Can University Administration Systems be shared via the Cloud?

BUSINESS SCHOOL

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Two key issues: the cloud and sharing

› "Academe heads for the cloud, with collaboration firmly in mind"

- John Ross, the Australian Higher Education, 3rd April 2013

› Why cloud?

- To save costs

- To fulfil other strategic needs

› Why share?

- Because Universities can do so in areas where they do not compete

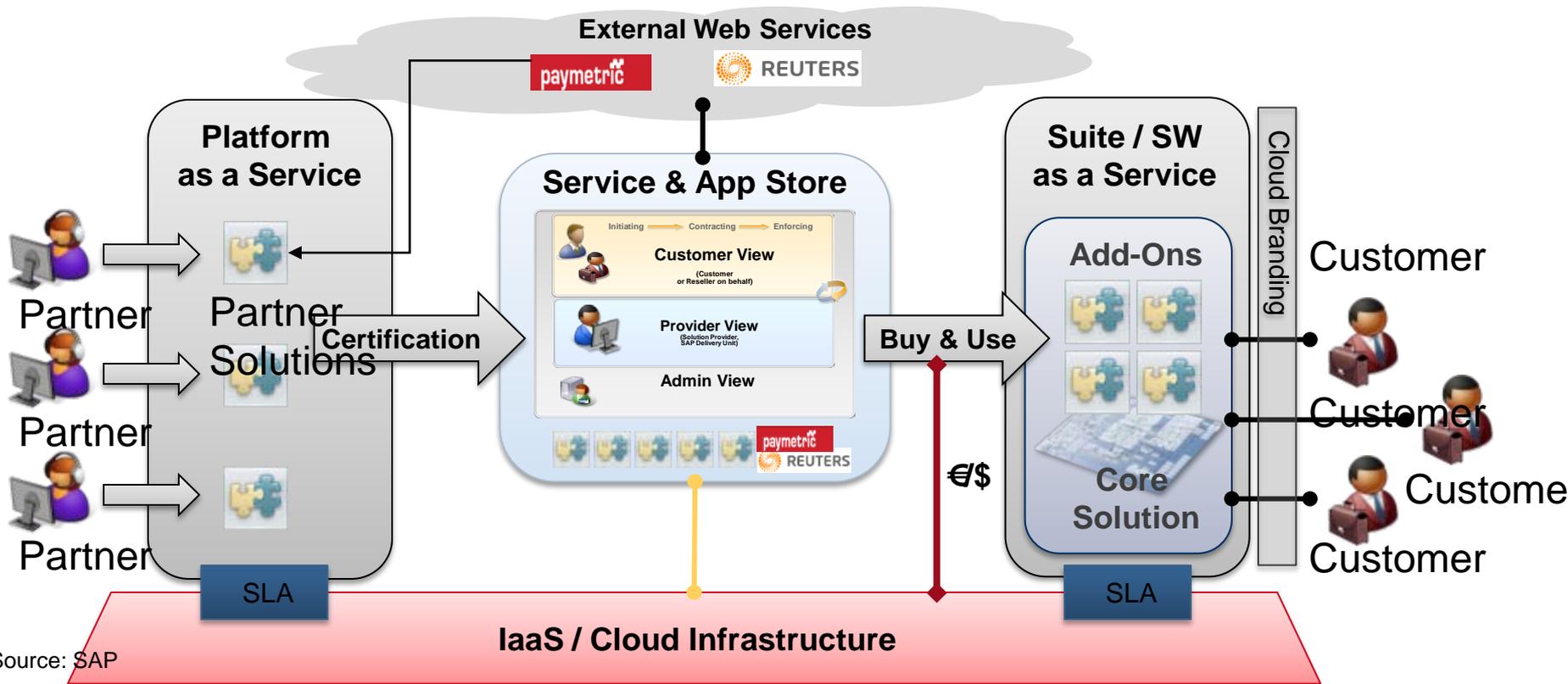› But will this work for University Administrative Systems?

1. Do UAS fit cloud-based models?

2. Would the cloud enhance the strategic advantages of UAS?

3. Sharing – lessons from history

4. Systems integration, interfaces and overlap

5. Thoughts on the dynamics of the future

The Dynamics of the Cloud

Service characteristics of the Cloud

Characteristics	Details
Standardised	• Standard offering defined by service provider, with little or no customization outside the offering
Always available, and scales automatically to adjust to demand	• Resilient, and highly available • Service provider offers massive capacity, such that any given customer can get as much capacity as they need at a given moment – and give it back when not needed
Pay-per-use or advertising-based	Free or pay-per-use, usually without long-term contracts, setup charges, or exit fees. The service is paid for in one of three ways 1. Advertising, usually for consumers 2. Subscription, billed by availability per unit of time, such as a month or less 3. Transaction, billed for actuall usage, such as minutes of computer time, gigabytes of network bandwidth, or gigabytes of storage
Offers full customer self-service	• Customers can provision, manage, and terminate services themselves, without involving the service provider • Control is via a Web interface or programmatic calls to service APIs.

