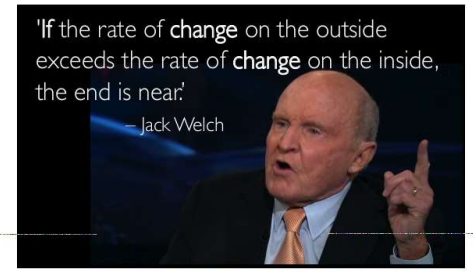
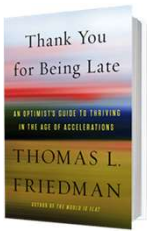
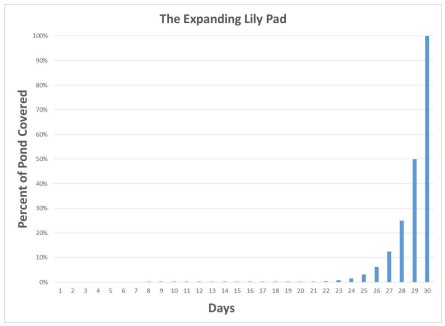
Leading Your Facilities Organization through an Age of Transformational Change

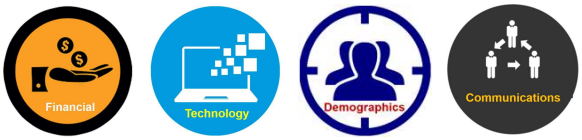
Lander Medlin, APPA
Don Guckert, University of Iowa



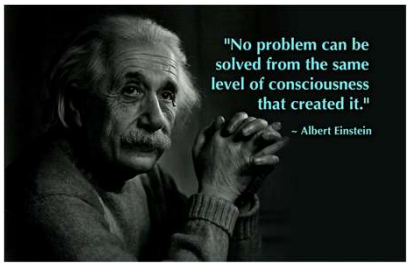


Thank You for Being Late
An Optimist's Guide to Thriving in the Age of Accelerations
Thomas L. Friedman


The Expanding Lily Pad
Percent of Pond Covered
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Days

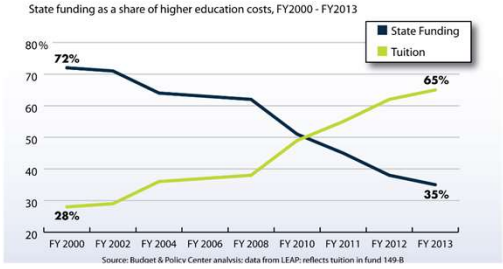

Financial
Technology
Demographics
Communications

Financial

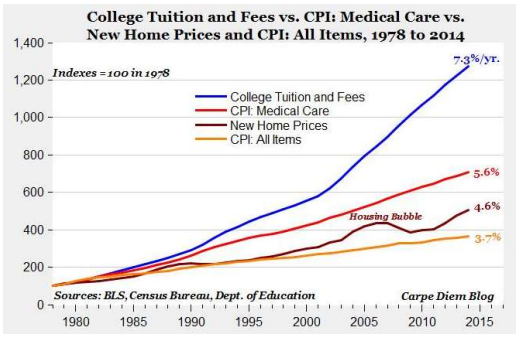


Student Tuition Accounts for Over Half of Higher Education Costs at 4-year Colleges

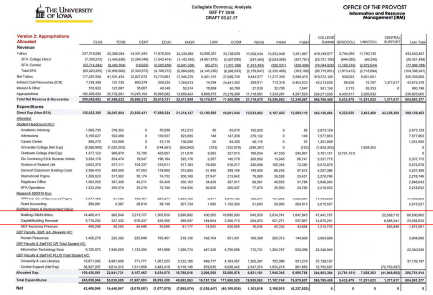
State funding as a share of higher education costs, FY2000 - FY2013



Source: Budget & Policy Center analysis; data from LEAP; reflects tuition in fund 149-B



Transparency



Modernization & Renewal

Not all buildings are created equal

Developing a portfolio approach will allow for a focused investment approach based on the Institutional Strategic Direction.

