Terraforming Data Product Governance
PREVIEW VERSION

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Preface

Terraforming the Data Product Governance is a revolutionary concept that integrates Data Products, Data Contracts, Data Agreements, Pricing Plans as Code, Data Quality as Code, and SLA as Code into a cohesive, programmable, and scalable framework. This approach transforms data product management into an advanced, automated process, akin to terraforming, utilizing reusable blueprints described in a machine-readable format.

By leveraging system configurations and pure code, the Data Product Governance framework empowers organizations to manage and optimize their data assets efficiently, ensuring seamless interoperability, high data quality, and robust compliance with contractual and service-level agreements. This innovative paradigm shifts the data management landscape, fostering greater agility, precision, and control in the ever-evolving data economy.

But how did this book get started? Why and for whom is it authored? This book was inspired by work and research

around Open Data Product Specification (ODPS), which I ignited in 2019. It became the Linux Foundation project eventually 2024 at the same time version ODPS 3.0 was released.

During 2023 - 2024 I became inspired by the larger scope of data governance and data product governance. That was natural as the ODPS had already matured and started to deliver value on various platforms. It was time to expand the horizon. This new horizon was inspired by interaction with communities and projects working around Data Contract specifications, data monetization and commercialization.

After nearly a year of exploration, experimentation, setbacks, and successes, I had a moment of clarity where the concepts in this book finally crystallized. By June 2024, I knew it was time to compile everything into one cohesive work. I have also initiated GitHub repositories where the models discussed in this book are available and actively being developed further[1]. To fully realize the value of this book, I encourage readers to apply the knowledge gained by leveraging these models in practice through the resources on GitHub.

You should also check out the expanding learning materials including practical self-paced learning online courses at https://masterdataproducts.com which offer a path forward.

[1] https://github.com/Terraforming-Data-Product-Governance

Acknowledgements

What you are holding now is the result of countless evenings and late nights dedicated to this project after completing my daily responsibilities at the Department of Government Enablement, Abu Dhabi.

Writing this book has been a journey that I could not have completed without the support and contributions of many incredible people. I would like to express my heartfelt gratitude to everyone who has played a role, both directly and indirectly, in bringing this project to life.

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To Abdulla Mohamed Hasan Almarzooqi, Milind Pandit, Mohamed Shams Eldin, Vijayakumar Sathyamoorthy, and Muhammad Fayaz, I am deeply grateful for your encouragement and contributions (which you might not even know, but

I picked things from our discussions). Your input and support, whether through discussions or your presence, have been essential in completing this work.

I also want to acknowledge the many others—colleagues, friends, and readers—who have provided feedback, shared ideas or simply motivated me to keep going. Thus, this book is also a result of collective effort, and I am truly thankful for all the contributions, both large and small.

Thank you all for being part of this journey with me. This is not the end, but the beginning of an exciting journey in data product governance—one that is future-proof and scalable.

1 Introduction

Why you should read the book

A CEO friend of mine Toni Luhti once told me a golden rule on evaluating anything business related ideas. The idea must fulfill at least one of the three: 1. create more revenue, 2. reduce costs, or 3. mitigate business risks. On top of that numbers are needed for the claimed (expected) gain. Then it is easy to make decisions whether to invest or not in the suggested business initiative. If the return of invest is high enough compared to costs, then most likely initiative should be considered. Of course world is hardly this black and white always, but the principle is solid in 80% of the cases.

This book is about new approach to data product governance, so lets apply the 3 aspects in that. That should give you enough reasons to read the book. **With help of this book you will be able to increase the revenue, cut costs and even mitigate risks related to data products**.

Proper data product governance enables organizations to turn raw data into valuable products. According to a study by McKinsey, **companies that treat data as a product can achieve a 20-30% increase in revenue** growth by identifying new data monetization opportunities and improving operational efficiency . Governance ensures that these data products are reliable, scalable, and meet legal and ethical standards, making them more marketable to customers or partners.

