

*Linda Kresl, BI Manager, Mentor Graphics
MIT IQ Symposium, July 17-19, 2008 Boston, MA.*



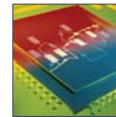
Quality Information as a Service for SOA

- 1. How to relate the Service Component to your business entities.***
- 2. How to build a high quality data service that enables all other services.***
- 3. How to develop the Information Management Strategy that prevents wasting your SOA investment.***

Who are we?



- Fastest growing of the top tier EDA companies
- Market leadership in key segments
 - ESL
 - Functional Verification
 - Analog-Mixed Signal
 - Design for Manufacturing
 - Integrated Systems Design
- Leader in Verification Standards
- Worldwide support, training and consulting



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Wilsonville, Oregon U.S.A. Headquarters



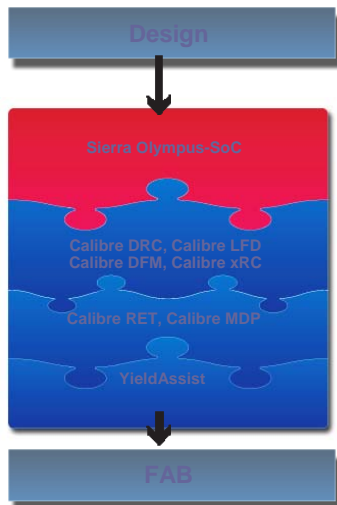
- 300,000 Square Feet of Office & Laboratory Space
- 4,350 Employees Worldwide
 - 1,000 at Wilsonville, Oregon Headquarters

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Mentor Graphics around the World



Mentor Offers Integrated Design-to-Fab



- Manufacturing-driven closure P&R architecture is the discontinuity of the 65/45/32/22 nm era
- Mentor Graphics now delivers an integrated design-to-fab solution for 65/45 nm and beyond

Mentor's ESL Architectural Tools

System Architect™

- Assess performance and power of TLM blocks
- Validate hardware against real software execution
- Quickly analyze architecture alternatives

Vista™

- Easily debug SystemC transaction-level models
- IDE-style project creation and advanced debugging
- Intuitive transaction sequence viewer

Visual Elite™ SD

- Design & assemble mixed SystemC / HDL models
- Intuitive SystemC / HDL text and graphical design
- Create TLM virtual prototypes for software development

A complete hardware design suite for architectural exploration and optimization

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Data is the Foundation.....

In the Gartner Report: Key Issues for Data Management and Integration, 2006 Ted Friedman writes:

*What impact will enterprise information management have on approaches such as service oriented architecture? New approaches to architecture and implementation of applications, such as SOA, are creating pressure to increase the availability, timeliness of delivery, consistency and auditability of data. **Without a strong focus on data at the foundation of their initiatives, organizations will fail in capturing the benefits of speed and agility they seek from SOA.** Our research will analyze the key dependency points between EIM and SOA to expose the risks of failing to align the application and data points of view.*

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What is Service Oriented Architecture?

- ✓ **SOA is a method of conceptualizing, designing & building applications by assembling reusable building blocks, each of which is usually represented as a service.**

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Service Components

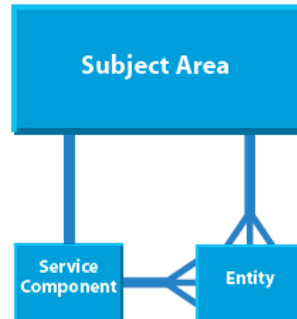
- ✓ **Service Component (and interface)**
- ✓ **main entities in the SOA Concept**
- ✓ **specify them uniquely**



