

BIM for Contractors: Back to Basics

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CLASS SUMMARY

Have you ever thought about starting your Building Information Modeling / virtual design and construction (BIM/VDC) department over from scratch? What would you do differently with all the knowledge and experience you've gained? What wasted time and energy would you avoid the second time around? What tools, software, workflows, and processes would make the cut, and which would be revealed as fluff? We recently did just this after helping to build and manage the BIM department at an industry leader in technology use, and we've found it to be an amazingly refreshing exercise in optimization and refinement of workflows and tools. This class will focus on that transition and the lessons learned that we've gained during the process. Whether you're a contractor with an established BIM/VDC workflow and you need some tips for spring cleaning your processes, or you're just getting started in this world of 3D technology and need some ideas for the most important first steps to ensure success, you will walk away with some great ideas to take back to your firm.

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Have you ever thought about **starting your Building Information Modeling / virtual design and construction (BIM/VDC) department** over from scratch? **What would you do differently** with all the knowledge and experience you've gained? What **wasted time and energy** would you avoid the second time around? What tools, software, workflows, and processes would make the cut, and which would be revealed as fluff? We recently did just this after helping to build and manage the BIM department at an industry leader in technology use, and we've found it to be an amazingly refreshing exercise in **optimization and refinement of workflows and tools**. This class will focus on that transition and the lessons learned that we've gained during the process. Whether you're a contractor with an established BIM/VDC workflow and you need some tips for spring cleaning your processes, or you're just getting started in this world of 3D technology and need some ideas for the most important first steps to ensure success, you will walk away with some great ideas to take back to your firm.

KEY LEARNING OBJECTIVES

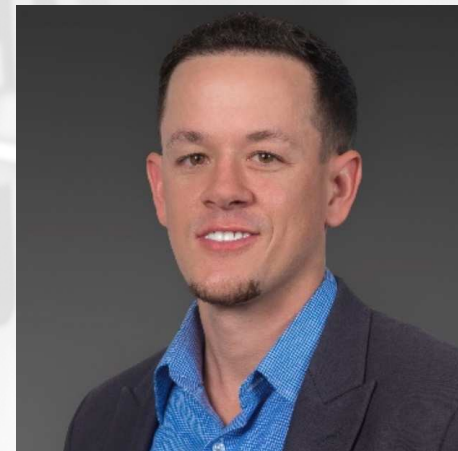
At the end of this class, you will be able to:

- Discover the essential tools and processes needed to start a BIM/VDC department
- Discover best practices for clearing unnecessary tools and processes from your workflow
- Discover the software/hardware needed to get BIM/VDC implemented at the building-design, conceptual, preconstruction, and operations stages of a project
- Discover the best ways to start interfacing with and training owners, subs, and partners you work with to enhance relationships and ensure successful BIM implementation on your projects

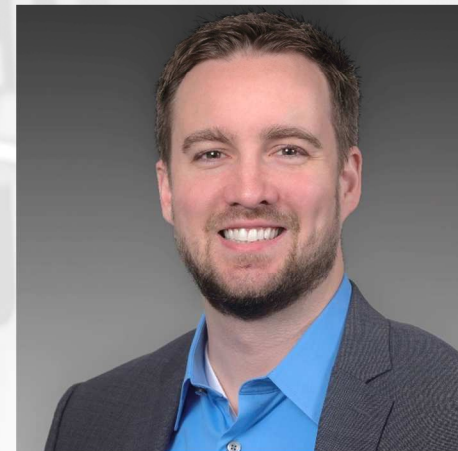
David Epps @DavidEppsBIM



- Director of Construction Technology
- University of Florida – Construction Management & Business
- 19 Years Construction Experience
- 13 Years BIM Experience
- Innovation, BIM/VDC, Laser Scanning, Drones, VR/AR
- AU Attendee Since 2007, Speaker Since 2008



- Purdue University – Computer Graphics Technology
- 8+ Years Professional BIM and Construction Experience
- Extensive Experience in Data & Technology and Corporate Office
- BIM Manager at Winter Construction Company

