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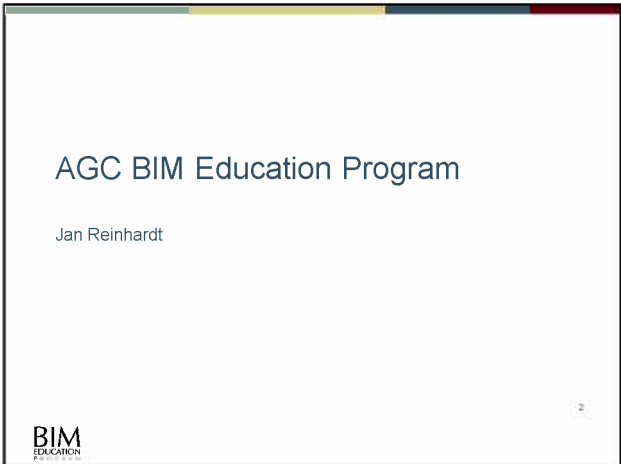
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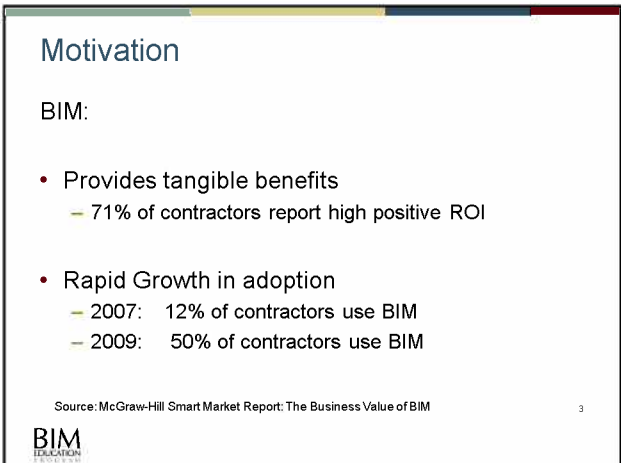
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### Motivation

- Tangible benefits:
  - Reduced conflicts during construction
  - Improved collective understanding of design intent
  - Improved project quality
  - Less changes during construction
  - Less RFIs

Source: McGraw-Hill Smart Market Report: The Business Value of BIM



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### Motivation

- Stated challenges to adoption:
  - Not sufficient time to evaluate BIM
  - Software hardware upgrades too expensive
  - Functionality does not apply well enough to what we do
  - Insufficient BIM-compatible content available for my needs
- Most of the perceived challenges can be overcome through thoughtful implementation

Source: McGraw-Hill Smart Market Report: The Business Value of BIM



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### Topics relative to BIM implementation

- What is BIM?
- What technologies / services need to be considered?
- Are there legal implications?
- What is the process?
- Who needs to know about BIM?

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### Current BIM Education for Contractors

- AGC BIM Education Program
- AGC BIMForum
- Software-specific, vendor education
- Colleges and Universities
- McGraw-Hill
- Others?



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### BIM Education Program

- Unit 1 – BIM 101 *Available Now*
- Unit 2 – BIM Technology *Available Shortly*
- Unit 3 – Legal Issues and Risk Management
- Unit 4 – BIM Case Studies and Lessons Learned
- Unit 5 – BIM Process and Integration
- Unit 6 – Advanced BIM



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### BIM 101 – An Introduction to BIM

- Objectives of BIM 101:
  - Provide orientation
  - Define the topics that need to be considered
  - Eliminate fear and uncertainty
  - Provide a starting point for BIM Implementation



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## BIM 101 – An Introduction to BIM

- Session 1 - What is BIM?
  - BIM Concepts, Definitions
  - BIM Relative to CAD
  - Evolution of BIM
  - BIM in collaboration
  - Benefits of BIM

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## BIM 101 – An Introduction to BIM

- Session 2 – Visualization and Spatial Coordination
  - The model management protocol
  - BIM for visualization, value analysis and scope clarification
  - BIM for Spatial Coordination

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## BIM 101 – An Introduction to BIM

