

University of Wisconsin

Administrative Excellence Study

Consolidated Prioritized Opportunities
Resulting from Advisory Committee Rankings

October 4, 2011



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Process for Prioritizing Opportunities

The process of selecting initiatives to move forward on employed an optimization model used to evaluate opportunities based on the Advisory Committee's perspective on the importance of three primary criteria.

- The Steering Committee asked for input from the Advisory Committee on the prioritization of the incremental initiatives that Huron has presented to it, using the following three parameters:
 - “Quick Wins” – projects that can demonstrate measurable success in a short timeframe
 - Ease of Change Management – projects that can be accomplished within existing structures using existing skills and capabilities
 - Large Financial Impact – projects that can return significant dollar savings and/or net revenue increases over the next five years
- The Advisory Committee's ranking resulted in the following top 5 recommendations, grouped together based on similar decision paths:
 1. Data Center Aggregation
 2. Space Management
 3. Computer Bundles
 4. Demand Management of Supplies
 5. Single Email & Calendaring Platform

Data Center Aggregation

Data Center Aggregation

Overview

An opportunity to realize increased scale economies is through consolidation of servers and data storage; this can result in significant management and energy savings, and enhance services.

Situation			
<ul style="list-style-type: none"> IT services at the University have evolved over time, with two central service areas and numerous distributed areas at various levels providing a range of general and area-specific services. <ul style="list-style-type: none"> Many services are duplicated across schools, DoIT, AIMS, and other organizations No coordinated prioritization or decision making processes Data for IT (e.g., resources invested, services provided, software run, etc.) by distributed units is not readily available in a consistent format The evolution of IT at UW-Madison has led to service portfolio and effort duplication, increasing the overall costs of service delivery. Server virtualization is the “splitting or sharing” of a server so that it is capable of operating multiple systems simultaneously, each of which functions as a stand-alone server. Approximately 430 physical servers are currently being managed (large and small) by campus and administrative units; approximately 35% currently have virtualization potential In the College of Agriculture & Life Sciences, approximately 140 physical servers are currently being managed (large and small), and approximately 50% currently have virtualization potential 			
Opportunities	Tactics		
<ul style="list-style-type: none"> Increased utilization of hardware Decreased capital investment in hardware and software Reduced maintenance and server downtime Reduced power and cooling costs Fewer FTEs allocated towards server management Decreased consumption of space by servers Improved planning capacity at the data center level instead of on an individual application basis Decreased server set-up time; rapid start-up of new servers, can cut weeks off the time needed to set up a new environment Improved and immediate scalability for short-term needs 	<ul style="list-style-type: none"> Evaluate potential cost savings associated with migrating campus administrative units and two colleges / schools to a virtualized server environment. Evaluate optimal form for data center aggregation: co-location, managed hosting, “virtualized,” (shared by different user groups), or outsourced Coordinate efforts to migrate to a virtualized environment, grouping schools and colleges where most appropriate and feasible, in order to achieve maximum economies of scale 		
Estimated Financial Impact	Resource Efficiency	Customer Service	Compliance Risk Mitigation
<u>Annual savings:</u> \$5.5M - \$9.3M (over 5-years) <u>Investments:</u> Technologies, Staff Time, Training	<ul style="list-style-type: none"> Increased available space <ul style="list-style-type: none"> Reduced utility costs FTE repositioning 	<ul style="list-style-type: none"> Improved understanding of University efforts Increased planning ability 	<ul style="list-style-type: none"> Improved data security

Data Center Aggregation

Server Virtualization Scale Economies

One opportunity to realize increased scale economies is through consolidation of servers and data storage; some of the savings will be in lower space and utilities costs which are more difficult to capture.

Objective:

- Evaluate potential cost savings associated with migrating campus administrative units and two colleges / schools to a virtualized server environment.

Questions and Next Steps:

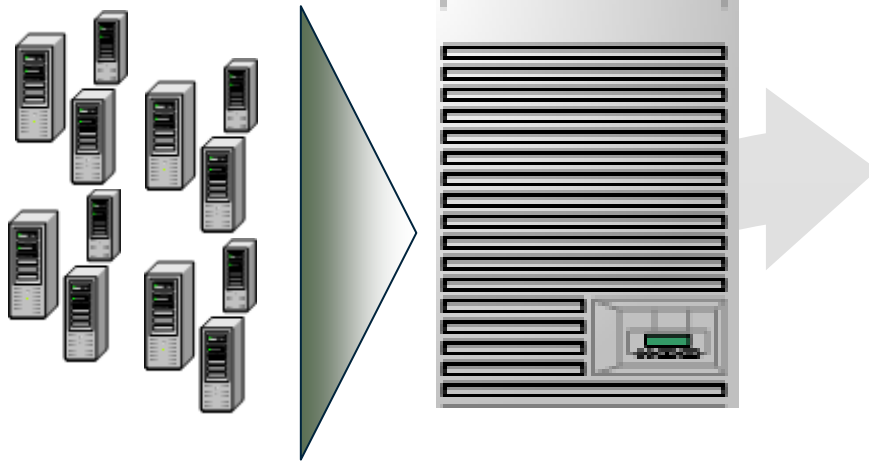
- Is there a desire to complete a server and data storage inventory assessment for the entire campus in order to maximize savings?
- With implementation in mind, should the University pursue different consolidation strategies for administrative versus academic and research computing?
- What role will the IT governing body play in order to facilitate the migration to a virtualized or cloud environment?

Maximum economies of scale can be achieved through a coordinated effort to migrate to a virtualized environment, grouping schools and colleges where most appropriate and feasible.

Data Center Aggregation

Server Virtualization Overview

Server virtualization is the “splitting or sharing” of a server so that it is capable of operating multiple systems simultaneously, each of which functions as a stand-alone server.



Benefits

- Increased utilization of hardware
- Decreased capital investment in hardware and software
- Reduced maintenance and server downtime
- Reduced power and cooling costs
- Fewer FTEs allocated towards server management
- Decreased consumption of space by servers
- Improved planning capacity at the data center level instead of on an individual application basis
- Decreased server set-up time; rapid start-up of new servers, can cut weeks off the time needed to set up a new environment
- Improved and immediate scalability for short-term needs

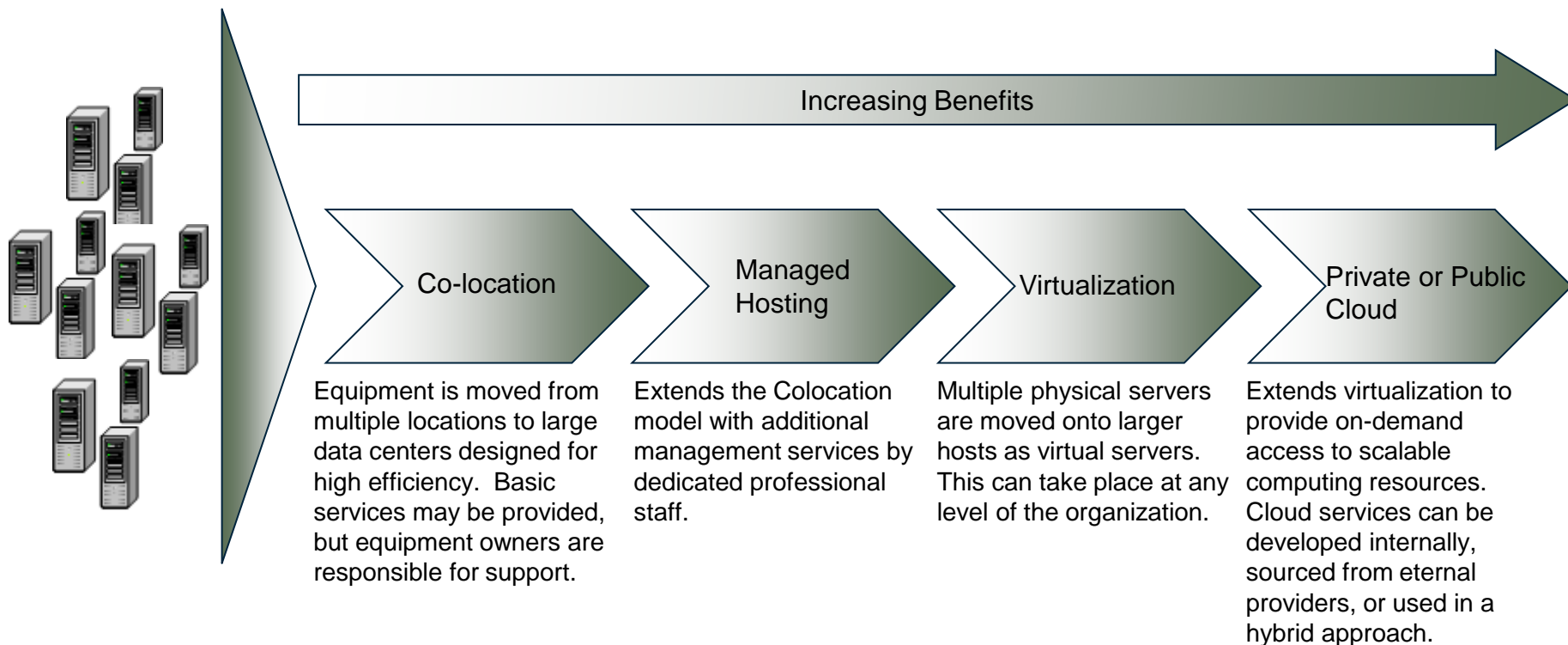
Considerations

- Limited scope of existing IT governance may negatively impact campus virtualization coordination (i.e., VM sprawl)
- Implementation requires clear delineation of roles and responsibilities for managing the virtual environment (i.e., maintenance, patching, etc.)
- Potential concerns about server proximity
- Achieving maximum savings through virtualization requires a common understanding of research-related compliance concerns

Server virtualization presents the opportunity to leverage scale economies and improve data security by consolidating the thousands of physical servers located around the University.

Data Center Aggregation Implementation Options

There is a range of implementation options where each increases the expected benefits, but also creates unique implementation challenges.



This diagram shows a progression of benefits as an organization moves further along the adoption curve. It is not intended to represent a linear implementation path.

The calculation of savings achievable through server consolidation uses data collected through interviews and surveys and is based upon a fully virtualized environment.

Data Center Aggregation

Savings Calculation Assumptions

Huron collected data through an IT survey of administrative units and interviews with IT staff in CALS and the School of Medicine & Public Health to estimate savings opportunities.

Cost Avoidance & Savings: Inputs & Assumptions	
Labor	From Huron survey, used 1 FTE per 137 servers in the School of Medicine & Public Health, and 1 FTE per 7 servers in the College of Agriculture & Life Sciences. Used 1 FTE per 100 servers in Administrative and Auxiliary Units ¹
Space	Available data on average sq ft of commercial property in area of the University, assumed \$15 per sq ft of dedicated data center space
Power & Cooling	Data from industry and other universities, assumed annual power and cooling costs to be \$800 per server
Server Replacement Costs	The survey defined small servers as having up to 2 CPUs and large servers having more than 2 CPUs. Using server costs from other universities, we estimated the replacement cost of a small server to be \$5K and a large server to be \$11.4K
Backup Software	Using data from other universities, assumed approximately \$1K for backup for large servers and \$450 for small servers
Depreciation	Used industry average of 5 years for server life and used straight-line depreciation for valuation purposes
Discount Rate	Assumed a 10% discount rate for all calculations
Capital Investments Inputs: Inputs & Assumptions	
Host Servers	Using industry data, assumed \$6K per virtual machine
Licenses	Using data from university enterprise VM licenses, assumed \$4K per machine, with maintenance costs of \$1.2K per year
Storage Costs	Using industry data, used \$1K per virtual server
VM Training	Assumed \$250 in training costs per virtual server, based on industry estimation

Note: (1) Survey data indicates 1 FTE is dedicated per 23 servers at the administrative level; Huron used a conservative estimate, more in line with industry and other samples.