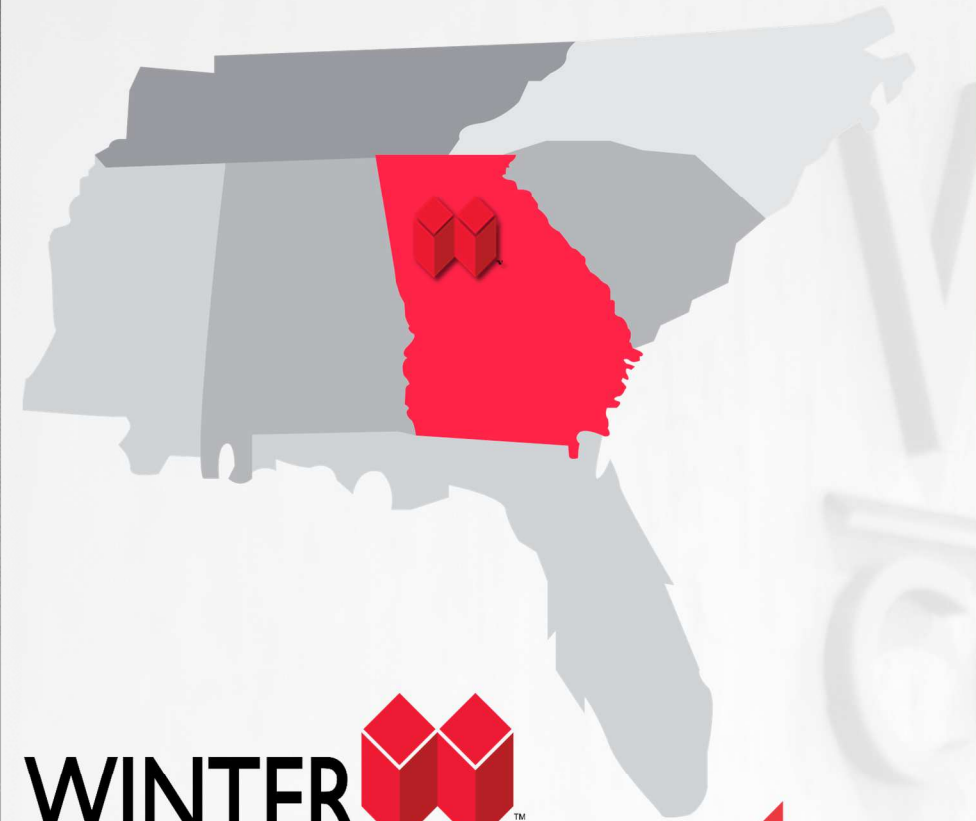


BACK TO BASICS

- Blank Slate (Like this slide)



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2016
PLATINUM
AWARD



WINTER CONSTRUCTION COMPANY



Aviation



Government



Higher Education



Recreation



Religious



Historic Restoration



Hospitality



Interiors & Special Projects



Retail



Senior Living



K-12 Education



Multi-Family



Office



Restaurant



Student Housing



BACK TO BASICS

STRATEGY

TOOLS

COMMUNICATION



STRATEGY



COST
SAVING
OVERVIEW

INDIRECT
COST
SAVINGS
REVIEW

COORDINATING
LOG

BIM
WORK
PLAN

BIM
ASSESSMENT

MODEL
REVIEW

SOFTWARE
BUSINESS
CASE

TECHNICAL
KICKOFF
PACKAGE

DEATH BY CHECKLISTS!