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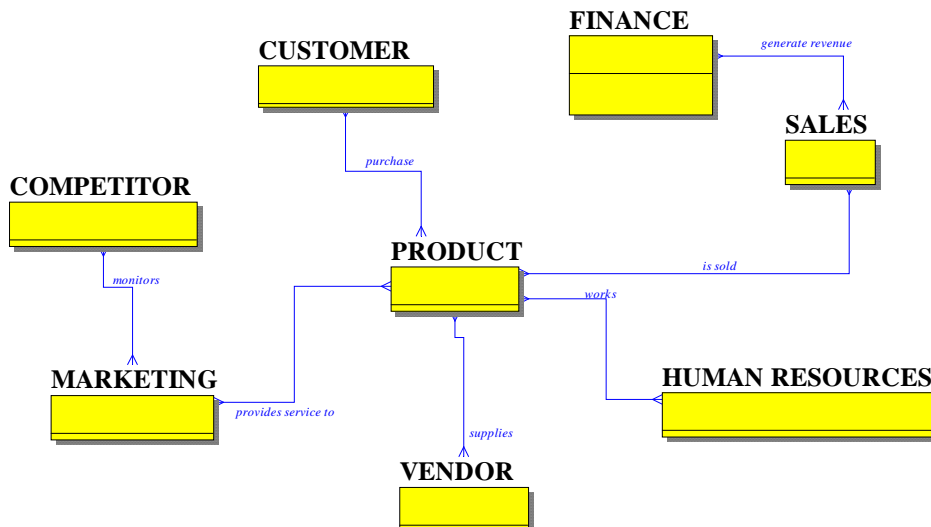
Entities

- ✓ **A person, place, or thing that the business cares enough about to store and track information.**

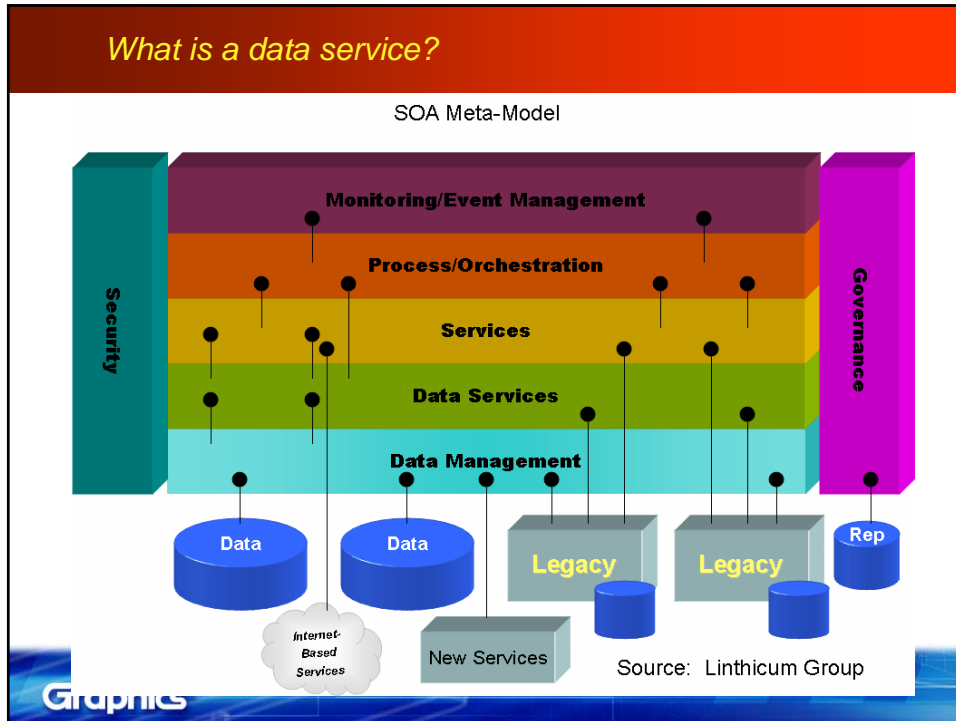


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Data Model is a communication vehicle for the business



