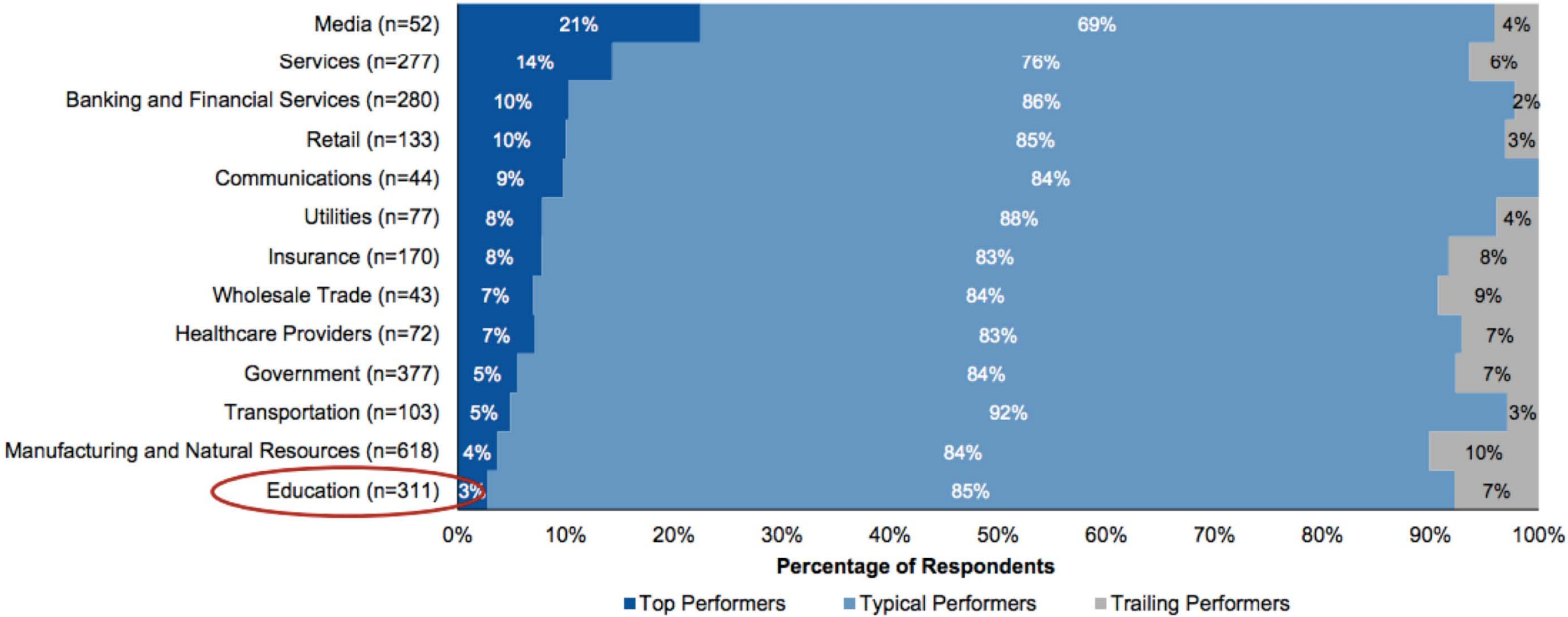
EdTech in der Medizin – Einsatz-möglichkeiten neuer Technologien in der medizinischen Lehre

Education as a sector ranks 14th of 22 sectors in the McKinsey Global Institute Industry Digitization index.

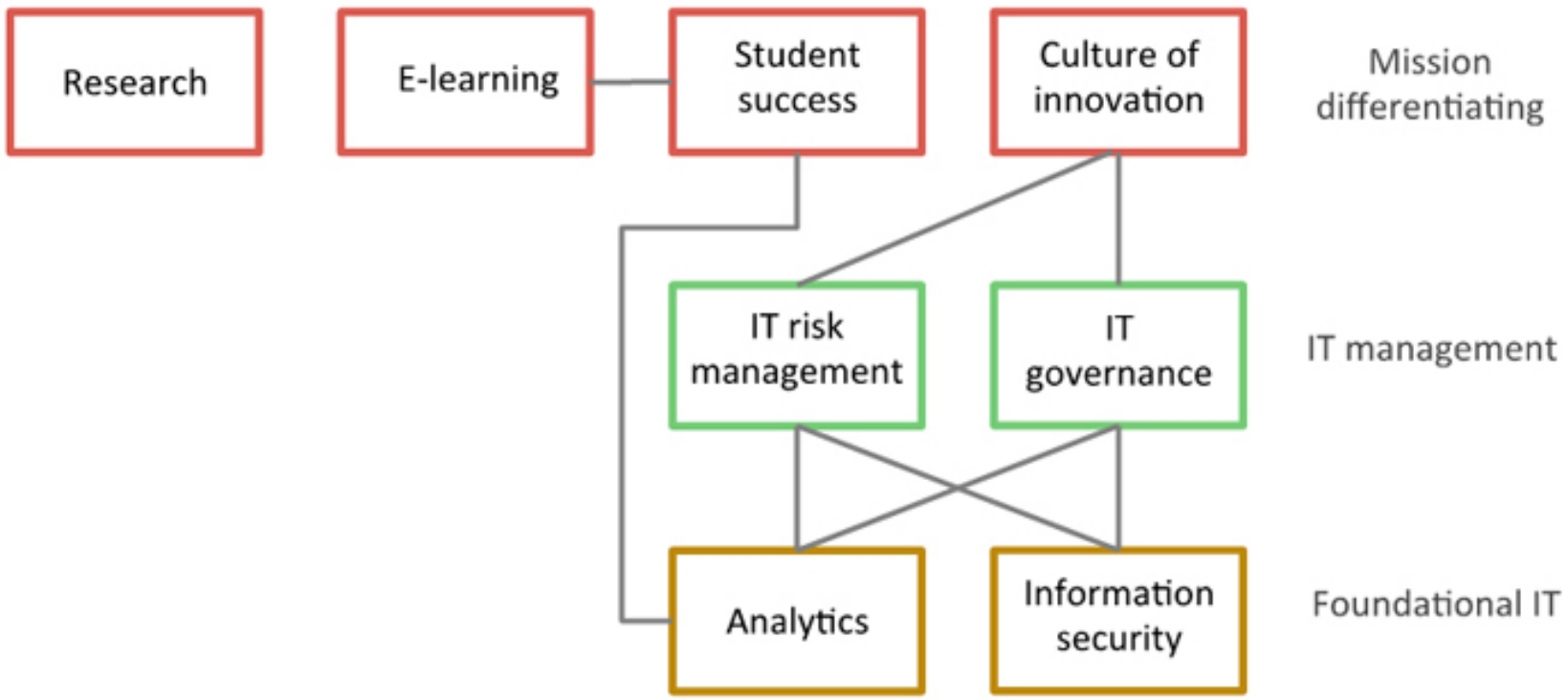
James Manyika, Sree Ramaswamy, Somesh Khanna, Hugo Sarrazin, Gary Pinkus, Guru Sethupathy, and Andrew Yaffe, "Digital America: A Tale of the Haves and Have-mores," McKinsey Global Institute (December 2015).

