



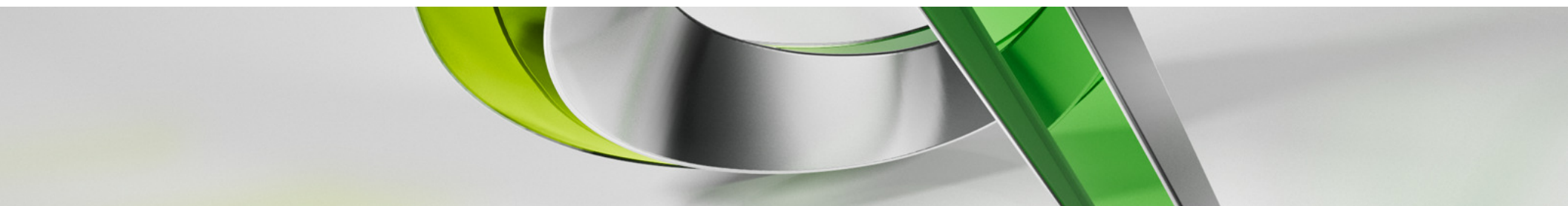
Implementing Information Modeling in a Large Firm

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Director of Virtual Design
Technology Manager, Building Services

Seth Meyrow, Dewberry

Virtual Design Analyst



Class Summary

This class details the process of implementing information modeling at a large, multidiscipline firm with nationwide locations.

- Evaluation methods of existing technology
- The importance of understanding the role of the “human factor” when building workflows that challenge proven and conventional methods.
- Utilize experiences and lessons learned to maintain forward momentum.

Key learning objectives

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

- Create an implementation roadmap for your company
- Evaluate existing resources
- Build an internal support structure
- Collect feedback by exposing a sample group to new technology

Dewberry Fast Facts

- Headquarters: [Fairfax, VA](#)
- Number of Employees: [1,800](#)
- Offices: [More than 40 locations in 18 States](#)
- Services: [Architecture, Structure, Mechanical, Electrical, Plumbing, Technology, Interior Design, Transportation, Site/Civil, Water Treatment, Surveying, Landscape Architecture, Planning, GIS, Mapping, Consulting, Program Management, Disaster Mitigation](#)
- 2012 Revenue: [\\$312 million](#)



EVALUATE
evaluate what you need....

"THE MANAGERS RECEPTION"

TRAINING?

CLIENTS?

TEMPLATES?

LICENSING?

NETWORK?

COST?

CONTENT?



RESELLER?

REQUIREMENTS?

STANDARDS?

SUPPORT?

LICENSING?

DEPLOYMENT?

IMPLEMENTATION?



Strategies for Evaluating

- Beta Testing
- Reworking old projects
- AU and other conferences
- Does “Train the Trainer” work for you?
- Identifying potential SMEs
- Who are your Clients?
 - Internal and External



Cost Analysis (Hardware & Software)

- Software licensing
- Hardware
- Standardized platform
- Companion products
- Training
- Unscheduled Upgrades



Client Requirements (Present & Future)

- GSA
- STATE DOTs
- Municipal
- Department of Veterans Affairs
- USACE
- Higher Education
- Healthcare



Planning a Support Structure – Evaluation Phase

- Supporting multiple disciplines
- Supporting multiple applications
- Standards
- Templates
- Content
- Base details
- What skills does a BIM Manager need?
- What to do with CAD Managers?
- Building the support group to feed off of each other
- ARE YOU READY TO START?



4 HOURS AND 9 DRINKS LATER...



WE HAD OUR PLAN...