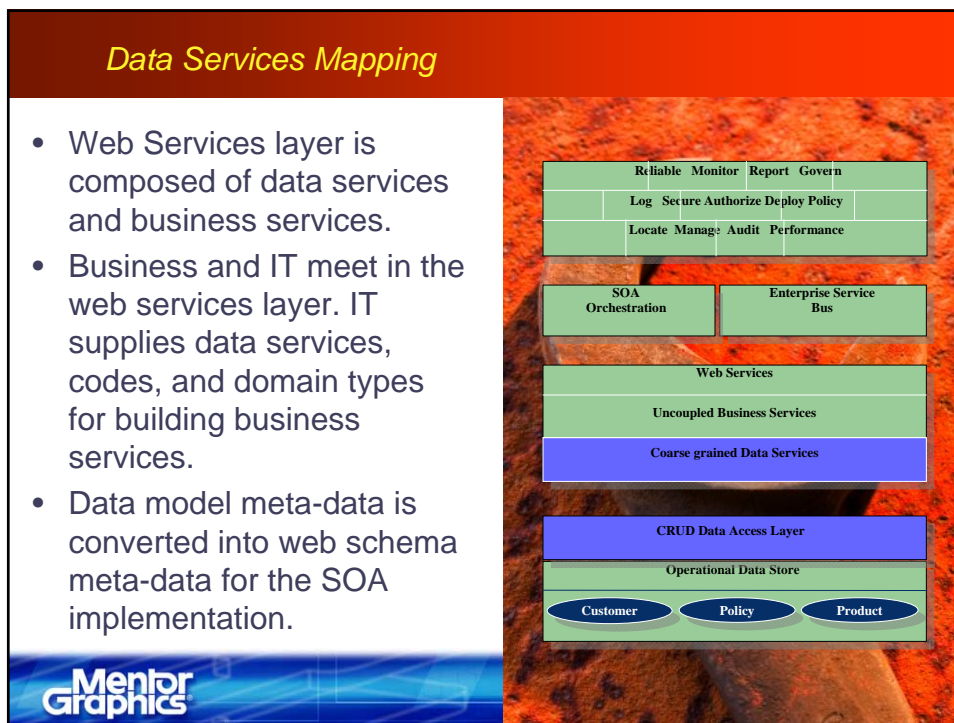
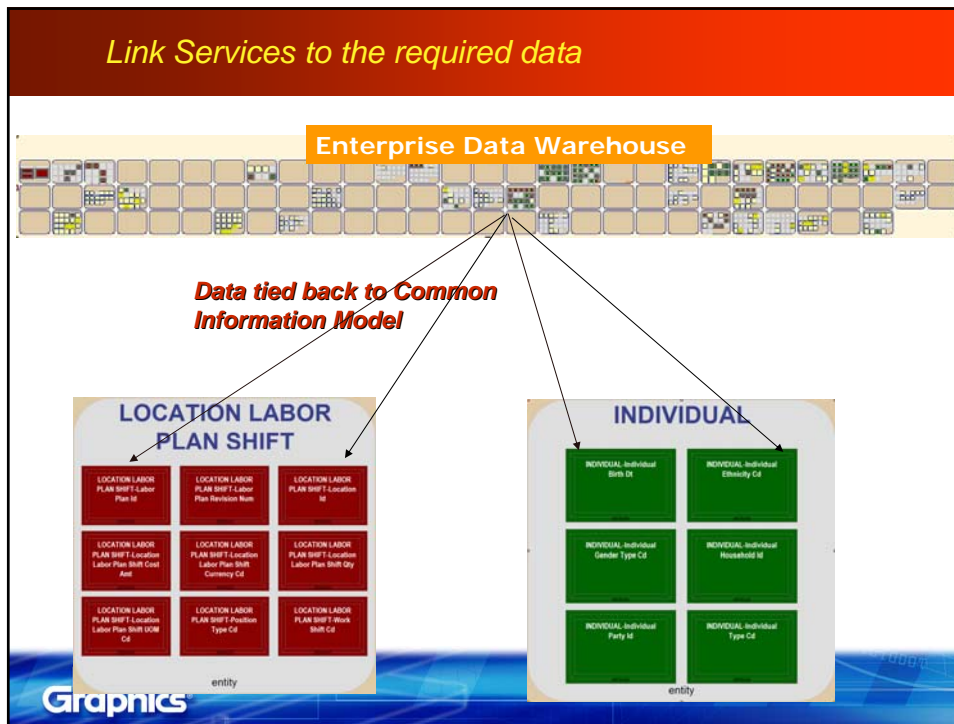
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