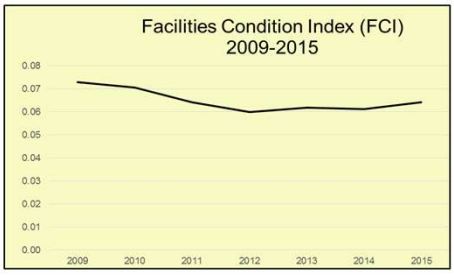
Core considerations to the portfolio approach

- Building Age
- Building Condition
- Building Location
- Institutional focus
- Academic requirements
- Student needs
- Historical Significance
- Safety/Code requirements
- Recruitment/Retention
- Transitional Space
- Adaptive Reuse

Institutional Leaders for buy in and communication

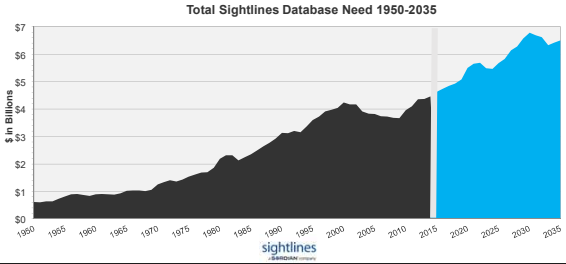
- Institutional Priorities
- Building Needs
- Future Campus Direction

Facilities Condition Equilibrium

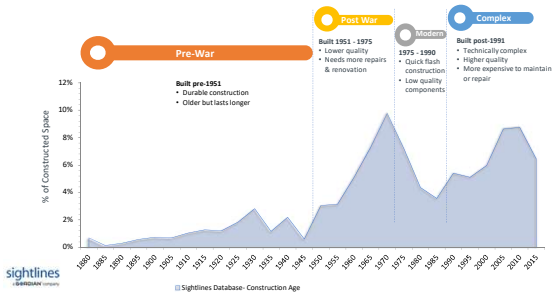


14

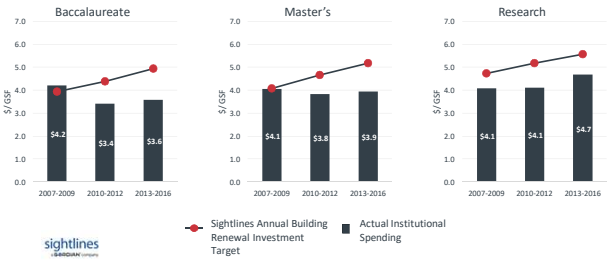
Growing Challenge

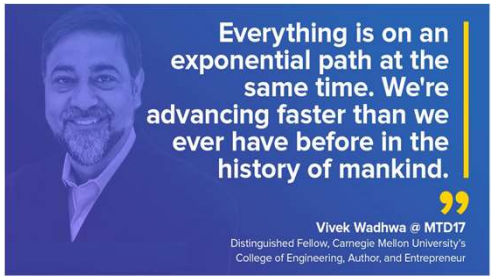


Growing Challenge



Moving Target





What the Hell Happened in 2007?

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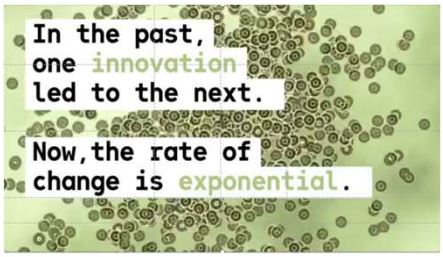

