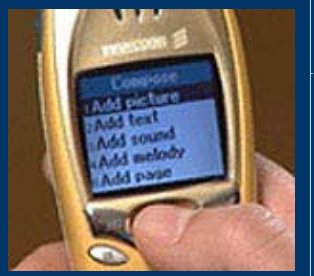
ERICSSON

Université du Québec
École de technologie supérieure

« Performance Measurement System Repository »



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Agenda

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- Objectives
- Criteria and Constraints
- Business Indicators
- Measurement Repository Design
- Object Oriented Repository Data Model
- Technological Environment
- Conclusion

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?

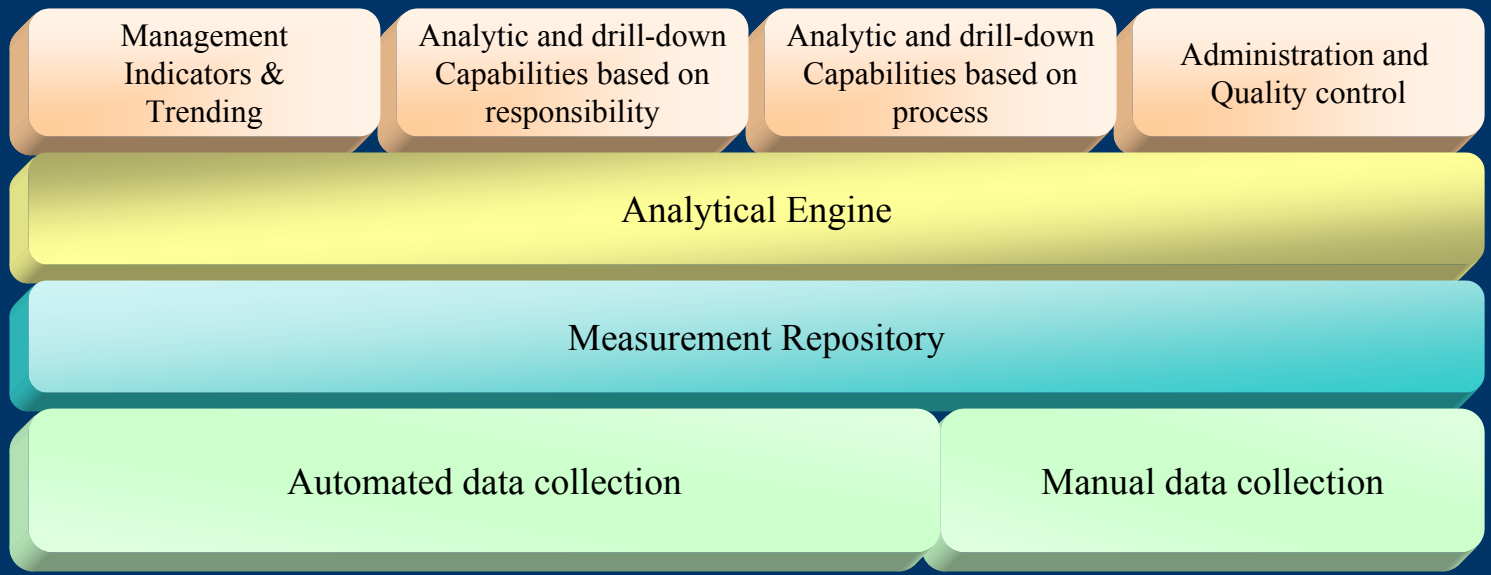
Measurement Repository Design

- 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)*

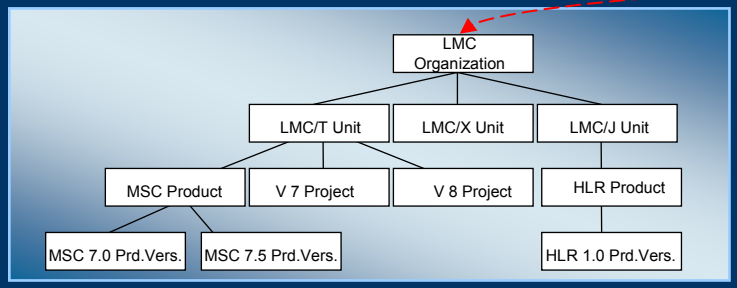
- OLAP Analytic and drill-down facilities provide users with the possibility of analyzing data at different levels of granularity.
- OLAP technology provides for graphical representation of multidimensional measures of the Measurement Repository.
- The system architecture of the repository will only 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