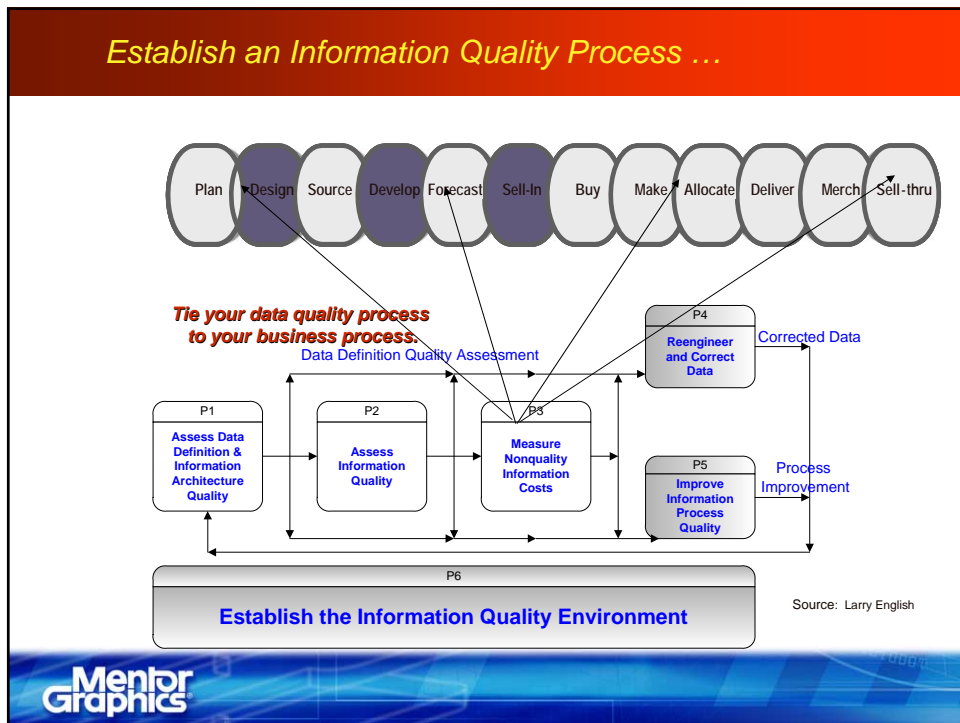
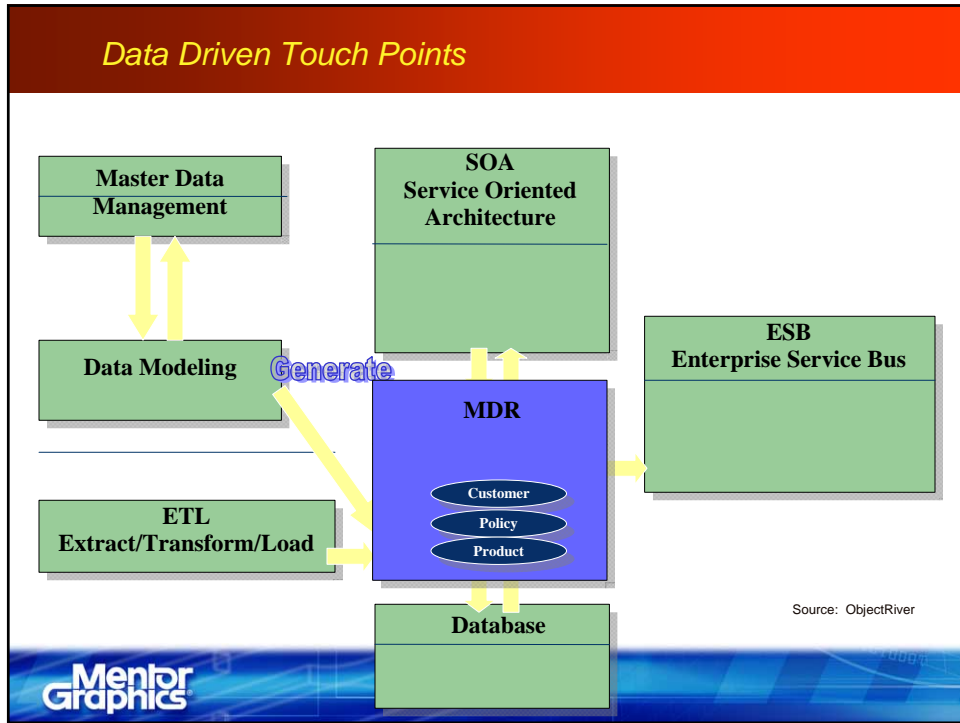


