

# Welcome

2012  
**Education  
Technology  
Market Watch**  
Beyond the Beltway for K-12 and Higher Education

CENTER FOR  
**DIGITAL**  
EDUCATION

TechAmerica  
WHERE THE FUTURE BEGINS  
THE ASSOCIATION OF COMPANIES DRIVING INNOVATION WORLDWIDE

**GOVERNMENT TECHNOLOGY™**

# Education Market Forecast 2012



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# You are Here

- Other sectors have embraced technology and transformed
  - Industry – 20 years ago
  - Federal government – 15 years ago
  - State and local government – 10 years ago
- Higher ed – began 5 years ago
  - Consolidation/virtualization at the data center
  - Routine student services online not in line
- K12 – just building steam
  - Network upgrades
  - Digital content, 1-to-1/BYOD
  - Storage requirements suddenly skyrocketing
  - digital presentation tools, whiteboards, projectors are standard
  - Unified communication for collaboration & distance learning



# Market Size by Enrollment

		Number of Entities	Est. Enrollment
HED	Public Four Year	672	7,709,197
	Public Two Year	1,000	12,400,000
	Private Four Year	2,102	5,197,108
	Private Two Year	721	419,961
K12	Department of Education	50	-
	Public School Districts	14,000+	49,386,000
	- Public Schools	98,706	-
	Private Schools	33,740	5,964,000

Source: US Census & NCES, 2010

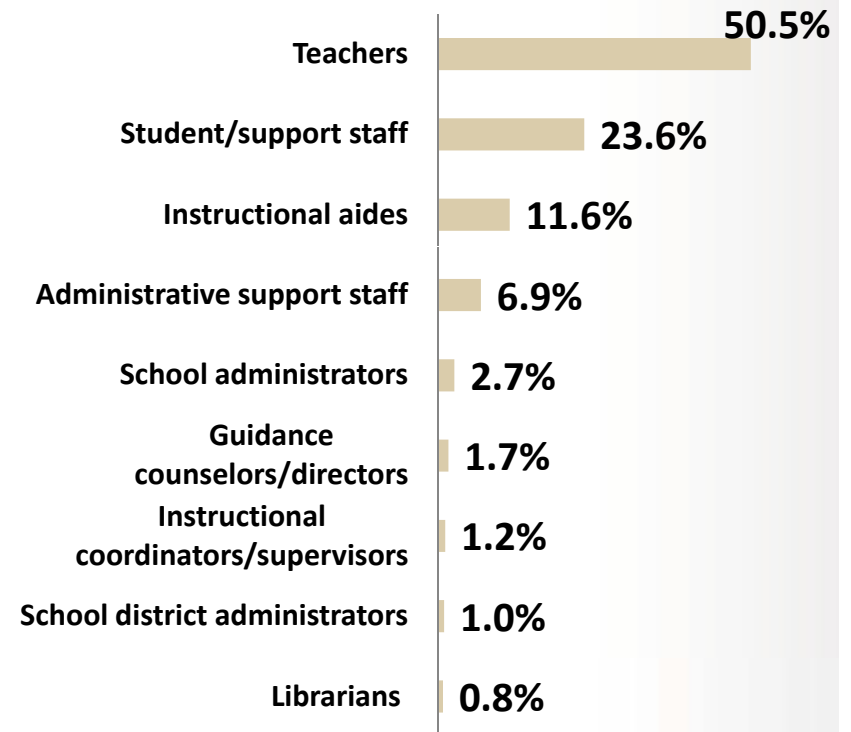
# Market Size by Staff Employment

**Total Education Employees: 11,132,752**

Role Category	Employees
Elementary and secondary education	7,917,038
➤ Instructional employees (Teachers, principals, supervisors, librarians, etc.)	5,355,239
➤ Other employees (Superintendents, administrators & other non-instructional staff)	2,561,799
Higher education	3,121,471
➤ Instructional employees (Teachers and academic researchers)	1,113,481
➤ Other employees (Administrators and other non-instructional staff)	2,007,990
Other education	94,243