QUALITY
CHECK

MODEL
QUALITY
CONTROL
CHECKLIST

BIM
STANDARD
OVERVIEW

LEVEL OF
DEVELOPMENT
MATRIX

MODEL
RESPONSIBILITY
MATRIX

STRATEGY

Outdated & Obsolete

- Templates
- Processes
- Checklists
- Tools
- Logs



STRATEGY

Muda

- Japanese Word
- Futility
- Uselessness
- Wastefulness



STRATEGY

Muda

- Can Be Difficult
- Need A Plan
- Sentimental Value



STRATEGY

Challenge Everything

- Process Waste
- Physical Waste
- Information Waste
- People Waste



BIM Assessment

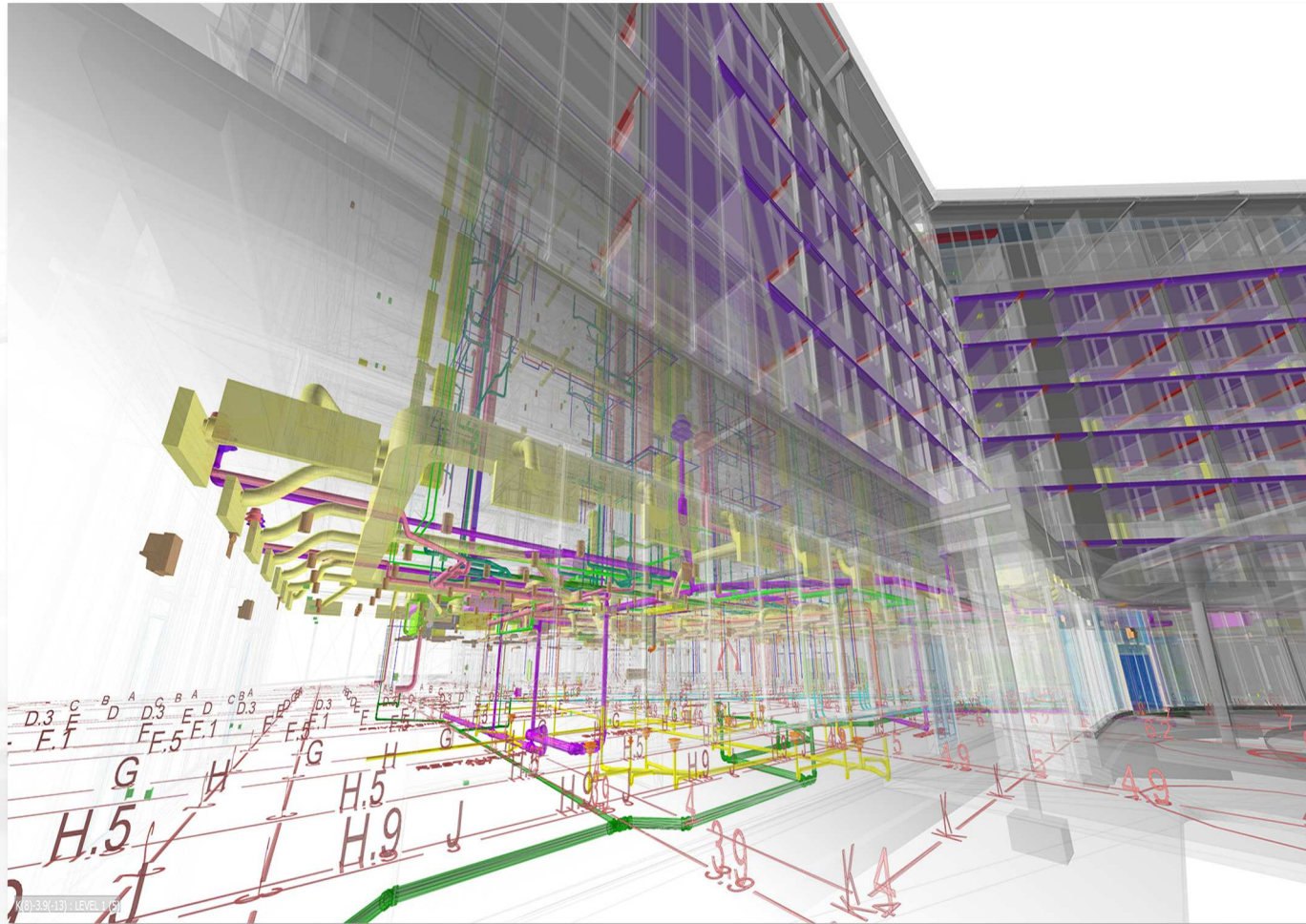
- Don't Do Everything
- Evaluate Each Project
- BIM Budget / Resources
- Scalability



STRATEGY

BIM Execution Plan

- Internal Plan
- External Plan
 - Who Does What?
 - When?
 - What LOD?
 - File Transfer Protocol
- Coordination
- Deliverables



TOOLS



TOOLS

Templates

- Consistency
- Be Flexible
- Avoid Cutting Corners
 - Single Use Processes
 - One-Off Scenarios
 - Avoid Improper / Quick Method