Staten and Schreck 2011

Vendor feasibility: not the same for all systems

Characteristics	Student admin	Research admin	Finance	HR*	SRM*	Library	LMS*
Standardised capability	**No**: Australia – specific, much inter-Uni variation		**Maybe**: some Functionality shared with other sectors/ countries		**Yes**: features can be offered in a fairly standardised way		
Broad user base	**No**: About 10 sites per system		**Maybe**: between 40 and 180 sites, say.				
Short-term contract	**No**: Complex, unique process, db of record		**Maybe** complex legal and other requirements embedded		**Yes**, although there would be learning curves for users and some		
End-user negotiation (excluding IS)	**No:** Complex security and integration with other systems				**Maybe:** important security and integration issues		

HR: Human Resources
SRM: Student Relationship Management
LMS: Learning Management System

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Strategic demands

Support for academic innovation

Rich student learning experience

Integrated student experience

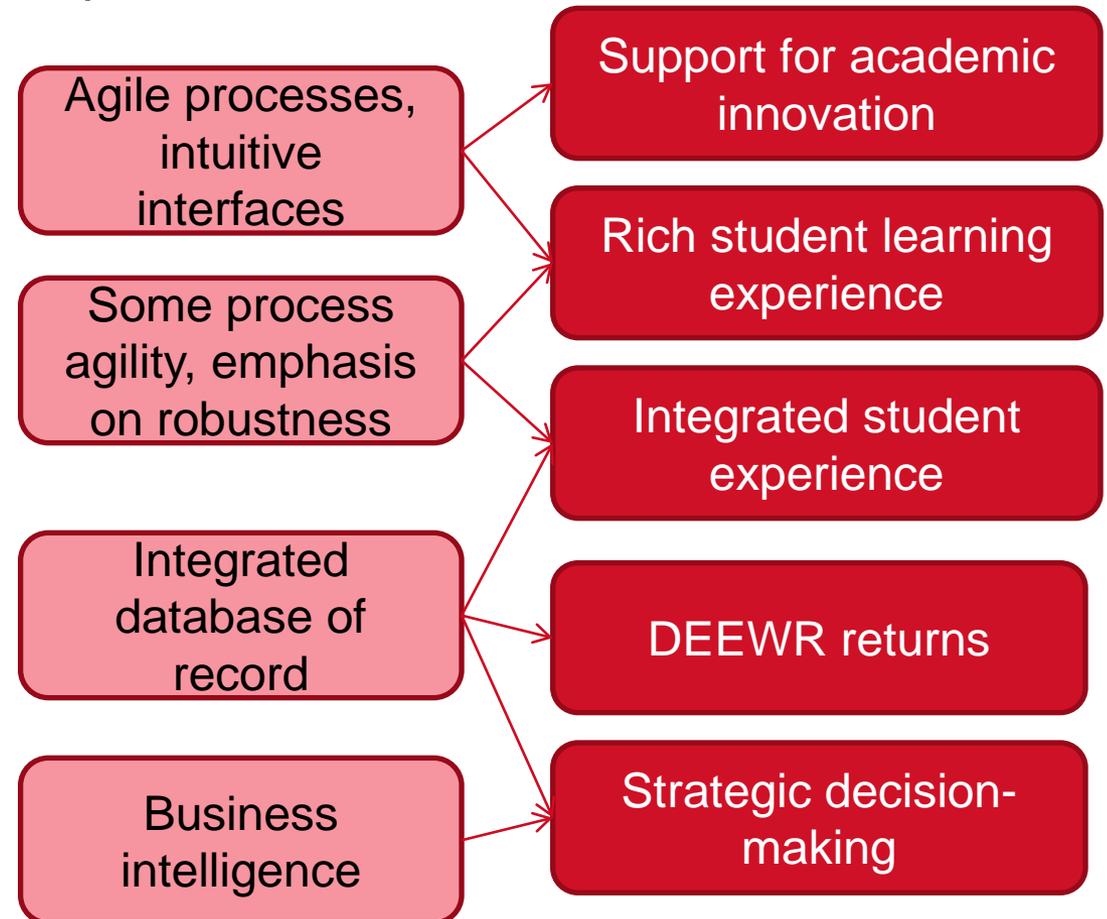**DEEWR returns**

Strategic decision-making

Strategic demands of systems

System requirements

- Agile processes, intuitive interfaces
- Some process agility, emphasis on robustness
- Integrated database of record
- Business intelligence