Effective data product governance streamlines operations by ensuring that data is clean, accessible, and usable across the organization. This **reduces the time and resources spent on data cleaning and integration, lowering operational costs.** Automating data governance through modern tools like Everything-as-Code models helps companies reduce inefficiencies in data management. Additionally, by maintaining high-quality data across the organization, companies avoid the costs associated with bad data, which can negatively impact decision-making and slow down projects.

Gartner's insights further reinforce the business case for data product governance, particularly by highlighting the operational disruptions that can result from poor governance. According to Gartner, by 2025, **75% of businesses will face operational disruptions due to the lack of proper data governance frameworks**. This underscores the critical role

governance plays not only in scaling data operations but also in ensuring operational continuity as businesses grow and handle increasingly complex data ecosystems.

Avoid pitfalls When Implementing Data Products

The book Terraforming Data Product Governance provides a comprehensive framework for avoiding many of the mistakes commonly encountered when implementing data products, as highlighted in the pitfalls checklist. Here's how the lessons from the book align with and help mitigate these common errors.

The book emphasizes the need for a product mindset, which is critical to avoiding mistakes like appointing inexperienced product managers and neglecting the importance of customer service and engagement. In the Data Product Blueprint, author highlights the significance of structured product management and continuous engagement with stakeholders, ensuring that the right expertise is in place to handle the evolving needs of data products, as well as the long-term commitment required from executives.

Further, the book stresses Data Product Governance as a continuous, iterative process that incorporates automation, compliance, and quality control, addressing key issues such as inadequate data infrastructure and the lack of service-

level contracts. With its focus on Everything as Code, the book guides readers through automating governance processes, ensuring scalability, reliability, and compliance — areas where organizations often fall short in managing the technical aspects of data products.

By advocating for interoperability frameworks and reusable metadata models, the book helps readers understand the importance of building a strong data infrastructure and ensuring that data products are not only technically sound but also easily accessible and well-documented. Moreover, the discussion around data contracts and agreements provides practical steps to avoid the mistake of not implementing comprehensive data governance or failing to create meaningful agreements with customers and stakeholders.

Another key pitfall addressed is inadequate handling of customer requests and product backlogs. The book teaches how to build robust product roadmaps and governance mechanisms, enabling product managers to prioritize effectively, prevent bottlenecks, and avoid leaving business users feeling frustrated by unresolved requests. It also emphasizes the importance of data marketplaces as a way to centralize and streamline access to data products, ensuring that data is discoverable, manageable, and consumable.

In essence, Terraforming Data Product Governance provides a clear roadmap for transitioning from traditional data man-

agement to a product-driven, business-aligned approach. By following the principles laid out in the book, readers can avoid many of the pitfalls associated with poor governance, lack of infrastructure, and misalignment between business objectives and data strategies. The book ensures that organizations are not only able to launch data products but also sustain, scale, and continually improve them, driving true business value.

For Whom is This Book Written

This book is tailored for professionals who find themselves at the intersection of technology, business strategy, and data-driven innovation. It is specifically written for tech-savvy leaders such as Chief Information Officers (CIOs), Chief Data Officers (CDOs), Data Governance Leads, Product Heads, and Data Architects. These roles are instrumental in shaping how organizations harness the power of data, yet the journey from technical data management to realizing true business value through data products is not always straightforward.

While some technology-related concepts are discussed, this book is not highly technical in nature. Instead, it is crafted for professionals who want to grasp the practical and strategic implications of the data product economy without delving too deeply into technical jargon. The aim is to provide clear

insights into how data can be transformed into products that deliver tangible value, helping leaders better understand how to govern, manage, and scale these products in their organizations.

