Architecture, it’s who we are.
Ellen Bensky
B. A., Dip. Arch. Tech.(Hon)
CanBIM P1
Principal, CEO, CFO
29 Years with the studio

Steve Nonis
B. Arch., OAA, AANB, AAPEI,
MRAIC, CanBIM P3, LEED AP
Principal
16 Years with the studio
Who We Are
Turner Fleischer
Toronto, Canada

45
Years of Experience

155
Talented Professionals

Architecture

Interior Design

Branding

Commercial

Industrial

Institutional

Hospitality

Mixed-Use

Residential

Retail

Planning
Implementing a Digital Practice: Looking Beyond BIM Management
Why Look Beyond BIM?
Why Look Beyond BIM?

Innovation is Accelerating Exponentially

Disruption is Inevitable

Digital Transformation is Unavoidable
Why Look Beyond BIM?

Workflow Shift

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**Drafting Centric Workflow**

**BIM Workflow**

- **Preliminary Design**
- **Detailed Design**
- **Construction Documentation**
- **Construction**
- **Operation**

Effect / Cost / Effort
Why Look Beyond BIM?

Department to Studio Thinking

DIGITAL PRACTICE
COMMERCIAL
CONSTRUCTION ADMINISTRATION
MARKETING
GRAPHIC SOLUTIONS
FINANCE+ADMINISTRATION
INDUSTRIAL
MIXED-USE
RESIDENTIAL
INTERIORS
SITE DEVELOPMENT
Why Look Beyond BIM?

Standardization
How We Began
Realities of Digital Disruption

Realities of Digital Disruption

BIM Transformation Accomplishments

- Determined TF Company Objectives for BIM
- Utilized BIM Uses document(s) to create TF definitions
- Completed BIM Execution Plan Version 3.2 for office use
- Researched and reviewed add-ins
- Integrated Dynamo into workflow
- Utilized Navisworks for Clash Detection
- Submitted Grant application for research project
- Completed TF CanBIM Membership
- Completed CanBIM Staff Certification
- Established legality of BIM contracts with consultants
- Established legality of BIM Model exports
- Conducted Workflow Interviews with staff
- Established legality of BIM Model exports
- Conducted Workflow questionnaire for standard settings previously established
- Conducted initial data collection for company standardization
- Tracked existing department standards
- Created standard for Family naming
- Created standard for Titleblocks
- Created standard for Template files
- Created standard for Line weights and object styles
- Created standard for Fonts and dimensions
Was This Working?
No, It Wasn’t.
Why?
Committee members were challenged to balance project demands and part-time BIM implementation responsibilities.
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Departments were focused on their own needs, not studio-wide objectives.
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Departments were focused on their own needs, not studio-wide objectives.

No direct connection between BIM Leads and staff working on projects.
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Departments were focused on their own needs, not studio-wide objectives.

No direct connection between BIM Leads and staff working on projects.

Technology was advancing faster than we were implementing it.
What Did We Do Next?
DIGITAL PRACTICE

Saji
Manager
- 3 years at TF
- 3 years in DPD

Kristian
Elizabeth
Rocky
Mauricio
Marco
Srujana
Mohsen
Ross

Hired for DPD
DIGITAL PRACTICE

Saji
Kristian
Elizabeth
Rocky
Mauricio
Marco
Srujana
Mohsen
Ross

Lead Specialist
- 3 years at TF
- 2 years in DPD

Previous Department:
- Residential + Mixed-Use
Elizabeth

Lead Specialist
• 6 years at TF
• 3 years in DPD

Previous Department:
• Interior Design
• BIM Transformation
DIGITAL PRACTICE

Content Creation
• 5 years at TF
• 1.5 years in DPD

Previous Department:
• Visualization
• Graphic Solutions
• Environment Replication
DIGITAL PRACTICE

Content Creation
Starting December 9

Mauricio
DIGITAL PRACTICE

Knowledge Manager
- 5 years at TF
- 1 year in DPD

Previous Department:
- Commercial + Industrial
Saji Elizabeth Rocky
Kristian Marco Ross

