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ICIS 2007 Panel

Service Orientation: Overview of Service Computing and Service Management

Panel: Bridging Service Computing and Service Management: How MIS Contributes to Service Orientation?

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Panel Overview

- J. Leon Zhao, Eller Professor, Dept. of MIS, University of Arizona: Service Orientation: Overview of Service Computing and Service Management
- Cheng Hsu, Professor, Decision Sciences &Engineering Systems, Rensselaer Polytechnic Institute: Making Information Systems Relevant, Again: A Case for a New Paradigm of Doctoral Programs
- Jim Spohrer, Director of Service Research, IBM: Service Research to Improve/Innovate Service Systems
- Mohan Tanniru, Professor of MIS, Dean of Business, Oakland University: Defining Service to Support Service-Dominant Logic

Three Objectives of this Panel

1. Discuss the need of a unified framework for service computing and management.
2. Identify research issues dealing with challenges enterprises must confront in the era of service computing.
3. Identify opportunities for curriculum changes in MIS in order to train future employees for service-oriented enterprises.

Service Computing: A New Research Frontier

- Service computing has become the new frontier of enterprise computing in pursuit of organizational agility.
- Corporations are implementing significant initiatives to re-orient their IT through service computing.
- Many new and interesting research challenges arise in this area, from technical to organizational to economic issues.
- One such challenge is to align issues of computing and management under service orientation.

Four Tenants of Service Orientation

1. Service boundaries are explicit – Interaction between services may have a cost and is formal, intentional and explicit.
2. Services are autonomous: Services are stable, evolve over time, decentralized, and deployed/managed independently.
3. Services share scheme and contract, not class: Interact solely with schemas for structure and contract for behaviors, maintain service integrity and contracts and schema remain stable over time.
4. Service compatibility is determined based on policy: Separates interactions from interaction constraints, capabilities are expressed in policies, and assertions are uniquely identified.

(Source: Paul Andrew, Microsoft)

Service Computing is Process-Driven

Creating a Platform for Business Agility

"top-down business view"

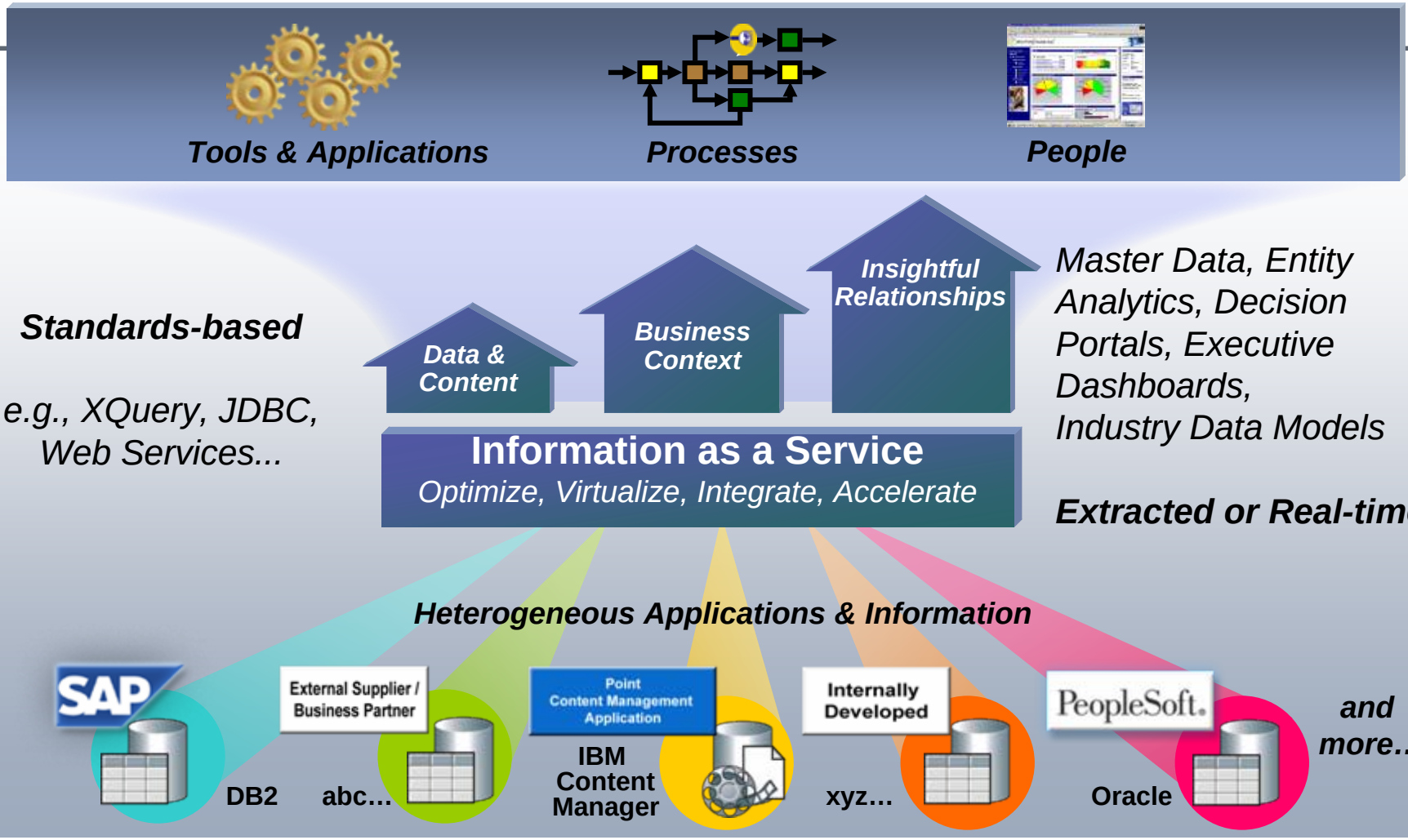
"execute the model"