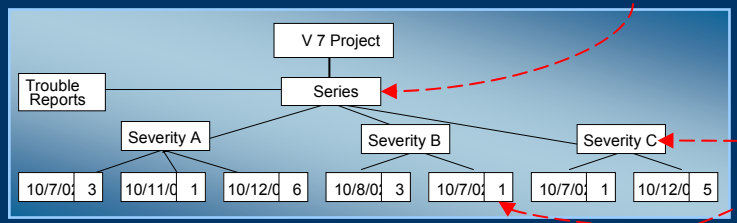


Object Oriented Repository Data Model

Relationship Hierarchy among entity instances supported by the Aggregates relationship

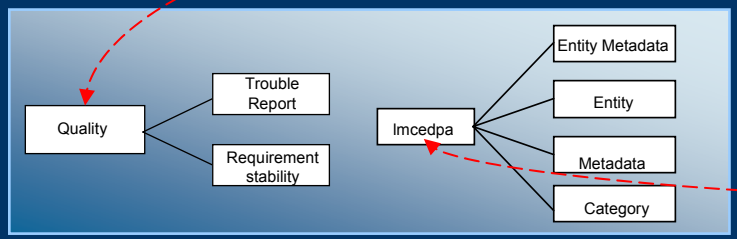


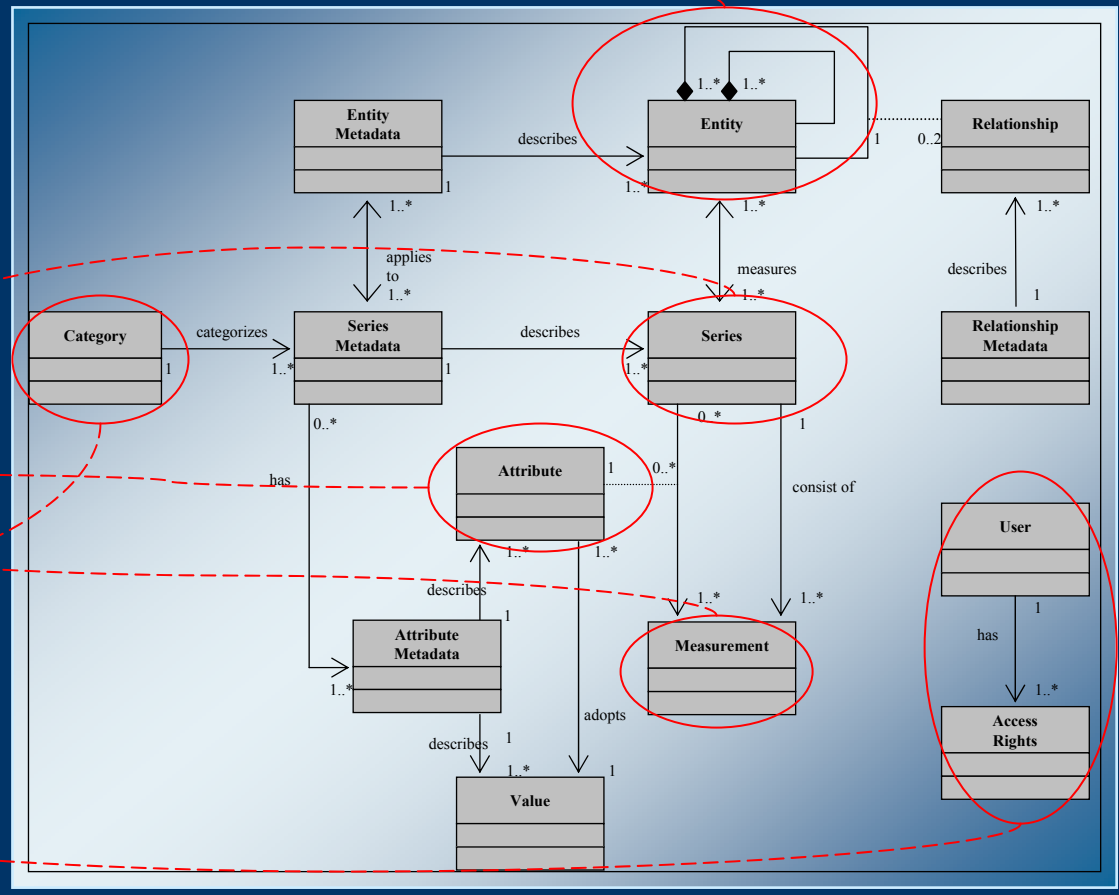