TOOLS

Hardware

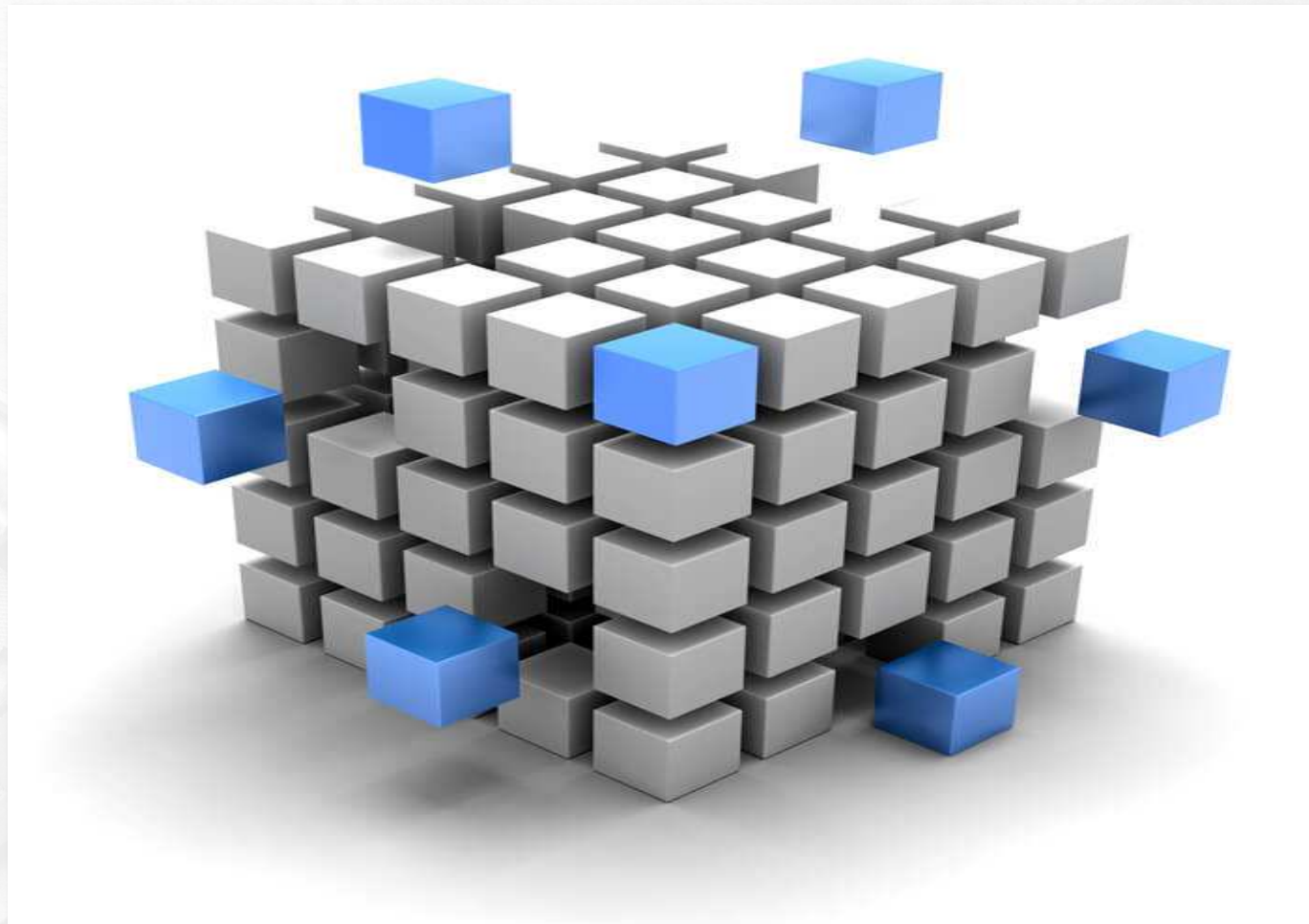
- Desktop vs Laptop
- iPads
- Drones
- Virtual Reality
- Virtual Job Boxes