Data Services . . . a necessity for SOA

- The advantage of a data service is the ability to bind many different data types into one unified **enterprise-wide data** model, including schema and content.
- Manages poorly designed and normalized **data** without having to force fixes to the back-end systems.


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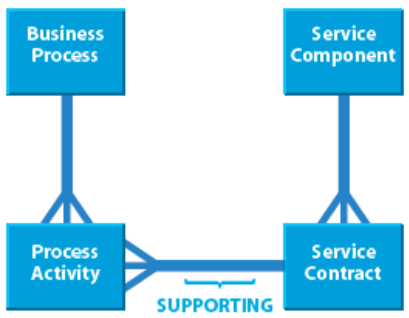



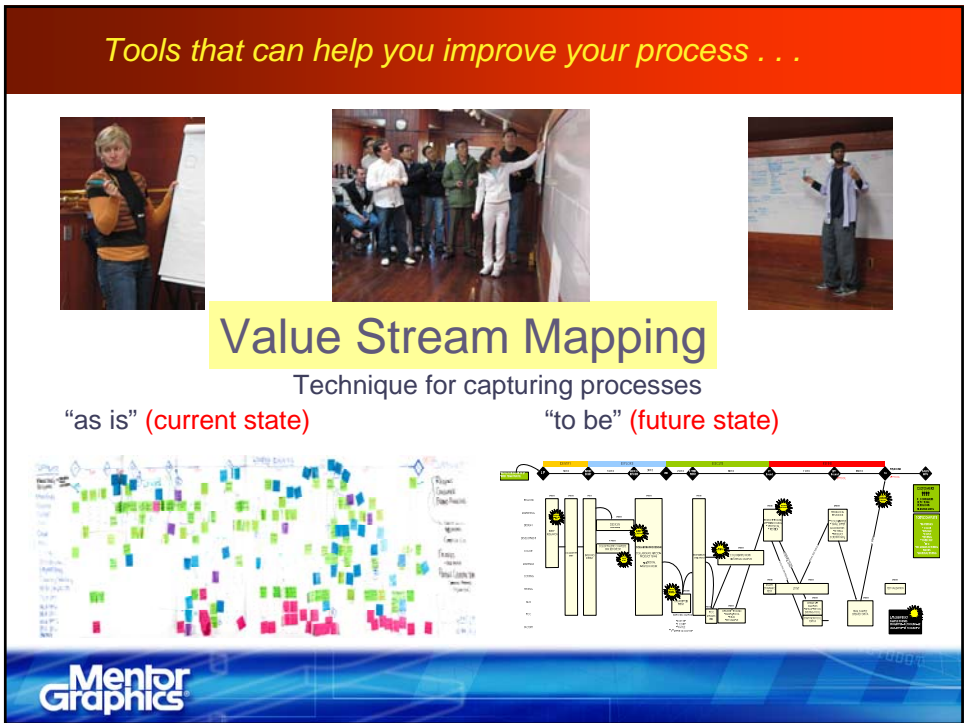
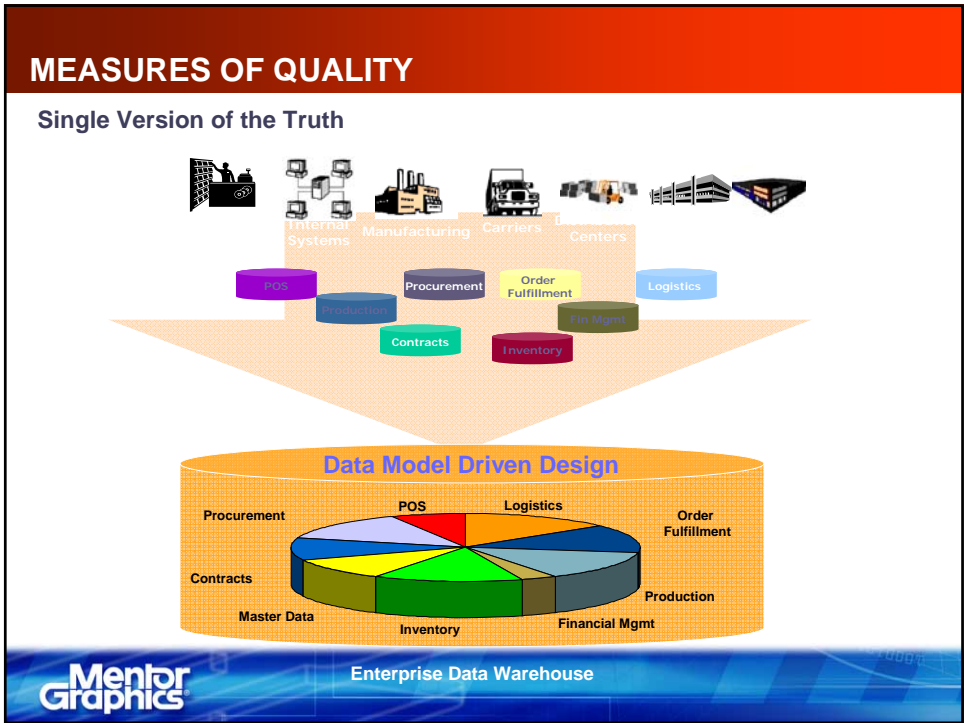
Information Quality Management will focus on the following activities:

Information Quality	Data Modeling	Data Stewardship	Business Process Modeling
<ul style="list-style-type: none"> ❖ Meta-Data Content ❖ Data Standards ❖ Data Architecture ❖ Goals & Metrics 	<ul style="list-style-type: none"> ❖ Conceptual ❖ Logical & Physical ❖ Business Rules ❖ Entity/Attribute Definition 	<ul style="list-style-type: none"> ❖ Data Remediation ❖ Data Scrubbing ❖ Data Governance ❖ Data Standards Compliance 	<ul style="list-style-type: none"> ❖ Identify business process owners ❖ Model the business/system processes ❖ Measurement & Analysis

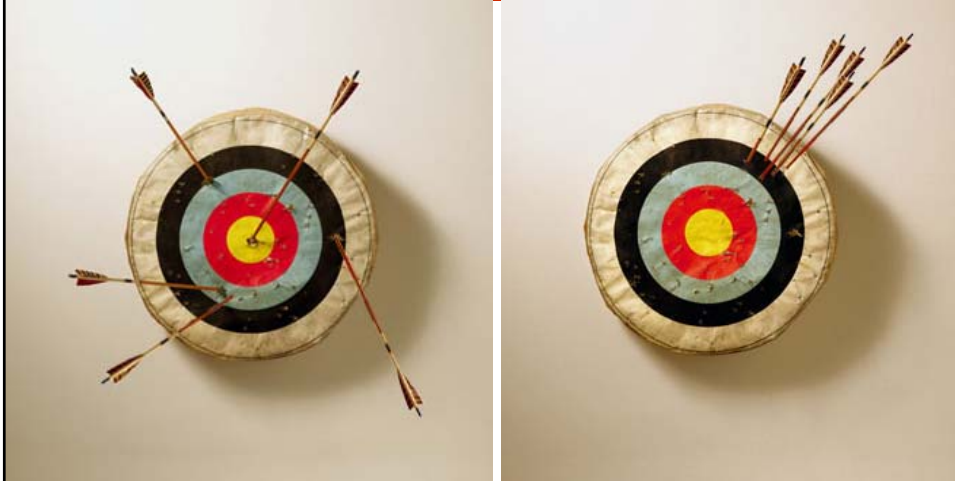


Business Processes



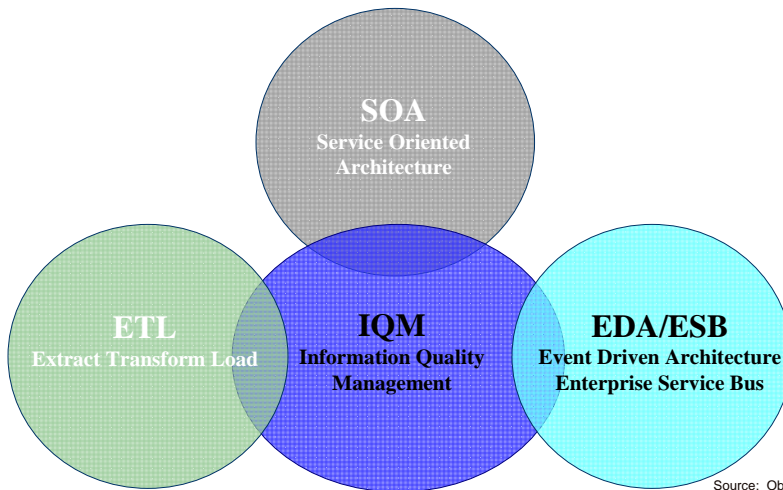
Stabilize before you Improve



Which player did better in this round?
Which is likely to do better after several rounds of play?