Main Idea - Evaluate

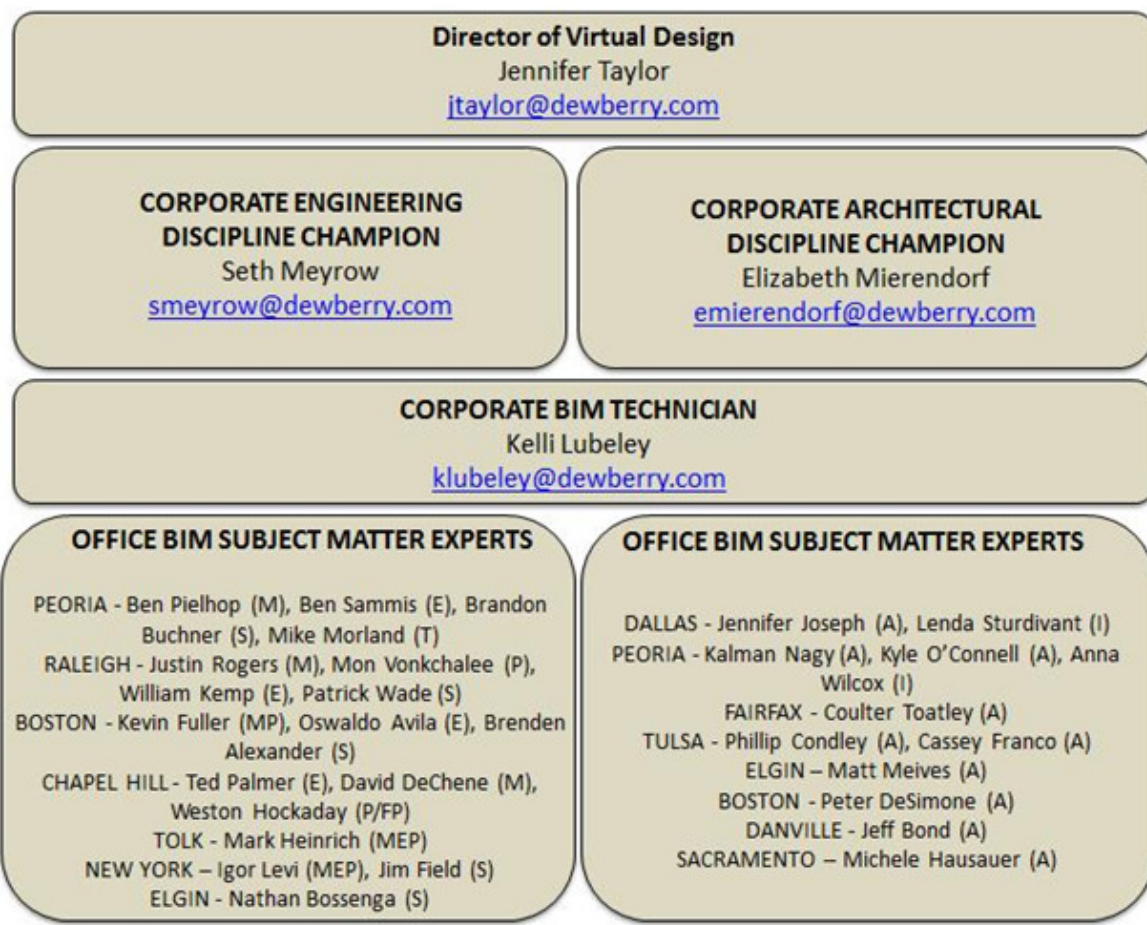
“Implementation **REQUIRES** due diligence
and it is **NOT** billable work.”

ADOPT

Forge a new relationship with the “human factor,” a critical piece of adopting new technologies