Strategic demands

- Support for academic innovation
- Rich student learning experience
- Integrated student experience
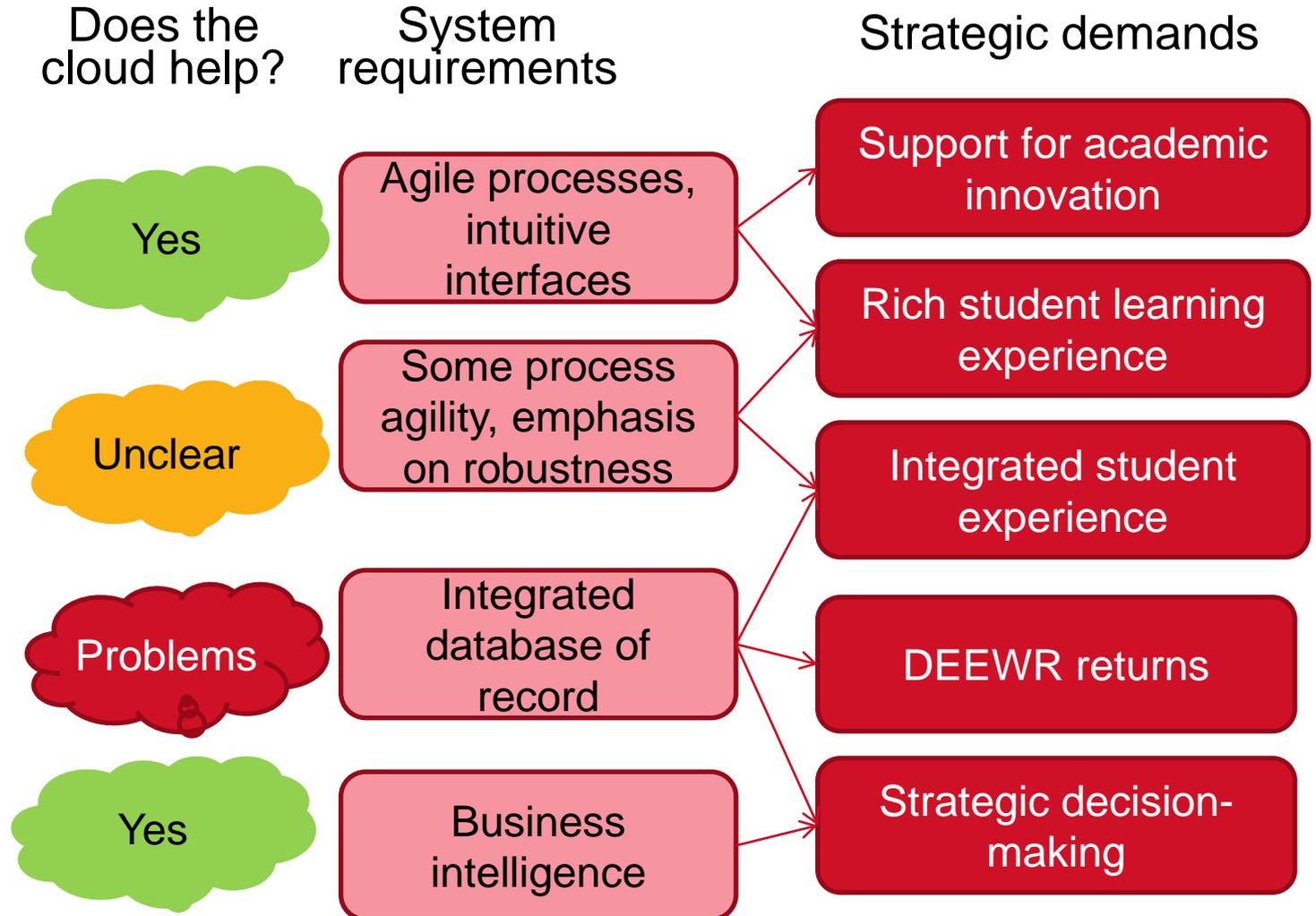- DEEWR returns
- Strategic decision-making