Data Center Aggregation

Calculating Savings

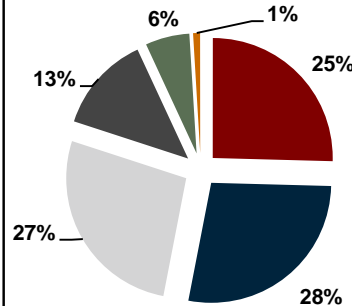
UW-Madison can save between \$5.5M and \$9.3M over 5 years by realizing scale economies of server virtualization within CALS, Administrative & Auxiliary units, and the School of Medicine & Public Health.

	Server Count	Consolidation Ratio		Virtualization Potential		Estimated 5-year Savings	
		Low	High	Low	High	Low	High
College of Ag & Life Sciences	140	10:1	12:1	50%	80%	\$.7M	\$1.1M
Administrative & Auxiliary Units	430	10:1	12:1	35%	80%	\$1.7M	\$3.3M
School of Med & Public Health	840	10:1	12:1	50%	80%	\$3.1M	\$4.9M
Total	1,410					\$5.5M	\$9.3M

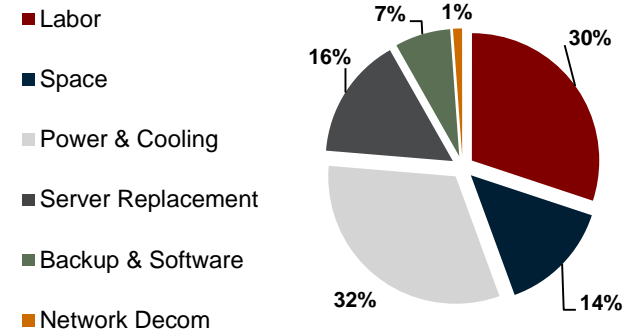
Estimated Savings Breakdown: Admin & Auxiliaries

- Approximately 80% of the 5-year savings are realized in fewer FTEs managing servers, reduced data center space, and reduced power and cooling expenses; the high savings estimate realizes more savings in labor and power and cooling, and less in space conservation
- Two large cost saving areas, space and Power & Cooling are not direct costs to UW-Madison but are real savings and may identify a potential source of project / investment funding
- Over 10% of savings is realized from lower hardware costs as the current computing infrastructure is better utilized through virtualization

Est. Low Savings: \$1.7M



Est. High Savings: \$3.3M



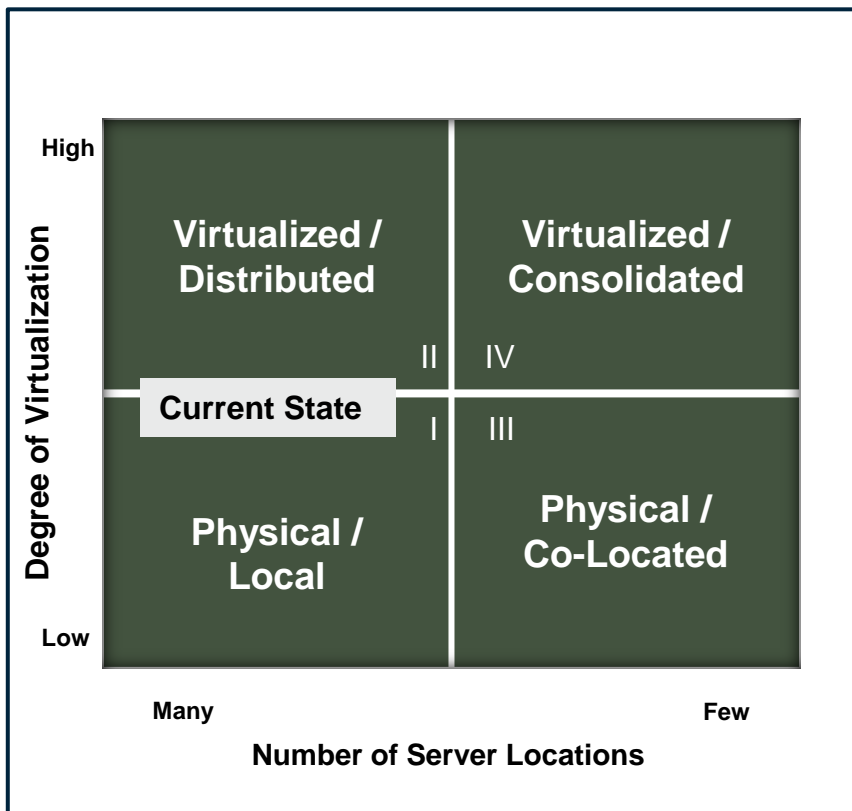
Estimated savings opportunities are presented separately because realizing savings may require different approaches within each individual school or college based on the locations and types of servers in use.

Note: (1) Based on survey data, administrative and auxiliary units could potentially save \$1.7M more dollars over 5 years using the 1 FTE to 23 servers ratio versus the more conservative 1 to 100 figure used in this calculation

Data Center Aggregation

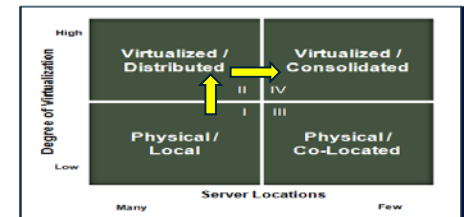
Option Paths for UW-Madison to Consider (1 of 2)

Efficiencies are derived from economies of scale through either virtualization of servers within distributed locations, co-location of servers, or a combination of virtualization and co-location.



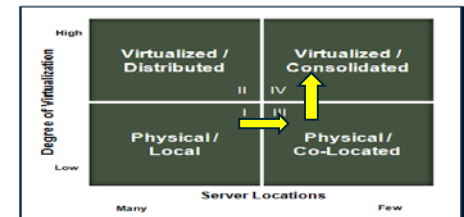
Option 1:

Move from the current state to a virtualized / distributed environment, and then to a virtualized and consolidated environment



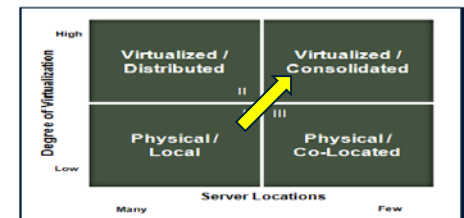
Option 2:

Move from the current state to a physical / co-located environment, and then to a virtualized and consolidated environment



Option 3:

Move from the current state to a virtualized and consolidated environment



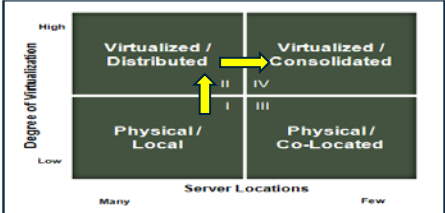
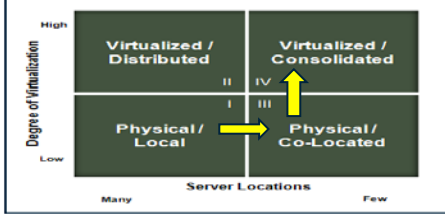
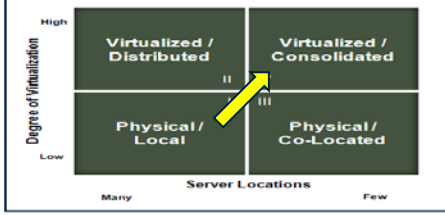
There are three other configurations for server operation that are more efficient than quadrant I¹, though implementation may require a stepped or staged approach.

Note: Data from IT survey and interviews with CALS IT personnel suggest that there are currently many physical locations with a low degree of virtualization throughout campus.

Data Center Aggregation

Option Paths for UW-Madison to Consider (2 of 2)

Options 1 and 2 offer feasible implementation paths to the most efficient virtualization of servers across the University and each could be considered for different IT areas.

Implementation Option	Implementation Plan	Benefits	Considerations
<p>Option 1</p> 	<p>Step 1 Migrate to a higher degree of virtualization within multiple physical environments</p> <p>Step 2 Migrate virtual servers to a central physical location</p>	<ul style="list-style-type: none"> ▪ Reduced carbon footprint through lower power consumption and reduced cooling requirements ▪ Hardware and software savings ▪ Reduced floor space needed to run same applications ▪ Decreased downtime expenses and improved service delivery 	<ul style="list-style-type: none"> ▪ Multiple distributed environments may not use a common virtualization platform to maximize savings ▪ Efficiencies may be realized more slowly based on when physical servers are taken off-line ▪ There is a higher probability for VM sprawl among departments that do not have adequate training
<p>Option 2</p> 	<p>Step 1 Migrate physical servers from multiple locations to a single location</p> <p>Step 2 Migrate to a higher degree of virtualization within the single location</p>	<ul style="list-style-type: none"> ▪ Allows for maximum optimization of virtual machines through consolidated planning for the new virtualized environment ▪ Optimizes server and storage costs in a facility with proper environmental controls ▪ Provides opportunities to repurpose local space consumed by utility IT functions 	<ul style="list-style-type: none"> ▪ Co-location costs during the migration period can be very expensive if server growth requirements are not properly estimated ▪ Disaster recovery and future application upgrades are significantly more difficult when applications and services are split between internal data centers and co-location facilities
<p>Option 3</p> 	<p>Step Simultaneously implement options I and II</p>	<ul style="list-style-type: none"> ▪ Reduces time to transfer to fully virtualized environment 	<ul style="list-style-type: none"> ▪ A full-scale migration invites significant implementation challenges and unanticipated costs ▪ <u>This option is not recommended</u>

Data Center Aggregation

Savings Summary

UW-Madison should immediately initiate a project to identify a co-location, then pursue a strategy to create a virtualized server center for all of administrative computing.

Cumulative 5-Year Savings Conservative Case (\$'000s)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Administration	443	327	321	321	324	1,736
School of Medicine	798	557	558	569	587	3,069
CALS	181	125	125	126	131	688
Total	1,422	1,009	1,004	1,016	1,042	\$5,493

Data are in thousands of Year-0 dollars

Recommendation	Rationale
Pursue Option 2 (co-location → virtualization) for administrative computing	<ul style="list-style-type: none"> ▪ Leverage moving the administrative and auxiliary units to a co-located environment, and subsequently to a virtualized environment, as a pilot opportunity for the governing body to set policy and for the University to realize efficiency and cost savings
Review internal economies and pricing for campus co-location and virtualization opportunities for	<ul style="list-style-type: none"> ▪ A temporary move to a co-location facility may be a viable and cost-effective option, freeing up valuable space, reducing power and cooling costs, repositioning IT FTEs for mission-driven activities, all while allowing the University to better understand and plan for a larger scale consolidation effort
Collect data on servers and server virtualization opportunities across all colleges, schools, and units	<ul style="list-style-type: none"> ▪ The University can determine which consolidation path is most feasible through an understanding of the various consolidation requirements across colleges and departments ▪ The University can maximize savings opportunities through a campus-wide migration to a virtualized or cloud environment

Space Management

Space Management

Overview

UW must promote the efficient and strategic use of space in order to help meet the needs of a growing campus community.

