created. The 7Ds methodology just wants to encourage researchers to think even in this plane, and if they have to deal with this issue, they have a place in the model where they can write down their specific comments.

I am interested in spreading the methodologies described in this publication with the least resistance possible. I realize that people today no longer have the time to read or choose carefully what they will read. Time is our most precious commodity, and each of us is gradually losing part of it.

For the introductory book on methodology, I chose the Creative Common based licensing model – <u>'Creative Common ShareAlike 4.0'</u>, means 'Specify the source -Keep license 4.0 International (CC BY-SA 4.0).



## 2 Second discipline: D2 - Motivation

PACKAGE NAME-02.EN-D2-MOTIVATION, STEREOTYPE- '«7DS-D2»'

They say "Where there is will, there is a way". But whose will and whose way? It is good to clarify these questions already at the start. Even if only one person participates in the solution. A much more challenging issue is to clarify the motivation of key players if the solution involves many elements, many companies and many specific people. Motivation is about emotions and about the internal need to take part in the solution. Often, motivation is unknown and it is frequently not clear who is the key player. In such case, it is almost certain that at the end of the journey it will be very complicated. Identifying all the key players, their impact on solutions and their motivation is an extremely important thing for the success of the whole solution. Proper consideration should be given to it.



The next chapter is a small preview of such an analysis.

## 2.1 D2-01.Stakeholder analysis

PACKAGE NAME-01.STAKEHOLDER ANALYSIS, STEREOTYPE-"

Key player analysis is essential for successful solutions. It is hard to play if we do not know our teammates. It is hard to play a single-player game unless the player even realizes why he or she is actually playing. We do not need to know or at least anticipate the motivation of the players for every activity. But if we care about the outcome, it is worthwhile thinking about who plays this game, what is the meaning for the participants, who is deciding in this game and so on.



The list of key players below is not complete at all.



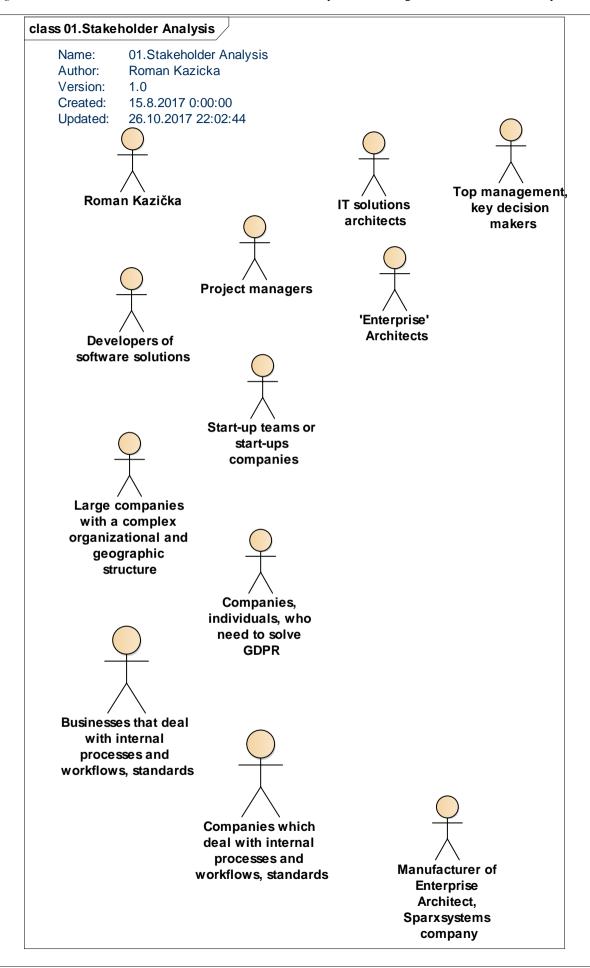




Fig., 27: 01. Stakeholder Analysis

### Manufacturer of Enterprise Architect, Sparxsystems company

Actor in package '01.Stakeholder Analysis'

When Geoffrey Sparks founded his company in 1996, he maybe did not even know what kind of timeless product the company was to introduce to the market. The original intention of supporting software engineers in the field of UML charts has a much wider scope. For me personally, *EA* is primarily a Knowledge based management system based on metadata. Lately, I have also been using EA as a data source for various technical documents. I hope that the experiences included in this book will help improve some of the documentation generation capabilities. In particular, the access to the central repository via the web interface, a more sophisticated interface for working with the model would support figure creation on community sites. I think that the highly professional community sites include a small number of pictures (different wikis, Github, StackOverflow, etc.).

#### Roman Kazička

Actor in package '01.Stakeholder Analysis'

My motivation is based on a long-term experience from practical work, where sharing knowledge, building single source of truth and creating documentation was provided with insufficient attention.

• Without communication there is no understanding, without understanding there is no trust, without trust there is no successful solution.

With this and the following publications I would like to contribute to all three areas:

- communication
- understanding
- trust

Since 2004, I have been using the 8D (8-discipline) methodology to solve the problems introduced by Henry Ford's factories in the last century. The methodology itself and its modifications proved themselves because of their clear structure and form. 8 disciplines also means eight chapters, eight stages of open documents, so-called "eight Ds". According to the number of problems in each stage, the operation of a small production plant can be well managed, but also wherever it is desirable to eliminate incidents of higher severity or problems with managed process. Based on my experience, I gradually added and edited the original methodology. In particular, I added explicit chapters on management. My aim was to develop a methodology that would be applicable wherever it is necessary to solve, analyse, design, decide, learn from experience and, above all, help people involved in the solution to be successful. Thus, the first two methodologies were created. First one to manage the implementation process from the idea to the expected outcome - 7 Discipline for successful solutions. The second - Assets-Perspective-Views is focused on describing the structure of assets, defining the perspectives by which we observe the assets and the description of specific assets through a specific perspective in a particular view.

### 'Enterprise' Architects

Actor in package '01.Stakeholder Analysis'

"Enterprise Architects" need a comprehensive tool to be able to implement their roles in companies. In addition to methodologies, they also need a system tool to support them in as many perspectives, through which they look at business, systems and data and technologies. The 7D and APV methodologies and their implementation into *EA* can help this role in putting architectural frameworks into practice, building a "common understanding" with top management of a company, but also a customer or a business partner.



There is a lot of nice top methods for "enterprise" architecture like *TOGAF*, ZACHMANN DoDAF, or graphic languages for IT top architects like ARCHIMATE. There are also many technologies where this is implemented in some way. Nevertheless, I needed simpler tools that I could grasp and use on a daily basis. Therefore, the first two 7D and APV methodologies were developed. The methodologies themselves are implemented in the EA tool. This way I created a very interesting tool for the practical use and implementation of "top level" methodologies. Long-term experience connected with technology, methodologies and practical experience. At the same time, connection with other methods such as UML or ARCHIMATE is not excluded.

#### IT solutions architects

Actor in package '01.Stakeholder Analysis'

IT Architects need to design complex systems that have a relatively long lifecycle. If the information about individual parts of the system are described at different levels of detail in non-metadata tools, it is very difficult, and in my opinion even impossible for me to keep up-to-date information about system changes at any stage of the life cycle. This should be the very reasons why IT architects should use methodologies and technologies that support the entire life cycle of the solution. Text editors and spreadsheets are only technical tools for operational actions. Secondary sources of information. The primary source should be "single source of truth" - a model.

#### Top management, key decision makers

Actor in package '01.Stakeholder Analysis'

The top manager and key decision makers need information for their decisions. I do not expect them to be involved in modeling itself. But they can promote culture in their businesses so that it is based on trustworthy sources of truth. It is necessary to create conditions for the development of people in the field of modeling, knowledge sharing, focusing on the life cycle of components, systems and whole solutions.

### Companies, individuals, who need to solve GDPR

Actor in package '01.Stakeholder Analysis'

Current times are characterized by tsunami of information. Whoever is able to navigate these information has a huge weapon in his or her hands. This is why regulators are encouraged to at least partially protect members of society. One of the other regulations is aimed at promotion of citizens' fundamental rights - the right to privacy. In the EU, a directive called the *GDPR* was passed, which aims to change the market situation in a very tough way by putting in place a sanction for any company that does not meet this directive. In my view, this directive is inexecutable and creates a lot of room for corruption. But, no matter what, it is reasonable to reflect on the essential and constructive points of this directive. From the IT point of view, these are topics that concern the continuity of business processes, and especially from the IT point of view and the security of IT processes in companies. These include risk analysis, securing infrastructure failure, protection of sensitive data in production systems and backups.

In the event of a service failure and connected error in systems of fast and managed recovery, business data protection, knowledge of own infrastructure from processes, systems, information resources, locations and ways of storing information. Not only in what type of systems, but also in what locations, data encryption and protection against data misuse. All this requires a very good "documentation", knowledge of our own processes, systems and technologies. This requires a knowledge-based business that sees information as a strategic value which means survival in the competitive struggle.

7D and APV methodologies also offers support in this area:

- Practical steps support the knowledge level of all team members
- Knowledge is preserved and shared in trusted sources the so-called "single source of truth".
- Supporting the creation of habits that support the interests of the company and individuals
- Increases the level of communication inside the company, with partners and with the customer



- Raises the level and shortens the time to achieve a "common understanding"
- Supporting key decision makers and practically all the roles in actions and decision-making
- Creating company/community know-how based on the metadata and life cycle of each element
- It is possible to gradually move to new working practices,
- Supports existing worldwide best-practice experiences and standards (e.g. *TOGAF*, ITIL,...)
- Supports virtually all roles in the company
- From the cost point of view it is very affordable in terms of technology and methodologies used the most expensive part includes the costs for the change of habits and access to information in companies. However, the price for the current non-quality is certainly higher than the costs associated with the necessary changes. However, there are only a few who calculate the "price for non-quality in IT". For now.

### Businesses that deal with internal processes and workflows, standards

Actor in package '01.Stakeholder Analysis'

Companies that need to reduce workflow costs, improve the sharing of knowledge needed for business, improve internal communication, and shorten the time to reach a 'common understanding' state.

### Companies which deal with internal processes and workflows, standards

Actor in package '01.Stakeholder Analysis'

Companies that are not technically targeted can benefit from the 7D methodology and its implementation into its internal processes. 7D does not impress the discovery of a new wheel. 7D only offers an integrated look at the 2 key moments of our life. We live all our lives on the roads that bordered by milestones and the accumulation of assets that we need for our lives. Both in privacy and in working life. The 7D methodology helps with our mileage and APV helps with assets. At the same time, the assets are in each project, in each company something else.

By combining methodology and technology, new opportunities are created to make things better. We can Learn about our own mistakes and our mistakes are not reason to punish, but to use as a source for improvement in other projects.

### **Project managers**

Actor in package '01.Stakeholder Analysis'

Project management is essential for every project. For small projects, it is enough to share the role of the project manager, but for larger projects it will be a single person or a whole team. In any case, we need to carry out activities to help us maintain real "numbers". This includes finances, deadlines and so on. In large companies, team members are burdened by reporting to many managers. In small companies, reporting is much more simplified. A reasonable degree must be found in this area. For the last 15 years, I have always done my own recording of time. Regardless of whether or not the organization requested it. My reporting process is divided into two parts. Primary data collection and processing reports. Primary data collection was done in MS Outlook, which has excellent options for editing standard forms. I have used a modified calendar form. When you already have the data available, it is easier to make reports. However you need to prepare the reports at the time of performance, or some performance can be also planned. At the end of the month, just copy these to the appropriate manager's report. It saved me a lot of time, and it was also sort of a mental hygiene when I saw how much work I had or had not done in the last month.

The 7D methodology does not prescribe which methodologies and technologies to use in a particular project. In terms of *Enterprise Architect*, many features are implemented that also support the role and activities of project management. Collection of data from team members, reports of planned tasks, their status, priorities and complexity. From the 7D methodology perspective, the important thing is that these data and metadata are in a shared repository. This simplifies life for many members of the team by using one technology for multiple applications. Integration into other specialized tools is also simplified.



The project manager may find support in the *EA* tool in the form of resource allocation for each element in the model, a number of reporting elements (we only use time records for effort in this publication), selections that offer primary data for more complex reports in other tools, such as spreadsheets or project-oriented tools such as REDMINE, JIRA and the like.

### Start-up teams or start-ups companies

Actor in package '01.Stakeholder Analysis'

Many start-ups focus "only" on the product or service itself. On their journey they neglect the creation of the necessary information resources. There is not enough time, no necessary knowledge in the areas needed to start a company, marketing, sales, support, financing, organization of internal processes. Even in this case, the 7D methodology can help proceed systematically from the very beginning. 7D focuses mainly on the journey to the goal and the APV methodology describes assets from different perspectives. The journey and the project take some time. A product or a service will be created that has the potential to last much longer than the initial project. Life means change, so every product and every service is changing and evolving, and so every person is permanently on a journey with milestones. The milestones themselves are described by the APV methodology -Assets, Perspectives, Views. For the support of the start-up business, we are preparing a Q12-12 quadrant methodology to support business start-ups.

#### Large companies with a complex organizational and geographic structure

Actor in package '01.Stakeholder Analysis'

Large businesses have to deal with large problems, or as they say big challenges. It is just right that the teams in these companies are compared to orchestras and individuals to the players in that orchestra. But the orchestra is as good as its weakest member. Even the best performance of the entire body may go wrong with the inappropriate entry of the small triangle. People will not think that it was the bad percussionist, maybe they will not even distinguish that the bad impression was caused by the sound of the triangle. The whole orchestra will be bad. In IT, such a parallel is used but is not applies. The 7D methodology supports the professionalism of the entire team involved in the show. Conductor, players and listeners, customers who even pay for the show.

The 7D methodology offers a comprehensive system, structure of activities which need to be done, the technology in which this is implemented, and the experience that is rolled into the structure of each discipline. Processes in large companies are fragmented by individual organizational units. As they say, the left hand does not know what the right hand is doing. By establishing a "single source of truth" based on metadata and respecting the life cycle of each element in the source of truth, there is a chance that the "right information will be ready for the right role at the right time". Documents such as "Lastenheft", "Pflichtenheft", "Betriebshandbook", "Book of Standards", are the basic documents for defining customer requirements, definitions, scope, quality of delivered solution, business criticality level and the corresponding level of service required and dozens of other details, which are interconnected with one another and with existing systems at the process level, at the system level and at the technological level. There is a need to understand systems in their entirety as assets, from different perspectives and in particular detailed views. This is a rather complex problem that requires players with different instruments, respecting the score and the conductor's guidance.

### **Developers of software solutions**

Actor in package '01.Stakeholder Analysis'

Documentation is used to be created at code-level. There are various tools that automatically search the source code, and if the developer put the information there in an appropriate format, a nice, usually HTML documentation is created. Is this sufficient documentation? What system level can be described by this form of documentation? Often, there is quite a lot of documentation, but what does it actually describe? I see the leaves, but I cannot figure out what type of tree it is. How can such a form describe the business process, integration links, implicit relations, life cycle of solution or business model. The solution does not just include the code. According to the "Q12"



methodology there are at least 12 areas to be described in the solution in some way. And the technical documentation of the solution creation at the technological level is only 1/12 of the whole solution. Is that enough? Solution users are not just programmers. I am a visual type of person and I need to see what I am to understand. And I need to see it in the context and the best way is in pictures. First in conceptual and then also in more detailed ones. This is the way I learn, the way I often try to understand very sophisticated systems. But I also use the pictures to understand legal agreements. I have the feeling that both the form and the content of legal documents is deliberately chosen to create problems in the future. One picture in a legal document could often reveal misunderstandings and legal pitfalls at the time of signing of the agreement. The meaning of definitions and their relations is often unclear. In trying to understand the essence, principles, concepts, too much detail is not very helpful for me. On the contrary. I think that many recipients of such detailed information are in a similar situation. We need information at different levels of detail, according to our needs. In practice, I often come across the fact that very few people make the effort to draw a couple of initial conceptual figures that focus on the essence. Not all of us are experts in every area and we need a natural introduction. If it gets our attention, it will be easier to find and understand more detailed information.

Developers transform more abstract ideas into specific parts of the code. Sometimes it happens in the head of one person, sometimes it happens among the team members. The 7D methodology would like to help with communication and understanding among team members. No matter which development methodology they use, either agile or non-agile, they always need to communicate with each other. The 7D methodology recommends using the "One Source of Truth" to share information among key players. In our case, this is a model supported by Enterprise Architect.



## 3 Third disciplines: D3 - Analysis

PACKAGE NAME-03.EN-D3-ANALYSIS, STEREOTYPE- '«7DS-D3»'

In this chapter, the 7D methodology recommends collecting all information that are in some way related to our solution. These may include references to documentation, people, documents or web pages. Our own analytical activities and the like. In this section, we will consider what the documentation is actually about? How does the practice deal with documentation? What are the advantages and disadvantages of the current documentation process? In D4 discipline, we will then propose solutions for handling the documentation process in a different way compared to the present one.

In the context of our book, we introduce some background documentation about the writing of this book and how the "*Enterprise Architect*" tool supports the documentation process. To reduce the number of pages, we have moved the links to external sources of information to the chapter PCG 00055 References.

# 3.1 What approaches are used to create technical documentation in IT?

PACKAGE NAME-PCG\_00431\_WHAT APPROACHES ARE USED TO CREATE TECHNICAL DOCUMENTATION IN IT?, STEREOTYPE-"

Technical documentation in the IT area has large room for improvement. This is said rather mildly and I have to say that the topic could deserve a separate publication. Wherever I was working, documentation was discussed, something was even being done, but it was something that was stinking, no one wanted to have anything with it, but everyone needed it. No one really cares how the documentation should be updated throughout the whole life cycle of a solution. So the problem was not "Who?" should maintain the documentation up-to-date, but rather "How?" this should be done. Managers were pretending that the documentation exists. After all, they signed the contracts where it was required. This issue was always used when a culprit needed to be identified. Technicians pretended that the documentation exists, because when the managers need it, they need to deliver "it" somehow and something. I have to admit it is incredible how much energy is spent on this common deception of each other. If only part of this energy was devoted to finding solutions, it would have to make visible improvements over the years. How is technical documentation actually created? I do not want to generalize, I can only talk about my experience. I am not writing this to make someone look bad. I do not look for the culprits. Everywhere I worked, there were people I really appreciated, because I realize the difficult conditions that they need to work in, and yet the systems somehow work. There is a lot of stress, personal prowess, health problems and frustrations of individuals at all levels. But why? Is it not possible to change things so that this issue improves? I am trying to understand the overall situation in this field. If I was able to comprehend, I could propose a solution that can be verified in practice. I learned to distinguish the cases caused by the people and by the systems. I identified the following issues:

- primary information carriers are documents in some form or on paper
- multiple sources of information on the same assets
- low level of integration, communication between primary sources of information
- poor or no system for measuring and evaluating the reliability of data sources
- practical impossibility of keeping up-to-date information on assets in documents
- inappropriate structure of team members to create technical documentation
- most creative people are burdened / punished with the least creative work
- storage of documents in different repositories (Document Management System, CMS, etc.)
- high fluctuation of key team members
- low level of knowledge sharing in teams
- missing ecosystem infrastructure, methodology, processes, organizational support to simplify communication and share knowledge for key players
- general IT awareness that the technical documentation is done when the work is done
- general IT awareness that documentation is done for the customer, if not asked for (does not pay) then it is not prepared I realize that the list is not complete and I will add it in time. But just these few points indicate that the fault does not solely lie with the individuals but also in systems, processes, company culture and practices. The individual adapts to the system and to the used mental model.



## 3.2 What technologies are used to create technical documentation?

PACKAGE NAME-PCG\_00430\_WHAT TECHNOLOGIES ARE USED TO CREATE TECHNICAL DOCUMENTATION?, STEREOTYPE-"

In this publication, I focus mainly on *Enterprise Architect* technology from SparxSystems. I have been using it for quite a while now and I have not yet found a better tool. I have no business relationship with the company, nor any other profit from making this product popular. If I find a better product for myself, I will not have a problem teaching about a new technology. I already did it in 2000 and I have to say it was not easy. As they say, it is hard to break a habit. And every big change costs something. In this chapter, I would just like to mention some other technologies I think are in the product field and support the subject matter, i.e. the creation of technical documentation in IT. It is an extremely wide topic. Certainly, it deserves a deeper analysis that compares current technologies with the support of making technical documentation at all levels of detail. From the creation of architectural concepts, business processes and descriptions of workflows to minimal technical details. There are, for example, international organizations (such as OpenGroup) which try to develop criteria to assess the suitability of different systems to support the implementation of Enterprise Architecture Frameworks such as *TOGAF*. I have not performed such an analysis and I only express my personal experience. The next chapter is a list of certified tools that are on the official site of OPENGROUP. With regard to creating technical documentation in the context of the concept of a common, trustworthy source of data, I have come across the following tools:

- MS VISIO
- Provision
- ARIS
- PlanningIT
- Bizzdesign

After the years of my working experience in this field, I now understand that the key issue is not technology. It is the foundation without which it cannot be done. However, the success criteria come from people. It is not enough to only have technology. It is also necessary to change mental models in companies, corporate culture, habits of specialists, as well as working procedures of ordinary employees, non-IT specialists.

At the moment, I would greatly appreciate the technology that would offer accessibility in addition to great complexity. And I mean availability at least in the following areas:

- a simple interface for non-IT specialists
- the ability to access the system via the web interface
  - the ability to create simple text-based entries
  - the ability to create charts via the web interface

Many tools already offer it. Also Sparxsystems offers *WebEA*. But it is still not the proper thing. I would like a system that would provide me with the complexity of a fat client and the availability of a web client. The great advantage is that information to the shared repository can easily be accessed even by non-IT specialists who can actively add to the model.

## 3.2.1 List of Technologies supporting TOGAF implementation in companies

PACKAGE NAME-PCG\_00433\_LIST OF TECHNOLOGIES SUPPORTING TOGAF IMPLEMENTATION IN COMPANIES, STEREOTYPE-"

For those interested in a specific *TOGAF* work framework, I am providing information from the <u>OpenGroup</u> portal ("https://certification.opengroup.org/register/togaf-tool"). There you can find current certificates and areas where they were evaluated against specific areas in TOGAF.



custom PCG 00433 List of Technologies supporting TOGAF implementation in companies

## THE OPEN GROUP

## $Den_{ ext{GROUP}}$ Certification and Accreditation

#### User Login

#### Professional Certifications

ArchiMate® Certification Program
IT4IT™ Certification Program
Open FAIR™ Certification
Program
O-TTPS Certification Program

O-TTPS Certification Program
TOGAF® Certification Program
Training Course Accreditation
Examinations

Examination Fees
Take an examination

### TOGAF® 9 Tool Certification Register

### **TOGAF 9 Certified Tools**

There 8 tools from 8 organizations

All tools listed below are certified for conformance to the TOGAF® Version 9.1 Specification.

Organization	Tool Name	First Certified	Renewal	Conformance Statement	Certificate
alfabet AG	planningIT 7.1 and later	22-Jun-2012	21-Jun- 2018		
Avolution	ABACUS 4.0 or later	23-May-2012	22-May- 2018		
BiZZdesign	BiZZdesign Enterprise Studio	18-Jul-2012	17-Jul-2018		
BOC Group	ADOIT	15-Sep-2017	14-Sep- 2019		
Orbus Software	iServer Business and IT Transformation Suite 2015 or later	19-Aug-2013	18-Aug- 2017		
Planview	Troux	3-Apr-2012	2-Apr-2018		
Software AG	ARIS 9.0 or later	19-Nov-2013	18-Nov- 2017		
Sparx Systems Pty Ltd.	Enterprise Architect v12	06-Feb-2015	05-Feb- 2019		

All tools that are currently certified are listed in the public Tool Certification Register.

If you are a vendor with a certified tool and you're aware of any vendor claiming that its tool supports The Open Group TOGAF® standard or marketing such tool as certified, but the tool is not listed in this register of certified tools, we encourage you to report this vendor by sending an email to brand-enforcement@opengroup.org . Please include a link to the web page advertising the tool and Open Group staff will follow up with the vendor to bring them into compliance.

Screen1-Zoznam aplikácií podporujúcich implementáciu TOGAF

Fig. 28: PCG\_00433\_List of Technologies supporting TOGAF implementation in companies

## 3.3 What are the problems of the current "documenting"?

PACKAGE NAME-PCG\_00352\_WHAT ARE THE PROBLEMS OF THE CURRENT "DOCUMENTING"?, STEREOTYPE-"

present:

I see the following current shortcomings in the area of IT solutions, which are a general phenomenon of the

- Managers do not have enough information to make informed choices. And management is mainly about decision-making.
- Technical teams do not have up-to-date information on operating systems
- Recovery time of critical business processes is unnecessarily prolonged
- Increasing mental burden on all roles in companies
- Data is provided by people at lower management levels who only move data to higher levels of management,



but management does not need raw data, they need business information

- Managers need background material for strategic planning of support for key business processes, but they do not have this information or the information is not credible
- Low level of understanding among key players leading to great misunderstandings, which are often not resolved in reasonable time and finances
- Experience accumulates in the heads of individuals and "irreplaceable" heroes are emerging to save the situation

Over the last few years, we have been constantly pushing for speed of implementation of solutions. Around the year 2000, for example, the testing of multifunctional devices on the production line with the "UAT" was planned for several months. Times changed and we had to perform the acceptance tests in a matter of few weeks. The reason was simple. Saving funds and shortening the innovation cycle. The result? Despite all the rescue efforts, the production of multifunctional devices has failed. The effort for competitiveness was transformed into an effort to save funds with technological and process activities and processes that have improved the quality of the resulting product. After 15 years, this trend is even more significant. I understand this trend, after all "time is money". But there may still be a way to secure a reasonable extent saving. One way to do this is to change the way you work. I think there is a need to change the way products are services are created. The world is becoming more and more dynamic and increasingly complex. Our activities should also be tailored to that. One small area includes the relationship between key players. The basis of all relationships is communication-understanding-trust. With relationship, we generally understand legal relationships between business partners, members of internal teams and also relationships with ourselves. Currently, documentation is used to communicate between key players.



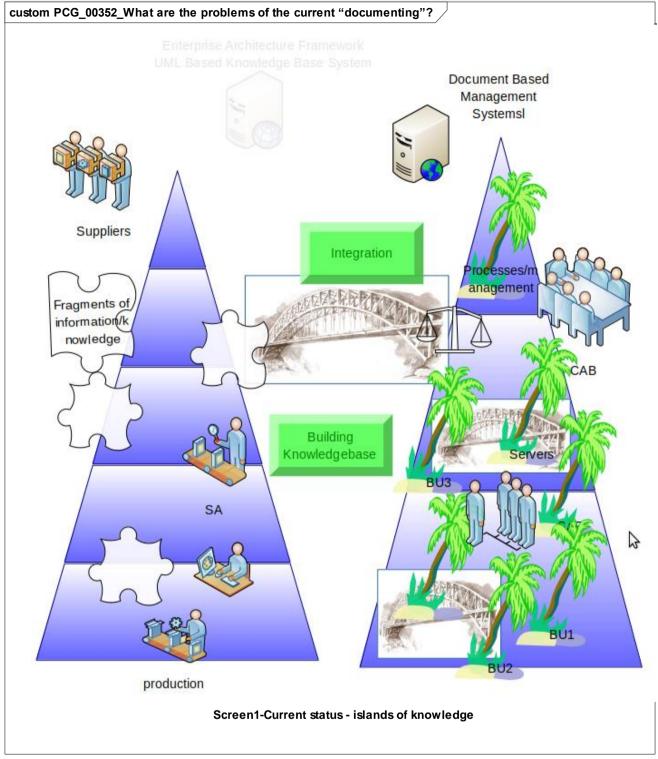


Fig. 29: PCG 00352 What are the problems of the current "documenting"?

## 3.4 What we understand when we say "documentation"?

PACKAGE NAME-PCG\_00353\_WHAT WE UNDERSTAND WHEN WE SAY "DOCUMENTATION"?, STEREOTYPE-"

There are many opinions on what the documentation actually is? We will understand the documentation as any printed or electronic media that carries real world data which correspond to a particular context for which it was created. For example, bids, contracts, supporting accompanying materials, pictures, spreadsheets, lists and technical



details about systems and components. Documents are usually printed, filed and archived, or stored in electronic form in repositories, which are then referred to as the "**Document Management System**". But what do we really need Documentation for? It is a communication tool. It should increase the level of common understanding. It should increase the level of trust between the parties involved. Can any document as the primary source of truth about our relationships and our assets meet the expectations of key players? I do not think so. My experience confirmed a simple fact.

### The document is out of date at the moment of printing.

Why? Because everything changes. The document contains information about many elements. Each element has its own life cycle. The document captured only one particular state of all elements in time. But how can we keep the document up-to-date, in order for it to provide reliable information to its users not just at the moment of printing? I do not think it is possible. For my part I have not found a solution for the Document as the primary source of truth about our solutions. I consider the Document to be a photograph of current situation in the context in which it originated. It is irreplaceable as a witness of a given situation, but with progress of time it loses its up-to-date status. However, this brings a relatively simple consequence - the document is important, but not as the primary source for the present that is constantly changing. The document is an excellent background for a contract, for a meeting. But it is an inappropriate instrument for decision-making at all levels of company management.

## 3.5 How to keep the knowledge, experience and the subject of the work delivered?

PACKAGE NAME-PCG\_00351\_HOW TO KEEP THE KNOWLEDGE, EXPERIENCE AND THE SUBJECT OF THE WORK DELIVERED?, STEREOTYPE-"

In documents. Documents are stored on repositories where their changes are also recorded. But the changes are made in thousands of details that are included in the documents. Documents should be kept up-to-date, with partners having this established in contracts, even under threat of sanctions. The situation in practice is that if a key business or system is changed, no one really knows how many documents should be updated. Only the real practice proves that something needs to be changed.

# 3.6 Understanding the solutions from the point of view of their life cycle

PACKAGE NAME-PCG\_00355\_UNDERSTANDING THE SOLUTIONS FROM THE POINT OF VIEW OF THEIR LIFE CYCLE, STEREOTYPE-"

"Panta Rhei" - all flows. Everything is subject to change. From the point of view of solutions, we will consider these changes in the context of a lifecycle. An initial idea will arise, a project will be created, the project will be implemented and will be put into operation. During the period of operation, something is constantly being changed and improved, until the time when the solution is technically, technologically or morally aged and discarded. But this also applies to each and every component of the solution, including people. The figure shows that the preparatory phase and the realization phase are much shorter than the operation phase. Common sense would say that if the first two phases are well prepared and implemented, the operation will go according to the expectations of all key players. Unfortunately, we do not want to see this in practice. Saving is done at every stage and solutions are put into operation even though they were not even supposed to be created. But when the damage exceeds large amounts, no one can find the courage to say that the solution is bad and should not be used. Proposed methodologies are based on such an understanding of the solution. The solution does not end with the achievement of a partial milestone within the solution lifecycle. Unfortunately, solutions are managed within a different lifecycle. Lifecycle of specific managers who are only responsible for partial milestones.



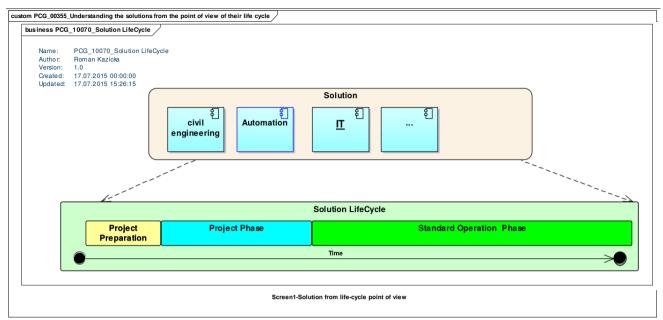


Fig. 30: PCG\_00355\_Understanding the solutions from the point of view of their life cycle



## 4 Fourth discipline: D4 –Solution design

PACKAGE NAME-04.EN-D4-DESIGN, STEREOTYPE-'«7DS-D4»'

According to the 7Ds methodology, we address the design of the future solution in this discipline. Structure and content is created according to what our solution requires. In our specific case, we have a dual goal:

- 1. Develop methodologies to help improve the quality of IT solutions.
- 2. Create a book on methodology itself (methodologies)

### Note on the design of methodologies

When designing methodologies, we will first focus on how to handle the journey. Then we will define how to process our assets. It is strange, but it should be the opposite. First I should describe the assets and then the journey to get them. Real life, however, showed me that the methodology about the journey was developed as the first one. In fact, I work on both disciplines in parallel, because I am in real projects where both things are dealt with. In this part we shall describe the purpose of both methodologies and the relationship between them. We will also design the 7Ds in more detail. Journey description is more accessible and easier to grasp for a larger number of potential readers. Asset description is more focused on solution architects and service organizations that work long-term with assets. These assets have a life cycle and they change in time. Special approaches are used in terms of both real-object mapping processes and the specific properties of the "Enterprise Architect" tool.



### Note on the draft book on methodologies

How do I share my experience with others? How can I to put years of work, mistakes and experience into a small format? One that may be used is a publication. The paradox is that I am basically against publications in technical documentation. Experience shows me that current dynamics of change is so huge that any document is outdated already at the moment of printing. But a document as a secondary source of information seems to me as a reasonable solution. This means that the publication is secondary with the model being primary. Or rather that the modelled elements mapping the real world. Technology gives us a chance to be able to capture an increasingly complex world. At a certain moment we are able to print the state of our knowledge about the real world so that we can share it with people who have no reason to handle a complex technical tool. Thus we have a chance to raise the level of understanding, among the key players. The publication itself, as a regular goal of a solution, is the subject of the 7Ds methodology, and is therefore both the product and the journey. True to the principle that everything changes (<u>006.Generated document is outdated at the moment of generation</u>), we will also consider this publication to be outdated at the time of generation. Therefore, the book has a certificate specifying for whom it was generated, and especially, what is the date when it reflects the current status.

We will design the structure of the book, the chapters it will consist of, templates used, types of content, fonts and styles for paragraphs. Considering the intention to write books in *EA* environment, we will propose elements which will be important to the content of our book and which we will complete during writing. In the transformation process, the information from the elements in the storage is transformed into the resulting document. A large part of information is generated automatically. These are the so-called metadata about the elements we create in the model and which are of great importance for the whole process. For example, element creation times, time of last change or dynamic information about changes at the model level - such as the number of requests, the number of decisions, the number of decisions in time, and so on.

# 4.1 How can we distinguish what is methodology itself, and what is the book about the methodology?

 $PACKAGE\ NAME-PCG\_00435\_IN\ THE\ BOOK,\ HOW\ CAN\ WE\ DISTINGUISH\ WHAT\ SHOULD\ BE\ INCLUDED\ IN\ THE\ METHODOLOGY\ ITSELF,\ AND\ WHAT\ IN\ THE\ BOOK\ ABOUT\ THE\ METHODOLOGY\ ?,\ STEREOTYPE-"$ 



How to make the text of the book more understandable? How to distinguish in a book, what should be included in the methodology itself, and what in the book about the methodology?

After reading the output document for the first time, I saw that it is quite difficult to understand what the text is actually about. The sections addressing the methodology and the sections dealing with the methodology book should be clearly separated. In some cases, the book needs to be interpreted as a preview of a work instrument with notes on a specific solution. This particular solution is a book on methodology. We do not need brilliant formulations during the implementation of the solution, just a simple note of the status of the journey. This is the way to understand the section on decisions and references. In this chapter, which is being created at the end of the book creation process, I will try to define the structure of the book so that it is clear in every chapter which text is general and belongs to the definition of the methodology and which part is only an illustration of the use of the methodology. There are several ways to do it. At first, I thought I would add the relevant chapters to a special element which would have different formatting than the rest of the document and will focus on the methodology itself. But after the few initial attempts, I quickly returned to the compact text with the icons.

# 4.2 Description of solution 3R- Right information in the Right time for the Right role

PACKAGE NAME-PCG 00356 DESCRIPTION OF SOLUTION 3R- RIGHT INFORMATION IN THE RIGHT TIME FOR THE RIGHT ROLE, STEREOTYPE-"

The proposed methodologies are characterized by the fact that they are trying to support a principle that can be simply expressed as follows:

### Right information – for the Right Role – in the Right time.

This approach is based on the fact that the repositories and their elements rather than documents are the primary information carrier about our solution during the whole life cycle. Let's call them "one common source of truth". In fact, there will always be more data sources at different levels of detail. For example "Asset Management", monitoring, configuration management and business enterprise systems. What is important is that each role will have information accessible at the appropriate level of detail, at a time when it is necessary. Each element of the solution has a lot of data that is generated by information systems. For example, if any information is generated in the information system, it is possible to save time, author, status, and so on. The amount of data and information is generated automatically, but a large part must be digitized or manually entered. Nevertheless, this enables to keep even the smallest details of the solution in the current state. We can even define the rules and criteria by which we can assess the level of credibility of our source of information. It is extremely important if we are to decide about strategic issues, but also on a daily routine level

The following figure describes the situation in a large company. As with all the levels of management and operations, the company can profit. But the proposed methodologies are also intended for individuals. Anyone who was interested in something for a longer period of time invested a lot of time into analysing, designing and implementing the solution and its operation. He or she had to process a great deal of information, acquire skills and gain experience. The harder we get the,, the more we value them. But if we do not continuously maintain what we planned, solved, our contacts acquired with difficulty, the experience or the results, we will simply forget them in time. Despite the fact that information lose their recency over time, older information can help us speed up current solutions.

This principle cannot be quite implemented in the book. The book is a linear flow of information with limited navigation options. The book is static and contains only a minimum of metadata about the data that is in the model.



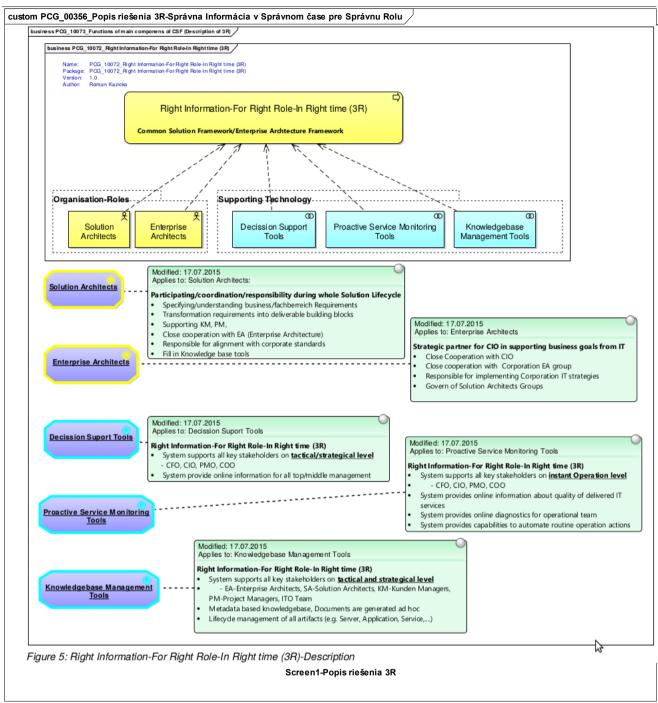


Fig. 31: PCG 00356 Popis riešenia 3R-Správna Informácia v Správnom čase pre Správnu Rolu

## 4.3 Design of a technical solution for 3R approach

PACKAGE NAME-PCG\_00357\_DESIGN OF A TECHNICAL SOLUTION FOR 3R APPROACH, STEREOTYPE-"

The technical solution of one shared repository with information about our world is based on a central relational database. The solution is implemented with the Sparxsystems technology. The basis is a relational database that stores data about the modelling part of the solution. A lot of additional data is created around the elements, which we call metadata. These are data about data. For example, every element in the database knows who and when created it, when it was changed, who changed it and so on. The user creates records in the database using the client application that is called *Enterprise Architect* in the case of Sparxsystems. The user creates charts, pictures of their reality. Elements in figures are selected from the so-called "Toolbox" element library. The Toolbox contains a large number of elements, sorted by



theme and by different manufacturers. The user can also create custom element libraries. With the client application, the more technically competent team members work, let us call them the authors. The number of authors, or content makers, is lower than number of those who use the information. The information can be transformed from a repository into various formats. Document formats like pdf, doc, docx, rtf or HTML and XML format. Information can be exported to "CMS". In addition, it is possible to integrate various data sources into Sparxsystems. If necessary, it is also possible to integrate it into third-party systems. This way the technological ecosystem is created. But technology alone does not solve anything. The key component includes the people, their mental models, habits, flexibility, responsibility, discipline and professionalism. In order for the technology to become a powerful efficient system, there is still must be a system of rules, experience on how to combine processes and technology. How to do this is described in this book which is the first of a series of books.

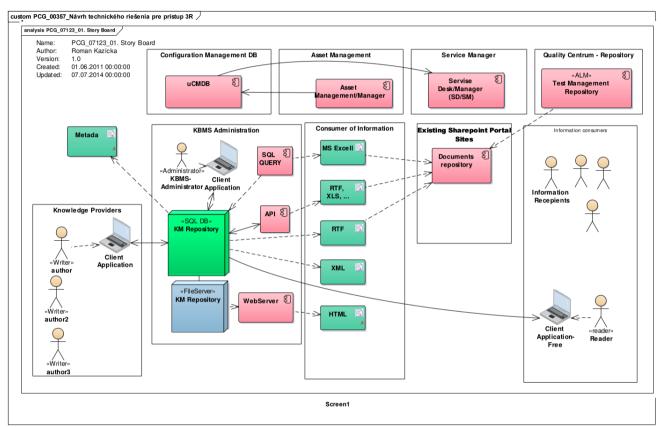


Fig. 32: PCG 00357 Návrh technického riešenia pre prístup 3R

### 4.4 Story of Solutions, Goals and Journeys

PACKAGE NAME-PCG\_00333\_STORY OF SOLUTIONS, GOALS AND JOURNEYS, STEREOTYPE-"

"Where there is will, there is a way". Old, but true. As long as we have motivation, we set ourselves on any type of journey. Many people claim that if they knew how hard the journey would be, they would have never started. But when we consider that every goal we have achieved is basically just an instant, a milestone on our life-long journey. We are basically on a journey all our lives, on many journeys at the same time. On a private journey or a business journey. Some are undertaken due to specific goals, other like a cruise on a river, carried by the circumstances. If you've ever thought about how this journeys work, you would come up with interesting ideas. We are usually on a journey because we want to achieve a goal. If we reach the goal, the journey itself loses any sense. It was just an intermediary to reach the goal. But is that really the case? The moment I reached Mont Everest, I am probably not going to be interested anymore about missing the train in Delhi, that I got wet, cold, lost my luggage, and so on. It's as if these were just subordinate information which I was interested in only at the time I lived through them. But as soon as I am to prepare another expedition, every detail of my past expeditions will become very valuable to me. It will save me time, energy, money and can be crucial to the success of the entire expedition. Success is not a coincidence. Fortune favours the prepared. There are many other positive slogans. These slogans not only motivate but also encourage us to consider the systematic preparation and the experience we can use at the right time to be of key importance.



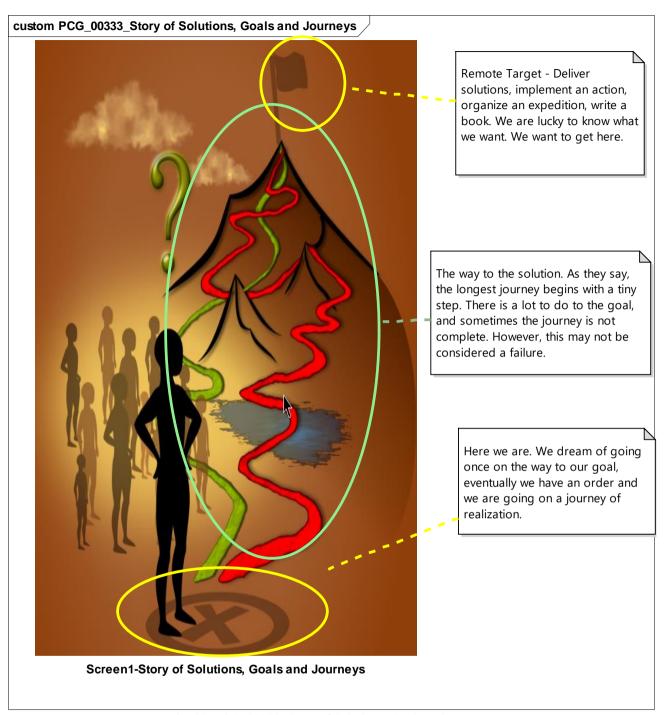


Fig. 33: PCG\_00333\_Story of Solutions, Goals and Journeys

## 4.5 7D and APV methodologies design

 ${\it PACKAGE NAME-PCG\_00350\_7D \ AND \ APV \ METHODOLOGIES \ DESIGN, STEREOTYPE-"}$ 

Why the "7Ds - Seven Disciplines of Successful Solutions" and "APV - Assets-Perspectives-Views" methodologies in particular? The are 3 ellipses in the figure. Of those 2 ellipses describe states and one ellipse describes the process. The status at the beginning is the baseline. The moment when we are just thinking about starting the journey. What we will need to make our journey a success in every respect. But how can we describe the current state and the future state. With the Everest example mentioned above I am not able to find a reasonable parallel, so I will help myself with an example from IT. According to the EU directive, each company must respect and protect personal data. How can I comply with this directive? The threat of huge fines forces me to at least think about the solution? What is the status of



IT in our company? What are the threats, risks and impacts? What measures need to be taken and how much will it cost? How to describe and document everything? How to describe the desired state? And of course, what is between the present state and the future state. That's the journey. Journey and status. We are always on a journey, with milestones being the moments we need to place in time. To describe the status, I need a different approach to describing the journey. The journey brings me experience, statuses bring me benefits. Most of the time we expect satisfaction or some benefits from the goals. The 7Ds methodology seeks to support the processes and the APV methodology aims to support the creation of benefits in the field.

Methodologies themselves do not bring any breakthroughs and the reader or the user can find some familiar truths in them. What is unique, however, is the **combination** of these generic truths into a comprehensive system supported by recommended workflows (7 Disciplines methodology), the recommended system environment and concepts (database storage, storage based on data metadata), and specific technology (SparxSystems- EA). This creates the basis for extraordinary synergy effects. Each member of the team contributes to the knowledge system with their specific experience in the range of their roles in a team or organization, creating model relationships that exist in the real world too, whether explicitly or implicitly. I myself experienced the situation as a project manager when I needed a more detailed German-language information about a part of the system in one project for which I was responsible. I've searched for a keyword in the model. To my great surprise, I discovered a chart in the model that was fitting to the context. As I later found out, a colleague from a supporting team did it for the needs of his roles. Not to mention that the business partner - the customer was also very impressed. It is important to use the tool in routine day-to-day activities. This moderate effort will become an automatic habit in time. In addition, routine work can be automated very effectively, so the team members can then concentrate on more creative work.

### 4.5.1 7Ds-Seven disciplines for successful solutions

PACKAGE NAME-PCG\_00334\_7Ds-SEVEN DISCIPLINES FOR SUCCESSFUL SOLUTIONS, STEREOTYPE- "

Why the "Seven disciplines" in particular and why the successful solutions? The seven disciplines were created as an inspiration from the 8D - Eight Disciplines methodology introduced in FORD company in the last century. Successful solutions are understood to mean all solutions that are implemented according to this methodology. This methodology is about journeys between milestones. If the journey is to be understood as a source of experience and a means to reach the goal, then each journey will be successful, even if we do not reach any milestone. It is important to be on the journey. Achieving milestone is just the cherry on the top. It's a bonus and the reason that gives us a sense of satisfaction in different forms. Good feeling, a sense of pride, but also the acquisition of finances.

### 4.5.1.1 What is the main feature of 7Ds methodology?

PACKAGE NAME-PCG\_00347\_WHAT IS THE MAIN FEATURE OF 7DS METHODOLOGY?, STEREOTYPE-"

The main feature of the 7Ds methodology is a rigorous preparation, planning, risk assessment, on a continuous basis, as part of our day-to-day activities. There are no separate documentation and solution processes. Documentation is an integral part of our solutions. The 7Ds methodology only uses current technology to be a support, not a barrier on our journeys. Every experience, be it positive or negative, gives us the chance to improve, to inform us and others who are accompanying us, or those who will be able to see their way through the information in the repository.

### 4.5.1.2 Design of 7D methodology

 ${\it PACKAGE NAME-PCG\_00185\_DESIGN OF 7D METHODOLOGY, STEREOTYPE-"}$ 

### 4.5.1.2.1 7D – Seven Disciplines - Overview

PACKAGE NAME-PCG\_00186\_01.VARIANT 1 MIND MAPPING STRUCTURE, STEREOTYPE- "



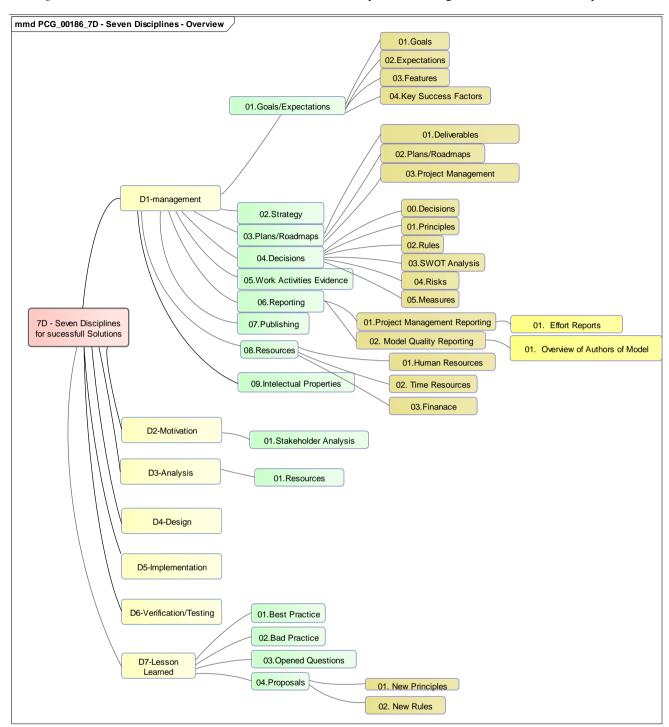


Fig. 34: PCG\_00186\_7D - Seven Disciplines - Overview

### 4.5.2 What is the main feature of APV methodology?

PACKAGE NAME-PCG\_00348\_WHAT IS THE MAIN FEATURE OF APV METHODOLOGY?, STEREOTYPE-"

The main feature of the APV methodology is to capture our solutions at 3 levels. Process, system and technology level in two levels of abstractness. At a more abstract level - as a reference model. And as a model of instances at a more detailed level. This approach is in line with generally accepted work frameworks such as **TOGAF**, ZACHMANN, DODAF, GODAF and the like.

### 4.5.2.1 Assets-Perspectives-Views

PACKAGE NAME-PCG\_09081\_02. ASSETS, PERSPECTIVES, VIEWS, STEREOTYPE-"



#### Assets

The title already suggests that the methodology is focused on a holistic description of systems at 3 levels. Business, Systems (information systems) and Technology. All three areas together form relationships both inward and outward. There is a multidimensional model of elements, systems, at different levels of abstractness. An abstract model is called a reference model, and a model of specific real objects is called a model of instances.

### Perspectives

Assets are processes, things, people that are needed to achieve business goals. Each role sees assets differently from the context of their role. This is what we call "perspectives". The defined perspective tells me how I see the assets. For example, as a technician, I see the server from a different perspective than the accountant. One object, but two different perspectives.