"service providers"

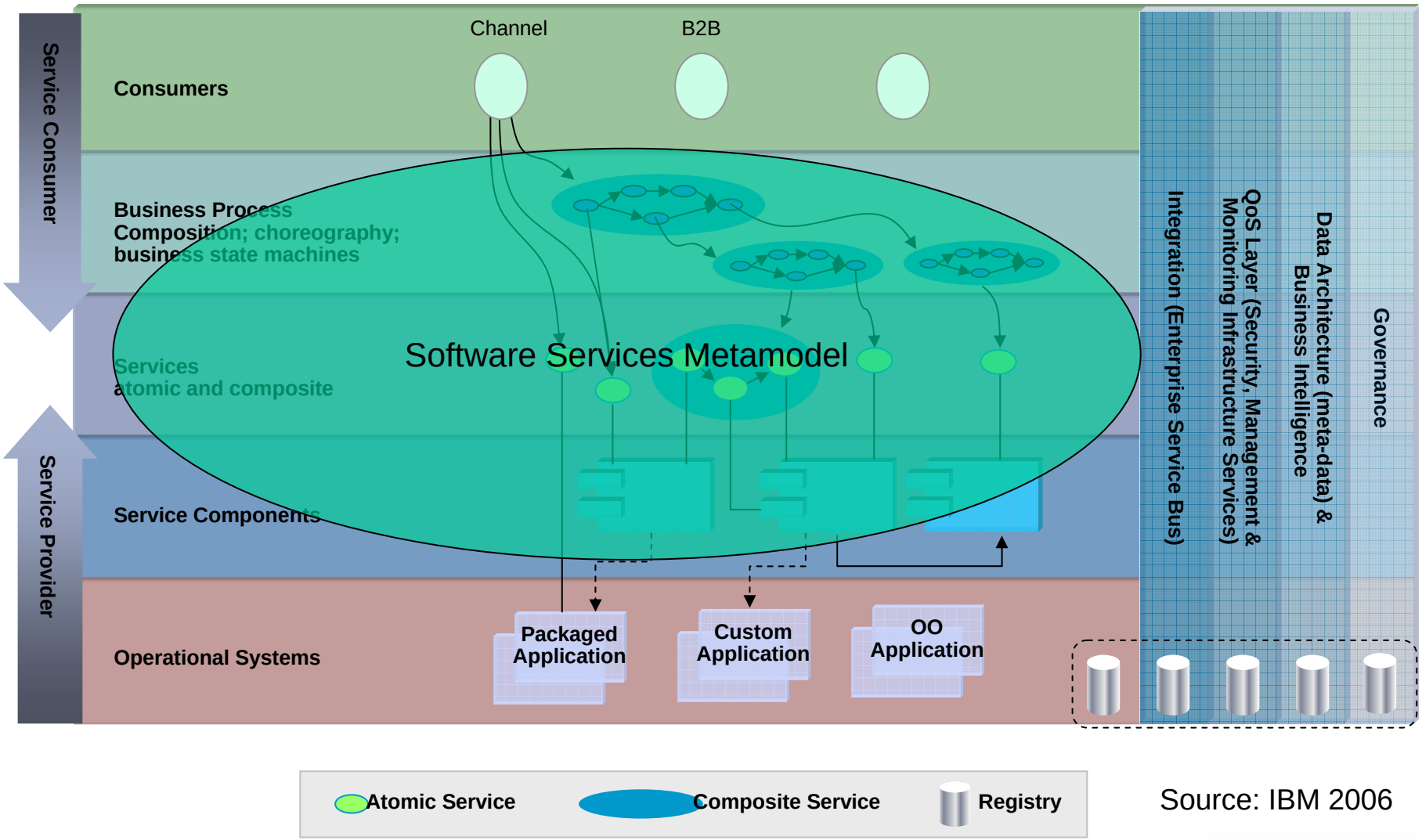
Source: SOA Consortium

Information Computing as a Service

Source: IBM 2006



Service Management is a complex task



Source: IBM 2006

IT Service Management under Service Computing

- ***Policies:*** Alter its policies to support reusing assets from any source and to set specific, measurable goals for levels of reuse
- ***Strategies:*** Move from strategies that are narrowly focused on programs to ones focused on reusable services across the entire enterprise
- ***Processes:*** The software development and capital planning processes need to be altered to make looking for opportunities for reuse a core task
- ***Culture:*** The organizational culture needs to change through a combination of recognition and incentive programs that reward reuse
- ***Governance:*** The company needs to take into account that a service may be used by multiple organizations and put proper SLAs in place

Service reuse is a key driver!!!

Service Orientation, Computing, & Management

- Service orientation: make software behave more like business functions to facilitate information asset reuse and strategic agility
- Service computing: build, maintain, and integrate computing functions as independent services.
- Service management: plan computing strategies, construct information infrastructure, allocate computing resources, and maintain computing functions under service orientation

Lab on Enterprise Process Innovation & Computing

- Transformation of enterprise information systems through service-oriented architectures, Funded by SAP
- Process-driven knowledge management for enterprise software development under SOA, funded by NSF
- Evolutionary management of enterprise software portfolios under service-oriented architectures, in collaboration with Raytheon

EPIC Lab
Enterprise Process Innovation & Computing

http://epic.eller.arizona.edu

Questions We Should All Think About

- Why should the MIS field pay attention to the ongoing revolution in service computing and management?
- How could the MIS field contribute to the emerging service orientation?
- How can various disciplines in engineering and management work together to help the business world move forward in service orientation?
- What might be the overall impact of achieving service orientation on the MIS field?

Will service orientation lead to an MIS re-orientation???