TECHNOLOGY SUPPORT: CONTINUOUS IMPROVEMENT

DAN EWART, VP FOR IT AND CIO

OCTOBER 2018
CURRENT STATE

Statewide information technology (IT) support at UI is provided through 140+ hard-working employees both inside and outside Information Technology Services (ITS). Decision making and budgets are also decentralized, leading to challenges in coordinating efforts to achieve UI’s priorities in our very complex environment. This situation has evolved over time for a multitude of reasons.

Changing the model for IT support could help UI in many ways.

IT and ITS

- Roughly 50-50 split in tech employees between ITS and units/colleges, likely more without tech titles
- “The Cloud” has blurred the lines of tradition ITS support
- ITS has many statewide responsibilities

Budgets

- ITS funded for operations, not new projects or infrastructure replacements
- “Rich versus poor” departments create technology gaps
- Many purchases with on-going expenses made through one-time funds

Decentralized Decisions

- Prioritization often done from a unit rather than an institutional perspective
- Often “first in, first out”
- Based on budget available to a unit
- Many duplicative solutions

Coordination

- Extremely complex environment
- ITS often involved late, slowing down or stopping projects
- Limited communication between unit technology teams
- Security and compliance issues
WHY CHANGE IT SUPPORT?

- Some unhappiness with level, consistency and speed of support
- Continued high expectations of technology support exceed what is possible with current resources
- Decentralized support creates risk, silos of expertise, lack of vision on institutional technology spend and duplication of efforts/costs
- Minimal institutional prioritization of effort for technology professionals creates extended and sometimes unsuccessful technology implementations
- Requirement to maintain what we have with strong desire for new systems and capabilities
- Security and compliance concerns are growing in number and impact
- Higher costs as we do not take advantage of economies of scale in purchasing and we support a broad set of non-standard technologies
- UI is unlikely to identify significant new resources in the near future, yet needs increase
WHY CHANGE IT SUPPORT?
RESPOND TO STATE IT INITIATIVES

Governor’s 2015 and 2016 executive orders on cybersecurity
Centralized IT for State agencies as of July 2018
Centralized purchasing for many technologies as of August 2018
SBOE’s focus on “systemness”

UI needs to be poised to respond to anticipated future changes.

Dear Directors,

On July 1, the new Office of Information Technology Services (ITS) was officially launched. The Idaho Legislature created ITS with its approval of House Bill 407 during the 2016 session. The bill had two primary objectives: creating the ITS structure and aligning all the State of Idaho’s statutory IT authority under a single agency. The bill also granted the roles of the Director of Information Security and the Office of the Chief Information Officer, which previously were in the Department of Administration. ITS now is part of the Executive Office of the Governor and is led by Director Jeff Weak and Deputy Director Greg Zibich.

My goal is to consolidate, streamline, and improve our IT services. In doing that effort, ITS will find ways to make IT more uniform, interchangeable, and user-friendly throughout State government. It will also develop and implement more functional solutions for our cybersecurity, email, network operations, help desk and telephone needs. All that will be accomplished using a phased approach, addressing each agency individually and ensuring that every unique operational requirement is met.

The consolidation will involve all of Idaho’s Executive Branch agencies shifting from the role of IT provider to that of consumer, with ITS leading the way in addressing our shared challenges. By doing so, agencies can focus on their core operational functions in providing efficient, innovative services to our citizens.

ITS now is a reality, but significant planning remains to be done. One of the first steps is for ITS to review and approve all current IT procurements and contracted services. The intent is to standardize solutions across agencies in order to save taxpayer dollars and remove some of the parallel IT products we use.

My expectation is that you and your agency will fully support the efforts led by ITS. Agency input is vital to building an effective strategy and will ensure our success.

I’m excited for what the future holds for the State of Idaho’s IT. I’m convinced this initiative will better protect our citizens’ sensitive personal information, improve public services, help drive down taxpayer costs, and make all of us lives a little better. Thank you for embracing these important changes.

As Always – Idaho, Esto Perpetua

C.L. "Butch" Otter
Governor of Idaho

State of Idaho
Office of Information Technology Services
Executive Office of the Governor

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P.O. Box 67522
Boise, ID 83750-6752
(208) 334-2200
http://its.idaho.gov

August 6, 2018
Re: Guidance for review and approval of IT purchases

Dear Directors,

This letter provides additional guidance on the review and approval of IT purchases in accordance with the Governor’s letter dated July 5, 2018. As you may know, we are working with agencies under the Idaho Technology Authority (ITA) and the Information Technology Leadership Council (ITLC) to guide the exercise of our authority in establishing common solutions to common technology requirements. Having such solutions in place is an essential step to streamlining and improving our IT operations.