### • Views

Under "view", we mean specific information about a particular asset or group of assets. For example, the Server Power Options perspective defines what will we focus on when modelling the server from an electricity connection point of view. For example, which circuit breaker feeds which rack. Other perspectives define rack servers, other applications that are running somewhere else, and so on. "View" is thus a specific situation in a particular server room. This information is described in the current documents and is understood as technical documentation.

From the APV methodology point of view, the primary information is in the model and the documents are generated from the model. Just like this book. We are aware of the fact that at the time the document was generated, the situation in the server room could have already changed.



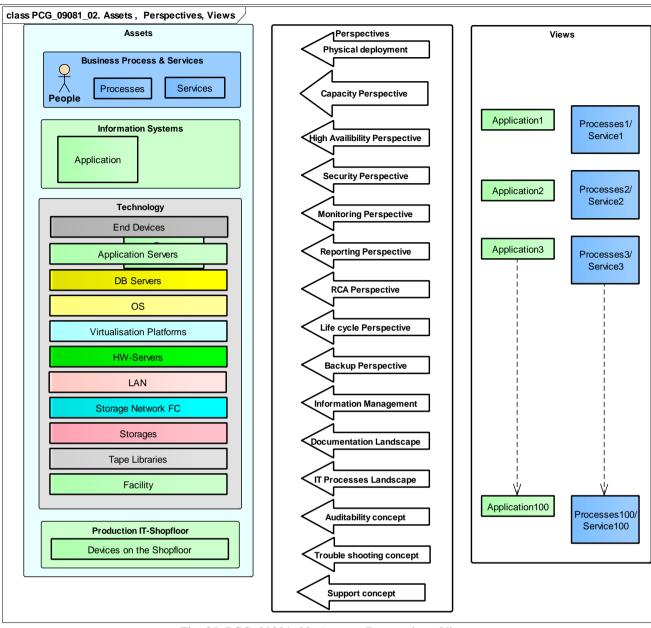


Fig. 35: PCG\_09081\_02. Assets, Perspectives, Views

### 4.5.3 What is the 7Ds methodology about?

PACKAGE NAME-PCG\_00339\_WHAT IS THE 7DS METHODOLOGY ABOUT?, STEREOTYPE-"

The "7Ds - Seven Disciplines for Successful Solutions" Methodology can help increase the success of the solutions, also because it encourages the definition of criteria to be used for evaluation already at the beginning. It is difficult to evaluate something when we have no criteria. It is quite simple. If I do not have the criteria, I cannot explain to what extent I have achieved the goals we have defined. The world is rarely black and white. We rarely get everything with 100%. But that may not have to be harmful. If we know the areas, if we even know the reasons why, we can better prepare for the future. Let's look at the picture on the following chart. We are at the beginning. We have a goal ahead of us. It is so far away that we cannot really see it, but through our motivation, we can see ourselves at the finish line. We know we have to go through some journey. At first try, it is probably going to be a red journey. Full of traps, surprises and lessons. The second journey with some other project will probably be easier. At least our experience and the mistakes we have learned last time will help us. We will take better care on the next one. And with each journey we will be better and better. But how can we do things in order to need fewer journeys to learn to not hurt our knees? This is what the 7Ds methodology is also about. Errors will definitely occur. For it is a natural way of learning. But it is good if we include mistakes, limitations and past experiences in the preparation of our future solutions. If we can do that, our journeys will be more successful and joyful, even if we do not achieve a goal for some reason. Beginning and the goal are only two moments of



the whole journey. We spend most of the time on the journey itself. So it seems reasonable to learn how to work as efficiently as possible on these journeys.

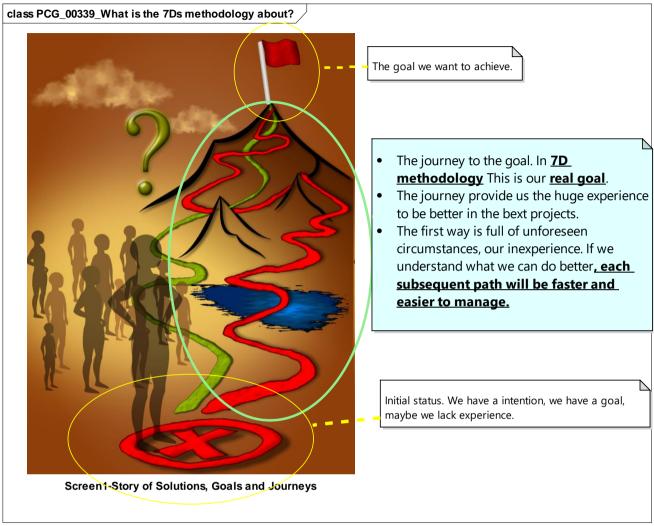


Fig. 36: PCG\_00339\_What is the 7Ds methodology about?

### 4.5.4 What is the APV methodology about?

PACKAGE NAME-PCG\_00344\_WHAT IS THE APV METHODOLOGY ABOUT?, STEREOTYPE-"



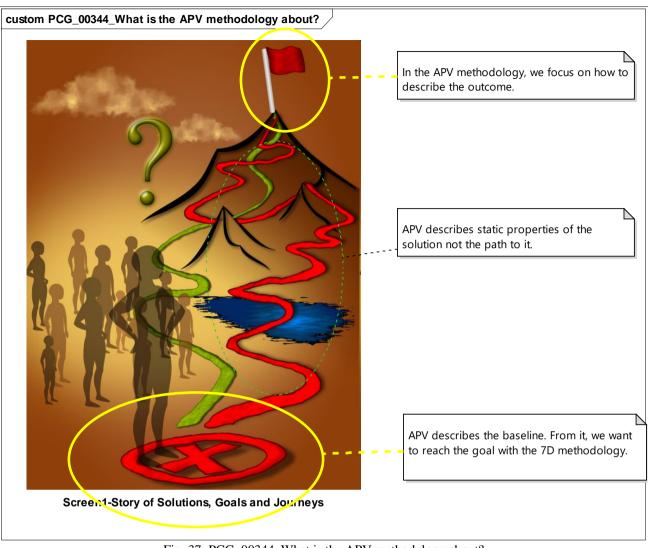


Fig. 37: PCG\_00344\_What is the APV methodology about?

## 4.5.5 What is the relationship between 7Ds and APV?

PACKAGE NAME-PCG\_00345\_WHAT IS THE RELATIONSHIP BETWEEN 7DS AND APV?, STEREOTYPE-"



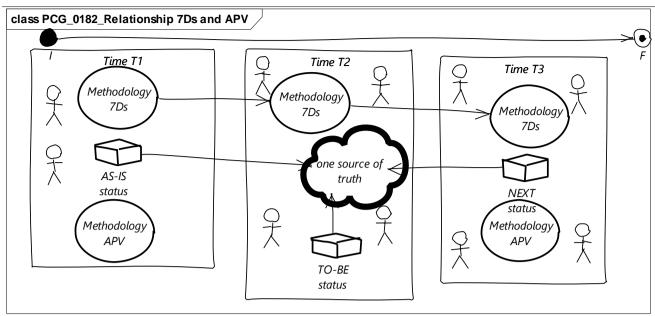


Fig. 38: PCG 0182 Relationship 7Ds and APV

### 4.5.6 How to use the methodologies in specific solutions?

PACKAGE NAME-PCG 0155 HOW TO MANAGE THIS? - ROADMAP VIEW. STEREOTYPE-"

How to use both methodologies in practice? Here is a simple example that we are currently implementing in real projects, such as supporting the implementation of the GDPR EU Personal Data Protection Directive. The following chart shows a rough schedule of activities, decisions, methodologies and technology used. The process starts with an initial analysis of the current state. We will use the 7Ds methodology to support processes and the APV for asset mapping. At the end of the first phase, we will have a full model for the current state of customer processes, systems and infrastructure. Additionally, we will have experience of implementation of planning the resources, risks, finances and so on. In the chart, we assume that 7Ds of the processes / projects could be more or less parallel in case of a larger customer. We also assume that the initial analysis will be a good foundation and initiator of additional incentives from the customer. The customer will see a transparent, systematic approach where documentation is a natural part of our work. The question is, whether the customer will ask for documentation and what type of documentation? But it is up to the customer. Documentation is always prepared even if the customer does not explicitly request it. He considers us to be professionals. In other professions, we assume the same thing. A construction company has a project, a carpenter prepares documentation before the start of the work and even an ordinary kitchen line is being modelled in the shop as a standard part of our business relationship



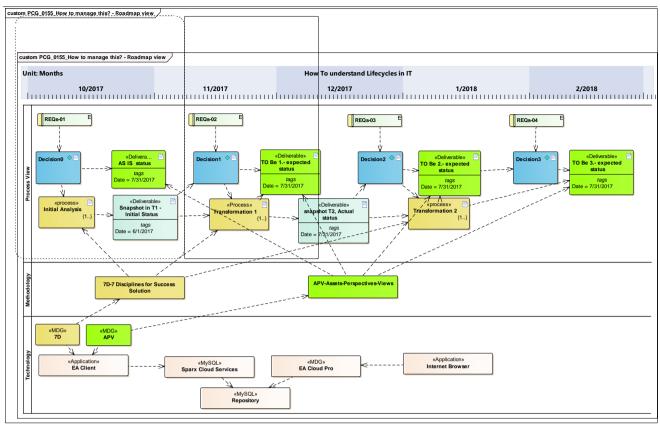


Fig. 39: PCG\_0155\_How to manage this? - Roadmap view

## 4.6 Story of the design of the book about 7Ds methodology

PACKAGE NAME-PCG\_00335\_STORY OF THE DESIGN OF THE BOOK ABOUT 7DS METHODOLOGY, STEREOTYPE-"

In this section we will focus on the design of the book, structure of chapters, design of the environment for its modelling and generation.

### 4.6.1 Designing the book Page format

PACKAGE NAME-PCG 00437 DESIGNING THE BOOK PAGE FORMAT, STEREOTYPE-"

After reading the preliminary version of the book, I found that the book was not readable enough. When I looked at it as part of the model, all of it made sense. Fixed model structure and model navigation. After linearizing the text on paper, it suddenly stopped working. I realized that the following adjustments needed to be done:

- clear separation of the methodology itself and the methodology book
- the methodology describes the general rules that can be applied to a wide range of solutions
- the book is about the methodology itself, and one example of using the methodology is the book itself on this methodology.

Therefore, each chapter will have an introductory part that will have a completely different formatting than the rest of the book to emphasize connection to the methodology. The rest of the text about the book will follow this general introduction and will be highlighted with an icon.

## 4.6.2 Book structure design - concept

PACKAGE NAME-PCG\_00170\_01.BOOK STRUCTURE DESIGN - CONCEPT, STEREOTYPE-"



From the point of view of the process of generating documentation from *EA* modeller, it is necessary to distinguish several roles or perspectives:

- Perspective of the reader
- Perspective of the content creator
- Perspective of the creator, or manager of the ecosystem, for "automatic" generation of content / documents
- Reader

The model information user expects a standard document format in pdf, rtf, docx, or HTML output.

• Perspective of the content creator

"Content Creators" perspective is created by questions of new content creation and the updating of older content within the life cycle of each asset at different levels of detail. In our case it is the author of the book, in other cases the author of the solution, who creates the content.

But what do we understand under content? In terms of the 7D methodology, the content is the information carried by the record stored in a central repository, regardless of whether it is a structured format (relational database) or unstructured data sources (document, multimedia content, etc.). In a common case, this means words, sentences and elements in pictures. If we use the classic imaging tools, we have a problem. The problem is that, for practical reasons, it is not possible to update changes on elements within their individual life cycle or in contexts in which the element is located. Element metadata is missing or not stored in a central repository. When we use a system that has a central repository and which creates a number of metadata about the elements themselves to "draw" or model a reality, we have the chance to get answers to the following questions:

- What state are different elements of our system in?
- What are the dependencies between individual elements, for example which services will be affected if I turn off this circuit breaker?
- How many service facilities do I have to deal with without a service contract?
- What contacts and if any do we have for the service organizations
- List of questions can be infinite.
- Perspective of the ecosystem creator in EA environment

Perspective of the creator of the ecosystem for "automatic" content / document generation addresses the methodology, technology and organizational procedures to integrate it into a functional solution. This is the perspective most dependent on the knowledge of technical details of EA. I can imagine that the author does not have to know all the details about the technology if he or she has the support of someone who will prepare the environment for him or her. This perspective requires the deepest knowledge about technology. The basic building blocks for *Document Generation* from the information stored in the model are:

- "Style sheets", "System Templates", "User Templates", templates for "Fragments", templates for "Cover Pages", template for "Table of Contents"). This is a relatively broad subject, which will be discussed in more detail in the following publications.

If the target was to write a classic book, I would just use any text editor and a drawing tools. For the reader, the output is very similar. The reader must be aware of the fact that the document generated by the model contains a "snapshot" of the storage at a given time. In just a few minutes, the information is changed by at least one item. The document is a static view of the situation in the dynamic system. It is like a photo. A sheer moment. From a practical point of view, the generated document serves to improve communication and understanding between key players at a particular time. Therefore we need the "One source of truth" system about our reality, so that we have a chance to find out the necessary reliable information. We can even verify the validity of the information by using the metrics defined by us. For example a following metric - How many elements do not have their obligatory parameter set in the charts? Which elements? Who is responsible for the elements? Who is responsible for the area? This is not possible in the case of an "ordinary" book.



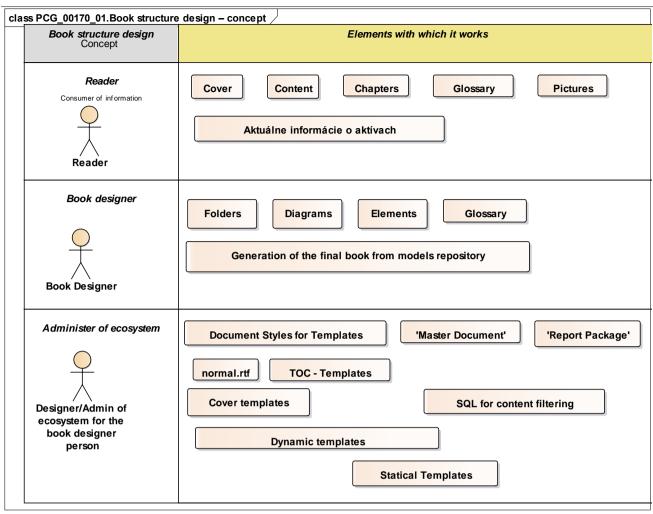


Fig. 40: PCG\_00170\_01.Book structure design - concept

## 4.6.3 Working environment for book writing (Enterprise Architect - Sparxsystem)

PACKAGE NAME-PCG\_00172\_WORKING ENVIRONMENT FOR BOOK WRITING (ENTERPRISE ARCHITECT - SPARXSYSTEMS), STEREOTYPE-"

When writing a book, we need an office suite (LibreOffice, OpenOffice, MS Office, Office 365, Google Docs) or work environment for publishing (leanpub.org), Gitbook, Scrivener and so on. When writing a "Model Driven Book" we need a modeller, such as EA from Sparxsystems. The activities for creating a book in the model are very similar to activities in other projects that produce something that can be presented. Organizing an event, creating a technical solution, setting up a company, developing applications, systems, and so on. The configuration of the work environment varies depending on whether we are working on solutions or working together in the team. We describe 4 work environments that vary in complexity and team collaboration options.

## 4.6.3.1 01.Version-Working environment – everything on my local laptop – working with an eap file

PACKAGE NAME-PCG\_00183\_01. VERSION-WORKING ENVIRONMENT - EVERYTHING ON MY LOCAL LAPTOP - WORKING WITH AN EAP FILE, STEREOTYPE-"

The simplest version only requires *EA* application. In our case, this is version 13.5. The author can do it with an EAP file format. If there is a need for team collaboration, there is a possibility to use database replica synchronization mechanism called "master replica". The outputs can be in html, docx, pdf or rtf format. Another option is to export content to Joomla! ( see <u>PCG\_00166\_EA</u> as a <u>Publishing Reporting Tool</u> ). The EAP file is actually an MS



Access file using MS JET 3.0. However, this does not support unicode, which affects fonts in languages other than the English language. If you need a national language fonts, you can check the "*Use Jet 4.0*" checkbox in "*Preferences*". However, it is expected that the user has an installed MS Access with a valid license.

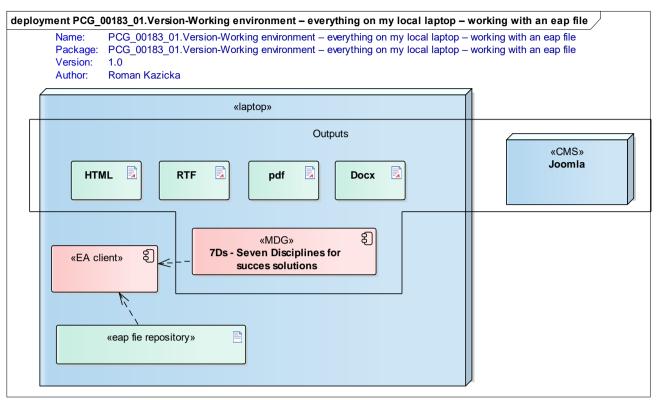


Fig. 41: PCG\_00183\_01. Version-Working environment – everything on my local laptop – working with an eap file

## 4.6.3.2 02.Version-Working/Development environment – Everything on local laptop with MySQL

 $PACKAGE\ NAME-PCG\_00182\_02. VERSION-WORKING/DEVELOPMENT\ ENVIRONMENT-EVERYTHING\ ON\ LOCAL\ LAPTOP\ WITH\ MYSQL,\ STEREOTYPE-"$ 

A version with a repository in a relational database brings new factors for the teamwork, but also for individual work. It should be remembered that *EA* is actually a relational database with a graphical user interface. EA supports the following relational databases

- MySQL
- MSSQL from 2005 version
- Oracle from 9i version
- Postgress SQL
- Adaptive Server Anywhere 8 and 9, SQL Anywhere 10 and 11

When working with a relational database, it does not matter whether it is located on a local laptop or somewhere else. The connectivity and speed of responses and, of course, the security of interconnection are important. Once you have a repository in a relational database, you have the ability to share your storage with your team or with partners or customers. However, one disadvantage still remains. At least the technical one, which consists of installing an "**ODBC driver**" on the end device besides EA. If this is a problem, there is the option to use the third option to work with the repository.



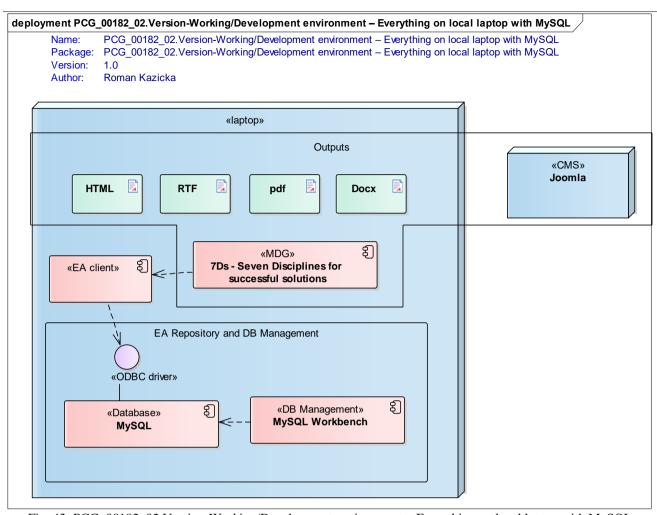


Fig. 42: PCG\_00182\_02. Version-Working/Development environment – Everything on local laptop with MySQL

## 4.6.3.3 03.-Version-Working/Development environment – Version with the "cloud"

PACKAGE NAME-PCG\_00171\_03.-VERSION-WORKING/DEVELOPMENT ENVIRONMENT - VERSION WITH THE "CLOUD", STEREOTYPE-"



Cloud solution brings several advantages:

- Online access to repository via standard http, https (80,443)
- No need to install an **ODBC driver** on each workstation
- Possibility of sharing shared content across multiple models
- Possibility to automatically run SQL updates, which is of major importance for automated reporting

There is also a 4th version that was introduced by the new SparxCloud Pro product with web access to the repository ("WebEA""). When writing this book in the Slovak language, this version was not used. It is expected to be used for translation into other languages and for "reviewing" content by people who have no reason to use the EA client application.



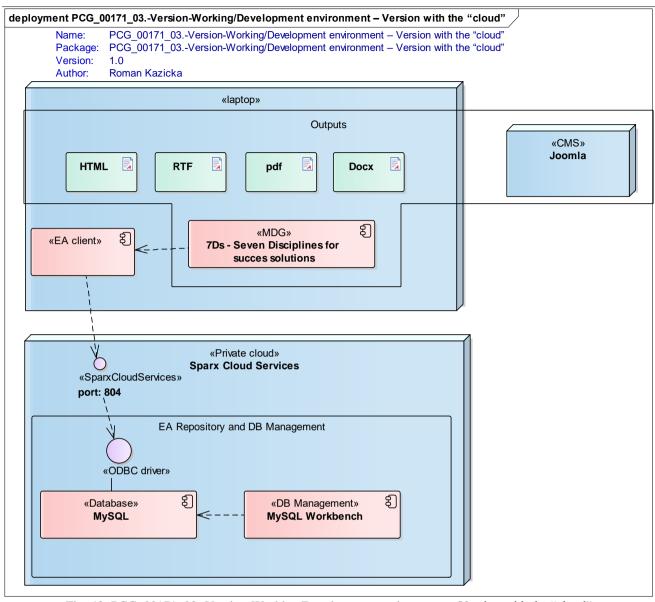


Fig. 43: PCG\_00171\_03.-Version-Working/Development environment – Version with the "cloud"

### 4.6.3.4 04. Version – Model Web EA Access

PACKAGE NAME-PCG\_00193\_04.VERSION – MODEL WEB EA ACCESS, STEREOTYPE- "

"SparxCloud services PRO", an individually licensed product, offers an additional web-based approach compared to "Sparx Cloud Services". The implemented "OSLC" standard is used (please see PCG 00194 OSLC - Open Service for Life Collaboration). This approach to the model is very useful. EA tool is an extremely complex tool. It is its biggest disadvantage and advantage at the same time. Up until now the high complexity has prevented wider use of the tool not only among technical roles but also among general non-technical roles and managers. At the moment, the following uses are implemented: assigning tasks, creating error and risk logs, allocating resources to individual elements, communicating between team members, or end customers directly above the model element. These are just a few features to involve multiple roles in the teams. This is an excellent way to support the concept of "one source of truth". Verification of the quality of the information in the model can be verified online by any member of the team and, in addition to that, we have strong mechanisms for automatic model quality control. For example, checking the number of authors registered for each element. The appropriate metric for model quality is implemented through the fat client. It is displayed online through its WebEA. This way the manager can have online information and respond as necessary. For example, the number of requirements in a certain state does not change for a long time even though it should. If there is a graphic and comprehensible information available, the manager can learn it right away. This case of application could be



further improved, for example, by automatic notification of selected roles. You can use the application interface to do this. This is not a standard feature of EA or WebEA.

To illustrate this, I have discovered during writing of this book, that among the authors I can also find the author named "crossover", but also "Roman Kazička" and "roman kazička". I have discovered this during the systematic control using **SQL** commands in <u>02.Model Quality Reportings</u>. As I was able to identify this quite soon, the repair was performed in just a few minutes. The error occurred during the initial configuration of the model. "Crossover" occurred there because I have a "crossover" application on my Linux laptop for emulating windows applications in Linux and Mac. But until I created my application users in EA, the EA system assigned the attribute value of the "author" for each element of the current user from the operating system. It is not a mistake, but it leads to uncertainty about the credibility of "one source of truth". And one should not play games with credibility. It can be lost relatively easy and it is very, very difficult to build it up again.

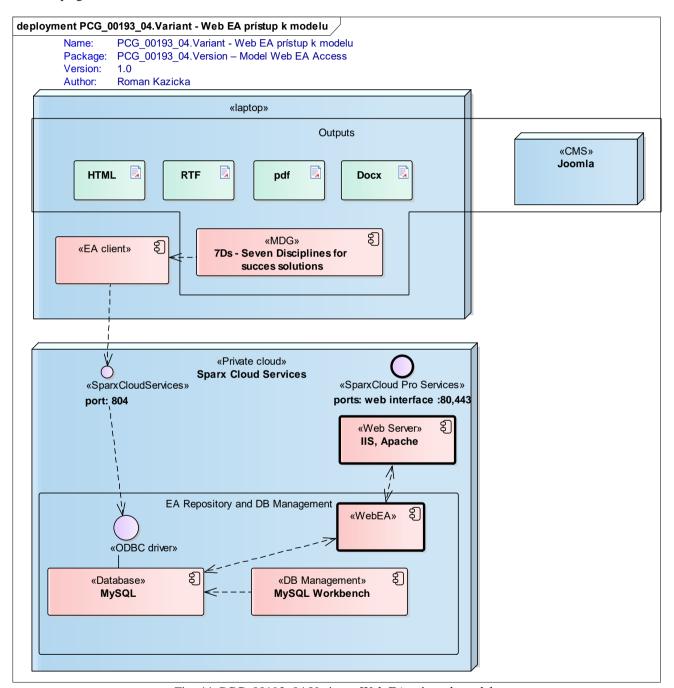


Fig. 44: PCG\_00193\_04. Variant - Web EA prístup k modelu



# 5 Fifth discipline: D5 – Solution implementation

PACKAGE NAME-05.EN-D5-IMPLEMENTATION, STEREOTYPE- '«7DS-D5»'

D5 serves to describe the implementation of the solution in detail. 7D methodology does not prescribe exactly what to describe and what not to describe. The solver must know that. From the point of view of book creation, we established a part of the directory structure that was transferred to the output publication as individual subchapters. I am preparing a separate book on the details of book creation and it will deal with EA technology in more detail. We start by setting up a user interface to allow us move comfortably in the EA environment. In this publication we are more focused on the methodology and questions "WHY?" we should use modelling as a basic technique. The next book will be more about "HOW?" it was done.

This chapter provides more detailed information on how to implement a model driven book. The chapter contains a section of chapters that have been transferred to the output document through the attributes in virtual documents. Using the virtual document mechanism, we have the ability to combine texts from the entire model into a single document in order and content that suits us according to the purpose of the virtual document.

# 5.1 University class - System thinking and digital fabrication

PACKAGE NAME-PCG\_00462\_UNIVERSITY CLASS - SYSTEM THINKING AND DIGITAL FABRICATION, STEREOTYPE-"

For several years now I have been working with FABLAB CVTI. It is a so-called "maker space", a space equipped with modern technologies that are available to the general public, especially for education purposes (more details here - www.fablab.sk). FABLAB is located in a university environment with universities of technical and humanistic focus. FABLAB CVTI has prepared Digital Fabrication class for these universities. This year, together with FABLAB Chief Jozef Vaško, we have prepared a new subject for 2nd grade students at the Faculty of Informatics and Information Technology (FIIT) - System thinking and digital fabrication. The subject of this class is to connect the system approach with the realization of projects on technologies within the premises of FAVBLAB CVTI. In cooperation with Sparxsystems, we have created a team for collaboration - Sparx cloud Services and WebEA. The company provided the students with licenses. The civic association AGNICOLI-poznaním ku slobode, o.z. has prepared the hardware infrastructure. Complete lecturing, lectures themselves, presentations, semester projects, analysis, design and output document generation are realized with the support of *Enterprise Architect*. The curriculum of the subject includes the basics of system approach to IT solutions built on their lifecycles. Students will also get basic information on the following topics - Lifecycle of IT solutions from ideas to real-world 3D systems. Enterprise Architecture Frameworks, **TOGAF**, Archimate, **IoT**, **Industry 4.0**. Students will try to design and produce 3D objects using **CAD** systems (FreeCAD, OpenSCAD, Fusion360, etc.). Computer science students with a focus on nested systems have the ability to work with oscilloscopes and to test their Arduino, Raspberry PI based solutions with various physical converters. In the future, it would also be possible to use the cooperation with National Instrument company, which provided licenses to the academic community. I have many years of experience with this technology (LabVIEW, LabWindows for Windows, TestStand, PXI, NI-DAQ, ...) since 1992, when we were at university and we were preparing virtual drivers for oscilloscopes, logic analysers, digital multimeters, and later in the manufacture of consumer electronics and automotive components. I consider this technology one of the best technologies for computer-aided measurement and automation. Extremely complex technology for science, research and engineering solutions. This technology would be very suitable for use in collaborative projects with technical universities and individual faculties such as the Faculty of Electrical Engineering and the Faculty of Mechanical Engineering. My ambition is to support these activities using proposed methodologies in Enterprise Architect. In the future, cooperation with these faculties may also arise.

For the **System Thinking and Digital Fabrication** subject we have 14 students in the 2017 winter semester. Everyone works in the *EA* environment over a shared storage. All students have their work space in the form of their own "*Package*" for 7D and APV. For group projects, they will have a common "Project Node". Almost all of the topics in this book will also be practiced. All activities related to the subject, information about lectures, exercises, technical documentation, information about active students, communication between the members of small working teams and also with the leading subjects is done using the model. It's an attempt to get closer to the real situation work on a real project. Despite the initial difficulties with a complex tool, there will be a reward in form of automatically generated project document. Naturally, this will be possible only if the basic premise is met - systematic system work throughout the whole



semester. The semester ends at the end of the year and will be evaluated at the beginning of the next year. I'm very curious about the results. In the current issue of the book we will certainly mention this.

# 5.2 Implementing 7Ds in Enterprise Architect

PACKAGE NAME-PCG\_00131\_EN-IMPLEMENTING 7DS IN ENTERPRISE ARCHITECT, STEREOTYPE-"

Why was *Enterprise Architect* used to implement the new methodologies? Up until the year 2000, I have used Visio from Visio Corporation to create technical and business documentation. It had great graphic capabilities with implemented new methodologies like UML and syntactic control of linking elements to the chart. But then in 2000 it was sold to Microsoft, which wanted to transform it to only a drawing tool. That is why I was looking for an alternative. In 2000, I have come across the "Enterprise Architect" technology from the Sparxsystems, an Australian company. After experience with Visio, it was a difficult transition. At the time, Enterprise Architect had a very cumbersome user interface. But it already had several essential features - database storage and a very good price. Around each element of the chart and "Project Browsers" a number of visible and less visible metadata is created, which arise automatically and help the user focus on content that can only be generated by his creative efforts. A large portion of the routine information is generated in a non-user-initiated system. Despite the advanced VISIO graphical interface, this *EA* system property has prevailed. From 2000 I have used it in all my professional roles. As a development specialist in computeraided measurement and automation (CBMA), as the head of the process visualization department, as a test designer, as a top manager responsible for developing an application for an international company, as a process manager for ITIL processes or as a senior architect for automotive IT solutions. I have always encountered the same problems. Misunderstandings and errors of misunderstanding that cost a lot of effort and money to correct. The problem always was with the creation of documentation at various levels. From management level to operating documents. It has always been a problem to achieve an appropriate document status. Over the past 17 years, I have been working on documentation using models that share a database repository. I have created dozens of solutions, tens of thousands of directories, thousands of pictures, and a large number of elements. Thus, I created a relatively abundant archive of experience and knowledge that I have shared with my teams, which I have been using for years as a source of instruction. Some outputs from this experience are

- metadata based knowledge systems
- one source of truth about the context of our solutions
- model driven publications
- model driven solutions

Given the enormous versatility and complexity of EA, I have decided to share my experience with several methodologies and implement them into this comprehensive tool. I would like to add a great many quality documentation on practical examples of methodology, tool and experience.

# 5.2.1 Deployment diagram for Cloud solution

PACKAGE NAME-PCG 00237 DEPLOYMENT DIAGRAM FOR CLOUD SOLUTION, STEREOTYPE-"

During my work with *EA*, I use all the variants that this technology provides. (Please see. <u>PCG\_00172\_Working environment for book writing (Enterprise Architect - Sparxsystems)</u> My preferred configuration is to work with MySQL on a local laptop. I am quite accustomed to the combination of 2 repositories. One repository is primary, in a cloud with the secondary on a laptop. Automatic daily backups are running on the server. It has saved me many hours of work many times already. Backup, back up and back up. People learn that only after losing their data. I also would like to add that the backups should also be checked to see if they are really usable. I once relied on my monthly daily backups, and eventually found out that one model was damaged and it cost me quite a lot of energy to avoid losing my data completely. I need to establish and automate the backup health verification process. I have about 50 repositories and I work daily at 3-5 of them. Some are like living memory where I go only from time to time.



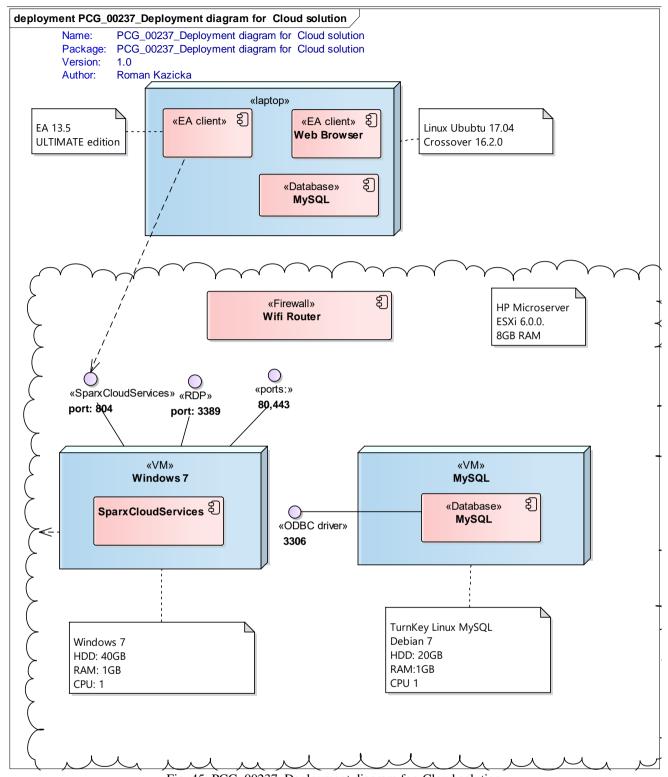


Fig. 45: PCG\_00237\_Deployment diagram for Cloud solution

# 5.2.2 Directory structure in the model – "Project Browser"

PACKAGE NAME-PCG\_00359\_DIRECTORY STRUCTURE IN THE MODEL - "PROJECT BROWSER", STEREOTYPE-"





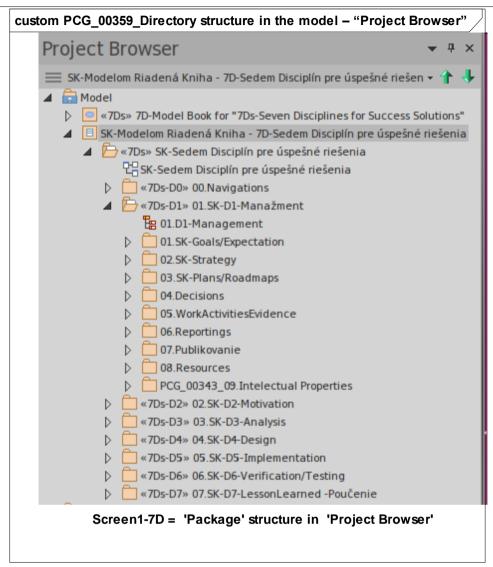


Fig. 46: PCG\_00359\_Directory structure in the model – "Project Browser"

# 5.2.3 Directory structure in file system

PACKAGE NAME-PCG\_00360\_DIRECTORY STRUCTURE IN FILE SYSTEM, STEREOTYPE-"



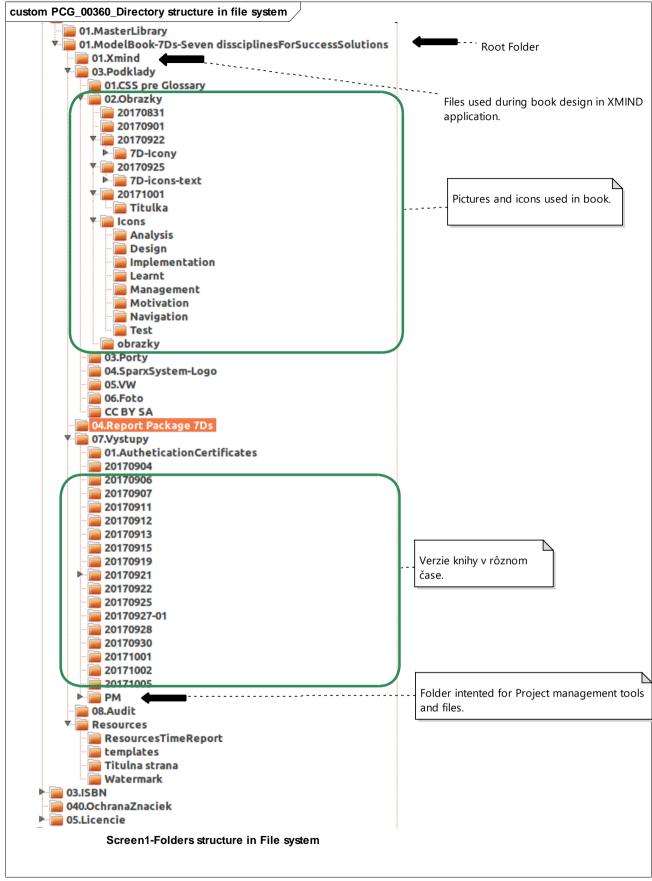


Fig. 47: PCG\_00360\_Directory structure in file system



# 5.2.4 Example of export into HTML

PACKAGE NAME-PCG\_00394\_EXAMPLE OF EXPORT INTO HTML, STEREOTYPE-"



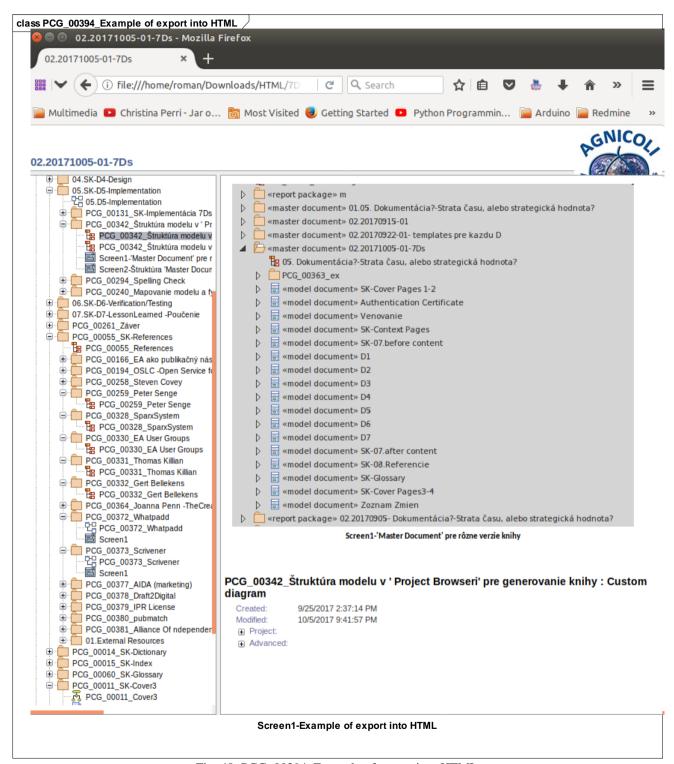


Fig. 48: PCG\_00394\_Example of export into HTML

# 5.2.5 Example of export into CMS system "Joomla!"

PACKAGE NAME-PCG\_00395\_EXAMPLE OF EXPORT INTO CMS SYSTEM "JOOMLA!", STEREOTYPE-"





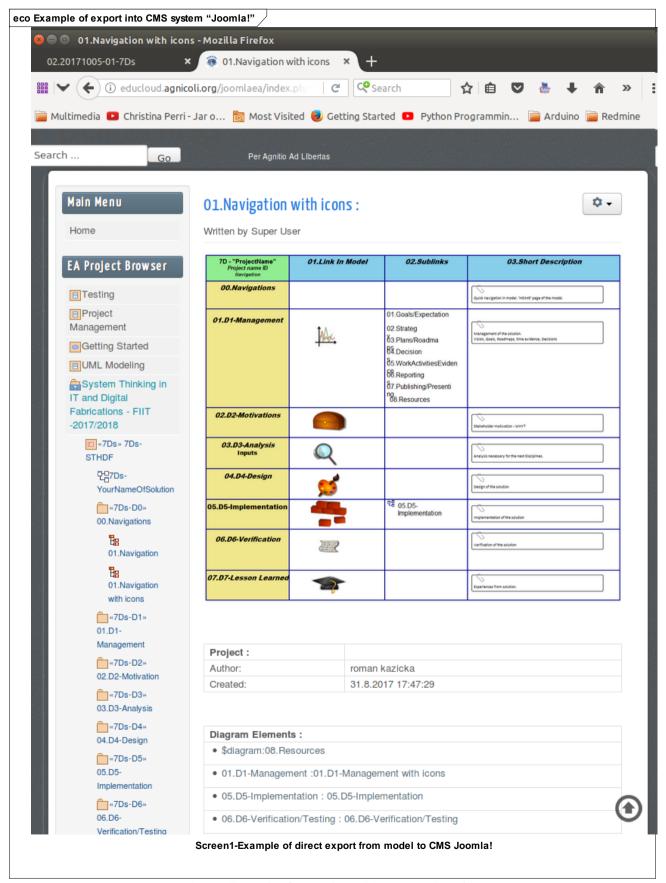


Fig. 49: Example of export into CMS system "Joomla!"



# 5.2.6 Example of Access to the model via WebEA

PACKAGE NAME-PCG 00396 EXAMPLE OF ACCESS TO THE MODEL VIA WEBEA, STEREOTYPE-"



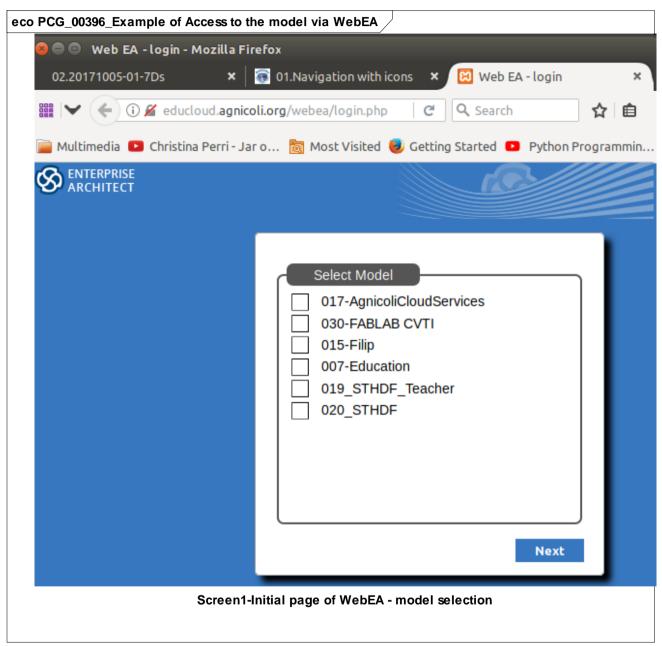


Fig. 50: PCG\_00396\_Example of Access to the model via WebEA



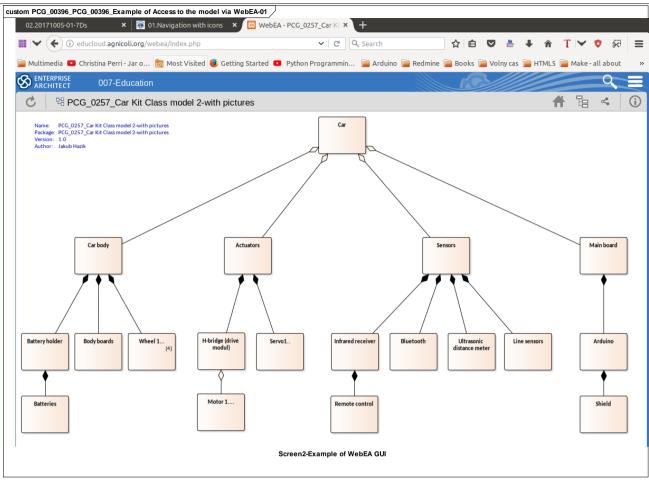


Fig. 51: PCG\_00396\_PCG\_00396\_Example of Access to the model via WebEA-01

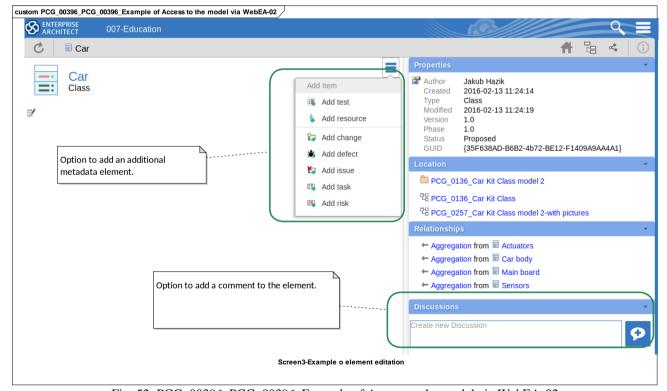


Fig. 52: PCG\_00396\_PCG\_00396\_Example of Access to the model via WebEA-02



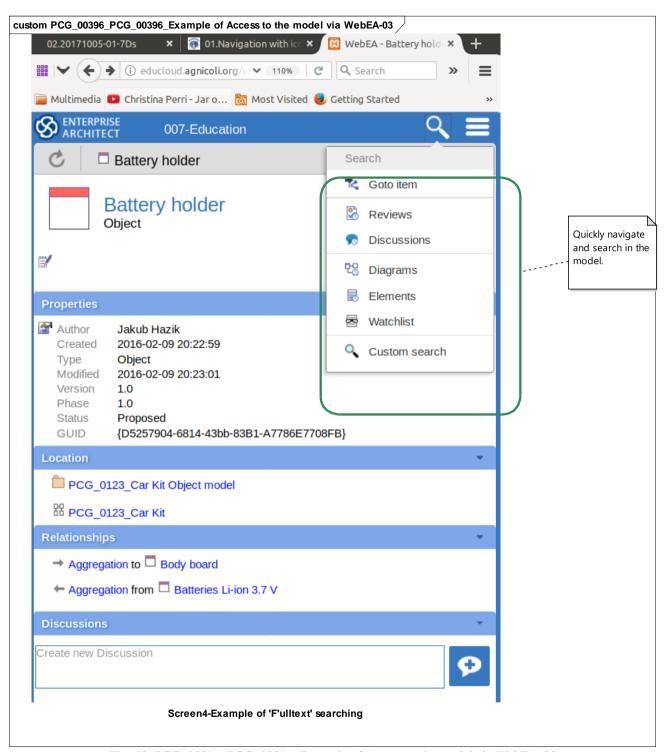


Fig. 53: PCG\_00396\_PCG\_00396\_Example of Access to the model via WebEA-03



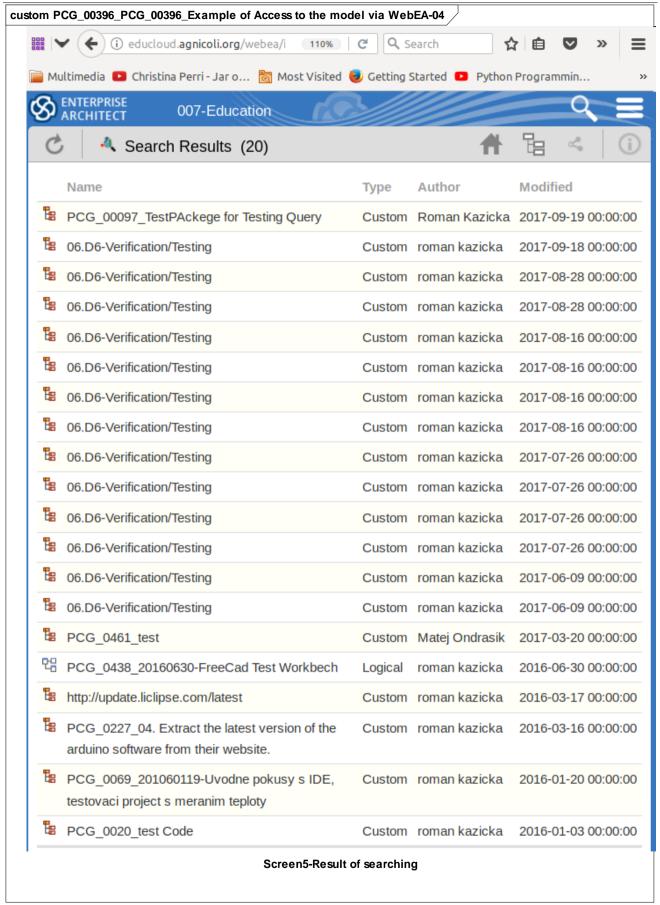


Fig. 54: PCG\_00396\_PCG\_00396\_Example of Access to the model via WebEA-04



# 5.2.7 01. "EA Cloud Sparx Services" solution concept

PACKAGE NAME-PCG 2039 01. "EA CLOUD SPARX SERVICES" SOLUTION CONCEPT, STEREOTYPE-"



Solution concepts should be understood on 3 levels: Business, System and Technology

### Business level

**EA** Cloud Sparx Services is designed to serve for a team cooperation. It is supposed to support as many activities as possible in the team. The results include shared knowledge, shorter time to market and higher quality in the form of a more satisfied customer. The effort is to build a trusted source of information that every key player can rely on.

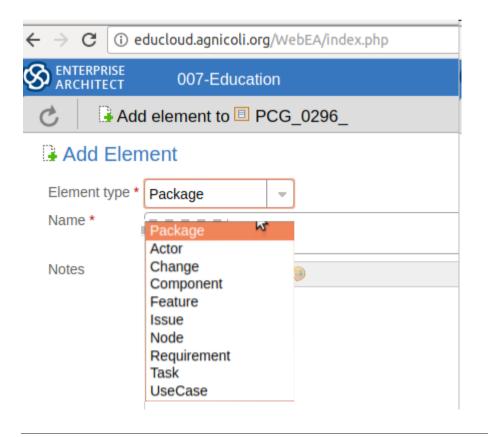
### • System level

The service is based on a shared repository and services over the repository. A relational database, a web server and an application server that provides special cloud services are all part of the solution. For example, accessing the repository via a standard port designed for web access (80, 443), sharing content partitions for multiple project repositories. Web access to the repository is designed for team members who do not want or do not need to access the model through a sophisticated, fat client but will only use a reduced web access.

### • Technology level

Several relational databases (ORACLE, Microcoft **SQL**, MySQL, Postgress, Adaptive Anywhere server) are supported at the technological level. Apache or MS IIS are used as web server. Connection to the database is provided by native driver or ODBC connector according to the used database. Using the "Sparx Cloud Services" service (application), the connector task is resolved by this service. This means that team members do not have to install **ODBC driver** and can work with remote repositories. For administrative purposes an ODBC access is necessary in some cases.