- Session 3 – BIM Scheduling, Estimating Facility Management
  - Advantages of BIM in scheduling and estimating
  - BIM in facility management
  - Recognizing the benefits associated with BIM

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### BIM 101 – An Introduction to BIM

- Session 4 – Getting Started
  - Identification of challenges getting started with BIM
  - Basic understanding of BIM tools
  - Development of a BIM Action Plan
  - Recognizing the benefits associated with BIM
  - BIM resources



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### BIM Education Program

- Unit 1 – BIM 101 *Available Now*
- Unit 2 – BIM Technology *Available Shortly*
- Unit 3 – Legal Issues and Risk Management
- Unit 4 – BIM Case Studies and Lessons Learned
- Unit 5 – BIM Process and Integration
- Unit 6 – Advanced BIM



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### BIM Technology

- Objective:
  - Recognize how BIM technology needs to be embedded into processes
  - Develop ability to analyze and articulate technology needs
  - Recognize how models can be exchanged between applications for reliable and efficient flow of information
  - Develop a plan for BIM Implementation on a project



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## BIM Technology

- Session 1:
  - Explain what parametric modeling means
  - Explain why tool selection matters so much more in the BIM approach
  - Associate tool classes and phases
  - Match BIM tools and functions
  - Determine if tools support the BIM process

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## BIM Facilitates Better Rework Practices

Common Pre-BIM Practice



Common BIM Practice



Best practice = frequent feedback

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## BIM Technology

- Session 2:
  - Federated Model
  - Classes of BIM Tools
  - Developer / Vendor Resources

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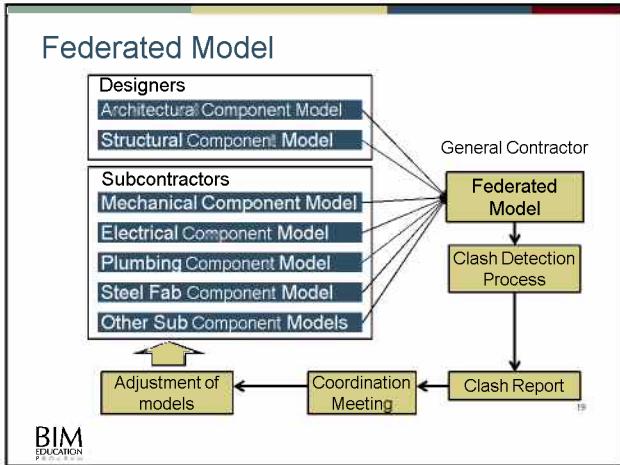
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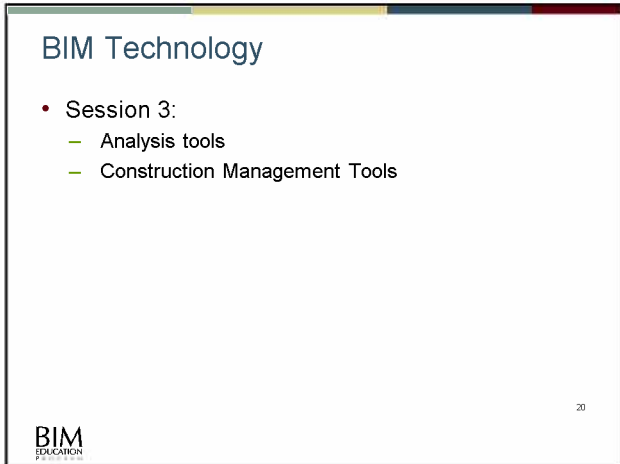
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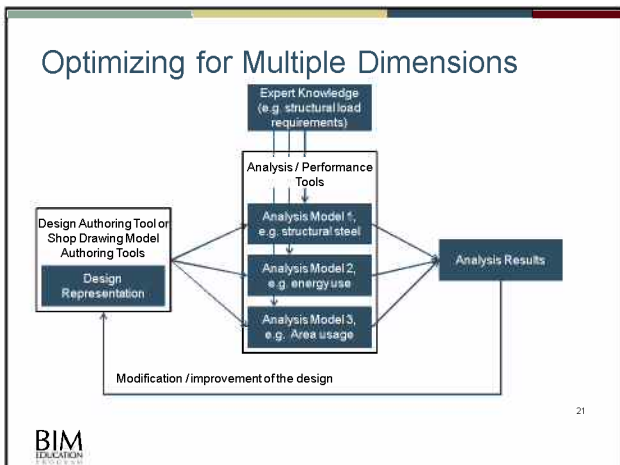
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## BIM Technology