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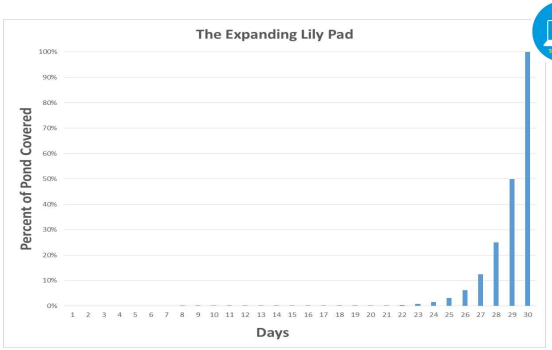
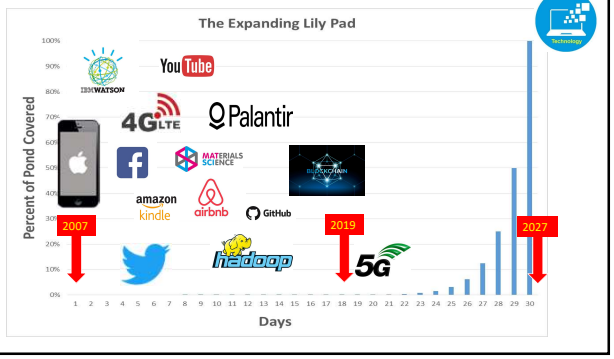



The Expanding Lily Pad
Percent of Pond Covered
Days
2007
2019
2027
IBM WATSON
YouTube
4G LTE
Palantir
MATERIALS SCIENCE
amazon kindle
airbnb
GitHub
hadoop
5G


WHAT we do will change.
HOW we do it will change even more.


BIG
DATA
& ANALYTICS

What is Big Data?

Merriam-Webster's Collegiate Dictionary added Big Data in 2014….

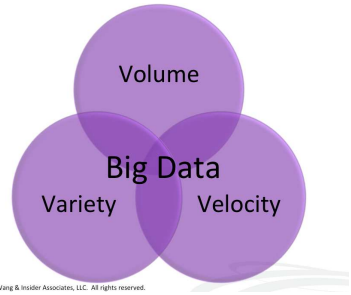
An accumulation of data that is too large and complex for processing by traditional database management tools.

What is Big Data?

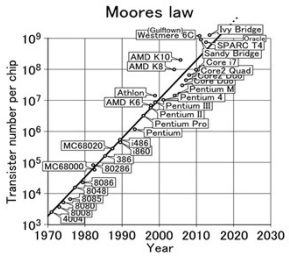
Industry Definition:

High volume, high variety and high velocity of information assets that demand cost effective and innovative forms of information processing for enhanced insight and decision making.

What is Big Data?

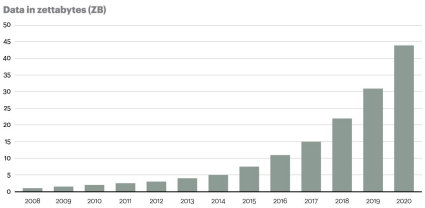


Velocity



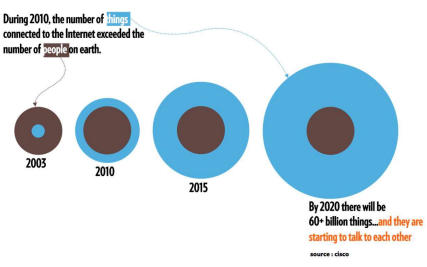
Volume

Data is growing at a 40 percent compound annual rate, reaching nearly 45 ZB by 2020

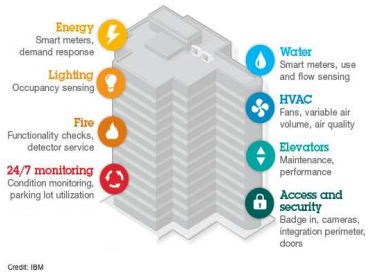


Source: Oracle, 2012

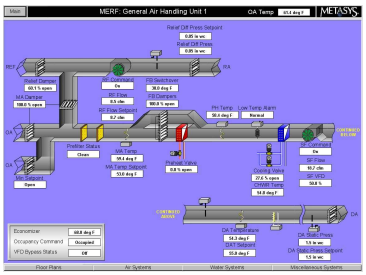
Variety



Internet of Things



Internet of Things



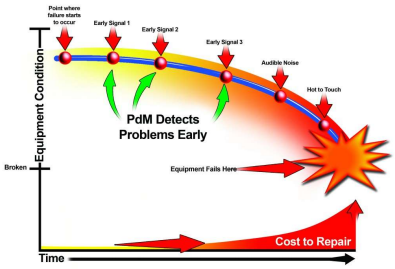
Internet of Things

Air Handler Performance

- Fan Runtime
- Fan Power
- VFD Control
- Static Pressure
- Heating Control
- Cooling Control
- Ventilation Air Control
- Economizer Control
- CO2 control