For team members who do not need or do not want to use the sophisticated EA client environment, a separate *WebEA* product can be used. This is a web-based approach directly to the model. It is possible to create basic elements such as "*Package*", "Actor", "Change", "Component" and more. Please see the picture. Via the web it is possible to discuss elements, assign tasks, errors, and so on. It is not possible to create charts





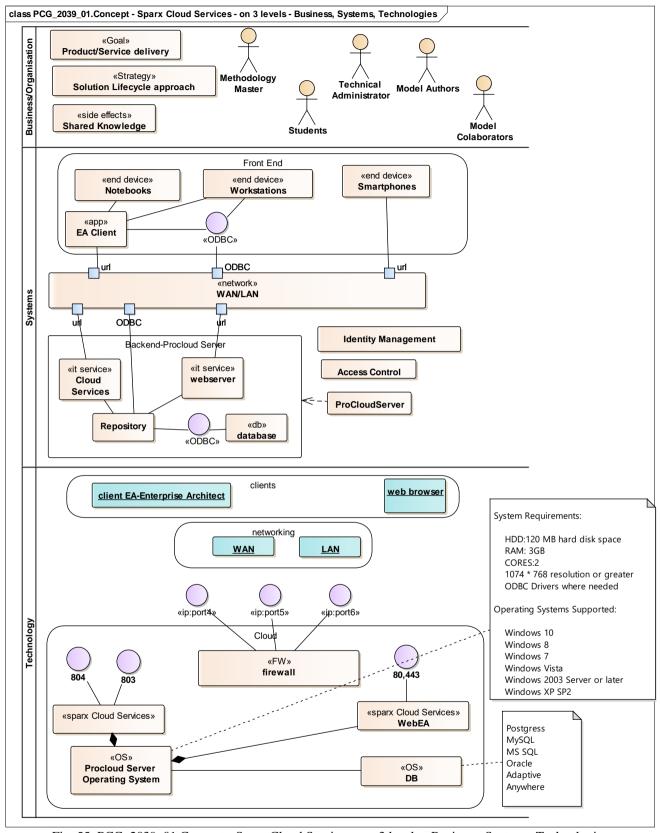


Fig. 55: PCG\_2039\_01.Concept - Sparx Cloud Services - on 3 levels - Business, Systems, Technologies



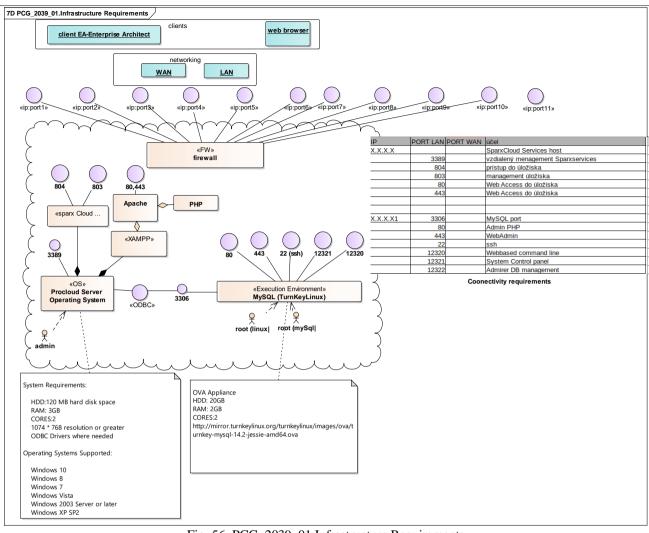


Fig. 56: PCG\_2039\_01.Infrastructure Requirements

# 5.2.8 Model structure in "Project Browser" for book generation

PACKAGE NAME-PCG\_00342\_MODEL STRUCTURE IN "PROJECT BROWSER" FOR BOOK GENERATION, STEREOTYPE-"





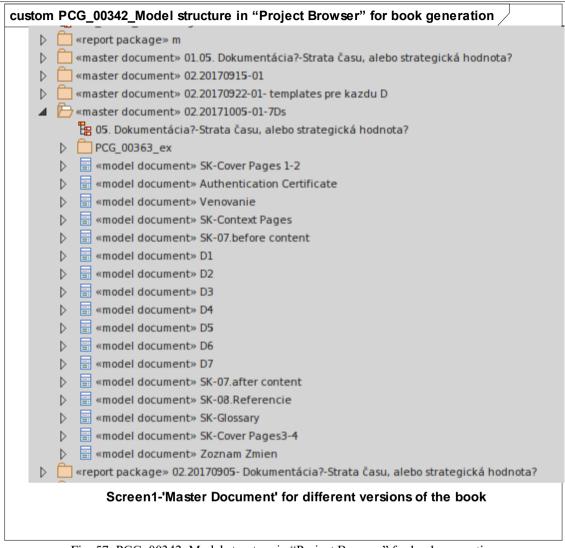


Fig. 57: PCG 00342 Model structure in "Project Browser" for book generation



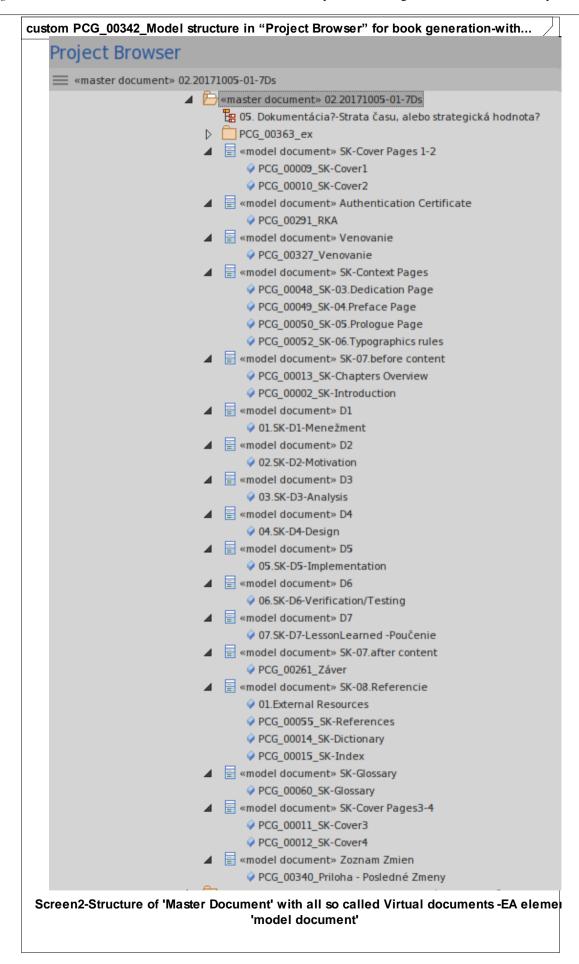




Fig. 58: PCG\_00342\_Model structure in "Project Browser" for book generation-with details

# 5.2.9 Spelling check

PACKAGE NAME-PCG\_00294\_SPELLING CHECK, STEREOTYPE-"

EA application does not support the Slovak language. It is also possible to use the "Google Translator" technology, but not for the Slovak language. That is why I have solved the spelling check as follows. I generated a RTF (docx) document and opened it in the Write (Libre Office) application. I either copied or corrected manually all texts where I found an error. MS Word users have wider options. In the generated document they can make various modifications, such as adding hyperlinks to linked pages or using advanced techniques to work with "bookmarks". I have chosen a one-transition process. Model ----> Output Document. With all the advantages (simplicity) and disadvantages (I rely on the tool that the output will be perfect enough).

# 5.2.10 Model mapping and printed book

PACKAGE NAME-PCG\_00240\_MODEL MAPPING AND PRINTED BOOK, STEREOTYPE-"





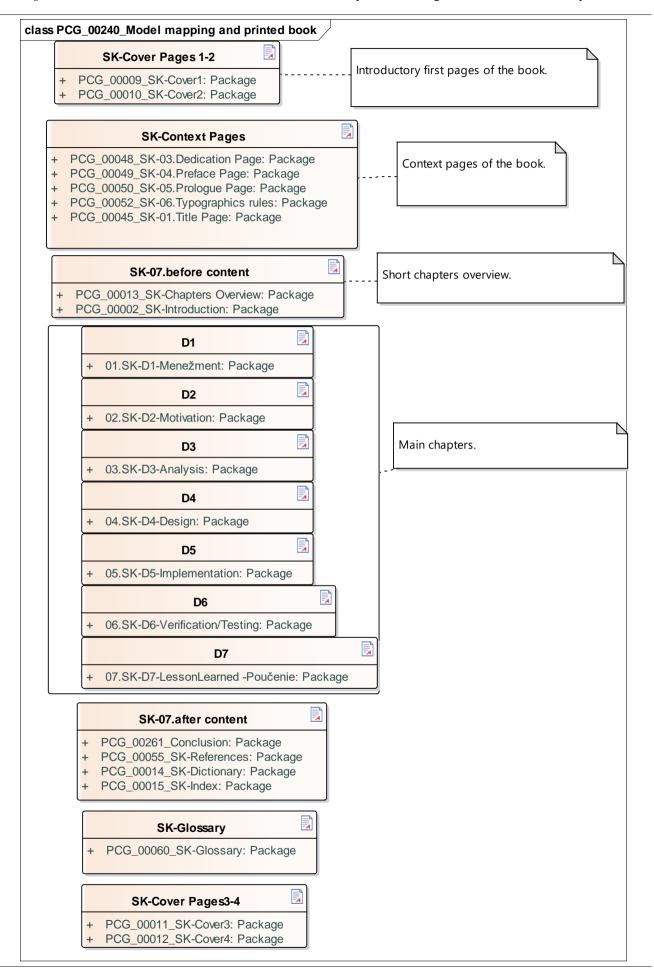




Fig. 59: PCG\_00240\_Model mapping and printed book

# 5.2.11 Navigation diagrams in model for 7D methodology

PACKAGE NAME-PCG\_00403\_NAVIGATION DIAGRAMS IN MODEL FOR 7D METHODOLOGY, STEREOTYPE-"

Working with the model is an extremely important navigation system. *EA* allows several ways to navigate the model. Through the '*Project Browser*', use 'Model Views', Use 'Home Page' to help you find the concepts. I was very well versed in using diagrams to navigate. The 7D and APV methodologies have a comprehensive navigation system across the EA. It improves the comfort of working with the model. The following is a list of navigation diagrams in the 7D model.

### 5.2.11.1 7D – Navigation diagram

PACKAGE NAME-PCG\_00404\_7D - NAVIGATION DIAGRAM -HOME PAGE, STEREOTYPE- "



7D - "ProjectName" Project name ID Navigation	01.Link In Model	02.Sublinks	03.Short Description	
00.Navigations			Quick navigation in model. 'HOME' page of the model.	
01.D1-Management	MANAGEMEN	01.Goals/Expectation 02.Strategy 03.Plans/Roadmaps 04.Decisions 05.WorkActivitiesEvidence 06.Reportings 07.Publishing/Presenting 08.Resources	Mana gement of the solution.  Vision, Goals, Roadmaps, time evidence, Decisions	
02.D2-Motivations	\$CIMATION .		Stakehol der motivation - WHY?	
<i>03.D3-Analysis</i> Inputs	, saltyso		Analysis necessary for the next Disciplines.	
04.D4-Design	DESIGN		De sign of the solution	
05.D5-Implementation	THE COLUMN TO STATE OF		Imple mentation of the solution	
06.D6-Verification	Sich TON 1887		Verification of the solution	
07.D7-Lesson Learned	VSSSON/LEARAY		Experiences from solution.	

Fig. 60: PCG\_00404\_7D – Navigation diagram -Home Page



# 5.2.11.2 D1-Management – Navigation diagram

PACKAGE NAME-PCG\_00405\_D1-MANAGEMENT - NAVIGATION DIAGRAM, STEREOTYPE- "



01.Management 7Ds-Seven Disciplines	01.Links	02.Sublinks	03.Description
External Navigation	Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z		
01.Goals/Expectations	COAL		
02.Strategy	S'RATEGY.		
03.Plan/Roadmaps	PLANS		
04.Decisions	OFCISIO4		
05.Work Activities	STATE OF STA		
06.Reporting	SCORTING		
07.Publishing	PAST22HING		
08.Resources	명 08.Resources		
	Screen1-D1-Manageme	nt - Navigation diagram	

Fig. 61: PCG\_00405\_D1-Management – Navigation diagram



### 5.2.11.2.1 01.01.Goals - Navigation diagram

PACKAGE NAME-PCG\_00412\_01.01.GOALS - NAVIGATION DIAGRAM, STEREOTYPE- "



Fig. 62:  $PCG_00412_01.01.Goals - Navigation diagram$ 

### 5.2.11.2.2 01.02.Strategy – Navigation diagram

PACKAGE NAME-PCG\_00413\_01.02.STRATEGY - NAVIGATION DIAGRAM, STEREOTYPE-"



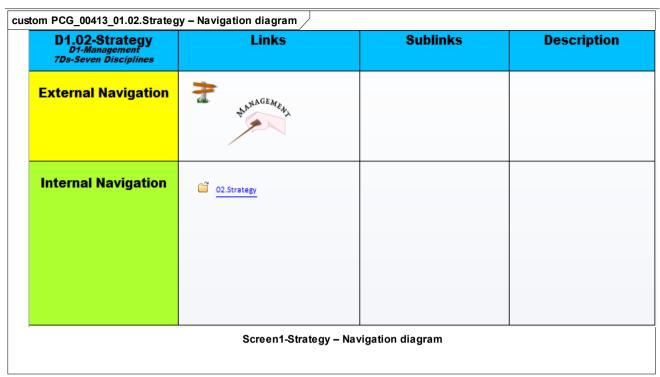


Fig. 63: PCG\_00413\_01.02.Strategy - Navigation diagram

### **5.2.11.2.3 01.03.Plans – Navigation diagram**

PACKAGE NAME-PCG\_00414\_01.03.PLANS - NAVIGATION DIAGRAM, STEREOTYPE-"

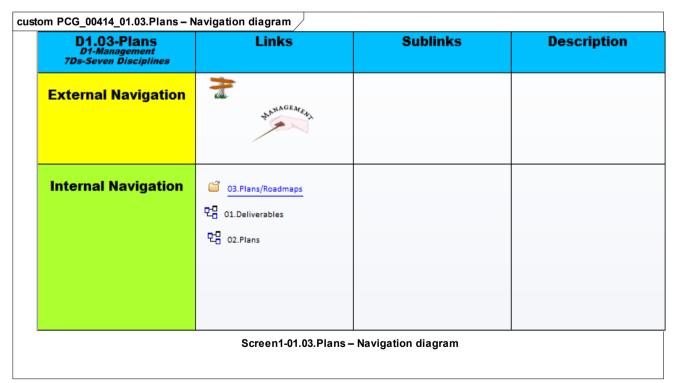


Fig. 64: PCG\_00414\_01.03.Plans - Navigation diagram

### 5.2.11.2.4 01.04.Decisions – Navigational diagram



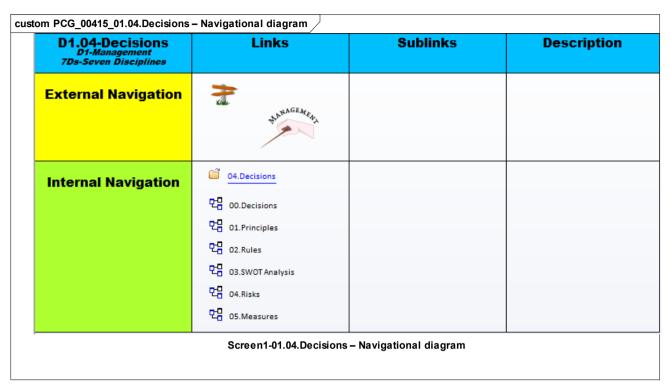


Fig. 65: PCG\_00415\_01.04.Decisions - Navigational diagram

### 5.2.11.2.5 01.05. Work evidence – Navigation diagram

PACKAGE NAME-PCG\_00416\_01.05. WORK EVIDENCE - NAVIGATION DIAGRAM, STEREOTYPE-"

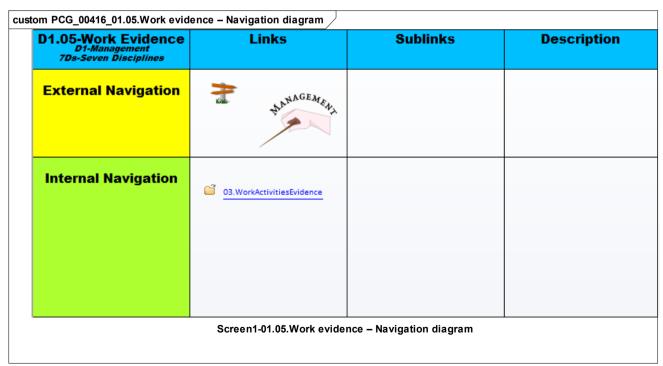


Fig. 66: PCG\_00416\_01.05. Work evidence - Navigation diagram



### 5.2.11.2.6 01.06.Reporting – Navigation diagram

PACKAGE NAME-PCG\_00417\_01.06.REPORTING - NAVIGATION DIAGRAM, STEREOTYPE- "

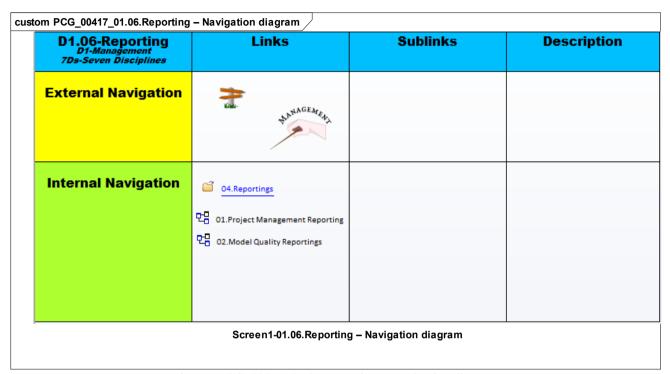


Fig. 67: PCG\_00417\_01.06.Reporting – Navigation diagram

### 5.2.11.2.7 01.07.Publishing – Navigation diagram

PACKAGE NAME-PCG\_00418\_01.07.PUBLISHING - NAVIGATION DIAGRAM, STEREOTYPE-"

D1.07-Publishing D1-Management 7Ds-Seven Disciplines	Links	Sublinks	Description
External Navigation	ANAGEMEN.		
Internal Navigation	○ 05.Publishing		
	명 Master Document		



Fig. 68: PCG 00418 01.07. Publishing – Navigation diagram

### 5.2.11.2.8 01.08.Resorces – Navigation diagram

PACKAGE NAME-PCG\_00419\_01.08.RESORCES - NAVIGATION DIAGRAM, STEREOTYPE-"

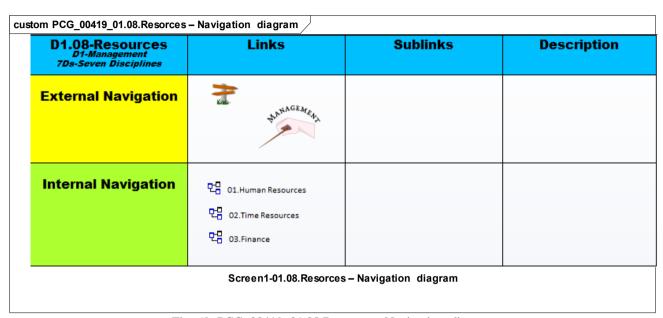


Fig. 69: PCG\_00419\_01.08.Resorces - Navigation diagram

### 5.2.11.3 D2-Motivation – Navigation diagram

PACKAGE NAME-PCG\_00406\_D2-MOTIVATION - NAVIGATION DIAGRAM, STEREOTYPE-"



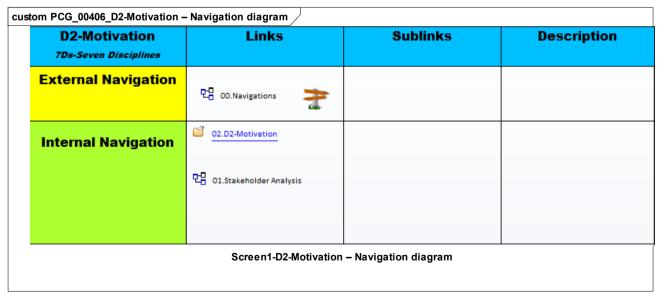


Fig. 70: PCG\_00406\_D2-Motivation – Navigation diagram

# 5.2.11.4 D3- Analysis – Navigation diagram





D3-Analysis 7Ds-Seven Disciplines	Links	Sublinks	Description
External Navigation	면 00.Navigations		
Internal Navigation	03.D3-Analysis Carrotte 01.Resources	면 PCG_0122_Web	
	Screen1-D3- Analysi	s – Navigation diagram	

Fig. 71: PCG\_00407\_D3- Analysis – Navigation diagram

# 5.2.11.5 D4-Design – Navigation diagram

PACKAGE NAME-PCG\_00408\_D4-DESIGN - NAVIGATION DIAGRAM, STEREOTYPE-"



ustom PCG_00408_D4-Design – Navigation diagram			
D4-Design	Links	Sublinks	Description
7Ds - Seven Disciplines			
External Navigation	Ca 00.Navigations		
Internal Navigation	04.D4-Design		
	Screen1-D4-Design –	Navigation diagram	

Fig. 72: PCG\_00408\_D4-Design – Navigation diagram

# 5.2.11.6 D5-Implementation – Navigation diagram

PACKAGE NAME-PCG\_00409\_D5-IMPLEMENTATION – NAVIGATION DIAGRAM, STEREOTYPE-"





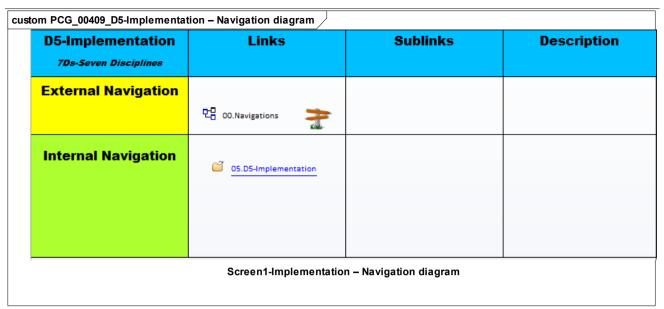


Fig. 73: PCG\_00409\_D5-Implementation – Navigation diagram

# 5.2.11.7 D6-Verification/Testing – Navigation diagram

PACKAGE NAME-PCG\_00410\_D6-VERIFICATION/TESTING - NAVIGATION DIAGRAM, STEREOTYPE-"



D6-Verification/Testing	Links	Sublinks	Description
7Ds-Seven Disciplines			
<b>External Navigation</b>			
	면 00.Navigations		
Internal Navigation			
	06.D6-Verification/Testing		
Sc	reen1-PCG_00410_D6-Verification	on/Testing – Navigation diagran	1

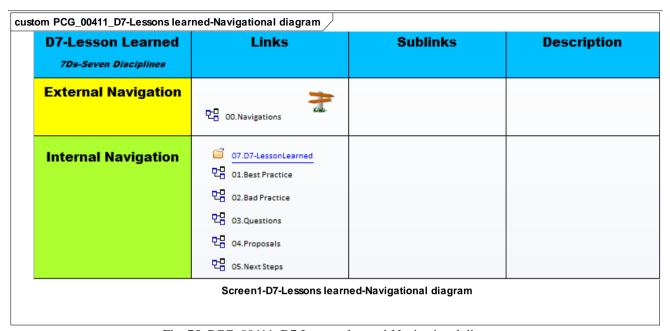
Fig. 74: PCG\_00410\_D6-Verification/Testing – Navigation diagram

### 5.2.11.8 D7-Lessons learned-Navigational diagram

PACKAGE NAME-PCG\_00411\_D7-LESSONS LEARNED-NAVIGATIONAL DIAGRAM, STEREOTYPE- "







 $Fig.\ 75:\ PCG\_00411\_D7\text{-}Lessons\ learned-Navigational\ diagram$ 



# 6 Sixth discipline: D6 – Verification and Testing

PACKAGE NAME-06.EN-D6-VERIFICATION/TESTING, STEREOTYPE- '«7Ds-D6»'

This discipline focuses on verifying objectives and expectations in terms of defined success criteria.

From the point of view of writing this book, I wrote the entire book according to the Seven Disciplines Methodology (7D) as described here. I have tried to verify how I use individual disciplines, what is suitable for me, what is and what is not useful. This is not a closed process, and the methodology itself will certainly be complemented and adjusted. But I do not expect big changes. The methodology does not reveal anything new. The methodology only provides a comprehensive view of the path to solutions that, regardless of the goal, have many common characteristics.

The second important goal of this publication is to present the Sparxsystems "*Enterprise Architect*" tool as a document generator. According to my experience, the professional community still considers it to be a "drawing" tool and not a powerful system tool.

This chapter is a brief summary of the experience from writing of this book. Verification is the process of verifying the current status against the reference status. At the beginning, I did not prepare exact requirements of the methodology or the output document. Therefore, there is not even a possible test plan accurately drawn up. I do verify the methodology(s) every day on real projects as well as with writing of this book. I evaluate the output book and the process of its creation subjectively, only on the basis of my expectations about what a good book should contain and how much effort did it take to come close to these expectations. I will not evaluate the book from the point of view of its content. This needs to be judged by each reader. I will evaluate it in terms of support of the tool for the book creation.

# 6.1 01. Methodology verification

PACKAGE NAME-PCG\_00385\_01.METHODOLOGY VERIFICATION, STEREOTYPE-"

The 7D methodology has helped me maintain my projects well described for the past few years. I have quite a lot of models since the year 2000. In the last year I added the first discipline to the original version. It was based on the 8D methodology, which I have used since 2004, but I did not deal with the management within the 8D. I resolved it outside of the methodology. At first I created the term 6Ds where the following disciplines were included D1-Motivation, D2-Analysis, D3-Design, D4-Implementation, D5-Testing and Verification, D6-Lessons learned. However, this type of structure led me to deal with everyday operational and tactical questions outside of it. I had to add another D1-Management discipline. And so I had to adjust the numbering of other disciplines. I was wondering how to actually verify the methodology? And I found one key for that. With practical examples. Either I will verify it and it will help me now or in the future or it will simply not. I am not preparing these methodologies just because I feel bored. I prepared them because I needed them for my everyday work, when I was preparing reports instead of creative activity, or when I was looking for some information, or when I had to prepare the documentation in a classic way into the text editors. I tried to use the methodology in writing of this book too. Mainly for the time records. It helped me record the tasks that I had to postpone for later and also record the level of their performance. During the follow-up check, I could easily identify the tasks I still have to work on and which I consider to be finished at a given time. I certainly could have had gone into further details when recording time but also with planning, risk assessment, and so on. More important for me was the fact that I created a system in which each piece of information has its place. I found the methodology satisfactory in this respect. It rationally connects management and professional activities into one system. For a large number of small projects it will be appropriate. For projects that are more complex, I will use more methodologies - 7D together with other APV methodology that is focused on describing systems from an architecture perspective at an abstract as well as an instance level. Another important methodology is "Q12-12 quadrants for successful business".

The process of making a book is described continuously in this book. It was my intention in order to demonstrate the 7D methodology with a specific example.

# 6.2 02. Technology verification

PACKAGE NAME-PCG\_00386\_02.TECHNOLOGY VERIFICATION, STEREOTYPE-"



Without technology, many methodologies and best practices would not be feasible. If I had no knowledge of EA, I probably would not have any motivation to develop the 7D and APV or Q12 methodologies. The real world is complex and its complexity increases exponentially. How to handle this situation? Using appropriate methodologies and advanced technologies. And with new habits and working practices. I often hear complaints on how the EA as very complicated. I think that EA is complex and the user is not ready to use it. He or she does not have the right habits. But I also realize one more thing - where there are reserves. And not so much in the tool itself, but in the way Sparxsystems supports it. The company itself generates a huge amount of documentation about the tool itself and its features. The tool manual itself has several thousand pages. I feel a great lack of practical examples of its use. These could be, and in part are, supplied by advanced EA users around the world (see the Reference part PCG 00055 EN-References). EA as a book generator has many drawbacks that can be resolved. I realize that EA has been developed for a different purpose. And generating a book just wants to demonstrate the scope of this tool. Just to be thorough, I just want to add that any technology cannot be useful unless it is used appropriately. By installing EA, the process is just beginning. It is still necessary to change the habits of the teams that use this tool. Here I will summarize the strengths and weaknesses I have identified during my work with this technology. Due to the complexity of the tool, I focus mainly on the properties supporting document generation in pdf, rtf, docx. I also realize that this is just a few remarks, and I will definitely have to add to this list.

### Negative experience: (please see also PCG\_00109\_01.01. Enterprise Architect)

- "Dashboard" features
- "Time Series Chart" do not allow for display of data, which is created as a result of **SQL** terms, such as the sum of time units for allocated resources
- Document generation
- a more complicated content table creation. Maybe I just did not understand how to create "TOC"
- I did not understand how to create a table of pictures is it possible at all?
- a very complicated and unclear way to work with styles very non-transparent for the user
- sophisticated way to work with sections
- very unpredictable behavior of blocked concepts section names in the "Content panel"; it often happened that the yellow color highlighted not only the specified terms, but also some free texts and I was no table to delete it
- I did not understand why the "Master Document" should not be supported in the future
- I did not understand why the new "Report Package" element was not introduced
- Master Document does not remember settings for defining the phase and other options for filtering output documents
- Master Document does not remember even the other instance parameters. It remembers the last used parameters with the last generation (for example, using F8), which takes a great deal of time with continuous rewrite of the same parameters. I would need an element similar to the "Report Specification" element, which would memorize all of these parameters.
- I was no table to switch on the change between the headers and footers on both the left and the right side in a complex document (via the Master Document), I can only do it over one virtual document.
- I was not able to find the option for "Frame" to change the "z" coordinate, for it to be squared by the text, over or below the text
- working with a watermark in a more complex document (via the "Master Document") was a problem. In case the "Virtual Document" has its own template definition in "Tag Value" called "RTFTemplate", the watermark was not generated at all.
- F8 dialog selecting a template with a large number of templates is unclear. It would be very helpful to categorize the templates, or at least the template should not be changed for "Master Document" and "Model Document" elements.
- I was not able to find a way to get information from the "Model View" element into the generated document. I only found the option to generate a document for selected elements. Generation in different formats leads to different results, generating in rtf lead to forced "embedded picture" from the *master document* into all documents. When generating into pdf and docx, the subdocuments have an "embedded picture" from the subdocuments template.

### Documentation

- too much documentation on detailed features
- lack of practical examples and context properties
- very-difficult-to-read documentation it takes a long time to understand where the terms belong. Difficult to determine whether the concept is from the EA tool itself, from a methodology or from a classical professional English
- Work with figures
  - it lacks the categorization of figures in the picture library with a large number of figures, the library work is very poor



- Work with "Resources Windows", especially with templates is very unclear.

  A possibility of nested categorizations would be very helpful. Example. The "User templates" section includes some items "Templates", "Fragment", "Cover Pages", "StyleSheets", "TableOfContents", "Dynamics". When creating them, we have the option to enter the "Template Group" and so move the new template into the new "Template Group". For more complex documents, a large number of templates and template types are created. It would help create subcategories at the "Template Groups" level. Also for standard types such as "Cover Page", but also for custom document templates and custom style definitions
- Generating information from "Audit view" or from "Audit" records

   I was no table to find a way to generate a list of changes in the output document. Perhaps an Audit section could be added in the "Sections Panel". There is the possibility to view the latest changes in "Audit History", but I was not able to find the ability to generate information in the context of the generated document. I would greatly appreciate the inclusion of a list of all the elements that have changed in some way in the annex. I could also define the type of change. For example, changing the status, changing text in a note, changing a phase, and so on

### Positive experience:

There is significantly more positive experience than negative experience. I will mention at least some:

- Rapid generation of pdf from one chart
- Option to generate a comprehensive document from each "Package"
- Option to generate a comprehensive document from the "Search"
- Option to insert any fragment from the model into different sections using the so-called "Fragments"
- Option to use SQL, scripts, and the so-called "Template Selector"
- Option to generate complex documents from one source

# 6.2.1 20170911-Output document format verification

PACKAGE NAME-PCG\_00277\_20170911-OUTPUT DOCUMENT FORMAT VERIFICATION, STEREOTYPE-"

The documentation details each feature. However, the user needs to try to generate the first documents, change the parameters and find out where and how it will show. In the last year I tried to map how different parameters affects particular things in the output. I plan to use it or generate it once again in a new technique-focused publication and the way how to do it.

### 6.2.1.1 Findings during the document format verification

PACKAGE NAME-PCG\_00279\_FINDINGS DURING THE DOCUMENT FORMAT VERIFICATION, STEREOTYPE-"

This section describes some test results or deviations from our expectations. Sometimes I was able to remove the problem and understood its cause, sometimes I removed it and did not understand the cause itself. It may be that the settings are incorrect, the environment is affected or there is some wrong combination of configuration, and so on. At present, some findings cannot be repeated. Nevertheless, I left them in my book.

### **6.2.1.1.1** Findings – Authentification certification

PACKAGE NAME-PCG\_00278\_FINDINGS - AUTHENTICATION CERTIFICATION, STEREOTYPE- "

This finding relates to my misunderstanding of the "Master Document" mechanism. I wanted to make the situation easier and use the standard parameters for nonstandard use when generating the certificate. This record demonstrates the level of my knowledge at a given time. It was my fault, but it has great value for me that I have it in the model.





Fig. 76: PCG\_00278\_Findings – Authentication certification

### 6.2.1.1.2 Problem with numbering of Right and Left pages

PACKAGE NAME-PCG 00280 PROBLEM WITH NUMBERING OF RIGHT AND LEFT PAGES, STEREOTYPE-"

I know how to achieve a status when the document distinguishes the left and right side numbers in simple document only. I did not succeed to do it with a more complex document generated with the "Master Document". I hope to learn one day...

# Name: PCG\_00280\_Problem with numbering of Right and Left pages Author: Roman Kazicka Version: 1.0 Created: 11.9.2017 19:05:47 Updated: 29.10.2018 16:42:33 Issue\_0002\_Formatting of Page footer on left anf right pages. Why is not respect the formating for right page?

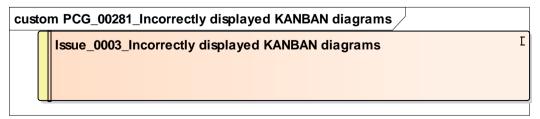
Fig. 77: PCG\_00280\_Problem with numbering of Right and Left pages

### 6.2.1.1.3 Incorrectly displayed KANBAN diagrams

PACKAGE NAME-PCG\_00281\_INCORRECTLY DISPLAYED KANBAN DIAGRAMS, STEREOTYPE-"

Kanban diagrams exceeded A4 format. I did everything I knew. I set the chart property to set to A4, but it did not help. I set the 'Margin' side. Nothing helped me. In the meantime, I have somehow removed it. I'm not sure what helped. In this version of the book, this problem is no longer the case.

The problem was caused by the use of the unheard-of theme for the charts background.



 $Fig.\ 78:\ PCG\_00281\_Incorrectly\ displayed\ KANBAN\ diagrams$ 



### 6.2.1.1.4 Template should be supplemented with the stereotype information

PACKAGE NAME-PCG 00282 TEMPLATE SHOULD BE SUPPLEMENTED WITH THE STEREOTYPE INFORMATION, STEREOTYPE-"

I have recognized that I would like the document to reveal specific features about the described elements and not just the written text, but also the specification of terms. The "stereotype" mechanism is used for this purpose. The relevant term shall be assigned an explanatory term. For example, the "TimeRecord" stereotype emphasizes that the term is related to time recording.

Change\_0001\_It is necessary to add new sterotype to the 7D toolbox. e.g. for term 'Rule', 'Principle', etc.

Fig. 79: PCG 00282 Template should be supplemented with the stereotype information

# 6.2.2 Check – overview of templates for output document

PACKAGE NAME-PCG 00297 CHECK – OVERVIEW OF TEMPLATES FOR OUTPUT DOCUMENT, STEREOTYPE-"

When analysing the problems I needed to understand the mechanism of document generation. All virtual documents in "Master Document" have their own template. I needed to know which parameters of local parameters are overwritten by the parameters defined in the master template in the "Master document". All the used templates are shown in the following figure.



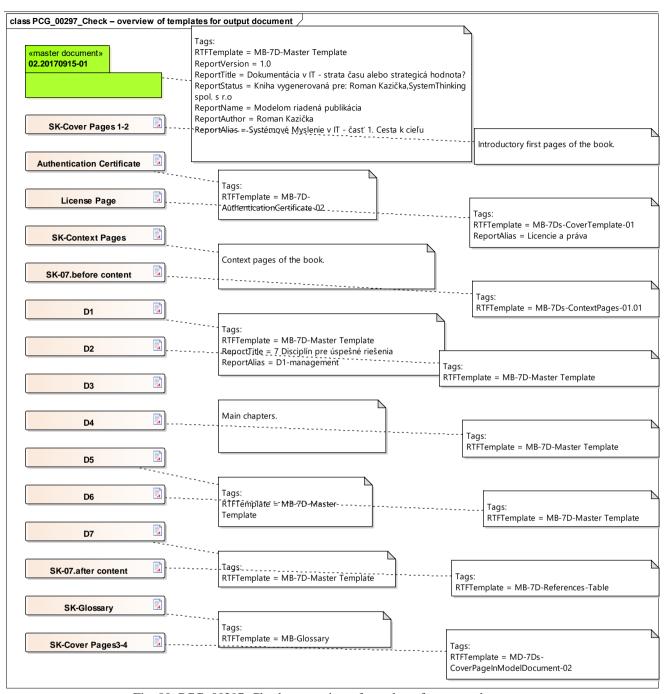


Fig. 80: PCG\_00297\_Check - overview of templates for output document



# 7 Seventh discipline: D7 – Lessons learned

PACKAGE NAME-SEVENTH DISCIPLINE: D7 – LESSONS LEARNED, STEREOTYPE- '«7Ds-D7»'

This discipline is exceptional. If we manage it well, it can bring us huge benefits. It contains our greatest resources. Our experiences, mistakes, faults, unanswered questions and challenges for the future. For the first time, it will also be about searching, testing, experiments and mistakes. Every successful step will serve as an accelerator for the next project, and the knowledge of mistakes will enable us not to waste time in the future. We must also be grateful for the mistakes and faults. They move us forward the most. Mistakes and faults cannot be avoided, but it is good to learn from them, by recording them, trying to understand them in order not to repeat again.

# 7.1 D7-01.Best practice

PACKAGE NAME-01.BEST PRACTICE, STEREOTYPE-"

In this chapter, we record experiences from our activities and practices. What we verified as good. The list is not final.

### 7.1.1 Habits are hard to break

PACKAGE NAME-PCG\_00196\_HABITS ARE HARD TO BREAK, STEREOTYPE-"

During the writing and implementation of the methodology, I also collaborated with students of the eighth year of private grammar school. Boys do not have "bad" habits, they are accepting new technology information quite naturally. They also do part of what one tells them to, but the question is how!? Just show them the right direction, and they themselves are trying, looking for better ways, wanting to do things freely, in their own way. This just confirms my company experience. Senior "solution architect" looks for arguments how it cannot be done. Young people are taking on new things quite naturally.

### 7.1.2 Work evidence

PACKAGE NAME-PCG 00398 WORK EVIDENCE, STEREOTYPE-"

Work timesheets are definitely among the least attractive activities. With my model I made this activity more comfortable and more interesting. This makes me prepare my time records and planning better. Time is the most precious thing we have and we need to know how to manage it well. A record of activities can help us do it.

# 7.1.3 Synergic effects in a team - Self-learning organization

PACKAGE NAME-PCG\_00429\_SYNERGIC EFFECTS IN A TEAM - SELF-LEARNING ORGANIZATION, STEREOTYPE-"

In a good team each member contributes to the final result. The figure shows the process of learning in a self-learning organization that is strongly supported by the technological possibilities of the modeller with a common repository. A new member of the team is initially a consumer of the model information. But after a short time he or she is able to fill in the missing information and gradually becomes a contributor of knowledge to the model. This way all team members enrich each other and contribute to the model to the same element, but each one from some other perspective.



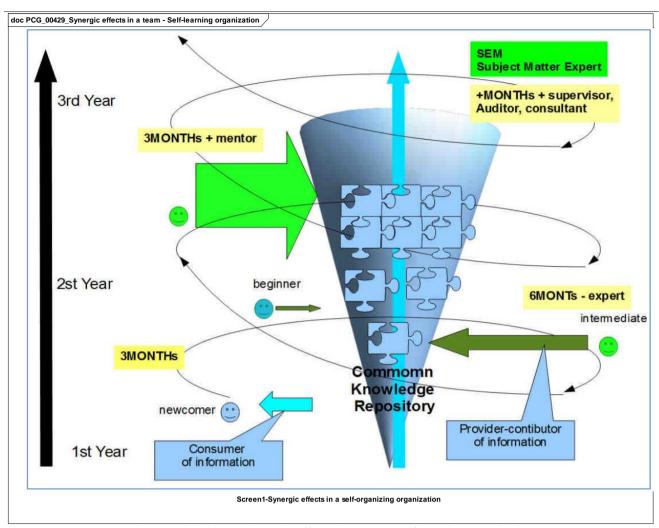


Fig. 81: PCG\_00429\_Synergic effects in a team - Self-learning organization

# 7.2 D7-02. Bad practice

PACKAGE NAME-02.EN-BAD PRACTICE, STEREOTYPE-"

The most valuable outcomes of our journey include the things we did not manage to do, or cases where our expectations were different from reality. People learn best from their mistakes. This section records such experiences. They are the most valuable grains of wisdom. This is for those who have experienced this themselves, but especially for those who may save time and energy by learning from the experience of others. The experience is divided into thematic areas. The process of making a book. Technology. Methodologies.

# 7.2.1 Book creation process

PACKAGE NAME-PCG\_00444\_BOOK CREATION PROCESS, STEREOTYPE-"

The process of book creation is a challenging process. This chapter should have included more items. I've changed and edited the book a lot, but I've just recorded only some experiences. It is a pity. Perhaps I will add the rest another time.

# 7.2.1.1 Book comprehensibility - too many topics

PACKAGE NAME-PCG\_00438\_BOOK COMPREHENSIBILITY - TOO MANY TOPICS, STEREOTYPE-"



Understanding is the key to success. After printing the preliminary version, I realized that the access to information in the model and the access to information in the book is different. In the model I have the opportunity to create something like a home page from which we get to any place in the model. Alternatively, I can use a "full-text" search and bookmarks system. When I work with a book, I can use content, index and navigational elements on each page. The problem is the fact that there are several varieties in the book that can be misleading when misrepresented. The book contains several lines:

- information on the methodology close to project management
- the book presents technology and its advantages and disadvantages in delivering solutions, especially IT solution
- the book presents a new way of collaborating in a team where each member of the team should understand the context of their work
- the book itself serves as an example of one type of solution and tries to present the methodology in practice using a particular technology

This can make the reader misunderstand what the book really wants to be. The meaning of the book will be fully shown in the following cases:

- I have a lot of information and I cannot deal with them efficiently and process them long-term
- I have a particular technology, I have a lot of problems and I need to deal with them somehow
- I need to address the issue of the current "documentation"
- I am willing to think about the essence of my problems and look for solutions
- I am willing to change my habits if it will benefit me in the long run

Based on these experiences, I have taken the decision <u>Decision7-The book must be more readable = what is the methodology and what is the book on methodology.</u> Navrhol som nové členenie knihy <u>PCG\_00435\_In the book, how can we distinguish what belongs to the methodology itself and what belongs to the book on methodology?</u> And I implemented it.

# 7.2.2 Technologies

PACKAGE NAME-PCG\_00445\_TECHNOLOGIES, STEREOTYPE-"

Several applications have been used to create a book. Inkskape, Xmind, MySQL, *Enterprise Architect*. In the following text, we will focus on *EA*.

# 7.2.2.1 Experience with EA as a tool for writing books or other publications

PACKAGE NAME-PCG\_00109\_EXPERIENCE WITH EA AS A TOOL FOR WRITING BOOKS OR OTHER PUBLICATIONS, STEREOTYPE-"

Here is some experiences with generating documents in *EA* environment. EA is not a tool for writing books, but for generating technical documentation from the model. The following chapters describe the experiences that have caused some worries, at least taking my time. Some of the problems were caused by the fact that I did not understand the documentation well, part by the deficiencies in the tool and part by the shortcomings between the operating system (ubuntu 17.04), crossover and EA 13.5.

#### 7.2.2.1.1 Chapter title will be shown at the bottom of the page

PACKAGE NAME-CHAPTER TITLE WILL BE SHOWN AT THE BOTTOM OF THE PAGE, STEREOTYPE-"

The picture below shows that the chapter title is at the bottom of the page and the body of the paragraph on the next page without a title. This can be solved by exporting to RTF or DOCx and manually correcting it. A configuration parameter would be helpful in this case. It is possible that such a parameter already exists, I just did not discover it or discovered it, and I did not understand the context.



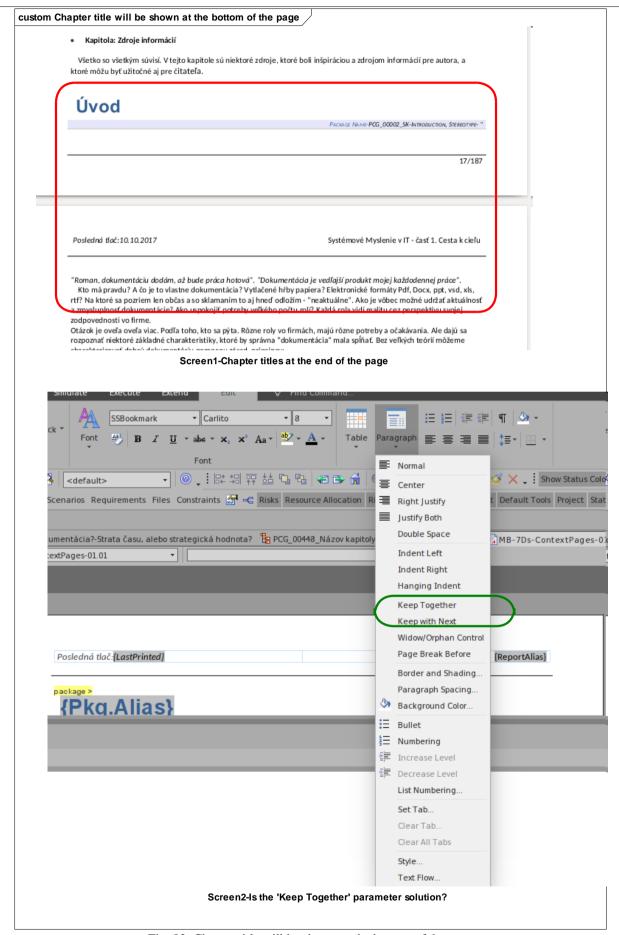


Fig. 82: Chapter title will be shown at the bottom of the page



#### 7.2.2.1.2 Writing in Slovak characters is not possible...

PACKAGE NAME-PCG\_00110\_WRITING IN SLOVAK CHARACTERS IS NOT POSSIBLE..., STEREOTYPE-"

Text inside 'Artifact1' with stereotype 'Document' ŏ ó é=áíé=áíáýžýžťčýžščťťžščeťudryjghvnuojk,

In Linux Ubuntu 17.04, in Windows manager Cinnamon you cannot enter the Slovak alphabet characters that do not have one key assigned, and punctuation is achieved using a diacritic keys. In windows I have not encountered a similar problem.

20. 9. 2017 16:02:53

In Linux, it sometimes works and sometimes does not. I did not identify why.

Text inside 'Artifact1' with stereotype 'Document' ŏ ó é=áíé=áíáýžýžťčýžščťťžščeťudryjghvnuojk,

#### 7.2.2.1.2.1 Test of Cinnamon Ubuntu 17.04

PACKAGE NAME-PCG 00124 TEST CINNAMON UBUNTU 17.04, STEREOTYPE-"

I only came across this error in Windows OS. In Linux, it sometimes did happen to me in different "Windows manager". It was however most common in "Cinnamom".

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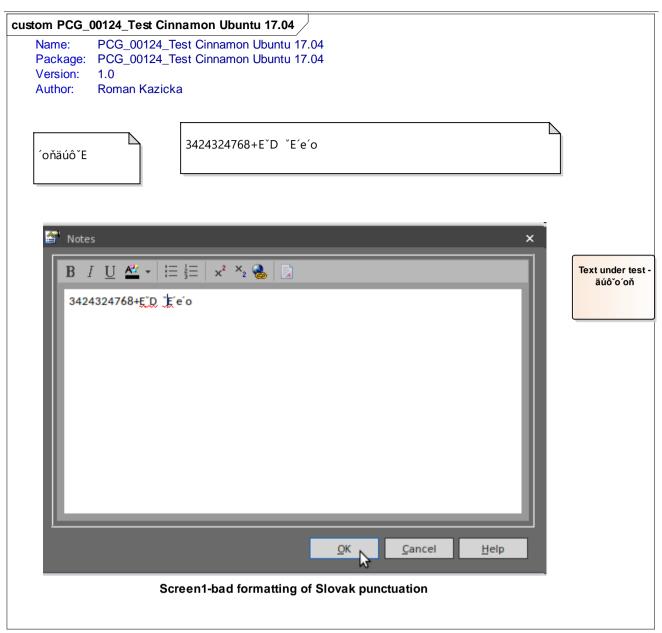


Fig. 83: PCG\_00124\_Test Cinnamon Ubuntu 17.04

#### 7.2.2.1.3 Generating Element Properties Tables

PACKAGE NAME-PCG\_00112\_GENERATING ELEMENT PROPERTIES TABLES, STEREOTYPE-"

The following experiences resulted from unfamiliarity of the tool. After reading the documentation in more detail, I found the explanation, but it took quite a while to understand. Here (http://sparxsystems.com/enterprise\_architect\_user\_guide/13.5/modeling\_tools/tablecomman) is a partial explanation for the problem, but most own experience helped the most. Some can be found in the following sections, there are examples. It does not really matter if the table header has one or two rows, or if the last row of the table is a blank line or not.

#### 7.2.2.1.3.1 SparxSystem User Guide

PACKAGE NAME-PCG\_00325\_SPARXSYSTEMS USER GUIDE, STEREOTYPE-"



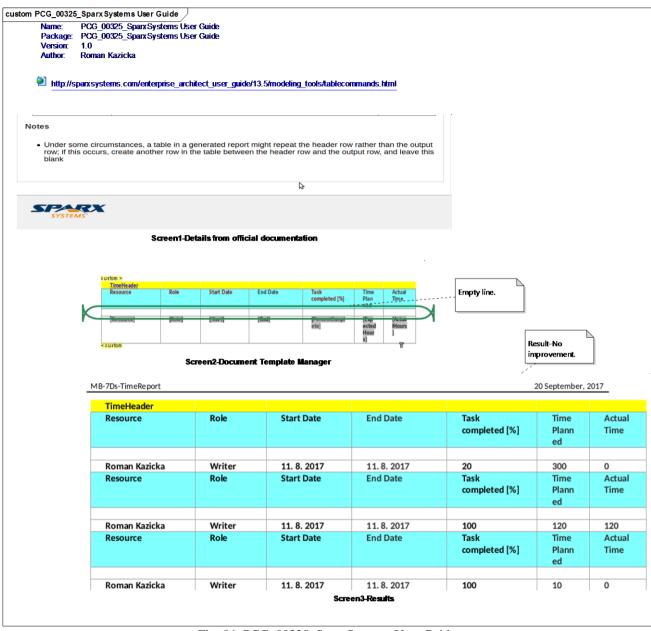


Fig. 84: PCG\_00325\_SparxSystems User Guide

### 7.2.2.1.3.2 Incorrect table formatting Example 1

PACKAGE NAME-PCG\_00114\_INCORRECT TABLE FORMATTING EXAMPLE 1, STEREOTYPE- "

When generating the attribute table by assigning the "*Resource*" source, for example for time recording purposes, there is a problem repeating the table header. See the pictures in the chart. My idea was that the table would have the main heading "Time Evidence" with the column names below it. I have to admit that the result surprised me.



