« Performance Measurement System Repository »

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Agenda

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Introduction

• Understanding, predicting, and controlling performance is a continuous challenge, and static measurement systems are inadequate in dynamic and rapidly changing business environments.

• A common Framework of Performance Measurement System will secure that Ericsson is moving in the right direction at the right time as we pay full respect to market dynamics.
Project Objectives

- Design and development of a generic and flexible Performance Measurement Repository to support a dynamic measurement system which, is capable of supporting Ericsson Research Canada’s business information needs.
Specific criteria and constraints for the Measurement Repository Project

- Design a coherent and consistent model of enterprise performance evaluation.

- Individual and team Performance measures aligned with organizational goals.

- Ability to permit managers to extract value from the vast amounts of data and information in the organization.

- Improvements to the quality of the software engineering measures themselves.
Initial Business Indicators proposed for the Measurement Repository

- **Delivery according to commitments**: Are we delivering according to our promises?

- **Effectiveness & Efficiency**: Are we delivering the right products at the right time at the promised cost?

- **Financial**: What is the cost of our operations? Are expenditures growing or declining? Are we meeting the goals of the efficiency program?

- **Quality**: Are our products satisfying our customers? Does our quality provide support for TL 9000 certification?

- **Sustainability**: What are we doing to sustain our growth? Are we improving our processes? Are we able to retain and develop our employees?

- **Strategic goals**: Can we monitor the specific goals set for the month / quarter / year?
Measurement Repository Design

- The Measurement Repository consists of a collection of **Multidimensional data cubes** (i.e. OLAP cubes) containing the **aggregation data** on which multidimensional measurement analysis is based.

- OLAP multidimensional capabilities are used for defining several components of the **Measurement Repository**, such as: Entities, Aggregations, Series, Attributes, Categories, etc.

- The OLAP services pull together data from **multiple sources** in the organization and store that data in a form convenient for further analysis and decision support.

- OLAP cubes are materialized views of information, that is, a way of **pre-computing data summaries** so that requests can be answered quickly.
Measurement Repository Design *(continued)*

- OLAP **Analytic and drill-down** facilities provide users with the possibility of analyzing data at different levels of granularity.

- OLAP technology provides for **graphical representation of multidimensional measures** of the Measurement Repository.

- The system architecture of the repository will only store **base measurements**. **Derived measurements** will be handled by the “Analytical Engine” (ex. MS-Analysis Services).

- The Measurement Repository is capable of handling the following **scale types**: Nominal, Ordinal, Interval and Ratio, according to ISO 15939.
Measurement System Repository:
Internal Architecture

- Management Indicators & Trending
- Analytic and drill-down Capabilities based on responsibility
- Analytic and drill-down Capabilities based on process
- Administration and Quality control

Analytical Engine

Measurement Repository

Automated data collection
Manual data collection
Object Oriented Repository Data Model

Relationship Hierarchy among entity instances supported by the Aggregates relationship

Measurement qualification

Categories

Security mechanisms
Repository Technological Environment

- MS Windows 2000 Server
- MS SQL 2000 Server
- MS Analysis Services Enterprise Edition
- MS Internet Information Server
- ASP technology
- Web Components: Pivot Table Services (PTS)
- Intranet Share Portal Server
Measurement System Repository: Client/Server architecture

Data Collection → Measurement Repository → MS-Analysis Server

OLAP Cubes → Analytical Engine (User manipulation)

LMC / P → Client
Connecting Performance Measurement System over the Ericsson Intranet

- Pivot Table Services (PTS)
- IIS Web Server
- MS Share Point Portal Server
- MSOLAP.ASP
- Analysis Server
- OLAP Data
Conclusion

- In this presentation an approach was proposed for the design and development of an integrated, generic and flexible Measurement Repository. This Repository is based in a Meta-model concept. This proposition supports several measurement concepts of the Ericsson Research Canada information Requirements.
Merci !!!  

Questions ?