Top Digital Performers per Industry — No Industry Has a Majority of Mastery — But Education is Lagging!



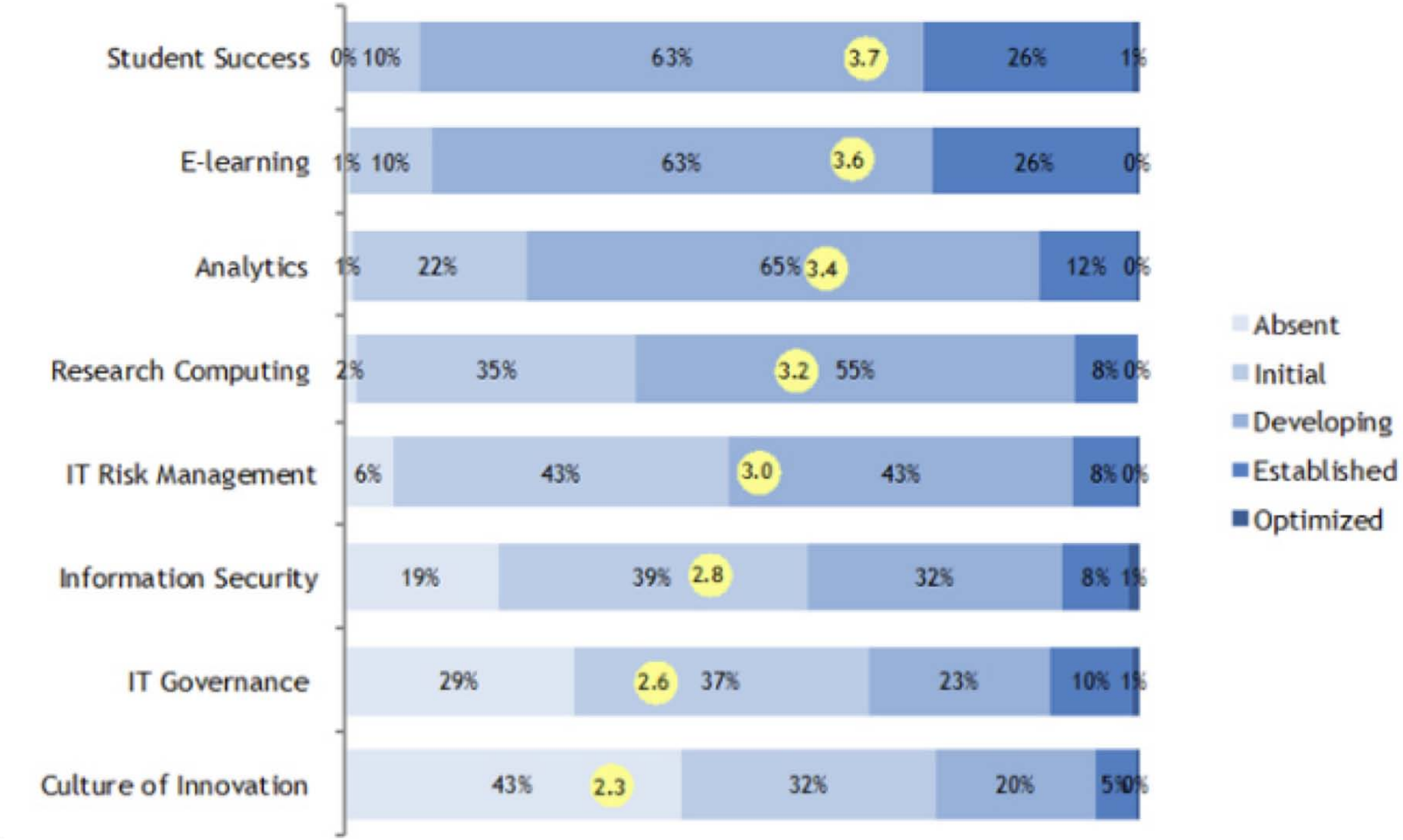
Gartner 2017 CIO Survey: "How effective is your company at factoring digital considerations into strategy and planning?"