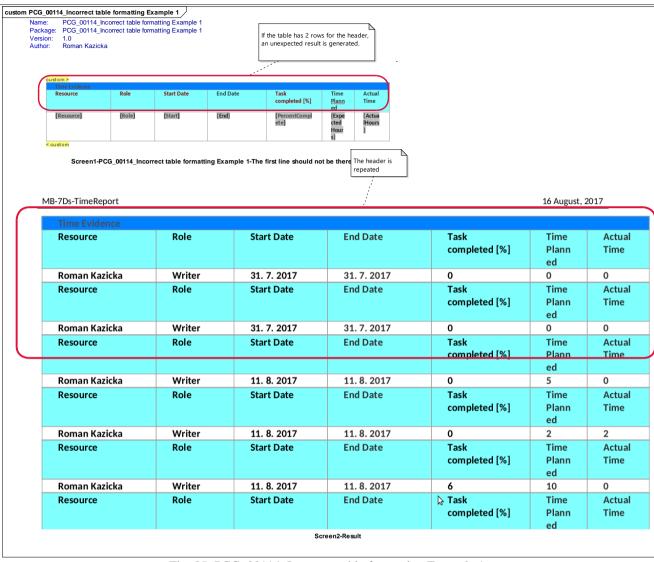


Fig. 85: PCG\_00114\_Incorrect table formatting Example 1

### 7.2.2.1.3.3 Incorrect table formatting Example 2

PACKAGE NAME-PCG\_00115\_INCORRECT TABLE FORMATTING EXAMPLE 2, STEREOTYPE-"

A similar example if you leave a blank line above the header.



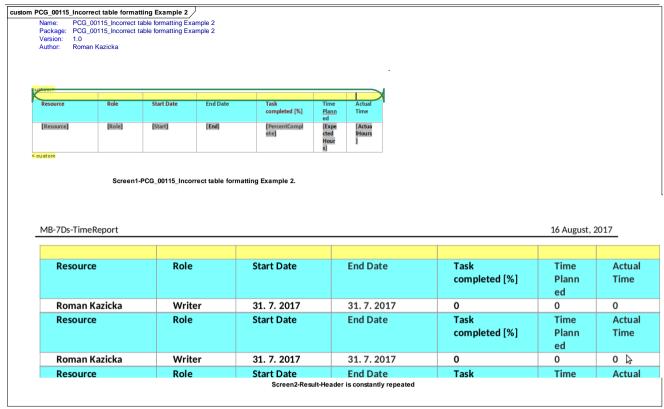


Fig. 86: PCG\_00115\_Incorrect table formatting Example 2

### 7.2.2.1.3.4 Expected Output – Generation of Time Report, Resource, Role, Times

PACKAGE NAME-PCG\_00113\_EXPECTED OUTPUT – GENERATION OF TIME REPORT, RESOURCE, ROLE, TIMES, STEREOTYPE-"

Here is an example of how I originally wanted it. Worked hours report.



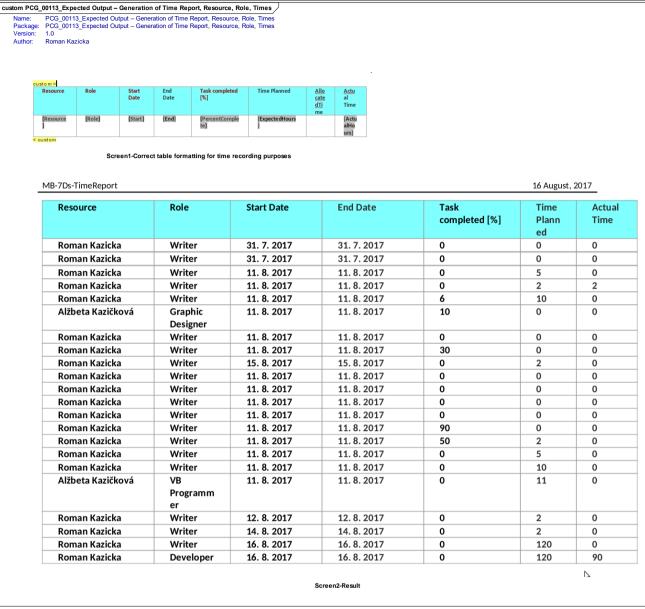


Fig. 87: PCG\_00113\_Expected Output – Generation of Time Report, Resource, Role, Times

# 7.2.2.1.4 "Chart Time Series" does not allow to view results of mathematical operations - SUM and similar

PACKAGE NAME-PCG\_00206\_"CHART TIME SERIES" DOES NOT ALLOW TO VIEW RESULTS OF MATHEMATICAL OPERATIONS - SUM AND SIMILAR, STEREOTYPE-"

Time charts show trends. It is an outstanding visual element. It is a shame that in the current version, it is not possible to visualize the results of **SQL** commands of various mathematical operations such as sum, multiplication and the like.



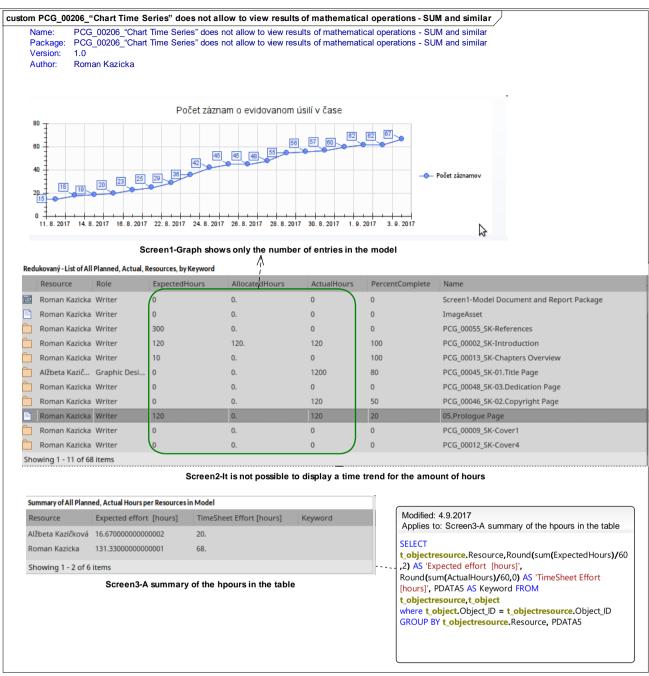


Fig. 88: PCG\_00206\_"Chart Time Series" does not allow to view results of mathematical operations - SUM and similar

# 7.2.2.1.5 Word formatting according to dictionary does not work in texts in artifacts with the "Document" stereotype

PACKAGE NAME-PCG\_00224\_WORD FORMATTING ACCORDING TO DICTIONARY DOES NOT WORK IN TEXTS IN ARTIFACTS WITH

THE "DOCUMENT" STEREOTYPE, STEREOTYPE-"

Visually differentiating text by relevance to different areas is a very good feature that increases the speed of reading comprehension. It is a shame that this feature does not work inside the elements for formatted texts. For example, in the "Document" artifacts.



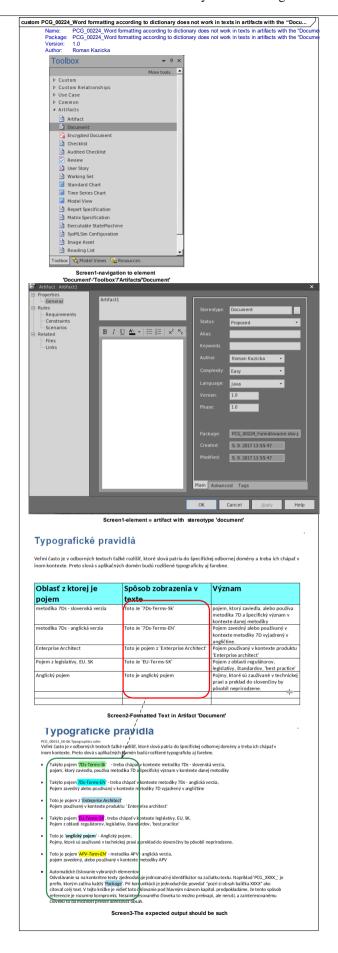




Fig. 89: PCG\_00224\_Word formatting according to dictionary does not work in texts in artifacts with the "Document" stereotype

# 7.2.2.1.6 Diagrams are incorrectly formatted to into size A4

PACKAGE NAME-PCG 00226 DIAGRAMS ARE INCORRECTLY FORMATTED TO INTO SIZE A4, STEREOTYPE-"



The charts from the model did not convert to A4 and did not appear in the document.



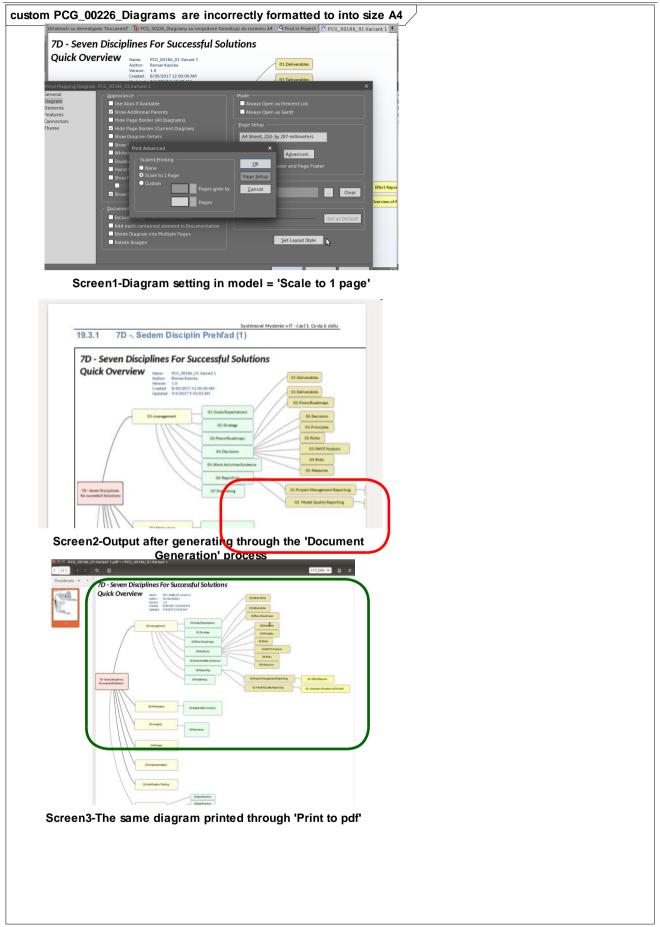


Fig. 90: PCG\_00226\_Diagrams are incorrectly formatted to into size A4



#### 7.2.2.1.6.1 RCA-Rootcause Analysis - Cause - Figure was saved into "frame"

PACKAGE NAME-PCG\_00251\_RCA-ROOTCAUSE ANALYSIS - PRÍČINA -OBRÁZOK BOL ULOŽENÝ VO 'FRAME', STEREOTYPE-"

As it turned out, the cause was the so-called "Frame".

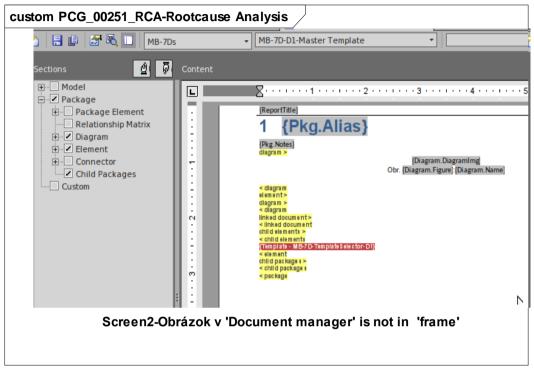


Fig. 91: PCG\_00251\_RCA-Rootcause Analysis



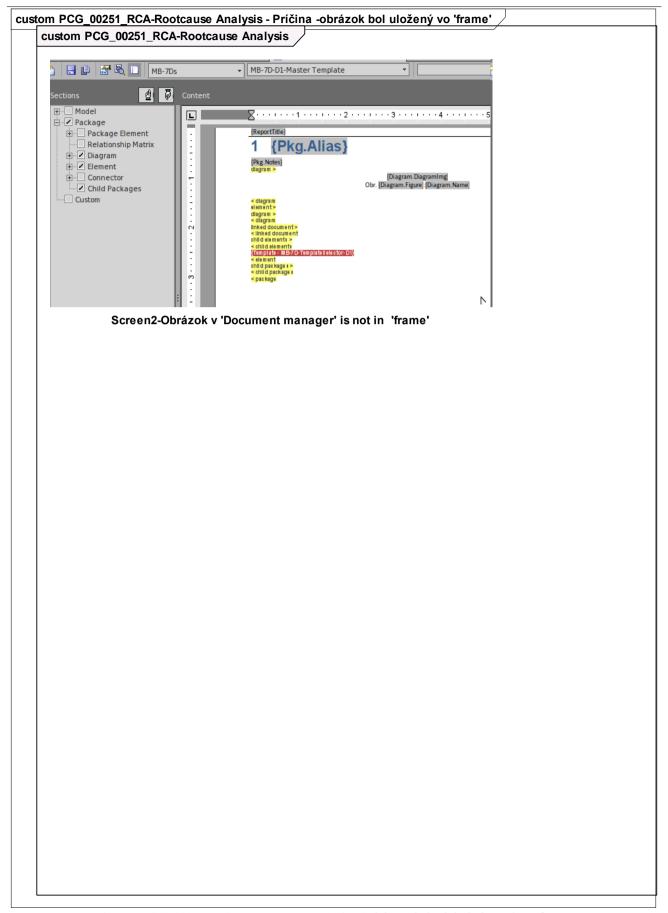


Fig. 92: PCG\_00251\_RCA-Rootcause Analysis - Príčina -obrázok bol uložený vo 'frame'



## 7.2.2.1.7 Watermark in templates is not transferred to the resulting document

PACKAGE NAME-PCG\_00235\_WATERMARK IN TEMPLATES IS NOT TRANSFERRED TO THE RESULTING DOCUMENT, STEREOTYPE-



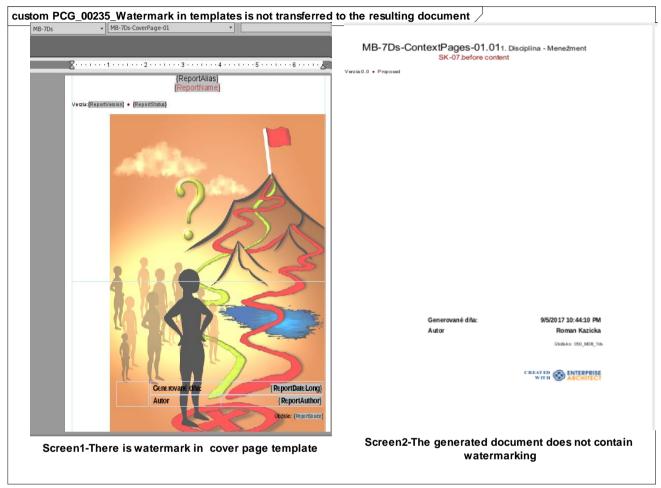


Fig. 93: PCG\_00235\_Watermark in templates is not transferred to the resulting document

### 7.2.2.1.8 Mathematical operations cannot be used with an item in the SQL command

PACKAGE NAME-PCG\_00244\_MATHEMATICAL OPERATIONS CANNOT BE USED WITH AN ITEM IN THE SQL COMMAND,

STEREOTYPE-"





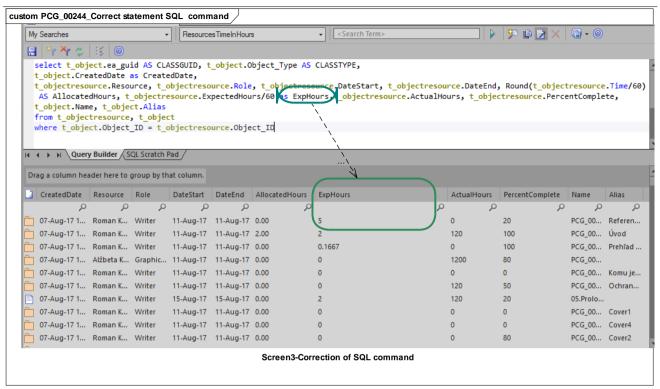


Fig. 94: PCG\_00244\_Correct statement SQL command

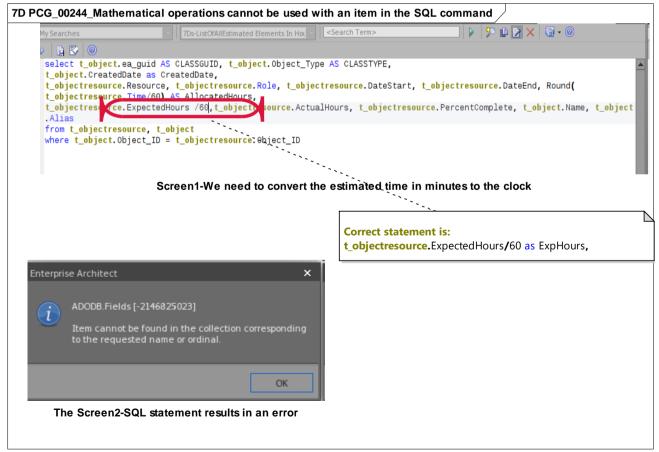


Fig. 95: PCG\_00244\_Mathematical operations cannot be used with an item in the SQL command

#### 7.2.2.1.9 Do not use "," as a delimiter when assigning a "Role"



PACKAGE NAME-PCG\_00246\_DO NOT USE "," AS A DELIMITER WHEN ASSIGNING A "ROLE", STEREOTYPE-"



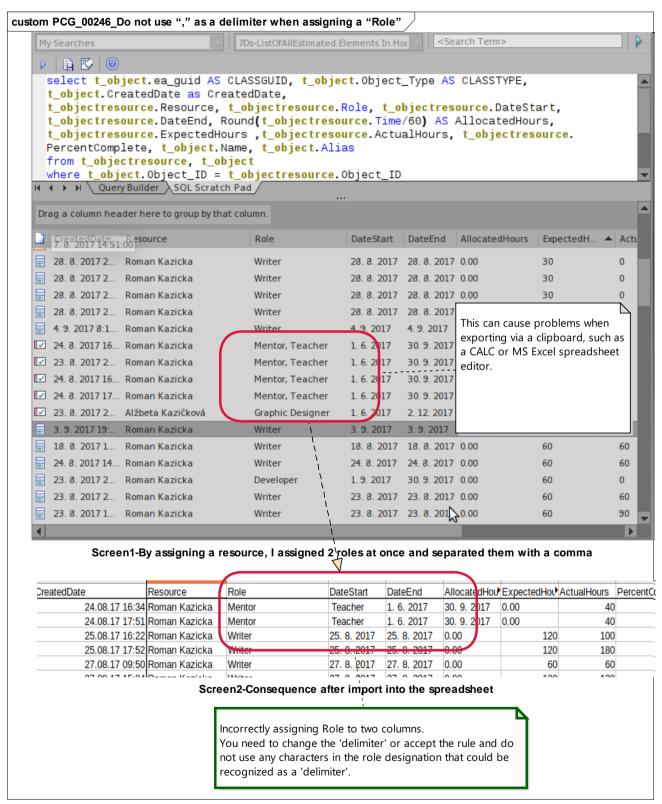


Fig. 96: PCG\_00246\_Do not use "," as a delimiter when assigning a "Role"



# 7.2.2.1.10 How to publish more complex documents?-"Master Document" or "Report Package"

PACKAGE NAME-PCG\_00254\_How to publish more complex documents?-"Master Document" or "Report Package", Stereotype-"

The "Master Document" mechanism is one of the very strong *EA* features. There are a lot of imperfections, but it is a very useful tool for generating documents. I did not find an explanation of why this tool should not be supported and replaced by the 'weaker' "Report *Package*".



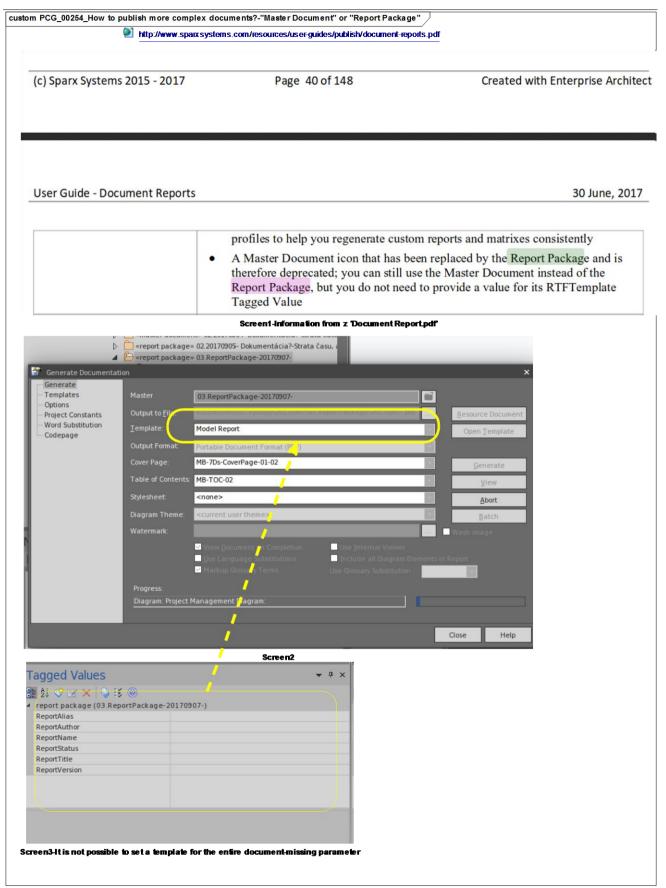


Fig. 97: PCG\_00254\_How to publish more complex documents?-"Master Document" or "Report Package"

#### 7.2.2.1.11 Very cumbersome, unintentional work with templates and styles



PACKAGE NAME-PCG 00260 VERY CUMBERSOME, UNINTENTIONAL WORK WITH TEMPLATES AND STYLES, STEREOTYPE-"

There are quite a few manuals, webinars, "whitepapers" on the manufacturer's site (e.g. <a href="http://www.sparxsystems.com/resources/user-guides/">http://www.sparxsystems.com/resources/user-guides/</a>). /). In spite of the great amount of information or maybe because of it, it is quite difficult to work with this feature. What I really missed were some practical examples. I started to write them, so maintain them in the model myself. I will publish them in some of the following books. This book is not focused directly on EA, but on the result to which EA should helpfully lead. With EA technology, it costs a little bit of effort, training, experience, suffering, but then it fulfils its purpose.

#### 7.2.2.1.12 How to generate a table of elements in a diagram?

PACKAGE NAME-PCG\_00284\_HOW TO GENERATE TABLE OF REFERENCES FROM HYPERLINKS IN DIAGRAM, STEREOTYPE-"



Generated for:Roman Kazička, SystemThinking spol. s r.o., Expiration: 10.Oct.2020



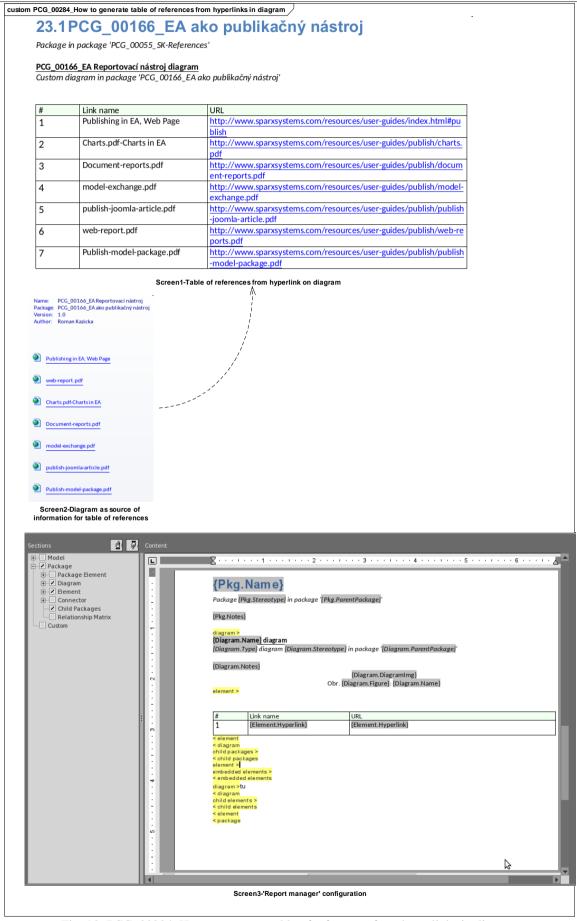


Fig. 98: PCG\_00284\_How to generate table of references from hyperlinks in diagram



#### 7.2.2.1.12.1 Wish to have

PACKAGE NAME-PCG\_00285\_WISH TO HAVE, STEREOTYPE-"

This is how I imagined it.

#### custom PCG\_00285\_Wish to have

# 23.1PCG\_00166\_EA ako publikačný nástroj

Package in package 'PCG\_00055\_SK-References'

#### PCG\_00166\_EA Reportovací nástroj diagram

Custom diagram in package 'PCG\_00166\_EA ako publikačný nástroj'

#	Link name	URL
1	Publishing in EA, Web Page	http://www.sparxsystems.com/resources/user-guides/index.html#pu
		blish
2	Charts.pdf-Charts in EA	http://www.sparxsystems.com/resources/user-guides/publish/charts.
		<u>pdf</u>
3	Document-reports.pdf	http://www.sparxsystems.com/resources/user-guides/publish/docum
		ent-reports.pdf
4	model-exchange.pdf	http://www.sparxsystems.com/resources/user-guides/publish/model-
		exchange.pdf
5	publish-joomla-article.pdf	http://www.sparxsystems.com/resources/user-guides/publish/publish
		-joomla-article.pdf
6	web-report.pdf	http://www.sparxsystems.com/resources/user-guides/publish/web-re
		ports.pdf
7	Publish-model-package.pdf	http://www.sparxsystems.com/resources/user-guides/publish/publish
		-model-package.pdf

Screen1-Table of references from hyperlink on diagram

Fig. 99: PCG\_00285\_Wish to have

#### 7.2.2.1.12.2 Document Generation' settings-very important!

PACKAGE NAME-PCG\_00286\_'DOCUMENT GENERATION' SETTINGS-VERY IMPORTANT!, STEREOTYPE-"

Generated for:Roman Kazička, SystemThinking spol. s r.o., Expiration: 10.Oct.2020



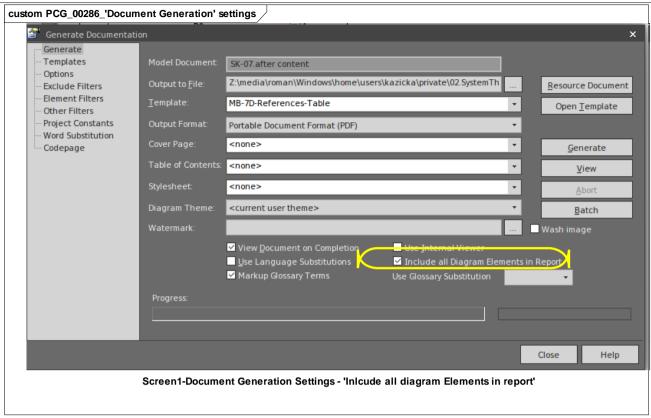


Fig. 100: PCG\_00286\_'Document Generation' settings

#### 7.2.2.1.12.3 Diagram as a source of information for table of references

PACKAGE NAME-PCG\_00287\_DIAGRAM AS SOURCE OF INFORMATION FOR TABLE OF REFERENCES, STEREOTYPE-"





Fig. 101: PCG\_00287\_Diagram as source of information for table of references

### 7.2.2.1.12.4 "Report manager" configuration

PACKAGE NAME-PCG\_00288\_'REPORT MANAGER' CONFIGURATION, STEREOTYPE-"



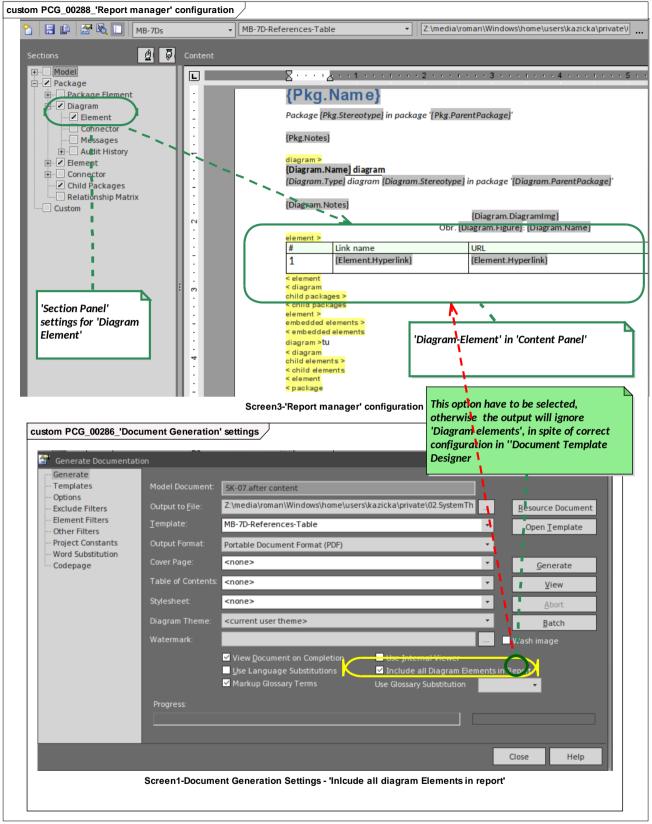


Fig. 102: PCG\_00288\_'Report manager' configuration

#### 7.2.2.1.13 Configuration hierarchy in "Master Document" and "Model Document"

PACKAGE NAME-PCG\_00300\_CONFIGURATION HIERARCHY IN "MASTER DOCUMENT" AND "MODEL DOCUMENT",
STEREOTYPE-"



This is a standard *EA* feature, but you need to try it, in order to understand how it works. I found minor differences in behavior when generating the output document according to the format that was generated - rtf, pdf or docx.



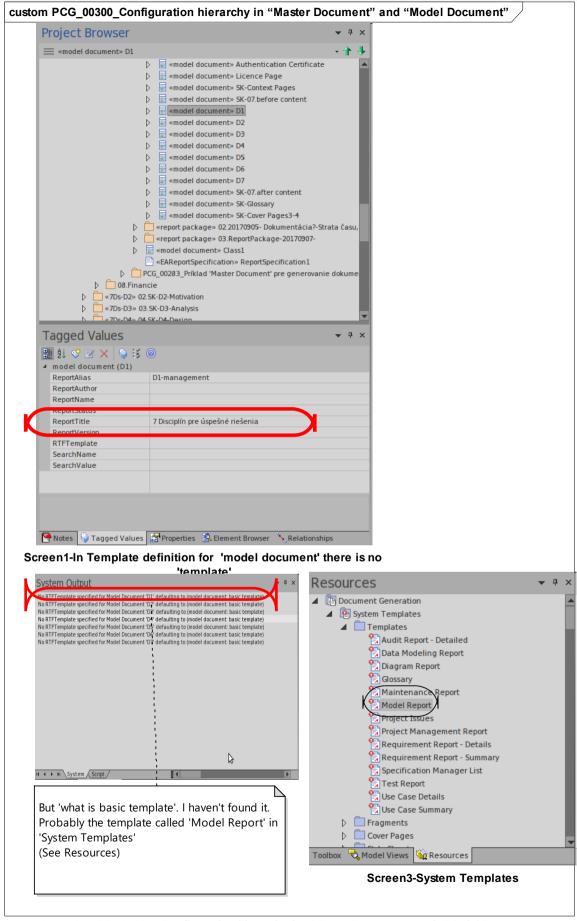


Fig. 103: PCG\_00300\_Configuration hierarchy in "Master Document" and "Model Document"



# 7.2.2.1.14 Problem with creating model with the help of "Add a Model using Wizard"

PACKAGE NAME-PCG\_00314\_PROBLEM WITH CREATING MODEL WITH THE HELP OF "ADD A MODEL USING WIZARD",

STEREOTYPE-"



# 7.2.2.1.14.1 01.Configuration

PACKAGE NAME-PCG\_00315\_01.Configuration, Stereotype-"

The problem occurs when connecting a model via the SparxCloudServices.

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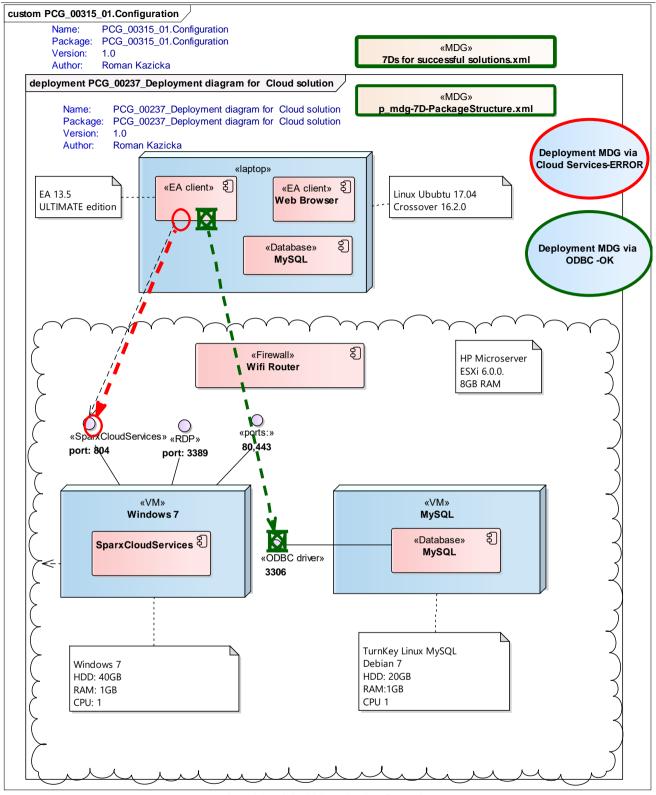


Fig. 104: PCG\_00315\_01.Configuration

#### 7.2.2.1.14.2 02.Symptoms

PACKAGE NAME-PCG\_00317\_02.SYMPTOMS, STEREOTYPE-"

The error is occurring randomly. When creating 17 7Ds model, the error occurred in 7 cases. And every error was just a little bit different. One, two or more lines in the "matrix" are missing.



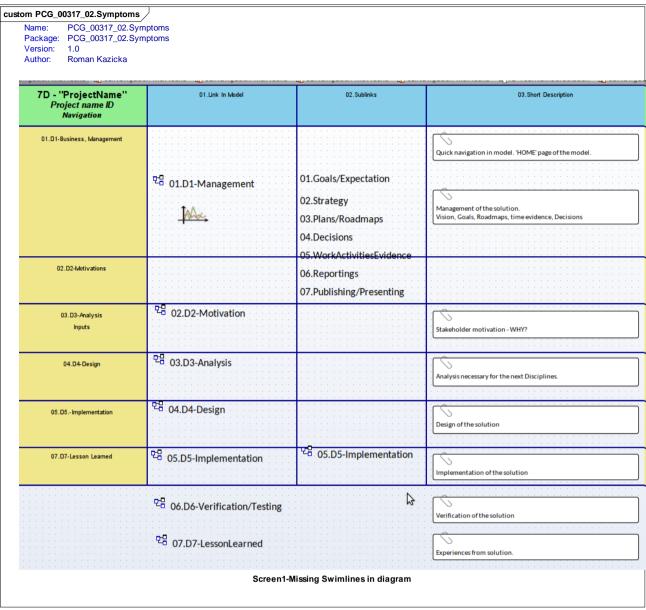


Fig. 105: PCG\_00317\_02.Symptoms

#### 7.2.2.1.14.3 03.RCA-Rootcause analysis

PACKAGE NAME-PCG\_00318\_03.RCA-ROOTCAUSE ANALYSIS, STEREOTYPE-"

The error is somehow related to the "SparxCloudServices" feature.

# 7.2.2.1.14.4 04. "Workaround" - Solution

PACKAGE NAME-PCG\_00319\_04. 'WORKAROUND' - SOLUTION, STEREOTYPE-"

If an ODBC connection is used, the error does not occur.

#### 7.2.2.1.15 It is not possible to insert the document into the model (Linux OS only)

PACKAGE NAME-PCG\_00399\_IT IS NOT POSSIBLE TO INSERT THE DOCUMENT INTO THE MODEL (LINUX OS ONLY),

STEREOTYPE- "



In the Windows operating system, drag & drop feature can be used to insert a document into the model from the "file" system. I did not succeed with this in Linux. With "drag&drop" action nothing happens, when you press "CTRL + SHIFT", the correct dialog for an internal or external artifact appears, but the application just freezes.

# 7.2.2.1.16 Freezing of the operating system (Linux, CrossOver) during import picture from image library

PACKAGE NAME-PCG\_00422\_FREEZING OF THE OPERATING SYSTEM (LINUX, CROSSOVER) DURING IMPORT PICTURE FROM IMAGE LIBRARY, STEREOTYPE-"



## 7.2.2.1.17 'Project Constants' cannot be imported during 'Cloud Connections' session

PACKAGE NAME-PCG\_00423\_'PROJECT CONSTANTS' CANNOT BE IMPORTED DURING 'CLOUD CONNECTIONS' SESSION,
STEREOTYPE- "



Generated for:Roman Kazička, SystemThinking spol. s r.o., Expiration: 10.Oct.2020



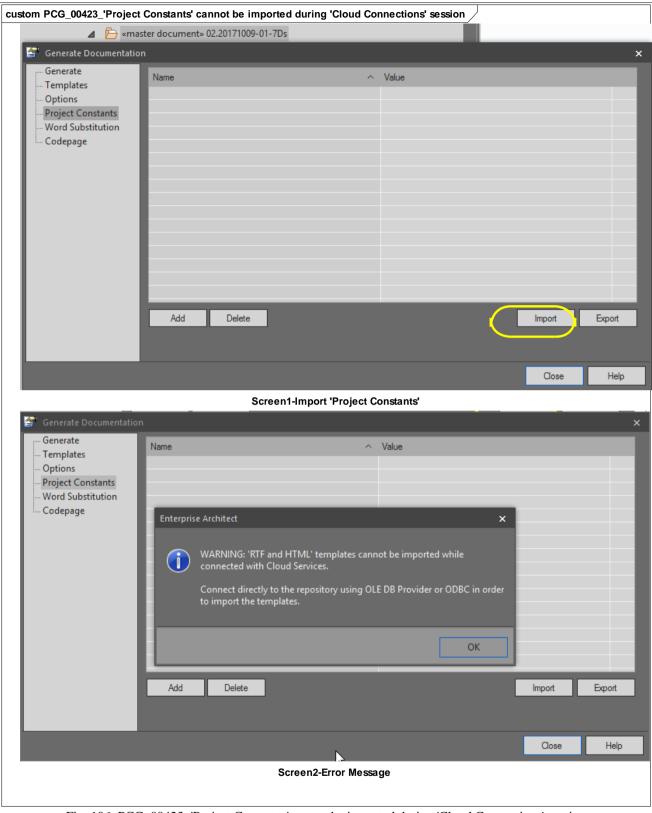


Fig. 106: PCG\_00423\_'Project Constants' cannot be imported during 'Cloud Connections' session

#### 7.2.2.1.18 'Internal Links' Feature Is not running under linux

PACKAGE NAME-PCG\_00424\_'INTERNAL LINKS' FEATURE IS NOT RUNNING UNDER LINUX, STEREOTYPE-"





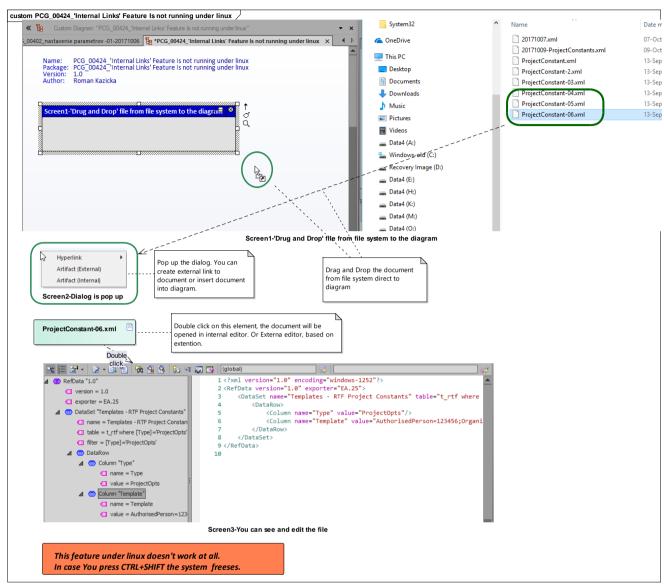


Fig. 107: PCG\_00424\_'Internal Links' Feature Is not running under linux

# 7.2.2.1.19 'Background color' in Text element is not changed properly, the same is with 'Hyperlink element'

PACKAGE NAME-PCG\_00425\_'BACKGROUND COLOR' IN TEXT ELEMENT IS NOT CHANGED PROPERLY, THE SAME IS WITH 'HYPERLINK ELEMENT', STEREOTYPE-"





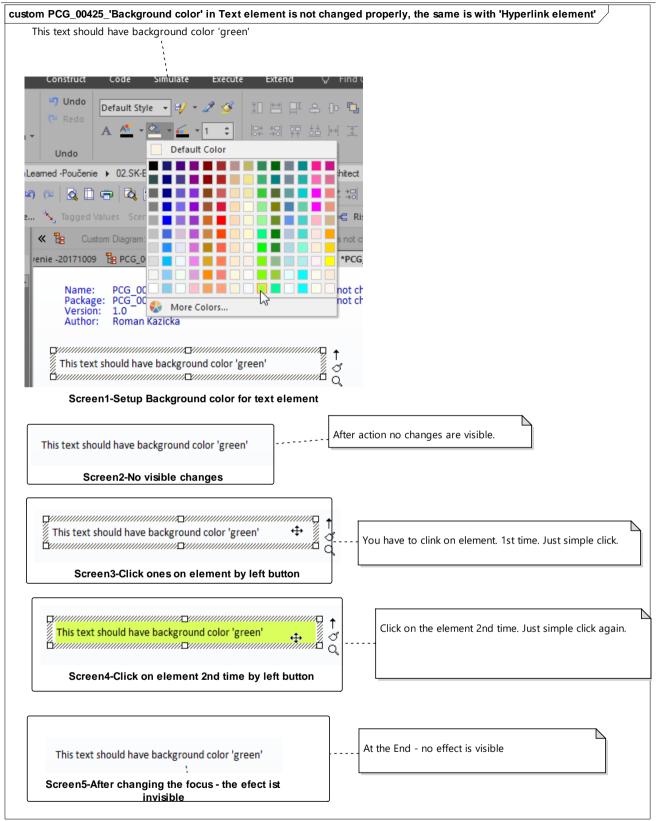


Fig. 108: PCG\_00425\_'Background color' in Text element is not changed properly, the same is with 'Hyperlink element'

#### 7.2.2.1.20 The diagram frame does not appear in the output document

PACKAGE NAME-PCG\_00446\_THE DIAGRAM FRAME DOES NOT APPEAR IN THE OUTPUT DOCUMENT, STEREOTYPE-"



Up until now, I was not able to comprehend why chart frames are generated in some cases and not it others. The configuration is clearly defined as to what I expect. See the figure.

It is clear to me today. See another figure. The parameters that define the output also include the ability to disable generating a char framework.

05-Feb-18 23:59:52 Problem solved. See pictures.



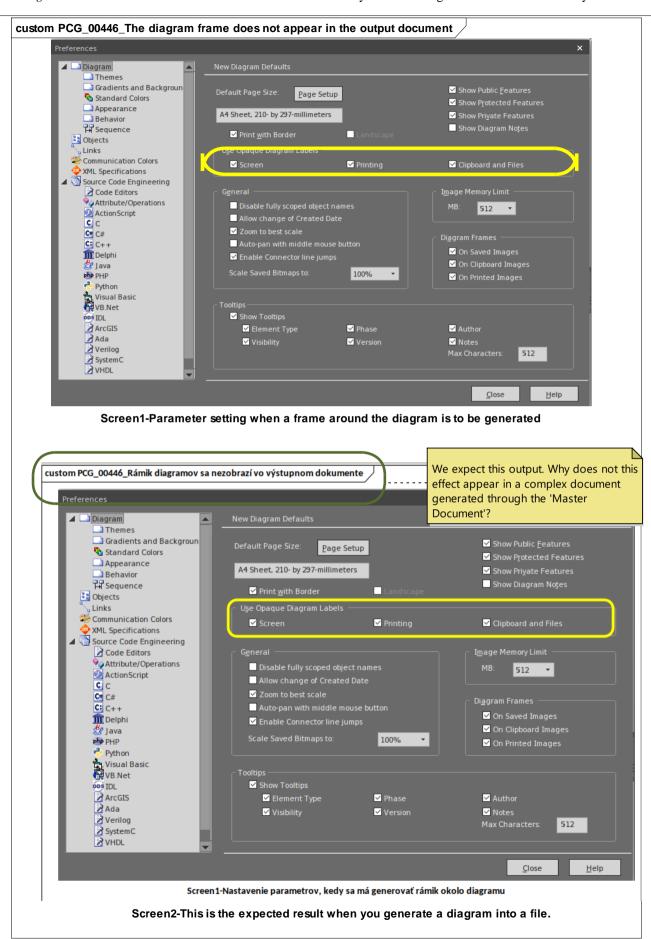


Fig. 109: PCG\_00446\_The diagram frame does not appear in the output document



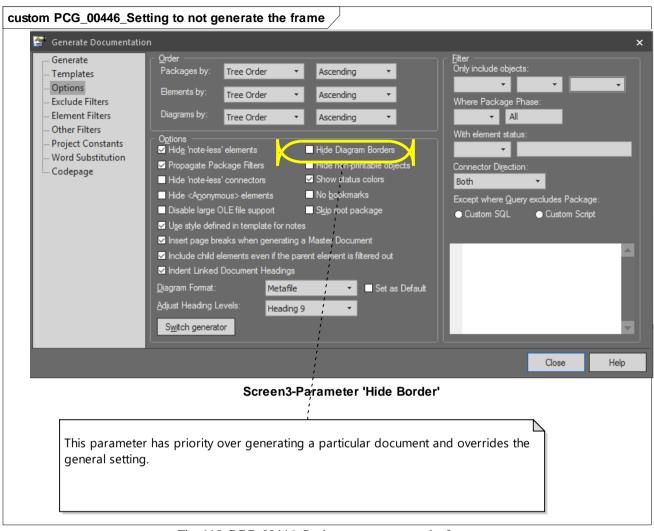


Fig. 110: PCG\_00446\_Setting to not generate the frame

### 7.2.2.1.21 Diagram title will be shown on the next page

PACKAGE NAME-PCG\_00447\_DIAGRAM TITLE WILL BE SHOWN ON THE NEXT PAGE, STEREOTYPE-"

Similar to the headline at the bottom of the page, the figure names sometimes go to the next page. The attempts to adjust the page margin did not help. There is probably a parameter for a paragraph that could help. Please see the figure.

Note for the reader of this note.

This book is an extract from a project notebook and is strongly focused on capturing the experience from the journey to our goal. If you question, why do I write about it and why not try it right away? That's because I'm just dealing with the text correction now and I do not want to interrupt this work. I will definitely try it and it will not happen again in the next issue of the book. If I did not write this now, an important moment would be lost - the chance to learn from mistakes. It is best to learn from the mistakes of others. I am currently learning on my own.



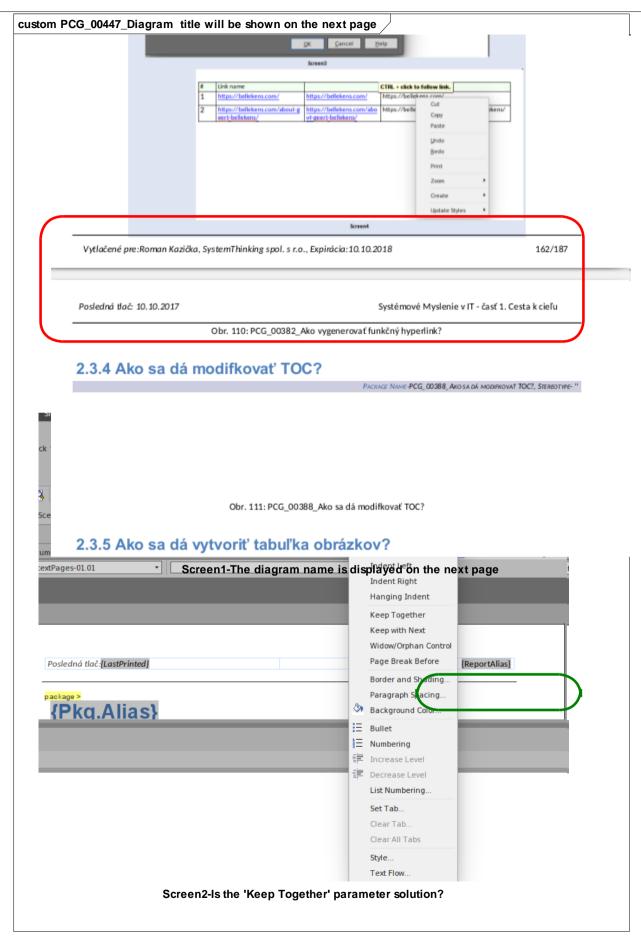


Fig. 111: PCG\_00447\_Diagram title will be shown on the next page



### 7.2.2.1.22 How to return windows "Search" back to tabbed windows?

PACKAGE NAME-PCG\_00448\_HOW TO RETURN WINDOWS "SEARCH" BACK TO TABBED WINDOWS?, STEREOTYPE-"

### **7.2.2.1.22.1** Symptoms

PACKAGE NAME-PCG 00476 SYMPTOMS, STEREOTYPE-"

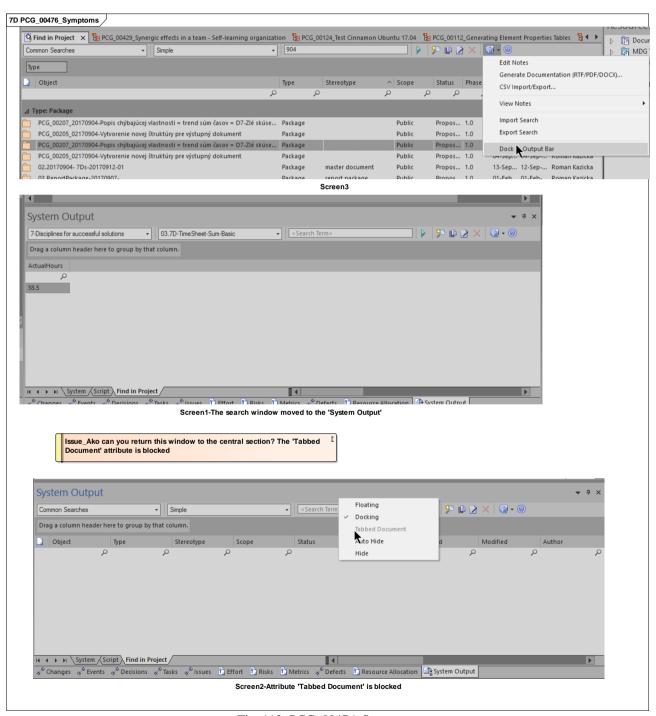


Fig. 112: PCG\_00476\_Symptoms



### 7.2.2.1.22.2 Troubleshooting

PACKAGE NAME-PCG\_00490\_TROUBLESHOOTING, STEREOTYPE-"

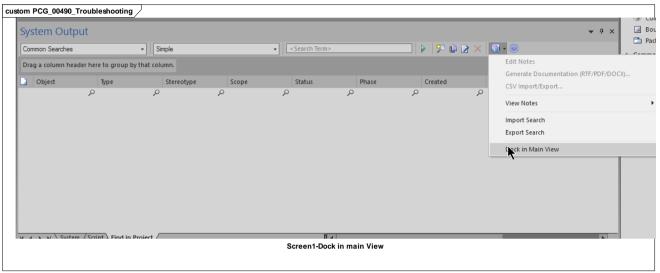


Fig. 113: PCG\_00490\_Troubleshooting

### 7.2.2.1.23 Wrong Style Numbering in master Document

PACKAGE NAME-PCG\_00492\_WRONG STYLE NUMBERING IN MASTER DOCUMENT, STEREOTYPE-"

### 7.2.2.1.23.1 01.Symptoms

PACKAGE NAME-PCG 00493 01.SYMPTOMS, STEREOTYPE-"



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Fig. 114: PCG\_00493\_01.Symptoms

### 7.2.2.1.23.2 02.RCA

PACKAGE NAME-PCG\_00494\_02.RCA, STEREOTYPE-"

### 7.2.2.1.23.2.1 Which Templates configuration is used in virtual document for chapter 7?

PACKAGE NAME-PCG\_00496\_WHICH TEMPLATES CONFIGURATION IS USED IN VIRTUAL DOCUMENT FOR CHAPTER 7?,

STEREOTYPE- "



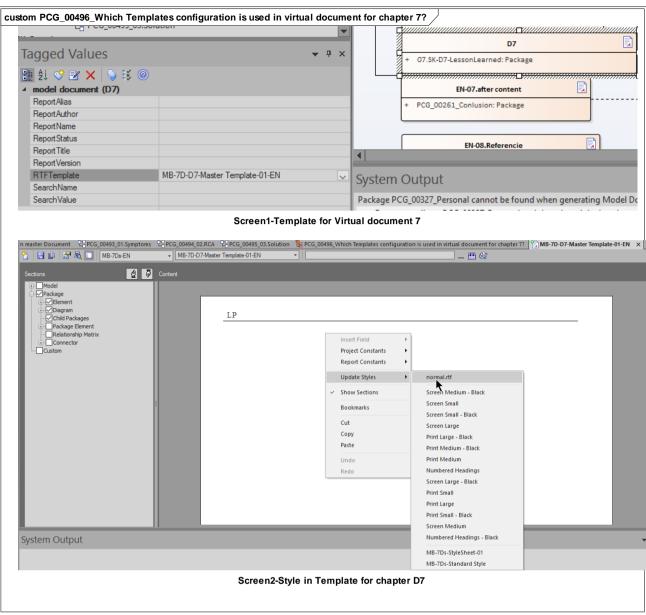


Fig. 115: PCG\_00496\_Which Templates configuration is used in virtual document for chapter 7?

