Embracing Technology Trends to Position Your Firm to Thrive in the Future

Megan R. Miller, CPSM
Deltek, Inc.
Did you know?

*Total revenue for top AEC companies in 2016 was $125 billion*

- Engineering-News Record
Did you know?

Global construction industry is projected to grow from $7.4 trillion in 2010 to $10.3 trillion in 2020

- Construction Intelligence Center
Did you know?

» In the next decade, experts are predicting a technology transformation unlike anything we have seen before
Today’s Agenda

» Who Am I?
» Why Technology and Why Now?
» Technology Trends: Deltek Clarity
» Technology Changing How We Work Today
» Preparing for Tomorrow’s Technology Transformation
» Positioning Your Firm to Thrive Through Technology
Who Am I?
About Me

Recovering Marketing Coordinator

» 11 years in AEC industry
» Self-taught CRM guru

15+ year SMPS member

» President for Greater Cincinnati SMPS
» CPSM

At Deltek

» Product Marketing Manager for A&E solutions
» Lead Deltek A&E Clarity Survey & Report
Why Technology and Why Now?
Why Now?

» Laggard Industry
» Struggling to keep up
» Technology can truly transform AEC
» Firms are starting to adopt technologies and seeing positive ROI
» Creating a competitive advantage
What if we could transform project delivery?
Technology Trends: Deltek Clarity
# Emerging Technology Trends

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<th>Technology</th>
<th>Important</th>
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<tbody>
<tr>
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<td>Block Chain</td>
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# Emerging Technology Trends – Large Firms

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Applying Technology Trends – Business Area

- Project Management: 58%
- Project Execution: 49%
- Business Development and Marketing: 44%
- Project Information Management: 40%
- Financial Management: 37%
- Building Information Management: 34%
- Business Administration: 30%
- Resource Management: 27%
- Human Capital Management: 21%
- None of the Above: 14%
Top Technology Trend Challenges

- Cost of Technology (e.g. Equipment, Education): 57%
- Prioritizing Which Trends are Most Applicable to Your Business: 54%
- Lack of Time to Invest in Learning about Technology Trends: 49%
- Employee Education about Trends and their Application to A/E/C: 45%
- Client Education about Technology Trends and their Application to Projects: 29%
- Lack of Champion to Lead Initiative: 25%
- Buy-In From Firm Leadership: 16%
Top Technology Trend Initiatives

- Create Strategic Plan for Implementing Technology Trends
- Educate Staff on Technology Trends
- Identify and Develop Technology Subject Matter Experts
- Develop Budget for Strategic Investment
- Hire Staff or Acquire Company with Necessary Expertise
- Identify Champion to Lead Initiative

First: Develop Budget for Strategic Investment (44%)
Second: Educate Staff on Technology Trends (53%)
Third: Create Strategic Plan for Implementing Technology Trends (66%)
Technology Changing the Way We Work Today
Technology Today: Changing the Way We Work
Building Information Modeling

» Multi-dimensional

» More than just lines

» Building can start to tell a story

» Dramatic impact on AEC industry
  » Common language
  » Saving firms significant money

» We’re not done yet!
Drones

» Initially, a toy for big kids

» Now, changing how we do what we do
  » How we manage construction sites
  » Project progress reports
  » Health and safety inspections
  » Access hazardous areas
3D Modeling and 3D Printing

» 3D Modeling: The Evolution of Design
  » Paper drafting on large tables
  » Computer automated drawing (CAD)
  » 3D modeling
  » Also physical models to help owners visualize projects, but done in a much faster easier way than before

» 3D Printing
Virtual Reality

» More than just a game
» Game changer
  » Remote viewing of construction site
  » Employee training
  » Project progress reports and walk throughs
  » Experience for owners
Collaboration

» No more going on the project site and going dark for the day

» Constant communication and collaboration

  » Teams are more mobile and project sites are getting further and further away

» Connect teams with technology

» Less time wasted traveling back and forth to office
Mobile Technology

» No more trailers of paper stacks

» How are you leveraging technology?
  » Drawings on tablets
  » Web conferences
  » Site photos, videos and punch lists
  » Site inspections
Remote Team and Project Management

» Project sites, working from home, consolidation of offices, etc. have changed the dynamic of the team

» Not always co-located

» Teams are always changing – internal and external

» Technology is improving collaboration and helping teams work together efficiently
Preparing for Tomorrow’s Technology Transformation
Connected BIM

» Combination of BIM, cloud and IoT

» Allow mobile technology to manage drawings and tracking entire project’s lifecycle in the cloud

» Taking connectivity and BIM to a whole new level
Internet of Things (IoT)

» Improving nearly every aspect of construction
  » Tracking tools and items
  » How are workers spending time
  » Machine use for efficiencies/inefficiencies
  » Building information – temperature, humidity, loss of pressure, etc.
» Reduction in paperwork, claims, water leaks, mold
» Informs maintenance decisions, future design and process improvements

*Image from forconstructionpros.com*
Adaptive Learning

» What is adaptive learning?
  » Engineering student
  » Project manager
  » Contractor or specialty trade

» Student-centered

» Interactive environments

» Better engagement and improved flexibility
Wearable Technology

» Smart glasses and hard hats
» Augmented reality
» Smart watches and trackers
» Technology enhanced safety vests
» Tracking time and expenses via GPS
Hiring and Recruiting

» AI interviews/one-way videos
» Video interviews
» Flexible work arrangements
» Potential employees looking for technology-savvy company
Project Information Management

» Piles of drawings are a thing of the past

» Amount of project information growing exponentially

» Collaboration and sharing more critical than ever

» Tools and resources to access project information wherever project takes you
Cloudier than Ever

» Scalability
» Flexibility
» Accessibility
» Collaboration
» Security
» Privacy
Positioning Your Firm to Thrive Through Technology
make changes in something established, especially by introducing new methods, ideas, or products
Transformational Trends:

Modernization Imperatives!
Where Are Your Inefficiencies Today?
Learn and Absorb
Dream of the Possibilities
What Will Give You the Advantage?
Build into
Strategic Plan
Identify Internal Champions
Develop Thought Leaders
Position Firm with Clients
Show the Positive Impact
Constantly Challenge
How to Leverage Technology
Drive Business Forward with Technology
Ask Questions
Questions
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