Source: US Census & NCES

## K12 Breakdown

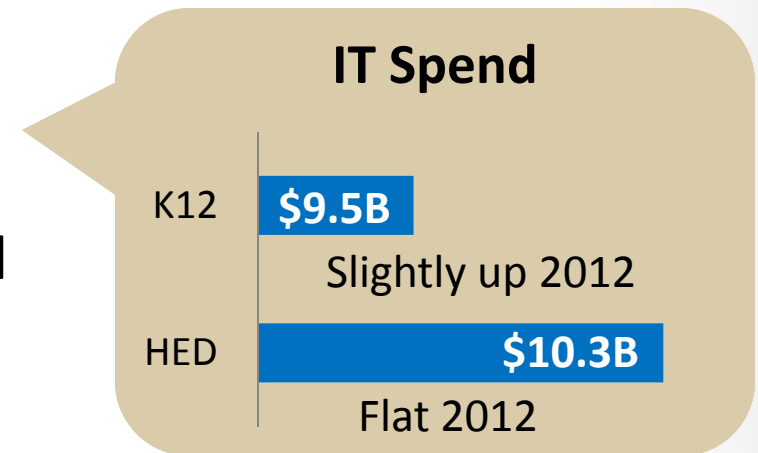


# If it were a Fortune 500

School District / Company	Revenue	Higher Edu Institution/ Company	Revenue
Nike (Rank #135)	\$19,014,000,000	MGM Resorts International (Rank #380)	\$6,019,200,000
<b>New York City DOE (NY)</b>	<b>\$18,599,971,800</b>	<b>University of Michigan (MI)</b>	<b>\$5,849,883,321</b>
J.C. Penney (Rank #146)	\$17,759,000,000	Fidelity National Financial (Rank #398)	\$5,740,300,000
<b>Los Angeles Unified School District (CA)</b>	<b>\$11,700,900,000</b>	<b>University of Washington (WA)</b>	<b>\$5,584,919,000</b>
Marriott International (Rank #210)	\$11,691,000,000	MasterCard (Rank #410)	\$5,539,000,000
<b>Chicago Public Schools (IL)</b>	<b>\$6,566,800,000</b>	<b>UC Los Angeles (CA)</b>	<b>\$4,873,215,000</b>
Yahoo (Rank #365)	\$6,324,700,000	Washington Post (Rank #470)	\$4,817,100,000
<b>Miami-Dade County Public Schools (FL)</b>	<b>\$4,300,000,000</b>	<b>Ohio State University (OH)</b>	<b>\$4,745,733,000</b>

# Education Spend

- According to the 2011 Fall Fiscal Survey, there was \$1.7 trillion in state spending for FY2011.
  - This includes all sources of funding, i.e. general fund, federal funds, other state funds, bonds, etc.
- Education made up:
  - 20.1% (or \$341.7B) in K12 spend
  - 10.1% (or \$171.7B) in HED spend



Source: Center for Digital Education, 2012

Source: 2011 Fall Fiscal Survey of States

# What's Effecting the Market?

## Federal Reform

State Reform

Funding

Impact of curriculum  
on IT

Trending Technologies



- Digital Textbook Playbook
  - US DOE and FCC - Feb 2012
- FY 2013 Proposed Budget
  - 3.8% increase
  - \$300M for K12 RTT
  - \$1B Hi Edu RTT-version
  - \$8B for CC job training program
- No Child Left Behind
  - Waivers granted to 11 states
  - 26 more states and DC seek flexibility in round two requests
  - Round three expected for Sept. 6



# What's Effecting the Market?

Federal Reform

**State Reform**

Funding

Impact of curriculum  
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Trending Technologies



- Oregon
  - Zero-to-20 education system
  - Chief Education Officer
- Connecticut
  - Proposal for student centric model
- Idaho
  - Requires two online credits for HS graduation (AL, FL & MI require one)
- Florida
  - Requires use of digital learning tools by (2015/16)
- California & Utah
  - Launch free online textbook initiatives