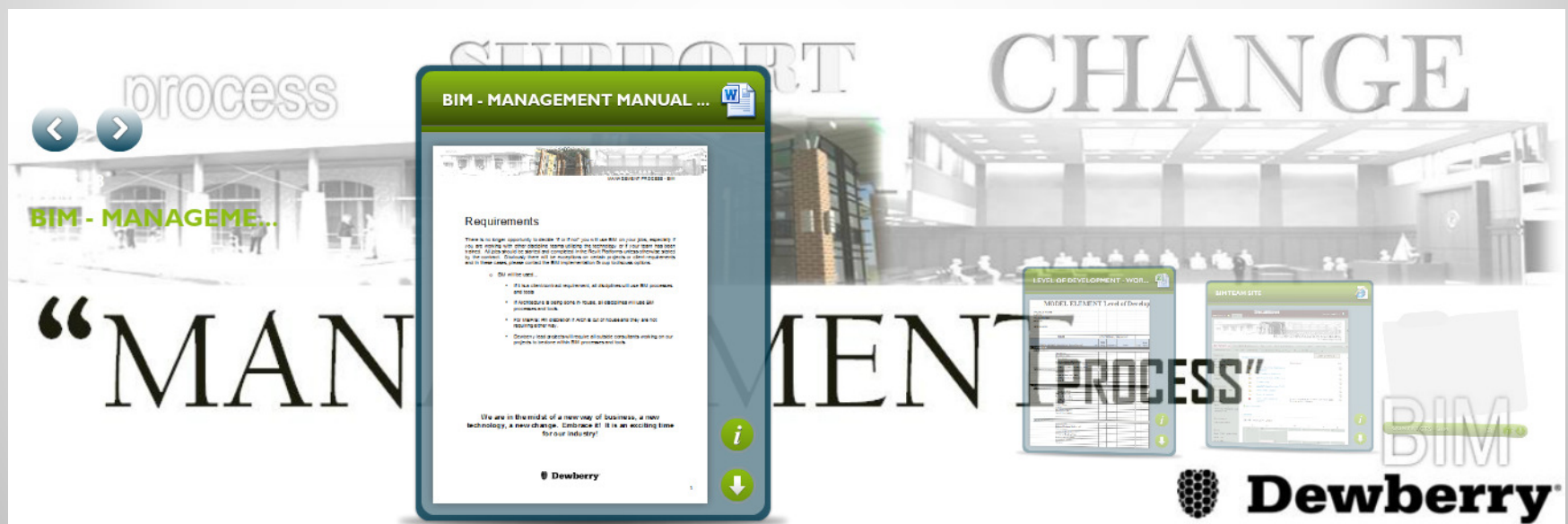
Solidify Your Support Structure

- Multi-discipline firms requires expertise in each disciplines
- What expertise is needed at your firm
- Survey your offices for technical MVPs
- Provides first line of support for end users
- Train MVPs on model management and support training



“Manage” your Managers














- It is not just software
- Management Training on process changes
- Revit for Project Managers



Standardize Your Standard

Multiple Standards = No Standard


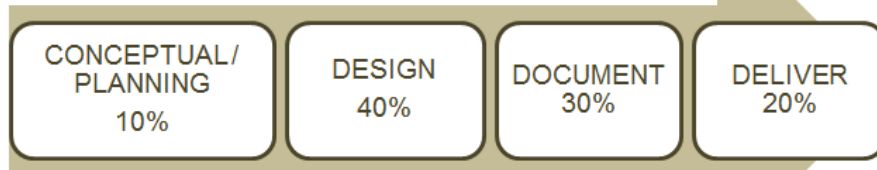
- Templates
 - Architectural Template
 - Structural Template
 - MEP Template
- Single, Centralized Library of Content
- Single Shared Parameters File
- Discipline Specific Typical Detail Library
- Discipline Specific Schedule Library
- Standard Symbol Legend

Name	Date modified	Type
 2012	7/2/2012 8:49 PM	File folder
 2013	11/5/2012 9:16 PM	File folder
 2014	10/7/2013 9:13 PM	File folder
 Applications	7/2/2012 8:51 PM	File folder
 BIM Project Folder Structure	7/2/2012 8:51 PM	File folder
 IES	8/7/2012 9:13 PM	File folder
 Keynotes	3/5/2013 9:13 PM	File folder
 Lookup Tables	6/28/2013 9:13 PM	File folder
 Materials	3/5/2013 9:13 PM	File folder
 Patterns	10/15/2012 11:40 ...	File folder
 References	3/20/2013 9:13 PM	File folder
 Shared Parameters	7/23/2013 9:13 PM	File folder
 Folder Organization.docx	2/6/2012 8:55 AM	Microsoft Word Document

Project Planning

- BIM Kick-off Meeting
- BIM Execution Plan
- Coordination Documentation
 - Level of Development
 - Element Responsibility Matrix
 - Scoping Documents
 - PM Assistance

Process Change!



BIM EXECUTION PLAN

The intent of this BIM Execution Plan is to provide a framework that will let the owner, architect, engineers, and construction manager deploy building information modeling (BIM) technology and best practices on this project faster and more cost-effectively. This plan delineates roles and responsibilities of each party, the detail and scope of information to be shared, relevant business processes and supporting software. **This plan should be utilized at the beginning of each project with all project team members involved.** All text that is GRAY is for illustrative purposes only and should not be construed as a formalized response to this execution plan. Likewise, this plan is available in word format and should be used on every BIM project moving forward. A copy should be sent to the BIM Manager for record.

Use this

General Information

Project Information


Project Name:	
Project Number:	
Project Address:	
Project Description:	

Core Collaboration Team

Contact name	Role/Title	Company	Email	Phone

Collaboration Plan - Creating a collaboration plan early on will help team members efficiently communicate, share, and retrieve information throughout the project. It lets you get the most out of your collaborative project management system, saving time and increasing your ROI.