Situation

- UW's average classroom utilization for the last year was approximately 48%
- General assignment classrooms make up the largest portion of UW's classroom space at 41% or 358 total classrooms
 - Departmental classrooms make up 27% or 229 classrooms; departmental labs make up 32% or 279 labs
- The Space Management Office currently does not have an effective mechanism to capture non-classroom space utilization
 - While rogue use of space is recognized, there is no accurate non-classroom space utilization data
 - The current space management system doesn't integrate critical information, such as HR data
- There is currently over \$9M spent on off campus leases
- Baseline metrics are not used to analyze the productivity of research space
- The space request process is a prime example of a process that could be automated to help speed processing, increase data retention, and increase informed decision-making and facilitate efficient resource allocation
- Space audits are manual and time consuming; data captured within these audits isn't fully catalogued causing valuable information to be lost

Opportunities

- Strengthened enforcement of a more standardized master class schedule to promote savings through reduced needs for: off-campus space; construction; and energy; and increased class-by-class capacity
- Enhanced usage of existing facilities by regularly re-evaluating space use, especially in research buildings to ensure alignment of high-productivity employees and projects with appropriate workspaces

Tactics

- Develop baseline metrics to analyze and monitor the productivity of space. Common baseline metrics include total research expenditures (direct and indirect costs) (externally-sponsored and all sources)(\$)/ sq. ft. and indirect costs (\$)/ sq. ft.
- Work with DoIT to tie critical information, such as HR data, into the Space Management Office's spatial database in order to increase decision making capabilities
- Space Management needs to move towards electronic gathering of data, perhaps using tablet devices and automate paper-based processes and forms and forms

Estimated Financial Impact

Annual savings: \$2 - \$5M ±
Investments: Technologies, Repurposing of Space

Resource Efficiency

- Elimination of manual processes
- Reduction in off-campus leasing
- Decreased need for construction

Customer Service

- Improved space and space availability on-campus

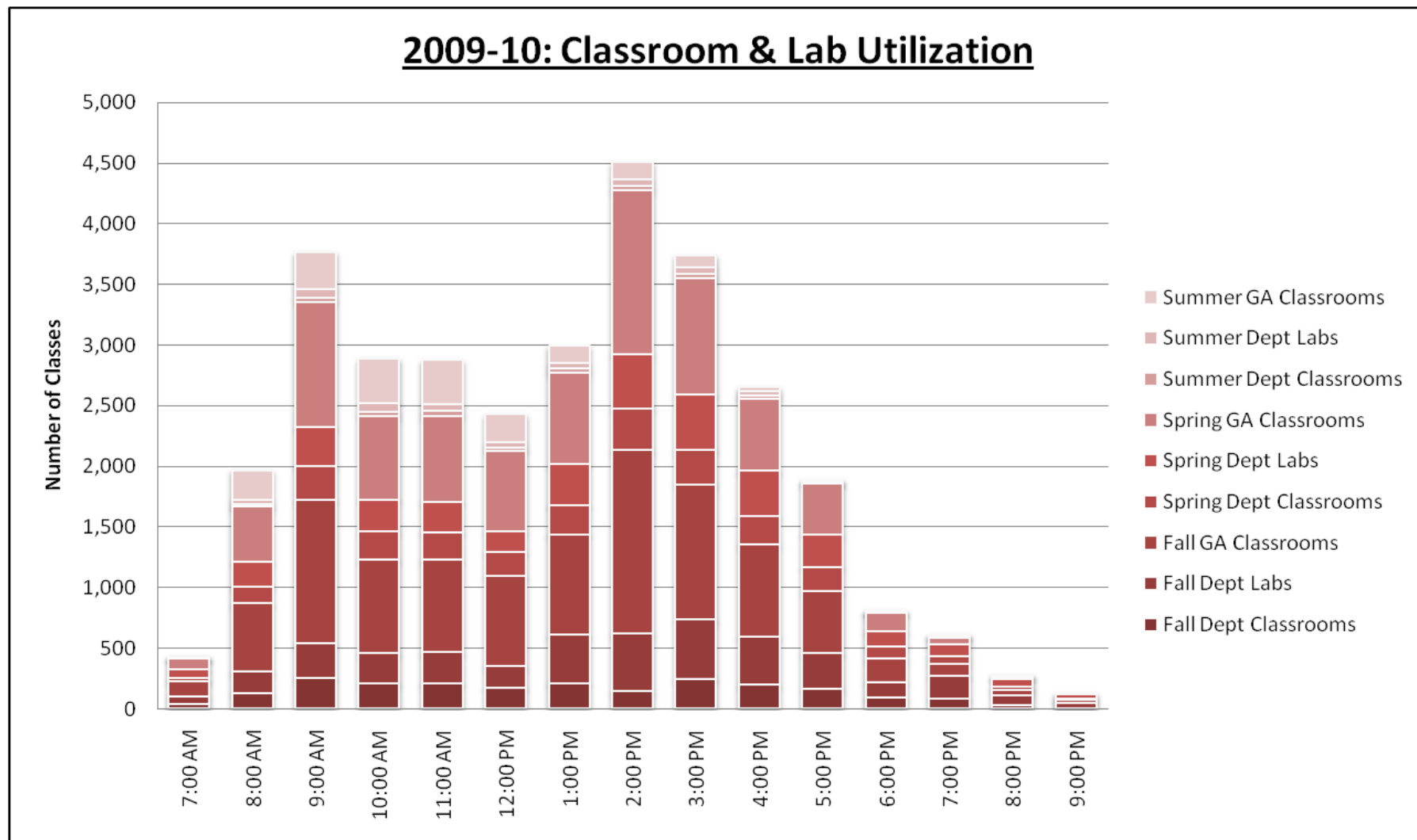
Compliance Risk Mitigation

- Improved F&A audit data capture and retention

Space Management

Facilities Utilization (1 of 2)

The majority of classes are held between 9:00 AM and 4:00 PM leaving classrooms underutilized for much of the rest of the day.



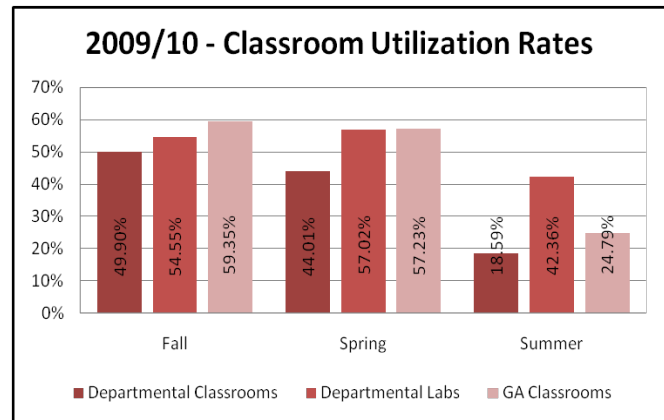
Space Management

Facilities Utilization (2 of 2)

A look at a typical departmental classroom schedule shows that the majority of high utilization classes are held between mid-morning and early afternoon, leaving the classroom underutilized during the rest of the day.

Fall: Vilas Communication Hall - 0545, Room: 4070					
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 AM					
9:00 AM		Class 1 - 84.5%		Class 1 - 84.5%	
10:00 AM		Class 3 - 91%		Class 3 - 91%	
11:00 AM	Class 2 - 58.7%		Class 2 - 58.7%		
12:00 PM	Class 4 - 54.8%	Class 5 - 114.8%	Class 4 - 54.8%	Class 5 - 114.8%	Class 6 - 48.4%
1:00 PM	Class 7 - 54.8%	Class 8 - 65.2%	Class 7 - 54.8%	Class 8 - 65.2%	Class 9 - 33.5%
2:00 PM	Class 10 - 100.6%	Class 11 - 78.7%	Class 10 - 100.6%	Class 11 - 78.7%	
3:00 PM	Class 12 - 100.6%		Class 13 - 9.7%		Class 14 - 9%
4:00 PM		Class 15 - 66.5%		Class 16 - 14.2%	
5:00 PM	Class 17 - 54.8%	Class 18 - 10.3%			
6:00 PM			Class 19 - 12.9%		
7:00 PM					
8:00 PM					
9:00 PM	Class 20 - 16.1%	Class 21 - 9%		Class 22 - 9%	
% Utilization	1-25%	26-50%	51-75%	76-100%	100+%

Inconsistent scheduling is a major reason why UW's classroom utilization rates remain low. During the 2009/10 school year, the average utilization rate for UW was approximately 48% .



Computer Bundles

Computer Bundles

Overview

UW-Madison does not have campus-wide standards and guidelines for computer purchases, leading to purchasing a broad range of computer configurations through a variety of suppliers and channels.

Situation

- UW-Madison users can utilize various contracts for computer hardware purchases
 - UW-Madison campus-specific contract with Dell
 - State WSCA contract (20 vendors including Dell, HP, Apple)
 - State standardized PC contract for Dell, HP, and Lenovo computers
- Dell is the exclusive desktop and laptop vendor available on the MDS e-Commerce site
 - 26 standard bundles for desktops, laptops, servers, workstations, and monitors are available through UW-Madison's Dell Premier site
 - Most Dell computers are purchased via the e-Commerce site, with some use of other Dell-related sites
- Currently there are limited campus-wide policies regarding computer purchases; IT planning and purchasing is usually decided at the divisional level, which leads to a wide variety of different models/configurations being purchased
- Discussions with stakeholders and data analysis identified potential purchase process differences exist across campus

Opportunities

- Improved purchase efficiency through increased use of negotiated bundles
- More consistent purchasing methods and product configurations
- Reduced pricing variance across campus
- Pricing/discount improvements resulting from procuring computers through the same vendor/channel

Tactics

- Review models and configurations UW-Madison currently purchases through the Tech Store, MDS, and other channels to determine feasibility of a standards program
- Consider the range of prices UW-Madison paid for various models and configurations and compare UW-Madison's average prices and discounts from list price vs. peer institutions' average discounts
- Develop standard computer bundles with the input of campus subject matter experts and user groups
- Increase monitoring of user spending to achieve maximum desired savings and ensure compliance with implemented guidelines



Estimated Financial Impact	Resource Efficiency	Customer Service	Compliance Risk Mitigation
<u>Annual savings:</u> \$300K - \$500K <u>Investments:</u> Staff Time	<ul style="list-style-type: none"> • Decreased purchase costs • Streamlined processes 	N/A	<ul style="list-style-type: none"> • Consistent campus-wide policies and purchasing methods

Computer Bundles

UW-Madison Computer Contracts & Policies

UW-Madison utilizes a University-specific contract with Dell for the purchase of computer hardware products; however, various state and system-wide contracts are also available for campus use.