Coupling Principles

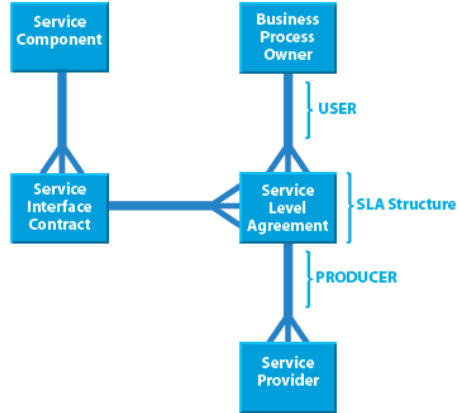


Source: ObjectRiver



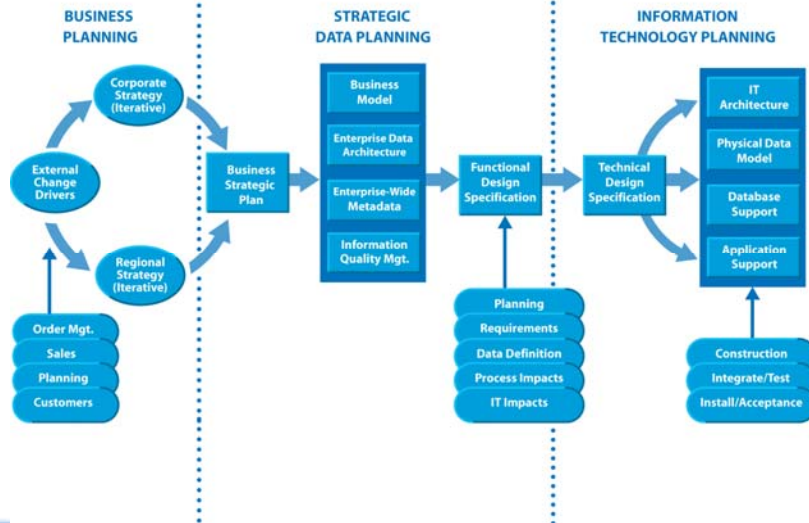
Service Level Agreement

✓ A SLA is a formal negotiated agreement between two parties.

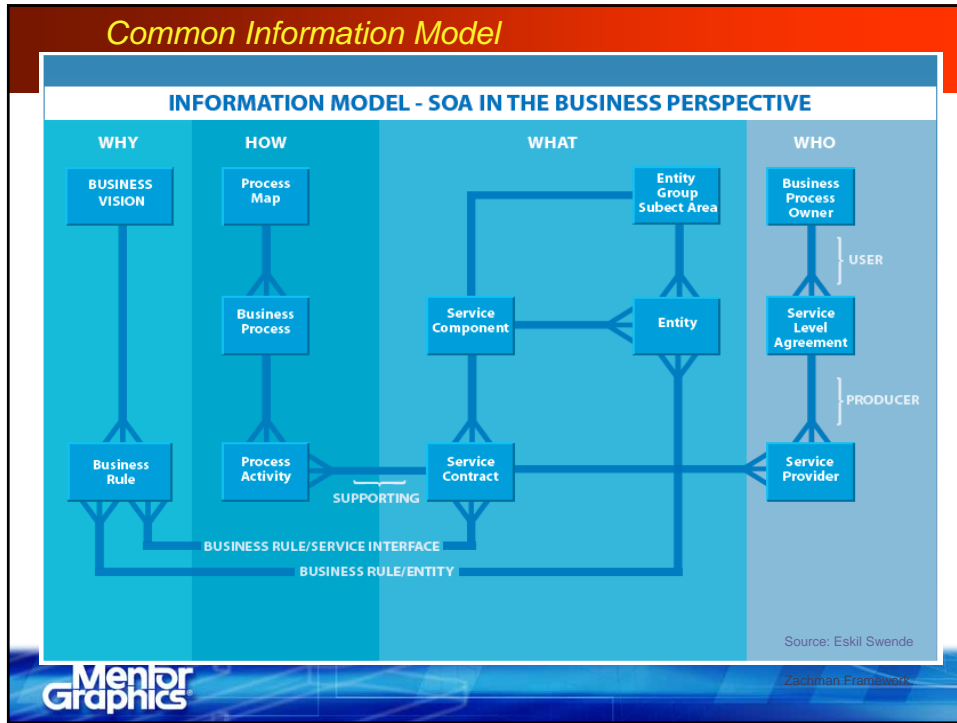


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Information Quality Management Strategy drives SOA



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Master the Art of Problem Solving

- **Develop a hypothesis and test it.**
- **Check results and adjust your plan.**
- **Be relentless in pausing to learn from “what just happened?”**

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What now . . . ?

Taking it back to the
job . . .



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*Quality Information as a Service for SOA -
Questions?*



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