### 7.2.2.1.23.3 03.Solution

PACKAGE NAME-PCG\_00495\_03.SOLUTION, STEREOTYPE-"



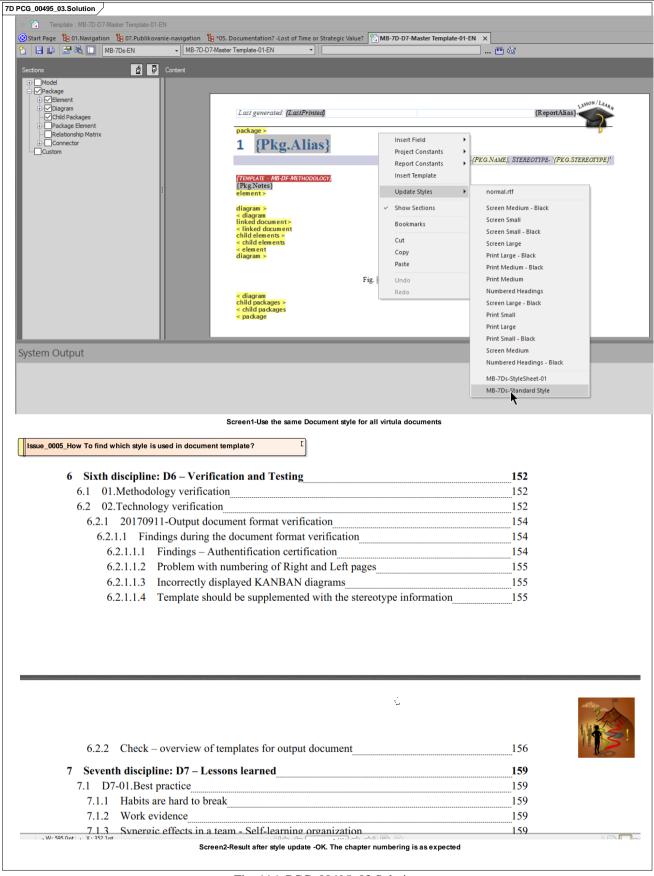


Fig. 116: PCG\_00495\_03.Solution



# 7.2.2.1.24 Error -'Could not load file or assembly 'EAWordImporter, Version 1.0.7.0, Culture=neutral, PublicKey

PACKAGE NAME-PCG\_00521\_ERROR - 'COULD NOT LOAD FILE OR ASSEMBLY 'EAWORDIMPORTER, VERSION 1.0.7.0,
CULTURE=NEUTRAL, PUBLICKEYTOKEN=NULL' OR ONE OF ITS DEPENDENCIES.'. STEREOTYPE-"

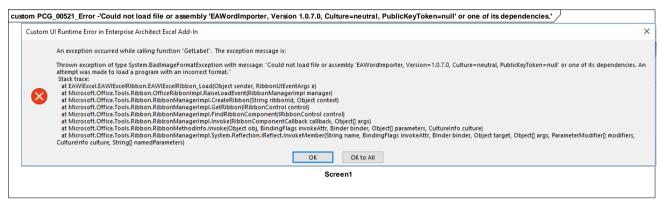


Fig. 117: PCG\_00521\_Error -'Could not load file or assembly 'EAWordImporter, Version 1.0.7.0, Culture=neutral, PublicKeyToken=null' or one of its dependencies.'

### 7.2.2.1.24.1 01.Symptoms

PACKAGE NAME-PCG\_00522\_01.SYMPTOMS, STEREOTYPE-"

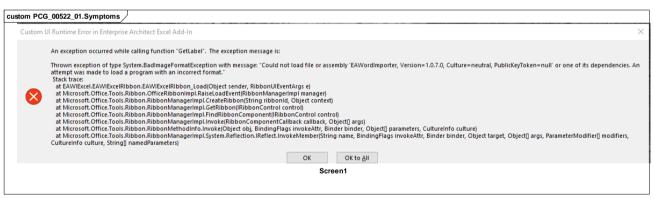


Fig. 118: PCG\_00522\_01.Symptoms

### 7.2.2.1.24.2 02.Analysis

PACKAGE NAME-PCG\_00523\_02.ANALYSIS, STEREOTYPE-"

#### 7.2.2.1.24.2.1 01.Sparx

PACKAGE NAME-PCG 00525 01.SPARX, STEREOTYPE-"

### 7.2.2.1.24.2.1.1 01.Forum

PACKAGE NAME-PCG\_00526\_01.FORUM, STEREOTYPE- "



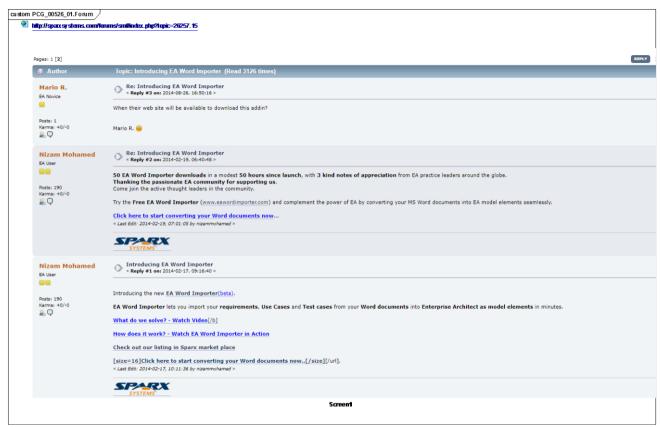


Fig. 119: PCG\_00526\_01.Forum

### 7.2.2.1.24.2.1.2 02.Forum

PACKAGE NAME-PCG\_00530\_02.FORUM, STEREOTYPE-"



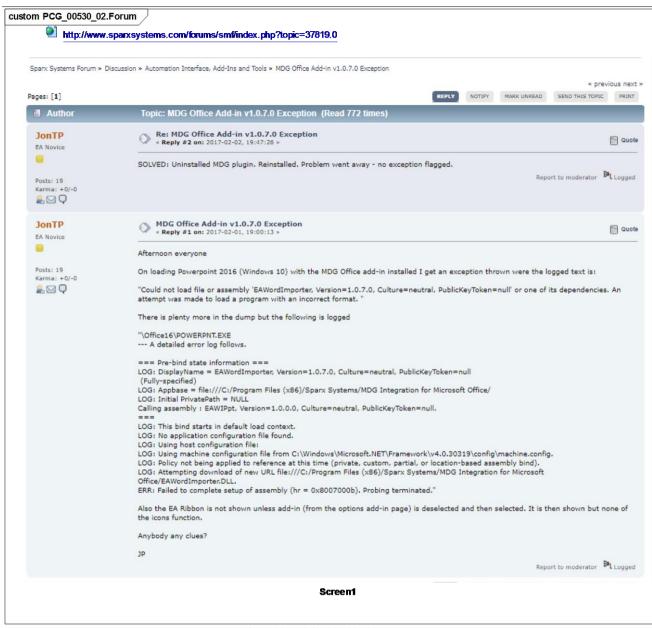


Fig. 120: PCG\_00530\_02.Forum

### 7.2.2.1.24.2.2 02.6thforce

PACKAGE NAME-PCG\_00527\_02.6THFORCE, STEREOTYPE-"



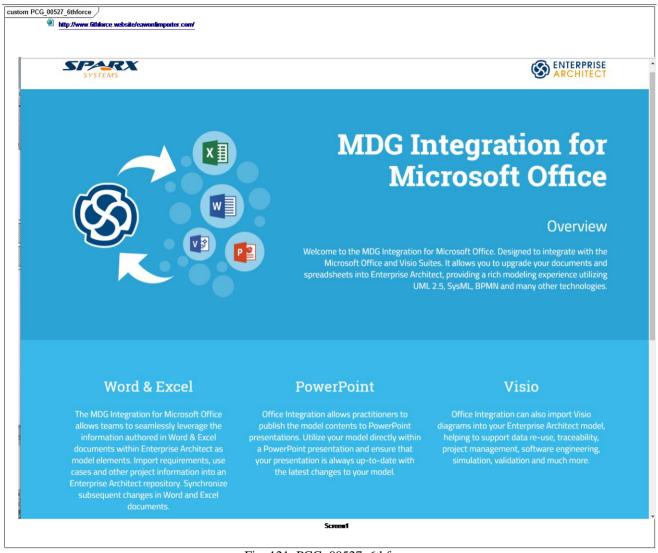


Fig. 121: PCG\_00527\_6thforce

### 7.2.2.1.24.2.3 00.Details

PACKAGE NAME-PCG\_00529\_00.DETAILS, STEREOTYPE-"

### 7.2.2.1.24.3 03.Actions

PACKAGE NAME-PCG\_00524\_03.ACTIONS, STEREOTYPE-"

### 7.2.2.1.24.3.1 01.Reinstall mdg

PACKAGE NAME-PCG\_00528\_01.REINSTALL MDG, STEREOTYPE-"



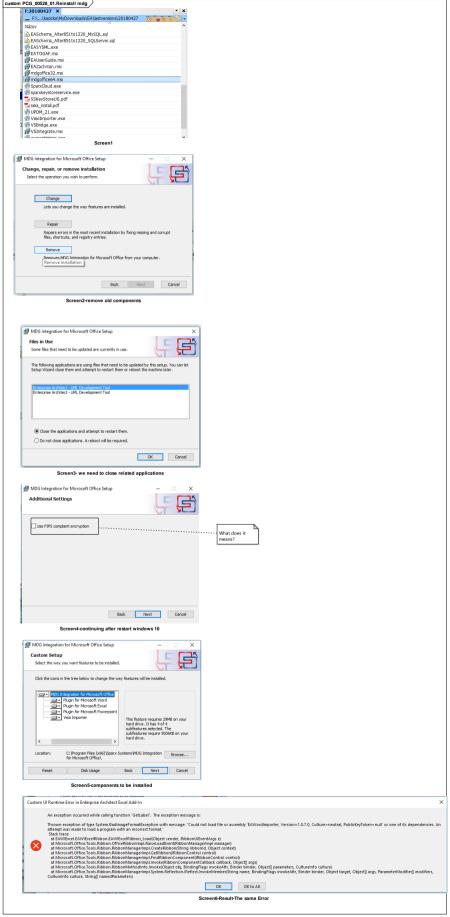


Fig. 122: PCG\_00528\_01.Reinstall mdg



### 7.2.2.1.25 Document Template - Bad formating the second Diagram caption in Package

PACKAGE NAME-PCG\_00604\_DOCUMENT TEMPLATE - BAD FORMATING THE SECOND DIAGRAM CAPTION IN PACKAGE,

STEREOTYPE- "

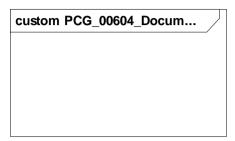


Fig. 123: PCG\_00604\_Document Template - Bad formating the second Diagram caption in Package

### 7.2.2.1.25.1 01.Symtoms

PACKAGE NAME-PCG\_00605\_01.SYMTOMS, STEREOTYPE-"

### 7.2.2.1.25.1.1 Output with wrong formatting

PACKAGE NAME-PCG\_00608\_OUTPUT WITH WRONG FORMATTING, STEREOTYPE-"

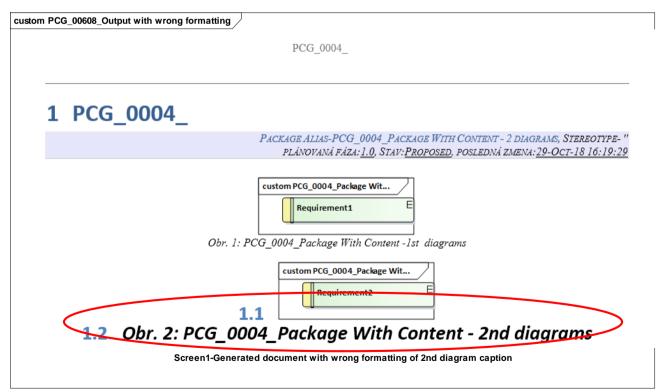


Fig. 124: PCG\_00608\_Output with wrong formatting



### 7.2.2.1.25.1.2 Project Browser structure

PACKAGE NAME-PCG\_00612\_PROJECT BROWSER STRUCTURE, STEREOTYPE-"



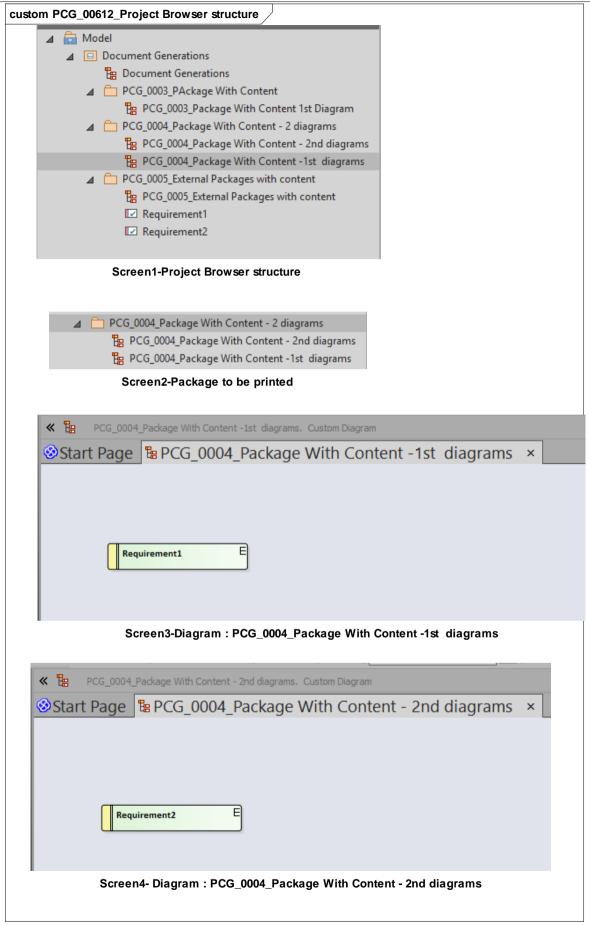


Fig. 125: PCG\_00612\_Project Browser structure



#### 7.2.2.1.25.2 02.Root Cause

PACKAGE NAME-PCG\_00606\_02.ROOT CAUSE, STEREOTYPE-"

### 7.2.2.1.25.2.1 Template definition

PACKAGE NAME-PCG\_00609\_TEMPLATE DEFINITION, STEREOTYPE-"

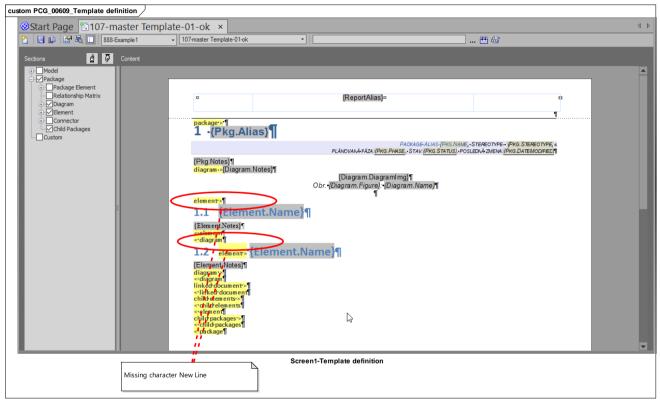


Fig. 126: PCG\_00609\_Template definition

#### 7.2.2.1.25.3 03.Solution

PACKAGE NAME-PCG\_00607\_03.SOLUTION, STEREOTYPE-"

### 7.2.2.1.25.3.1 01.Correct formating

PACKAGE NAME-PCG\_00610\_01. CORRECT FORMATING, STEREOTYPE- "



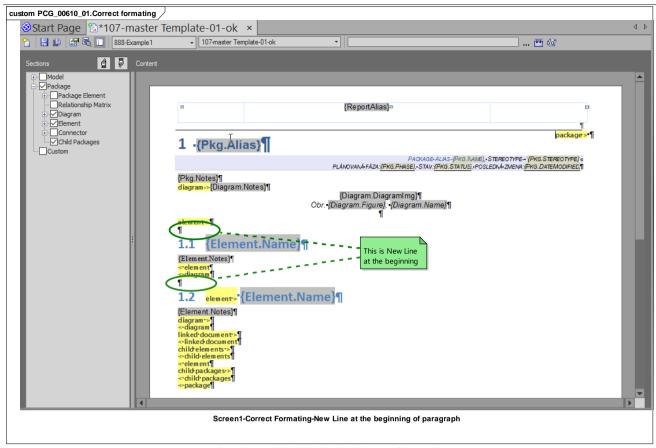


Fig. 127: PCG\_00610\_01.Correct formating

### 7.2.2.1.25.3.2 02.Final Output

PACKAGE NAME-PCG\_00611\_02.Final Output, Stereotype-"

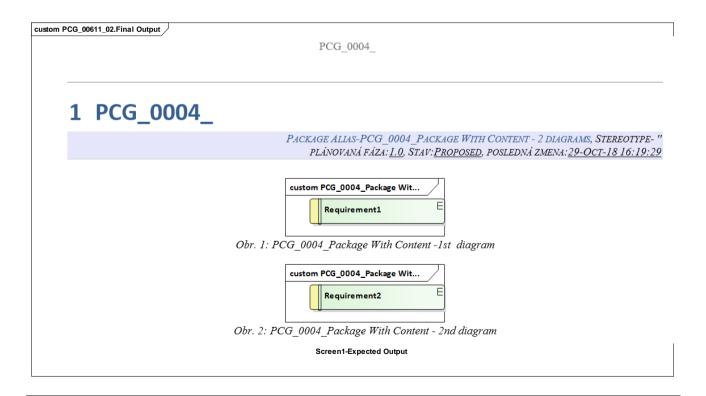




Fig. 128: PCG 00611 02.Final Output

# 7.3 D7-03. Opened Questions

PACKAGE NAME-03.EN-QUESTIONS, STEREOTYPE-"

On our journey, we will encounter many situations that create questions. We do not always know how to answer them immediately. It is reasonable not to be delayed, write the questions down and return to them again. If it is possible.

## 7.3.1 How to reach "Time Series" elements – automatic update?

PACKAGE NAME-PCG\_00116\_HOW TO REACH "TIME SERIES" ELEMENTS – AUTOMATIC UPDATE?, STEREOTYPE-"



# 7.3.2 How can I switch the "spell check" off?

PACKAGE NAME-PCG 00159 HOW CAN I SWITCH THE "SPELL CHECK" OFF?, STEREOTYPE-"



## 7.3.3 How to create a working hyperlink?

PACKAGE NAME-PCG\_00382\_HOW TO CREATE A WORKING HYPERLINK?, STEREOTYPE-"





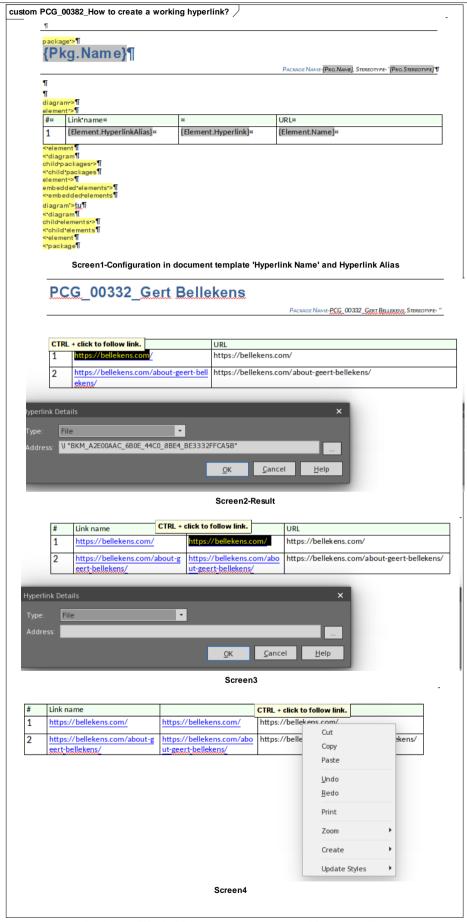


Fig. 129: PCG\_00382\_How to create a working hyperlink?



# 7.3.4 How can we modify the TOC?

PACKAGE NAME-PCG 00388 HOW CAN WE MODIFY THE TOC?, STEREOTYPE-"



# 7.3.5 How to create a table of figures?

PACKAGE NAME-PCG 00389 HOW TO CREATE A TABLE OF FIGURES?, STEREOTYPE-"



### 7.3.6 How to create an index?

PACKAGE NAME-PCG\_00390\_HOW TO CREATE AN INDEX?, STEREOTYPE-"



# 7.4 D7-04. Proposals for further continuation

PACKAGE NAME-04. PROPOSALS FOR FURTHER CONTINUATION, STEREOTYPE-"

In the current solution, we are challenged by various improvements. If we do not have them defined in our plan, we should put them down, but we do not have to solve them right away. It is important to remember that we do not have to solve all the problems of the world on one journey, we do not have to be perfect. Just reach the defined goal. It will give us the confidence that we have completed something. If a customer is also satisfied, a key player will trust us and pay for another journey.

# 7.4.1 Look And Repeat-Why?-What?-How?

PACKAGE NAME-PCG 00614 LOOK AND REPEAT-WHY?-WHAT?-HOW?, STEREOTYPE-"

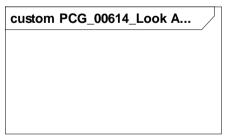


Fig. 130: PCG\_00614\_Look And Repeat-Why?-What?-How?

# **7.5 05.Next Steps**

PACKAGE NAME-05.NEXT STEPS, STEREOTYPE-"



A lot of new ideas will come up during the solution process. As long as this is not directly connected with our current solution, it is not wise to get off the planned journey and "get a new toy". If we put the idea down and go back on our journey, we have the chance to finish the already started journey and later, if there is a favourable situation, we can continue on a new journey.

### 7.5.1 LMS Support

PACKAGE NAME-PCG\_00583\_LMS SUPPORT, STEREOTYPE-"

### 7.5.1.1 Import/Export from Model

PACKAGE NAME-PCG 00589 IMPORT/EXPORT FROM MODEL, STEREOTYPE-"

### 7.5.1.1.1 Import/Export Elements from/to Model via CSV file

PACKAGE NAME-PCG\_00584\_IMPORT/EXPORT ELEMENTS FROM/TO MODEL VIA CSV FILE, STEREOTYPE-"

### 7.5.1.1.2 Import/Export Package Tree via CSV file

PACKAGE NAME-PCG 00585 IMPORT/EXPORT PACKAGE TREE VIA CSV FILE, STEREOTYPE-"

# 7.5.2 Sharing Models configuration data among models

PACKAGE NAME-PCG\_00586\_SHARING MODELS CONFIGURATION DATA AMONG MODELS, STEREOTYPE-"

### 7.5.2.1 Share Ref Data

PACKAGE NAME-PCG\_00587\_SHARE REF DATA, STEREOTYPE-"

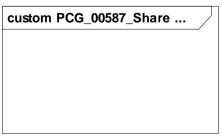


Fig. 131: PCG\_00587\_Share Ref Data

### 7.5.2.2 Shared Repository

PACKAGE NAME-PCG\_00588\_SHARED REPOSITORY, STEREOTYPE-"



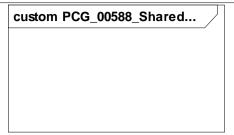


Fig. 132: PCG\_00588\_Shared Repository

### 7.5.2.3 RAS

PACKAGE NAME-PCG\_00602\_RAS, STEREOTYPE- "

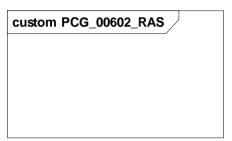


Fig. 133: PCG\_00602\_RAS

## 7.6 06.How To?

PACKAGE NAME-06. HOW TO?, STEREOTYPE-"

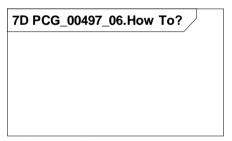


Fig. 134: PCG\_00497\_06.How To?

### 7.6.1

PACKAGE NAME-PCG\_00648\_HOW TO IMPORT CLASS/ELEMENT ATTRIBUTES?, STEREOTYPE-"



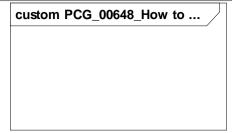


Fig. 135: PCG\_00648\_How to import Class/Element attributes?

## 7.6.2 01. How to use Integration with MS Excel?

PACKAGE NAME-PCG\_00498\_01.How to use Integration with MS Excel?, Stereotype-"

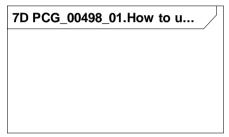


Fig. 136: PCG\_00498\_01. How to use Integration with MS Excel

# 7.6.3 How to make pivot tables from Tags and Tags Value?

PACKAGE NAME-PCG 00504 HOW TO MAKE PIVOT TABLES FROM TAGS AND TAGS VALUE?, STEREOTYPE-"

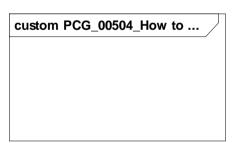


Fig. 137: PCG\_00504\_How to make pivot tables from Tags and Tags Value?

### 7.6.3.1 01. Wishes - Timesheet with detailed informations

PACKAGE NAME-PCG\_00505\_01. WISHES - TIMESHEET WITH DETAILED INFORMATIONS, STEREOTYPE-"



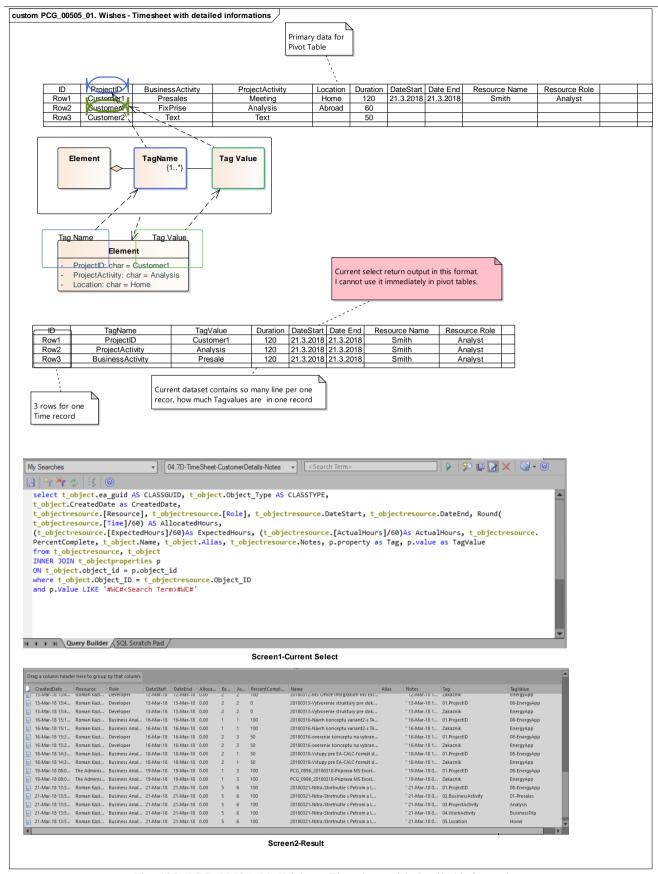


Fig. 138: PCG\_00505\_01. Wishes - Timesheet with detailed informations

### 7.6.3.2 **02.**Analysis



custom	PCG_	_00506	6_02. <i>A</i>	analys	is

Fig. 139: PCG\_00506\_02. Analysis

### 7.6.3.2.1 01.StackOverflow-SQL Create Columns From values and fill with other column

PACKAGE NAME-PCG\_00507\_01.STACKOVERFLOW-SQL CREATE COLUMNS FROM VALUES AND FILL WITH OTHER COLUMN,
STEREOTYPE-"



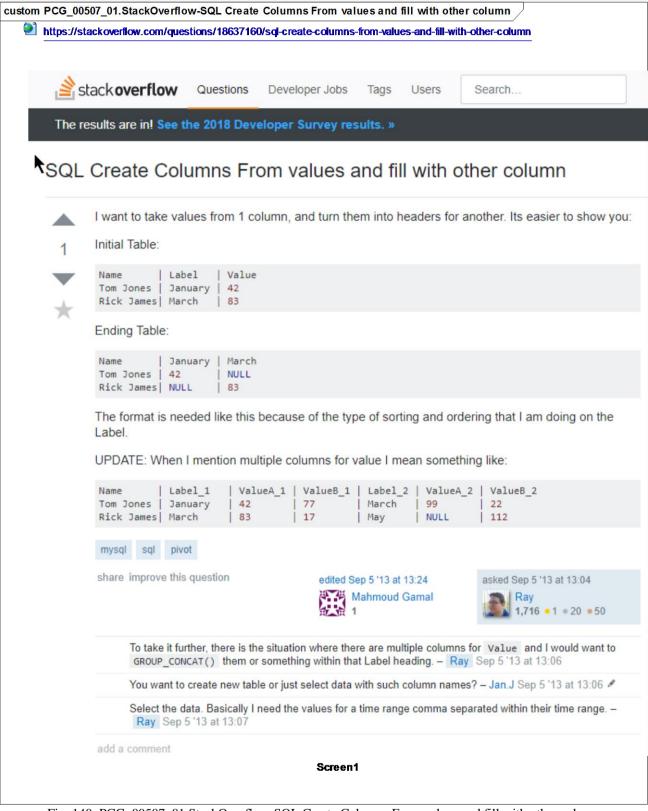


Fig. 140: PCG 00507 01.StackOverflow-SQL Create Columns From values and fill with other column

#### 7.6.3.2.2 02.CreateTable from select ...

PACKAGE NAME-PCG\_00508\_02. CREATETABLE FROM SELECT ..., STEREOTYPE- "



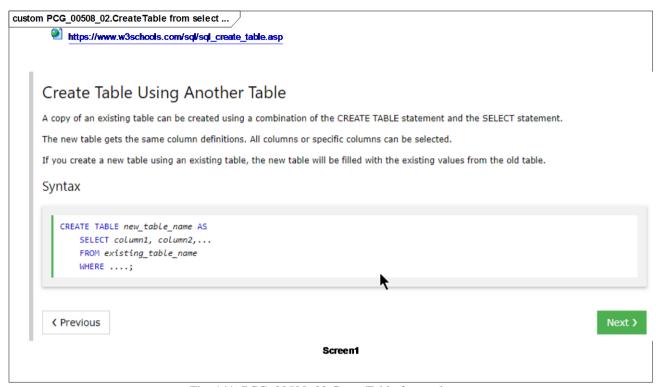


Fig. 141: PCG\_00508\_02.CreateTable from select ...

### 7.6.3.2.3 Forum

PACKAGE NAME-PCG\_00509\_FORUM, STEREOTYPE-"

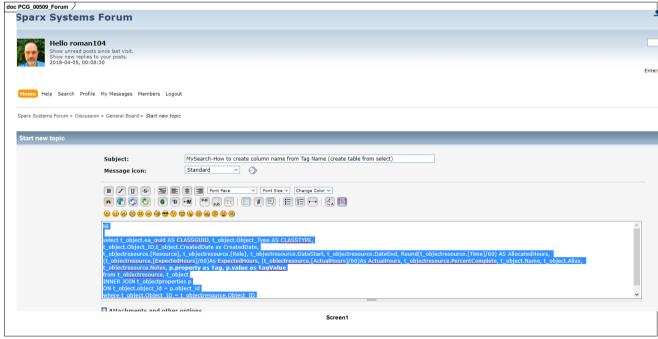


Fig. 142: PCG\_00509\_Forum



### 7.6.3.2.4 MySQLWorkBench

PACKAGE NAME-PCG\_00510\_MYSQLWORKBENCH, STEREOTYPE-"

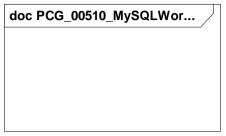


Fig. 143: PCG\_00510\_MySQLWorkBench

### 7.6.3.2.4.1 .Select

PACKAGE NAME-PCG\_00511\_.SELECT, STEREOTYPE-"



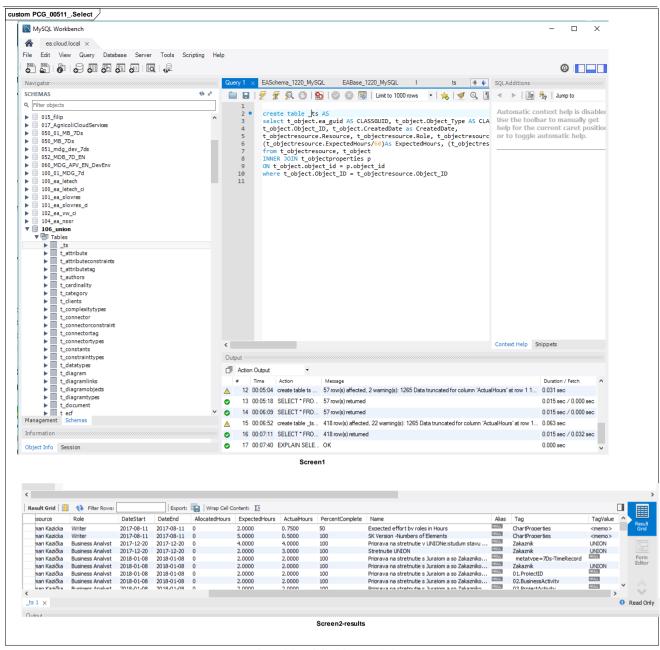


Fig. 144: PCG\_00511\_.Select

### 7.6.3.2.5 Pivot Tables in MySQL

PACKAGE NAME-PCG\_00512\_PIVOT TABLES IN MYSQL, STEREOTYPE-"

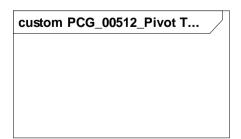


Fig. 145: PCG\_00512\_Pivot Tables in MySQL



### 7.6.3.2.5.1 01

PACKAGE NAME-PCG\_00513\_01, STEREOTYPE-"



Fig. 146: PCG\_00513\_01

### 7.6.3.2.6 03.Stack Overflow

PACKAGE NAME-PCG\_00514\_03.STACK OVERFLOW, STEREOTYPE-"



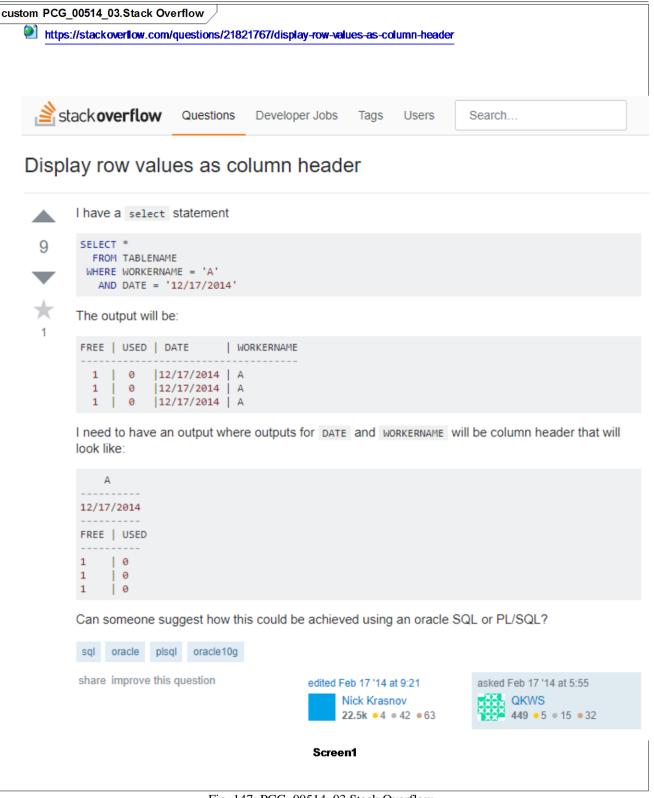


Fig. 147: PCG\_00514\_03.Stack Overflow

# 7.6.4 How to run SparxCloudSerivces under Linux?

PACKAGE NAME-PCG\_00515\_HOW TO RUN SPARXCLOUDSERIVCES UNDER LINUX?, STEREOTYPE-"



### 7.6.4.1 Installation

PACKAGE NAME-PCG\_00516\_INSTALLATION, STEREOTYPE-"

## 7.6.4.2 Configuration

PACKAGE NAME-PCG\_00517\_CONFIGURATION, STEREOTYPE-"

# 7.6.4.3 Solution deployment overview-01-SCC on Windows, DB on local linux

 ${\it Package Name-PCG\_00518\_Solution\ deployment\ overview-01-SCC\ on\ Windows,\ DB\ on\ local\ linux,\ Stereotype-package\ Name-pcg\_00518\_Solution\ deployment\ overview-01-SCC\ on\ Windows,\ DB\ on\ local\ linux,\ Stereotype-package\ Name-pcg\_00518\_Solution\ deployment\ overview-01-SCC\ on\ Windows,\ DB\ on\ local\ linux,\ Stereotype-package\ overview-01-SCC\ overview-01-SCC\$ 



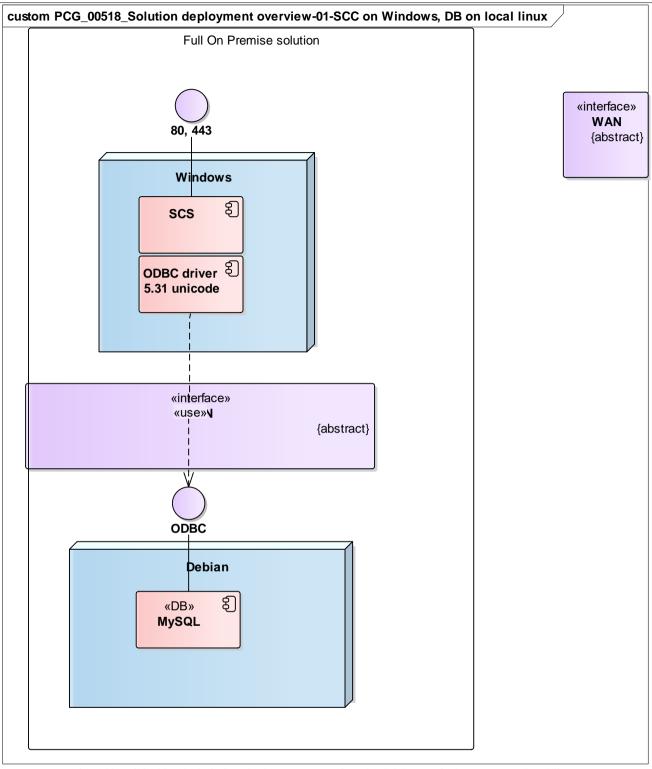


Fig. 148: PCG\_00518\_Solution deployment overview-01-SCC on Windows, DB on local linux

# 7.6.4.4 Solution deployment overview-02-SCS on Windows, DB on external Linux

PACKAGE NAME-PCG\_00519\_SOLUTION DEPLOYMENT OVERVIEW-02-SCS ON WINDOWS, DB ON EXTERNAL LINUX, STEREOTYPE-"



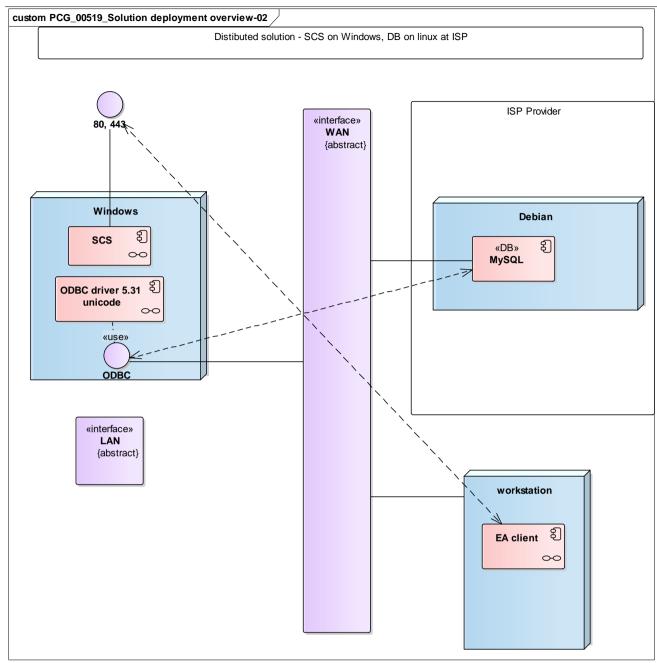


Fig. 149: PCG\_00519\_Solution deployment overview-02

# 7.6.4.5 Solution deployment - SCS on linux, DB on linux

PACKAGE NAME-PCG\_00559\_SOLUTION DEPLOYMENT - SCS ON LINUX, DB ON LINUX, STEREOTYPE-"



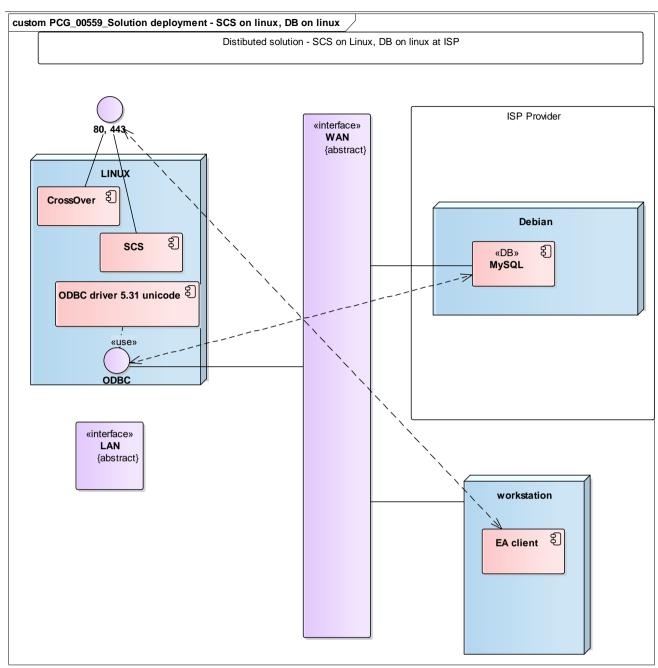


Fig. 150: PCG\_00559\_Solution deployment - SCS on linux, DB on linux

# 7.6.5 How to make Timesheet from Tag Values?

PACKAGE NAME-PCG\_00533\_HOW TO MAKE TIMESHEET FROM TAG VALUES?, STEREOTYPE-"

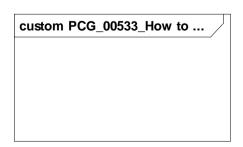




Fig. 151: PCG\_00533\_How to make Timesheet from Tag Values?

# **7.6.5.1 01.**Purpose

PACKAGE NAME-PCG 00534 01.PURPOSE, STEREOTYPE-"

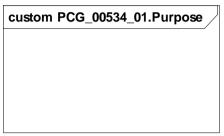


Fig. 152: PCG\_00534\_01.Purpose

## 7.6.5.2 02. Current issues with SQL

PACKAGE NAME-PCG\_00535\_02. CURRENT ISSUES WITH SQL, STEREOTYPE-"

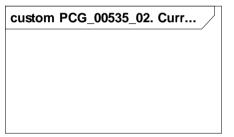


Fig. 153: PCG\_00535\_02. Current issues with SQL

# 7.6.5.3 03. Analysis-how to solve the problem

PACKAGE NAME-PCG\_00536\_03.ANALYSIS-HOW TO SOLVE THE PROBLEM, STEREOTYPE-"

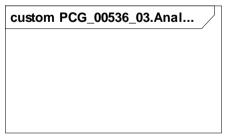


Fig. 154: PCG\_00536\_03. Analysis-how to solve the problem

#### 7.6.5.3.1 01. Via SQL

PACKAGE NAME-PCG\_00538\_01. VIA SQL, STEREOTYPE-"



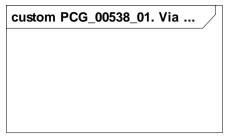


Fig. 155: PCG\_00538\_01. Via SQL

### 7.6.5.3.2 02. Via internal scripting

PACKAGE NAME-PCG\_00539\_02.VIA INTERNAL SCRIPTING, STEREOTYPE-"

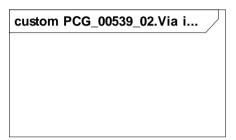


Fig. 156: PCG\_00539\_02. Via internal scripting

#### 7.6.5.3.2.1 Chronological actions in time

PACKAGE NAME-PCG\_00540\_CHRONOLOCICAL ACTIONS IN TIME, STEREOTYPE-"

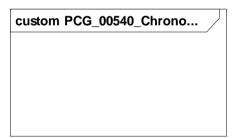


Fig. 157: PCG\_00540\_Chronolocical actions in time

#### 7.6.5.3.2.1.1 20180428-How to do this?

PACKAGE NAME-PCG\_00541\_20180428-How to do this?, Stereotype-"



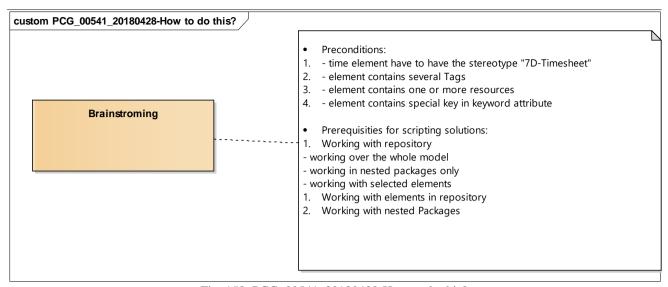


Fig. 158: PCG\_00541\_20180428-How to do this?