- UW-Madison users can utilize various contracts for purchase of computer hardware:
 - UW-Madison contract with Dell
 - State WSCA contract (20 vendors including Dell, HP, Apple)
 - State standardized PC contract for Dell, HP, and Lenovo computers
- Procurement methods in use for purchase of computer hardware include: MDS e-Commerce site, Dell retail or outlet sites via p-card, and websites/vendor contacts for other vendors
- UW-Madison has a university-specific contract with Dell, however, the contract does not include specific pricing or discounts; pricing for standard bundles are negotiated directly with Dell and updated via the UW-Madison Dell Premier site
- MDS and DoIT share a 6% rebate provided by Dell, and Dell orders are shipped desktop direct to customers
- 16 desktop and laptop standard configurations are currently available on the e-Commerce site:

UW-Madison Dell Premier (MDS e-Commerce) Standard Configurations¹

	Product Model	UW-Madison Premier Price	UW-Madison Discount ²	Key Specifications				
				Processor	Memory	Hard Drive	Monitor / Screen	Warranty
General Laptop	Latitude E6520	\$1,115.58	32%	Core i5-2540M 2.60GHz	4GB	250GB	15.6"	4 Year Basic & NBD
	Latitude E6420	\$1,047.88	36%	Core i5-2520M 2.50GHz	4GB	250GB	14.0"	4 Year Basic & NBD
	Latitude E4200	\$2,061.89	8%	Core 2 Duo ULV SU9600 with VT 1.60GHz	3GB	64GB	–	3 Year Basic & NBD
	Latitude 2120	\$452.27	9%	Atom N455 1.66GHz	1GB	250GB	10.1"	1 Year Basic & NBD
	Latitude XT2	\$2,230.40	20%	Core 2 Duo SU9600 with VT 1.60GHz	5GB	250GB	–	3 Year Basic & NBD
	Latitude 13	\$690.00	21%	Core 2 Duo ULV SU7300 1.30 GHz	2GB	160GB	13.3" Wide	1 Year Basic & NBD
General Desktop	OptiPlex 780 MT	\$687.55	44%	Core 2 Duo E8400 with VT 3.0GHz	4GB	250GB	None	4 Year Basic & NBD
	OptiPlex 380 DT	\$425.01	25%	Dual Core E5800 3.2GHz	2GB	250GB	None	3 Year Basic & NBD
	790 SFF	\$1,107.38	31%	Core i5 2400 3.1GHz	4GB	320GB	21.5"	5 Year Basic & NBD
DoIT Desk.	OptiPlex 790 MT	\$681.95	44%	Core i3 2120 3.3GHz	4GB	250GB	None	4 Year Basic & NBD
	OptiPlex 780 MT	\$797.50	40%	Core 2 Duo E8500 with VT 3.16GHz	4GB	320GB	None	4 Year Basic & NBD
DoIT Laptop	OptiPlex 790 MT	\$765.45	37%	Core i5 2400 3.1GHz	4GB	250GB	None	4 Year Basic & NBD
	Latitude E4200	\$1,728.18	19%	Core 2 Duo ULV SU9600 with VT 1.60GHz	3GB	64GB	–	3 Year Basic & NBD
	Latitude E6420	\$1,120.70	27%	Core i5-2520M 2.50GHz	4GB	250GB	14.0"	4 Year Basic & NBD
Comp. Sci. Desk.	Latitude E6520	\$1,190.00	30%	Core i5-2540M 2.60GHz	4GB	250GB	15.6"	4 Year Basic & NBD
	OptiPlex 790 MT	\$664.00	46%	Core i3 2120 Processor 3.3GHz	8GB	250GB	None	3 Year Basic & NBD

Source: UW-Madison Dell contract, UW System IT hardware contracts, State of Wisconsin VendorNet contracts.

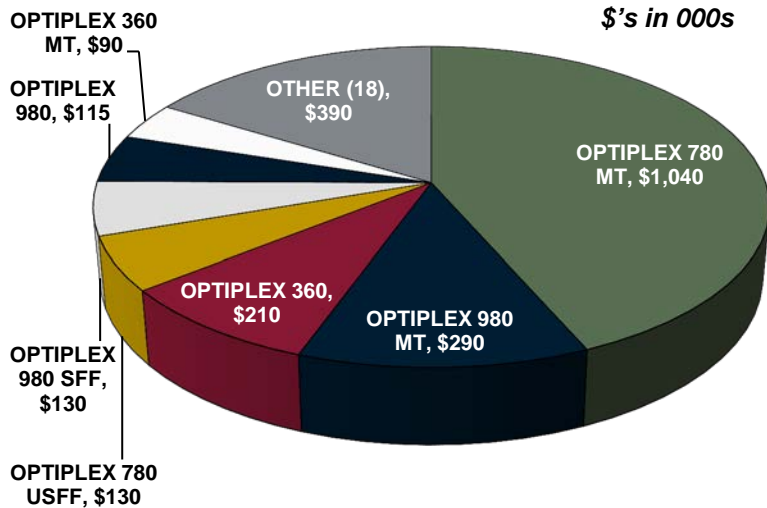
Note: (1) Standard configurations as noted on the UW-Madison MDS e-Commerce Dell Premier site as of 6/6/2011; (2) Discounts do not include the 6% rebate provided to UW-Madison.

Computer Bundles

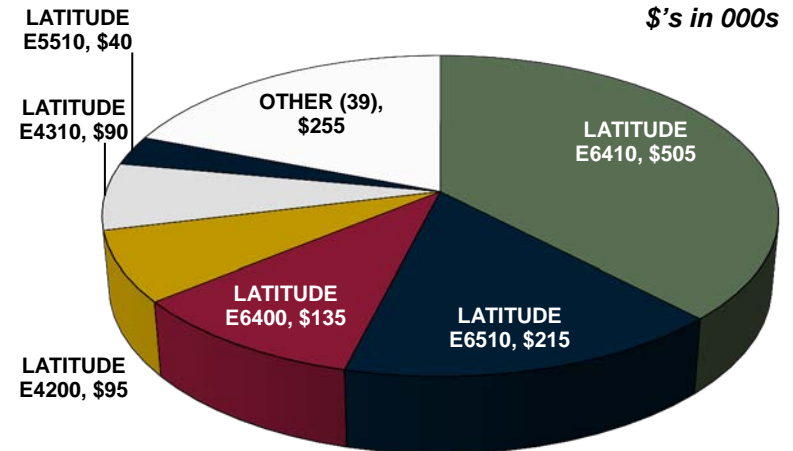
Top Dell Desktop & Laptop Models Analysis

UW-Madison spend on desktops and laptops is largely concentrated on 6-7 main model types.

Top Desktop Models by Spend



Top Laptop Models by Spend



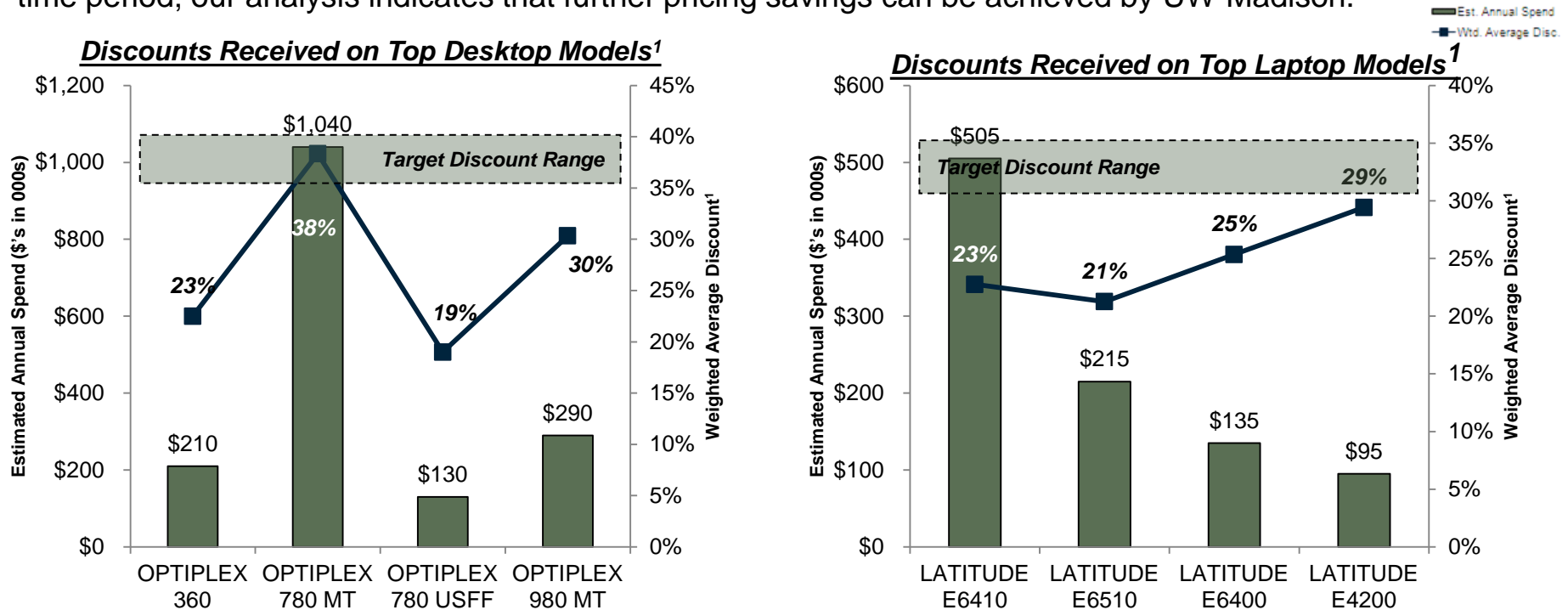
- Dell computer spend on desktops accounts for 28% of total spend with Dell, and is the top computer category of UW-Madison Dell computer spend
- Top desktop models account for 83% of Dell desktop spending
- While it is good that a majority of spend is on the top models, within the top seven desktop models, spend is somewhat less distributed, indicating stronger use of standard configurations and less customizability will improve cost savings
- UW-Madison spend on laptops accounts for 16% of total spend with Dell; however, although this is less than total spend on desktops, there are more laptop standard configurations offered to users than desktops
- The top six laptop models account for 81% of Dell laptop spend; similar to analysis of desktop spending, the opportunity exists to further consolidate offered bundles and direct users to these configurations
- Spend on both desktop and laptop models coincides with some offered standard configuration models, although key specifications of actual purchases vary

Source: 4/1/2010-3/31/2011 e-Commerce Dell data.

Computer Bundles

Discounts by Top Dell Desktops and Laptops

UW-Madison received varying discounts on both desktop and laptop purchases during the last 12 month time period; our analysis indicates that further pricing savings can be achieved by UW-Madison.



- As current UW-Madison pricing is not based upon an overall discount by product type, discounts received on different products within the same category vary significantly
- The weighted average discount for UW-Madison desktop purchases was 28% overall; experience indicates that although some products are receiving discounts within the achievable target range for an account of UW-Madison's size, the opportunity exists for pricing/discount improvements
- Similar as with desktops, UW-Madison laptop purchases received varying discounts; the weighted average discount for laptop purchases was 23% overall
- Discounts for most of the top laptop models purchased indicate an opportunity for discount improvements exists

