

# UW meets the Cloud

**Strategic issues & choices:**  
**lifting the fog around our institutional role**

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# Presentation Objective:

- Information: **background & status**  
→ focus on institutional role, not cloud technology tradeoffs
- Action: **validate strategic approach**  
→ “UW Tech Recommendations”



- Background 10m
- Strategy 10m
- Status 10m
- Discussion 30m

# What is Cloud Computing?

aka "utility computing", "SaaS"

- **Usually** web-based apps running "*elsewhere*"
  - Early examples: **Hotmail** (1994) **Salesforce** (1999)
  - Also "**platform services**" -renting computing/disk
- **Not** traditional "outsourcing the IT dept"
  - But it **impacts** current dept'l & central IT svcs
- **Both** consumer and enterprise services
  - Many **vertical apps**, e.g. PCI, CRM
- Think **timesharing service bureaus**, but with new technology and ***new business models***:
  - **Low cost** via high-scale, uniform tech & contracts
  - Hybrid "free & fee"; **low-touch** DIY support

# Motivation

- **Individual**
    - *Effectiveness*: convenience, flexibility, resilience
    - e.g. cross-org collaboration; episodic calculations
  - **Institutional**
    - *Efficiency*: reduce IT costs; raise PI effectiveness
    - e.g. reducing datacenter & support costs
- ***This is where our students/fac/staff will be!***
- ***Many of them seek a more “integrated life”***

# IT Evolution

from artifacts to abstractions

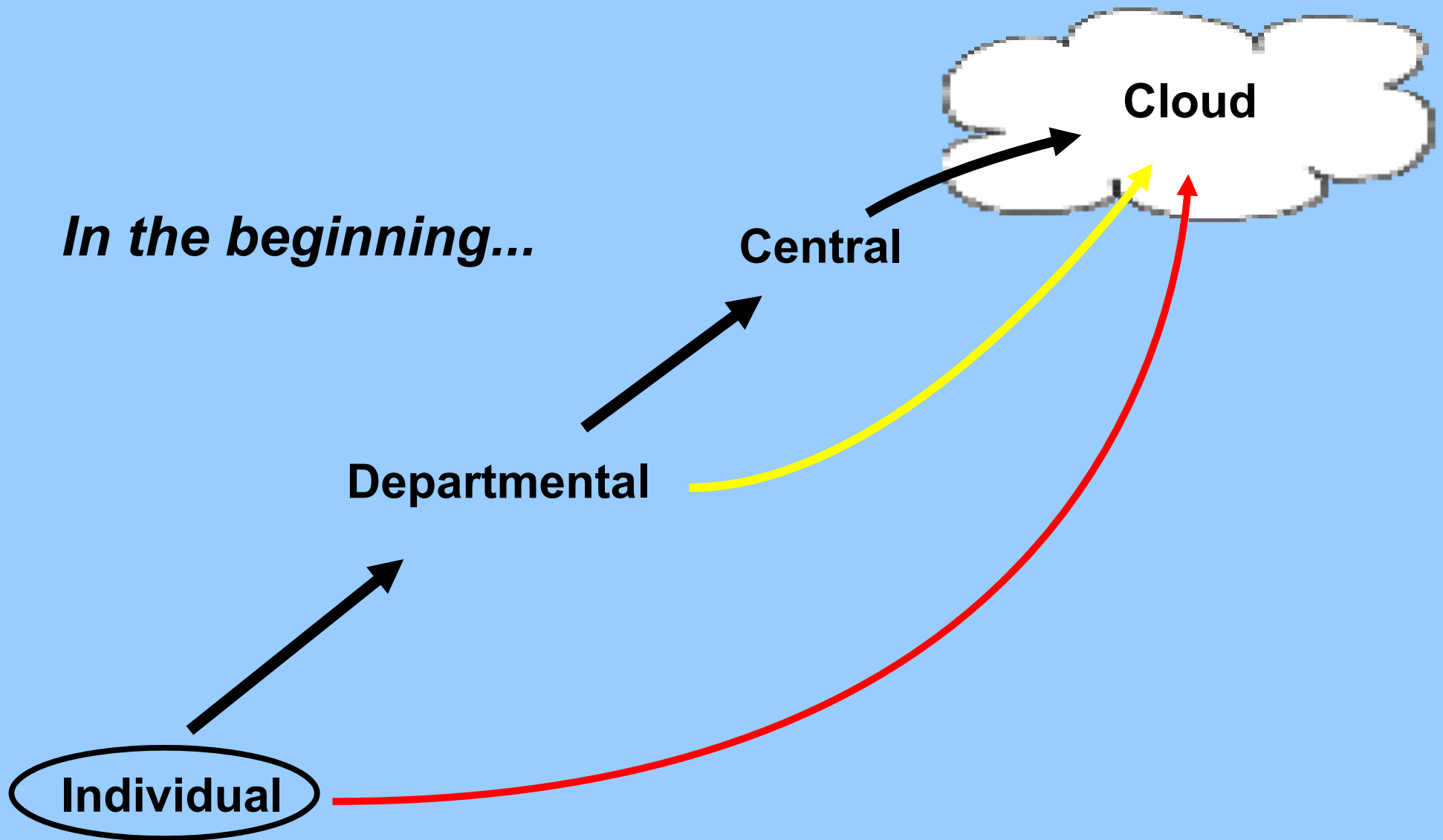
- **Build** *e.g. Pine*
- **Buy** (a right to use) *e.g. Exchange*
- **Borrow** (open source) *e.g. Thunderbird*
- **Barter\*/Rent** (cloud svcs) *e.g. Gmail*