TOOLS

Software Flexibility

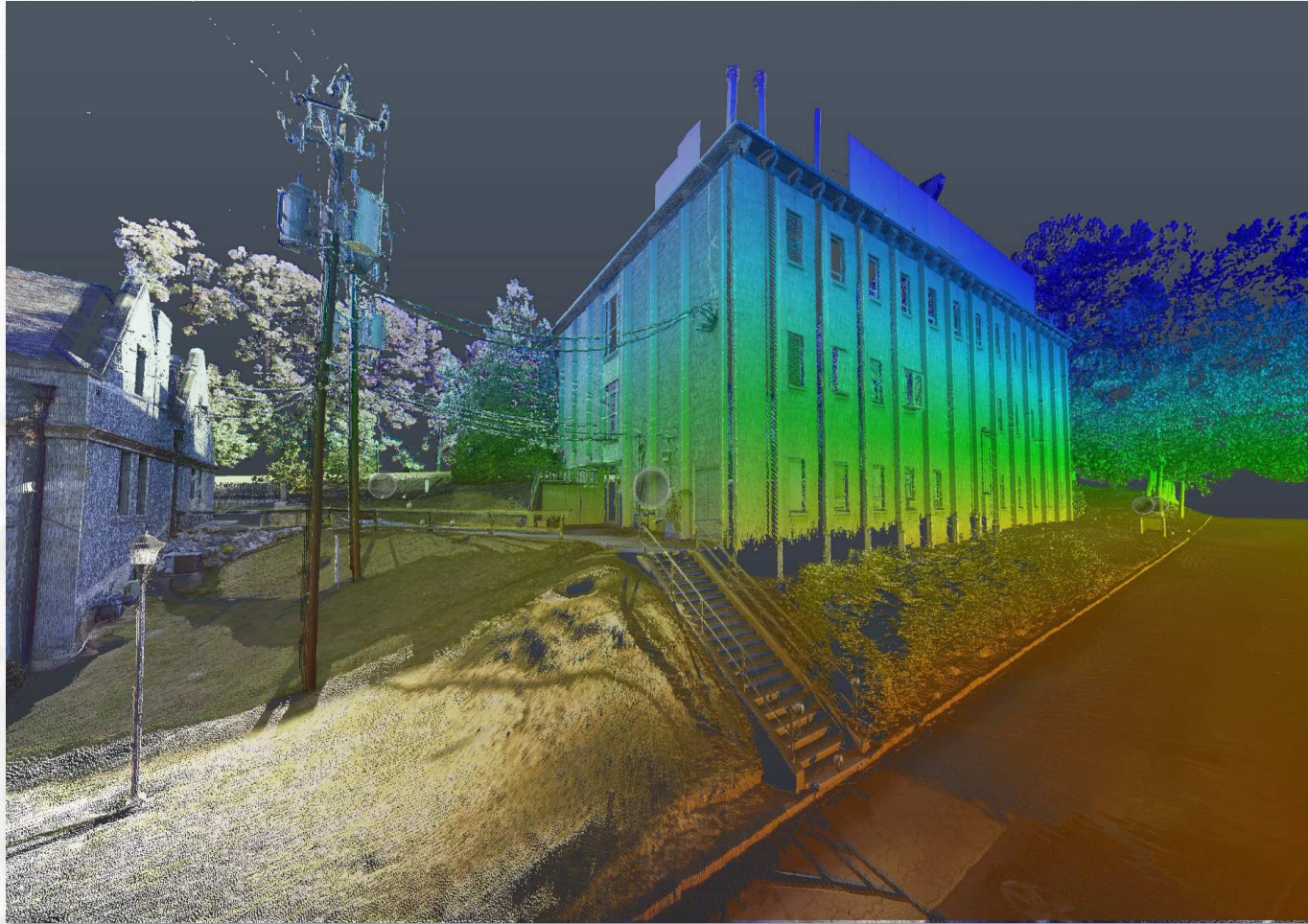
- Innovate
- Be Selective
- Use Trials / Demos
- Workflow