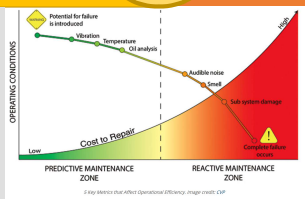
- Outside Air Temperature
- Return Air Temperature
- Make-up Air Temperature
- Supply Air Temperatures
- Freeze Stat Alarms
- Smoke/Fire Alarm
- Pressure Drop Alarm

Early Detection

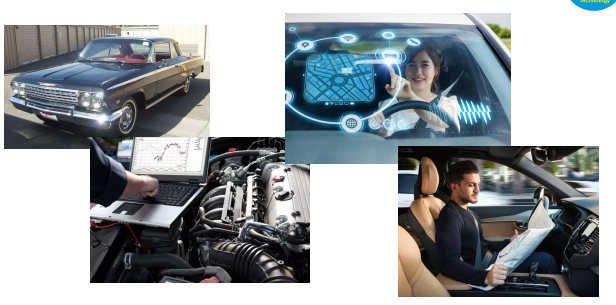


Fault Detection

INVESTING	VS	SPENDING
• Better Infrastructure Investments • Modernization • Picking up on "Weak Signals" • Lower Business Continuity Risk • Lower Financial Risk		• High Productivity Losses • High Repair Costs • Wasted Energy Investments



Auto Industry as a Model



Conditioned-Based Maintenance

"Preventative maintenance was: change the oil every six thousand miles, whether you drive it hard or not. The new approach is "predictive maintenance" and "prescriptive maintenance" We can now predict nearly the exact moment when a tire, engine, car or truck battery, turbine fan or widget needs to be changed."

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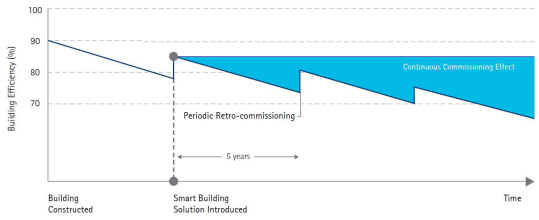
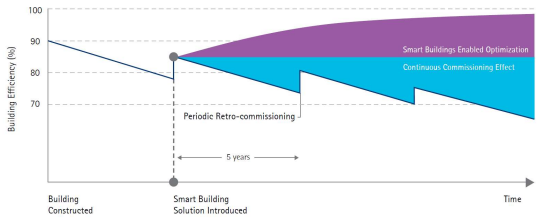
Continuous Commissioning



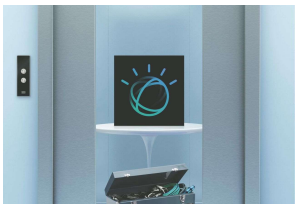
Microsoft Smart Buildings White Paper 11/2011

Continuous Commissioning



Microsoft Smart Buildings White Paper 11/2011

Cognitive Computing



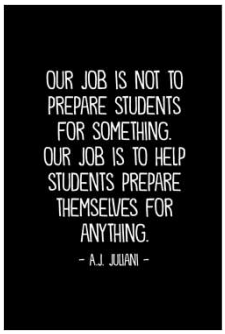
- **Cognitive computing** simulates the human thought processes using self-learning algorithms that use data mining, pattern recognition and natural language processing to mimic the way the human brain works.
- Source: Forbes Magazine, March 23, 2016

Succession Planning

Succession planning focuses on identifying and preparing select individuals for specific roles.

Succession Preparation

Succession preparation focuses on developing adaptable talent and leadership for an evolving organization.