What are we talking about?



Susan Grajek, E-Learning: Strategic Capabilities in Higher Education, 2015,research report (Louisville, CO: EDUCAUSE Center for Analysis and Research, August 19, 2016).

Where are we now?



An average of 553 institutions completed each maturity index: 290 for research computing, 499 for information security, 517 for analytics, 524 for student success technologies, 537 for e-learning, 582 for culture of innovation, 729 for IT risk management, and 747 for IT governance.

How's the progress?

For IT governance, student success technologies, and research computing.

Increase between year 2014 and 2015 based on a 5 point composite maturity cose, across IT governance, student success technologies and research

How's the progress?

20% of MOOCS offered by U.S. News and World Report's Top 100 National Universities are offered by the Top 5 universities on that list.
56% of MOOCs offered by those National Universities are offered by schools in the Top 20.
87.6% of all MOOCs available are offered by schools within the Top 50.
Course offerings per institution drop off exponentially at a rate of -700% after Top 50:

that's an average of 21 MOOCs per university in the Top 50
average of 3 MOOCs per university in the bottom 50.

→ massively unequal distribution of MOOCS toward some of the most expensive, highly valued, and heftily-endowed universities in the world.

http://www.onlinecoursereport.com/state-of-the-mooc-2016-a-year-of-massive-landscape-change-for-massive-open-online-courses/

How's the progress?

Many „apply" but...

- Few active users
- „engagement" falls off dramatically after firstg 1-2 weeks
- Few „persist" to course end - even if offerd from major universities

MOOCS almost never connceted either to another MOOC or to another aspect of the curriculum

- What is needed instead is a commitment to rebuilding the connective tissue that once made college curricula in general and general education curricula in particular substantially more than the sum of their disconnected parts.

MOOCs weren't the solution but MOOCs have prompted a widespread interest into research about how people learn.

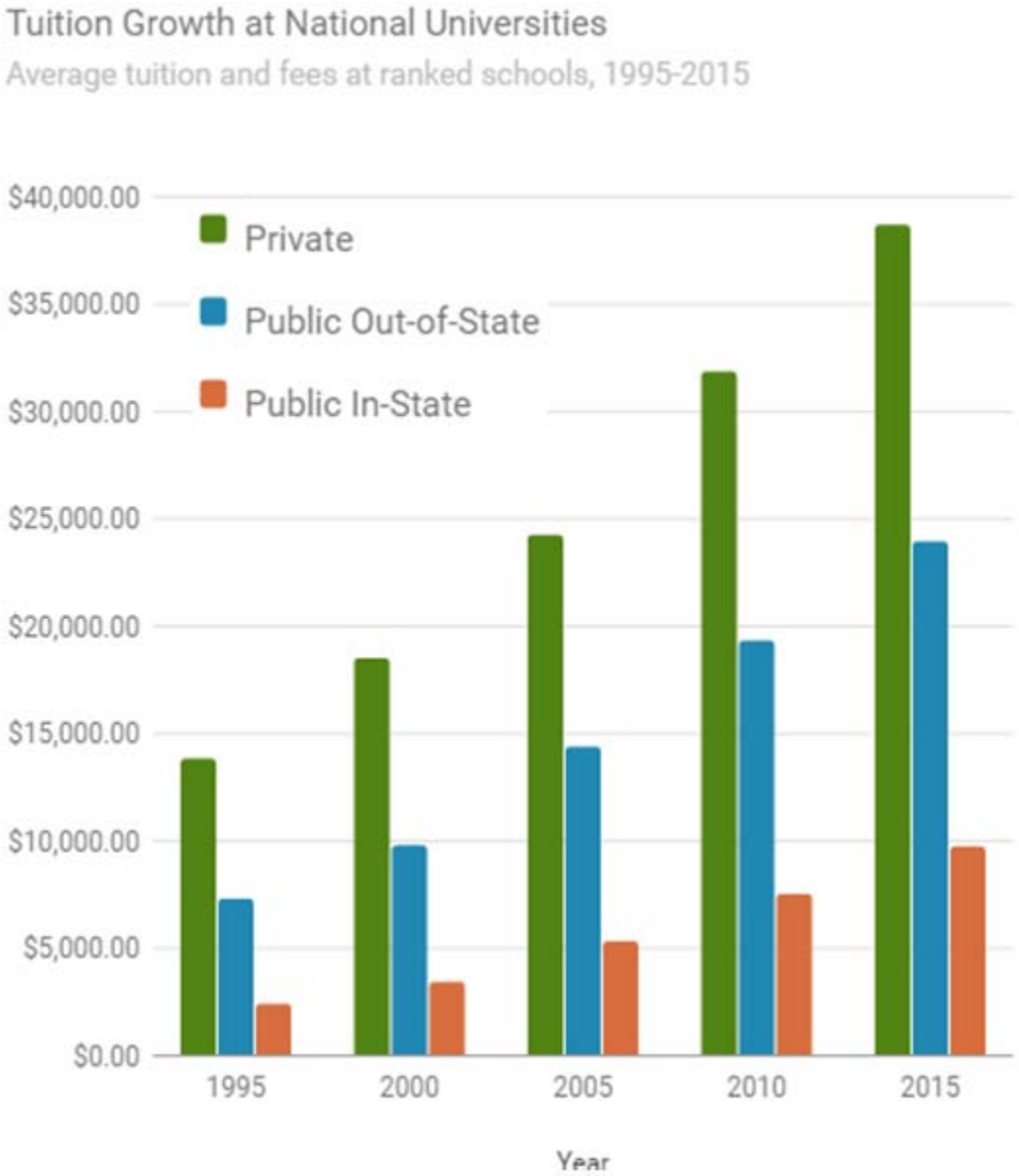
- The action in the MOOC world now is learning about learning.