Strategic demands of systems

Does the cloud help?	System requirements	Strategic demands
Yes	Agile processes, intuitive interfaces	Support for academic innovation
Unclear	Some process agility, emphasis on robustness	Rich student learning experience
Problems	Integrated database of record	Integrated student experience
Yes	Business intelligence	DEEWR returns
		Strategic decision-making

Strategic demands of systems
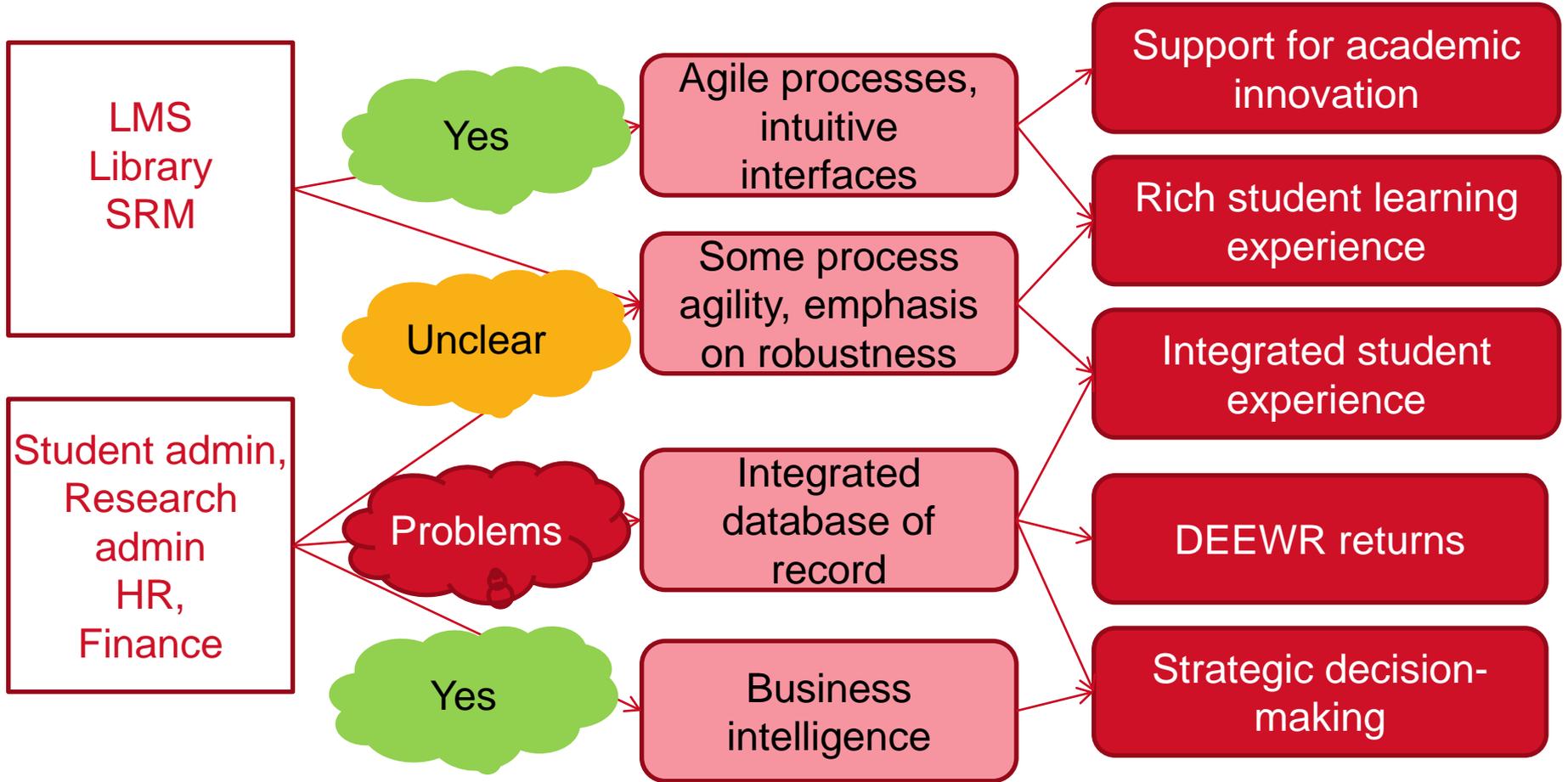
Customer demand – not the same for all systems