Frequency of Meetings

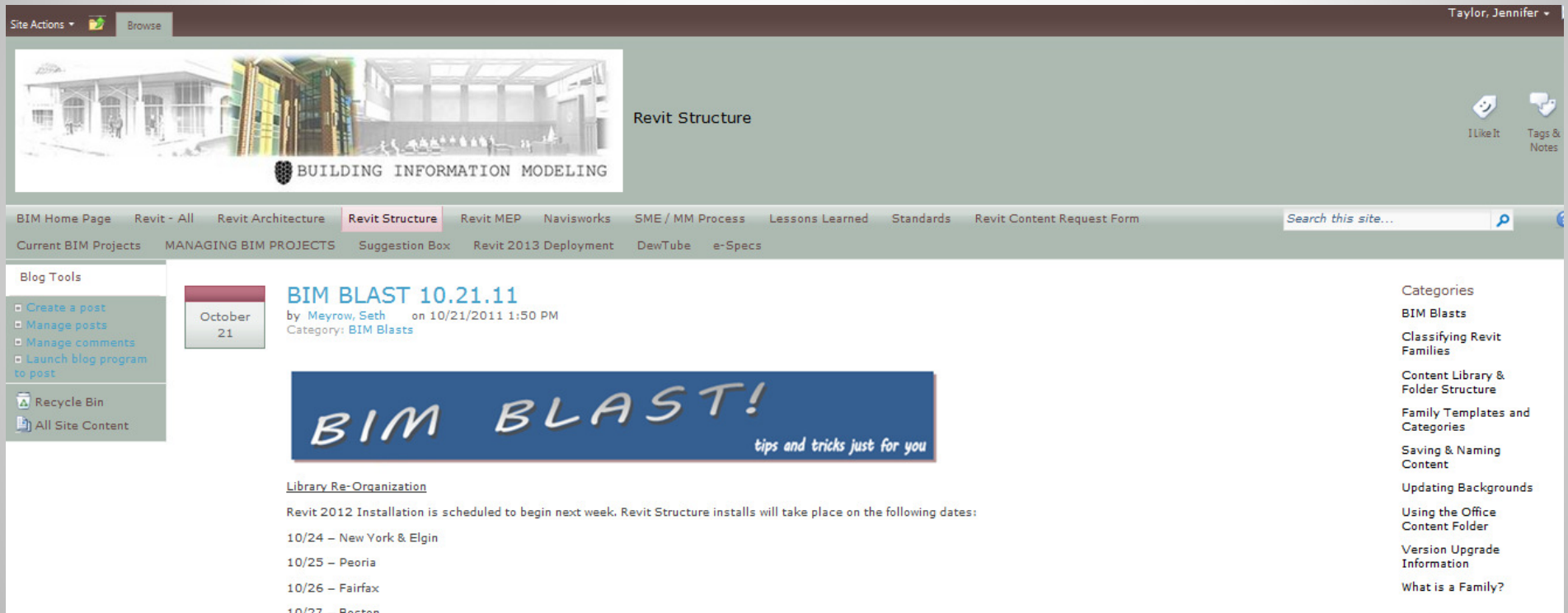
 Dewberry

Training


- 100% Internal Training
- Company Owned Curriculum
- Train Specific to your Standards
- Basic and Advanced Training
 - Revit Architecture
 - Revit Structure
 - Revit MEP
 - Navisworks
 - Civil 3D
 - Project Management Training
 - Model Management Training
 - New Hire Training



Centralize Your Resources!



The screenshot displays the Autodesk University 2013 website interface. At the top, there's a navigation bar with "Site Actions" and "Browse" buttons, and a user profile for "Taylor, Jennifer". Below this is a banner for "Revit Structure" featuring a 3D architectural rendering of a building interior. The main navigation menu includes links for "BIM Home Page", "Revit - All", "Revit Architecture", "Revit Structure" (highlighted), "Revit MEP", "Navisworks", "SME / MM Process", "Lessons Learned", "Standards", and "Revit Content Request Form". A search bar is located on the right side of the menu. Below the menu, there's a "Blog Tools" sidebar with links like "Create a post", "Manage posts", "Manage comments", "Launch blog program to post", "Recycle Bin", and "All Site Content". The main content area features a blog post titled "BIM BLAST 10.21.11" by Seth Meyrow, dated 10/21/2011 1:50 PM, categorized under "BIM Blasts". The post includes a graphic with the text "BIM BLAST! tips and tricks just for you" and a section titled "Library Re-Organization" which lists dates for Revit 2012 installations: 10/24 - New York & Elgin, 10/25 - Peoria, 10/26 - Fairfax, and 10/27 - Boston. On the right side, there's a "Categories" sidebar listing various topics like "BIM Blasts", "Classifying Revit Families", "Content Library & Folder Structure", "Family Templates and Categories", "Saving & Naming Content", "Updating Backgrounds", "Using the Office Content Folder", "Version Upgrade Information", and "What is a Family?".

Site Actions  Browse Taylor, Jennifer

Revit Structure

BUILDING INFORMATION MODELING

BIM Home Page Revit - All Revit Architecture **Revit Structure** Revit MEP Navisworks SME / MM Process Lessons Learned Standards Revit Content Request Form Search this site...

