IT Executive Board

March 2019
I. Welcome and introductions

II. Unite IT Proposal
   - Approve Phase I - Pilot

III. Business Intelligence & Analytics Proposal
     - Approve Phase I

IV. Project Updates

V. Q & A
What’s the problem?
it takes “an entire institution working collaboratively to keep us safe.”

research repositories are “often outside the purview of the office of information technology.”

information security staff have “no--or very little--visibility” into research projects at universities

"Universities must rebalance personal preferences in how technology is used and managed with policies and procedures that effectively mitigate institutional risk.
What’s the solution?
High Risk – High Reward
“Game Changing”

Incremental Improvement
“Slow & Steady Progress”

Maintaining existing IT solutions?
“Debt Service”
Possible Projects

• Data Center consolidation (17)
• Application Portfolio management (300+)
• Improve career paths for IT professionals
• Business Intelligence/Data Analytics Center of Excellence
• End User Support model (30+)
• Purchasing agreements
• Security consistency

• Project Management Office
• Data Management/Storage
• Classroom Support
• Human Resources Processes
• Communication and Collaboration
• Governance and transparency
• Computer Network Management
• Identity Management
UNITE
Guiding Principles

• **NOT** a headcount reduction exercise
• Reinvest savings in IT Strategic Priorities
• Project based implementation
• IT Executive Board serves as governance
• Business case driven
## Business Case Overview: IT-04

<table>
<thead>
<tr>
<th>Business Case ID</th>
<th>Description</th>
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<tbody>
<tr>
<td>IT-04</td>
<td>Using Technology Innovations to reduce the Total Cost of Ownership (TCO)</td>
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<tr>
<td></td>
<td>- Utilize Technology Innovations to Reduce the Total Cost of Ownership (TCO) for Technology Infrastructure across all three universities</td>
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</table>

### Current State Landscape and Challenges:

- **Significant annual desktop spend** – Over 30,000 traditional desktops are in use across all the three universities, resulting in significant annual desktop spend to refresh (estimated at $7-8M per year\(^1\)); this points towards a potential opportunity to utilize technology innovations like thin client devices, which provide similar functionality as desktops, but can be potentially more cost effective in the long-run.

- **Local printer usage** – Over 4,900 local printers were inventoried during Phase 2, as being deployed across all the three universities. Typically, a local printer is directly connected to a workstation and is typically only used by one user to print. In general, such printers are more prone to support issues, and may be unnecessary, as networked printers may be available (or made available) to serve such printing requests more cost effectively.

- **Reasonably efficient print paper usage** – Paper printer reporting metrics indicate that the three universities are reasonably efficient in terms of using printing features like duplex printing (with metrics ranging from 45% to 75% duplex). These metrics can be increased higher through communications, change management and leveraging printer technology features, pointing to an opportunity to reduce some printing costs.

- **Complex IT support model** - for end-user computing and printing support, wherein some desktops and laptops are supported by central ITS and others by distributed ITS teams; Additionally, the desktop configuration variations within and across the three universities increases the maintenance efforts for these teams.
### Business Case Overview: IT-04

#### Future State Solution
- Two key transformational initiatives should be considered as part of this overall initiative, as described below.
- **Consider a Desktop Transformation initiative** - Use virtual desktop infrastructure (VDI) to reduce the cost of acquisition, support, and management of some proportion of end-of-life (EOL) physical desktops, without sacrificing ease of use or functionality, for users within all three universities. This architecture could also help provide utility savings across the three universities and enable standards to be determined for these devices.
- **Consider a “Print Green” initiative** - Consolidate local printer usage and migrate end-users to networked printers across the universities. Enhance efficient paper usage by using technological methods on local and networked printers to encourage enhanced usage of capabilities like duplex printing. Consider a streamlined desktop and printer refresh program across the universities to enable effective reporting on progress.

#### Cost-Savings Summary ($000s)

<table>
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<th>Year</th>
<th>One-time Impl. Cost</th>
<th>Savings</th>
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<td>Year 2</td>
<td>-</td>
<td>-</td>
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<td>Year 9</td>
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<td>Year 10</td>
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**One-time Implementation Costs**: 2,660

**Ongoing Savings/Cost Reductions**

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<td>Year 9</td>
<td>3,435</td>
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**TOTAL Benefits**

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<td>Year 4</td>
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**Cumulative Benefits**

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#### Expected Qualitative Benefits
- Ability to better safeguard sensitive data, due to pooled storage of data within data centers.
- Reduced complexity of maintenance & support of thin client and local printer devices.
- Environmental savings from enhancing printing options that enable savings of paper.
- Enable better standardization of desktop landscape.
- Improved metrics tracking to assess printing performance.
- Potential for streamlined desktop refresh activities.

#### Proposed Performance Measures
- Desktop and thin-client procurement rates and costs.
- Paper-cut summaries indicating coverage of networked machines and printing metrics (like simplex/duplex printing etc.).
- Number of local printers supported.

#### Time to Implement
- **Short**: 0-6 Months
- **Medium**: 6-18 Months
- **Long**: 18 Months or Longer

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[1] Denotes the time frame for implementation and benefits realization.

