Bridging the GAP: Unified Approaches to Governance, Architecture and Procurement

Jonathan Murray
VP and EMEA Chief Technology Officer
Microsoft Corporation
jmurray@microsoft.com
Critical for Institution’s Strategic Success
2000–2005

Source: http://www.educause.edu/ir/library/powerpoint/CI5in05.ppt
What Senior IT Leaders Spend Most Time On 2000–2005

Source: http://www.educause.edu/ir/library/powerpoint/CI5in05.ppt
Expenditure on Human/Financial Resources
2000–2005

Source: http://www.educause.edu/ir/library/powerpoint/CI5in05.ppt
Higher Education IT key challenges

**Governance**
- Strategic Planning for IT
- Faculty Development, Support, and Training
- Governance, Organization, and Leadership for IT

**Architecture**
- Security and Identity Management
- Administrative / ERP / Information Systems
- Infrastructure Management for IT
- E-learning / Distributed Teaching and Learning
- Enterprise-Level Portals
- Web Services / Web-Based Systems

**Procurement**
- Funding IT
- Strategic Planning for IT
- Support, and Training
In Plain Terms

**Governance**
- Competing needs of many diverse stakeholders
- More demands than capacity
- Everyone is an IT expert

**Architecture**
- Rapidly increasing systems complexity
- Delivering new services increases complexity
- Operations and maintenance budget growing

**Procurement**
- Severe budget and cost control pressures
- Procurement cycles not responsive to institutions needs
“The GAP Principles”

Best practices in Governance, Architecture & Procurement and the link to effective IT service delivery
Economic pressures of the early 2000s lead leading companies to develop a set of best practices in IT governance, architecture and procurement: “The GAP Principles”

Many HE. institutions continue to implement GAP approaches which leading companies evolved away from in the late 1990s.

HE. Institutions adoption of the GAP Principles would enable accelerated deployment of new services, increased flexibility and efficiency
The GAP Principles

**Governance**
1. *IT is a service provider to the business* - Business units and information technology organizations need to be intimately linked through managed engagement processes.
2. *The Chief Information Officer (CIO) requires real authority* - CIOs need effective authority to mandate architecture standards across organizational boundaries.

**Architecture**
3. *“Good Architecture” demands abstraction* – Good architecture based on XML and underlying open internet standards abstract underlying complexities, maximise flexibility and improve speed of delivery of new services.

**Procurement**
4. *Architecture is the foundation* - A long term strategic model is required for core architecture procurement
5. *Service orientation in architecture enables flexibility* – Shorter term tactical models can be used to procure from smaller, local or specialized suppliers
6. *Service Level Agreements alone do not guarantee success* – Good governance and architecture are required to enable flexible outsourcing
Six Eras of Enterprise Computing

- Pre mid 1970s
  - Centralised Big Iron.

- Mid 1970s to mid 1980s
  - The Emergence of Departmental Autonomy.

- Mid 1980s to the mid 1990s
  - The Power of the End User.

- Late 1990s to early 2000s
  - The Dominance of the Internet.

- 2001
  - The Crash

- 2001 to Present
  - The Recovery
Late 1990’s: The IT “Abyss”

- IT spending growing rapidly.
- Operations and maintenance dominating IT budgets.
- Complexity of distributed computing environment is exploding.
- Ineffective new development.

Source: 1997 Research study by McKinsey and Company
Late 1990s to early 2000s
Dominance of the Internet

- Architecture
  - Web/Internet Distributed Computing
  - Browser based delivery
- Governance
  - Anarchy
- Procurement
  - “One of Everything”
  - “Boutique” Development Services
Three Catalyst Events

- Remediation of computing systems to address the Year 2000 bug.
- The terrorist attacks of September 11th 2001.
The Present

Leading Companies Today

- Architecture
  - The Web as “Fabric”
  - Application abstraction through Service Orientation
  - Systems abstraction through Virtualization

- Governance
  - Federal
  - Architectural “Hegemony”

- Procurement
  - “Strategic Partnership” => Standardisation
  - The rise of shared service models
Core Internet Open Standards

- **TCP/IP – Transmission Control Protocol/Internet Protocol**
  - Basic communication protocols which enable two machines to exchange packets of information with each other across the internet

- **HTTP – HyperText Transfer Protocol**
  - The basic protocol upon which the World Wide Web is built which enables the servicing of requests for information between browsers and web servers

- **HTML – HyperText Markup Language**
  - The language used to define how information is displayed in a browser on the World Wide Web

- **XML – eXtensible Markup Language**
  - A language which is used to facilitate the exchange of structured information between two or more applications or systems.

- **SOAP – Simple Object Access Protocol**
  - A protocol based on XML which enables the remote execution of a services between one system and another.

- **WS* - Web Services** *
  - A collection of foundation services based on SOAP and XML which facilitate the building of robust distributed applications over the internet infrastructure.
Benefits of “Good Architecture”

- Abstraction of complexity
- Vendor Neutrality and Interoperability
- Speed to service delivery
- Cost efficiency
- Flexibility
- Extensibility
Benefits of Abstraction

- Company Application Portfolio
  - Customers
  - Application 2
  - Application 3
  - Partner Application

- Service Oriented Architecture
  - Based on core internet Open Standards

- Physical and Operational Infrastructure
  - System 1
  - System 2
  - System 3
  - System 4
GAP Principles: Benefits for Higher Education

**Governance**

Federal governance models balance the need for centralized control for cost and service quality reasons whilst increasing flexibility through devolution of responsibility for delivery of departmental services.

**Architecture**

Abstraction through implementation of “Good Architecture” (loosely coupled, service oriented) enables flexible, efficient, new service delivery and the opportunity to rationalise and hide underlying complexity.

**Procurement**

Federal governance and “Good Architecture” enable flexible and responsive procurement permitting the implementation, or adoption, of shared service models.
Summary

**Governance**
- Integration with core HE management
- Strategic planning and direction
- CIO’s with real authority
- Funding

**Architecture**
- Maximized abstraction
- Loosely coupled
- Common security & Identity Management

**Procurement**
- Smart, flexible procurement
- Focus on whole system & lifetime costs
- Partnerships for value creation
GAP Principles & Value Creation

Today's IT

30% New Capability

70% Sustaining & Running Existing Capability

Desired IT

Increases Value Creation

45% New Capability

55% Existing Capability

Decreases Maintenance & Delivery

Do More With Less

Source: Accenture IT Spending Survey