# What's Effecting the Market?

Federal Reform

State Reform

**Funding**

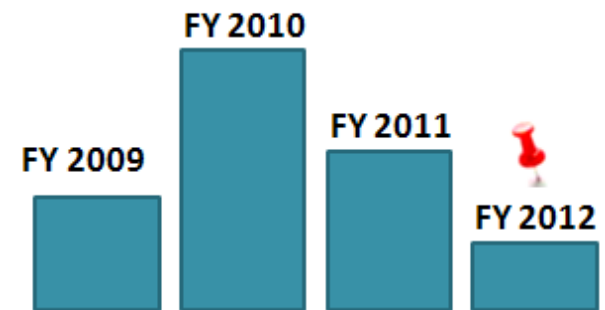
Impact of curriculum  
on IT

Trending Technologies



- State general funding increased 2.9% in 2012 over 2011
- The Center on Education Policy reports that 20 in 37 states plan to increase their education budgets in 2012. This is up from 14 states in 2011.
- Dwindling stimulus funds

Total State/Local/Edu Stimulus Funding



# What's Effecting the Market?

Federal Reform

State Reform

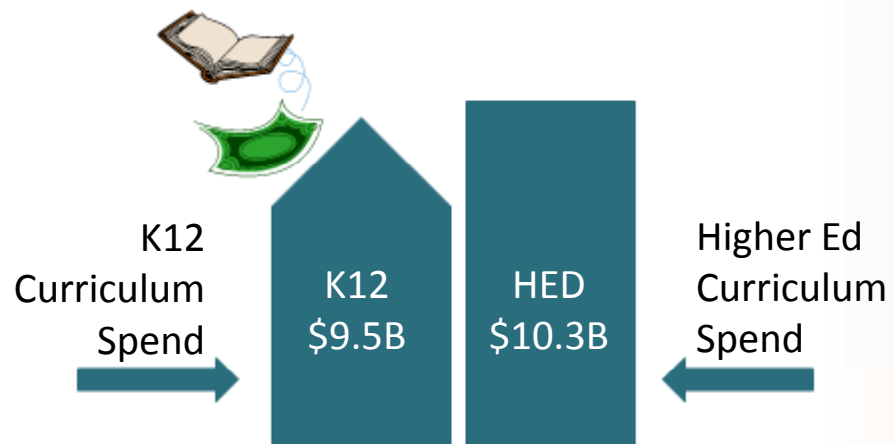
Funding

**Impact of curriculum  
on IT**

Trending Technologies



- Common Core (Adopted by 46 states)
- Online assessments
- IT Spend for K12 and HED is an estimated \$19.8B, but that may increase with investment from curriculum in digital content resources and eLearning applications



# What's Effecting the Market?

Federal Reform

State Reform

Funding

Impact of curriculum  
on IT

**Trending  
Technologies**



- There are several areas of technology that are changing the education landscape. To mention a few:
  - Mobility
  - Digital content & Content Mgmt
  - Learning Mgmt & Student Mgmt Systems
  - Online virtual learning with live teacher access
  - Storage and Cloud
  - Network evolutions
  - Classroom tech build-out to unfinished classrooms

# Mobility

## Tech Trends & Procurement

# Mobility

## Quick Facts

- The top two initiatives reported by district technology leaders are mobility (1:1 & BYOD) and wireless/network infrastructure. – 2011/12 CDE Digital School Districts Survey
- Among college students, tablet device ownership tripled from 7% (2011) to 25% (2012), 66% believe tablets improve the learning environment, and 63% believe tablets will replace traditional textbooks within 5 years - The Pearson Foundation
- Over 80% of public and private universities and almost 70% of community colleges have wireless classrooms, which is a key component supporting mobile environment - The Campus Computing Project.

## Drivers

- 1:1 objective
- Student demand
- Increased academic achievement & student engagement
- More cost effective solutions available

## Potential Barriers

- Limited bandwidth & aging infrastructure
- Support for multiple devices and platforms
- Cost to implement & connectivity costs
- Teacher understanding of proper integration of the tool
- School and state policies prohibiting devices (K12)