As the author comes from a business development and value creation background, the content is structured to speak the language of business leaders. The emphasis is on how data products can drive organizational growth, innovation, and competitiveness, making the book a perfect fit for those who are focused on translating technical concepts into strategic business advantages. Whether you're directly responsible for data initiatives or guiding your organization through digital transformation, this book offers a balanced view of technology and business, helping you navigate the evolving data product landscape.

What You Will Learn from This Book

This book is designed to offer a comprehensive understanding of the evolving data economy, focusing on the shift from traditional data management to a product-driven approach. By exploring this paradigm shift, you'll gain actionable insights into the following key areas.

Understanding the Shift to a Data Product-Driven Economy. The book examines the transformation from a data-

oriented exchange model, where the focus was primarily on sharing raw datasets, to a modern data economy where data is treated as a business product. You'll learn how this shift enables organizations to create scalable, reusable, and valuable data products that deliver business outcomes, moving beyond mere data sharing to true value creation.

Crossing the Data Product Chasm. You'll explore how the transition from a technical, data-focused mindset to a business-oriented product approach creates the "Data Product Chasm." The book provides a roadmap for navigating this shift by introducing the concept of data contracts and data agreements, which are essential for bridging the gap between technical stakeholders and business users. These frameworks will help you overcome the challenges in scaling data products and ensuring their business impact.

Governance in the Data Product Economy. Traditional data governance models often fall short when applied to data products. This book introduces new layers of governance required to manage data products, including legal frameworks, service-level agreements (SLAs), and interoperability standards. You'll learn how modern governance models, such as the Everything-as-Code approach, can enable agile, automated, and scalable governance that meets the demands of today's data product landscape.

Leveraging Open Data Product Specifications. You'll gain

a deep understanding of the Open Data Product Specification (ODPS) and how it can be leveraged to manage data product lifecycles, from creation to consumption. The book explains the importance of aligning legal agreements, data handling procedures, and compliance with privacy laws when selling or sharing data products with third parties. This chapter will help you understand how to secure the proper use of data in a scalable and compliant manner.

Interoperability and Reusability with Data Products. Modern data products require interoperability across systems and industries. The book covers how universal YAML schemas can be reused across data contracts, agreements, and product descriptions, enabling seamless integration and reducing friction in data exchanges. You'll learn how to future-proof your data products for maximum reusability and cross-functional applicability.

Practical Insights from the Author's Business Development Perspective. While the book touches on technology, it is fundamentally business-driven. As a business development and value creation professional, the author ensures that complex technology concepts are presented in a way that is accessible to non-technical audiences. You'll learn how to translate technical advancements in data products into strategic business advantages, helping you align data initiatives with organizational growth and innovation goals.

The Future of Data Product Governance. Finally, the book offers a forward-looking perspective on how emerging standards and technologies, such as the Everything-as-Code approach and automated governance, will shape the future of data product governance. You'll be equipped with the tools and knowledge to not only navigate the current landscape but also anticipate the next wave of innovation in data product management and governance.

By the end of this book, you will have gained a well-rounded understanding of the data product economy and be equipped to lead initiatives that turn data into high-value, scalable business products. Whether you're focused on governance, business strategy, or product development, this book will provide the insights you need to succeed in this fast-evolving space.

The story does not end in this book! I have ignited Github repositories in which the explained models are available and continue to be developed further[1]. The maximum value can be obtained by adopting the knowledge in the book and applying it in practice with the models available in Github.

[1] https://github.com/Terraforming-Data-Product-Governance

The book contains 7 chapters

In the Introduction, we introduce the fundamental motivation behind the shift from traditional data management to data product governance. Through examples and business case studies, we explore why data product governance is essential in the modern data economy. We present the three core business benefits—revenue generation, cost reduction, and risk mitigation—that make this shift imperative. By the end of this chapter, readers will understand why governing data as a product is no longer an option but a necessity for sustained business growth and innovation.

