Learning Objectives

- 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

Description

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.
Your AU Experts

David Epps – Director of Construction Technology
Winter Construction Company

As Director of Construction Technology, David oversees the implementation, management and innovation of technology that provides value to the Construction process. This includes Building Information Modeling and Virtual Design and Construction, but also extends into other exciting and overlapping areas like Drones / UAVs, Laser Scanning, Virtual Reality, and Construction Simulation. His focus also includes project pursuit and marketing support, project setup, BIM Execution Planning, company and industry training, project standardization and consistency, recruitment, and managing the day-to-day workload and support needs across the company.

He is responsible for the evaluation, purchasing, and management of new software and hardware that is released to the industry and collaborating with leading software and hardware providers to push the technology toward adding higher value on Construction projects. He is a member of the BIMForum Leadership Group and a frequent presenter at numerous industry conferences and events in the hopes that educating and working with the most innovative members of the Design and Construction industry will lead to a more collaborative and efficient Construction process for everyone involved.

Christopher Baierl – BIM Manager
Winter Construction Company

Christopher Baierl is the Building Information Modeling Manager at Winter Construction. Christopher graduated with a degree in Computer Graphics Technology from Purdue University and is a seasoned BIM professional with over nine years of BIM industry experience. Christopher manages Winter’s BIM services and promotes technology and graphics solutions across all projects. With extensive experience in the Data & Technology and Corporate Office sectors, he is well versed in model authoring, graphics creation, and building coordination during all phases of projects from pursuit through facility management. Christopher focuses on driving projects forward through implementation of technology and smarter solutions for construction projects.
Strategy

- How often do you reflect on your department?
- As long as we appear to be moving forward we don’t tend to overhaul our processes.
- Broken workflows can be ‘taped together’ by your team. They may work, but at the cost of efficiency.
- Death by Checklists! Are you hampered by your own processes? Do you spend more time with checklists and forms than you do working?

Waste (Muda)

- Don’t be hampered by your own processes.
- Your tools, templates, and processes should all have a goal.
- Don’t do things just because “That’s how it has always been done”
- Ex: If your house burned down, what things would you re-buy?
- Focus on efficiency, eliminate tasks that do not provide value.
- Challenge everything. 90% of all work done in the office is waste!

Efficiency

- BIM Assessment – Evaluate project. You don’t need to do everything on every job!
  - What adds the most value? What can your budget support?
- BIM Execution Plan – Establish your plan with your external partners.
  - Set appropriate goals for project.
  - You don’t want any surprises later in the job.

Tools

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

Templates

- Templates bring consistency to your workflow
- Be flexible, don’t be held back by the tool if it doesn’t work for the project.
• Think big picture. Create a template if you end up doing the same task repeatedly.

Hardware

• Desktop vs Laptop – How important is mobility for your team?
  o You will sacrifice cost and performance using a laptop.
• iPads / Tablets – Complete basic tasks in the field. What works best with your company software?
• Mobile Plan Rooms – Base stations in the field. Do they have proper access to internet/documents?
• What Else? Drones, Virtual Reality, what can your team get value from?

Software Flexibility

• Innovate constantly, but intelligently
• Research how new software platforms work with your current ones.
• Use trials effectively
• Every software is the next big thing! Look past the sales pitches on what value they provide.

Software Workflow

• Integration with your workflow is more important than feature set.
• You will waste time in your workflow on workarounds for incompatible software.

Autodesk Industry Collections – Architecture, Engineering, & Construction

• Unpaid Autodesk Plug: The new Industry Collections are more affordable than ever.
• Includes more software than any previous suites.
• Provides all base level software your BIM associates will need to get started.

Communication

Turning The Ship

• Implementing BIM will be new to most people.
• People fear change. An automatic response will be to resist.
• Old School Mentality: “I’ve done this for 30 years, I don’t need BIM (or other new technology)”

• Focus on the value it brings to them. Will it save time? Can they go home sooner?

• Do not fall in to the trap that it is better simply because it is new.

• Find proponents outside of your department. It will mean more coming from their own peers.

• Get leadership on board. They need to be supportive of your department goals.

• Change slowly. Allow the new processes and tools to take hold.

Training & Awareness

• Look for opportunities to make the company aware of how you are supporting projects.

• Give “awareness” trainings. High level overviews of software or deliverables.
  
  o This leads to more focused trainings on things they want to learn.

• Technology Moments. General awareness through e-mails, newsletters, in-person dialogue.

Industry Partners

• Design Team – Learn their workflow. How can they adapt their practices to help you?
  
  o Simple changes for them can be valuable downstream.
  
  o What value can you bring them? Better/Fewer RFIs? Faster quantity extraction?

• Trade Partners – The coordination process is costly and time consuming. How can we speed it up?
  
  o If they are bought in to a process that works best for them everyone can win.

• Clients – Understanding BIM workflows and key technical elements will save heartache later.
  
  o Are they making harmful decisions purely because they don’t know any better?
  
  o Clients are more willing to pay for services when they understand the value.

Budgets

• Starts with your BIM assessment. Do we have the appropriate money for the services we plan to provide?

• Your team and clients will want services, but are not always willing to pay for it.

• Establish project ‘needs’ versus project ‘wants’.
• Educate your teams on how long each deliverable takes. This helps with their decision making.

• Your goal is to provide project value. Every deliverable will not apply to every project!

Business Cases

• There are several ways to spread and implement new technology throughout the company.

• “Top-Down” Approach – Large cost or infrastructure change. Need leadership buy-in.

• “Bottom-Up” Approach – Cheap or free. Inform departments or individuals.

• Anything requiring a substantial investment should have a business case.

• Find the break-even point for your investments. Does it make sense to rent or buy? Outsource?

• Demonstration of use and value gained on a real project is the most impactful case you can make. White papers and hypothetical values are less impactful.

• Communicate effectively to your target audience. Speak their language.