*The last two are transformational, especially in bad times*

\* eyeballs for ads

# IT Evolution

Who ya gonna call (for commodity IT)?



*In the beginning...*

Central

Departmental

Individual

Cloud

Goodbye "IT priesthood"... Hello "Consumer Computing"

# Part II: Strategy

# Strategic Assumptions

- **Cloud computing is transforming IT**
- **Cloud usage is growing & unstoppable**
- **Institutional risks are greater if we do nothing**
- **Central role:** enable, increase compliance, usability

***Key questions:*** How much central integration & support?  
Lead, follow, or get out of the way?

# Institutional Goals

for any central cloud computing role

## Increase:

- **Compliance** (e.g. eDiscovery, FERPA)
- **Cost savings / avoidance** (e.g. datacenter)
- **Individual effectiveness ...**
  - IAM integration (e.g. group mgt)
  - Application integration (e.g. calendar, Catalyst)
  - Cross-vendor interoperability

# Institutional Risks

- **Operational** (service or business failures)
  - Individuals have biggest stake here *for now*
- **Financial** (surprise support or integration costs)
  - High-touch support model could kill future savings
- **Compliance** (failure → liability cost)
  - Primarily unauthorized disclosure of sens. Info
  - Limited forensics ability → notification cost
  - Ability to respond to legal requests for data

**NB:** 1) these kinds of business risks are **uninsured**

2) departments assume \$\$ liability for failure to comply w/UW policies

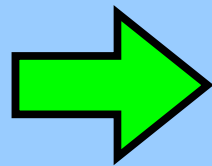
3) data guidelines need to cover all cases, not just **cloud computing**

# Risk Mitigation

compared with status-quo

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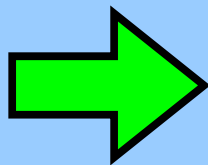
Inability to respond to eDiscovery request



Partner contracts provide for “admin” accounts

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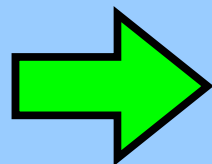
Disclosure of confidential data



Data security guidelines to define appropriate cloud use

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Inability to comply with FERPA



Contract terms added

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# Example Policy Choices

(save for later discussion)

- Appropriate use? (e.g. HIPAA, GLB, classified?)
- Partners: who and how many?
- Service eligibility: who and for how long?
- Premium services: how to fund/bill?
- Name spaces: common or free-for-all?
- Password policy: Same, different, don't care?
- User support tools: integrated or separate?
- Departmental or UW branding & administration?

# UW Tech Recommendations

for central IT role to add value, reduce risk

- **Lead & Follow**
  - **Encourage** cloud use; **Partner** w/MS, Google, Amazon
  - **Provide** expertise & coordination; **Assist** policy efforts
- **“Get out of the way”**
  - **Facilitate** master contracts meeting UW & dept needs
  - **Enable**, don't mandate; soft-launch
- **Moderate Integration** (IAM and application)
  - **Balance** usability/compliance goals w/TCO
  - **Avoid** both too little/too much; slippery slopes
- **Minimum User Support**
  - **Manage** *central* “Admin” accounts
  - **Embrace** low-touch DIY support paradigm

# Is There Consensus?

- UW should encourage use of cloud services, consistent with compliance obligations
- UW risk is reduced by executing partner contracts and incenting their use
- UW should leverage the cloud's low-cost user support model as much as possible