- Session 4:
  - File Sharing Tools
  - BIM Hardware
  - How to select BIM tools for our organization




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## BIM Technology

- Session 5:
  - Leveraging BIM tools for effective and efficient
    - Conceptual Estimating
    - Detailed Estimating

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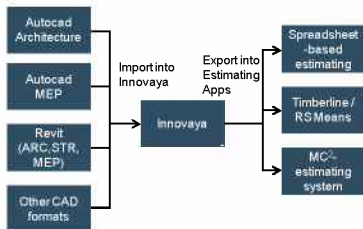
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## Innovaya

- Normalization of BIM file formats in Innovaya
- Construction centric quantity takeoff




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# BIM Technology

- Session 6:
  - Planning and Scheduling (4D)

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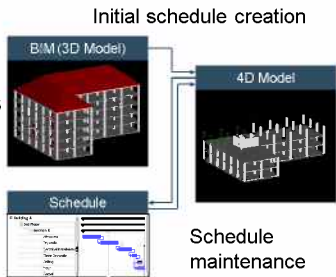
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# Bi-Directional Link

- Create schedule in 4D
- Export changes to schedule app.
- Make changes in schedule app.
- Update 4D model




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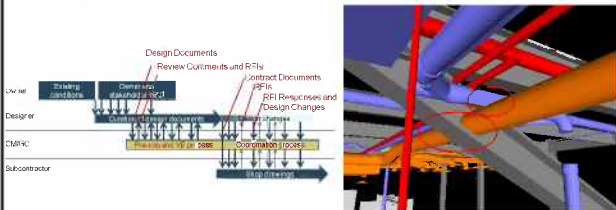
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# BIM Technology

- Session 7:
  - Leveraging BIM Technology for collaboration
  - How to create a BIM Execution Plan




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## Audience

- BIM 101:
  - Project Managers
  - Managers of the company
  - Superintendents, Engineers
  - BIM Champions to be
- BIM Technology:
  - Identified BIM Champions for the company
  - Identified BIM Champions for a project
  - IT Managers



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## Instructors

- BIM 101 and BIM Technology:
  - Experienced BIM Managers
  - Background in BIM and Construction
  - Passionate about BIM



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## Conclusion

- BIM has significant opportunities
- BIM has a profound impact on the AEC industry
- All professionals in the AEC industry need to know about BIM
- BIM technology needs to be embedded in a process
  
- The BIM Education Program allows your organization to leverage BIM to create tangible results



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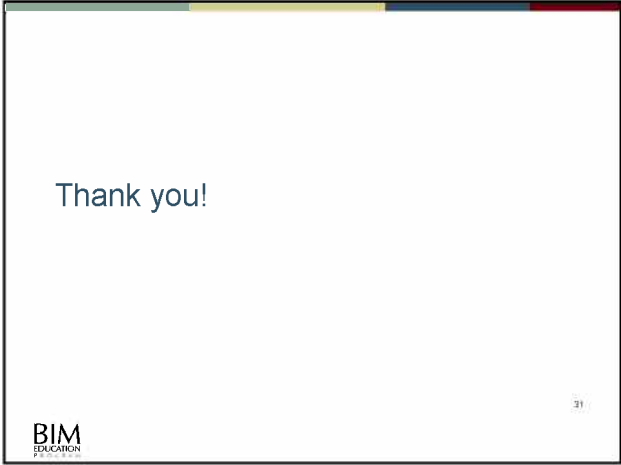
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Thank you!

BIM  
EDUCATION

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