Current BIM Projects MANAGING BIM PROJECTS Suggestion Box Revit 2013 Deployment DewTube e-Specs

Blog Tools

- Create a post
- Manage posts
- Manage comments
- Launch blog program to post

Recycle Bin All Site Content

October 21

BIM BLAST 10.21.11
by Meyrow, Seth on 10/21/2011 1:50 PM
Category: BIM Blasts

BIM BLAST!
tips and tricks just for you

Library Re-Organization

Revit 2012 Installation is scheduled to begin next week. Revit Structure installs will take place on the following dates:

- 10/24 - New York & Elgin
- 10/25 - Peoria
- 10/26 - Fairfax
- 10/27 - Boston

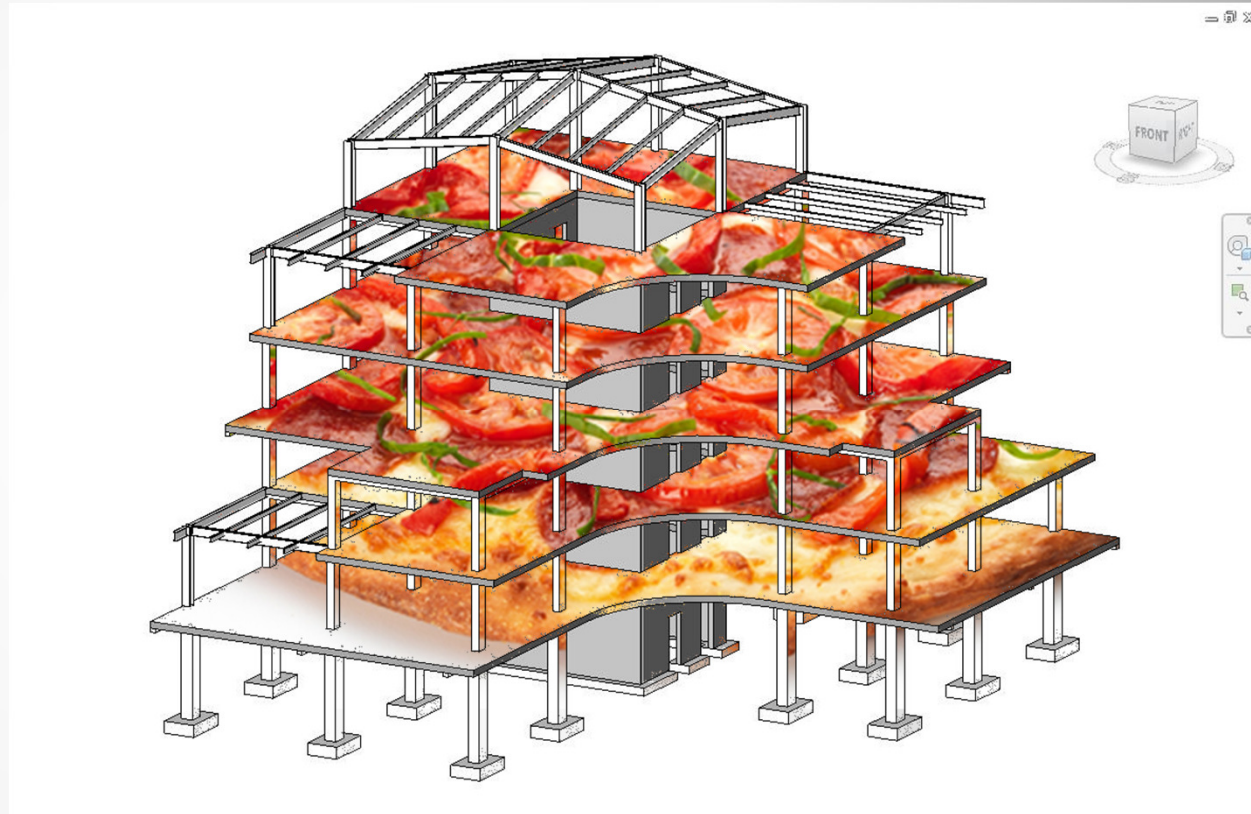
Categories

- BIM Blasts
- Classifying Revit Families
- Content Library & Folder Structure
- Family Templates and Categories
- Saving & Naming Content
- Updating Backgrounds
- Using the Office Content Folder
- Version Upgrade Information
- What is a Family?



Bribe with Food... “BIM and Pizza”

- Inform on strategy
- Inform on expertise
- Inform on capabilities of your team
- COMMUNICATE
- When addressing people, address them as being part of the plan



“BIM BERRY”

BIM BERRY AWARD OF THE MONTH

PRESENTED TO

Mike McLaren

FOR
OUTSTANDING PERFORMANCE USING BUILDING
INFORMATION MODELING



BUILDING INFORMATION MODELING
Information you need.

Jennifer Taylor

Jennifer Taylor
Building Information Modeling Manager

BIM Berry Award of the Month



BUILDING INFORMATION MODELING
Information you need.

Jennifer Joseph - Dallas



This month's BIM Berry Award goes to Jennifer Joseph in the Dallas office. Great Job Jennifer!!