PennState Study

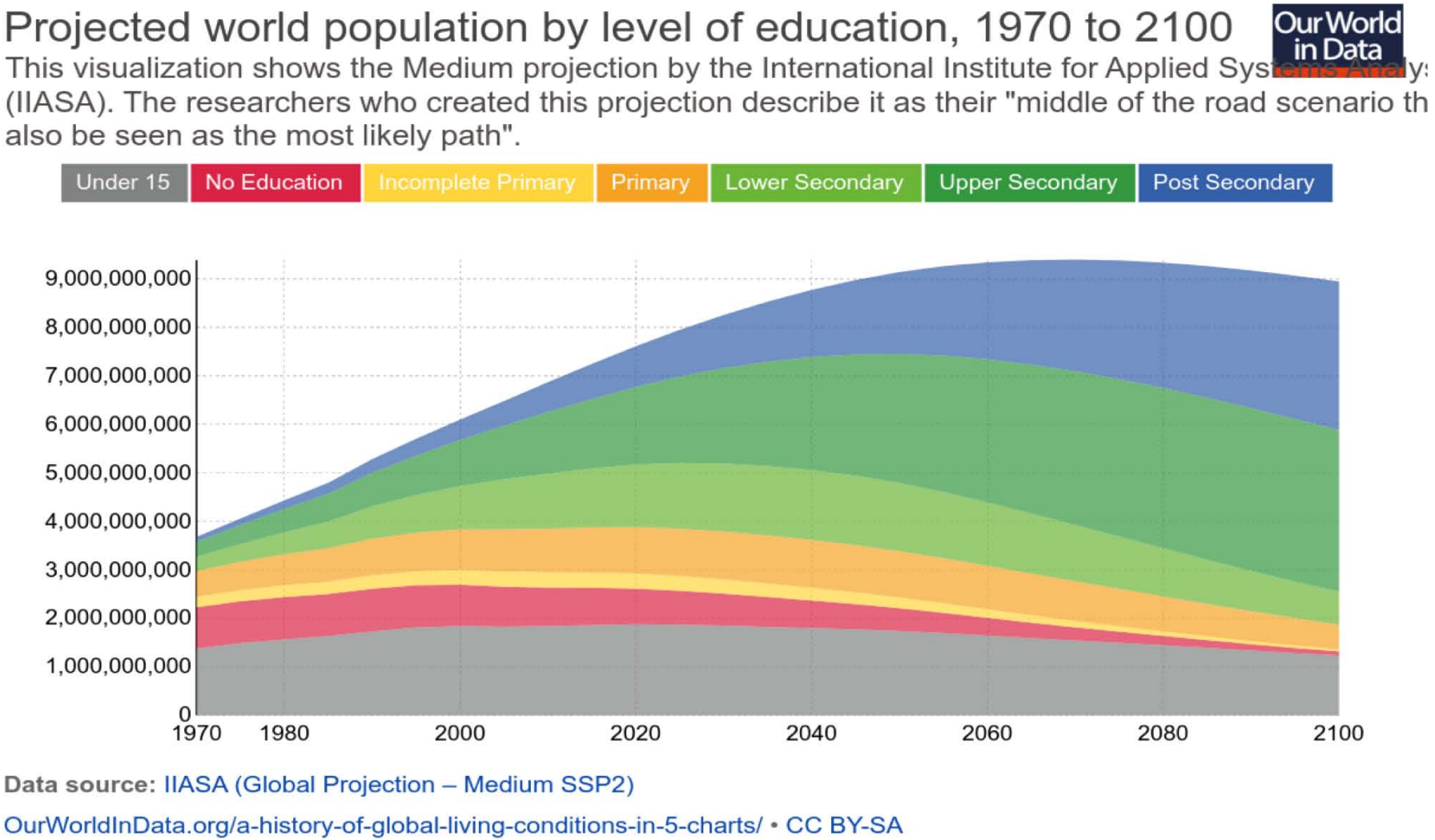
Digital divide in Higher ED?

Susan Grajek, Trend Watch 2016: Which IT Trends Is Higher Education Responding To? research report (Louisville, CO: ECAR, March 7, 2016).

Why should we digitalize?