#### 7.6.5.3.2.1.1.1 Practical Exercises with scripts

PACKAGE NAME-PCG\_00542\_PRACTICAL EXERCISES WITH SCRIPTS, STEREOTYPE-"



Fig. 159: PCG\_00542\_Practical Exercises with scripts

#### 7.6.5.3.2.1.1.1.1 How to write field in Search Windows

PACKAGE NAME-PCG\_00716\_HOW TO WRITE FIELD IN SEARCH WINDOWS, STEREOTYPE-"

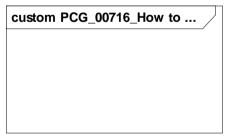


Fig. 160: PCG\_00716\_How to write field in Search Windows

#### 7.6.5.3.2.1.1.1.2 How to work With Element Tags

PACKAGE NAME-PCG 00717 HOW TO WORK WITH ELEMENT TAGS, STEREOTYPE-"



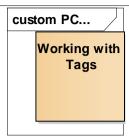


Fig. 161: PCG\_00717\_How to work With Element Tags

#### 7.6.5.3.2.1.1.1.3 How to write to file

PACKAGE NAME-PCG\_00718\_HOW TO WRITE TO FILE, STEREOTYPE-"

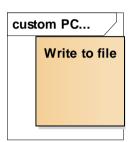


Fig. 162: PCG\_00718\_How to write to file

## 7.6.5.3.2.1.1.4 How To work with Stereotype

PACKAGE NAME-PCG\_00719\_HOW TO WORK WITH STEREOTYPE, STEREOTYPE-"

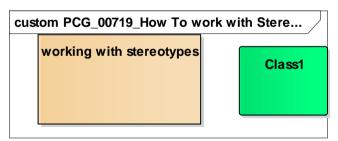


Fig. 163: PCG\_00719\_How To work with Stereotype

## 7.6.5.3.2.1.1.1.5 Workig in Nested Packages

PACKAGE NAME-PCG\_00720\_WORKIG IN NESTED PACKAGES, STEREOTYPE-"



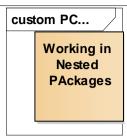


Fig. 164: PCG\_00720\_Workig in Nested Packages

#### 7.6.5.3.2.1.1.2 Design of the script

PACKAGE NAME-PCG\_00725\_DESIGN OF THE SCRIPT, STEREOTYPE-"

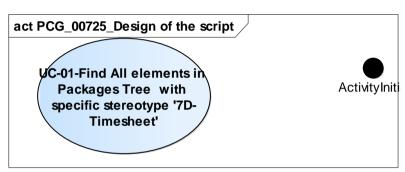


Fig. 165: PCG\_00725\_Design of the script

#### 7.6.5.3.2.2 Activity Diagrams

PACKAGE NAME-PCG\_00733\_ACTIVITY DIAGRAMS, STEREOTYPE-"

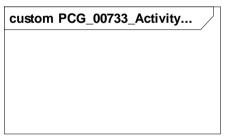


Fig. 166: PCG\_00733\_Activity Diagrams

#### 7.6.5.3.2.2.1 01.AD-Timesheet

PACKAGE NAME-PCG\_00734\_01.AD-TIMESHEET, STEREOTYPE-"

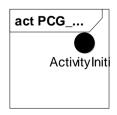




Fig. 167: PCG\_00734\_01.AD-Timesheet

## 7.6.5.3.2.2.2 02.Search Windows-Alone

PACKAGE NAME-PCG\_00735\_02.SEARCH WINDOWS-ALONE, STEREOTYPE-"

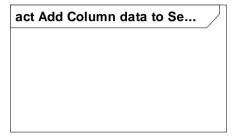


Fig. 168: Add Column data to Search Window

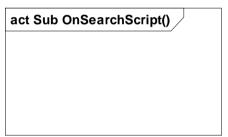


Fig. 169: Sub OnSearchScript()



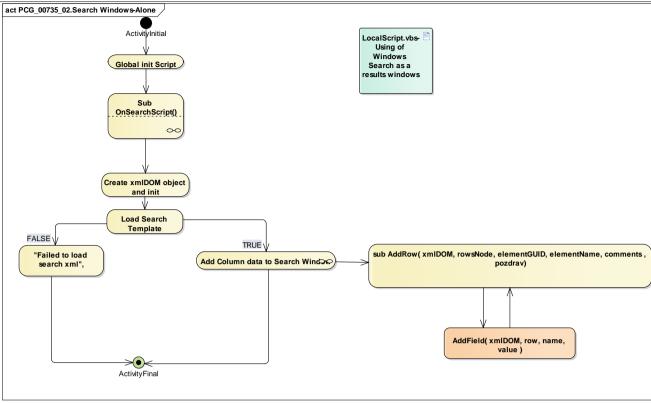


Fig. 170: PCG\_00735\_02.Search Windows-Alone

## 7.6.5.3.2.3 03.sub RecursiveElementCountExample()

PACKAGE NAME-PCG\_00736\_03.SUB RECURSIVEELEMENTCOUNTEXAMPLE(), STEREOTYPE-"



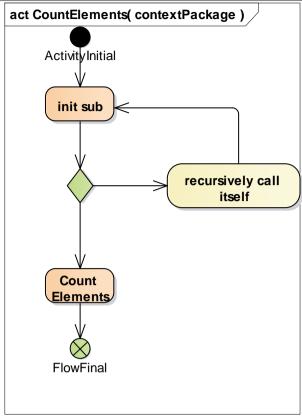


Fig. 171: CountElements( contextPackage )



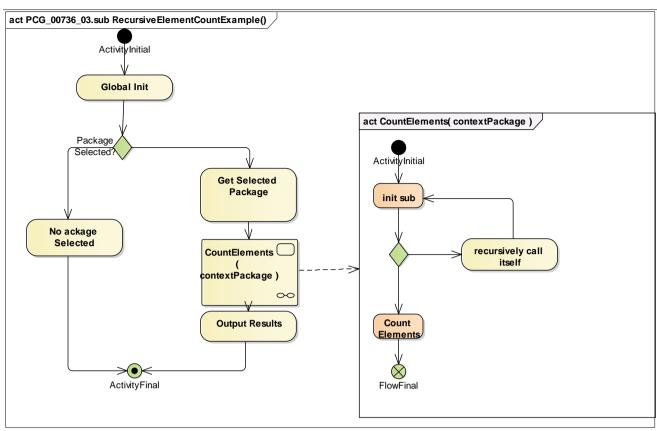


Fig. 172: PCG\_00736\_03.sub RecursiveElementCountExample()

## 7.6.5.3.2.4 VbScript-Timesheet from element with Tags

PACKAGE NAME-PCG\_00778\_VBSCRIPT-TIMESHEET FROM ELEMENT WITH TAGS, STEREOTYPE-"

option explicit

```
!INC Local Scripts.EAConstants-VBScript
                                         ********
' Name: Create Timesheet from the Timesheets element in the packages Tree
' Notes: 20180525-it is running.
' the goal is to have universal script with element attributes and tag keys, value
output in search windows
' Related APIs
 ______
' Package API -
http://www.sparxsystems.com/enterprise_architect_user_guide/12.1/automation_and_scriptin
g/package 2.html
 Repository API -
http://www.sparxsystems.com/enterprise_architect_user_guide/12.1/automation_and_scriptin
g/repository3.html
 global collection is fill in in inner loop CountElements ()
                    -----DEFINE SEARCH Windows columns
 TODO 1: Define your search specification:
 The columns that will apear in the Model Search window
 the search column is dynamicali changed based on number of Tags values?
dim SEARCH_SPECIFICATION
```



```
' Instantiate an object of class Scripting.Dictionary
 Dictionaly collect
      dim myColumnsForTimeSheet
      set myColumnsForTimeSheet = CreateObject( "Scripting.Dictionary" )
      Const eGUID=0
      Const eElementID=18
      Const eElementName=1
      Const eProjectID=2
      Const eBusinessActivity=3
      Const eProjectActivity=4
      Const eWorkActivity=5
      Const eLocation=6
      Const eCreateDate=7
      Const eDateStart=8
      Const eDateEnd=9
      Const eAllocatedHours=10
      Const eExpectedHours=11
      Const eActualHours=12
      Const ePercentComplete=13
      Const eNotes=14
      Const eAlias=15
      Const eResource=16
      Const eRole =17
SEARCH SPECIFICATION = "<ReportViewData>" &_
                                              "<Fields>" &
                                                     "<Field name=""CLASSGUID""/>" &
                                                     "<Field name=""CLASSTYPE"" />" &
                                                     "<Field name=""ElementID"" />" &
                                                     "<Field name=""01.Element Name"" />"
&
                                                     "<Field name=""02.ProjectID"" />"
&_
                                                     "<Field name=""03.BusinessActivity""
/>" &_
                                                     "<Field name=""04.ProjectActivity""
/>" &_
                                                     "<Field name=""05.WorkActivity"" />"
&_
                                                     "<Field name=""06.Location"" />" &
                                                     "<Field name=""07.CreateDate"" />"
&
                                                     "<Field name=""08.DateStart"" />"
&_
                                                     "<Field name=""09.DateEnd"" />" &
                                                     "<Field name=""10.AllocatedHours""
    &
                                                     "<Field name=""11.ExpectedHours""</pre>
/>"
                                                     "<Field name=""12.ActualHours"" />"
&_
                                                     "<Field name=""13.PercentComplete""
/>" &<u>_</u>
                                                     "<Field name=""14.Notes"" />" &_
                                                     "<Field name=""15.Alias"" />" &
                                                     "<Field name=""16.Resource"" />"
                                                     "<Field name=""17.Role"" />" &
```

"</Fields>" &



```
"<Rows/>" &_
                                    "</ReportViewData>"
                                                      AllocatedHours
'CreatedDate Resource
                        Role DateStart
                                          DateEnd
      ExpectedHoursActualHours PercentComplete Name Alias Notes
      ' Create a DOM object to represent the search tree
      set xmlDOM = CreateObject( "MSXML2.DOMDocument.6.0" )
      xmlDOM.validateOnParse = false
      xmlDOM.async = false
      dim rowsNode 'row to be added
'=============
dim TS elements as EA.Collection
                                   -----
findAllTimeSheetsRecordsInPackageTree
sub findAllTimeSheetsRecordsInPackageTree()
      ' Show the script output window
      Repository.EnsureOutputVisible "Script"
     Session.Output( "VBScript RECURSIVE ELEMENT COUNT EXAMPLE" )
Session.Output( "========="" )
'======="" )
      ' Get the package to work on
      dim contextObjectType
      contextObjectType = Repository.GetContextItemType()
if contextObjectType = otPackage then
            dim elementCounter
            elementCounter = 0
            ' Get the context object as a package
            dim contextPackage as EA.Package
            set contextPackage = GetContextObject()
            ' -----init Search Windows
      ' Load the search template
            if xmlDOM.loadXML( SEARCH_SPECIFICATION ) = true then
                  set rowsNode = xmlDOM.selectSingleNode( "//ReportViewData//Rows" )
                  ' TODO 2: Gather the required data from the repository
                  ' This template adds a result row for a bogus class to the search
document
            'AddRow xmlDOM, rowsNode, "{2917209A-D3E0-4de7-8AED-C7D7F059D96F}",
"ResultClass", _
                        "Here are some comments about this class!", "klkl"
                  ' Fill the Model Search window with the results
                  Repository.RunModelSearch "", "", xmlDOM.xml
            Session.Prompt "Failed to load search xml", promptOK
                 ______
            ' Recursively count the number of elements in the package and its
            ' children
```



```
elementCounter = CountElements( contextPackage )
            ' Output the results!
           dim message
           message = "Package '" & contextPackage.Name & "' has " & elementCounter &
                  " element(s) under it"
           MsgBox ( message )
           Session.Output( message )
           Session.Output( "Done!" )
     else
            ' Package is not currently the context item
           MsgBox( "This script requires a package to be selected." & vbCrLf &
                  "Please select a package and try again." )
     end if
end sub
AllTimeSheetsRecordsInPackageTree
 Counts the number of elements under the provided package and its children
function CountElements( thePackage )
     RKA
 Create a new element in the package
           dim testElement as EA.Element
     dim currentElement as EA.Element
     dim count
     count = 0
      'set TS elements = EA.Elements
      ' Cast the Package to EA. Package so we get intellisense
     dim contextPackage as EA.Package
     set contextPackage = thePackage
     dim currentPackage as EA.Package
      ' Iterate through all child packages
      'If no child package are in package
     if contextPackage.Packages.Count =0 then
        addAllElementsToTimesheet contextPackage
     else
     end if
     for each currentPackage in contextPackage.Packages
            ' Recursively process child packages
           addAllElementsToTimesheet(currentPackage)
           count = count + CountElements( currentPackage )
      next
      ' Add this package's element count to the counter
     CountElements = count + contextPackage.Elements.Count
end function
______
function addAllElementsToTimesheet( thePackage )
           dim elements as EA.Collection
```



```
set elements = thePackage.Elements
            dim element as EA.Element
            dim MvTagValues as EA.Collection
            dim ElementResources as EA.Collection
            dim MyElementResource as EA.Resource
            dim message
      for each element in elements
         set ElementResources=element.Resources
            'set MyElementResource =ElementResources.GetAt(0)
            'set MyTagValues=element.TaggedValues
            ' Display Output in the Debug Windows
            message = "Element ID="& element.ElementID &" Element Name="& element.name
& " Stereotype=" & element.Stereotype & " Tags.count="
            & element.TaggedValues.Count & " Tag Value (1)="&
element.TaggedValues.GetAt( 1 ).Name
                  Session.Output( message )
            'Display results in SearchWindow
            'Only for Elements with Stereotype 7D-TimeSheet
            if element.Stereotype= "7Ds-TimeRecord" then
                  displayTagsList element
            else
                  message = "Element ID="& element.ObjectType& "Element Name="&
element.Name &"Element Stereotype="&element.Stereotype
                  Session.Output( message )
            end if
      ' Fill the Model Search window with the results
      ' RunModelSearch (string sQueryName, string sSearchTerm, string sSearchOptions,
string sSearchData)
      'sQueryName: String - the name of the search to run, for example Simple
      '. sSearchTerm: String - the term to search for
      '. sSearchOptions: String - currently not being used
      '· sSearchData: String - a list of results in the form of XML, which is appended
      'onto the result list in Enterprise Architect - see the XML Format topic; this
      'parameter is not mandatory so pass in an empty string to run the search as per
      'normal Notes: Runs a search, displaying the results in Enterprise Architect's
Model Search
      ' window.
      ' Parameters:
      ' · sQueryName: String - the name of the search to run, for example Simple
      '----
      next
      Repository.RunModelSearch "", "", "", xmlDOM.xml
end function
_______
      Display Element attributes in Debug, or system output
sub displayTagsList(theElement)
            dim i
       dim currentTag as EA.TaggedValue
            dim myTagName
            dim ElementResources as EA.Collection
            dim MyElementResource as EA.Resource
```



```
set ElementResources=theElement.Resources
                 'set MyElementResource =ElementResources.GetAt(0)
                 'Make empty Disctionary
        ' For All Element Resources
           for each MyElementResource in theElement.Resources
                          'set MyElementResource =ElementResources.GetAt(0)
                myColumnsForTimeSheet.removeall
           Session.Output( "
                                      Current version of the tags list")
                if (theElement.TaggedValues.Count = 0) then
                         Session.Output( "
                                                   EMPTY LIST" )
                else
                         'for i = 0 to the Element. Tagged Values. Count - 1
                                 set currentTag = theElement.TaggedValues.GetAt( i )
                                 Session.Output( "
                                                          Tagged Value: " & currentTag.Name )
                         next
                         ' add raws into dictionary for search window
                         myColumnsForTimeSheet.Add "ElementGUID", theElement.ElementGUID
                                                  myColumnsForTimeSheet.Add "00.Element Name",
theElement.Name
                         'set myTagName=theElement.TaggedValues.GetByName("01.ProjectID")
                         if theElement.TaggedValues.GetByName("01.ProjectID").Value <>
nothing then
                         myColumnsForTimeSheet.Add "01.";
the Element. Tagged Values. Get By Name ("01. Project ID"). Value
                         myColumnsForTimeSheet.Add "02.",
theElement.TaggedValues.GetByName("02.BusinessActivity").Value
                         myColumnsForTimeSheet.Add "03.",
the Element. Tagged Values. Get By Name ("03. Project Activity"). Value
                         myColumnsForTimeSheet.Add "04.",
the Element. Tagged Values. Get By Name ("04. Work Activity"). Value
                         myColumnsForTimeSheet.Add "06."
theElement.TaggedValues.GetByName("05.Location").Value
                         else
                                 Session.Output( "
                                                            No Tags: " &theElement.ObjectID )
                         end if
                         myColumnsForTimeSheet.Add "07.", theElement.Created
                         myColumnsForTimeSheet.Add "08.", MyElementResource.DateStart
                         myColumnsForTimeSheet.Add "09.", MyElementResource.DateEnd
                         myColumnsForTimeSheet.Add "10.", MyElementResource.Time/60
                        myColumnsForTimeSheet.Add "10.", MyElementResource.lime/b0
myColumnsForTimeSheet.Add "11.", MyElementResource.ExpectedHours/60
myColumnsForTimeSheet.Add "12.", MyElementResource.ActualHours/60
myColumnsForTimeSheet.Add "13.", MyElementResource.PercentComplete
myColumnsForTimeSheet.Add "14.", MyElementResource.Notes
myColumnsForTimeSheet.Add "15.", theElement.Alias
myColumnsForTimeSheet.Add "16.", MyElementResource.Name
myColumnsForTimeSheet.Add "17.", MyElementResource.Role
myColumnsForTimeSheet.Add "18.", theFlement.FlementID
                         myColumnsForTimeSheet.Add "18.", theElement.ElementID
                AddRow xmlDOM, rowsNode, myColumnsForTimeSheet
                end if
        next
```



```
end sub
'-----
  Display Element attributes in Debug, or system output
sub displayTagsListInSearchWindows(theElement)
                dim i
          dim currentTag as EA.TaggedValue
          Session.Output( " Current version of the tags list1")
                if (theElement.TaggedValues.Count = 0) then
                         Session.Output( " EMPTY LIST" )
                else
                         for i = 0 to theElement.TaggedValues.Count - 1
                                 set currentTag = theElement.TaggedValues.GetAt( i )
                                 Session.Output( " Tagged Value: " & currentTag.Name )
                         next
                end if
end sub
'-----
'' TODO 3: Modify this function signature to include all information required for the
' results. Entire objects (such as elements, attributes, operations etc) may be passed
in.
' Adds an entry to the xml row node 'rowsNode'
sub AddRow( xmlDOM, rowsNode, myColumnsForTimeSheet )
        ' Create a Row node
        dim row, index
        set row = xmlDOM.createElement( "Row" )
        index=myColumnsForTimeSheet.Items
        ' Add the Model Search row data to the DOM
        AddField xmlDOM, row, "CLASSGUID", index(eGUID)
        AddField xmlDOM, row, "CLASSTYPE", "Class"
        AddField xmlDOM, row, "00", index(eElementID)
        AddField xmlDOM, row, "01", index(eElementName)
        AddField xmlDOM, row, "02", index(eProjectID)
        AddField xmlDOM, row, "03", index(eBusinessActivity)
       AddField xmlDOM, row, "03", index(eBusinessActivity)
AddField xmlDOM, row, "04", index(eProjectActivity)
AddField xmlDOM, row, "05", index(eWorkActivity)
AddField xmlDOM, row, "06", index(eLocation)
AddField xmlDOM, row, "07", index(eCreateDate)
AddField xmlDOM, row, "08", index(eDateStart)
AddField xmlDOM, row, "09", index(eDateEnd)
AddField xmlDOM, row, "10", index(eAllocatedHours)
AddField xmlDOM, row, "11", index(eExpectedHours)
AddField xmlDOM, row, "12", index(ePercentComplete)
        AddField xmlDOM, row, "13", index(eNotes)

AddField xmlDOM, row, "14", index(eNotes)
        AddField xmlDOM, row, "15", index(eAlias)
AddField xmlDOM, row, "16", index(eResource)
        AddField xmlDOM, row, "17", index(eRole)
```



```
AddField xmlDOM, row, "02.ProjectID", A02_ProjectID
AddField xmlDOM, row, "03.BusinessActivity", A03_BusinessActivity
       ' Append the newly created row node to the rows node
       rowsNode.appendChild( row )
'-----
' TODO 3: Modify this function signature to include all information required for the
' results. Entire objects (such as elements, attributes, operations etc) may be passed
' Adds an entry to the xml row node 'rowsNode'
sub AddRow1( xmlDOM, rowsNode, elementGUID, myCollectionOfColumns )
       ' Create a Row node
       dim row
       set row = xmlDOM.createElement( "Row" )
       ' Add the Model Search row data to the DOM
       AddField xmlDOM, row, "CLASSGUID", elementGUID

AddField xmlDOM, row, "CLASSTYPE", "Class"

AddField xmlDOM, row, "01.Element Name", myCollectionOfColumns(eElementName)

AddField xmlDOM, row, "02.ProjectID", myCollectionOfColumns(eProjectID)

AddField xmlDOM, row, "03.BusinessActivity",
myCollectionOfColumns(eBusinessActivity)
       ' Append the newly created row node to the rows node
       rowsNode.appendChild( row )
end sub
' Adds an Element to the DOM called Field which makes up the Row data for the Model
Search window.
 <Field name "" value ""/>
sub AddField( xmlDOM, row, name, value )
       dim fieldNode
       set fieldNode = xmlDOM.createElement( "Field" )
       ' Create first attribute for the name
       dim nameAttribute
       set nameAttribute = xmlDOM.createAttribute( "name" )
       nameAttribute.value = name
       fieldNode.attributes.setNamedItem( nameAttribute )
       ' Create second attribute for the value
       dim valueAttribute
       set valueAttribute = xmlDOM.createAttribute( "value" )
       valueAttribute.value = value
       fieldNode.attributes.setNamedItem( valueAttribute )
       ' Append the fieldNode
       row.appendChild( fieldNode )
end sub
```



#### findAllTimeSheetsRecordsInPackageTree

```
'option explicit
!INC Local Scripts.EAConstants-VBScript
• **************************
' Name: Create Timesheet from the Timesheets element in the packages Tree
' Notes: 20180525-it is running.
' the goal is to have universal script with element attributes and tag keys, value
output in search windows
' Related APIs
 ' Package API -
http://www.sparxsystems.com/enterprise architect user guide/12.1/automation and scriptin
g/package 2.html
 Repository API -
http://www.sparxsystems.com/enterprise architect user guide/12.1/automation and scriptin
g/repository3.html
 global collection is fill in in inner loop CountElements ()
' -----DEFINE SEARCH Windows columns
' TODO 1: Define your search specification:
' The columns that will apear in the Model Search window
' the search column is dynamicali changed based on number of Tags values?
dim SEARCH SPECIFICATION
 Instantiate an object of class Scripting. Dictionary
' Dictionaly collect
      dim myColumnsForTimeSheet
      set myColumnsForTimeSheet = CreateObject( "Scripting.Dictionary" )
      Const eGUID=0
      Const eElementID=18
      Const eElementName=1
      Const eProjectID=2
      Const eBusinessActivity=3
      Const eProjectActivity=4
      Const eWorkActivity=5
      Const eLocation=6
      Const eCreateDate=7
      Const eDateStart=8
      Const eDateEnd=9
      Const eAllocatedHours=10
      Const eExpectedHours=11
      Const eActualHours=12
      Const ePercentComplete=13
      Const eNotes=14
      Const eAlias=15
      Const eResource=16
      Const eRole =17
SEARCH_SPECIFICATION = "<ReportViewData>" &_
                                          "<Fields>" &_
                                                "<Field name=""CLASSGUID""/>" &
```



```
"<Field name=""CLASSTYPE"" />" &_
"<Field name=""ElementID"" />" &_
                                                 "<Field name=""01.Element Name"" />"
&
                                                 "<Field name=""02.ProjectID"" />"
&
                                                 "<Field name=""03.BusinessActivity""
/>" &_
                                                 "<Field name=""04.ProjectActivity""
/>" &
                                                 "<Field name=""05.WorkActivity"" />"
&_
                                                 "<Field name=""06.Location"" />" &_
                                                 "<Field name=""07.CreateDate"" />"
&
                                                 "<Field name=""08.DateStart"" />"
&
                                                 "<Field name=""09.DateEnd"" />" &
                                                 "<Field name=""10.AllocatedHours""</pre>
                                                 "<Field name=""11.ExpectedHours""</pre>
                                                 "<Field name=""12.ActualHours"" />"
&_
                                                 "<Field name=""13.PercentComplete""
/>" &<u>_</u>
                                                 "<Field name=""14.Notes"" />" &
                                                 "<Field name=""15.Alias"" />" &
                                                 "<Field name=""16.Resource"" />" &
                                                 "<Field name=""17.Role"" />" &
                                           "</Fields>" &
                                           "<Rows/>" &_
                                     "</ReportViewData>'
'CreatedDate Resource
                        Role DateStart
                                           DateEnd
                                                       AllocatedHours
      ExpectedHoursActualHours PercentComplete
                                                 Name
                                                       Alias Notes
      ' Create a DOM object to represent the search tree
      dim xmlDOM
      set xmlDOM = CreateObject( "MSXML2.DOMDocument.6.0" )
      xmlDOM.validateOnParse = false
      xmlDOM.asvnc = false
      dim rowsNode 'row to be added
'----
dim TS elements as EA.Collection
I .
findAllTimeSheetsRecordsInPackageTree
sub findAllTimeSheetsRecordsInPackageTree()
      ' Show the script output window
      Repository.EnsureOutputVisible "Script"
      Session.Output( "VBScript RECURSIVE ELEMENT COUNT EXAMPLE" )
      Session.Output( "=======" )
      ' Get the package to work on
      dim contextObjectType
      contextObjectType = Repository.GetContextItemType()
```



```
if contextObjectType = otPackage then
           dim elementCounter
           elementCounter = 0
           ' Get the context object as a package
           dim contextPackage as EA.Package
           set contextPackage = GetContextObject()
           ' -----init Search Windows
     ' Load the search template
           if xmlDOM.loadXML( SEARCH SPECIFICATION ) = true then
                set rowsNode = xmlDOM.selectSingleNode( "//ReportViewData//Rows" )
                ' TODO 2: Gather the required data from the repository
                ' This template adds a result row for a bogus class to the search
document
           'AddRow xmlDOM, rowsNode, "{2917209A-D3E0-4de7-8AED-C7D7F059D96F}",
"ResultClass", _
                      "Here are some comments about this class!", "klkl"
                ' Fill the Model Search window with the results
                Repository.RunModelSearch "", "", xmlDOM.xml
           Session.Prompt "Failed to load search xml", promptOK
     '_____
                 ' Recursively count the number of elements in the package and its
           elementCounter = CountElements( contextPackage )
           ' Output the results!
           dim message
           message = "Package '" & contextPackage.Name & "' has " & elementCounter &
                " element(s) under it"
           MsgBox ( message )
           Session.Output( message )
           Session.Output( "Done!" )
     else
           ' Package is not currently the context item
           MsgBox( "This script requires a package to be selected." & vbCrLf &
                "Please select a package and try again." )
     end if
end sub
'-----find
AllTimeSheetsRecordsInPackageTree
' Counts the number of elements under the provided package and its children
function CountElements( thePackage )
' Create a new element in the package
           dim testElement as EA.Element
```



```
dim currentElement as EA.Element
      dim count
      count = 0
      'set TS elements = EA.Elements
      ' Cast thePackage to EA.Package so we get intellisense
      dim contextPackage as EA.Package
      set contextPackage = thePackage
      dim currentPackage as EA.Package
      ' Iterate through all child packages
      'If no child package are in package
      if contextPackage.Packages.Count =0 then
         addAllElementsToTimesheet contextPackage
      else
      end if
      for each currentPackage in contextPackage.Packages
             ' Recursively process child packages
            addAllElementsToTimesheet(currentPackage)
            count = count + CountElements( currentPackage )
      next
      ' Add this package's element count to the counter
      CountElements = count + contextPackage.Elements.Count
end function
'-----
function addAllElementsToTimesheet( thePackage )
            dim elements as EA.Collection
            set elements = thePackage.Elements
            dim element as EA.Element
            dim MyTagValues as EA.Collection
            dim ElementResources as EA.Collection
            dim MyElementResource as EA.Resource
            dim message
      for each element in elements
          set ElementResources=element.Resources
            'set MyElementResource =ElementResources.GetAt(0)
            'set MyTagValues=element.TaggedValues
            ' Display Output in the Debug Windows
            message = "Element ID="& element.ElementID &" Element Name="& element.name
& " Stereotype=" & element.Stereotype & " Tags.count="
            & element.TaggedValues.Count & " Tag Value (1)="&
element.TaggedValues.GetAt( 1 ).Name
                   Session.Output( message )
             'Display results in SearchWindow
            'Only for Elements with Stereotype 7D-TimeSheet
            if element.Stereotype= "7Ds-TimeRecord" then
                   displayTagsList element
            else
                   message = "Element ID="& element.ObjectType& "Element Name="&
element.Name &"Element Stereotype="&element.Stereotype
                   Session.Output( message )
```



```
end if
      ' Fill the Model Search window with the results
      ' RunModelSearch (string sQueryName, string sSearchTerm, string sSearchOptions,
string sSearchData)
      'sQueryName: String - the name of the search to run, for example Simple
      '. sSearchTerm: String - the term to search for
      '. sSearchOptions: String - currently not being used
      '. sSearchData: String - a list of results in the form of XML, which is appended
      'onto the result list in Enterprise Architect - see the XML Format topic; this
      'parameter is not mandatory so pass in an empty string to run the search as per
      'normal Notes: Runs a search, displaying the results in Enterprise Architect's
Model Search
      ' window.
      ' Parameters:
      ' · sQueryName: String - the name of the search to run, for example Simple
      Repository.RunModelSearch "", "", "", xmlDOM.xml
end function
 ______
       _____
 Display Element attributes in Debug, or system output
sub displayTagsList(theElement)
            dim i
       dim currentTag as EA.TaggedValue
            dim mvTagName
            dim ElementResources as EA.Collection
            dim MyElementResource as EA.Resource
             set ElementResources=theElement.Resources
            'set MyElementResource =ElementResources.GetAt(0)
            'Make empty Disctionary
      ' For All Element Resources
        for each MyElementResource in theElement.Resources
                  'set MyElementResource =ElementResources.GetAt(0)
            myColumnsForTimeSheet.removeall
        Session.Output( " Current version of the tags list")
            if (theElement.TaggedValues.Count = 0) then
                  Session.Output( " EMPTY LIST" )
            else
                  'for i = 0 to the Element. Tagged Values. Count - 1
                        set currentTag = theElement.TaggedValues.GetAt( i )
                        Session.Output( " Tagged Value: " & currentTag.Name )
                  next
                  ' add raws into dictionary for search window
                  myColumnsForTimeSheet.Add "ElementGUID", theElement.ElementGUID
                                    myColumnsForTimeSheet.Add "00.Element Name",
theElement.Name
                  'set myTagName=theElement.TaggedValues.GetByName("01.ProjectID")
                  if theElement.TaggedValues.GetByName("01.ProjectID").Value <>
nothing then
```



```
myColumnsForTimeSheet.Add "01.",
theElement.TaggedValues.GetByName("01.ProjectID").Value
                        myColumnsForTimeSheet.Add "02.",
the Element. Tagged Values. Get By Name ("02. Business Activity"). Value
                        myColumnsForTimeSheet.Add "03.",
theElement.TaggedValues.GetByName("03.ProjectActivity").Value
                        myColumnsForTimeSheet.Add "04.",
theElement.TaggedValues.GetByName("04.WorkActivity").Value
                        myColumnsForTimeSheet.Add "06."
theElement.TaggedValues.GetByName("05.Location").Value
                        else
                                Session.Output( "
                                                         No Tags: " &theElement.ObjectID )
                        end if
                        myColumnsForTimeSheet.Add "07.", theElement.Created
                        myColumnsForTimeSheet.Add "08.", MyElementResource.DateStart
                        myColumnsForTimeSheet.Add "09.", MyElementResource.DateEnd
                        myColumnsForTimeSheet.Add "10.", MyElementResource.Time/60
                       myColumnsForTimeSheet.Add "10.", MyElementResource.Time/60
myColumnsForTimeSheet.Add "11.", MyElementResource.ExpectedHours/60
myColumnsForTimeSheet.Add "12.", MyElementResource.ActualHours/60
myColumnsForTimeSheet.Add "13.", MyElementResource.PercentComplete
myColumnsForTimeSheet.Add "14.", MyElementResource.Notes
myColumnsForTimeSheet.Add "15.", theElement.Alias
myColumnsForTimeSheet.Add "16.", MyElementResource.Name
myColumnsForTimeSheet.Add "17.", MyElementResource.Role
myColumnsForTimeSheet.Add "18." theElement ElementTD
                        myColumnsForTimeSheet.Add "18.", theElement.ElementID
                AddRow xmlDOM, rowsNode, myColumnsForTimeSheet
                end if
        next
end sub
 ______
  Display Element attributes in Debug, or system output
sub displayTagsListInSearchWindows(theElement)
                dim i
         dim currentTag as EA.TaggedValue
         Session.Output( "
                                   Current version of the tags list1")
                if (theElement.TaggedValues.Count = 0) then
                        Session.Output( "
                                                EMPTY LIST" )
                else
                        for i = 0 to theElement.TaggedValues.Count - 1
                                set currentTag = theElement.TaggedValues.GetAt( i )
                                Session.Output( "
                                                         Tagged Value: " & currentTag.Name )
                        next
                end if
end sub
 ______
'' TODO 3: Modify this function signature to include all information required for the
' results. Entire objects (such as elements, attributes, operations etc) may be passed
in.
```



```
Adds an entry to the xml row node 'rowsNode'
sub AddRow( xmlDOM, rowsNode, myColumnsForTimeSheet )
          ' Create a Row node
         dim row, index
         set row = xmlDOM.createElement( "Row" )
         index=myColumnsForTimeSheet.Items
          ' Add the Model Search row data to the DOM
         AddField xmlDOM, row, "CLASSGUID", index(eGUID)
AddField xmlDOM, row, "CLASSTYPE", "Class"
AddField xmlDOM, row, "00", index(eElementID)
         AddField xmlDOM, row, "01", index(eElementName)
         AddField xmlDOM, row, "02", index(eProjectID)
         AddField xmlDOM, row, "03", index(eBusinessActivity)
AddField xmlDOM, row, "04", index(eProjectActivity)
AddField xmlDOM, row, "05", index(eWorkActivity)
         AddField xmlDOM, row, "05", index(eWorkActivity)

AddField xmlDOM, row, "06", index(eLocation)

AddField xmlDOM, row, "07", index(eCreateDate)

AddField xmlDOM, row, "08", index(eDateStart)

AddField xmlDOM, row, "09", index(eDateEnd)

AddField xmlDOM, row, "10", index(eAllocatedHours)

AddField xmlDOM, row, "11", index(eExpectedHours)

AddField xmlDOM, row, "12", index(eActualHours)

AddField xmlDOM, row, "13", index(ePercentComplete)

AddField xmlDOM, row, "14", index(eNotes)

AddField xmlDOM, row, "15", index(eResource)

AddField xmlDOM, row, "16", index(eResource)
         AddField xmlDOM, row, "17", index(eRole)
         AddField xmlDOM, row, "02.ProjectID", A02_ProjectID
AddField xmlDOM, row, "03.BusinessActivity", A03_BusinessActivity
          ' Append the newly created row node to the rows node
         rowsNode.appendChild( row )
end sub
'-----
' TODO 3: Modify this function signature to include all information required for the
'results. Entire objects (such as elements, attributes, operations etc) may be passed
in.
  Adds an entry to the xml row node 'rowsNode'
sub AddRow1( xmlDOM, rowsNode, elementGUID, myCollectionOfColumns )
          ' Create a Row node
         dim row
         set row = xmlDOM.createElement( "Row" )
          ' Add the Model Search row data to the DOM
         AddField xmlDOM, row, "CLASSGUID", elementGUID
         AddField xmlDOM, row, "CLASSTYPE", "Class"
         AddField xmlDOM, row, "01.Element Name", myCollectionOfColumns(eElementName)
         AddField xmlDOM, row, "02.ProjectID", myCollectionOfColumns(eProjectID)
```



```
AddField xmlDOM, row, "03.BusinessActivity",
myCollectionOfColumns(eBusinessActivity)
       ' Append the newly created row node to the rows node
      rowsNode.appendChild( row )
end sub
' Adds an Element to the DOM called Field which makes up the Row data for the Model
Search window.
 <Field name "" value ""/>
sub AddField( xmlDOM, row, name, value )
      dim fieldNode
      set fieldNode = xmlDOM.createElement( "Field" )
      ' Create first attribute for the name
      dim nameAttribute
      set nameAttribute = xmlDOM.createAttribute( "name" )
      nameAttribute.value = name
      fieldNode.attributes.setNamedItem( nameAttribute )
      ' Create second attribute for the value
      dim valueAttribute
      set valueAttribute = xmlDOM.createAttribute( "value" )
      valueAttribute.value = value
      fieldNode.attributes.setNamedItem( valueAttribute )
      ' Append the fieldNode
      row.appendChild( fieldNode )
end sub
```

 $\verb|findAllTimeSheetsRecordsInPackageTree| \\$ 

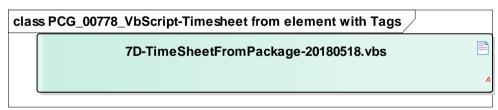


Fig. 173: PCG\_00778\_VbScript-Timesheet from element with Tags

# 7.6.6 How to export System ODBC DSN in Windows 10?

PACKAGE NAME-PCG\_00543\_HOW TO EXPORT SYSTEM ODBC DSN IN WINDOWS 10?, STEREOTYPE-"



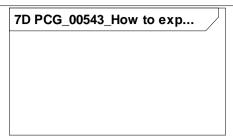


Fig. 174: PCG\_00543\_How to export System ODBC DSN in Windows 10?

# 7.6.6.1 01. Where is located information about System DSN in Windows 10?

PACKAGE NAME-PCG\_00544\_01. Where is located information about System DSN in Windows 10?, Stereotype-"

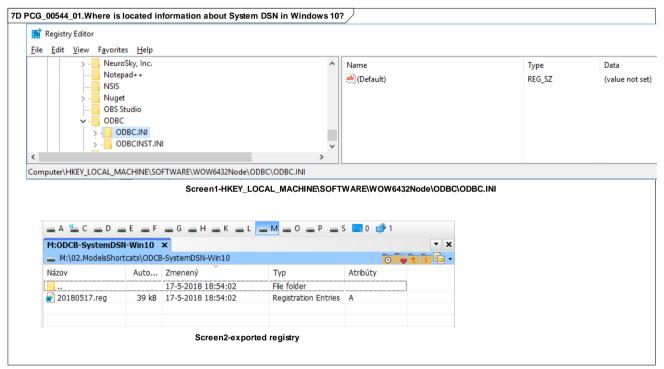


Fig. 175: PCG\_00544\_01. Where is located information about System DSN in Windows 10?

# 7.6.7 How to make visible element Progress bar on diagram?

PACKAGE NAME-PCG\_00545\_HOW TO MAKE VISIBLE ELEMENT PROGRESS BAR ON DIAGRAM?, STEREOTYPE-"

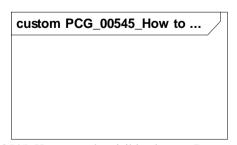


Fig. 176: PCG\_00545\_How to make visible element Progress bar on diagram?



# 7.6.7.1 O1. Final State - Visible progress bar on diagram

PACKAGE NAME-PCG\_00546\_01.FINAL STATE - VISIBLE PROGRESS BAR ON DIAGRAM, STEREOTYPE-"

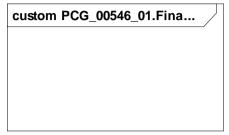


Fig. 177: PCG\_00546\_01.Final State - Visible progress bar on diagram

#### 7.6.7.2 02.How to do?

PACKAGE NAME-PCG\_00547\_02.How to do?, Stereotype-"

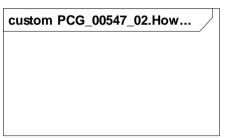


Fig. 178: PCG\_00547\_02. How to do?

# 7.6.7.3 03.Examples with 'good' and 'bad' procedures

PACKAGE NAME-PCG\_00548\_03.Examples with 'GOOD' AND 'BAD' PROCEDURES, STEREOTYPE-"



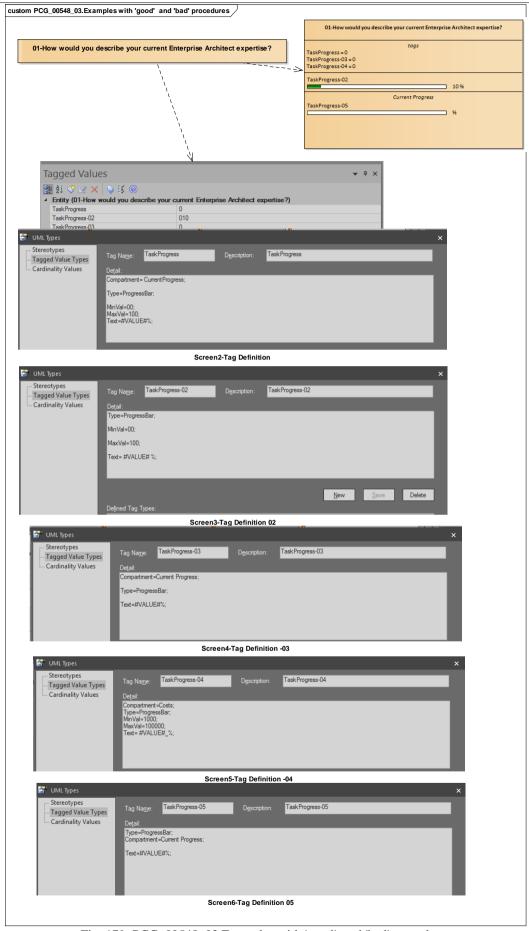


Fig. 179: PCG\_00548\_03.Examples with 'good' and 'bad' procedures



# 7.6.8 EA Object Model

PACKAGE NAME-PCG 00549 EA OBJECT MODEL, STEREOTYPE-"

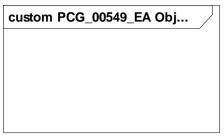


Fig. 180: PCG\_00549\_EA Object Model

# **7.6.8.1 01.Sparx Web Site**

PACKAGE NAME-PCG\_00550\_01.SPARX WEB SITE, STEREOTYPE-"



Fig. 181: PCG\_00550\_01.Sparx Web Site

# 7.6.9 EA Scripting

PACKAGE NAME-PCG\_00551\_EA SCRIPTING, STEREOTYPE-"

custom PCG\_00551\_EA Scripting
PCG\_00551\_EA Scripting

Fig. 182: PCG\_00551\_EA Scripting

# 7.6.9.1 How to create elements with autoname via scripts?

PACKAGE NAME-PCG\_00552\_HOW TO CREATE ELEMENTS WITH AUTONAME VIA SCRIPTS?, STEREOTYPE-"

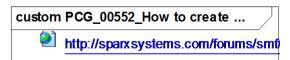


Fig. 183: PCG\_00552\_How to create elements with autoname via scripts?



#### 7.6.9.1.1 01.Forum

PACKAGE NAME-PCG\_00553\_01.FORUM, STEREOTYPE-"

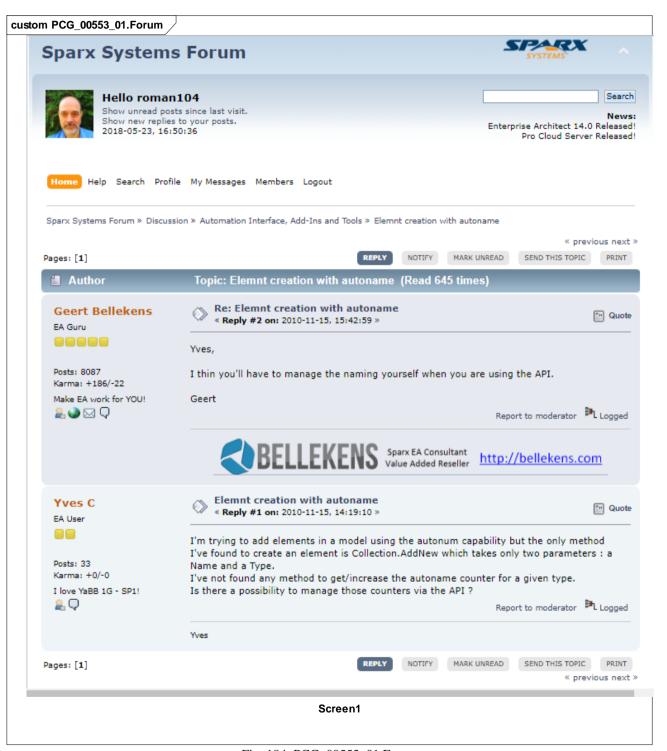


Fig. 184: PCG\_00553\_01.Forum

## 7.6.9.1.2 02.enterprise-architect-object-model.pdf

PACKAGE NAME-PCG 00554 02.ENTERPRISE-ARCHITECT-OBJECT-MODEL.PDF, STEREOTYPE-"



# custom PCG\_00554\_02.enterprise-architect-object-model.pdf

User Guide - Enterprise Architect Object Model	25 November, 2016

	Type - The constraint type.
CustomProperties	You cannot create these.
DataTypes	Name - The datatype name.
	Type - The datatype type.
DiagramLinks	Name - Not used.
	Type - The style string (such as 'l=200;r=400;t=200;b=600;')
	(You might prefer to leave the Type empty and use the Functions on this interface for size, colors and so on).
DiagramObjects	Name - This can either be an empty string, or it can specify the initial Left, Right, Top and Bottom values for the new DiagramObject. For example:
	diagram.DiagramObjects.AddNew( "l=200;r=400;t=200;b=600;", "" )
	Note: Top and Bottom values should be specified here as positive numbers, but will be set in the repository as negative values.
	Type - Unused.
Diagrams	Name - The name of the diagram.
	Type - This can be either a standard UML metaclass type (such as 'Class' or 'UseCase') or a fully-qualified metatype defined by an MDG Technology (such as 'BPMN2.0::BusinessProcess' or 'SysML1.4::Block').
Efforts	Name - The name of the effort.
	Type - The effort type.
Elements	Name - The name of the new element. If the repository has an auto-name counter defined for the element type being created, pass an empty string to use the auto-name counter instead.
	Type - Can be either a standard UML metaclass type (such as 'Class' or 'UseCase') or a fully-qualified metatype defined by an MDG Technology (such as 'BPMN2.0::BusinessProcess' or 'SysML1.4::Block').
Files	Name - The full pathname of the file.
	Type - The file type (such as 'Local File' or 'Web Address').
Issues	Name - The name of the issue.
	Type - The problem type, (such as 'Issue' or 'Defect')
MethodPostConditions	Name - The name of the constraint.
	Type - The constraint type
MethodPreconditions	Name - The name of the constraint.
	Type - The constraint type.
Methods	Name - The name of the method.
	Type - The return value of the method.

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### Screen1

Fig. 185: PCG\_00554\_02.enterprise-architect-object-model.pdf



## 7.6.9.1.3 01.Solution for Elements

PACKAGE NAME-PCG\_00555\_01.SOLUTION FOR ELEMENTS, STEREOTYPE-"



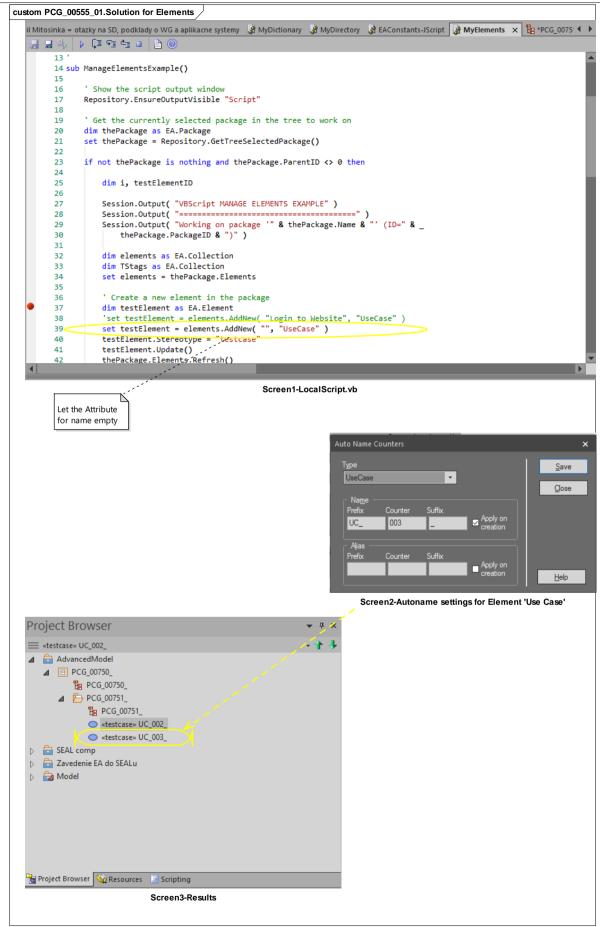


Fig. 186: PCG\_00555\_01. Solution for Elements



#### 7.6.9.1.4 **02.Solution For Packages**

PACKAGE NAME-PCG\_00556\_02.SOLUTION FOR PACKAGES, STEREOTYPE-"

If You use the *Package*. Elements attributes it is the same procedure for elements, and Package.

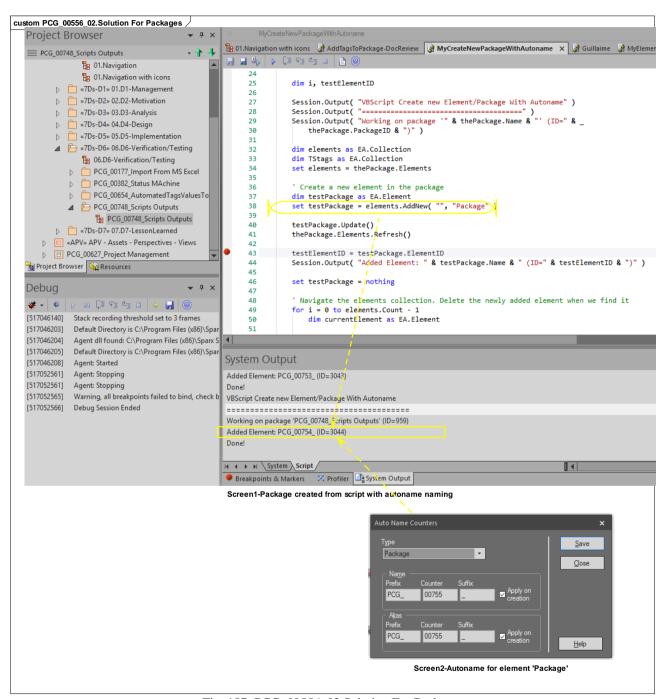


Fig. 187: PCG\_00556\_02.Solution For Packages

# 7.6.9.2 Scripting Under Linux

PACKAGE NAME-PCG 00558 SCRIPTING UNDER LINUX, STEREOTYPE-"



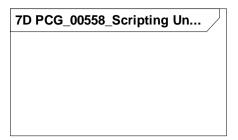


Fig. 188: PCG\_00558\_Scripting Under Linux

# 7.6.9.3 General rules how to develop client script for automation rutine work in client EA

PACKAGE NAME-PCG\_00591\_GENERAL RULES HOW TO DEVELOP CLIENT SCRIPT FOR AUTOMATION RUTINE WORK IN CLIENT EA, STEREOTYPE-"

### 7.6.9.3.1 Type of script in EA

PACKAGE NAME-PCG\_00592\_TYPE OF SCRIPT IN EA, STEREOTYPE-"

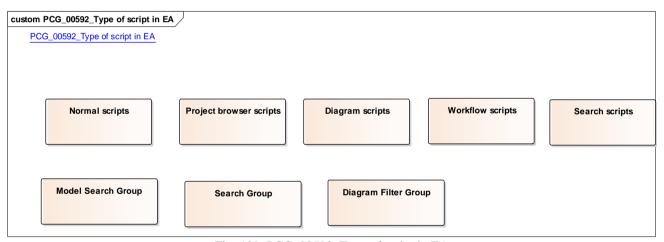


Fig. 189: PCG\_00592\_Type of script in EA



#### custom PCG\_00592\_Type of script in EA-screenshot from sparx **Define the Script Group Properties** Field/Button See also Action Name Type in the name of the script group. Group UID (Read only) The automatically assigned GUID for the group. Source (Read only) The location of the template used to create the script. Package Context Menu Group Type Click on the drop-down arrow and select the type of script contained in the group; this can be one of: • Normal - (%) General model scripts Project Browser - (%) Scripts that are listed in and can be executed from the Project Browser 'Scripts' context Workflow menu option Scripts Workflow - (4) Scripts executed by Enterprise Architect's workflow engine; you can create only VB scripts of this type Model Search - (%) Scripts that can be executed as model searches; these scripts are listed in the 'Search' field of the Model Search window, in the last category in the list Diagram - (%) Scripts that can be executed from the 'Scripts' submenu of the diagram context menu Diagram Context Menu Find in Project - (%) Scripts that can be executed from the 'Scripts' submenu of a context menu within the Model Search view, on the results of a successfully-executed SQL search that includes CLASSGUID and CLASSTYPE, or a Query-built search Element - Scripts that can be executed from the 'Scripts' submenu of element context menus; accessible from the Project Browser, Diagram, Model Search, Element List, **Package Browser** and Gantt views Package - Scripts that can be executed from the 'Scripts' submenu of Package context menus; accessible from the Project Browser Diagram - Scripts that can be executed from the 'Scripts' context menu option for diagrams; accessible from the Project Browser and diagrams Link - Scripts that can be executed from the 'Scripts' context menu option for connectors; accessible from diagrams Notes Type in any comments you need regarding this script group. Screen1

Fig. 190: PCG\_00592\_Type of script in EA-screenshot from sparx

# 7.6.9.4 Import /Export relationships

PACKAGE NAME-PCG\_1271\_IMPORT/EXPORT RELATIONSHIPS, STEREOTYPE-"

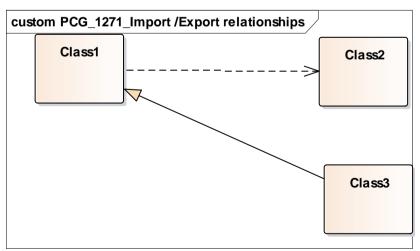


Fig. 191: PCG\_1271\_Import /Export relationships

#### 7.6.9.4.1 Screenshot-How to get info about connections between elements



PACKAGE NAME-PCG\_1272\_SCREENSHOT-HOW TO GET INFO ABOUT CONNECTIONS BETWEEN ELEMENTS, STEREOTYPE-"

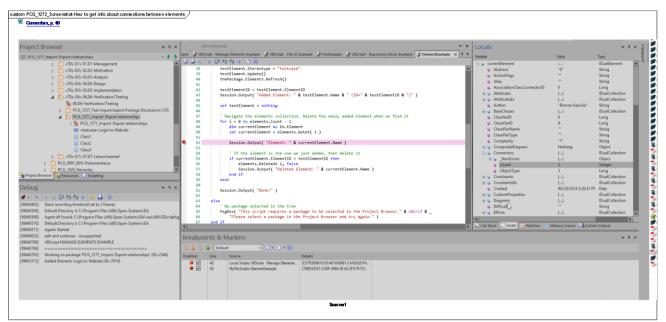


Fig. 192: PCG\_1272\_Screenshot-How to get info about connections between elements

## 7.6.9.4.2 CreateNewwConector to Element via script

PACKAGE NAME-PCG\_1273\_CREATENEWWCONECTOR TO ELEMENT VIA SCRIPT, STEREOTYPE-"



# custom PCG\_1273\_CreateNewwConector to Element via script

```
Connectors, p. 40
            Advanced Creations
                                                                                               40
                    element = package.Elements.AddNew ("New MDG Element", "BPMN2.0::Assignment");
                    element.Update ();
            4.6.3 Diagrams
            Creating a new diagram is similar. Again you supply the MDG stereotype via the second
            parameter of the AddNew method:
                    element = package.Elements.AddNew ("New MDG Element", "BPMN2.0::Assignment");
                    element.Update ():
            4.6.4 Attributes and Methods
            Yet another way (we all love EA for its unique interface) is used to create attributes and methods:
                    attribute = element.Attributes.AddNew ("New Attribute", "");
                    attribute.SterotypeEx = "BPMN2.0::Property";
                    attribute.Update();
            Unlike using the second AddNew parameter like for Elements you need to supply StereotypeEx.
            4.6.5 Connectors
            Once again like elements you can create connectors by supplying the MDG stereotype via the
            second parameter of the AddNew:
                    connector = element1.Connectors.AddNew ("", "BPMN2.0::ConversationLink");
         2
                    connector.SupplierID = element2.ElementID;
                    connector.Update ();
                                                 Screen1
```

Fig. 193: PCG 1273 CreateNewwConector to Element via script

#### How to add Tag value to the package from the vbscript? 7.6.10

PACKAGE NAME-PCG\_00557\_HOW TO ADD TAG VALUE TO THE PACKAGE FROM THE VBSCRIPT?, STEREOTYPE-"



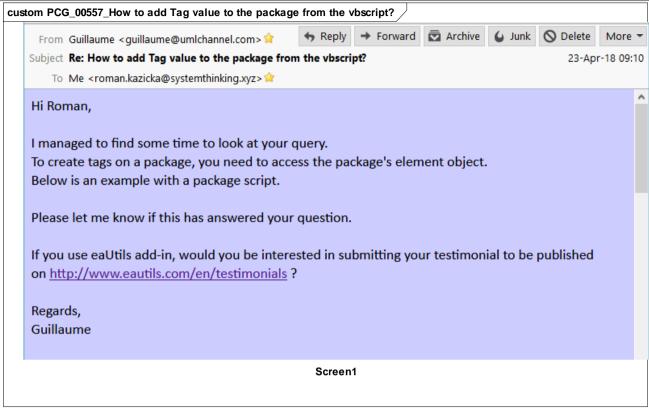
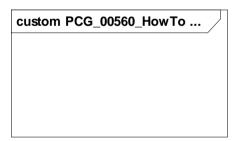


Fig. 194: PCG\_00557\_How to add Tag value to the package from the vbscript?