To that end and effective immediately, the following purchases require approval regardless of whether the purchase is made from a state contract; any technology that will be placed at or connect directly to the Chidoni Campus; any IT security product or service; any software purchase exceeding $3,000 (excluding rental or subscription); VoIP components; or Wi-Fi components.

You can initiate the approval process by emailing Jeff Weak (Jeff.Weak@its.idaho.gov). Please include the exact product, price (this may be satisfied by attaching a quote or draft purchase order), and a brief description of purpose. At default, all responses that are not received within two (2) business days will be automatically approved. If circumstances require urgent approval, please contact me, my Deputy (Greg Zibich), or our Chief of Operations (Jim Pope).

The approval process and the items requiring approval will be adjusted as needed. A current list of systems, technologies, or functions requiring approval prior to purchasing will be posted at: https://its.idaho.gov/it-purchase-review-approval/. The list will be updated as appropriate, and we will notify IT managers when changes are made to the list or process.

We appreciate your support with this important change. Please feel free to contact me with any questions or concerns.

Sincerely,

Jeff Weak
Administrator

Pw ms
“We are not focused. Possibly too many initiatives, too much going on. Everything is a priority which means nothing is a priority. Less projects means more focus. That’ll lead to higher impact. Too many initiatives that make programs and people uncertain, need to simplify.”
## Layers of IT Efforts

### Remain Functional

- User technology support, upgrades and maintenance
- Application support, upgrades and maintenance
- Infrastructure upgrades and maintenance
- Continuous improvement on processes and policies
- Many more...

| Transformational Improvements  | "Leap Ahead"
|-------------------------------|----------------|
| Strategic Improvements        | "Move Forward"
| Technology Baseline Improvements | "Catch Up"
| Baseline Activities           | "Remain Functional"
LAYERS OF IT EFFORTS
CATCH UP

<table>
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<tr>
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**Catch Up**
- Online education
- Tighter system integration
- Collaboration and document sharing tools
- Security and data protection tools
- Student retention and faculty management tools
- Mobile functionality
- Mission continuity and disaster recovery
- Many more...
LAYERS OF IT EFFORTS

MOVE FORWARD

**Move Forward**
- Research computing and data management coordination
- 100G state network
- Improved technology coordination across Idaho higher ed
- New cloud-based data analytics systems
- Enhanced mobile functionality
- Optimized user experience based on role
- Next level eSports
- Many more...

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LAYERS OF IT EFFORTS

LEAP AHEAD

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**Leap Ahead**

- Blockchain technology innovation
- Real time student retention analytics through AI
- Work, teach, research anywhere to address staffing issues
- New applications of voice control devices and Internet of Things (IoT)
- Many more...
## SPENDING OUR TIME

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- We need and want to spend more time here
- We spend the vast majority of our time here

With limited and finite resources, how can we best move forward?
## MOVING FORWARD WITH “BEST USE”

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### Best Use

- We need to do **more** than just continuous improvement on ITS processes and procedures.
- “Best use” means optimizing how we use our available financial and personnel resources **without** adding any additional cost or requiring more resources.
- Focusing on “best use” **now** will provide more resources for moving forward and leaping ahead.
# COMPONENTS OF "BEST USE"

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## Components of “Best Use”

### IT Governance & Prioritization

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### Why

- To maximize the chances of project success by aligning all necessary resources for project completion
- To ensure institutional resources are working on the highest priority initiatives and to be transparent on those priorities

### Process

- Following a best practice methodology, collect requests and see if existing technology will suffice. If not, prioritize projects from an institutional perspective, align resources and complete projects.