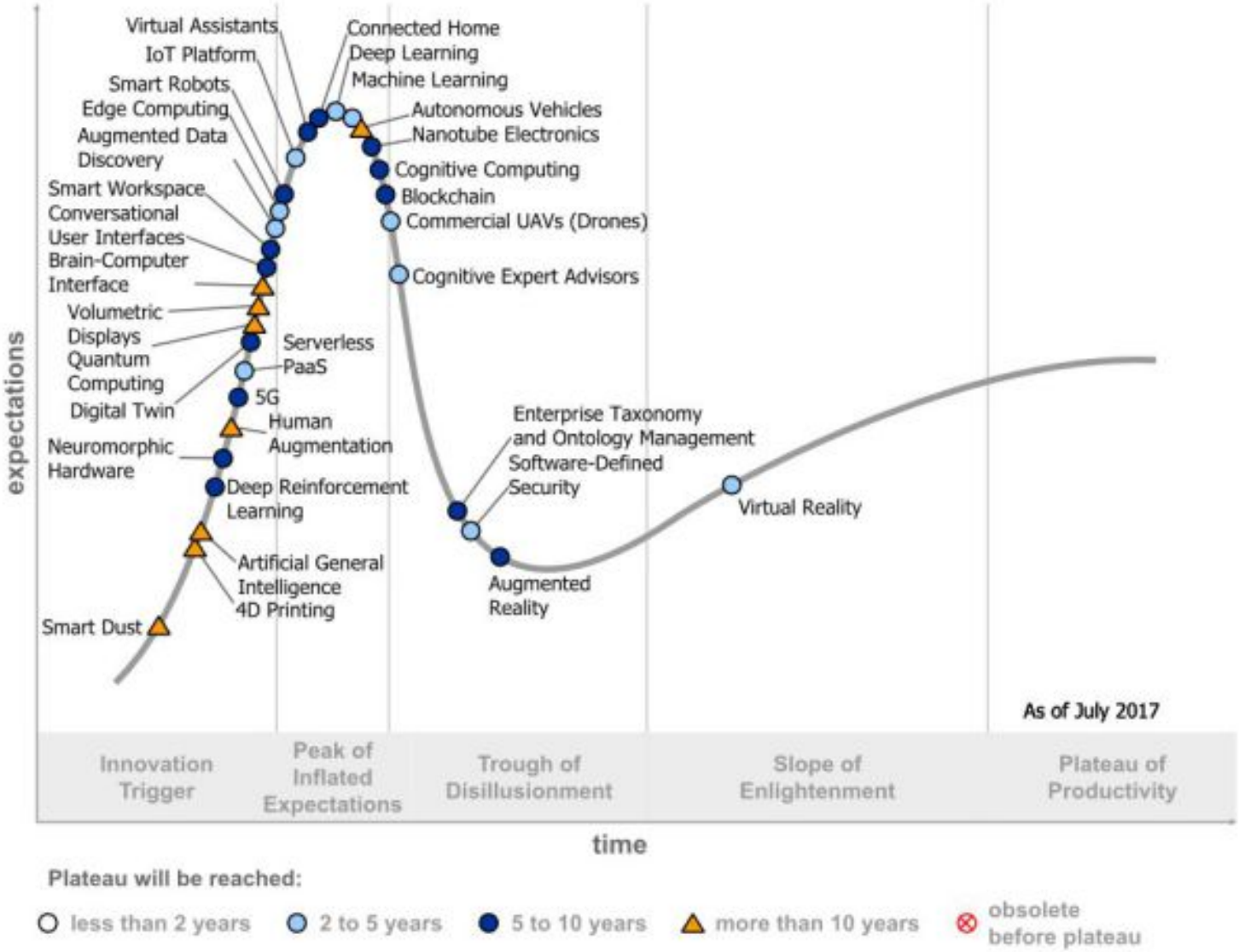


Why should we digitalize?