"We would like to recognize Jennifer Joseph in the Dallas office for her efforts on multiple projects. Recently, she has managed aspects of both production and design on Independence Park Library, Midland Library, and Saginaw City Hall. The Midland Library project is a high design interior renovation. Jennifer modeled extremely complex geometry and worked with the BIM team to develop custom content. She also makes a constant effort to streamline projects and maintain the most efficient models possible. Jennifer is constantly providing feedback and suggestions on how to make content and workflow better for all Revit users. She is extremely dedicated to making Revit and BIM a success at Dewberry. Jennifer is a project architect in the Dallas office with six years of experience in production, design, and LEED submittals."

RECOGNIZE THOSE WHO EMBRACE CHANGE!



AUTODESK UNIVERSITY 2013

AUTODESK.

Main Idea – Adopt

“The “human” factor is just as important as the “technical” factor.”

MAINTAIN
maintain adoption phase...


Implementation Maintenance Plan

- Lessons Learned / Model Audits
- Re-visit Standards
- Advanced and Expert Training
- Refine Support Structure
- Cost Reduction Strategies
- Sharing Success!



Lessons Learned / Model Audits

- Consistent from project to project
- Entire project team not just modelers
- Manager understanding of issues
- Round table discussions



Dewberry Model Audit

Modeling Techniques

- MEP team will work with Architects and VDG to develop a method for modeling/displaying light fixtures that are attached to sloping surfaces.

Lessons Learned Comments

The first thing I noticed was a great improvement in model organization. Past audits of MEP models from this group have shown disorganization in terms of the number of unused views and the structure of views that are used. This model has an exceedingly low number of unused views and for the most part, the Project Browser is organized nicely.

I would like to commend the group on the improvement of proper content usage. Content in this model reflects use of the OpenAsset plugin and the absence of downloaded content from internet sources. There are families that were edited on the fly specifically for this project but it was done by duplicating/modifying previously approved content. Revit schedules have been loaded from the library and appear to be functioning well.

Use of AutoCAD files as a crutch or shortcut is still an issue for this MEP group. There are certain situations where this is acceptable. However, CAD files are being used for supplemental information.

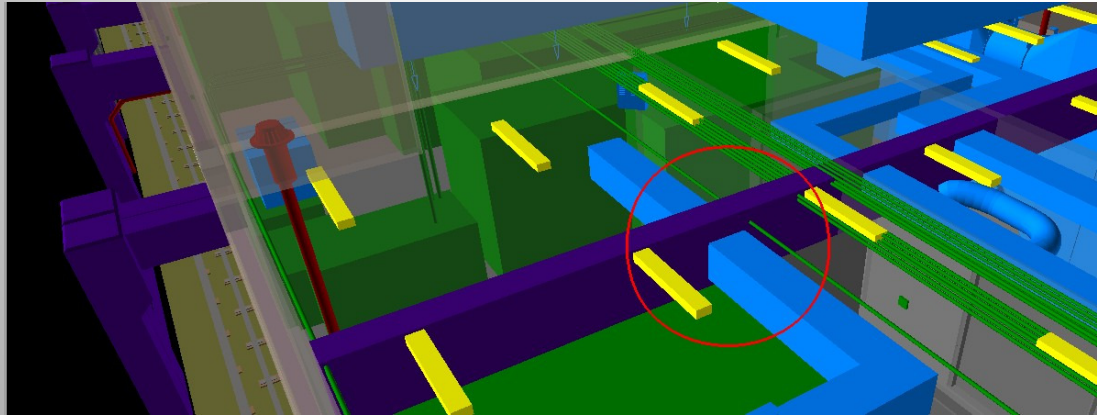
Revisit Standards

- Multi-office Focus Group
- Advanced Users Only
- Democratic Process
- Revisions based on Group Decisions