### Implementation

- Immediate - initial process has already been developed
- Will require support of Purchasing Services
IT GOVERNANCE & PRIORITIZATION

Desired Projects
- Project
- Project
- Project

Approved and Priority Ranked Projects
- Approved Project 1 Priority 1
- Approved Project 2 Priority 2
- Approved Project 3 Priority 3
- Approved Project 4 Priority 4

NOTE: The order of priority may change

Actively Managed Projects
- Active Project 1
- Active Project 2
- Active Project 3
- Next Active Project (as resources are available)

Basic Analysis: Requirements, Business Value, Data Classification, Resources

- Need met by existing system?
  - Yes
    - Implement in existing system as resources are available
  - No
    - Cabinet Review Process

- Approved and prioritized?
  - Yes
    - Cabinet Review Process
  - No
    - Project cancelled, submitter notified

Project Change required?
- Yes
  - Cabinet Review Process
- No

ITS-Led Deep Dive Analysis
IT GOVERNANCE & PRIORITIZATION

- Collect a list of desired projects that have leadership support.
- Projects, regardless of cost, include:
  - Admin Software: new, upgrade or replacement where UI data is captured or disseminated.
  - Enterprise (not user) hardware: new upgrade or replacement.
- Initiatives tracked elsewhere include:
  - New capital construction or renovation.
  - Research computing funded through grants.
  - Required ITS infrastructure additions or upgrades.
The IT Advisory Council will provide quarterly input to VP IT/CIO on UI-wide technology focus, projects, communication and collaboration.

Suggested participants:
- Facilitator – Head, ITS Portfolio & Project Mgmt Office
- ITS – VP for IT/CIO
- Faculty – Chair of Senate IT Committee
- Staff – TBD, named by Staff Council
- Students – TBD, named by ASUI
- Outside Moscow – Center Executive Officer
- Finance – AVP Finance & Administration
- UCM - TBD
IT GOVERNANCE & PRIORITIZATION

Basic Analysis

- Requirements
- Business Value
- Data Classification
- Resources

Need met by existing system?

- Yes
  - Implement in existing system as resources are available
- No
  - Cabinet Review Process

Approved and prioritized?

- Yes
  - Approved Project 1 Priority 1
  - Approved Project 2 Priority 2
  - Approved Project 3 Priority 3
  - Approved Project 4 Priority 4
  - NOTE: The order of priority may change
- No
  - Project cancelled, submitor notified

Approved and Priority Ranked Projects

- Basic analysis collects information and determines if an existing system can meet the need.
- If something new is required, Cabinet will do a quarterly review of alignment to mission, priority, available funding and risk.
- After President’s approval, we communicate priority or the decision not to proceed.
- Approved projects will proceed as resources are available.
- Will align with UBFC.
• The deep dive provides full requirements and final selection through established purchasing processes
• If deep dive reveals that project scope or cost have changed significantly, the project is returned to Cabinet for review before proceeding
• Otherwise, the project begins as resources are available.
IT GOVERNANCE & PRIORITIZATION

Desired Projects

Project

Approach Analysis:
- Requirements
- Business Value
- Data Classification
- Resources

Need met by existing system?

Yes

Implement in existing system as resources are available

No

Cabinet Review Process

Approved and prioritized?

Yes

No

Project cancelled, submitter notified

Approved and Priority Ranked Projects

- Approved Project 1
  - Priority 1
- Approved Project 2
  - Priority 2
- Approved Project 3
  - Priority 3
- Approved Project 4
  - Priority 4

NOTE: The order of priority may change

Next Active Project (as resources are available)

Actively Managed Projects

- Active Project 1
- Active Project 2
- Active Project 3

NOTE: The order of priority may change
COMPONENTS OF “BEST USE”

ANNUAL SECURITY TRAINING FOR ALL EMPLOYEES

Why

• Majority of security and compliance issues are due to social engineering and user error
• Rapid pace of change requires regular refreshers

Process

• ITS will partner with Employee Development & Learning (EDL) to make training available and report on completion
• Training content is purchased through SANS, an industry leader

Implementation

• Immediate – training purchased, already working with EDL
## COMPONENTS OF “BEST USE”

### COMMON WORK MANAGEMENT SYSTEM

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<tbody>
<tr>
<td><strong>Why</strong></td>
</tr>
<tr>
<td>- Connecting customers more quickly to those who can fix their issues</td>
</tr>
<tr>
<td>- One place for customers to go with technology issues</td>
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<tr>
<td>- One place to track technology projects</td>
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<tr>
<td>- One place to manage human resource investment for technology support</td>
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<th>Catch Up</th>
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<tr>
<td><strong>Process</strong></td>
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<tr>
<td>- Review business processes, build necessary forms, train technology employees and inform customers</td>
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<tr>
<th>Remain Functional</th>
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<tr>
<td><strong>Implementation</strong></td>
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<tr>
<td>- Complete by March 1, 2019 - finish volunteers, then complete others; software is provided through an ITS budget</td>
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COMPONENTS OF “BEST USE”