TOOLS

Software Workflow

- Work Together
- R&D Process
- Integration > Capabilities
- Need Vs. Available



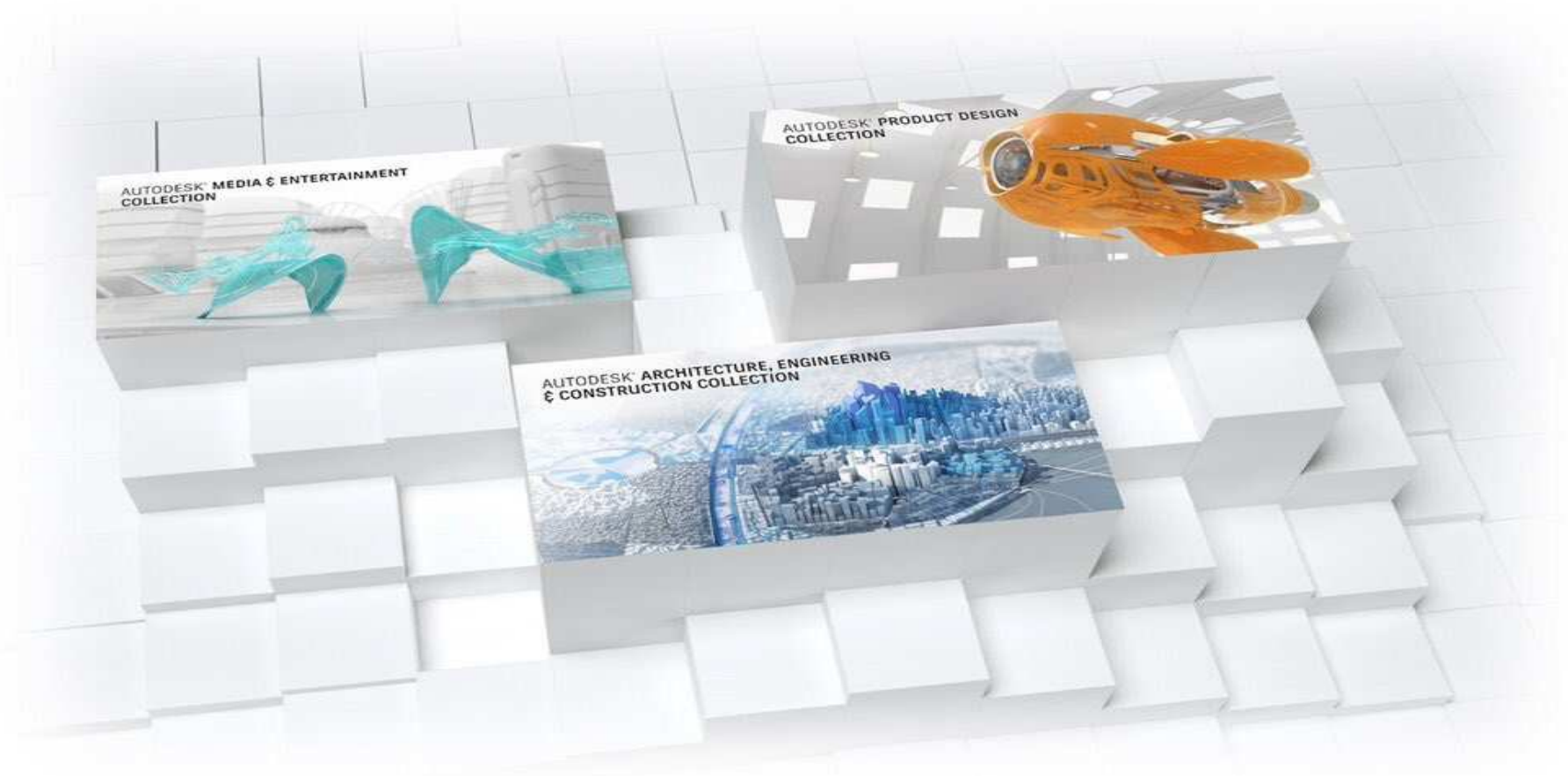
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KEY LEARNING OBJECTIVES

Discover the software/hardware needed to get BIM/VDC implemented at the building-design, conceptual, preconstruction, and operations stages of a project

WARNING!
INCOMING UNPAID
AUTODESK PLUG!