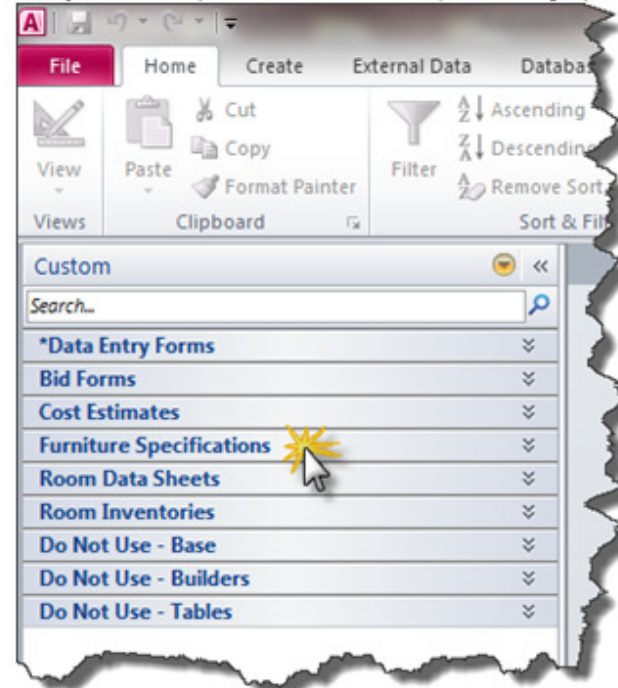
42			
43	New Families		
44	Family Category	Family Name	Description
45	Pipe	DELETE DUPLICATE PIPE MATERIALS	Since the material can change by do not have separate pipe types l
46	Pipe	Plumbing - DT	Change Type Comments and Nam
47	Pipe & Accessories	Sanitary	Change Type Comments and Nam
48	Pipe	Mechanical - CD	Change Type Comments and Nam
49	Duct (Round)	Taps with VD	Duplicate the "Taps" round duct f
50	Duct (Rectangular)	Taps with VD	Duplicate the "Taps" rectangular
51			"Rectangular Tap - Beveled - Dam
52	Halftone Settings		
53	Setting Type	Description	
54	Halftone	Change from 50% to X%	
55			
56	Annotation Family Settings		
57	Family Category	Family Name	Description
58	Annotation Symbol	Blank Leader (DEW)	Change Leader Arrowhead to 15 0
59			
	General Global Changes	Mechanical	M - VG Explanation
		Fire Protection	FP - VG Explanation

Advanced & Expert Training

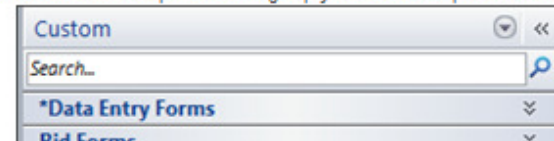
- Add-on Applications
- Analysis Applications
- Project Training – Advanced Techniques
- Focus on Model **INFORMATION!**



- Open your database by double clicking on it in Windows Explorer.
- Once your database opens, click on the Furniture Specifications group in the Navigation Pane to expand