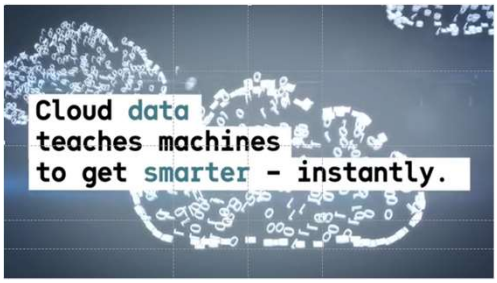


The Melbourne Model

"The Melbourne Model is a distinctive curriculum that gives students a wider understanding of the world beyond their degree. With a breadth and depth of knowledge, our talent is prepared for everything your workplace will become."

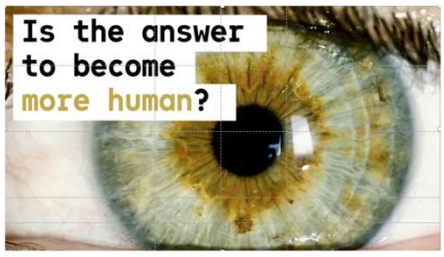
Rising Demand for Soft Skills

Rising Demand for Soft Skills



Rising Demand for Soft Skills

Rising Demand for Soft Skills



Rising Demand for Soft Skills

Generational Differences

What Millennials Want

From LinkedIn...

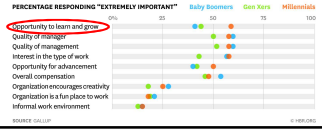
Finally, the three factors you should highlight to get a millennial to accept a job are

1 Compensation package
2 Professional development
3 Opportunities for advancement

From the Harvard Business Review and Gallop...

What Different Generations Look for When Applying for a Job

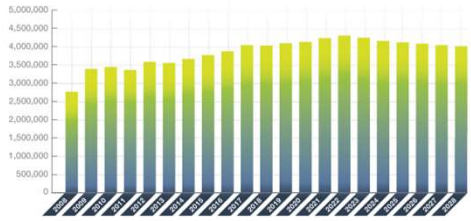
According to a survey of 1,700 U.S. workers.



From ManpowerGroup...

The Gen X Senior Leader

Baby Boomer Retirements



Weak Signals

"The intuition about how a machine is operating on a factory floor used to come from working there thirty years and being able to detect a slightly different sound signature emanating from the machine, telling us something is not exactly right. That is a weak signal. Now with sensors, a new employee can detect a weak signal on the first day of work – without any intuition."

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Weak Signals

"Experienced workers knew how to process weak data. But now with Big Data, with a much finer grain of fidelity we can make finding a needle in the haystack the norm - not the exception. And we can augment the human worker with machines so they work as colleagues and enable them to process weak signals together and overnight become like a thirty year veteran."

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Skills Gap

Wage Stagnation

Value Proposition

A **value proposition** is a promise of value to be delivered, communicated, and acknowledged. It is also a belief from the customer about how value (benefit) will be delivered, experienced and acquired.

Source: Wikipedia

Communicating Value

Speed of Now

Speed of Now

HEALTH NEUROSCIENCE

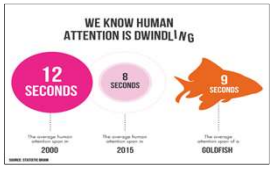
You Now Have a Shorter Attention Span Than a Goldfish

Kevin McSpadden @KevinMcspadden May 14, 2015

No longer can we boast about 12 seconds of coherent thought

The average attention span for the notoriously ill-focused goldfish is nine seconds, but according to a new study from Microsoft Corp., people now generally lose concentration after eight seconds, highlighting the affects of an increasingly digitalized lifestyle on the brain.

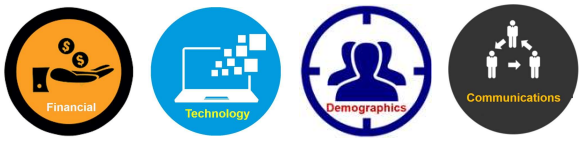
Researchers in Canada surveyed 2,000 participants and studied the brain activity of 112 others using electroencephalograms (EEGs). Microsoft found that since the year 2000 (or about when the mobile revolution began) the average attention span dropped from 12 seconds to eight seconds.



Communication Media

#MeToo

LeanIn.org pushes female mentorship as it reveals a survey showing growing backlash against #MeToo




CONTINUOUS
LEARNING