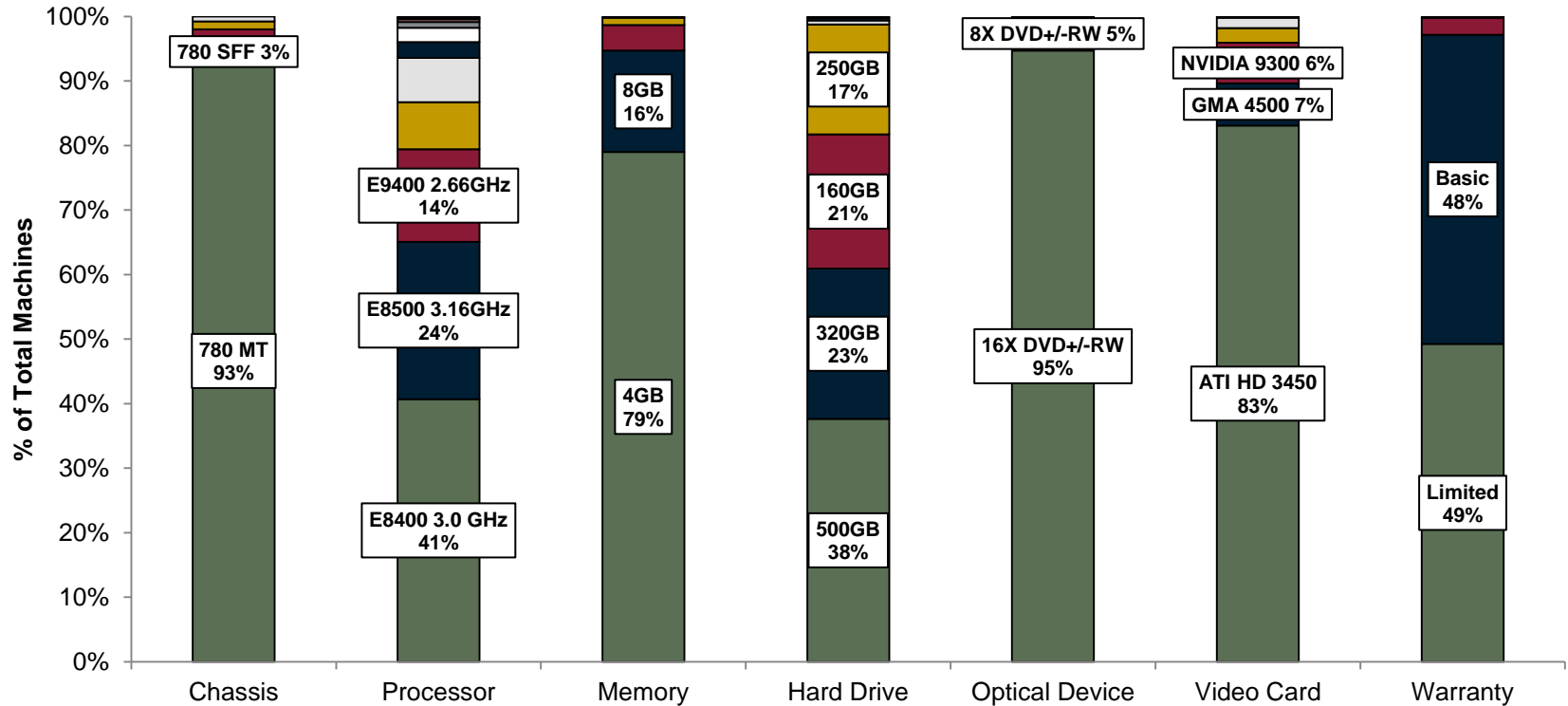
Source: 4/1/2010-3/31/2011 e-Commerce Dell data.

Note: (1) Calculated discounts are based upon analysis of sample UW-Madison data from October 2010, January 2011, February 2011, and March 2011; discounts do not include the 6% rebate provided to UW-Madison.

Computer Bundles

Example Specifications Analysis

UW-Madison purchases within OptiPlex 780 indicate significant product variances; however, concentrated purchases toward popular components indicates the feasibility for a standards program exists.



- Although there is moderate standardization of desktop model purchases available on the e-Commerce site for user purchase, analysis indicates variance within model configurations occurred throughout the year on top purchases as a result of heavy customization
- Even though original configurations may be competitively priced, the users ability to customize standard configurations can result in significantly higher prices and increased delivery times
- Implementation of user consumption guidelines can improve both purchase efficiency and cost savings, and help to guide user spend to negotiated bundles

Source: 4/1/2010-3/31/2011 e-Commerce Dell data.

Computer Bundles

Savings Summary

As UW-Madison has greater procurement flexibilities for computer hardware purchases, achievable savings are in improved pricing/discounts, as well as improved user consumption guidelines and monitoring of spend.

(\$'s in 000s)

Savings Opportunity Description / Category	Est. Annl. Spend	Estimated Savings Opportunity Range			
		Low %	-	High %	Low \$ - High \$
Dell Pricing Improvements					
Desktops	\$2,395	6%	-	8%	\$135 - \$200
Laptops	1,335	6%	-	9%	85 - 120
Servers	2,470	2%	-	3%	40 - 80
Monitors	400	13%	-	16%	50 - 65
Workstations	350	3%	-	4%	10 - 15
Other	1,605	1%	-	5%	20 - 85
CDW-G Pricing Improvements	3,730	2%	-	3%	75 - 110
Pricing Subtotal	\$12,285	3%	-	5%	\$415 - \$675
Dell Demand Management					
Desktops	\$1,675	4%	-	12%	\$75 - \$205
Laptops	935	6%	-	11%	55 - 105
Demand Management Subtotal		5%	-	12%	\$130 - \$310
Vendor Consolidation					
Shift Apple Spend to Dell	\$2,980	6%	-	8%	\$180 - \$235
Other Vendor Consolidation	6,245	2%	-	4%	125 - 250
Vendor Consolidation Subtotal	\$9,225	3%	-	5%	\$305 - \$485
Total Savings	\$21,510	4%	-	7%	\$850 - \$1,470

- UW-Madison utilizes the e-Commerce site to push user spend to Dell; however, analysis indicates a current high level of customizability for computer hardware purchases and varying purchase processes exist, suggesting implementation of an effective campus-wide purchasing program can capture significant savings
- Experience indicates that while the university receives competitive discounts for certain purchases, the opportunity exists to improve pricing for an account of UW-Madison's size
- UW-Madison should track standards utilization and investigate the opportunity to create 4-5 bundles for desktops and laptops that support user needs, and encourage increased use of these negotiated bundles to capture available savings from negotiated pricing
- Establishment of user guidelines for purchases of Apple computer products can help to rationalize Apple computer spend and increase savings
- The campus has significant spend with Dell and lesser spend with other computer hardware vendors; the campus should consider implementing purchasing guidelines to drive spend to primary suppliers to capture further vendor consolidation savings

Note: Calculated savings do not include the current 6% rebate received by MDS/DoIT.

Demand Management

Demand Management

Overview

State purchasing contracts are mandated for many commodity areas, limiting procurement flexibilities and suggesting savings beyond price.

Situation
<ul style="list-style-type: none"> • There is a lack of consistent, campus-wide purchasing guidelines/standards and limited monitoring of purchases. For example: <ul style="list-style-type: none"> • The state has a mandatory remanufactured toner contract with Cartridge Savers, Inc., which provides pricing for 250+ toner products, however campus users are not required to purchase remanufactured toner products • Various pricing and purchasing methods for scientific supplies has lead to pricing variation within purchases from primary vendors • Product proliferation and purchasing across multiple vendors for each commodity is common across campus. For example: <ul style="list-style-type: none"> • UW-Madison has done a good job of directing the majority of campus office supplies spend toward Staples via the MDS e-Commerce site, however, toner can be purchased with various vendors, including: Staples, CDW-G, and Cartridge Savers • UW-Madison purchased more than 700 different SKUs of pens over the past 12 months, including 285 SKUs of black pens alone • The quality of remanufactured toner has increased dramatically in recent years, and prices are often significantly lower than OEM toner pricing, but currently only 2% of toner purchases are on remanufactured products • UW-Madison purchased over 375 SKUs of lamps from WW Grainger, indicating opportunities to more effectively manage and standardize types of lamps and other MRO products purchased across various departments

Opportunities
<ul style="list-style-type: none"> • Improved purchase efficiency through coordinated campus-wide purchasing efforts • Reduced proliferation of products purchased for the same need • Transfer of purchases from a more expensive option to a less expensive option, without sacrificing quality



Tactics
<ul style="list-style-type: none"> • Analyze campus spending and current contracts within targeted commodity areas to understand the variety of products being purchased, purchase methods, and preferred vendors • Review spending on high volume products within targeted commodity areas to understand opportunities for standardization and simplification • Increase monitoring of user spending to achieve maximum desired savings and ensure compliance with purchasing guidelines • Compare purchase guidelines and habits with those of peers and industry best practices to identify demand management opportunities

Estimated Financial Impact	Resource Efficiency	Customer Service	Compliance Risk Mitigation
<p><u>Annual savings:</u> \$470K - \$870K</p> <p><u>Investments:</u> Staff Time</p>	<ul style="list-style-type: none"> • Decreased purchase costs • Streamlined processes 	N/A	<ul style="list-style-type: none"> • Consistent campus-wide policies and purchasing methods

Demand Management

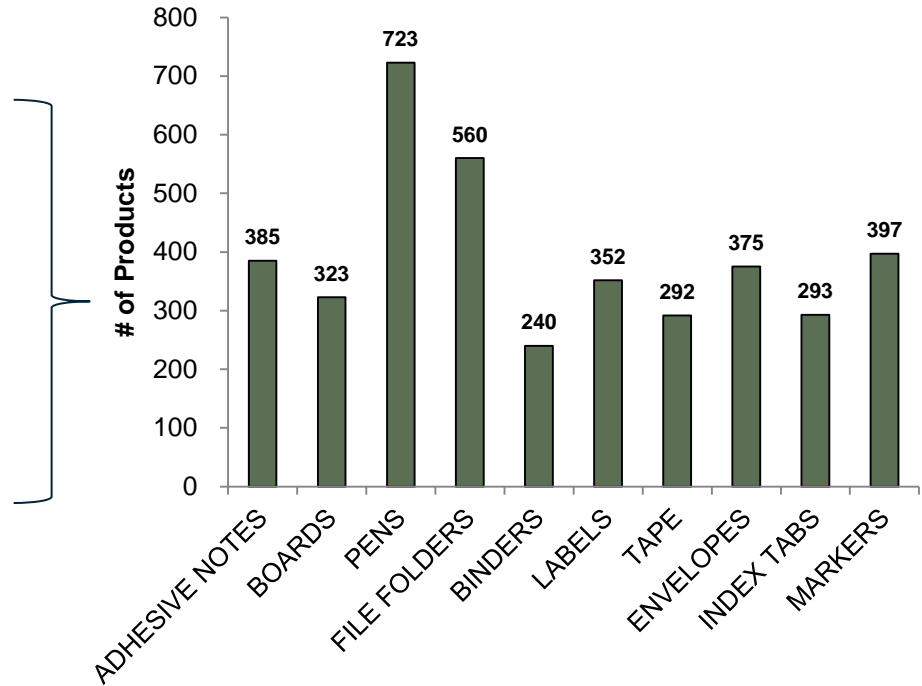
Office Related Products – Staples Office Supplies Consumption

Product proliferation is common across all major categories of spend. Over 700 types of pens were purchased from Staples during the previous 12 months.

Spend by Office Supply Sub-Category

<i>Sub-Category</i>	(\$'s in 000s)	
	Estimated Annual Spend	% of Spend
POST IT, FLAGS, PADS, EASELS	\$80	6%
BOARD, CHALK, BULLETIN, DRY ERASE	75	6%
PEN, BALLPOINT, EXECUTIVE, SETS, CUSTOM & INK	75	6%
FILE FOLDERS - TOP TAB	75	6%
BINDERS, PRESENTATION, VIEW	70	5%
LABELS, SHEET, MAILING, SPECIALTY	60	5%
TAPE, TAPE DISPENSERS	45	3%
ENVELOPES & CUSTOM	45	3%
INDEXES, DIVIDERS, INDEX TABS	45	3%
MARKERS	40	3%
OTHER (100)	710	54%
Total	\$1,320	100%

Number of Office Supply Items Purchased per Top Sub-Category



Source: 4/1/2010-3/31/2011 e-Commerce Staples data.