DIGITAL PRACTICE

Srujana
Laser Scanning Specialist
• 1 year at TF
• 1 year in DPD
Hired for DPD
DIGITAL PRACTICE

Programmer
- 6 month at TF
- 6 month in DPD
- 8 month co-op
Digital Practice

- Saji
- Kristian
- Elizabeth
- Rocky
- Mauricio
- Marco
- Srujana
- Mohsen
- Ross

3D Printing Spc
- 1 years at TF
- 2 months in DPD

Previous Department:
- Residential + Mixed-use
Practice

Workflow – BIM Implementation
Practice

Workflow – Model QA/QC
# LINE STYLE NAMING

## FORMATTING RULES:

- All fields are required except where indicated.
- Fields must be separated by a hyphen character `"-"`. Hyphens should not be used anywhere else in the line style name with exception of a performance range.
- Forward slashes `"/"` and dots `"."` are permitted to indicate fractions.

### Field 1: Owner
- **Field 2: Use**
  - **Field 3: Description (Optional)**
    - A description that further specifies use, scale, line weight, colour, etc. If this field is blank while field 4 is used, it is recommended to fill this field with either "Standard" or a colour such as "Black" in order to avoid field 4 shifting to 3. This will maintain visual consistency.

### NAMING STANDARDS

- **Name**
  - Enscape TF Branding
  - Revit Parameters Standard (Content Creation)
- **Standard Titleblock Use**
- **Titleblock Use (Libraries)**

- **Family Naming**
- **Group Naming**
- **Line Style Naming**
- **Material Naming**
- **Model - Link Naming**
- **Revit Project Parameter Naming**
- **Sheet Export Naming**
- **Sheet Numbering**
- **Text Style Naming**
- **Workset Naming**
Practice

Workflow – Content Creation
Practice

Workflow – Automation
Practice
Support
Practice Analytics

Troubleshooting Requests Past 3 Months

<table>
<thead>
<tr>
<th>Department</th>
<th>Creation Time</th>
<th>Subject</th>
<th>Status</th>
<th>Created By</th>
<th>Assigned To</th>
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<tbody>
<tr>
<td>Commercial + Industrial (C)</td>
<td>1/28/2019 1:45:00 PM</td>
<td>Edit family for project specific dimensions</td>
<td>Closed</td>
<td>Rocky Leong</td>
<td>Abraham</td>
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<tr>
<td>Residential</td>
<td>3/18/2019 6:00:00 AM</td>
<td>How to install Schedule X3 add-in</td>
<td>Closed</td>
<td>Aileen Sarwar</td>
<td>Alishabar</td>
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<td>Residential</td>
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<td>Fix site</td>
<td>Not Started</td>
<td>Daisy Yim</td>
<td>Daisy</td>
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<tr>
<td>Residential</td>
<td>2/27/2019 8:28:00 AM</td>
<td>Fix site</td>
<td>Not Started</td>
<td>Daisy Yim</td>
<td>Daisy</td>
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<tr>
<td>Residential</td>
<td>2/28/2019 5:8:00 AM</td>
<td>Marketing, Drawing Title Block, Family Broken</td>
<td>Closed</td>
<td>Daisy Yim</td>
<td>Daisy</td>
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<tr>
<td>Interior Design</td>
<td>2/28/2019 10:00:00 AM</td>
<td>2D/3D grid extents, lesson at desk</td>
<td>Closed</td>
<td>Laura Simpson</td>
<td>Kristan</td>
</tr>
<tr>
<td>Commercial + Industrial (C)</td>
<td>2/22/2019 1:45:00 PM</td>
<td>Adobe printing issues - not printing more than one view/cell</td>
<td>Closed</td>
<td>Ashley McPhaden</td>
<td>Kristan</td>
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<tr>
<td>Residential</td>
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<td>CAD: Scrubbing issues and large 3D view limits</td>
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<td>Catherine Martin</td>
<td>Kristan</td>
</tr>
<tr>
<td>Residential</td>
<td>2/6/2019 11:55:00 PM</td>
<td>Computation issues in View template from working</td>
<td>Closed</td>
<td>Aurelie Amable</td>
<td>Kristan</td>
</tr>
<tr>
<td>Construction Administration</td>
<td>2/13/2019 1:45:00 AM</td>
<td>Filter lesson for slice edges and groups</td>
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<td>Athena Hummel</td>
<td>Kristan</td>
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<tr>
<td>Residential</td>
<td>1/15/2019 3:20:00 PM</td>
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<td>Kristan</td>
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<td>Construction Administration</td>
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<td>Lesson on filters with Michelle and Susan</td>
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<td>Athena Hummel</td>
<td>Kristan</td>
</tr>
</tbody>
</table>