KEY LEARNING OBJECTIVES



KEY LEARNING OBJECTIVES



AUTODESK® ARCHITECTURE, ENGINEERING & CONSTRUCTION COLLECTION

COLLECTION INCLUDES

Revit

AutoCAD

AutoCAD Civil 3D

OTHER SOFTWARE INCLUDED

Navisworks Manage

AutoCAD Architecture

AutoCAD Electrical

AutoCAD Map 3D

AutoCAD MEP

AutoCAD P&ID

AutoCAD Plant 3D

AutoCAD Raster Design

AutoCAD Utility Design

Vehicle Tracking

3ds Max

CLOUD SERVICES INCLUDED

Rendering in A360

AutoCAD 360 Pro

FormIt 360 Pro

InfraWorks 360

Insight 360

ReCap 360 Pro

Structural Analysis for
Revit

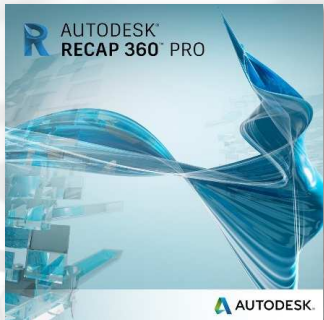
Storage (25GB)

KEY LEARNING OBJECTIVES

Design / Conceptual



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ENGINEERING & CONSTRUCTION
COLLECTION

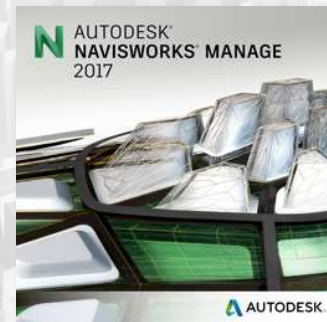


KEY LEARNING OBJECTIVES

Preconstruction



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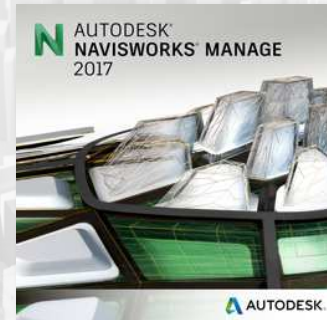


KEY LEARNING OBJECTIVES

Operations



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ENGINEERING & CONSTRUCTION
COLLECTION



TOOLS

Outsourcing

- Needs > Resources
- Prioritize Efforts
- Outsource
 - Costs
 - Timing
 - Micromanagement

YOUR AD HERE
750 X 247

**BUY
ME**

YOUR AD HERE
750 X 247

**BUY
ME**

COMMUNICATION



COMMUNICATION

Turning the Ship

- Changing Mentalities
- “Old School”
- Find Proponents
- Leadership Support
- Change Slowly



COMMUNICATION

Training & Awareness

- Education
- Training
- “ConTech Moments”
- Awareness



COMMUNICATION

Industry Partners

- Architects
- Trade Partners
- Clients



Budgets

- Starts With Assessment
- Educate
- Effort = Value



COMMUNICATION

Business Cases

- “Top-Down” Approach
- “Break-Even Point”
- Demonstration of Use
- Communicate Effectively
- Calibrate



BACK TO BASICS

STRATEGY

TOOLS

COMMUNICATION



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KEY LEARNING OBJECTIVES

Discover the essential tools and processes needed to start a BIM/VDC department

Tools

- Computer / Hardware
- Software
- BIM Assessment (Internal Kickoff)
- BIM Project Kickoff (External Kickoff)
- Site Logistics Plan
- Model Creation / Authoring
- Model Coordination Process Tracking
- QTO Plan