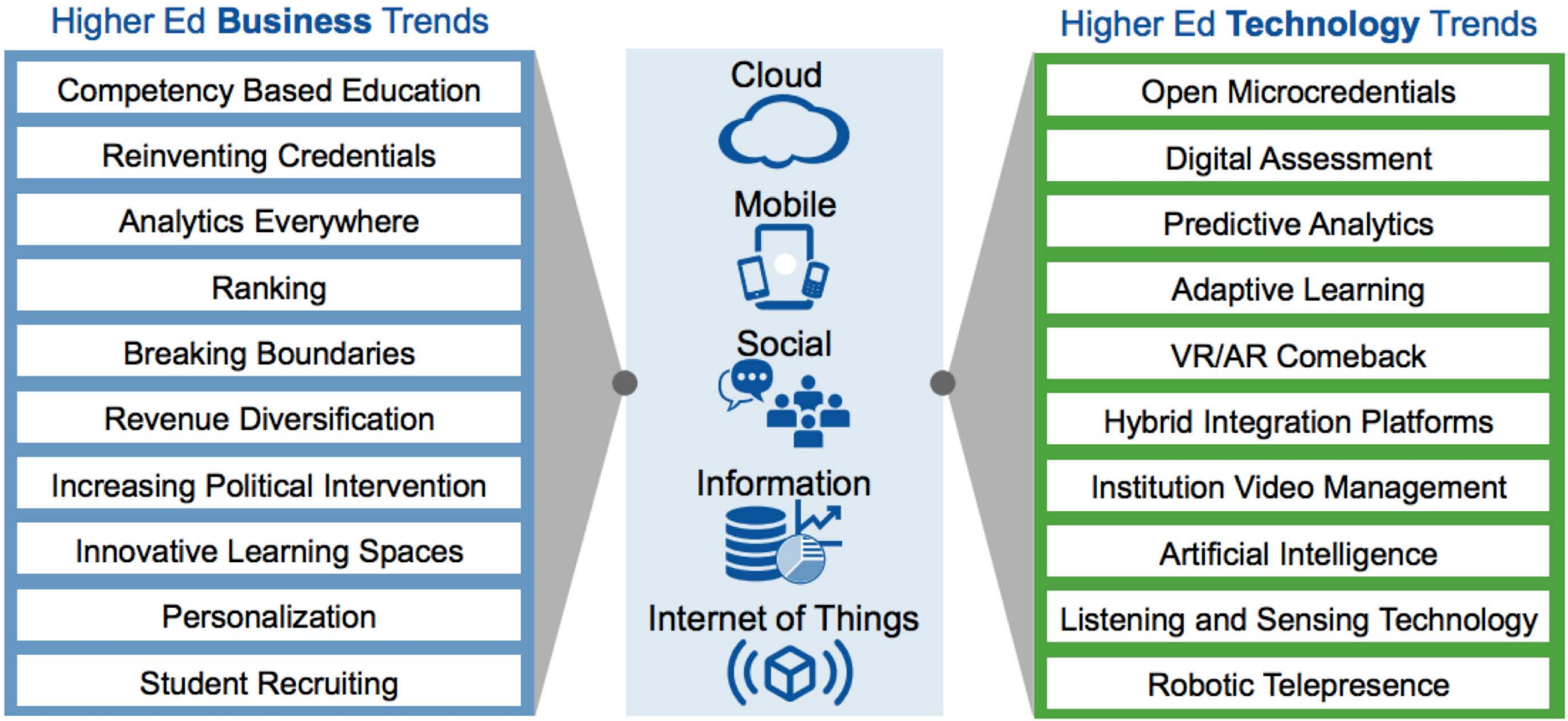


What's next?

Figure 2. Hype Cycle for Emerging Technologies, 2017



More Than Aligned: Technology and Business are Fused



Open Microcredentials: Atomic Digital Signs of Accomplishment

- Represent smaller identifiable chunks of learning, accomplishment, achievement or skill
- Atomic, Stackable, Portable
- Must be transparent & durable
- Supports the original e-Portfolio vision
- Raises questions of who can issue and control creds
- Offers employers additional evidence of abilities
- Blockchain holds promise as foundational technology

Action Item

Experiment with badging technology such as Mozilla and blockchain and identify viable ecosystem partners

Supports Business Trends:

- Competency Based Education
- Reinventing Credentials
- Personalization

Adaptive Learning: The Key to Scalable Personalized Learning

- "Mind-reading robo-tutor in the sky" (NPR)
- Over-hyped and complex
- Two modalities – textbooks and platforms
- Dependent on large-scale collection and analysis of learning data
- Requires algorithmically derived pedagogical responses

Action Item

Start small and temper expectations - prepare for the depth of support required

Supports Business Trends:
- Competency Based Education
- Personalization
- Analytics Everywhere

http://www.npr.org/sections/ed/2015/10/13/437265231/meet-the-mind-reading-robo-tutor-in-the-sky

VR/AR Comeback: Now More Available and Affordable

- Field trips – Google Expeditions via Cardboard
- Virtual Classrooms – Immersive's Engage Education Virtual Reality Platform
- Deeper engagement with content –zSpace, Unimersive, Alchemy VR, Curiscope, IndyLabVR
- Understand 3D objects such as human heart – Ellucian Brainstorm
- Athletics, campus tours, research

Action Item

Develop a potential set of use cases; perform market scan; and engage in pilots

Supports Business Trends:
- Competency Based Education
- Innovative Learning Spaces
- Revenue Diversification

Artificial Intelligence: Adapt Behavior Based on Experience

Credit: "Deakin University

Deakin student advisor powered by Watson

- Applications across the academy- admin, teaching, & research
- Increasingly complex data sources (such as tweets, Facebook and campus cards), combined with larger volumes of traditional data (such as SIS, LMS and CRM), drive the need to use smart machines to identify correlations for student success
- Changing the professions for which higher education is teaching

Action Item

Adopt standards (Caliper, LTI, xAPI) to prepare for interoperability. Experiment with smart machine services for analytics

Supports Business Trends:

- Analytics Everywhere
- Personalization
- Ranking

Digital Assessment: Digital Technology for Examination of Student Learning, Achievement and Skill

- Increasingly important aspect of online learning and CBE
- An essential element of adaptive learning
- Provides raw data which can be fed to predictive analytics and CRM technologies to improve student success
- Investments are sometimes being done by disparate parts of the institution and therefore not strategic

Action Item

Produces large quantities of valuable and attractive data – make sure you have a governance framework in place

Supports Business Trends:

- Competency Based Education
- Reinventing Credentials
- Analytics Everywhere

Predictive Analytics: Applying an Algorithmic Approach to Data

- **Actionable insight** predicting future behaviors and outcomes
- Key element of your student success strategy
- Most powerful when combined with machine learning and natural language processing
- An iterative activity: define problem, design algorithm, measure, analyze, and then act
- Buyer beware

Action Item

Start small and build - identify the key institutional questions and currently available data

Supports Business Trends:
- Analytics Everywhere
- Personalization
- Student Recruiting


14:52


our 5 Moments
or Hand Hygiene
“It feels really real, like really really real!”
(ED physician)

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.

Don't let yourself be lulled into inaction."