Characteristics	Student admin	Research admin	Finance	HR*	SRM*	LMS*	Library
Frequent users, demanding rapidly changing interfaces as part of info infrastructure	Links with SRM may be visible to students	Very few users in this category			An everyday part of students lives, and a frequent source of innovation by academics and administrators		
Infrequent users, needing simple interfaces	Most staff need relatively simple access to these systems						
Power users, heavy use and integration requirements	Considerable use by administrators who require complex integration			Relatively complex use by some users	Relatively little requirement for complex, integrative requirements		

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› Consortium approaches

- Australia: CASMAC1988 – late 1990s

- UK MAC 1980s

- France Gigue

- Holland SUAA, SURG, SUNCOO

- Sweden LADOK 1980s – still in use

- Finland 2000a Oodi – still in use

› Shared vendors

- Australia: Callista, Oracle/Peoplesoft, Technology One, others

- UK: SITS, Oracle/Peoplesoft

- Denmark Uni-C STADS (all eight unis)

- USA; Oracle/Peoplesoft

› Sharing is hard!

› Most sharing is limited to a particular country

› Historically, there has been much debate about what should be in specific administration systems

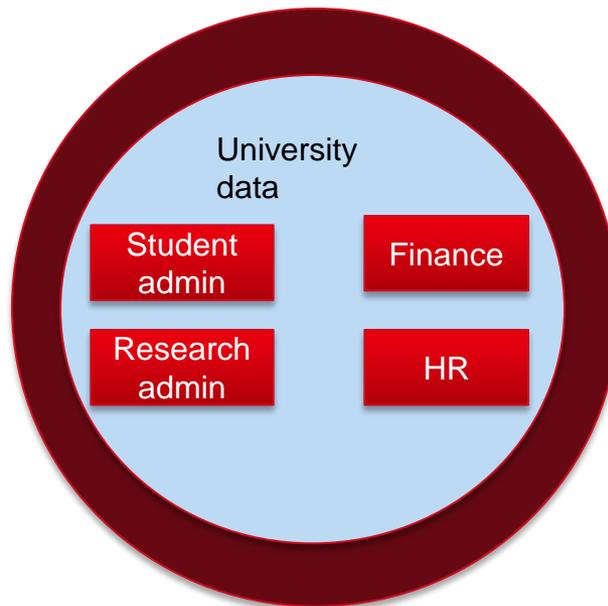› Models of development include shared development, and specific user modifications

Systems integration, interfaces, overlap

Cloud-based returns to government

DEEWR returns

Cloud-based business intelligence

Business intelligence

University data

Student admin

Finance

Research admin

HR

Cloud-based student/staff information ecosystem
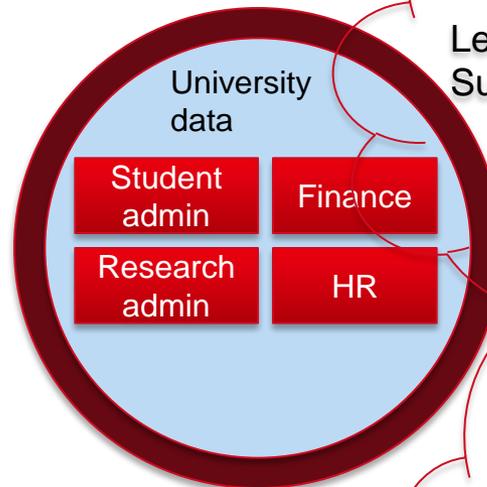
Learning Management systems Summon

Cloud-based administrative systems

Student relationship management
Staff recruitment
Student recruitment
Expenses management

Cloud encroachment, perhaps?

DEEWR returns

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Some questions

› How will core systems develop?

- Negotiation for less in core systems, as extra functionality comes from the cloud?

- Vendor models for maintaining systems?

- Pressure on governments to be more globalised in their demands of universities?

› Who will have control of software licensing?

- End users in the business units buying software directly from vendors?

› Who will have responsibility for integration and security?

- University IS/IT units?

- Other vendors?

Pressures affecting the rate of change

› Individual University motivation for change

- Change fatigue

- Unclear case that cloud based UAS provide strategic advantage

› Retaining a viable business model for vendors

› External pressures

- Changes to the digital ecosystem (Finger 2010)

- Globalisation of the HE sector

- Attitude of government

Different potential cloud solutions

Type of system	
Core administrative systems, university specific (Student administration, Research administration)	Community cloud, specific to Australia, limited number of vendors, Data held according to Australian law
Core administrative systems, used in a broad number of sectors (Finance, HR)	Private cloud. Data held according to Australian law
Peripheral administrative systems (SRM)	Private cloud, some links with public cloud
Academic support systems (LMS, library)	Private cloud, some links with public cloud