# 7.6.11 HowTo Export/Import TestCases to Excel

PACKAGE NAME-PCG 00560 HOWTO EXPORT/IMPORT TESTCASES TO EXCEL, STEREOTYPE-"



 $Fig.\ 195: PCG\_00560\_HowTo\ Export/Import\ TestCases\ to\ Excel$ 

#### 7.6.11.1 Elements to be tested

PACKAGE NAME-PCG\_00561\_ELEMENTS TO BE TESTED, STEREOTYPE-"

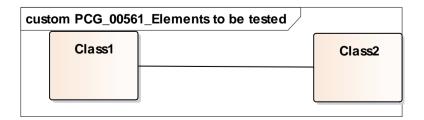




Fig. 196: PCG\_00561\_Elements to be tested

# 7.6.11.2 SQL commands for testing

PACKAGE NAME-PCG\_00562\_SQL COMMANDS FOR TESTING, STEREOTYPE-"





Fig. 197: PCG\_00562\_SQL commands for testing



#### 7.6.11.2.1 80.TestsResourcesElements

PACKAGE NAME-PCG\_00563\_80.TESTSRESOURCESELEMENTS, STEREOTYPE-"

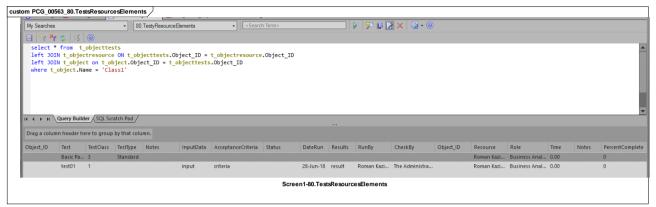


Fig. 198: PCG 00563 80.TestsResourcesElements

#### 7.6.11.2.2 78.ElementsTestsResources

PACKAGE NAME-PCG 00564 78.ELEMENTSTESTSRESOURCES, STEREOTYPE-"

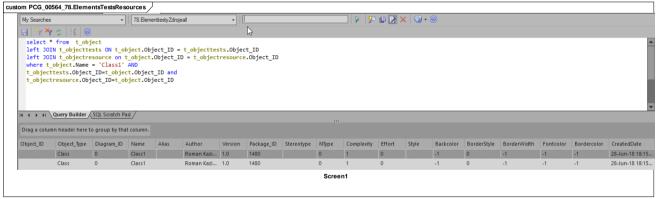


Fig. 199: PCG\_00564\_78.ElementsTestsResources

#### 7.6.11.2.3 79.TestsResourcesElements

PACKAGE NAME-PCG\_00565\_79.TESTSRESOURCESELEMENTS, STEREOTYPE-"



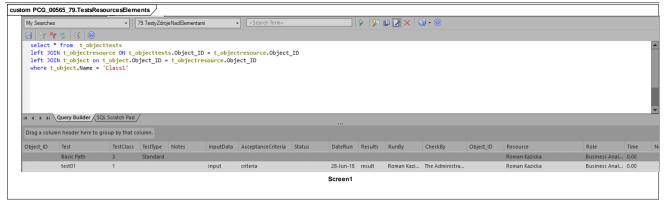


Fig. 200: PCG\_00565\_79.TestsResourcesElements

# 7.6.12 SQL Examples

PACKAGE NAME-PCG\_00566\_SQL EXAMPLES, STEREOTYPE-"

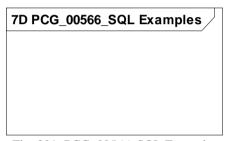
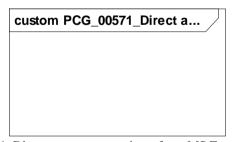


Fig. 201: PCG\_00566\_SQL Examples

# 7.6.13 Direct access to repository from MS Excel - Timesheets report

PACKAGE NAME-PCG\_00571\_DIRECT ACCESS TO REPOSITORY FROM MS EXCEL - TIMESHEETS REPORT, STEREOTYPE-"



 $Fig.\ 202:\ PCG\_00571\_Direct\ access\ to\ repository\ from\ MS\ Excel\ -\ Time sheets\ report$ 

#### 7.6.13.1 01.Context

PACKAGE NAME-PCG 00572 01. CONTEXT, STEREOTYPE-"



# custom PCG\_00572\_01.Context

Fig. 203: PCG 00572 01.Context

#### 7.6.13.1.1 03. How to use Import Wizard Query?

PACKAGE NAME-PCG\_00575\_03.How to use Import Wizard Query?, Stereotype-"

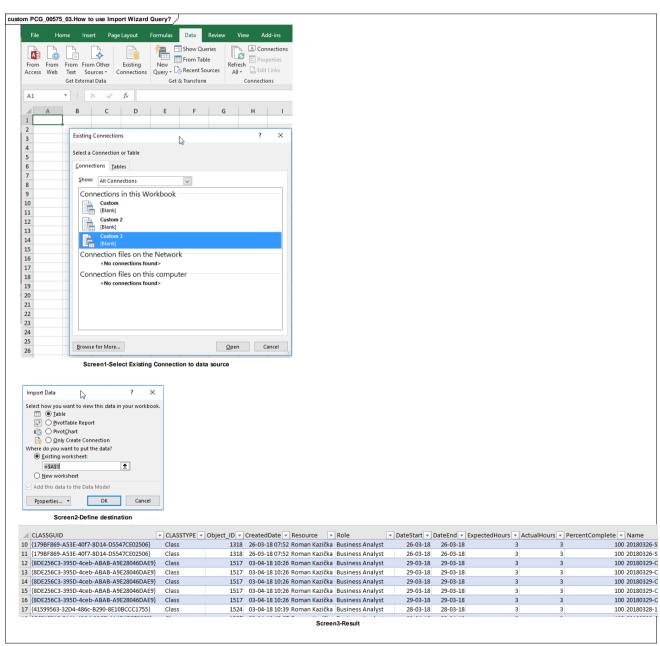


Fig. 204: PCG\_00575\_03. How to use Import Wizard Query?



# 7.6.13.2 02.SQL Query from MS Excel via Import Wizard

PACKAGE NAME-PCG\_00574\_02.SQL QUERY FROM MS EXCEL VIA IMPORT WIZARD, STEREOTYPE-"

Generated for:Roman Kazička, SystemThinking spol. s r.o., Expiration:10.Oct.2020



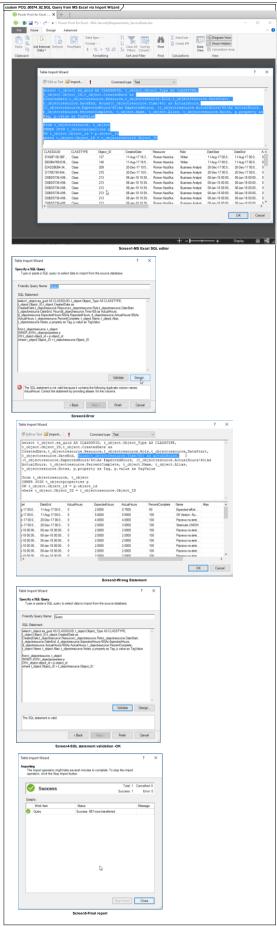


Fig. 205: PCG\_00574\_02.SQL Query from MS Excel via Import Wizard



#### 7.6.14 Simulation

PACKAGE NAME-PCG\_00576\_SIMULATION, STEREOTYPE-"

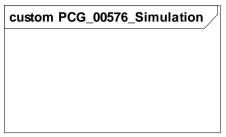


Fig. 206: PCG\_00576\_Simulation

#### 7.6.14.1

PACKAGE NAME-PCG\_00577\_, STEREOTYPE-"

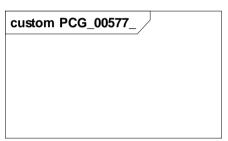


Fig. 207: PCG\_00577\_

# 7.6.15 How to create PackageHyperlink on Current diagram

PACKAGE NAME-PCG\_00590\_HOW TO CREATE PACKAGEHYPERLINK ON CURRENT DIAGRAM, STEREOTYPE-"



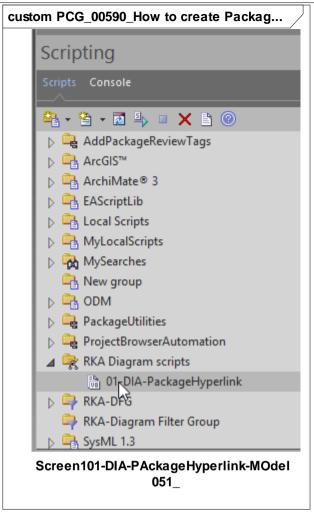


Fig. 208: PCG\_00590\_How to create PackageHyperlink on Current diagram

# 7.6.15.1 Script Design

PACKAGE NAME-PCG\_00599\_SCRIPT DESIGN, STEREOTYPE-"



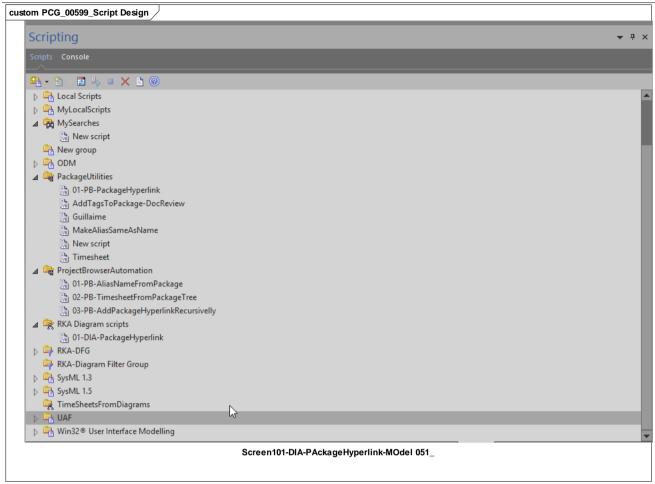


Fig. 209: PCG\_00599\_Script Design

#### 7.6.16

PACKAGE NAME-PCG\_00603\_HOW TO CHANGE ELEMENT ORDER ON THE DIAGRAM (TAB BUTTON PRESSING), STEREOTYPE-"

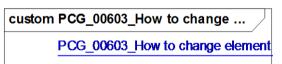


Fig. 210: PCG\_00603\_How to change element order on the diagram (TAB button pressing)

#### 7.6.17 UML Pattern

PACKAGE NAME-PCG\_00615\_UML PATTERN, STEREOTYPE-"



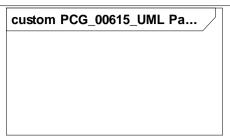


Fig. 211: PCG\_00615\_UML Pattern

## 7.6.17.1 SparxSystem Patterns

PACKAGE NAME-PCG\_00616\_SPARXSYSTEM PATTERNS, STEREOTYPE-"

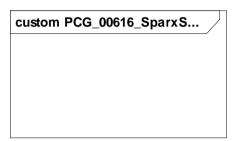


Fig. 212: PCG\_00616\_SparxSystem Patterns

#### 7.6.17.1.1 Web1

PACKAGE NAME-PCG\_00617\_WEB1, STEREOTYPE-"



Fig. 213: PCG\_00617\_Web1

## 7.6.18 How to create Wizard for Process Guidance

PACKAGE NAME-PCG\_00618\_HOW TO CREATE WIZARD FOR PROCESS GUIDANCE, STEREOTYPE-"



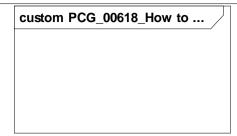


Fig. 214: PCG\_00618\_How to create Wizard for Process Guidance

# 7.6.19 Test Import/export Package Structure to CVS

PACKAGE NAME-PCG\_1257\_TEST IMPORT/EXPORT PACKAGE STRUCTURE TO CVS, STEREOTYPE-"

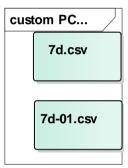


Fig. 215: PCG\_1257\_Test Import Package Structure

# 7.6.20 How to create one diagram for one screen element from many elements on one diagram

PACKAGE NAME-PCG\_00619\_HOW TO CREATE ONE DIAGRAM FOR ONE SCREEN ELEMENT FROM MANY ELEMENTS ON ONE DIAGRAM, STEREOTYPE-"

#### **Description of situation:**

During documenting current activities I am making screenshot of all important steps. Result is, that is a lot of screen elements on one diagram. In case of generating word document, all alements are on one page of A4 format. They are unreadable.

#### **Manual Solution:**

- 1. Create package 'Package For Publishing'
- 2. in this package create specia diagram for every screen element from the original diagram.
- 3. From the original diagram copy one screen element and past it (CTRL-V) on diagram with its name in Publish Package.
- 4. Repeat step 3 for all screen elements

#### **Automated solution:**

Prerequisites: Script created in group Project Brower Group.

- 1. Click LEFT button on mouse on the original package with many screen elements on one diagram
- 2. Click Rigth buuton and select script with name 04-Create separate diagram for every screen element
- 3. Run the script



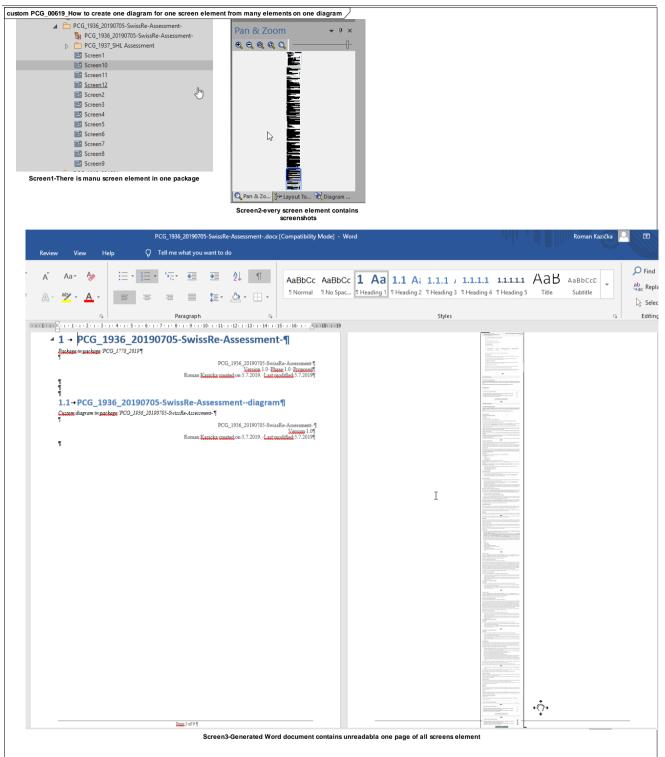


Fig. 216: PCG\_00619\_How to create one diagram for one screen element from many elements on one diagram

#### **7.6.20.1** Motivation

PACKAGE NAME-PCG\_00620\_MOTIVATION, STEREOTYPE-"



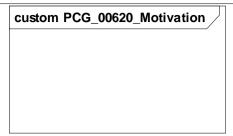


Fig. 217: PCG\_00620\_Motivation

# 7.6.20.2 Solution-Create separate diagram for every screen element from the original diagram

PACKAGE NAME-PCG\_00621\_SOLUTION-CREATE SEPARATE DIAGRAM FOR EVERY SCREEN ELEMENT FROM THE ORIGINAL DIAGRAM, STEREOTYPE-"

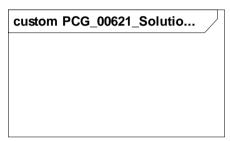


Fig. 218: PCG\_00621\_Solution-Create separate diagram for every screen element from the original diagram

#### 7.6.20.2.1 Solution Description

PACKAGE NAME-PCG\_00623\_SOLUTION DESCRIPTION, STEREOTYPE-"

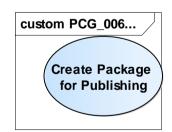


Fig. 219: PCG\_00623\_Solution Description

#### 7.6.20.2.2

PACKAGE NAME-PCG\_00625\_TODO, STEREOTYPE-"





Fig. 220: PCG\_00625\_Todo

### 7.6.20.2.3 Original Package-PCG\_1936\_20190705-SwissRe-Assessment-

PACKAGE NAME-ORIGINAL PACKAGE-PCG\_1936\_20190705-SWISSRE-ASSESSMENT-, STEREOTYPE-"







Fig. 221: PCG\_1936\_20190705-SwissRe-Assessment-

#### 7.6.20.2.3.1 SHL Assessment

PACKAGE NAME-PCG\_1937\_SHL ASSESSMENT, STEREOTYPE-"



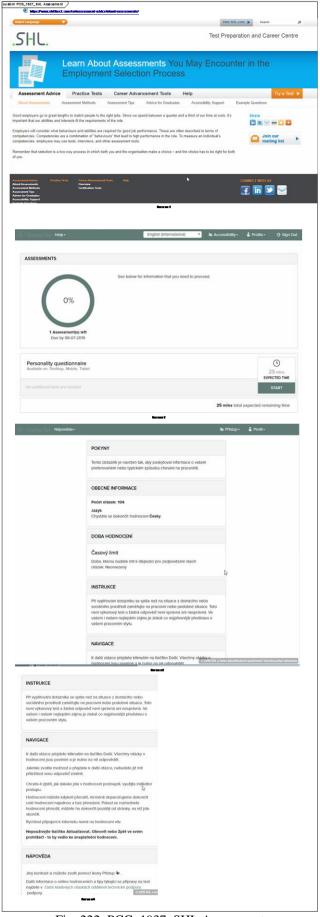


Fig. 222: PCG\_1937\_SHL Assessment



#### 7.6.20.2.3.1.1 Try a Test

PACKAGE NAME-PCG\_1938\_TRY A TEST, STEREOTYPE-"



Fig. 223: PCG\_1938\_Try a Test

#### 7.6.20.2.3.2

PACKAGE NAME-PUBLISHING, STEREOTYPE-"

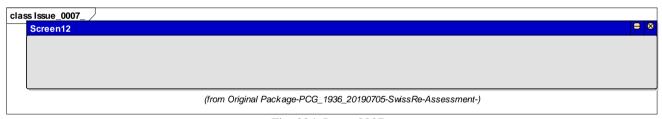


Fig. 224: Issue\_0007\_

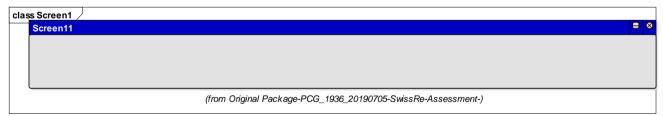


Fig. 225: Screen1



Fig. 226: Screen10



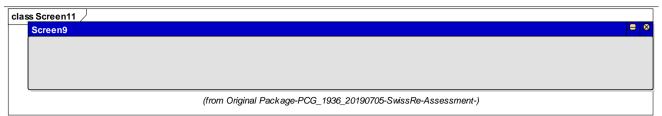


Fig. 227: Screen11

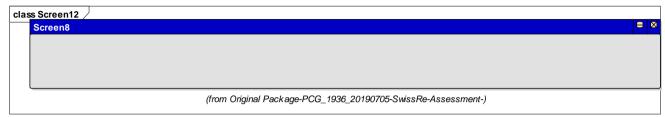


Fig. 228: Screen12

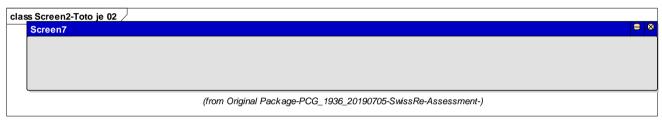


Fig. 229: Screen2-Toto je 02

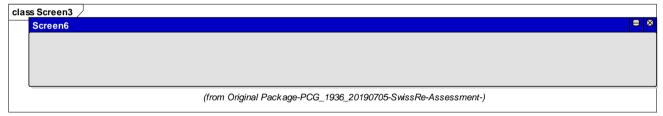


Fig. 230: Screen3

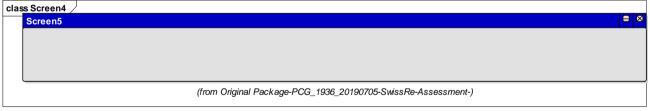


Fig. 231: Screen4

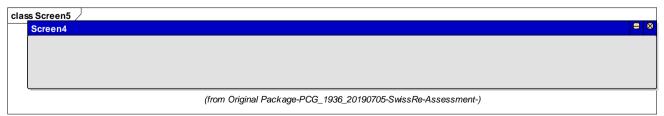


Fig. 232: Screen5



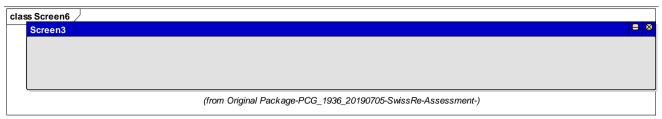


Fig. 233: Screen6

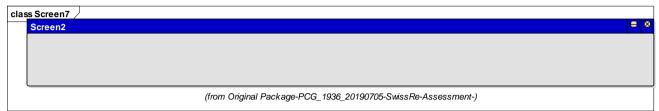


Fig. 234: Screen7



Fig. 235: Screen8

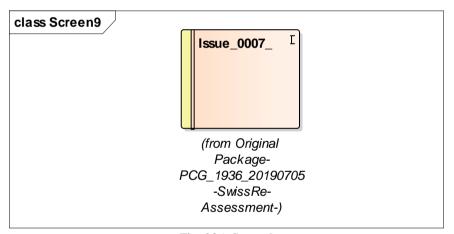


Fig. 236: Screen9

#### 7.6.20.2.4 Original Package-PCG\_1936\_20190705-SwissRe-Assessment-

PACKAGE NAME-XXXORIGINAL PACKAGE-PCG\_1936\_20190705-SWISSRE-ASSESSMENT- - COPY, STEREOTYPE- "







Fig. 237: PCG\_1936\_20190705-SwissRe-Assessment-

#### 7.6.20.2.4.1 SHL Assessment

PACKAGE NAME-PCG\_1937\_SHL ASSESSMENT, STEREOTYPE-"



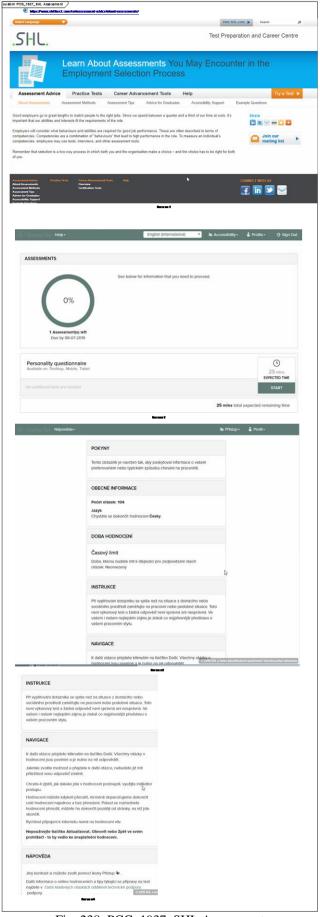


Fig. 238: PCG\_1937\_SHL Assessment



#### 7.6.20.2.4.1.1 Try a Test

PACKAGE NAME-PCG\_1938\_TRY A TEST, STEREOTYPE-"

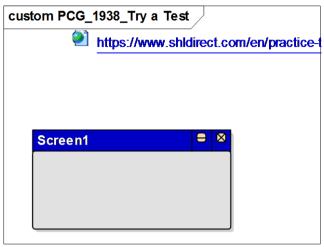


Fig. 239: PCG\_1938\_Try a Test

#### 7.6.20.2.4.2

PACKAGE NAME-PUBLISHING, STEREOTYPE-"



Screen02_ /	
DATA PROTECTION NOTICE	
Introduction to the Data Protection Notice	
Please read this <u>Data Protection Notice</u> ("Notice") to continue. It sets out how and why your Employer and personal information. For any defined terms which are not defined on this page, please see the definitions in Notice.	
Please read the entire Notice carefully. If you have questions about this Notice, please refer to FAQ page.	
Data Protection Notice	
See the entire notice	
I confirm I have read and understood this Notice.	•
(OPTIONAL) I agree that SHL can contact me, including by email, in order to participate in future test trials, surveys and to provide further information relating to the assessment.	•
I acknowledge and agree that the results of this Assessment will determine whether I am successful in moving forward to the next stage of the role I have applied for.	
NEXT	
Screen02	

Fig. 240: Screen02\_



#### **DATA PROTECTION NOTICE**

Introduction to the Data Protection Notice

Please read this <u>Data Protection Notice</u> ("Notice") to continue. It sets out how and why your Employer and SHL collect your personal information. For any defined terms which are not defined on this page, please see the definitions included within the Notice.

Please read the entire Notice carefully. If you have questions about this Notice, please refer to FAQ page.

**Data Protection Notice** 

B

This Notice was last updated 14 May 2018.

#### 1. Who we are

This Notice describes how;

(1) your Employer/ potential new Employer ("Employer"); and

(2) SHL Group Limited of The Pavilion, 1 Atwell Place, Thames Ditton, Surrey KT7 ONE, England (together, SHL or we or us)

respectively use your information collected through this online Assessment.

SHL will process and collect information about you when you complete an SHL assessment ("Assessment") in accordance with this Notice. Some information is ("Personal Information"), personal information about you or from which we can identify you.

This Notice also covers us, and our affiliated group of companies, where we are data controller. Each group company is a data controller and we've listed them here.

This Notice sets out the way the Employer and SHL use your information: what is collected, how it is used, why it is used, who it is shared with and the rights to which you will be entitled.

<u>Section 2</u> (Employer as the Data Controller) provides further information on **processing of your personal information by the Employer as the data controller.** 

<u>Section 3</u> (SHL as the Data Controller) describes **processing of your Personal Information by SHL for our own purposes as data controller.** 

<u>Section 4</u> (The Employer and SHL as the Data Controller) provides additional information **on who SHL and the Employer share your** data with and an overview of your rights under data protection law.

#### 2. Employer as the Data Controller

Screen03

Fig. 241: Screen03\_



#### 2. Employer as the Data Controller

SHL collects your Personal Information on behalf of your Employer. If you have a query as to the identity of the Employer, please contact the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice

The **Employer will be the data controller** in respect of your Personal Information and the Employer will decide what data is collected, the purposes for which it is collected and who it is shared with. You will be able to exercise your rights directly against the Employer in respect of this Personal Information (see section 4 (The Employer and SHL as the Data Controller) for more information)).

#### The data collected

We collect and process the categories of data on behalf of the Employer as set out below. The categories of data which are collected about you vary depending on the type of Assessment and instructions we receive from the Employer. Not all the categories of data listed below may be collected about you. If you require further information as to the extent of the data that is collected you should contact the Employer directly.

#### What we collect

Information that you give us and the Employer when you complete an Assessment, including:

- i. "Candidate Data" which includes your:
  - name:
  - · email address; and
  - · account log in details.
- II. "Assessment Data" which are your answers to the Assessment questions.

Using the Candidate Data and Assessment Data, we generate the ("Results Data"), which includes the results of your Assessment.

Additionally, we will collect information if provided to us by your Employer ("Employer Provided Data"). To the extent provided by your Employer to us, this will include:

- · CV or resume information (including your employment history, educational background, skills, languages and hobbies);
- · details of the role you are in, or applying for;
- · your manager's rating of performance;
- · confirmation whether you were hired; and
- · performance appraisals.

#### What we do with the data

We use your Candidate Data, Assessment Data, Results Data, and Employer Provided Data (if provided) on behalf of the Employer to:

- 1. invite you to complete an Assessment on behalf of the Employer;
- 2. use the Results Data to compile a report given to the authorised representatives of the Employer ("Assessment Report").
- 3. when instructed by the Employer, provide you with an Assessment Report;

4 --------

Screen04\_

Fig. 242: Screen04\_



#### What we do with the data

We use your Candidate Data, Assessment Data, Results Data, and Employer Provided Data (if provided) on behalf of the Employer to:

- 1. invite you to complete an Assessment on behalf of the Employer;
- 2. use the Results Data to compile a report given to the authorised representatives of the Employer ("Assessment Report").
- 3. when instructed by the Employer, provide you with an Assessment Report;
- 4. provide our services to the Employer;
- 5. when instructed by the Employer, compare your Candidate Data, Assessment Data, Results Data and Employer Provided Data (if provided) with anonymised Benchmark Data (as defined below) to provide talent analytics services to the Employer so that the Employer can understand how your Personal Information compares to the market in the role you are in, or applying for; and
- 6. manage and administer our services.

#### Why this data is collected and how long it is retained by us

We hold and process your Candidate Data, Assessment Data, Results Data, along with Employer Provided Data, in accordance with the Employer's instructions. The reasons why the Employer collects your Personal Information will vary but generally, the Employer will instruct us to process your Personal Information because they have one or more of the following legitimate interests:

- I. to evaluate your suitability for a role you have applied for;
- II. to perform analytics on the characteristic profile required for the role;
- III. to evaluate your promotion opportunities or development requirements.

as part of an overall recruiting/development/promotion process. The Employer may also instruct us to process your Personal Information because you have provided consent or if it is necessary on reasonable request by a law enforcement or regulatory authority, body or agency or in the defence of a legal claims on behalf of the Employer.

We will keep your Personal Information on behalf of the Employer in accordance with the Employer's instructions. The period of time that we are instructed to hold your Personal Information, varies from Employer to Employer. We will not delete your Personal Information if relevant to an investigation or a dispute. It will continue to be stored until those issues are fully resolved.

You should contact the Employer directly if you require more information on this section

#### **Automated Decision Making**

The Assessment is designed to assist the Employer in an overall process to effectively evaluate your suitability for a role or a promotion. Consequently, if you do not obtain a score for this Assessment, pre-determined by the Employer, the Employer will make an automatic decision to not progress your application to the next stage forward for employment/ development/ promotion.

Not all Employers will use your Results Data to make an automated decision. If you disagree with a decision, or if you want to understand more about the pre-determined score threshold you should contact the Employer.

#### **Data Sharing**

We will only share your Personal Information processed on behalf of the Employer with the Employer and on the Employer's

Screen05

Fig. 243: Screen05



Not all Employers will use your Results Data to make an automated decision. If you disagree with a decision, or if you want to understand more about the pre-determined score threshold you should contact the Employer.

#### Data Sharing

We will only share your Personal Information processed on behalf of the Employer with the Employer and on the Employer's instructions. The Employer may share your Personal Information with other third parties including its group companies and those parties listed at section 4. You should contact the Employer for more information on who they share your Personal Information with.

#### 3. SHL as the Data Controller

When you complete an Assessment we will collect Personal Information about you for the purposes outlined below. We will be data controller in respect of this information and we will be responsible for your Personal Information including for what purposes your information is collected and used.

If you have any questions on the processing of your data by SHL as data controller you can contact the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice

#### What we collect

- 1. Information that you or the Employer give us when you complete an Assessment: including your **Candidate Data**, **Assessment Data**, and your **Results Data** and your **Employer Provided Data** (if provided by Employer).
- 2. **OPTIONAL RESEARCH QUESTIONS** At the beginning of an Assessment, we will ask you to answer a set of <u>optional</u> demographic research questions ("Research Data"). Some of this demographic data collected will be of a sensitive nature and be classified as a special category of personal information as such you will required to provide us with your consent to process this information during the Assessment. **Providing this information is <u>completely voluntary</u>** if you do not want to answer a question, simply select the "*Prefer not to answer*" option. If you choose not to answer these questions, it will not prevent you from taking the Assessment or affect the Assessment results in any way. We will store your Research Data in a de-identified format and only use it in an anonymised format for research purposes as further detailed below. Your Research Data will NOT be provided to the Employer. The questions ask you to provide certain types of demographic information for research purposes including your:
- · Gender;
- Age;
- · First language;
- Country of Origin;
- · Country of Residence;
- · Highest educational qualification attached;
- · Highest education qualification you are working toward;
- · Level at current job;
- Years of Employment Experience; and
- Business function and Industry section you are currently working in.
- · Ethnicity.

Screen06

Fig. 244: Screen06



#### How long we keep it

We keep your Assessment Data, Results Data, Employer Provided Data, Candidate Data, and Research Data, for our own purposes in a de-identified form for a maximum of seven years. We will not delete your Personal Information if it is relevant to an investigation or a dispute. It will continue to be stored until those issues are fully resolved.

We keep your Technical Information and Country of Residence for seven years.

#### Where your Personal Information will be held

We store your Personal Information in data centres located in the United Kingdom.

Your Personal Information will be transferred to the United States or India where a limited number of personnel in our US and India offices, as well as our trusted third party vendors and service providers, will have access to Personal Information in order to provide their services. As the U.S. and India do not have equivalent data protection laws to those applicable in the EEA we have an Intragroup Agreement in place, signed by all SHL affiliates, which contains the European Union (**EU**) Standard Contractual Clauses (**SCCs**) which have been approved by the EU data protection authorities for the transfer of data outside the EEA, and our third party vendors and service providers are also required to sign up to SCCs in accordance with Article 46 of the General Data Protection Regulation. All SHL affiliates have the same technical, physical, and administrative security controls and are required to comply with our data protection policies and procedures, applicable laws, governing the collection and use of personal information.

We are happy to provide you with copies of the regulator-approved SCCs, which you can request from the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice.

#### When do we share Personal Information

We have set out the circumstances in which we will share your data with third parties below:

- We will share a combination of your Assessment Data, Results Data, Employer Provided Data and Research Data within our
  group companies when required to provide maintenance and support services and so that we can continue to improve the
  services we provide across the group.
- We will also share your information with our trusted third party service providers, including our survey tool provider, IT security
  provider and cloud hosting platform provider. Our service providers will be required to meet our standards on processing
  information and security.

#### 4. The Employer and SHL as the Data Controller

#### **Data Sharing**

The Employer and SHL as data controller will share your data with the following third parties in the below circumstances:

- If we are discussing selling or transferring part or all of our business, Personal Information will be transferred to prospective purchasers under suitable terms as to confidentiality;
- · If we are reorganised or sold, Personal Information will be transferred to a buyer who can continue to provide services to you;
- If we are required to by law, or under any regulatory code or practice we follow, or if we are asked by any public or regulatory authority – for example the Police;

Screen07\_

Fig. 245: Screen07\_



#### How long we keep it

We keep your Assessment Data, Results Data, Employer Provided Data, Candidate Data, and Research Data, for our own purposes in a de-identified form for a maximum of seven years. We will not delete your Personal Information if it is relevant to an investigation or a dispute. It will continue to be stored until those issues are fully resolved.

We keep your Technical Information and Country of Residence for seven years.

#### Where your Personal Information will be held

We store your Personal Information in data centres located in the United Kingdom.

Your Personal Information will be transferred to the United States or India where a limited number of personnel in our US and India offices, as well as our trusted third party vendors and service providers, will have access to Personal Information in order to provide their services. As the U.S. and India do not have equivalent data protection laws to those applicable in the EEA we have an Intragroup Agreement in place, signed by all SHL affiliates, which contains the European Union (**EU**) Standard Contractual Clauses (**SCCs**) which have been approved by the EU data protection authorities for the transfer of data outside the EEA, and our third party vendors and service providers are also required to sign up to SCCs in accordance with Article 46 of the General Data Protection Regulation. All SHL affiliates have the same technical, physical, and administrative security controls and are required to comply with our data protection policies and procedures, applicable laws, governing the collection and use of personal information.

We are happy to provide you with copies of the regulator-approved SCCs, which you can request from the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice.

#### When do we share Personal Information

We have set out the circumstances in which we will share your data with third parties below:

- We will share a combination of your Assessment Data, Results Data, Employer Provided Data and Research Data within our
  group companies when required to provide maintenance and support services and so that we can continue to improve the
  services we provide across the group.
- We will also share your information with our trusted third party service providers, including our survey tool provider, IT security
  provider and cloud hosting platform provider. Our service providers will be required to meet our standards on processing
  information and security.

#### 4. The Employer and SHL as the Data Controller

#### **Data Sharing**

The Employer and SHL as data controller will share your data with the following third parties in the below circumstances:

- If we are discussing selling or transferring part or all of our business, Personal Information will be transferred to prospective purchasers under suitable terms as to confidentiality;
- · If we are reorganised or sold, Personal Information will be transferred to a buyer who can continue to provide services to you;
- If we are required to by law, or under any regulatory code or practice we follow, or if we are asked by any public or regulatory authority – for example the Police;

Screen08\_

Fig. 246: Screen08\_



#### 4. The Employer and SHL as the Data Controller

#### **Data Sharing**

The Employer and SHL as data controller will share your data with the following third parties in the below circumstances:

- If we are discussing selling or transferring part or all of our business, Personal Information will be transferred to prospective purchasers under suitable terms as to confidentiality;
- If we are reorganised or sold, Personal Information will be transferred to a buyer who can continue to provide services to you;
- If we are required to by law, or under any regulatory code or practice we follow, or if we are asked by any public or regulatory authority – for example the Police;
- If we are defending a legal claim your Personal Information will be transferred as required in connection with defending such claim.

#### Data Subject Rights

We've listed the rights you have over your Personal Information and how you can use them below. These rights are subject to exemptions in applicable law and will only apply to certain types of information or processing. As described above, the Employer will be data controller so you should contact them directly if you want to exercise a right over data for which they are data controller.

For the Personal Information where we are data controller, you can exercise these rights by contacting the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice

- 1. The right to withdraw consent: Where we or the Employer have obtained consent for some of the ways we use your information you can remove that consent at any time by contacting the Employer or the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice
- 2. You can ask us to confirm if we are processing your information and, if we are, you can ask for access to that information as well as further details including why your data is being used and for what purposes.
- 3. You can ask to correct your Personal Information held by us and the Employer if it is wrong.
- 4. You can ask us and the Employer to delete certain of your information.
- 5. You can ask us and the Employer to restrict how we use your Personal Information.
- 6. You can ask us and the Employer to help you move certain Personal Information to other companies. To help with that you have a right to ask that we or the Employer provide your Personal Information in a machine readable format to another company.
- 7. You can ask us and the Employer to stop using your Personal Information, but only in certain cases. This applies where we are processing your personal information based on a legitimate interest (or those of a third party) and you can object to processing on this ground. However we will be entitled to continue processing your information based on our compelling legitimate interests.

You also have a right to make a complaint to a Supervisory Authority. Where we are the data controller you can contact the UK Information Commissioner's Office; or the local data protection regulator in your jurisdiction.

Where the Employer is the data controller, you can contact the regulator in the location where the Employer is based.

Screen09\_

Fig. 247: Screen09\_



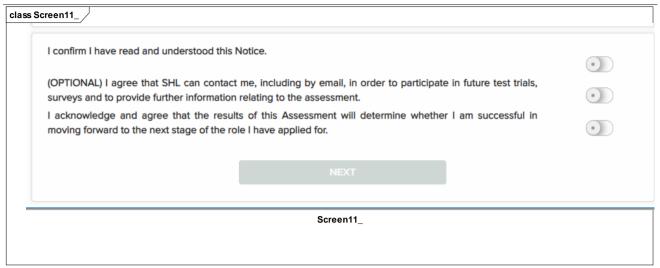


Fig. 248: Screen11\_

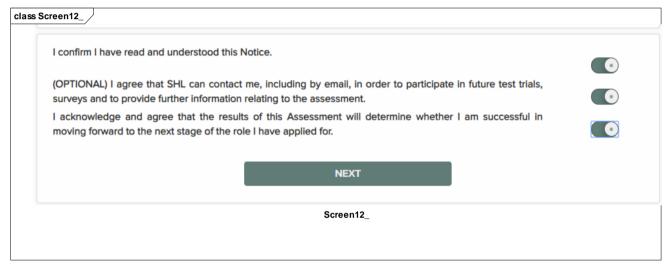


Fig. 249: Screen12\_

#### 7.6.20.2.5 New content -PCG\_1936\_20190705-SwissRe-Assessment-

PACKAGE NAME-NEW CONTENT -PCG\_1936\_20190705-SWISSRE-ASSESSMENT-, STEREOTYPE-"





Fig. 250: PCG\_1936\_20190705-SwissRe-Assessment-



# 7.6.20.2.5.1 Package for Publishing

PACKAGE NAME-PCG\_00622\_PACKAGE FOR PUBLISHING, STEREOTYPE-"

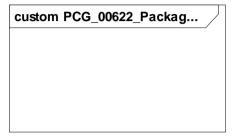


Fig. 251: PCG\_00622\_Package for Publishing



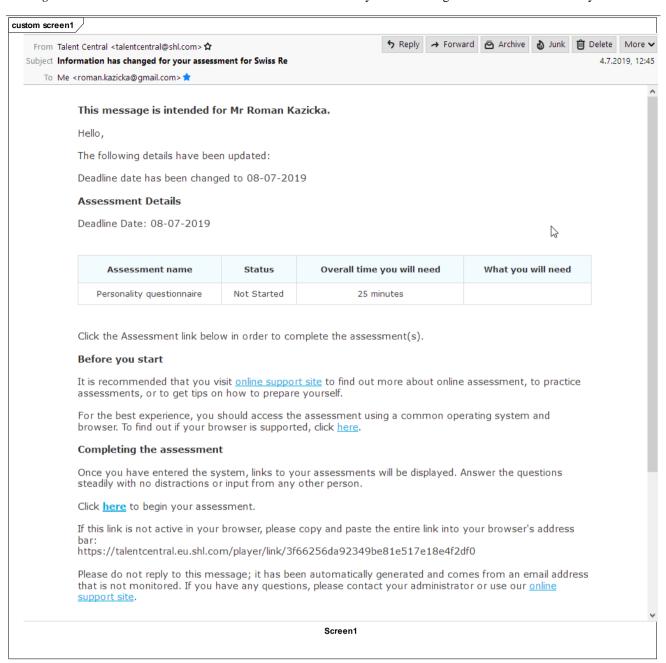


Fig. 252: screen1



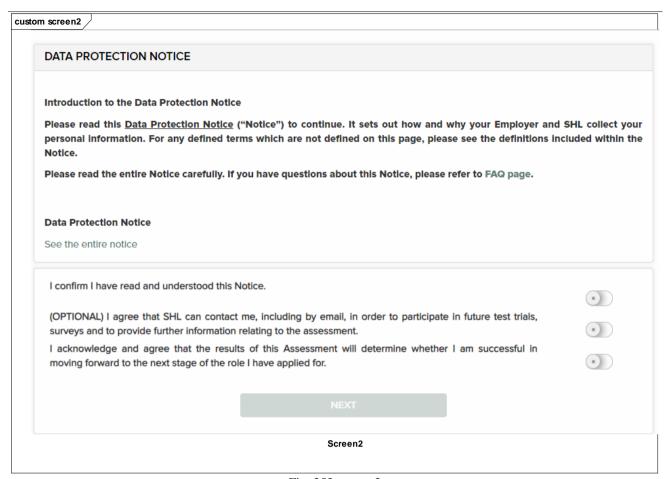


Fig. 253: screen2

S



### custom screen3

### DATA PROTECTION NOTICE

Introduction to the Data Protection Notice

Please read this <u>Data Protection Notice</u> ("Notice") to continue. It sets out how and why your Employer and SHL collect your personal information. For any defined terms which are not defined on this page, please see the definitions included within the Notice.

Please read the entire Notice carefully. If you have questions about this Notice, please refer to FAQ page.

#### **Data Protection Notice**

This Notice was last updated 14 May 2018.

#### 1. Who we are

This Notice describes how;

(1) your Employer/ potential new Employer ("Employer"); and

(2) SHL Group Limited of The Pavilion, 1 Atwell Place, Thames Ditton, Surrey KT7 ONE, England (together, **SHL** or **we** or **us**) respectively use your information collected through this online Assessment.

SHL will process and collect information about you when you complete an SHL assessment ("Assessment") in accordance with this Notice. Some information is ("Personal Information"), personal information about you or from which we can identify you.

This Notice also covers us, and our affiliated group of companies, where we are data controller. Each group company is a data controller and we've listed them here.

This Notice sets out the way the Employer and SHL use your information: what is collected, how it is used, why it is used, who it is shared with and the rights to which you will be entitled.

<u>Section 2</u> (Employer as the Data Controller) provides further information on **processing of your personal information by the Employer as the data controller.** 

Section 3 (SHL as the Data Controller) describes processing of your Personal Information by SHL for our own purposes as data controller.

Section 4 (The Employer and SHL as the Data Controller) provides additional information on who SHL and the Employer share your data with and an overview of your rights under data protection law.

### 2. Employer as the Data Controller

Screen3

Fig. 254: screen3



### custom screen4 /

### 2. Employer as the Data Controller

SHL collects your Personal Information on behalf of your Employer. If you have a query as to the identity of the Employer, please contact the SHL Data Protection Officer (DPO) on dpo@shl.com or the contact details included at the end of this Notice

The **Employer will be the data controller** in respect of your Personal Information and the Employer will decide what data is collected, the purposes for which it is collected and who it is shared with. You will be able to exercise your rights directly against the Employer in respect of this Personal Information (see section 4 (The Employer and SHL as the Data Controller) for more information)).

#### The data collected

We collect and process the categories of data on behalf of the Employer as set out below. The categories of data which are collected about you vary depending on the type of Assessment and instructions we receive from the Employer. Not all the categories of data listed below may be collected about you. If you require further information as to the extent of the data that is collected you should contact the Employer directly.

#### What we collect

Information that you give us and the Employer when you complete an Assessment, including:

- i. "Candidate Data" which includes your:
  - name;
  - · email address; and
  - · account log in details.
- II. "Assessment Data" which are your answers to the Assessment questions.

Using the Candidate Data and Assessment Data, we generate the ("Results Data"), which includes the results of your Assessment.

Additionally, we will collect information if provided to us by your Employer ("Employer Provided Data"). To the extent provided by your Employer to us, this will include:

- · CV or resume information (including your employment history, educational background, skills, languages and hobbies);
- · details of the role you are in, or applying for;
- · your manager's rating of performance;
- confirmation whether you were hired; and
- · performance appraisals.

### What we do with the data

We use your Candidate Data, Assessment Data, Results Data, and Employer Provided Data (if provided) on behalf of the Employer to:

- 1. invite you to complete an Assessment on behalf of the Employer;
- 2. use the Results Data to compile a report given to the authorised representatives of the Employer ("Assessment Report").
- 3. when instructed by the Employer, provide you with an Assessment Report;

Screen4

Fig. 255: screen4



### custom screen5 /

### What we do with the data

We use your Candidate Data, Assessment Data, Results Data, and Employer Provided Data (If provided) on behalf of the Employer to:

- 1. invite you to complete an Assessment on behalf of the Employer;
- 2. use the Results Data to compile a report given to the authorised representatives of the Employer ("Assessment Report").
- 3. when instructed by the Employer, provide you with an Assessment Report;
- 4. provide our services to the Employer;
- 5. when instructed by the Employer, compare your Candidate Data, Assessment Data, Results Data and Employer Provided Data (if provided) with anonymised Benchmark Data (as defined below) to provide talent analytics services to the Employer so that the Employer can understand how your Personal Information compares to the market in the role you are in, or applying for; and
- 6. manage and administer our services.

#### Why this data is collected and how long it is retained by us

We hold and process your Candidate Data, Assessment Data, Results Data, along with Employer Provided Data, in accordance with the Employer's instructions. **The reasons why the Employer collects your Personal Information will vary** but generally, the Employer will instruct us to process your Personal Information because they have one or more of the following legitimate interests:

- I. to evaluate your suitability for a role you have applied for;
- II. to perform analytics on the characteristic profile required for the role;
- III. to evaluate your promotion opportunities or development requirements.

as part of an overall recruiting/development/promotion process. The Employer may also instruct us to process your Personal Information because you have provided consent or if it is necessary on reasonable request by a law enforcement or regulatory authority, body or agency or in the defence of a legal claims on behalf of the Employer.

We will keep your Personal Information on behalf of the Employer in accordance with the Employer's instructions. The period of time that we are instructed to hold your Personal Information, varies from Employer to Employer. We will not delete your Personal Information if relevant to an investigation or a dispute. It will continue to be stored until those issues are fully resolved.

