



CHAPTER ONE:

WHY IS TECHNOLOGY SO
IMPORTANT TO CONSTRUCTION
MANAGEMENT?

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THE PROMISE OF BIM

- To build a structure *virtually* prior to physically constructing it
 - Gives the ability to design, analyze, sequence, and explore a project digitally
 - Far less expensive
 - Mitigate construction risk
- Successful BIM use requires three key factors
 - Processes, Technologies, and Behaviors



KEY FACTORS

- **Processes**
 - Take new technologies and make them work in old processes
 - Creates waste by not taking into account the implications of the new technology
- **Technologies**
 - Analyzing and selecting technology
 - Three Approches
 - Pile On
 - Looking at tools as an addition to the current system
 - Swap Out
 - Examining a new tool and looking to see which current tool or tools can be replaced
 - Process First
 - Company reviews current system and asks themselves “How do we want it to work?”
 - More time consuming and tedious than others
- **Behaviors**
 - Is the company resistant to change or has a culture of innovation
 - Most difficult to change

THE VALUE OF BIM IN CONSTRUCTION

- Can solve real-world problems such as scheduling, estimating, and logistics.
 - Scheduling
 - By linking to scheduling data, incorrect schedule logic can be detected
 - Estimating
 - BIM derived estimating directly links model components to unit cost to produce an estimate
 - Logistics
 - BIM combined with geographic information systems has changed the way we create site plans by adding a level of detail, particularly in more vertical construction.
- Save time through automated functions
- Eliminate the need to travel to a meeting
- Save money since better information is available early on to make effective decisions



WHERE THE INDUSTRY IS HEADED

- Data input is becoming more efficient
- Big shift in collaboration methodologies and an increase in the frequency of information sharing. Such as: Dropbox, Egnyte, Newforma and etc
- BIM is significant for every phase of construction
- Many industry organizations have moved beyond introducing BIM as a concept to more detailed analysis on planning, organizational structure, and process change dialogue



SUMMARY

- BIM continues to change the way we deliver construction
- Our industry was in need of reinvention that included technology improvements and enhanced collaboration
- Construction firms around the world continue to realize the benefits of BIM