# Digital Content

## Quick Facts

- Approx. 27% of middle school and 35% of high school students use digital textbooks - Project Tomorrow
- The eLearning market is approx. \$2.9 billion for K12 (\$0.46 of every \$100 spent) and \$24.4 billion for HED (\$5.60 of every \$100 spent) - “Unleashing the Potential of Education Technology,” The White House, 2011
- Several states have rewritten textbook funding laws to include digital content, e.g. IL, IN, OH, IA, WV & TX. (IN, OH & IA allow purchase of computer hardware.)
- The United States spends over \$7 billion on textbooks annually; many textbooks can be 7-10 yrs old - FCC
- 58% of college students prefer a digital format for textbooks, which is a reversal from last year when more students preferred printed textbooks - The Pearson Foundation

## Drivers

- Improved learning capabilities
- Cost effective
- Personalized learning opportunities
- Availability of up-to-date content

## Potential Barriers

- Cost (publisher pricing) vs. obtaining new “born-digital” non-book-format content inexpensively
- Device and content interoperability
- Managing the transition
- Professional Development

# Online Virtual Learning

## Quick Facts

- The number of students involved in online learning tripled at the high school level and doubled at the middle school level from 2008 to 2011 - Project Tomorrow
- According to Keeping Pace in K12:
  - 40 states have virtual schools or state-led online learning initiatives.
  - 30 states plus Washington DC have at least one full-time online school operating statewide.
  - 536,000 course enrollments in state virtual schools & 250,000 full-time enrollments in online schools.
- Through introductory course redesigns using online learning tools, the National Center for Academic Transformation reports annual average cost savings of:
  - 35% (or \$1,688,672) for the Arizona Board of Regents
  - 38% (\$591,027) for Missouri Public Universities
  - 35% (\$534,655) for the State University of New York

## Drivers

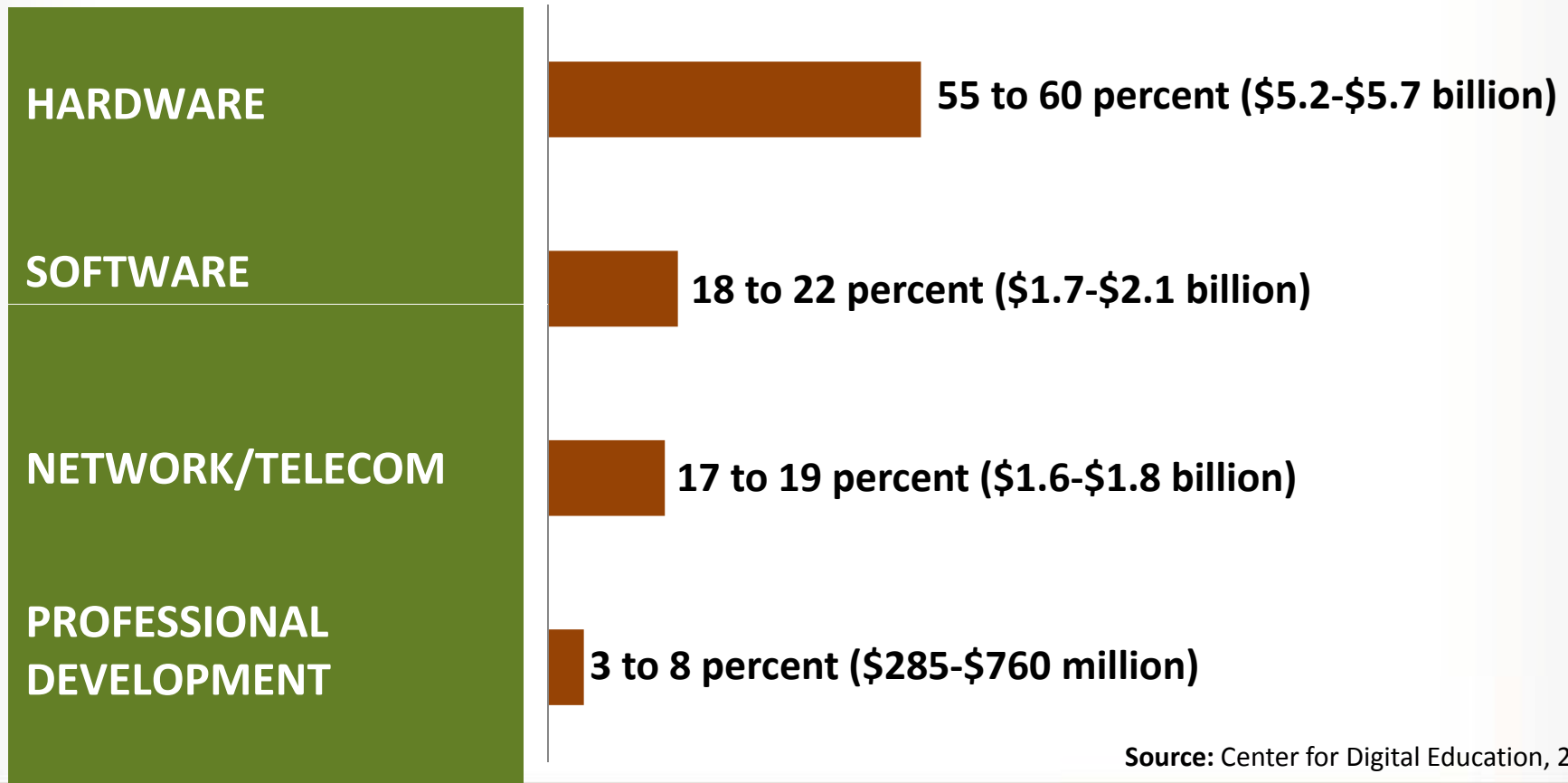
- More cost effective solutions available
- Demand from students and parents
- Personalized and flexible learning options
- Increased student engagement
- Shared resources (teachers & courses) across multiple schools