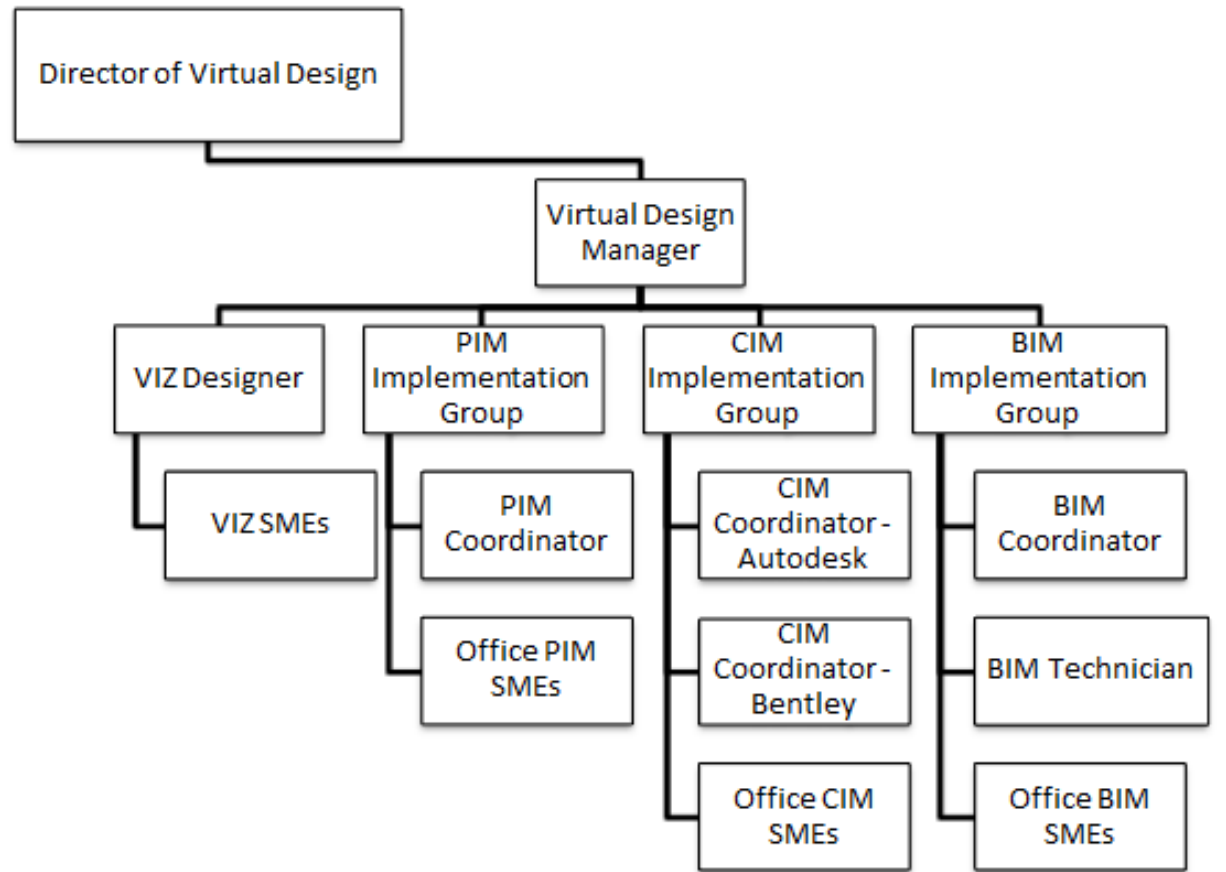


- In the Furniture Specifications group you will see a report called Furniture Specification.



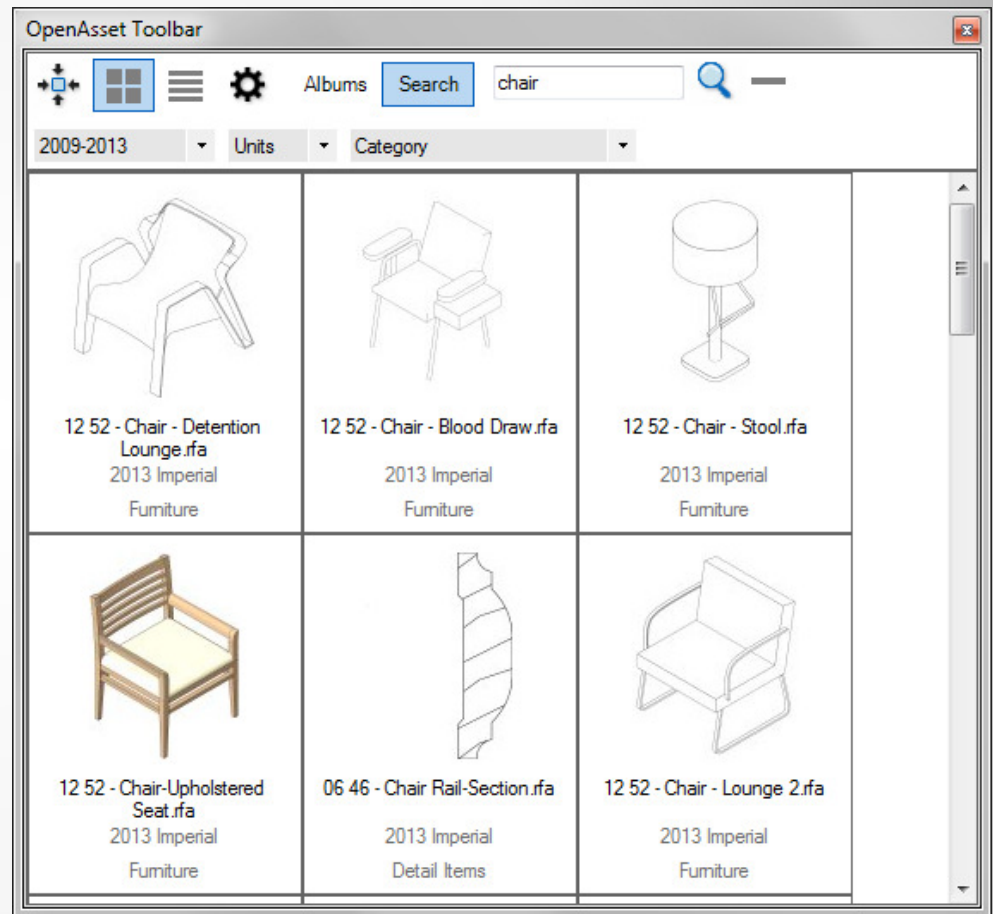
Refine Support Structure

- What other experts do you need now?
- What specific needs do you have 2-3 years into your implementation?
- Uncompromising on skill set
- Hire the right people



Cost Reduction Strategies

- Content Creations / Request Form
 - Look to the Future!
- Content Organization Application
- Maintaining Internal Training
- On-site Support for Deadline Week



Share Your Success!



Dewberry's BIM Capabilities -- A Video Explaining Our In-House C...

Main Idea – Maintain

“Technology is a moving target, maintaining equals progressing. Learning FROM the project is just as important as learning ON the project.”

*IMPLEMENT THE PROCESS THAT
PEOPLE WANT TO BE A PART OF....*

GOOD LUCK!