Chapter 2 takes a deep dive into the evolving nature of the data economy, which started with basic data exchanges and has rapidly grown into a landscape driven by data monetization and productization. We explore how this shift has changed the way organizations approach data, focusing on the need for a product mindset. We introduce the concept of comprehensive data product stewardship and discuss how organizations must transition from siloed data management to holistic governance frameworks that foster business value creation.

In Chapter 3, we introduce the Data Product Blueprint, a strategic framework that helps organizations bridge the gap between traditional data management and modern data productization. We break down the model's key components,

from the first Data Product Chasm, which requires organizations to adopt a business-oriented mindset, to the second chasm of external commercialization. This chapter offers a roadmap for creating, maintaining, and scaling data products, guiding readers through the full lifecycle of a data product.

Chapter 4 introduces terraforming as a metaphor for transforming legacy data governance models into agile, automated frameworks suitable for the modern data economy. We explore the origins of terraforming in IT and its broader implications for data product governance. Key concepts such as Infrastructure as Code (IaC), Data as Code, and Governance as Code are discussed in detail, highlighting how these paradigms can be applied to achieve scalable and efficient data governance.

In the 5th chapter, we explore the intersection of computational governance and business needs. We explain how modern data standards, such as the *Open Data Product Specification (ODPS)*[2] and *Open Data Contract Standard (ODCS)*[3], are enabling organizations to align business objectives with automated, code-driven processes. Readers will gain insight into how data governance can be automated to ensure compliance, improve data quality, and optimize business outcomes, all through a computational approach.

[2]See more from https://opendataproducts.org"
[3]See more https://github.com/bitol-io/open-data-contract-standard

Chapter 6 introduces the *Interoperability Framework Model*, a key component for ensuring seamless integration of data products across systems and industries. We dive into the synergy between declarative and computational components and how they work together to create interoperable data products. The model's reusable metadata, data contracts, and product descriptions are explored, showing how they reduce friction in data exchanges and enhance reusability across different contexts.

In the final chapter, we emphasize the urgency for organizations to adopt modern, automated approaches to data governance before they are left behind. With the rapid pace of change in the data economy, this chapter underscores the competitive advantages gained by embracing computational governance models, such as Everything as Code. We provide actionable insights on how organizations can begin the terraforming journey, ensuring their data governance frameworks are future-proofed and scalable.

2 The Business Imperative for Change

2.1 Data Exchange started the Data Economy

A crucial element of the data economy is the exchange of data among diverse entities, including businesses, governments, and individuals. This data exchange is enabled by a variety of technologies, such as cloud computing, big data analytics, and artificial intelligence. The data exchange acts as a critical catalyst for innovation and economic growth in the data economy.

By sharing data, businesses can innovate new products and services, enhance operations, and gain a better understanding of customer needs and preferences. This can result in heightened efficiency, productivity, and profitability, as well as improved customer satisfaction. In essence, participation

in the data economy offers businesses a significant advantage in today's rapidly evolving digital landscape.

Data exchange is the practice of sharing data among distinct entities or groups. This process entails the secure transmission of data from one organization to another, fostering collaboration, insight generation, and value creation. The mechanisms of data exchange can vary and include partnerships, marketplaces, or formal agreements.

The primary goal of data exchange is to encourage data flow, thereby allowing organizations to tap into varied data sources, glean insights, and improve decision-making. Its emphasis is on the act of data sharing itself, irrespective of any associated direct financial transaction. While data exchange and data monetization are interconnected concepts, they diverge in their central focus and objectives.

2.2 Data Monetization growing fast

Data monetization, a crucial facet of the data economy, involves transforming data into revenue or extracting economic value from it. This process essentially capitalizes on data as an asset to generate financial returns. Data monetization can adopt various forms such as directly selling data to third parties, licensing data to other organizations, or utilizing data to develop and offer value-added products or ser-

vices.