Demand Management

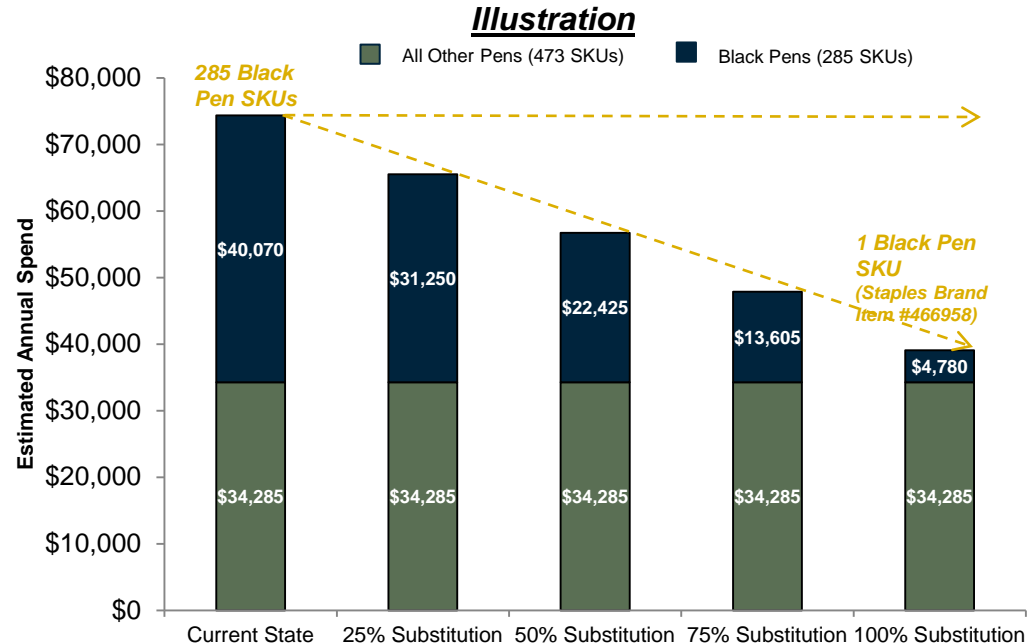
Office Related Products – Staples Office Supplies Consumption Example

Demand management through consumption guidelines and user behavior modification can achieve significant savings for UW-Madison.

Pens Subcategory SKU Stratification

(\$'s in 000s)				
Qty Purchased	# of Items	Est. Annl. Spend	% of Spend	Wtd. Avg. Discount
1 - 5	284	\$5	7%	59%
6 - 10	90	5	7%	62%
11 - 20	134	10	13%	64%
21 - 50	129	20	26%	67%
> 50	86	35	47%	73%
Total	723	\$75	100%	69%

“Best Value” Consolidation Analysis – Black Pen



- UW-Madison purchased more than 700 different SKUs of pens, including 285 SKUs of black pens alone in the past 12 months
- An effort to reduce product proliferation of office related products can result in significant savings opportunities

- Demand management consolidation of black pen spend can result in up to \$35K in savings with 100% substitution

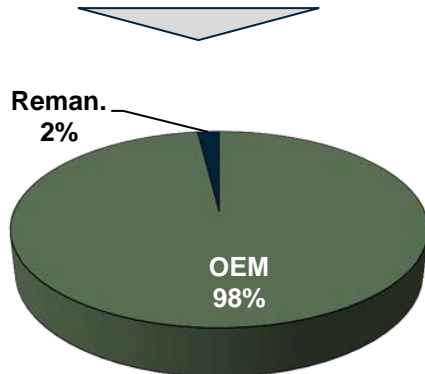
Demand Management

Office Related Products – Toner Spend Overview

UW-Madison purchases toner products from various vendors, however, 97% of toner purchases are through Staples; the majority of remanufactured toner purchases were made through Cartridge Savers, Inc.

OEM vs. Remanufactured Toner Spend

Supplier	Estimated Annual Spend (\$'s in 000s)			
	OEM	Reman.	Total	% of Spend
Staples	\$1,720	< \$5	\$1,720	97%
Cartridge Savers, Inc.	–	35	35	2%
CDW-G	15	–	15	1%
Total	\$1,735	\$35	\$1,770	100%



Spend by Manufacturer

Mfr.	Estimated Annual Spend (\$'s in 000s)			Total Qty.
	Staples	CDW-G	Total	
HP	\$1,455	\$10	\$1,465	11,524
Xerox	95	< 5	95	1,060
Brother	45	< 5	45	1,032
Other (28)	125	5	130	2,470
Total	\$1,720	\$15	\$1,735	16,086

HP Weighted Average Discount Comparison

HP Wtd. Avg. Discount		Our Experience
Staples	CDW-G	
44%	31%	45% - 50%

- Hewlett Packard accounts for ~84% of total spend on toner products; Xerox and Brother have the next highest spend totals at 6% and 3% of spend overall, respectively
- Analysis of weighted average discounts for HP purchases suggest higher discounts can be achieved for an account of UW-Madison's size if pricing negotiations are possible
- Comparisons of Staples purchases with CDW-G purchases from the past 12 months indicated product duplication of 87 items; ~77% of the products purchased at both suppliers were toner products
 - Staples had lower overall pricing on duplicate items, with ~17% aggregate cost savings over CDW-G; UW-Madison should keep this price variance in mind when reviewing vendor responses for the IT Peripherals bid
 - Most of UW-Madison spend on duplicate items was with the lower cost provider, Staples, versus CDW-G

Source: 4/1/2010-3/31/2011 e-Commerce Staples data; 5/6/2010-5/6/2011 CDW supplier spend data.

Demand Management

Office Related Products – Staples Toner Demand Management

Current UW-Madison spend on remanufactured toner accounts for only 2% of total toner spend; demand management of toner purchases can be used to achieve additional cost savings.

HP Product #	Total Qty.	Estimated Annual Spend	Average Staples Unit Price	Cartridge Savers Price	Demand Management Savings	
					%	\$
CE505A	610	\$43,640	\$71.67	\$48.15	33%	\$14,320
Q6470A	379	42,930	113.27	74.90	34%	14,540
C9720A	310	39,130	126.22	64.20	49%	19,225
C9733A	135	37,035	274.39	101.65	63%	23,315
C9730A	188	36,175	192.41	101.65	47%	17,065
C9731A	134	36,150	269.76	101.65	62%	22,525
C9732A	133	35,880	269.76	101.65	62%	22,360
Q5950A	205	31,195	152.17	85.60	44%	13,645
C9723A	178	30,350	170.51	69.55	59%	17,970
Q5942A	234	29,865	127.63	58.85	54%	16,095
CC364X	126	29,710	235.81	101.65	57%	16,905
Q5942X	159	29,120	183.14	58.85	68%	19,760
C9721A	159	27,110	170.51	69.55	59%	16,050
C9722A	157	26,770	170.51	69.55	59%	15,850
CC364A	191	25,315	132.53	80.25	39%	9,985
Other (123)	7,523	688,995			43%	\$27,995
Total	10,821	\$1,189,370			49%	\$587,605

Demand Management Savings with Remanufactured Toner Pricing Improvements

Our Experience	Potential UW Demand Mgmt. Savings
15% – 25%	\$680K – \$740K

- The quality of remanufactured toner has increased dramatically in recent years, and prices are often significantly lower than pricing for OEM toner items
- The state has a mandatory remanufactured toner contract with Cartridge Savers, Inc., which provides pricing for over 250 toner products
- Demand management of toner purchases, and increased utilization of the Cartridge Savers state contract could yield savings of 49%, or \$587K
- Our experience suggests further pricing discounts are available on remanufactured toner items; if UW-Madison had the flexibility to negotiate improved pricing, demand management savings could reach \$680K – \$740K

Source: 4/1/2010-3/31/2011 e-Commerce Staples data; State of WI Cartridge Savers, Inc. contract pricing.

Demand Management

Office Related Products – Staples Paper Top Items Analysis

Significant product and pricing variances exist in the Staples top paper purchases; comparisons with quoted MDS e-Commerce prices indicate that savings from demand management may exist.

Top 15 Staples White 8.5" x 11" Copy Paper Purchases

Manufacturer	Paper Weight	Paper Brightness	Recycled Content	Avg. Staples Unit Price / Carton	Estimated Annual Spend
HAMMERMILL PAPER	20	92		\$31.64	\$40,530
STAPLES BRAND GROUP	20	92		31.94	22,040
HAMMERMILL PAPER	20	92	30%	40.58	12,865
STAPLES BRAND GROUP	20	92	100%	44.56	10,380
STAPLES BRAND GROUP	20	92	30%	33.81	9,605
XEROX CORP	20	92		34.79	9,495
HAMMERMILL PAPER	24	98		50.87	7,985
HAMMERMILL PAPER	20	92	30%	35.26	7,530
HAMMERMILL PAPER	20	92		32.71	7,480
HEWLETT PACKARD	20	92		34.92	6,040
HAMMERMILL PAPER	20	92		32.93	4,200
STAPLES BRAND GROUP	20	92	30%	34.69	4,190
DOMTAR	20	92		31.02	4,000
HAMMERMILL PAPER	28	100		61.76	3,910
BOISE CASCADE PAPER	20	92	100%	60.41	2,660

Top MDS White 8.5"x11" Copy Paper Purchases

Materials Distribution Services (MDS) Top Purchases			
Product	UOM	Unit Price	Est. Annl. Spend (\$'s in 000s)
30% Recycled GP-Spectrum	Case	\$32.80	\$320
30% Recycled GP-Spectrum	Pallet	\$1,264.74	150
100% Recycled Boise Aspen	Case	\$36.80	80
Other			10
Total			\$560

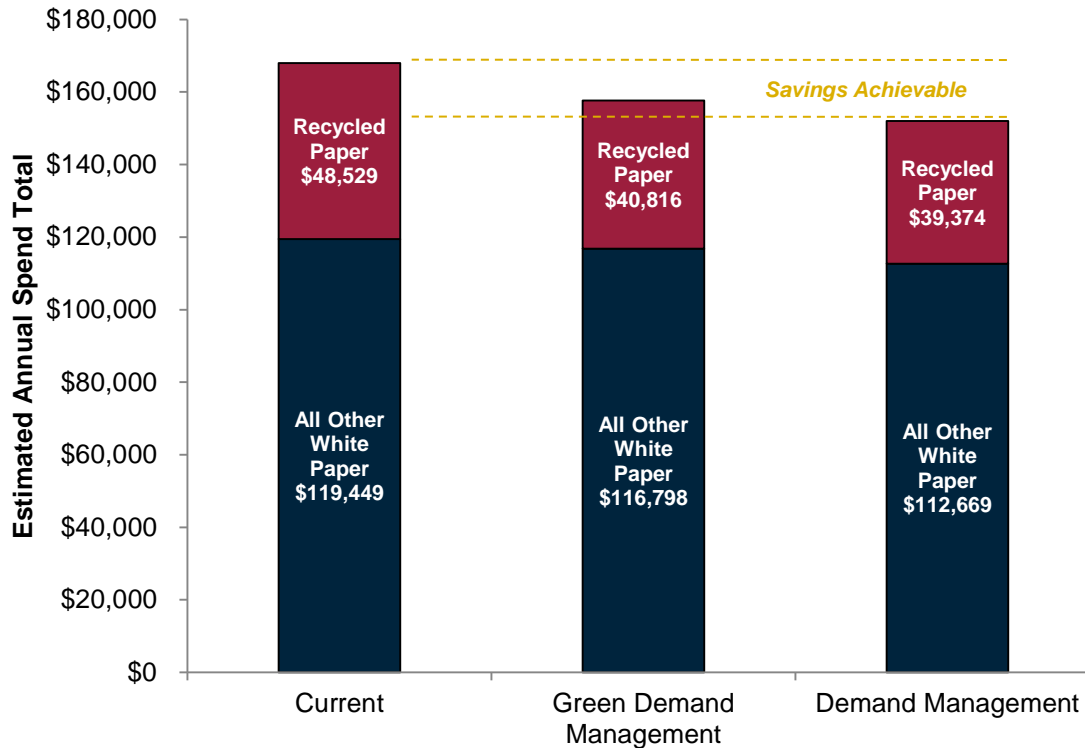
- The top 15 paper items purchased at Staples were all white copy paper of varying weight/brightness/recycled content combinations, accounting for ~73% of total spend
- UW-Madison users are able to purchase small convenience quantities of copy paper from Staples, however, all larger purchases must be made using the state bulk copy paper contract
 - In the past 12 months, fewer than 30 instances of purchases with quantities greater than 10 cases occurred; this accounted for ~12% of Staples spend on copy paper
- The state bulk copy paper contract includes pricing for 30% and 100% recycled content paper only
- The top 3 copy paper purchases at MDS in the past 12 months account for ~98% of copy paper spend at MDS
- The Staples unit price per carton for 30% and 100% recycled paper was higher than the bulk copy paper price available at MDS for each of the top items, suggesting potential demand management savings exist

Source: 4/1/2010-3/31/2011 e-Commerce Staples data; MDS e-Commerce paper pricing.