## Potential Barriers

- Lack of teacher experience to create curriculum specific online course
- Teacher reluctance or comfort level to teach online courses
- Connectivity
- Funding models for enrollment

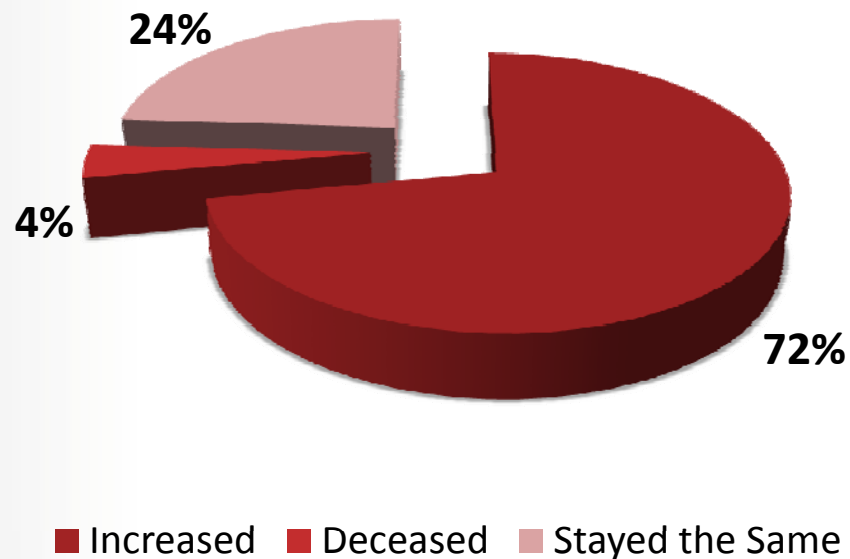


# K12 Spend Breakdown



# K12 Spend on Computing Devices

## Computing Device Increases Year-over-Year



	2011 Install	2012 Spend
Number	18.1 million	3.2 million (refresh+net new)
Est. Spend	\$10.3 billion	\$1.88 billion

- **3-Year Forecast:** 7.5% annual Growth
- **Yearly Refresh:** 2 million devices

Source: CDE K12 Education Report, 2011  
 Source: School Dude Survey, 2011

# Procurement Vehicles

- Statewide and Cooperative Contracts are major vehicles leveraged for technology procurement:
- 74% of K12 use state contracting vehicles
  - Other methods include: city/county contracts, district contracts, US Communities & WSCA
- 74% of HED use cooperative purchasing contracts
  - 81% use cooperative purchasing for computer/ information technology/communications hardware