The primary aim of data monetization is to convert data into a source of revenue, whether through direct transactions or by creating new business models based on data-driven insights. Its focus is on the economic value that can be derived from data and the financial benefits it can yield. Notably, data monetization is a key driving force of economic growth in the data economy. It underscores the compelling monetary potential that data holds when harnessed effectively.

By monetizing their data assets, businesses can create new revenue streams, increase profitability, and gain a competitive advantage in their markets. Data monetization can also lead to new business models, such as subscription-based services and data marketplaces. The global data monetization market size stood at USD 2.60 billion in 2022. The market will expand from USD 2.99 billion in 2023 to USD 9.10 billion by 2030, exhibiting a CAGR of 17.2% over the estimated period.

2.3 The Shift to a Data Product-Driven Economy

The data economy has undergone a significant transformation from a focus on mere data exchange to a product-driven

paradigm that emphasizes the strategic value and business potential of data. In the earlier stages, data exchange was primarily about making raw datasets accessible, often in isolated formats, with the goal of enabling analytics and insights within siloed environments. This approach was largely technical, centered around data storage, sharing, and basic interoperability. Data itself was treated as a commodity, where the primary concern was moving bits of information between systems without much consideration for its contextual value, governance, or usage beyond the technical layer.

As businesses began to realize the untapped potential within their data assets, the focus shifted toward treating data as a product, designed with clear value propositions, quality standards, and customer-centric considerations. The modern data economy views data not just as a technical resource but as a product that delivers business outcomes. Data products are built to address specific business use cases, with an emphasis on reusability, interoperability, and lifecycle management. This shift demands a mindset change — from focusing on how to exchange data to focusing on how to create, maintain, and extract value from it.

This evolution from a data-oriented exchange model to a data product-driven economy aligns with the broader trends in digital transformation, where businesses strive to monetize data in ways that are scalable and aligned with customer

needs. It has introduced new disciplines like data governance, data contracts, and product management into the data economy, emphasizing the need for legal frameworks, service-level agreements, and clear data stewardship responsibilities. The result is a more structured and business-aligned ecosystem where data products can be sold, consumed, and integrated into value chains much like physical or digital goods in traditional markets.

2.4 Product mindset is the key

Data products, on the other hand, are products that are created using data as the primary input. These physical or digital products may include software, applications, reports, analytics, and insights. The Economist wrote an article in 2017 with the title *Data is giving rise to a new economy* and declared that *"data are to this century what oil was to the last one: a driver of growth and change."*. More recently, Harvard Business Review published an article *Approach Your Data with a Product Mindset* which emphasizes the need to *"abstracting these solutions into [...] products that can be used to address additional needs down the line, and packaging these products in a way that drives adoption by stakeholders across the organization."* In this approach, data is treated as a commodity rather than a pure technical asset.

The Product mindset establishes a foundation for effective data exchange and the ability to generate revenue. It seems evident that data products in different forms have become a standard block in the data economy. This has also changed the skills requirements in companies and given space for new positions like Data Product Managers.

2.5 From Data Management to Comprehensive Data Product Stewardship

The shift from a data-oriented economy to a data product-driven model has introduced a new layer of complexity in governance that traditional data management frameworks struggle to address. In the traditional approach, governance primarily focused on data quality, access control, privacy, and compliance within siloed environments. The goal was to ensure that data could be reliably stored, accessed, and used in specific contexts, often without considering broader value creation or interoperability across diverse ecosystems.

However, as data has evolved into a product with distinct business value, traditional governance models have proven inadequate. Managing data products requires not just ensuring data quality and compliance but also governing the

lifecycle of these products—from creation, through consumption, to retirement—much like any other business product. This introduces the need for additional layers of governance that handle issues such as version control, interoperability standards, service-level agreements (SLAs), and customer-centric requirements like user experience and data reliability.