Demand Management

Office Related Products – Staples White Copy Paper Demand Management

UW-Madison currently purchases approximately 55 different types of white, 8.5” x 11” copy paper from Staples; demand management to a few select products can yield savings.



- Demand management opportunities vary depending on the level of desired SKU consolidation:
 - For example, 100% substitution of Staples white copy paper purchases to the quoted MDS e-Commerce price per carton for 30% recycled content paper can yield approximately \$10K in savings
 - Furthermore, 100% product substitution of white copy paper with the top Staples paper purchase (Hammermill product #105007CT) can yield ~\$15K in demand management savings

Source: 4/1/2010-3/31/2011 e-Commerce Staples data.

Demand Management

MRO Products – WW Grainger Spend Stratification

WW Grainger provided 10,000 plus unique items to over 500 separate UW-Madison customers over the last twelve months.

WW Grainger Spend Stratification

Quantity Purchased	# of SKUs	Wtd. Avg. Disc.	(\$'s in 000s)	
			Est. Annl. Spend	% of Spend
500+	29	72%	\$270	16%
100 - 500	147	53%	160	9%
50 - 99	195	31%	140	8%
25 - 49	315	29%	130	8%
12 - 24	855	27%	205	12%
1 - 11	8,464	19%	795	47%
Total	10,005	42%	\$1,700	100%

WW Grainger Customer Base

UW-Madison Customer	(\$'s in 000s)	
	Est. Annl. Spend	% of Spend
Electric Shop	\$290	17%
Custodial Services	220	13%
Steamfitter Stores	85	5%
Administration Housing	85	5%
Steamfitter Shop	75	4%
UW Housing Administration	65	4%
Electric Stores Physical Plant	50	3%
UW Apartments	40	2%
Charter St Heating Plant	30	2%
Mem Union Bldg Services	20	1%
Subtotal	\$960	56%
Other Customers (493)	\$740	44%
Total	\$1,700	100%

- Approximately 370 items were purchased in quantities of 50+ over the last twelve months
- The large majority of MRO items were purchased in small quantities
- The top ten UW-Madison customers accounted for over 56% of the estimated annual WW Grainer spend

Demand Management

MRO Products – WW Grainger Lamp Analysis

Lamps were the highest-spend subcategory of items purchased by UW-Madison from WW Grainger, and the large majority of lamps were manufactured by General Electric.

WW Grainger Lamp Spend by Manufacturer

Description	Est. Annl. Spend	% of Spend
GENERAL ELECTRIC LIGHTING	\$260	96%
LUMAPRO	10	4%
OTHER (2)	<1	<1%
Total	\$270	100%



WW Grainger Customer Base

SKU #	Qty. Purchased	Avg. UW Unit Price	WSCA Unit Price	E & I Unit Price
Top Lamp SKUs				
4ZY40	38,952	\$2.04	\$2.17	\$2.28
2ETU4	10,044	1.94	1.94	1.94
1X562	1,332	7.66	-	4.72
4ZY25	1,998	3.24	3.00	3.07
1PGX4	720	8.15	4.84	4.84
1PHA5	870	5.43	-	3.90
4ZY36	,344	3.36	-	2.69
1PHA9	634	6.19	5.56	5.56
2F944	189	20.52	-	24.90
1PGY7	1,071	3.43	3.39	3.44

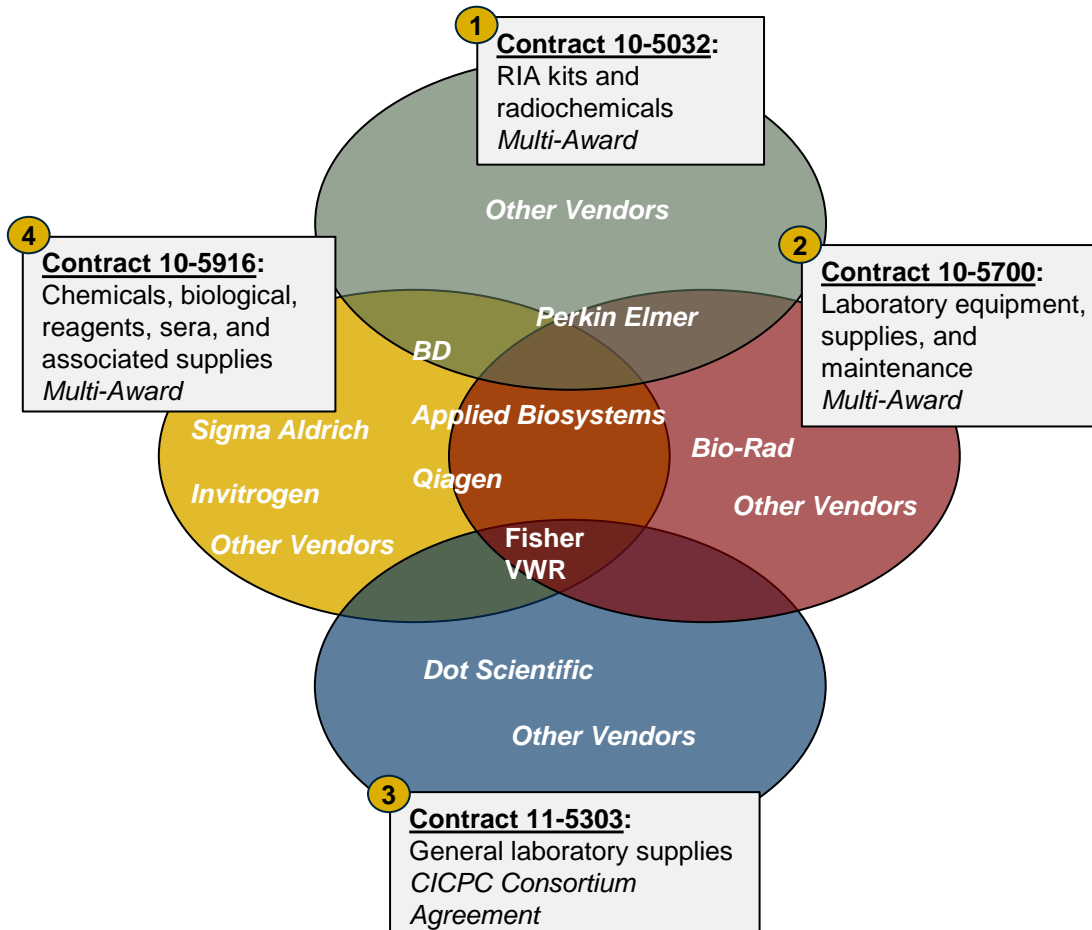
- UW-Madison purchased over 375 SKUs of lamps from WW Grainger
 - Opportunity may exist to effectively manage and standardize types of lamps purchased across various departments
- Discounts vary across each item within the category, reinforcing need to optimize discounts

Source: E&I and WSCA WW Grainger contracts as of 6/6/2011; MDS WW Grainger detailed usage data report for the period 4/1/2010 – 3/31/2011
 Note: (1) UW-Madison WAD reflects actual weighted average discount received; E&I and WSCA discounts reflect contract discounts

Demand Management

Scientific Supplies – State Regulations & Shared Contracts

A sampling of contracts shows that high-spend scientific supplies vendors are often covered by multiple UW-Madison contracts, making it difficult for purchasers to identify the source of product pricing.



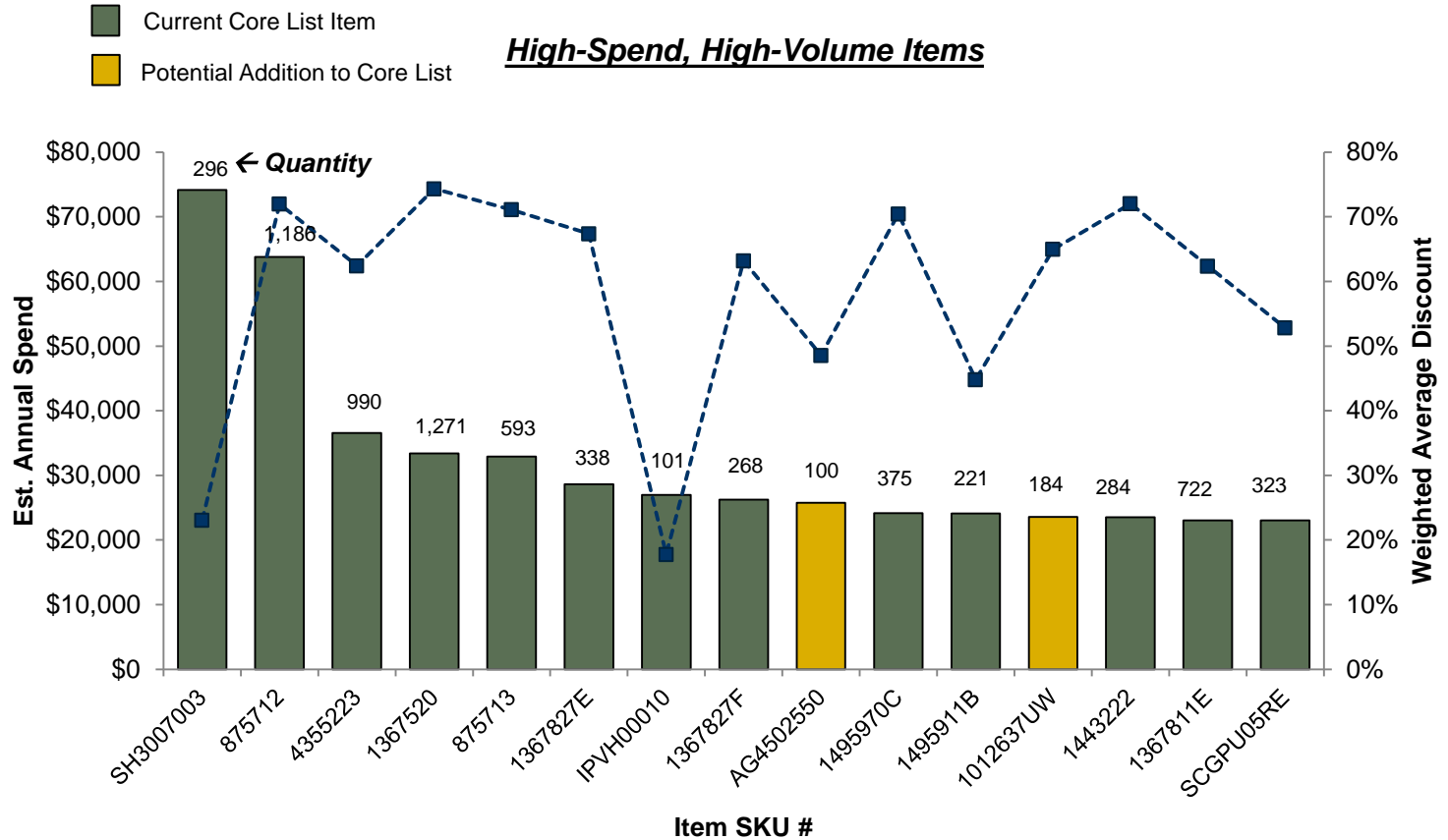
- UW-Madison contract information is housed in multiple locations
 - Contract summaries are posted on the UW Purchasing Services website, while vendor price lists are only available from UW Purchasing Services upon request
- Hundreds of scientific supplies vendors are considered preferred suppliers due to multi-award agreements
- Discussions with purchasing agents suggest that most vendors offer more competitive pricing than the stated contract discount
 - End-user perception is that vendors are less likely to agree to competitive pricing in written contracts due to the State of Wisconsin's 'sunshine' laws

Demand Management

Scientific Supplies – Thermo Fisher Core List Optimization Potential

Of the 1,510 CICPC Core List items purchased by UW-Madison during fiscal year 2010, only 189 were purchased in quantities of 100 or above, indicating potential opportunities to optimize core list utilization.