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[Image 0x126 to 720x592]
## Business Case Summary: IT-04

### Timeline

<table>
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<tr>
<th>Key Activity</th>
<th>Quarter 1</th>
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<th>Quarter 3</th>
<th>Quarter 4</th>
<th>Quarter 5</th>
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<th>Quarter 8</th>
<th>Quarter 9</th>
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<tbody>
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<td>&quot;Print Green&quot; Strategy</td>
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<td>VDI Architecture Design &amp; Roll-out Strategy</td>
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<td>Build, Test &amp; Pilot (VDI)</td>
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<td>VDI Implementation Waves</td>
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<td>Desktop Transformation</td>
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### Opportunity Scope

**Within Business Case – Desktop Transformation (VDI)**
- Desktop counts and understanding profiles of usage based on central and distributed IT team data
- Review of software licenses like Microsoft office and VMware, for usage within VDI environments

**Within Business Case – "Print Green"**
- Local and network printer counts and usage patterns based on central and distributed IT team discussions
- Network printing metrics from Papercut

**Outside of Business Case – Desktop Transformation (VDI)**
- UIHC-supported desktops including College of medicine
- Recommendations on specific VDI solutions or identification of preferred vendors for services
- Review of business software's for licensing impacts

**Outside of Business Case – "Print Green"**
- UIHC / College of medicine related IT assets
- Recommendations on specific printing solutions or identification of preferred vendors for services

### Assumptions

**Within Business Case – Desktop Transformation (VDI)**
- Cost of VDI infrastructure and thin-client devices modeled on existing architecture within the BOR universities
- Adoption rates for VDI based on review of usage profiles across desktop users, with central & distributed IT teams
- Infrastructure investment for VDI infrastructure could be funded by reallocating some money otherwise allocated to refreshing desktops.

**Within Business Case – "Print Green"**
- Local printer metrics based on self-reported data from central & distributed IT teams from all three universities
- Printer and desktop refresh rates modeled based on self-reported frequencies
- Sufficiency of network printers for most users
- Reduction of paper through some redirection to digital printing is not assumed, but could be an opportunity

### Activity Details

- **“Print Green” Strategy** - Determine university-specific incentives & measures to help reduce local printer usage, and reduce paper consumption for printing
- **Operationalize “Print Green” Strategy** - Roll-out communications, incentives and measures, and setup periodic performance reporting controls
- **VDI Architecture Design & Roll-out Strategy** - Determine the best target VDI architecture1 for UNI and SUI, and determine target sets of users for roll-out waves
- **Build, Test & Pilot (VDI)** - Prior to production roll-outs
- **VDI Implementation Waves** – Production waves across various categories of users

### Potential Issues/Risks

- Change resistance from current desktop users, who may have insufficient information about thin-client devices
- Change resistance from local printer users, who may not be aware of benefits of using network printers
- Need to account for total cost of acquisition and ownership of desktops across the entire system – as savings needs to be determined across the total cost spend on desktops / printers, regardless of funding entity
- Detailed software licensing impacts and mitigation strategies related to desktop virtualization
- The investment profile for VDI infrastructure may be lumpy, and will need to be determined during design

### Next Steps

- Develop "Print Green" Strategy across the universities
- Develop VDI architecture, and refine VDI user profiles - to determine target set of users for roll-out waves
- Refine inventory and TCO for desktops and printers across each university to ensure full coverage
- Refine investment profile taking into account VDI design
Business Intelligence & Analytics Proposal
HelioCampus

Exclusive to higher education
Packaged solution
Tech stack
Data models for systems we use
Expert human resources, including Data Scientists
Logical core data models for Banner & PeopleSoft
Student – HR - Financials
Join records across data domains
Expert, disciplined processes, inquiry, and findings
Growing Client Community
Institutions across every segment of higher education
UofSC Feedback

Should DoIT proceed with an RFP to seek these services?

- Strongly recommend: 13 (57%)
- Recommend: 7 (30%)
- Insufficient understanding at this time: 3 (13%)
- Strongly oppose: 5 (12%)
- Do not recommend: 1 (2%)

Strongly recommend
Recommend
Insufficient understanding at this time
Do not recommend
Strongly oppose
Detailed Timeline

USC Data & BI Capabilities Enhancement Project

Conceptual Scope of Work – 3 Enterprise Domains – $4 Million – 5 Years

In-House Integrations

- Aug 2020: USC-IBM prepped for In-House Integrations
- Jul 2020: Begin In-House Integration #1
- Apr 2021: Complete In-House Integration #1
- Dec 2021: Begin In-House Integration #2
- Mar 2022: Complete In-House Integration #2
- Sep 2022: Begin In-House Integration #3
- Jul 2023: Complete In-House Integration #3
- Jan 2024: Begin In-House Integration #4
- May 2024: Complete In-House Integration #4

Possible Integration Sources
- BTCM
- 25Live / Resource25
- Facilities – FAMIS
- IT – ServiceNow
- LMS – Blackboard
- Disability Resource – AIM
- Housing
- Admissions – Slate

Enterprise Data Domains – USC System-wide
- Student – Banner
- Financials – PeopleSoft
- Human Resources – PeopleSoft

Version 02/26/2019 – M Kelly
Project Updates
## Top Projects – Executive Summary
### March 2019

<table>
<thead>
<tr>
<th>Project/Initiative</th>
<th>Portfolio</th>
<th>Sponsor</th>
<th>Overall</th>
<th>Complete</th>
<th>Budget</th>
<th>Actual Spend</th>
<th>Start Date</th>
<th>Target Date</th>
<th>Schedule</th>
<th>Comms</th>
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<tbody>
<tr>
<td>Peoplesoft HCM (Phase 1)</td>
<td>Administrative Systems</td>
<td>Jeff Farnham</td>
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<td>$24,255,000</td>
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