New governance models must also address the complexity of data contracts and data agreements, particularly in cases where data products are sold or shared across organizations. These models need to manage not only the technical aspects of data (e.g., APIs, metadata, and formats) but also legal, ethical, and business considerations, such as who owns the data, how it can be used, and what liability exists in the event of data misuse or quality issues. Traditional governance lacks the agility to accommodate this level of detail and the dynamic nature of data products, requiring a shift toward frameworks that integrate governance ”as code” and other automation mechanisms to scale effectively across modern data ecosystems.

Thus, managing data products calls for new layers of governance that go beyond the confines of traditional data management. These layers must address the productization of data, the complexity of legal agreements, and the need for continual alignment with business goals, making governance

an ongoing, integrated process rather than a one-time checkpoint in the data lifecycle.

Why Terraforming?

The term terraforming was selected in the name of the book and concept for a few reasons. The original meaning of the term is process of deliberately modifying the atmosphere, temperature, surface topography or ecology of a planet, moon, or other body to be similar to the environment of Earth to make it habitable for humans to live on. Likewise the model presented in the book ”terraforms” the data product governance and elevates it to the next level. The legacy model (moon) is transformed into a new modified environment more suitable for data products (Earth).

In IT world it is known in the Infrastructure as Code. In that context terraforming is often associated to HashiCorp tool Terraform, that is an infrastructure as code tool that lets you define both cloud and on-prem resources in human-readable configuration files that you can version, reuse, and share. In broader scope terraforming as part Infrastrucure as Code (IaC) also includes other similar tools such as AWS CloudFormation, Azure Resource Manager (ARM) and Google Cloud Deployment Manager.

In this book the nature of IaC is taken as a foundation for

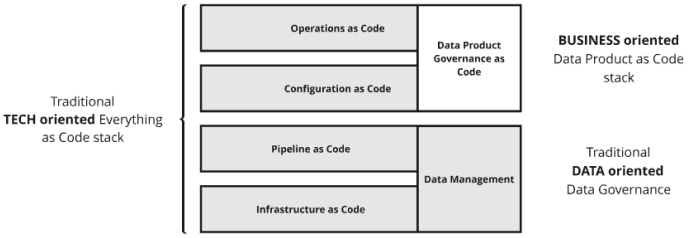

Figure 2.1: Traditional Everything as Code stack is extended with business oriented Data Product Governance

data product governance. The concept of Terraforming Data Product Governance borrows the IaC concept and expands it with data product governance elements. If you are not familiar yet with IaC, don't worry. We will discuss the concept in chapter 4 *Introducing Terraforming as a Metaphor*.

The traditional IaC stack is needed to build and maintain the technical backbone of the data products in data catalogs. But the data in catalogs is not ready to be consumed without productizement especially when the target audience is outside the organization borders. That business oriented and scalable layer is enabled with help of Data Product as Code and governance managing the published data products.

Data Products Governance is maturing and evolving

This book was written at the time when new models and thinking regarding data products started to mature. One such significant area is the standards and specification related to data products.

Without easy to use standards defining the ground rules for data products in machine-readable format, automation, reuse and scaling are impossible. Among those standards is The Linux Foundation project *Open Data Product Specification (ODPS)*[1] which aim to define and maintain a vendor-neutral, open source, machine-readable data product metadata model including YAML Schema. YAML based enables seamless CI/CD process adoption and scaling. ODPS is very business and data marketplaces as well as catalog oriented containing standardized pricing plan models, Everything as Code driven SLA and Data Quality models, licensing, and use cases among other things.

The second key standardization are is the Data Contract that is a formal agreement that defines and governs the structure, format, and types of data exchanged between different systems, applications, or organizations. The primary purpose of a data contract is to ensure consistent and reliable data interchange, facilitating seamless integration and communication across diverse platforms. By nature Data Contract

[1] https://opendataproducts.org/

are more technical and data oriented than for example ODPS which is business oriented. One of the Data Contract models, Open Data Contract Standard (ODCS)[2], is developed also under the Linux Foundation. ODCS is also YAML based and likewise suitable for automation and scaling.