- One-third of UW-Madison items purchased in quantities of 100 or greater were not covered by the CICPC Core List
- Optimization of the Core List to cover UW-Madison actual high spend and high volume items has the potential to generate additional savings opportunities



Source: Thermo Fisher Scientific detailed usage data report for the period 4/1/2010 – 3/31/2011
 Note: (1) 'High-Volume Items' are defined as items with quantities of 100+ in Thermo Fisher estimated annual spend

Single Email & Calendaring Platform

Single Email & Calendaring Platform

Overview

Consolidation of duplicative email servers that are operated across campus can result in efficiencies and cost savings benefits for UW-Madison.

Situation

- Departments and schools offer duplicative email and calendaring services that may not be distinguishable and are time consuming to maintain
 - DoIT runs WiscMail, the University's 'standard' email system
 - At least 12 instances of email are currently operated across the University
 - A 2008 network analysis indicated that there may be over 70 non-WiscMail departmental email servers as numerous academic and auxiliary departments appear to run their own email systems
- Eleven of the twelve administrative and auxiliary units that reported running their own mail system were estimated to have less than 500 users, indicating that significant economies of scale could be achieved
- Significant effort is required to organize large meetings, often requiring surveys and checking multiple calendars
- Student email has become a commodity service that is offered for free by large vendors at higher service levels than are currently provided to students at UW Madison
 - The majority of students already have email when they arrive on campus
 - A number of peers have elected to outsource the provision of student email (e.g., Google)

Opportunities

- Reduced overall purchasing, operational, and maintenance costs
- Increased ability to deploy more comprehensive services to a wider audience
- Increased service levels and simplified support
- Enhanced expertise in operating and using the solution
- Enhanced economies of scale
- Reduced administrative burden
- Improved capability to incorporate real-time communication

Tactics

- Accelerate activities to review email consolidation; explore consolidation to 2 email platforms (WiscMail plus one additional) or consolidation to 1 enterprise-wide email platform
- Evaluate potential cost savings associated with eliminating the duplicate administrative email systems across campus
- Review options for outsourcing student email to third party providers



Estimated Financial Impact

Annual savings: \$250K - \$1M
Investments: Technologies, Staff Time, Training

Resource Efficiency

- Reduced operational and systems costs
- FTE repositioning

Customer Service

- Improved cross-departmental collaboration
- Improved service to students

Compliance Risk Mitigation

- Improved access management

Single Email & Calendaring Platform

Administrative Email – Service Duplication Consolidation Benefits

The University can benefit from efficiencies and cost savings through the consolidation of many email servers that are operated across campus.

Objective:

- Evaluate potential cost savings associated with eliminating the duplicate administrative email systems across campus.

Questions and Next Steps:

- What are the outcomes of the ECC's efforts (e.g., RFI and vendor demonstrations) and how might they inform next steps?
- What are the roles of governance and policy in supporting the consolidation of campus-wide email? How should the system selection be supported and conducted?
- Given the trend at peer institutions (ASU, Brown, U of Hawaii etc.), is there an opportunity to outsource the campus administrative email?
- At the enterprise level, what entity is responsible for investing the money to migrate to a single platform and who benefits from the efficiencies generated?
- How should the efficiencies in moving to a common calendar and scheduling platform be measured and included in the estimated savings for moving to a common platform?

Administrative email is an example of a commodity IT service that should be administered on a common platform; there may be more duplication than value-added services created from using multiple platforms.

Single Email & Calendaring Platform

Administrative Email – Service Duplication Overview

Departments and schools offer duplicative email and calendaring services that may not be distinguishable and are time consuming to maintain.

	Current State		Future State
	Low	High	
Number of Email Instances ¹ (or Systems)	12	70	1
Servers per Instance	2	2	2
Number of Email Servers	24	140	2
Capital Cost Per Server	\$1,250	\$1,250	\$6,250
Total Server Cost	\$30,000	\$175,000	\$12,500
Server Administrator FTE per instance	.25	.25	.3
Number of Administrators Required	3	17.5	1
Salary of Email Server Administrator	\$67,500	\$67,500	\$80,000
Total Labor Cost	\$202,500	\$1,181,250	\$80,000
Estimated Hardware and Labor Costs	\$232,500	\$1,356,250	\$92,500
Other Costs (Space, Utilities, Software Maintenance)	\$25,000	\$153,000	\$5,000
Estimated Total Costs²	\$257,500	\$1,509,250	\$97,500
Estimated Annual Savings	-	-	\$160K - \$1,411K

Consolidation of systems reduces duplication of effort in administering and maintaining multiple systems, and can save between \$160K and \$1.4M per year depending on the number of systems currently in use.

Note: (1) Estimates on the number of email systems are from the Huron Survey (Low) and an automated network-review of servers by DoIT (High)

(2) Assumes the cost of storage for email remains constant across each service delivery option

Single Email & Calendaring Platform

Administrative Email – Consolidation Considerations

As the ECC group has identified in its evaluation of available technologies, email should be considered in the context of all of the services provided within a single platform.

Function	Description of Benefits
Common Calendar	<ul style="list-style-type: none">▪ Common calendaring platform will reduce the administrative burden associated with scheduling meetings across campus
Chat / IM	<ul style="list-style-type: none">▪ Instant messaging extends email capabilities to incorporate real-time communication
Advanced Collaboration Tools	<ul style="list-style-type: none">▪ Document sharing▪ Ad-hoc web-sites to support collaborative activities, projects, etc.▪ Integration of voice mailboxes and email through digital voice mail
System Administration	<ul style="list-style-type: none">▪ A single platform reduces downtime related to maintenance, upgrades, and patches▪ Standardized platform allows for consistent email archival and retention, eliminating redundant efforts across campus▪ Disaster recovery and continuity efforts are optimized and deployed from a central authority

The decision to consolidate email systems is complicated by the functionality provided through the calendaring, chat, and other collaboration technology bundles provided by each vendor.

Single Email & Calendaring Platform

Administrative Email – Savings Summary

The University can benefit from an understanding and evaluation of what options exist to consolidate email systems and possibly outsource the function to a vendor with more advanced tools and capabilities.

Cumulative 5-Year Savings Case (\$'000s)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Lower range	145	132	120	109	99	\$605
Upper Range	1,283	1,166	1,060	964	876	\$5,349

Data are in thousands of Year-0 dollars

Recommendation	Rationale
Accelerate activities to review email consolidation	<ul style="list-style-type: none"> ▪ Substantial financial efficiency opportunity ▪ Considerable time is spent maintaining multiple calendars and scheduling meetings across multiple calendars ▪ As cross-departmental collaboration becomes more important in obtaining research grants (particularly NIH) , having a single platform to disseminate critical information in a short timeframe will benefit the users that share a common system
Review options for outsourcing email	<ul style="list-style-type: none"> ▪ Repurposing FTEs away from maintaining utility systems will allow them to support and advance the mission of the University without having to increase headcount in IT

Single Email & Calendaring Platform

Student Email – Sunsetting Services Overview

Student email has become a commodity service that is offered for free by well-known vendors at higher service levels than are currently provided to students at UW-Madison.

	UWM Student Email	Gmail	MS Outlook Live
Storage	200MB (up to 3GB)	25GB	10GB
Annual Hardware Expenditure	\$175K	\$0	\$0
On-line and Video Chat	N/A	\$0	N/A
Spam Control	Unknown	\$0	\$0
Collaboration Suite & Document Sharing	Not Available	Yes	Yes (25GB free storage)
Help-Desk & Product Support Costs	\$ Unknown	\$0	\$0
“Email for Life”	Yes – Alumni Association Provided by Google	Yes	Unknown
Availability on Mobile Devices	Yes	Yes	Yes

Gmail provides significant service enhancement for students and can save between \$180K and \$300K per year from removing hardware, software, and labor costs of providing and supporting student email.

Single Email & Calendaring Platform

Student Email – Industry Data Comparison

Peers continue to transition to third-party email vendors and provide examples of enhancement to the services provided to students and the cost to the institution.

Highlighted Benefits Versus Internal Systems						Indicative Institutional Savings Uconn: \$N/A (Student and Alumni) Notre Dame \$1.5M (Student and Alumni) Arizona State University: \$0.5M (Student) Northwestern: \$0 Cost Avoidance (Student and Alumni)
Stated Benefit	UCONN	ASU	NWU	UND	Clemson	
Storage	X	X	X	X	X	
Calendaring	X	X	X	X	X	
Chat & Video	X	X		X		
Collaboration (Docs)	X	X	X	X	X	
Disaster Recovery	X					
Security & Uptime	X	X		X		
Cost Avoidance	X	X	X	X	X	
Direct Savings		X		X		

Transitioning to Gmail for student email provides the opportunity to reduce (eliminate) cost while significantly increasing the level of service provided to students.

Single Email & Calendaring Platform

Student Email – Calculating Sunsetting Savings

By utilizing a third-party to provide student email, UW-Madison has the opportunity to save between \$150K and \$300K while significantly improving the service offered to students.

Student Email Expense	FY12 Budget
Labor	\$0
Mail Stores	\$28K
Storage	\$138K
Support (Help Desk)	\$135K
Utilities (Power & Cooling)	-
Space	-
Estimated Annual Savings	\$0.3M

Savings Calculation
<p>Assumptions</p> <ul style="list-style-type: none"> - Labor savings is assumed to be \$0 although peers have indicated substantial savings in this area and DoIT would no longer have to conduct administration relating to email services and would have fewer servers to operate and maintain - Mail Stores estimated reduction of 2 of 6 active mail stores at \$14K OpEx per store per year (source: DoIT) - Storage allocated to student email is approximately 4.7 terabytes or \$138K at DoIT's current rates - Indicative Help-Desk Data from the University of Notre Dame indicated a reduction of 20% in contacts with the transition <ul style="list-style-type: none"> o FY10 Helpdesk Operating Cost: \$2.7M o Assume a 5% reduction in calls

Low:
\$150K

High:
\$300K

Contract with Third Party (e.g., Google / Microsoft) for Student Email

- Significant service enhancement in data storage and collaboration suite / document sharing
- Alumni are already provided accounts through the alumni association

Review Student Email Related Help-Desk Volume to Quantify Potential Impact of Transition

- University of Notre Dame experienced a 20% reduction in calls
- Assumed a 5% reduction in calls for this business case

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Student Email – Savings Summary

By sunsetting services that are currently provided, the University has the opportunity to reallocate budgets to fund more strategic investment.

Cumulative 5-Year Savings Conservative Case (\$'000s)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Student Email	136	124	113	102	93	\$568

Data are in thousands of Year-0 dollars

Recommendation	Rationale
Outsource student email by extending the alumni email option (Gmail) to current students	<ul style="list-style-type: none"> ▪ Gmail presents a substantial improvement in service over the current student email system in both storage and in collaboration applications ▪ Internal system has real costs associated with it while third party options are free