Beyond Clash Detection: How General Contractors Can Use BIM on Any Project

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About the speaker

Kate Kirwan, VDC Manager, Turner Construction

- Background in Architectural Technology, DIT
- Based in Vancouver with frequent travel to Toronto
- 8 years in the construction industry
- 5th time attending Autodesk University, 1st time presenting
- Sadly, not Canadian, eh
Learning Objectives

• **OBJECTIVE ONE:** Identify which technologies and processes will best benefit individual projects

• **OBJECTIVE TWO:** Learn about the various technologies that can be integrated into construction projects

• **OBJECTIVE THREE:** How to engage non-BIM users in the construction process

• **OBJECTIVE FOUR:** How to earn client buy-in into the BIM process
DEFINITIONS: BIM & VDC
Current State: The US vs Canada

• The “Government Problem”
• Industry Standards
• Consultant/Trade Capabilities
• Turner’s Projects
Software Overview
Learning Objective One
Identify Which Technologies and Processes Will Best Benefit Individual Projects
Know Your Audience

- Owners?
- Consultants?
- Trade Partners?
- Turner Team?

Each of these groups may need the project information filtered in a different way!
2D vs 3D - What Are You Trying to Say?
2D vs 3D - What Are You Trying to Say?
How Much Time Do You Have?
How Many Resources Do You Have?

Video credit: Turner Construction
How Many Resources Do You Have?
What Resources do you Have?

SOFTWARE + TRAINING + TIME

15 PROGRAMS

4 MODELERS

+ TRAINING

+ TIME

As per software overview slide
= $11,500 person/annum
Includes single/shared licenses, annual software subscriptions*

Across Canada. Different expertise/ Speed to Complete Work/ Software Knowledge

In-House/ Online/ Courses

Time for training/ completing project work
= $$$

*Some licenses are one-off purchases
Learning Objective Two
Learn about the various technologies that can be Integrated into Construction Projects
3D Laser Scanning

Photo credit: Turner Construction
3D Laser Scanning

Photo credit: Turner Construction
Floor Levelness Studies

Photo credit: Turner Construction
360 Degree Cameras

Photo credit: Turner Construction, Samsung.com, theta360.com
Virtual Reality

Photo credit: Turner Construction
Virtual Reality

Photo credit: Turner Construction
Virtual Reality

Photo credit: Turner Construction
Virtual Reality

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Learning Objective Three
How to Engage Non-BIM Users in the Construction Process
Technology in the Field
Virtual Mock Up Demonstrations
Virtual Mock Up Demonstrations

Photo credit: Turner Construction, oculus.com, Samsung.com
Virtual Mock Ups
Virtual Mock Up Sharing
Coordination Model Sharing
Coordination Model Sharing
Learning Objective Four
How to Earn Client Buy-In into the BIM Process
Communication is Key
Send in the Calvary
Use Local Examples

Virtual Design and Construction Services
Case Study: Metro Tower II, Burnaby, B.C.
Clash Detection for Office Spaces

Turner Construction Company
2018 Services Design Canada
Virtual Reality for Office Spaces

Photo credit: Turner Construction
BIM Champions

Photo credit: Turner Construction
BIM Execution Plans

Confidential Client
Virtual Design and Construction Services
Client Deliverable

Clash Detection & Coordination

Coordinated Revit model and resulting layout on-site.

Deliverables

Turner Construction Company

Photo credit: Turner Construction
Follow Through

EXPECTATION

REALITY

Photo credit via @ValentinHochet, Twitter
Q & A

Thank you, and please remember to fill out the speaker survey.

$50 Amazon gift card for one survey participant, drawn at random on Friday November 16th. The winner will be notified via email!