CENTRAL END USER TECHNOLOGY PURCHASING

**Why**
- Take advantage of economies of scale and reduce duplications
- Standardize technologies for lower costs and higher support quality with less time spent on custom solutions
- End to end ordering, inventory tracking, deployment and retirement for reduced steps and paperwork

**Process**
- Process to be developed to include online ordering, common items in stock, choices (Mac vs. Windows) and exceptions
- Budget remains with the unit

**Implementation**
- By August 2019, finish process development and rollout
- Will require support of Purchasing Services
Windows and Mac desktops and laptops, Windows and iOS tablets

Multi-function devices (copiers) and printers

Office/conference/mobile phones plus mobile plans and hotspots

Monitors, televisions, projectors, digital signage and streaming devices (Apple TV, etc.)

Video conferencing equipment

Peripherals (scanners, speakers, keyboards, mice, webcams, microphones, storage, etc.)

Cables, UPS power backups,

Approved client software and apps

Consult and provide recommendations on:

- Computer furniture and monitor arms
- Cases and skins
- Security devices (locks, cables)
- Power strips and cords per fire code
- Facilities cabling
- Non-standard software

Process

- Finalize guidelines, strategies and processes with Purchasing Services
- Develop a portal for standard products
- Finalize an exception mechanism
- Develop and implement a communication plan
- Train all local support staff and key constituents
COMPONENTS OF “BEST USE”

CENTRAL DEVICE MANAGEMENT

**Why**
- Improved user experience through automated software delivery and patching
- Improved security and reaction to security/compliance issues
- Improved ability to implement time-saving standards
- Allows IT employees to focus on critical initiatives
- Improved planning: replacement cycles, common challenges

**Process**
- For new devices, it will be part of the centralized purchasing
- For existing devices, each device will have software installed to facilitate patching, monitoring and security

**Implementation**
- By August 2019, finish process development and rollout
COMPONENTS OF “BEST USE”

COORDINATED TECHNOLOGY PERSONNEL STUDY

Why
- Better understanding of employee roles and existing tech
- Better understanding of institutional risks
- Focus employee time on strategic priorities and strategic solution by better coordinating resources

Process
- Document current positions with technology roles, document those roles and understand current technology in use at UI

Implementation
- By August 2019, understand employee skills and technologies and start institutional discussion of next steps
**KEYS TO SUCCESS**

“Best Use” will require a significant culture change for UI. There will be questions as to why we are doing this and potentially resistance to proceeding. Consistent support from leadership is critical, as is communication and continuous improvement. It will, at times, be difficult but we must stay the course to realize the benefits.

<table>
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<th>Initial Support</th>
<th>Communication</th>
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<tbody>
<tr>
<td>Top executive support to move forward and continue momentum once started</td>
<td>Promote the “why”</td>
</tr>
<tr>
<td>Consistent, active support through words and actions</td>
<td>Actively solicit feedback on “Best Use” implementations</td>
</tr>
<tr>
<td>Encourage constructive feedback</td>
<td>Be open with metrics, successes and areas for improvement</td>
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<tr>
<th>Continuous Improvement</th>
<th>Continued Support</th>
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<tr>
<td>Solicit and positively accept feedback</td>
<td>There will be challenges</td>
</tr>
<tr>
<td>Utilize data and surveys to improve</td>
<td>Do not circumvent the process</td>
</tr>
<tr>
<td>Adjust processes as necessary</td>
<td>There may be resistance, especially in reviewing non-ITS personnel</td>
</tr>
<tr>
<td>Explain why some changes do not happen</td>
<td>Remain focused on the “why” and adapt as necessary</td>
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Given the required changes in UI culture to achieve our goals, the implementation of the “best use” ideas will be phased approach.

**NEXT STEPS**

- Presidential support with consensus/support from executive leadership
- Begin communication of the “why”
- Immediate implementation of:
  - IT governance & prioritization
  - Annual security training for all employees
- Continued onboarding of volunteers for common work management system
- Process and communication development for other “best use” areas, with implementation to follow