You should contact the Employer directly if you require more information on this section

#### **Automated Decision Making**

The Assessment is designed to assist the Employer in an overall process to effectively evaluate your suitability for a role or a promotion. Consequently, if you do not obtain a score for this Assessment, pre-determined by the Employer, the Employer will make an automatic decision to not progress your application to the next stage forward for employment/ development/ promotion.

Not all Employers will use your Results Data to make an automated decision. If you disagree with a decision, or if you want to understand more about the pre-determined score threshold you should contact the Employer.

### **Data Sharing**

We will only share your Personal Information processed on behalf of the Employer with the Employer and on the Employer's

### Screen5

Fig. 256: screen5

### 7.6.20.2.5.2 SHL Assessment

PACKAGE NAME-PCG\_1937\_SHL ASSESSMENT, STEREOTYPE-"



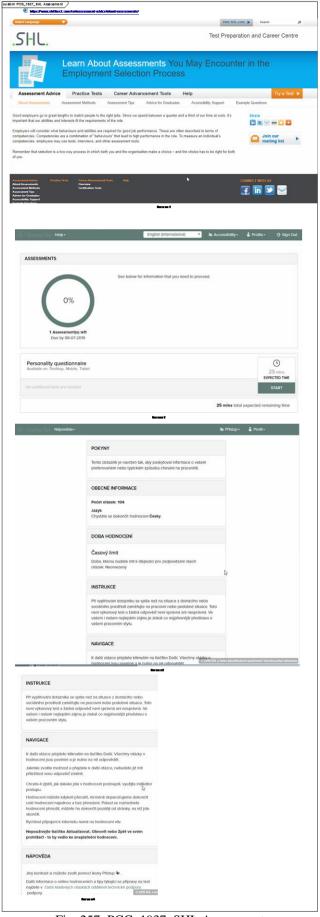


Fig. 257: PCG\_1937\_SHL Assessment



### 7.6.20.2.5.2.1 Try a Test

PACKAGE NAME-PCG\_1938\_TRY A TEST, STEREOTYPE-"

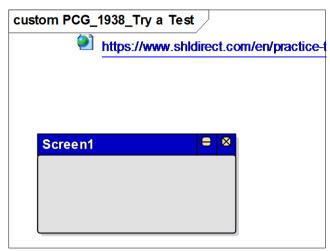


Fig. 258: PCG\_1938\_Try a Test

# 7.6.21

PACKAGE NAME-PCG\_00641\_HOW TO WORK WITH SELECTIONS ON DIAGRAM?, STEREOTYPE-"

### Where to use this:

- subdiagram layout
- changing connector layout among selected diagram elements



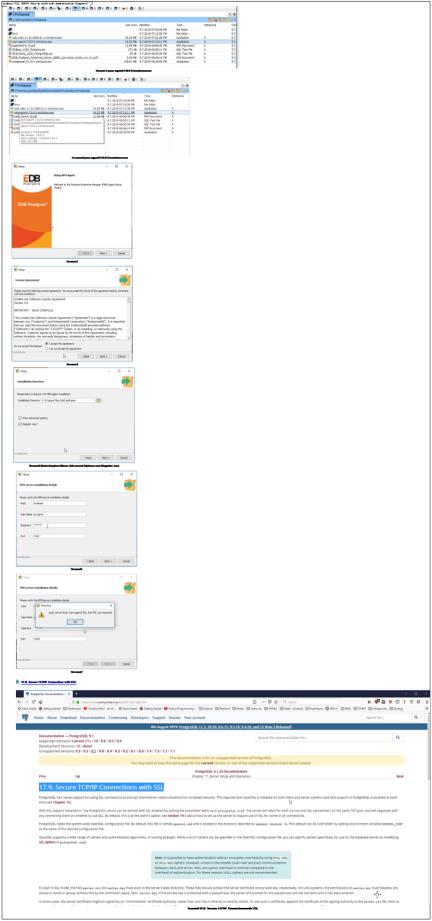


Fig. 259: PCG\_00641\_How to work with Selections on Diagram?





# **8** Concluding summary

PACKAGE NAME-PCG\_00261\_CONCLUDING SUMMARY, STEREOTYPE-"

I've known *Enterprise Architect* since 2000. I have been using it almost continuously on a daily basis. I have worked in many positions. As a tester of final product quality on the production line. As a top manager in an international business. As a process engineer within a complex IT services area. As a senior IT Architect. And this technology has always been very helpful. It helped me mainly as a knowledge database not only for me but also for the people around me. As an accelerator of the process of common understanding, in finding the right solutions and in generating documentation. *EA* is an extremely complex tool. This is an advantage and a disadvantage at the same time. The advantage of being able to help solve and model complex situations. The disadvantage is that it is ahead of its time. People, even from the professional community, do not have the necessary habits and flexibility to handle at least a fraction of its properties. After 16 years of use, I think I know the tool up to 15%. And in what I think I know, I still have things to improve. There are many things I never found necessary. Some things I did not have time to study in more depth. Some things I certainly have not even discovered.

However, it was very important for me that it always allowed me to work continuously on all activities. It helped me raise my understanding wherever I needed it. IT is a young discipline. It does not have clear technology tools for its profession. For example. What technology does come to your mind when you think about manufacturing, engineering or construction? Terms like **PLM**, **BIM**, **CAD** are common in engineering, construction and manufacturing. There are quite a lot of "CAD" tools and their number and types are constantly evolving as the complexity and knowledge of specialists grows. But what comes to your mound when your hear the term - IT specialist? Word, Excel, Vision? IT specialists argue that there is nothing more complex than the IT field. But how does IT solve this complexity? In spite of all the IT specialities, there should exit a universal tool for IT specialists. For me, Enterprise Architect and similar applications of this kind are such tools. Visual modellers with a shared storage. Currently, relational databases are used as storage, but more versatile storage is needed. For example, storage over unstructured data. Or the ability to create charts directly without having to install a thick client on the end device.

But all these are technological views. No technology can solve anything without qualified people and customized workflows and processes. We must constantly learn and adapt. It is the natural property of intelligent systems. Today, we even risk that artificial intelligent systems will be smarter than their creators. The ability to adapt, change our habits according to the context in which we find ourselves, according to our experience, is no longer just a privilege of people. "IoT" and "Industry 4.0" are not just business terms. Artificial intelligence is the intelligence of machines that become more and more independent of man and gain a high degree of autonomy in their decision-making. As a former tester in manufacturing, tester of software solutions, but also as a user I know there is no error-free application. We cannot create an artificial intelligence without errors. We cannot even rule out a deliberately defined negative properties of artificial intelligent systems. The process of controlling the systems is passed on to the machine ... But we are already going to a completely different plane.

"Documentation? I will do it when the work is done". "Documentation is a side-product of my everyday work". This is the sentence why I prepared this publication. I wanted to point out what the documentation is. It's our everyday experience, knowledge and information. In this first part, I wanted to show how to combine a simple methodology and a complex tool into a comprehensive system that can help individuals create a work team. Just like in the orchestra. The orchestra is as good as the weakest member of the orchestra.



# **EN-References**

PACKAGE NAME-PCG 00055 EN-REFERENCES, STEREOTYPE-"

In this chapter, I present some interesting external resources that could be of interest to the reader. There is much more information in the model. I only included the links for the output document. Pictures and texts are included in the model.

Template - DF-CM Metric Risk

### LieberLieber GmbH

PACKAGE NAME-PCG\_00464\_LIEBERLIEBER GMBH, STEREOTYPE-"

LieberLieber GmbH company is one of the rare companies active in the development of hardware for the "real time critical system" solutions. The company is unique in using *EA* to complete its design and debugging algorithms, which then run in nested real-time systems. In addition, the company and its founder, Peter Lieber, are among the most active members of the EA user group.

The company is the leading force in a new European initiative to minimize operating costs in the area of highly available and secure critical systems. (EUROSTARS project EMBEET (Environment for Model-Based Embedded Systems

Engineering and Testing)).

#	Link name	URL
1	http://www.eausergroup.com/	http://www.eausergroup.com/
2	http://www.lieberlieber.us/	http://www.lieberlieber.us/
3	https://www.lieberlieber.com	https://www.lieberlieber.com
4	https://www.lieberlieber.com/e n/lieberlieber-software- coordinator-for-eurostars- project/	https://www.lieberlieber.com/en/lieberlieber-software-coordinator-for-eurostars-project/

# How to make use EA

PACKAGE NAME-PCG\_00032\_HOW TO MAKE USE EA, STEREOTYPE-"

This chapter includes the links to official Sparxsystems sources.

#	Link name	URL
5	How to make use EA	PCG_00032_How to make use EA
6	<u>01.Resources</u>	\$package://{9BE52C95-4AFF-4dc6-BEE8-4D7017FE55C6}

### **Model Packages and Report Packages**

PACKAGE NAME-PCG\_00033\_MODEL PACKAGES AND REPORT PACKAGES, STEREOTYPE-"

### 01.User Guide

PACKAGE NAME-PCG\_00034\_01.USER GUIDE, STEREOTYPE-"

Ask Question up vote 2 down vote favorite

What is the difference between the stereotype "master document" and "report package"

#	Link name	URL
		http://sparxsystems.com/enterprise_architect_user_guide/13.0/model_publishin g/master_documents_and_model_doc.html

### What Is Master Document



PACKAGE NAME-PCG\_00035\_WHAT IS MASTER DOCUMENT, STEREOTYPE-"

#	Link name	URL
Ü	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 12.1/report_generation/virtuald ocuments.html	

### What is Report Package?

PACKAGE NAME-PCG\_00036\_WHAT IS REPORT PACKAGE?, STEREOTYPE-"

### What is the difference between the stereotype "master document" and "report package"

PACKAGE NAME-PCG\_00040\_WHAT IS THE DIFFERENCE BETWEEN THE STEREOTYPE "MASTER DOCUMENT" AND "REPORT PACKAGE", STEREOTYPE-"

#	Link name	URL
	What is the difference between the stereotype "master document" and "report package"	PCG_00040_What is the difference between the stereotype "master document" and "report package"

### **StackOverflow**

PACKAGE NAME-PCG\_00041\_STACKOVERFLOW, STEREOTYPE-"

#	Link name	URL
10		Note
11	https://stackoverflow.com/quest ions/42841683/report- packages-in-enterprise-architect	https://stackoverflow.com/questions/42841683/report-packages-in-enterprise-architect

# **How To use Linked Document templates**

 ${\it Package Name-PCG\_00037\_How\ To\ use\ Linked\ Document\ templates,\ Stereotype-"}$ 

#	Link name	URL
12		Note

# How To use Artifact Report Specification? Relationship to 'Master Document' 'Report Package'

PACKAGE NAME-PCG\_00042\_HOW TO USE ARTIFACT REPORT SPECIFICATION? RELATIONSHIP TO 'MASTER DOCUMENT' 'REPORT PACKAGE', STEREOTYPE-

# What is 'artifact' in Enterprise Architect?

PACKAGE NAME-PCG\_00043\_WHAT IS 'ARTIFACT' IN ENTERPRISE ARCHITECT?, STEREOTYPE-"

#	Link name	URL
10	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 12.1/building_models/artifact.ht ml	

# **Styles, Special Text & Table of Contents**

PACKAGE NAME-PCG\_00053\_STYLES, SPECIAL TEXT & TABLE OF CONTENTS, STEREOTYPE-"

#	Link name	URL
14	http://www.sparxsystems.com/e	http://www.sparxsystems.com/enterprise_architect_user_guide/13.0/modeling_
	<pre>nterprise_architect_user_guide/</pre>	tools/stylesheetsandtableofconte.html



# GlossaryStyle

PACKAGE NAME-PCG\_00054\_GLOSSARYSTYLE, STEREOTYPE-"

### Project Browser

#	Link name	URL
15	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.0/modeling_tools/glossary_s tyles.html	

### **Create Search Definitions**

PACKAGE NAME-PCG\_00056\_CREATE SEARCH DEFINITIONS, STEREOTYPE-"

#	Link name	URL
	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.0/model_navigation/creating filters.html	

# **Notes on Creating Tables of Contents**

PACKAGE NAME-PCG\_00069\_NOTES ON CREATING TABLES OF CONTENTS, STEREOTYPE-"

#	Link name	URL
		http://www.sparxsystems.com/enterprise_architect_user_guide/13.0/model_publishing/notes_on_creating_tables_of_co.html

# **Styles, Special Text & Table of Contents**

PACKAGE NAME-PCG\_00070\_STYLES, SPECIAL TEXT & TABLE OF CONTENTS, STEREOTYPE-"

#	Link name	URL
		http://www.sparxsystems.com/enterprise_architect_user_guide/13.0/modeling_tools/stylesheetsandtableofconte.html

# **Apply User-Defined Section Numbering, Lists, override Lists**

PACKAGE NAME-PCG\_00071\_APPLY USER-DEFINED SECTION NUMBERING, LISTS, OVERRIDE LISTS, STEREOTYPE-"

#	Link name	URL
19		http://sparxsystems.com/enterprise_architect_user_guide/13.0/model_publishin g/user-defined_list_numbering.html
	model_publishing/user- defined_list_numbering.html	

# **Insert Headers, Footers, Footnotes and Endnotes**

PACKAGE NAME-PCG\_00073\_INSERT HEADERS, FOOTERS, FOOTNOTES AND ENDNOTES, STEREOTYPE-"

#	Link name	URL
	nterprise_architect_user_guide/	http://www.sparxsystems.com/enterprise_architect_user_guide/13.5/modeling_tools/headerfootersandbookmarks.html
	13.5/modeling tools/headerfoot ersandbookmarks.html	

# **Document generation**



# Nonlinear generation of documentation in Sparxsystems Enterprise Architect

PACKAGE NAME-PCG\_00075\_NONLINEAR GENERATION OF DOCUMENTATION IN SPARXSYSTEMS ENTERPRISE ARCHITECT, STEREOTYPE-"

#	Link name	URL
	http://community.sparxsystems. com/tutorials/970-nonlinear- generation-of-documentation- in-sparx-enterprise-architect	http://community.sparxsystems.com/tutorials/970-nonlinear-generation-of-documentation-in-sparx-enterprise-architect
22	https://zubkiewicz.com/	https://zubkiewicz.com/

# **SQL Search in model In Branch**

PACKAGE NAME-PCG\_00091\_SQL SEARCH IN MODEL IN BRANCH, STEREOTYPE-"

### 01.

PACKAGE NAME-PCG\_00092\_01., STEREOTYPE-"

#	Link name	URL
23	http://sparxsystems.com/forums/smf/index.php?topic=25782.0	http://sparxsystems.com/forums/smf/index.php?topic=25782.0

### **SQL Examples**

PACKAGE NAME-PCG\_00093\_SQL EXAMPLES, STEREOTYPE-"

# find all t\_object s with name containing 'a'

 ${\it PACKAGE NAME-PCG\_00094\_FIND\ ALL\ T\_OBJECT\ S\ WITH\ NAME\ CONTAINING\ 'A',\ STEREOTYPE-"}$ 

#	Link name	URL
2	4	Note

# **Publishing-How To Use Template Selector?**

 ${\it PACKAGE NAME-PCG\_00209\_PUBLISHING-HOW TO~USE~TEMPLATE~SELECTOR?, STEREOTYPE-"}$ 

#	Link name	URL
25	Publishing-How To Use	PCG_00209_Publishing-How To Use Template Selector?
	Template Selector?	

### **Sparx**

PACKAGE NAME-PCG\_00210\_SPARX, STEREOTYPE- "

#	Link name	URL
26		Boundary
27		Boundary
28	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.5/model_publishing/define_ a_template_selector.html	http://www.sparxsystems.com/enterprise_architect_user_guide/13.5/model_publishing/define_a_template_selector.html

# **How To force New Page for every Topic**

PACKAGE NAME-PCG\_00211\_HOW TO FORCE NEW PAGE FOR EVERY TOPIC, STEREOTYPE-"



# **How To switch Off Spelling in 13.5**

PACKAGE NAME-PCG\_00225\_HOW TO SWITCH OFF SPELLING IN 13.5, STEREOTYPE-"

#	Link name	URL
29		Boundary
30	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.5/modeling_tools/spellcheck ing.html	

# Publishing = How to skip Root package in publishing

PACKAGE NAME-PCG\_00253\_PUBLISHING = HOW TO SKIP ROOT PACKAGE IN PUBLISHING, STEREOTYPE-"

#	Link name	URL
31		Boundary

# How to select Stylesheet in template manager?

PACKAGE NAME-PCG\_00255\_HOW TO SELECT STYLESHEET IN TEMPLATE MANAGER?, STEREOTYPE-"

#	Link name	URL
32	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.5/modeling_tools/the_norma 1 rtf_style_template.html	http://www.sparxsystems.com/enterprise_architect_user_guide/13.5/modeling_tools/the_normal_rtf_style_template.html
33	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.5/model_publishing/notes_o n_creating_stylesheets.html	http://www.sparxsystems.com/enterprise_architect_user_guide/13.5/model_publishing/notes_on_creating_stylesheets.html
34	http://www.sparxsystems.com/e nterprise_architect_user_guide/ 13.5/model_publishing/select_a _stylesheet.html	http://www.sparxsystems.com/enterprise_architect_user_guide/13.5/model_publishing/select_a_stylesheet.html

### **Document Reports**

PACKAGE NAME-PCG\_00275\_DOCUMENT REPORTS, STEREOTYPE-"

# **Working with Bookmarks**

PACKAGE NAME-PCG\_00276\_WORKING WITH BOOKMARKS, STEREOTYPE-"

#	Link name	URL
	http://www.sparxsystems.com/r esources/user- guides/publish/document- reports.pdf	http://www.sparxsystems.com/resources/user-guides/publish/document-reports.pdf

# Guillaume Finance, eaUtils is an addin for SparxSystems Enterprise Architect modeling tool

PACKAGE NAME-PCG\_00520\_GUILLAUME FINANCE, EAUTILS IS AN ADDIN FOR SPARXSYSTEMS ENTERPRISE ARCHITECT MODELING TOOL, STEREOTYPE-"

Guillaume Finance-Sparx *Enterprise Architect*, UML, SysML, and BPMN modeling consultant at VISEO Technologies. Guillaume designed and implemented very interesting and useful tool - eaUtils is an add-in for SparxSystems Enterprise Architect modelling tool. eaUtils sorting features act on the elements from a package or an element within an Enterprise Architect project. SparxSystems Enterprise Architect applies a default alphabetical sorting order based on the type and name of the elements. However, in order to achieve a better management and more efficient use of the elements from within the Enterprise Architect project browser, it can be useful to have the choice between a number of alternative sorting options.



Extended eaUtils sorting features and settings provide the option to sort elements based on various fields (e.g. stereotype), an integer value which may be surrounded by a prefix and/or suffix (e.g. REQ-1-PERF), having case sensitivity enabled, etc.

#	Link name	URL
36	https://www.eautils.com/en/hel	https://www.eautils.com/en/help/item/130-help-section-sort-elements-from-
	p/item/130-help-section-sort-	package-element-by-alias
	elements-from-package-	
	element-by-alias	

### **Helmut-Ortmann**

PACKAGE NAME-PCG\_00613\_HELMUT-ORTMANN, STEREOTYPE-"

#	Link name	URL
01	https://github.com/Helmut- Ortmann/EnterpriseArchitect_h oTools/wiki	https://github.com/Helmut-Ortmann/EnterpriseArchitect_hoTools/wiki

### 01-8D Overview

PACKAGE NAME-PCG\_00152\_01-8D OVERVIEW, STEREOTYPE-"

One from the sources about 8D methodology.

#	Link name	URL
38	http://quality-	http://quality-one.com/8d/#what
	one.com/8d/#what	

# **EA** as a Publishing Reporting Tool

PACKAGE NAME-PCG\_00166\_EA AS A PUBLISHING REPORTING TOOL, STEREOTYPE-"

he manufacturer offers a relatively large amount of documentation for all features. The problem is to understand the content and, in particular, to identify practical cases of use.

#	Link name	URL
39	Publishing in EA, Web Page	http://www.sparxsystems.com/resources/user-guides/index.html#publish
40	Charts.pdf-Charts in EA	http://www.sparxsystems.com/resources/user-guides/publish/charts.pdf
41	<u>Document-reports.pdf</u>	http://www.sparxsystems.com/resources/user-guides/publish/document-reports.pdf
42	model-exchange.pdf	http://www.sparxsystems.com/resources/user-guides/publish/model-exchange.pdf
43	publish-joomla-article.pdf	http://www.sparxsystems.com/resources/user-guides/publish/publish-joomla-article.pdf
44	web-report.pdf	http://www.sparxsystems.com/resources/user-guides/publish/web-reports.pdf
45	Publish-model-package.pdf	http://www.sparxsystems.com/resources/user-guides/publish/publish-model-package.pdf

# **Peter Senge - The Five Principles of self learning Organisation**

PACKAGE NAME-PCG\_00167\_PETER SENGE - THE FIVE PRINCIPLES OF SELF LEARNING ORGANISATION, STEREOTYPE- "

The author defined the basic principles for effective self-learning organizations. Ability to learn is seen as a competitive advantage in today's dynamic age. The process of team learning is seen as a lifelong process

- 1. Personal Mastery
- 2. Mental models
- 3. Building a shared vision
- 4. Team learning
- 5. Systemic thinking

#	Link name	URL
46		https://en.wikipedia.org/wiki/The_Fifth_Discipline
46	https://en.wikipedia.org/wiki/T he Fifth Discipline	https://en.wikipedia.org/wiki/The_Fifth_Discipline



# **Steven Covey - 7 Habits of Highly Effective People**

PACKAGE NAME-PCG\_00168\_STEVEN COVEY - 7 HABITS OF HIGHLY EFFECTIVE PEOPLE, STEREOTYPE- "

Steven Coven was an American lecturer and leadership coach, lecturer at the Jon M. Huntsman School of Business in Utah and a bestselling author of 7 Habits of Really Effective People.

	ne a cestsering addition of a radicion	of Really Effective respice
#	Link name	URL
47	https://en.wikipedia.org/wiki/T he_7_Habits_of_Highly_Effective People	https://en.wikipedia.org/wiki/The_7_Habits_of_Highly_Effective_People

# **Publishing on the web**

PACKAGE NAME-PCG\_00173\_PUBLISHING ON THE WEB, STEREOTYPE-"

There are quite a few systems that allow you to create content using a comprehensive web service. These services offer the entire ecosystem for creating, publishing and selling books. Some are listed below.

### Template - DF-CM Metric Risk

### LeanPub

PACKAGE NAME-PCG\_00174\_LEANPUB, STEREOTYPE-"

#	Link name	URL
48	https://leanpub.com/manifesto	https://leanpub.com/manifesto

### What is GitBook?

PACKAGE NAME-PCG\_00175\_WHAT IS GITBOOK?, STEREOTYPE-"

#	Link name	URL
	https://help.gitbook.com/basics/ what-is-gitbook.html	https://help.gitbook.com/basics/what-is-gitbook.html

# **Amazon Direct Publishing**

PACKAGE NAME-PCG\_00176\_AMAZON DIRECT PUBLISHING, STEREOTYPE-"

#	Link name	URL
50	https://kdp.amazon.com	https://kdp.amazon.com

### Joanna Penn - The Creative Penn

PACKAGE NAME-PCG\_00364\_JOANNA PENN -THECREATIVEPENN, STEREOTYPE-"

#	Link name	URL
0.1	https://www.thecreativepenn.co	https://www.thecreativepenn.com/resources/

# 7 steps to write your novel or non-fiction book

PACKAGE NAME-PCG\_00365\_7 STEPS TO WRITE YOUR NOVEL OR NON-FICTION BOOK, STEREOTYPE-"

#	Link name	URL
52	http://www.thecreativepenn.com/blueprint-download/	http://www.thecreativepenn.com/blueprint-download/
53		https://www.thecreativepenn.com/7-steps-write-first-novel/

### 00.Introduction

PACKAGE NAME-PCG\_00366\_00.INTRODUCTION, STEREOTYPE-"

#	Link name	URL



54	http://www.thecreativepenn.co	http://www.thecreativepenn.com/blueprint-download/
	m/blueprint-download/	

# How To Market A Book: Third Edition (Books for Writers Book 2)

PACKAGE NAME-PCG\_00367\_

HOW TO MARKET A BOOK: THIRD EDITION (BOOKS FOR WRITERS BOOK 2), STEREOTYPE- "

#	Link name	URL
55		Text

### webka

PACKAGE NAME-PCG\_00369\_WEBKA, STEREOTYPE-"

#	Link name	URL
56	https://www.bookbub.com/land	https://www.bookbub.com/landers/choices2.php?source=blog3
	ers/choices2.php?source=blog3	

### 01.Author BluePrint

PACKAGE NAME-PCG\_00368\_01.AUTHOR BLUEPRINT, STEREOTYPE-"

#	Link name	URL
57	http://www.thecreativepenn.co	http://www.thecreativepenn.com/blueprint-download/
	m/blueprint-download/	

# Successful Self-Publishing: How to self-publish and market your book in ebook and print (Books for W

PACKAGE NAME-PCG\_00370\_SUCCESSFUL SELF-PUBLISHING: HOW TO SELF-PUBLISH AND MARKET YOUR BOOK IN EBOOK AND PRINT (BOOKS FOR WRITERS 1) KINDLE EDITION

, STEREOTYPE- "

#	Link name	URL
	https://www.amazon.co.uk/gp/product/B019H38JL2?tag=thecrepen-21	https://www.amazon.co.uk/gp/product/B019H38JL2?tag=thecrepen-21

### **Webinars**

PACKAGE NAME-PCG\_00371\_WEBINARS, STEREOTYPE-"

#	Link name	URL
-	http://www.yourfirst10kreaders.com/author-marketing-webinar-ioanna	http://www.yourfirst10kreaders.com/author-marketing-webinar-joanna

# Print On Demand, Podcasts,...

 ${\it PACKAGE NAME-PCG\_00374\_PRINT\ ON\ DEMAND,\ PODCASTS,...,\ STEREOTYPE-"}$ 

#	Link name	URL
	https://www.thecreativepenn.co m/2017/09/25/top-5-mistakes- of-indie-authors/	https://www.thecreativepenn.com/2017/09/25/top-5-mistakes-of-indie-authors/
61	https://www.thecreativepenn.com/podcasts/	https://www.thecreativepenn.com/podcasts/

### **Online Courses**

PACKAGE NAME-PCG\_00375\_ONLINE COURSES, STEREOTYPE-"



#	Link name	URL
62	https://www.thecreativepenn.com/courses/	https://www.thecreativepenn.com/courses/

### **Creative Freedom**

PACKAGE NAME-PCG\_00376\_CREATIVE FREEDOM, STEREOTYPE-"

#	Link name	URL
63	http://creative-penn- courses.teachable.com/p/freedo	http://creative-penn-courses.teachable.com/p/freedom
	m	

# Whatpadd

PACKAGE NAME-PCG\_00372\_WHATPADD, STEREOTYPE-"

#	Link name	URL
64	https://www.wattpad.com/	https://www.wattpad.com/

### Scrivener

PACKAGE NAME-PCG\_00373\_SCRIVENER, STEREOTYPE-"

#	Link name	URL
65	http://www.literatureandlatte.co	http://www.literatureandlatte.com/index.php
	m/index.php	

# **AIDA** (marketing)

PACKAGE NAME-PCG\_00377\_AIDA (MARKETING), STEREOTYPE- "

#	Link name	URL
66	https://en.wikipedia.org/wiki/AI	https://en.wikipedia.org/wiki/AIDA_(marketing)
	DA (marketing)	

# **Draft2Digital**

PACKAGE NAME-PCG\_00378\_DRAFT2DIGITAL, STEREOTYPE-"

#	Link name	URL
67	https://www.draft2digital.com/	https://www.draft2digital.com/

### **IPR License**

PACKAGE NAME-PCG\_00379\_IPR LICENSE, STEREOTYPE- "

#	Link name	URL
68	https://iprlicense.com/	https://iprlicense.com/

### pubmatch

PACKAGE NAME-PCG\_00380\_PUBMATCH, STEREOTYPE-"

#	Link name	URL
69	https://www.pubmatch.com/	https://www.pubmatch.com/

# **OSLC -Open Service for Life Collaboration**

PACKAGE NAME-PCG\_00194\_OSLC -OPEN SERVICE FOR LIFE COLLABORATION, STEREOTYPE- "



The protocol the manufacturer used to access the model via the web. It uses a large REST API interface to exchange information between the storage model and other systems.

#	Link name	URL
70	Home Page OSLC-Open	http://open-services.net/
	Services	
	for Lifecycle Collaboration	
71	http://open-services.net/wiki/	http://open-services.net/wiki/
72	Sparxystem web page:OSLC	http://sparxsystems.com/enterprise_architect_user_guide/13.5/model_repositor
	Architecture Management v2.0	y/oslc_am_top.html
73	https://www.w3.org/RDF/	https://www.w3.org/RDF/

# **Free Barcode Generations**

PACKAGE NAME-PCG\_00214\_FREE BARCODE GENERATIONS, STEREOTYPE-"

### Template - DF-CM Metric Risk

# 01.-Online Barcode generator

PACKAGE NAME-PCG\_00215\_01.-ONLINE BARCODE GENERATOR, STEREOTYPE-"

#	Link name	URL
74	http://online-barcode-	http://online-barcode-generator.net/
	generator.net/	

# **EA User Groups**

PACKAGE NAME-PCG\_00330\_EA USER GROUPS, STEREOTYPE- "

#	Link name	URL
75	http://www.eausergroup.com/	http://www.eausergroup.com/

# **Thomas Killian**

PACKAGE NAME-PCG\_00331\_THOMAS KILLIAN, STEREOTYPE-"

#	Link name	URL
76	http://leanpub.com/InsideEA	http://leanpub.com/InsideEA
77	http://leanpub.com/shapescript	http://leanpub.com/shapescript

### **Gert Bellekens**

PACKAGE NAME-PCG\_00332\_GERT BELLEKENS, STEREOTYPE-"

Gert Bellekens is a world-renowned *EA* technology expert. He is a very active member of the Forum and an active member of the EA user group.

#	Link name	URL
78	https://bellekens.com/	https://bellekens.com/
79		https://bellekens.com/about-geert-bellekens/
	geert-bellekens/	

# **Seven Disciplines of A Leaders**

PACKAGE NAME-PCG\_00354\_SEVEN DISCIPLINES OF A LEADERS, STEREOTYPE-"

Steven Coven was an American lecturer and leadership coach, lecturer at the Jon M. Huntsman School of Business in Utah and a bestselling author of 7 Habits of Really Effective People.

Ctair ai	id a desiseining addition of 7 maons	of Reality Effective Leople.
#	Link name	URL
80	-	https://www.amazon.com/Seven-Disciplines-Leader-Jeff-Wolf/dp/1119003954
	n-Disciplines-Leader-Jeff-	
	Wolf/dp/1119003954	



### **Creative Common**

PACKAGE NAME-PCG\_00362\_CREATIVE COMMON, STEREOTYPE-"

One of many licensing models.

# **Alliance Of independent Authors**

PACKAGE NAME-PCG\_00381\_ALLIANCE OF INDEPENDENT AUTHORS, STEREOTYPE-"

ALLi, the Alliance of Independent Authors, is a non-profit professional association for authors who self-publish. Our alliance offers connection and collaboration, advice and education, advocacy and representation to writers who want to self-publish well.

7	‡	Link name	URL
:	31	https://www.allianceindepende ntauthors.org/?affid=88	https://www.allianceindependentauthors.org/?affid=88

# **MDSE-Model Driven Software Engineering**

PACKAGE NAME-PCG\_00427\_MDSE-MODEL DRIVEN SOFTWARE ENGINEERING, STEREOTYPE- "

#	Link name	URL
82		https://modeling-languages.com/the-mdse-book-is-finally-available/
	languages.com/the-mdse-book-is-finally-available/	

# **TOGAF 9 Tool Certification register**

PACKAGE NAME-PCG\_00432\_TOGAF 9 TOOL CERTIFICATION REGISTER, STEREOTYPE-"

#	Link name	URL
83	https://certification.opengroup.o	https://certification.opengroup.org/register/togaf-tool
	rg/register/togaf-tool	

# **SysUML**

PACKAGE NAME-PCG\_00442\_SYSUML, STEREOTYPE-"

### 01.

PACKAGE NAME-PCG\_00443\_01., STEREOTYPE-"

#	Link name	URL
84	http://dthomas-	http://dthomas-software.co.uk/resources/frequently-asked-questions/what-is-
	software.co.uk/resources/freque	sysml-2/
	ntly-asked-questions/what-is-	
	sysml-2/	

# Slovník

PACKAGE NAME-PCG\_00014\_EN-DICTIONARY, STEREOTYPE-"

# Template - DF-CM Metric Risk

# Index

PACKAGE NAME-PCG\_00015\_EN-INDEX, STEREOTYPE-"

### Template - DF-CM Metric Risk

# Glossary

Ter	m	Type	Meaning
3R		7D Methodology (EN)	3R= <b>R</b> ight Information for <b>R</b> ight Role in <b>R</b> ight TIme.



	1	
7D - Sedem disciplín pre úspešné riešenia	7Ds Metodika (SK)	Metodika zemeraná na podporu procesu od myšlienky ku úspešnému dosiahnutiu cieľa. Pôvodne bola metodika zamýšľaná pre IT projekty. Ale ukázalo sa, že je možné ju použiť aj pri iných riadených aktivitách. Ako príklad môže slúžiť napísanie publikácie o samotnej metodike 7Ds podľa tej istej metodiky.
7D - Seven Disciplines for Success Solutions	7D Methodology (EN)	Methodology for supporting necessary processes to reach the goals and repeatable experiences for individual and all team members during realisation Your solutions in many areas.
7D-Terms-EN	7D Methodology (EN)	Pojem pre vysvetlenie typografických pravidiel
7Ds-Terms-Sk	7Ds-Metodika	Testovací text pre zobrazenie v kapitole typografické pravidlá
8D	EU-Legislativa-SK	Metodika 8D - Osem disciplín pre analýzu príčin a riešenie problémov, bola zavedená vo firme FORD v minulom storočí.
8D (en)	EN	8 Disciplines - The Eight Disciplines of Problem Solving (8D) is a problem solving methodology designed to find the root cause of a problem, devise a short-term fix and implement a long-term solution to prevent recurring problems. When it's clear that your product is defective or isn't satisfying your customers, an 8D is an excellent first step to improving Quality and Reliability.
Adresár	7Ds-Metodika	'Package' - Základná logická jednotka, ktorá zoskupuje úzko súvisiace pojmy. Je to podobné, ako sa používa pojem adresár v súborovom systéme. Slúži na logické členenie obsahu.
AI	EN	Artifitial Inteligence - Umelá inteligencia. Technologické systémy, ktoré dokážu nahradiť človeka v niektorých roliach.
anglický pojem	EN	Text zavedený pre vysvetlenie typografických pravidiel
APV-Aktíva- Perspektívy- Pohlady	APV-Metodika	Pôvodná metodika zameraná na vytvorenie a udržiavanie jedného zdroja pravdy v oblasti IT.
APV-Term-EN	APV-Methodology	APV-Term-EN - pojem zavedený pre vysvetlenie typografických pravidiel
Archimate	IT Terminology	Originates from Architecture-Animate. It is an open and independent enterprise architecture modeling language to support the description, analysis and visualization of architecture within and across business domains in an unambiguous way.
Audit	EA-Terminológia	Vlastnoť <i>EA</i> zaznamenávať zmeny nad elementami v čase.
Audit History	EA-Terminológia	Špeciálne okno v rámci 'System Output', ktoré po kliknutí na element v diagrame, alebo v ' <i>Project Browser</i> ' zobrazí tabuľku posledných zmien a originál.
Audit view	EA-Terminológia	Špeviálny modul a okno na konfiguráciu a prezeranie histórie elementov z pohľadu zmien v čase.
BIM	EN	Building Information Modeling
BPMN	IT Terminology	Business Process Model and Notation (BPMN) is a standard for business process modeling that provides a graphical notation for specifying business processes in a Business Process Diagram (BPD), based on a flowcharting technique very similar to activity diagrams from Unified Modeling Language (UML).
Building Information Management (BIM)	EN	Building information modeling ( <b>BIM</b> ) is a process involving the generation and management of digital representations of physical and functional characteristics of places. Building information models (BIMs) are files (often but not always in proprietary formats and containing proprietary data) which can be extracted, exchanged or networked to support decision-making regarding a building or other built asset. Current BIM software is used by individuals, businesses and government agencies who plan, design, construct, operate and maintain diverse physical infrastructures, such as water, refuse, electricity, gas, communication utilities, roads, bridges, ports, tunnels, etc.
CAD	EN	Computer Aided Design
CBMA	EN	Computer Based Measurement and Automation
cena za	EU-Legislativa-SK	Cena za nekvalitu sa vo výrobných firmách, hlavne v automobilovom
nekvalitu		priemysle používa na vyjadrenie zbytočných nákladov, ktorým sa dá



		-1-/
		zabrániť. Dôležité je to, že sa o nich uvažuje, skúmajú sa príčiny, vyčísľuje sa ich výška.
CMS	EN	Content Management System. Redakčné systémy. narpíklad 'Wordpress', 'Joomla!'
Content panel	EA-Terminológia	Okno, v ktorom sa píšu texty pre šablóny dockumentov.
Cover Page	EA-Terminológia	Šablóny pre titulné stránky dokumentov.
Diagram Filtering	EA-Terminológia	Vlastnosť filtrovať elementy umiestnené na diagrame. Výbrané elementy môžu byť zvýraznené, skryté, potlačené.
Diagram Filters	EA-Terminológia	Vlastnosť filtrovať elementy umiestnené na diagrame. Výbrané elementy môžu byť zvýraznené, skryté, potlačené. veľmi podobné ako ' <i>Diagram Filtering</i> ' len sa to robí v inom okne a umožňuje to vytvárať pomenované filtre.
Document Generation	EA Terminology	In context of <i>EA</i> technology it means:  - In Windows 'Resources' is Folder called ' <i>Document Generation</i> '. It contains topics related to document generation like templates definition for text documents and 'Web style templates' and more.
Document Management System	EN	DMS - Systémy na správu dokumentácie v najširšom slova zmysle. Papierovej, elektornickej.
Dynamic Document	EA Terminology	Dynamic Document is generated from actual displayed diagram.  Dynamic document uses formatting from Selectable Dynamic Template.
EA	EA Terminology	Shortcut <i>EA</i> means - <i>Enterprise Architect</i> Tool (Sparx System)
EA_Model_book	7Ds-Metodika	Označenie pre pulikáciu, ktorá vznikla pomocou špeciálneho typu aplikácie - takzvaného modelátora. V kontexte tejto publikácie sa jedná o produkt firmy Sparxsystem, <i>Enterprise Architect</i> .
Enterprise Architect	EA-Terminológia	Produkt spoločnosti Sparxsystem.
EU-Terms-SK	EU-Legislativa-SK	Položka bola zavedené pre vysvetlenie typografických pravidiel
Fragments	EA Terminology	Special type of Template dedicated for selecting special attributes or metadata from model in process of generating documents
Frame	EA-Terminológia	Pri definovaní šablóny dokumentov sa frme používa napríklad na vkladanie nezávislého obrázu do textu.
Full Screen	EA-Terminológia	Maximalizácia diagramu.
GDPR GDPR-SK	7D Methodology (EN) EU-Legislativa-SK	Global Data Protection Regulation.  NARIADENIE EURÓPSKEHO PARLAMENTU A RADY (EÚ) 2016/679 z 27. apríla 2016 o ochrane fyzických osôb pri spracúvaní osobných údajov a o voľnom pohybe takýchto údajov, ktorým sa zrušuje smernica 95/46/ES (všeobecné nariadenie o ochrane údajov)
Glossary	EA Terminology	Glossary in EA means an alphabetical list of words relating to a specific subject, text, or dialect, with explanations; a brief dictionary.
Industry 4.0	EN	Priemyselná revolúcia štvrtej generácie. Trendy vý výrobnom sektore sú charakteristické vysokým podielom umelej inteligencie, interakcie človek-stroj, stroj-stroj.
IoT	EN	Internet Of Things - Internet vecí. Súčasný trend rozvoja IT, keď komunikujú medzi sebou inteligentné stroje.
ITIL	EN	Information Technology Infrastructure Library.
Jeden zdroj	7Ds-Metodika	Zdroj informácií pre kľúčových hráčov v kontexte dotknutého riešenia.
pravdy KQI	7D Methodology (EN)	Key Quality Indicator - is type of Quality Measurement. In 7Ds methodology it is set of metrics defined by Key stakeholders to estimate the quality of 'Source of Truth'.
linked document	EA Terminology	Every element in model can be associate to the document, which can be defined in model via document templates. These Document templates are generated in special tool in <i>EA</i> 'Document Template Designer'
master document	EA Terminology	Special <i>Package</i> with stereotype ' <i>master document</i> '. It serves for collecting all elements to be published. Content can be any part of



		11 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		model, and model elements. Source of information can be <b>SQL</b>
		statements as well.
MDG	7D Methodology (EN)	MDG-Model Driven Generation Technology plug-ins. Mechanism for
		extending the new features supported in <i>EA</i> .
model	EA Terminology	Stereotype for <i>Package</i> . It is intended for automatic generation of
document		documents in EA.
Model views	EA-Terminológia	Používateľom definovaná hierarchia pohľadov do modelu. Nezávislá
		od štruktúry v ' <i>Project Browser</i> '.
Modelom	7Ds-Metodika	Pojem vystihuje fakt, že celý proces tvorenia knihy, tvorby obsahu,
riadená kniha		tvorby obrázkov, slovníka pojmov, šablón pre výstupné dokumenty,
		plánovanie činností, definovanie míľnikov a verzií Proste základom
		procesu výstupného produktu bol modelátor. V našom prípade sa jedná
		o produkt firmy Sparxsystems - <i>Enterprise Architect</i> v 13.5.
Notes	EA Terminology	Almost all elements in <i>EA</i> has special attribute called "Note".
ODBC driver	EN	Open Database Connection. Standard for connection to different
		relational databases.
opportunita	EN	Príležitosť
OSLC	7D Methodology (EN)	Open Services for Lifecycle Collaboration.'Open Services for Lifecycle
		Collaboration' (OSLC) is an open community creating specifications
		for integrating tools. These specifications allow conforming
		independent software and product lifecycle tools to integrate their data
		and workflows in support of end-to-end lifecycle processes."
Package	EA Terminology	Element <i>Package</i> - A key element in the <i>EA</i> repository. It serves like a
		folder in a file system for gathering elements with common properties
PLM	EN	Product Lifecycle Management.
Pravidlo	7Ds-Metodika	Pojem ' <i>Pravidlo</i> ' sa v metodike 7Ds chápe ako konkrétny návod, ktorý
		by sa mal dodržať, aby celý systém na podporu aktivít fungoval. Ako
		príklad môže slúžiť pravidlo pre názvoslovie elementov. Nemusí sa
		dodržať, ale chaos v pojmoch v budúcnosti sa nám veľmi negatívne
		vráti minimálne v strate času pri riešení nedorozumení.
Preferences	EA Terminology	Menu for configuration preferences of <i>EA</i> .
		Access: START/WORKSPACE/ <i>Preferences</i> /Preferences
Princíp	7Ds-Metodika	Za 'Princíp' sa podľa metodiky 7Ds považuje doporučenie, ktoré
1		vzniklo na základe skúseností a pomáha v konkrétnej situácií pri
		rozhodovaní na ceste k cieľu.
product	7D Methodology (EN)	In industry, <i>product lifecycle management (PLM)</i> is the process of
lifecycle	23 \ /	managing the entire lifecycle of a product from inception, through
management		engineering design and manufacture, to service and disposal of
(PLM)		manufactured products.
Project Browser	EA Terminology	Special tree based view on <i>EA</i> repository.
report package	EA Terminology	Special <i>EA Package</i> intended for generating the documents from
		repository.
Resource	7D Methodology (EN)	In terminology <i>EA</i> it is somebody from resources defined in Model
110500100	, a memouslegy (and	Resources, clients, Authors.
Resources	EA-Terminológia	Špeciálne okno pre prácu s takzvanými zdrojmi - to v kontexte <i>EA</i>
Windows		znamenajú rôzne šablóny, rozšírenia, vzory a podobne.
Right	7D Methodology (EN)	3R - means, that all roles are able to get right information in right time
Information to	Traditional (Elit)	for performing their job. Decision makers need information about tasks
Right Role In		statuses, technician about technical details.
Rght Time		statuses, terminal acout terminal actums.
Search	EA-Terminológia	Mechanizmus vyhľadávania informácií v úložisku modelu.
Sections Panel	EA-Terminológia	Špeciálne okno v 'Document Template Generation' module.
slide show	EA-Terminológia	Vlastnoť <i>EA</i> z diagramov umiestnených v 'Model View' vytvoriť
Silde Bild W		prezentáciu.
SMART	EN	SMART - S-Specific; M-Measurable; A-Achievable, Agreed, Aligned;
MINIM III I		R-Relevant, Realistic, Resourced, Reasonable, Realistic and
		Resourced, Results-based; T-Time-bound
Source of Truth	7D Methodology (EN)	The Source of Truth is the source of information for decision-makers in
Source of Trulli	/D Memodology (EM)	the solution concerned.
Správna	7Ds Metodika (SK)	Heslo vyjadruje požiadavku, aby každá rola vo firme, mala možnosť
Informácia	/DS MCOURA (SIX)	prístupu k informáciám, ktoré pre výkon svojej role potrebuje.
momacia		pristapa k informaciani, ktore pre vykon svojej fore poneouje.



správnej Roli v		
Správnom čase		
SQL	EN	Structure Query Language -stands for Structured Query Language.  SQL is used to communicate with a database.
Style sheets	EA-Terminológia	Špeciálny súbor definujúci štýly v generovaných dokumetoch.
SysML	IT Terminology	The Systems Modelling Language (SysML) is a general purpose modelling language for engineering systems. SysML supports the analysis, design and verification of complex systems including hardware, software, information, personnel, procedures, and facilities in a graphical notation.
System Templates	EA Terminology	Document Templates delivered with <i>EA</i> installation.
Table of Contents	EA Terminology	
Tag Value	EA-Terminológia	Každý element v systéme <i>EA</i> môže mať vlastné premenné, ktoré sa nazývajú 'Tag'. Využíva sa to na definovanie špecifických vlastností elementov.
Template Group	EA-Terminológia	Skupina používateľom definovaných skupín pre kategorizáciu svojich šablón.
Template Selector	EA-Terminológia	Vlastnoť pri generovaní dokumentov. Táto vlastnosť umožňuje pre každý element v generovanom dokumente vybrať špecifickú šablónu.
Thread	EN	Hrozba. V rámci SWOT analýzy sa za hrozby považujú vonkajšie okolnosti, ktoré nemáme plne pod pod kontrolou, ale mali by sme nimi počítač.
TimeSeriesChar t	EA-Terminológia	Špeciálne elementy <i>EA</i> na vizualizáciu výberov z modelu na ploche diagramu.
TOGAF	7D Methodology (EN)	The OpenGroup Architecture Framework.
UAT	EN	User Acceptance Tests.
UML	IT Terminology	The Unified Modeling Language (UML) is a general-purpose, developmental, modeling language in the field of software engineering, that is intended to provide a standard way to visualize the design of a system.
Use Jet 4.0	EA Terminology	Part of References. It set up the using of JET 4.0 for using unicode for localization. JET 4.0 requires licence from Microsoft. You have to have own product of Microsoft MS Access.
User Templates	EA Terminology	
Virtual Document	EA-Terminológia	Špeciálna trieda 'class' so stereotypom 'Model Document', ktorej atribúty sú ' <i>Package</i> ' z ' <i>Project Browser</i> ', ktoré potom tvoria obsah generovaného dokumentu.
WebEA	EA Terminology	WebEA - Web access to EA repository. Some features can be accessed via web browser only. Extremely useful feature in enterprise environment.

# **Editorial Plan**

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	The journey- 7D-Seven Disciplines for successful solutions

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a book on methodology in the Slovak language ISBN

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MDG - EA extension (EN) MDG - EA Extension (EN) Book about methodology ( in SK) Book about methodology (in EN)



7 MDG Q12

MDG - EA extension (EN)





### About the author:

Roman studied at the faculty of Electrical Engineering - Technical Cybernetics (Department Measurement Technics) at Slovak Technology University. For 8 years he worked at his alma mater as a assistant at the Department of Measurements. He has worked in many international companies (SIEMENS, Hewlett-Packard, Trenkwalder Technologies, Philips, Sagem, Wabash Technologies) in different positions. From a specialist in computer-controlled measurement and automation, SCADA systems, to the top manager for the development of an international system for a

personal agency. Over the last 15 years, he has been involved with IT support and services in manufacturing businesses, especially in the automotive industry where he worked in technical roles (Solution Architect, Test Designer) in ITIL processes roles (ITSC Manager, Capacity Manager, Availability Manager) and in Professional managerial roles (CTO). He has certificates from ITIL and TOGAF 9.1 and practical experience of running and supporting IT services in the automotive industry. All his professional life is devoted to the creation of professional documentation at all levels. From Business Level, Process Description, Strategic Planning and IT Design at Enterprise Architecture level. Many years of his experience are now being translated into practical methodologies and their implementation. He works as an external lecturer at universities, organizes workshops, lectures and writes publications. He cooperates with FABLAB CVTI in Bratislava, where he runs workshops for children from the age of 14. He promotes the term "Model Driven Book". This term emphasizes the new paradigm of work in creative activity, such as book creation. This new paradigm of work consists of using single source of truth about the area concerned, modeling the solution before it is implemented, within the entire lifecycle of the solution. From the idea, design, implementation, operation to decommissioning. Over the past 15 years, he has been using the Sparxsystems UML Modeler of Enterprise Architect and has been popularizing it not only as a drawing tool, but as a system-based tool for teamwork.

The key is to systematically build a system approach that meets the criterion

### "Right information for the Right position at the Right time" so called 3R.

This new paradigm sees the way to the solution as just as important as the goal itself.

The destination may vary, but the experience from the Journey remains.

The author is of the opinion that this experience is part of the strategic values of each firm but also an individual.









### SystemThinking spol. s r.o www.SystemThinking.xyz

The company focuses on system thinking in IT. It provides consulting services in the field of building "Single Source of Truth" systems, a metadata knowledge systems, modeling in Sparxsystems Enterprise Architect environment and publishing.

**Right Information - Right Position - at Right Time** 

No Communication, No Understanding - No Understanding, No Trust - No Trust, No Successful Solutions



# AGNICOLI-Poznaním ku slobode - o.z www.agnicoli.org AGNICOLI-Through Knowledge to Freedom

A civic association aimed at reducing addictions that stem from the lack the knowledge. The members of the association are dedicated to the support of education, the history of information technologies in Slovakia, cooperation with FABLAB-CVTI in realisation of ideas

**AGNI**tio - **CO**nsilium - **LI**bertas (Knowledge-Wisdom-Freedom)



"7D-Seven Disciplines for Successful Solutions" - the original Journey-to-Goal methodology

"APP-Assets-Perspectives-Views" - The original methodology focused on the Current state and the Goal

The methodologies itself does not bring any breakthroughs, and the reader or the user may find known truths there. What is unique, however, is the <a href="combination">combination</a> of these general truths into a <a href="comprehensive single system">comprehensive single system</a> supported by recommended workflows (Methodology 7 Disciplines), recommended <a href="system environment">system environment</a> concepts (database storage, metadata storage) and specific technology (SparxSystems-EA UML Modeler). This creates the basis for extraordinary synergy effects. Every member of the team contributes to the knowledge system with their specific experience in the scope of their role in a team or organization, creating model relationships that exist in the real world, whether explicitly or implicitly.



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