The above mentioned standards overlap for some parts and define varying elements in different ways and formats, with different schemas. In the long run the best option for scaling, efficiency and also profitability is to have aligned and interoperable standards. That will take time. Should we then just wait and not to utilize the emerging possibilities? That is obviously one option, but not the only one. In order to jump into the front runner group and secure your business in the future, what you can and must do now is to learn and adopt the new standards, and create necessary ”glue” between the standards with conversion code and alike practices. This will increase the risks for a while, but the benefit is that you will also learn in the process, gain the position to utilize new opportunities, and secure your business position in the future. The above highlights the necessity of interoperability which will be discussed in depth in chapter 6 *Interoperability framework model*.

Next to the above mentioned emerging standards is plethora of other standards, which the above utilize or develop in par-

[2]https://bitol-io.github.io/open-data-contract-standard/latest/

allel. Such projects are for example Data Contract Specification[3], OpenSLO[4], and Data Product Descriptor[5].

One intriguing area of standardization still taking baby steps is the data agreements. While the data contract is focused on technical aspects of the agreement between stakeholders and suitable for data reuse cases inside the own organization, the data agreement contains also legal side of the agreement. The second you expose data products outside the organization borders, you will need a data agreement alike contract in order to protect your business and handle risks. Data agreements, also sometimes labelled as Data Sharing Agreements, have been used for a long time, but standardization to a form of machine-readable format with clear standard is lacking.

For the above mentioned reasons the standards play a key role in the transformation of the data product governance. This family of standards is built on top of everything as code principles and is the core of Data Product Governance as Code.

The principle is that we have aggregating standards which aim to keep rather narrow scope. Additional set of specific area standards can be used to extend the aggregating standards. This helps the standards to stay small and compact.

[3]http://datacontract.com/
[4]https://openslo.com/
[5]https://dpds.opendatamesh.org/concepts/data-product-descriptor/

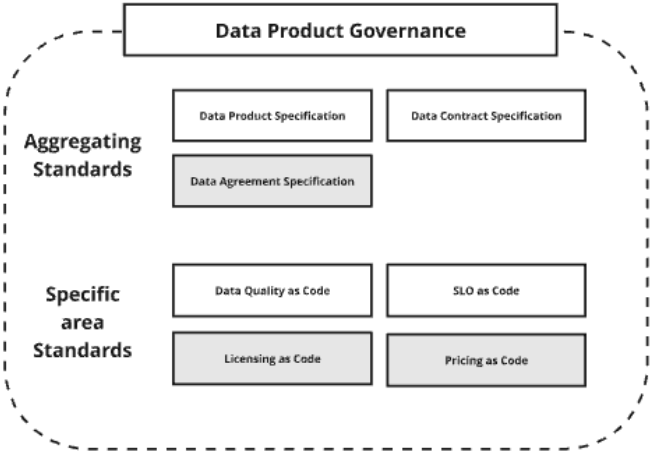

Figure 2.2: Data Product Governance Standards family. Some parts of this family exists (white boxes) and some are to emerge.

```
schema: https://opendataproducts.org/dev/schema/odps.yaml
version: 3.0
product:

  contract:
    id: 02323M123
    type:  ODCS
    contractVersion:  2.2.2
    contractURL: https://demo.datamesh-manager.com/demo834016807886/datapro
```

Figure 2.3: ODPS enables referencing data contract which is defined according to a difference specification or standard.

This is turn enables faster development of the standards. An existing example of this extension principle is visible in Open Data Product Specification which enables referencing and in-line definition of data contract. ODPS itself does not define or maintain the data contract part, but reuses the existing standards such as Open Data Contract Standard and Data Contract Specification.