Measurement qualification



Categories

Security mechanisms

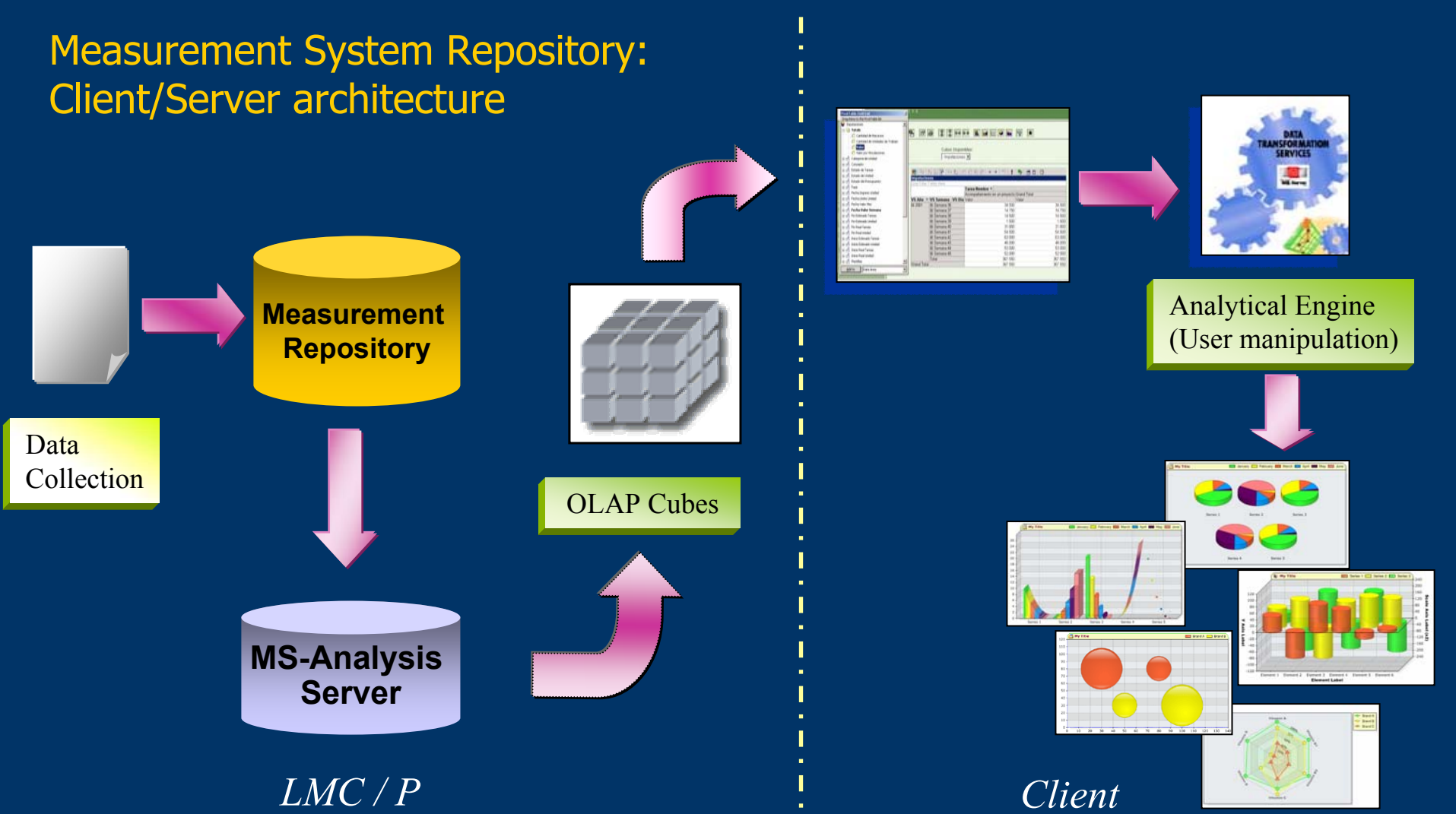




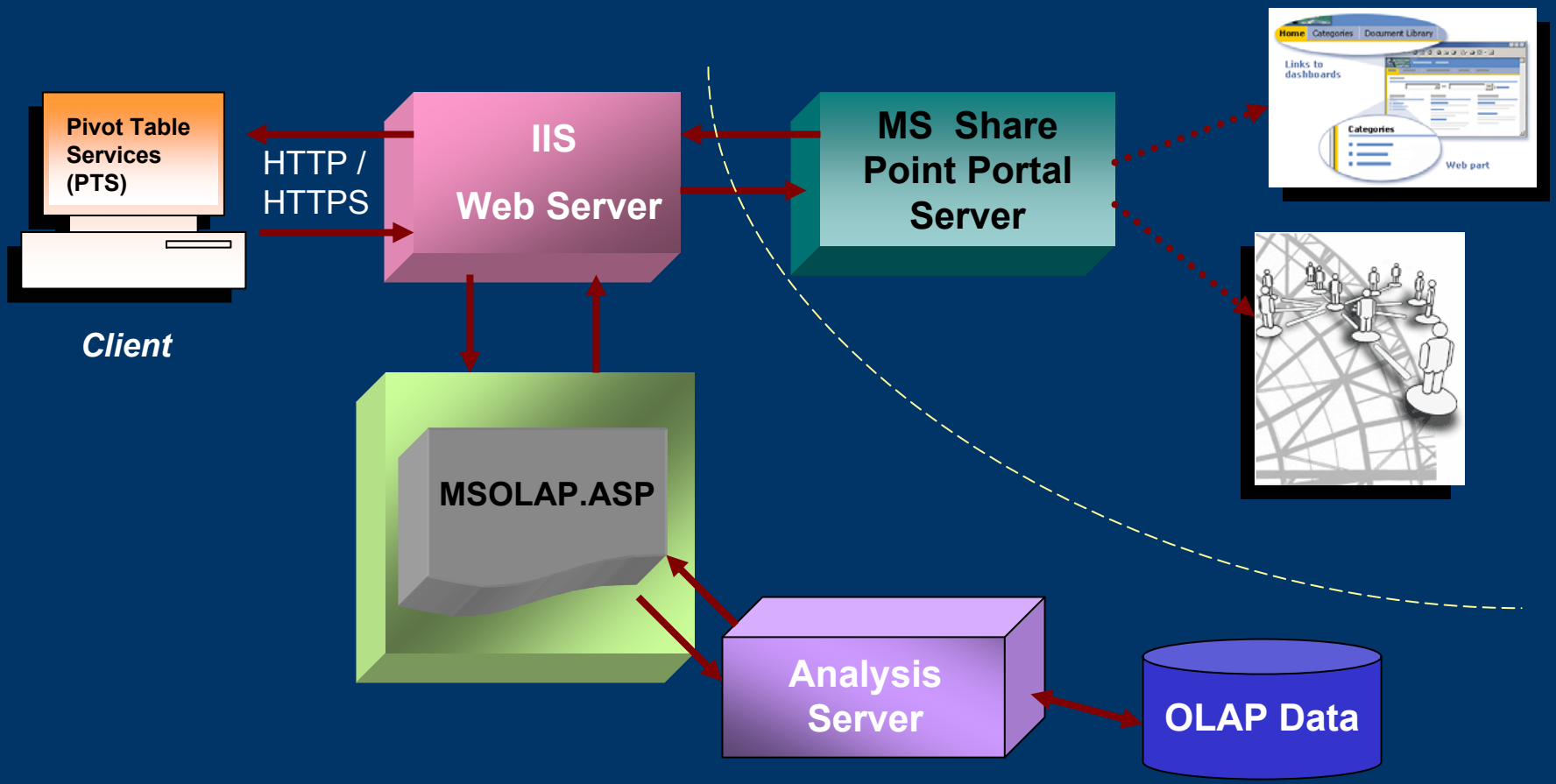
Repository Technological Environment

- 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



Connecting Performance Measurement System over the Ericsson Intranet



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 support several measurement concepts of the Ericsson Research Canada information Requirements.

Merci !!!

Questions ?