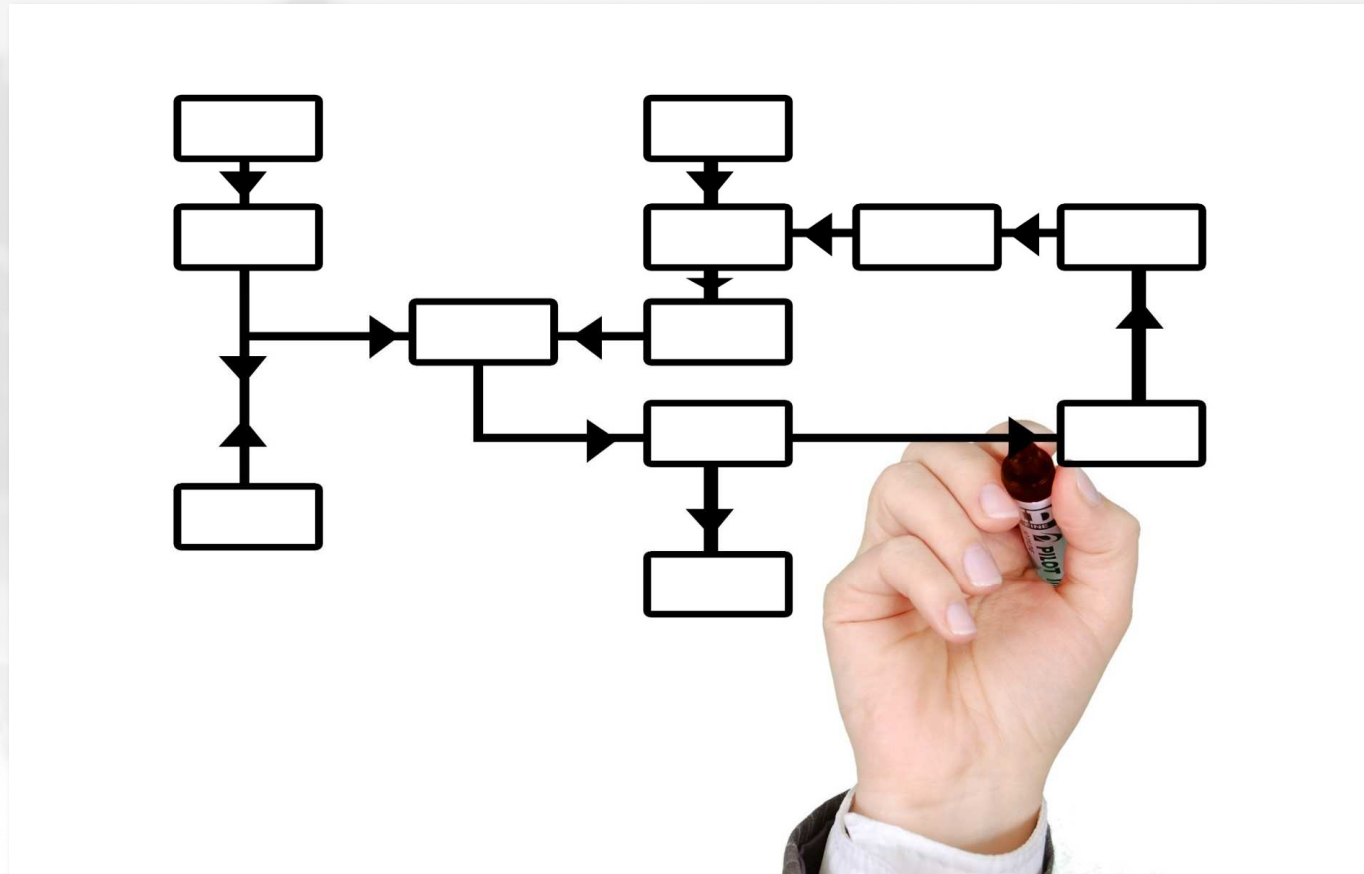


KEY LEARNING OBJECTIVES

Discover the essential tools and processes needed to start a BIM/VDC department

Processes

- Plug Into Everything
- BD / Pursuits
- Preconstruction
- Coordination
- Training / Awareness Plan



KEY LEARNING OBJECTIVES

Discover best practices for clearing unnecessary tools / processes from your workflow

- Challenge Yourself
- Reduce Wasteful Practices
- Combine / Reduce Tools



KEY LEARNING OBJECTIVES

Discover the software/hardware needed to get BIM/VDC implemented at the building-design, conceptual, preconstruction, and operations stages of a project



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Structural Analysis for
Revit

Storage (25GB)

KEY LEARNING OBJECTIVES

Discover the best ways to start interfacing with and training owners, subs, and partners you work with to enhance relationships and ensure successful BIM implementation on your projects

- Teach Owners
- Teach Design Partners
- Teach Trade Partners / Subs
- Industry Involvement
- BIM Roundtables



QUESTIONS?



HOW DID WE DO?

- Your class feedback is critical. Fill out a **class survey** now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- **Your feedback results in better classes and a better AU experience.**