As it was stated, the standards are evolving in a fast pace nowadays. Over time some of the specific area standards might be included in the aggregating standards either as is or modified. This is again visible in the development of ODPS. In ODPS SLA can be described staticly as target values or promises to the consumer. On top of that ODPS SLA part can include ”as code” part for defining monitoring of the SLA dimensions. In this example ODPS has swallowed parts of the ”SLO as Code” standard model. The alternative approach

would have been that ODPS enables similar referencing for OpenSLO style definition of SLA as was exemplified for data contracts.

The above examples of standards collaborating and utilizing each other should give you an idea of how Data Product Governance standards family (or collection of standards) works now. We will discuss the emerging family of modern standards in depth later in chapter 5 *Computational Approach Meets Business Requirements*.

Meet the Author

Jarkko Moilanen

Dr. Jarkko Moilanen is a distinguished figure in the fields of AI, data monetization, and the platform economy, with over a decade of experience at the forefront of the global data movement. As one of the early pioneers of the open data revolution in Finland, Dr. Moilanen co-founded the Open Knowledge Foundation in Finland and played a pivotal role in shaping the country's open data strategy. His thought leadership has been recognized through his inclusion in the Hyperight Nordic 100 list in Data, Analytics, and AI, and as the MIT CDOIQ Country CDO Ambassador for Finland.

Dr. Moilanen's expertise extends beyond academia; he has held several leadership roles, including Chief Data Officer and Chief Operations Officer, where he has driven significant innovations in AI and data product standardization, notably under the Linux Foundation. He is also the igniter and maintainer of the Linux Foundation project *Open Data Product*

Specification, a widely acknowledged standard for data products, contributing to the advancement of data-driven ecosystems globally.

As an author, Dr. Moilanen has written seminal works on the API and data economies, including API Economy 101 and Deliver Value in the Data Economy, which reflect his deep understanding of the intersection between business, technology, and data. His latest books, AI-Powered Data Products and Terraforming Data Product Governance, examine cutting-edge topics, offering practical insights for professionals navigating the rapidly evolving landscape of data product governance and AI applications.

In addition to his professional accomplishments, Dr. Moilanen is a passionate and inspirational leader, known for his ability to bridge the gap between strategic vision and practical execution. He continues to shape the future of data economies and is committed to helping organizations leverage data as a core asset for innovation and growth.

Recommended books

Deliver Value in the Data Economy

Deliver Value in the Data Economy is your essential guide to bridging the gap between IT and business, enabling companies to fully harness the power of data for monetization and value creation.

Based on insights from working with 200+ companies, this book addresses the real challenge: it's not about the technology—it's about understanding how to apply data to drive business growth. While tools and platforms are available, many businesses struggle to connect the dots. This book aims to close that knowledge gap.

Written for CEOs, CIOs, CDOs, business developers, and anyone leading digital transformation, this book offers practical, real-world insights to help you thrive in the data economy. With case studies, research, and expert experience, the authors—three seasoned professionals in data platforms, APIs, and data monetization—focus on how businesses can

leverage data products and services to create real value.

If you're ready to lead data-driven innovation, this book is for you! Get it from leanpub[6] or Amazon[7].

AI-Powered Data Products

AI-Powered Data Products is your essential guide to revolutionizing your business with the transformative power of AI. In today's competitive landscape, companies that leverage AI are the ones leading the way, and this book shows you how to do just that.

From machine learning to natural language processing, you'll learn how to create smarter, faster, and more efficient data products that outperform your competitors. Through real-world examples, discover how AI can unlock hidden insights, automate processes, and fuel your business growth.

If you're ready to take your business to new heights, this book is the ultimate guide to AI-powered innovation. Get your copy today from leanpub[8] or Amazon[9]and start transforming your business!

[6]https://leanpub.com/dataeconomy/
[7]https://www.amazon.com/Deliver-Value-Data-Economy-monetization-ebook/dp/B0B634SHCX/
[8]https://leanpub.com/ai-powered
[9]https://www.amazon.com/AI-Powered-Data-Products-Transforming-Profit/dp/B0CM8HBG5R/