Source: CDE Digital School Districts Survey, 2011/12

Source: AASCU, Public College & University Procurement, 2010

# WSCA 2011 Spend for Computers

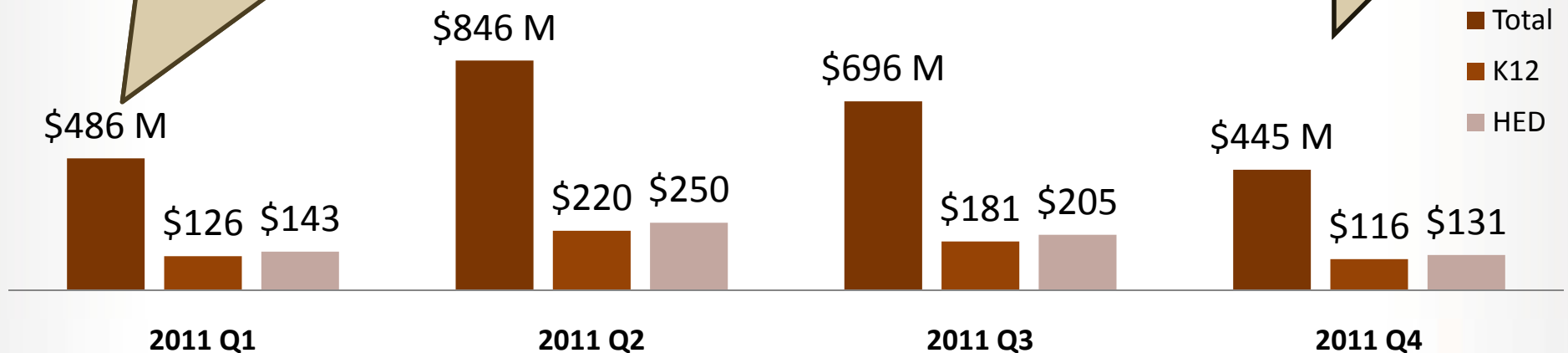
45 members states | \$2.47 billion in 2011 Spend

Of 2011 Q1 Spend, approx.:

- 26% accounted for K12
- 29.5% accounted for HED

If estimate applied across the board:

- \$642.2 million in K12 spend
- \$728.6 million in HED spend



Source: WSCA, Computer Equipment, Peripherals & Services Contract

# Wait. Who does the purchasing?

- There is no 'one size fits all' when it comes to technology procurement.
- In a recent CDE Converge Readership Survey,
  - 52.8% of K12 and 62.5% of HED curriculum staff reported that curriculum lead technology purchases related to eLearning applications and software.
  - 28.2% of K12 and 40.6% of HED teachers reported that teachers lead technology procurement directives
  - 38.9% of K12 and 52.4% of HED technologists report that technology staff lead technology procurement


# General Trends

## K12

- Not as enterprise tech oriented as other major markets
- Onslaught of BYOD
- Scrambling to update networks
- Most lack enough or primary qualified IT staff & qualified instructional tech staff
- Already 100+ vendor answers to every learning tech question

## HIGHER ED

- Not as classroom tech oriented
- Traditional systems and status quo spending being cut
- Lots of room for transitional learning tech spend (digital content), lecture capture, new LMS's
- Ripe for rip-and-replace on major systems
- Still doing consolidation/virtualization
- Big publishers moving to digital

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NAME	INSTITUTION	STATE	PUBLISHED
 Network Infrastructure Equipment	Warren Woods Public Schools	MI	Mar 16, 2012
 Tobii Eye Tracking Technology (Sole Brand)	Georgia Southern University	GA	Mar 16, 2012
 On-Call Telecommunications - Related Services	University of Maine System	ME	Mar 16, 2012
 Scanning Services	Anchorage School District	AK	Mar 16, 2012
 Computerized Maintenance Management Software	Harford Community College	MD	Mar 16, 2012
 Construction Management Services - Construct New Business Building & Conklin Hall Rehabilitation	State University Construction Fund	NY	Mar 16, 2012
 OCLC Online Subscriptions	Buffalo State College (SUNY)	NY	Mar 16, 2012
 Web-Based Case Management System	New Hampshire Department of Education	NH	Mar 16, 2012
 Multifunction Copiers	Fayette County Public Schools	KY	Mar 16, 2012

# Thank you



AVAILABLE TODAY:  
K12 Education Overview Report