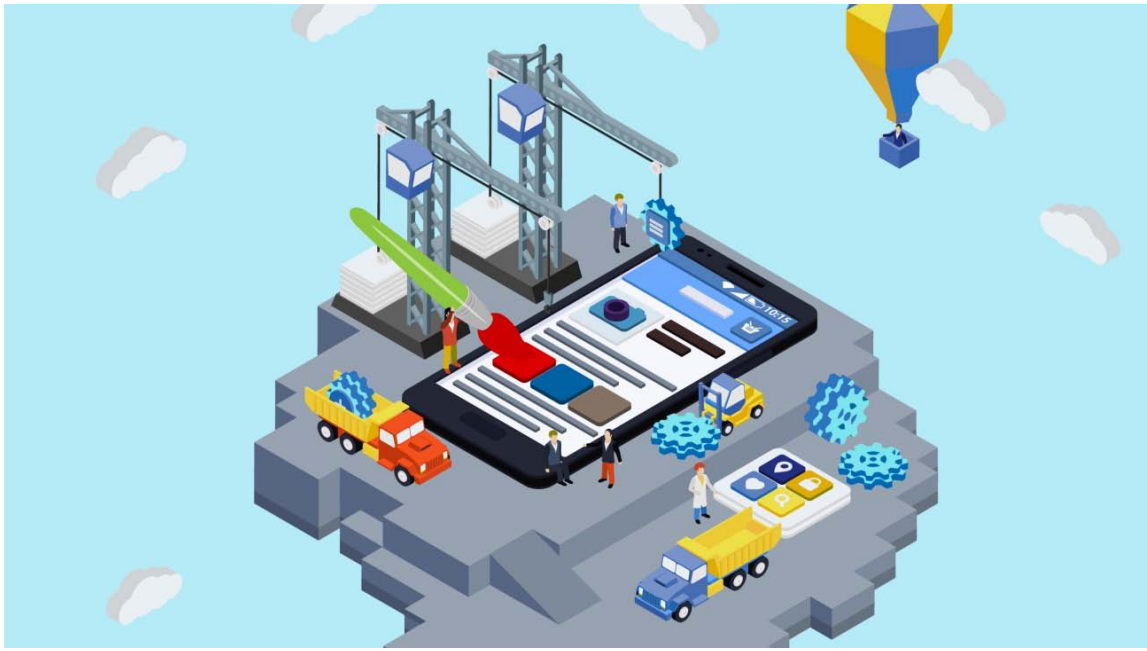
— Bill Gates

Sources

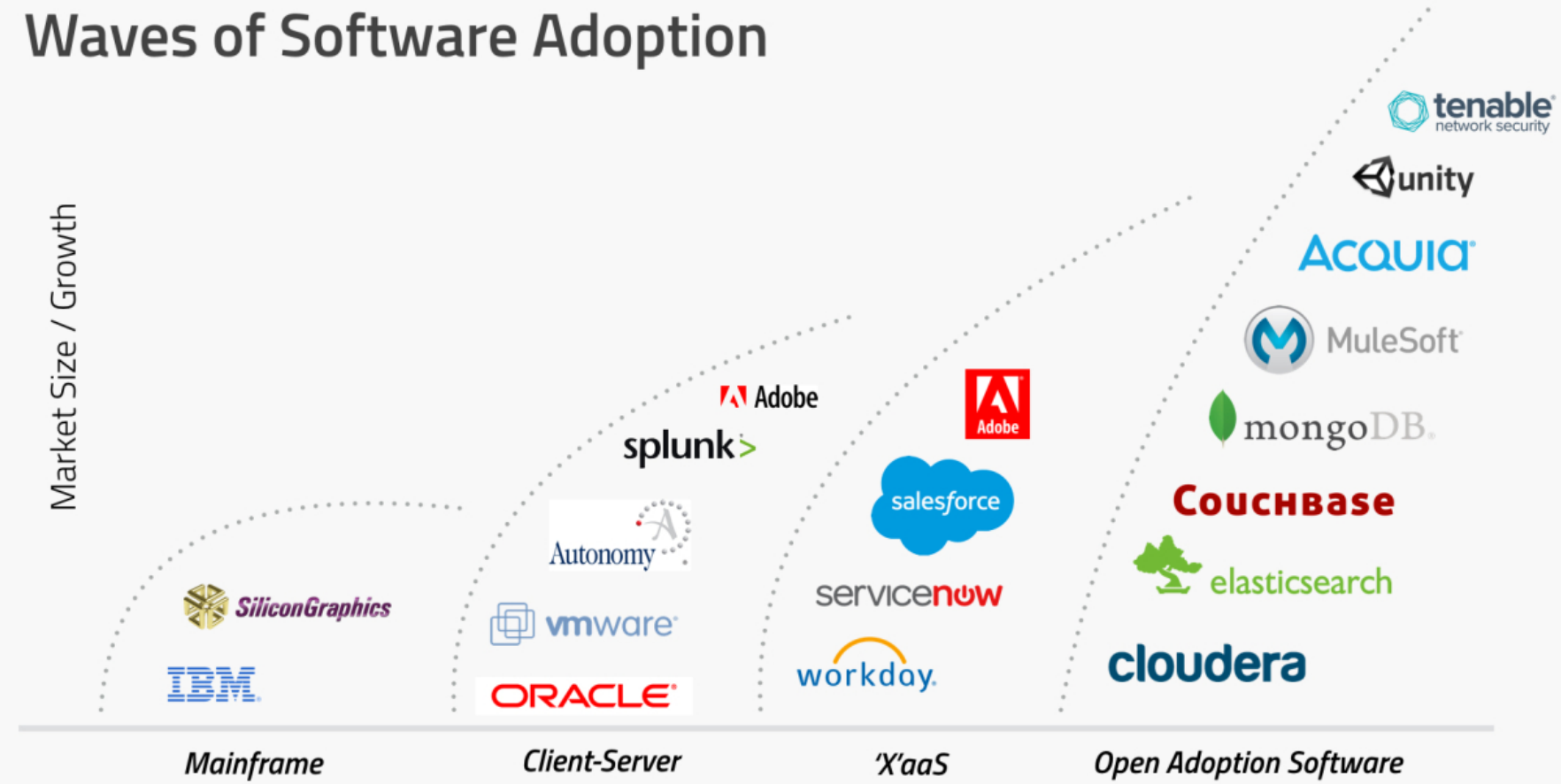
- Top Ten Strategic Technology Trends Impacting Higher Education in 2017_Jan-Martin Lowendahl, Terri-Lynn B. Thayer, Glenda Morgan
- Top Ten Business Trends Impacting Higher Education in 2017
  Jan-Martin Lowendahl, Terri-Lynn B. Thayer, Glenda Morgan
- Hype Cycle for Education, 2016
  Jan-Martin Lowendahl (G00289614)
- IT Market Clock for Higher Education, 2016
  Terri-Lynn B. Thayer, Glenda Morgan, Jan-Martin Lowendahl, Kelly J. Calhoun (G00308860)
- Analytics, Assessment and Adaptive Learning Will Prepare You for the Algorithmic Education Evolution
  Jan-Martin Lowendahl, Glenda Morgan (G00300304)
- Deakin University Uses Smart Machines to Innovate Student Engagement
  Nick Ingelbrecht, Jan-Martin Lowendahl (G00300625)
- Reinventing Education Credentials Using Blockchain as a Possible Missing Link for the Open Badge Infrastructure
  Jan-Martin Lowendahl, David Furlonger (G00302923)
- Industry Vision: The Fluid University Will Succeed in the Digital Business Era
  Terri-Lynn B. Thayer (G00294487)