# Part III: Status

# Cloud Status @ UW



AHEAD OF THE LEARNING CURVE



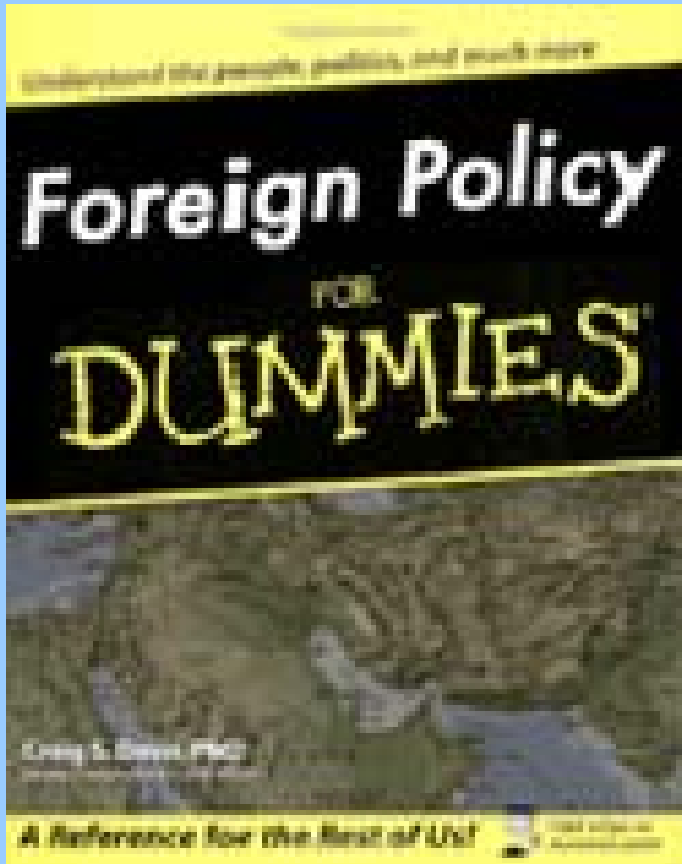
# Widespread Use @ UW

- 50% of students forward their UW email to cloud
- Popular cloud apps:
  - **Facebook**: 64K UW users; now big in classes
  - **Google** Gmail, Docs, Calendar
  - **Windows Live** (esp. Messenger)
  - **Doodle** (meeting scheduler)
  - **Blackboard online** used by Foster & UWB
- Platform services
  - **Amazon** EC2/S3
  - **Slicehost**

# Partner Engagement

The Google logo, featuring the word "Google" in its signature multi-colored font (blue, red, yellow, blue, green, red) with a trademark symbol (TM) to the upper right.The Microsoft logo, consisting of the word "Microsoft" in a white, italicized, sans-serif font centered within a solid blue rectangular background.The Amazon Web Services logo, featuring a cluster of orange isometric cubes on the left, followed by the text "amazon" in a bold, black, lowercase sans-serif font, and "web services" in a smaller, black, lowercase sans-serif font below it, with a trademark symbol (TM) to the upper right.

# Policy Development



- Initial use guidelines under review by PASSSC
- DMC policy drafted
- Google pilot MOU being drafted with CSE
- Communication & education plan: not started

***Larger need:*** update standards & guidelines to address all cases: **local, external & mobile data**

# Potential Projects

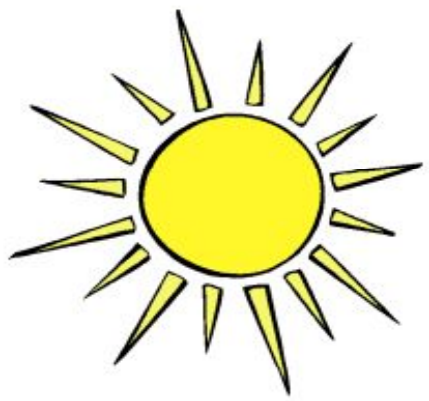
- UW Technology
  - Further coordination & consulting
  - Alumni email phase II
  - Microsoft live @ edu & BPOS deployments
  - Google “Apps for Edu” campus deployment
  - Amazon connectivity issues
  - Additional Catalyst / Google integration
- DMC, CISO, AG, & PASS Council
  - Guidelines for data protection & acceptable use
  - Risk education campaign

# Next Steps

- **Today:** validate strategy, “UW Tech Recommendations”
- **March:** updates on...
  - **TECHNOLOGY**
    - If U-TAC agrees with approach, UW Technology will prioritize and scope proposed projects.
    - Tactical policy questions will be surfaced and resolved during project discovery process.
  - **POLICY**
    - *Immediate:* guidelines on acceptable use
    - *Long-term:* UW policies & standards will be evolved to incorporate appropriate constraints

# Recap

- **Cloud computing is transforming IT**
  - Already widely used by UW individuals
  - Emerging as integral to research & teaching
- **Key concern: institutional risk management**
  - Data protection guidelines needed for *all* cases
  - Risk of status quo >> risk of partnership
- **Key questions re central role (compliance, usability)**
  - How much central integration & support?
  - Lead, follow, or get out of the way?



# Discussion

## **UW: meeting the cloud head-on**

For more background on cloud computing:  
<http://staff.washington.edu/gray/cloud.ppt>

# UW Tech Recommendations

U-TAC Action: Does this strategy look right?

- **Lead & Follow**
  - Encourage cloud use; Partner w/MS, Google, Amazon
  - Provide expertise & coordination; Assist policy efforts
- **“Get out of the way”**
  - Facilitate master contracts meeting UW & dept needs
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