The next wave in software is open adoption software

Posted Jun 19, 2016 by Jake Flomenberg (@jflomenb)



Waves of Software Adoption



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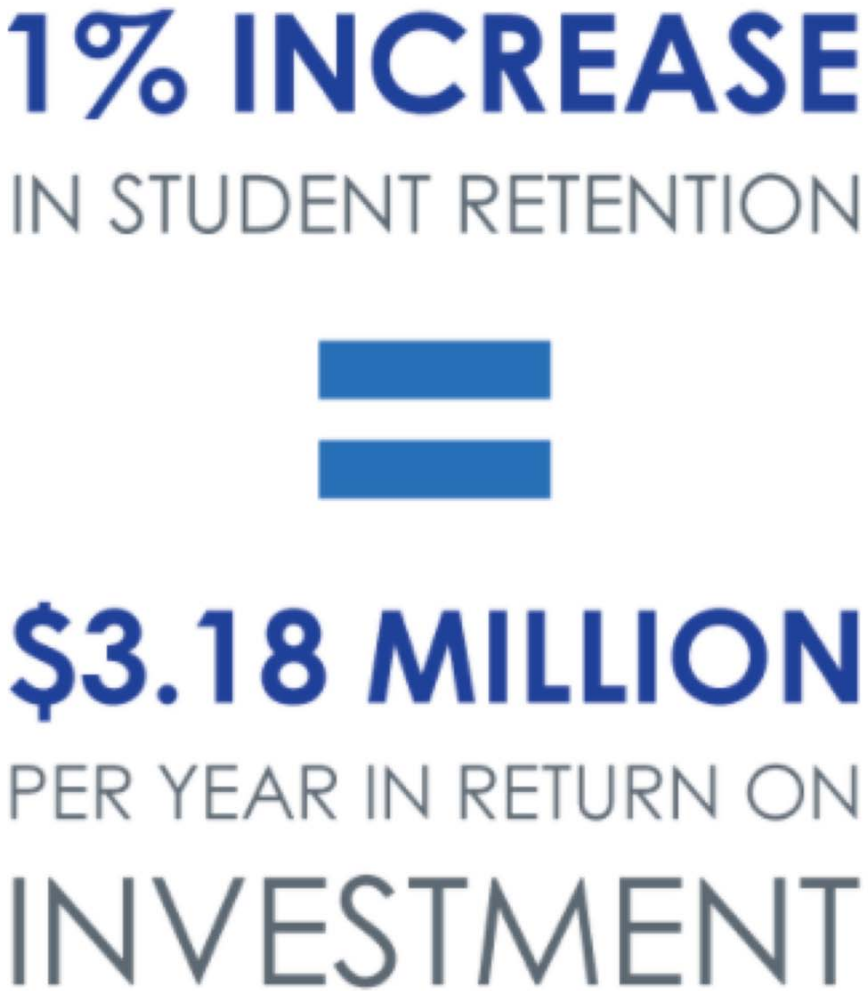

http://success.gsu.edu/, 2016

NHS

See an NHS GP in minutes for free 24/7

Sign up in 3 minutes

Thank you

www.oxfordmedicalsimulation.com
www.h5p.org
www.opencampus.net