Total Issues Count: 160
Practice

Research & Development


Industry Shifts
TF Adoption

Workflow  Support  Analytics  Research & Development  Technology  The Lab
Practice Technology
Practice
Technology – IT Infrastructure
Practice
The Lab

- Speakers
- Microphones
- Conferencing and Remote Training Camera
- Writeable walls
- Dedicated Training Laptops
- 86" SmartBoard
- Connected Tables
The Lab

- Video Wall
- Intelligent Room Schedule Screen (outside)
- Crestron:
  - Room Control System
  - Presentation Layout
  - Audio Conference
- Secure Access
- Floorbox Connectivity
- VR PC
- Audio Server & Amp Wireless Collaboration Device
Practice The Lab

- VR Room Sensors
- Secured Cabinet for VR Equipment
- VR Floorbox Connectivity
- Video Wall
- VR PC
Development Teams

**Technique**

- **Nick Bowker**
  Manager
  Commercial + Industrial
  *9 years at TF*

- **Ellen Bensky**
  Principal – CEO/CFO
  Finance Administration
  *29 years at TF*

- **Matthew Shelp**
  Intermediate Designer/Technologist
  Commercial + Industrial
  *4 years at TF*

- **Raza Mehdi**
  Associate
  Residential + Mixed Use
  *10 years at TF*

- **Florian Caffier**
  Designer/Technologist
  Marketing + Communications
  *2 years at TF*

- **Calvin Fung**
  Project Manager
  Residential + Mixed Use
  *9 years at TF*
Intelligent Content

Embedding predefined parameters creates intelligent content that enables the generation of schedules that automatically update as changes occur.
Design Review

Working in 3D creates a highly precise model that reflects the final built form and facilitates accurate design review.
Development Teams

Virtual Reality

Nebojsa Milutinovic
Intermediate Designer/Technologist
Residential + Mixed Use
3 years at TF

Nick Bowker
Manager
Commercial + Industrial
9 years at TF

Daniel Vivat
Job Captain
Residential + Mixed Use
1.5 year at TF

Laura Simpson
Intermediate Designer/Technologist
Interiors
2 years at TF

Shahin Kiyomarsi
Designer/Technologist
Commercial + Industrial
2 years at TF
Development Teams

Virtual Reality
Development Teams

Automation Nation

**Tyler Baxter**
Intermediate Designer/Technologist
Commercial + Industrial
2 years at TF

**Matthew Shelp**
Intermediate Designer/Technologist
Commercial + Industrial
4 years at TF

**Henry Tran**
Intermediate Designer/Technologist
Commercial + Industrial
4 years at TF

**Calvin Fung**
Project Manager
Residential + Mixed Use
9 years at TF

**John Corston**
Designer/Technologist
Commercial + Industrial
1.5 year at TF

**Mohsen Assaqqaf**
Programmer
Digital Practice
6 months at TF
Development Teams

Automation Nation
Development Teams

Academic Research

Natural Sciences and Engineering Research Council

**NSERC Grant 1:** QTO: Model Analysis and Software Research  
Students: Jacob Anhang, Fernanda Vale, Alexander Liu

**NSERC Grant 2:** QTO utilizing Dynamo  
Students: Gabriel Nery, Amrinder Waraich

**NSERC Grant 3:** Validate & Optimize Digital Architectural Content Library  
Students: Dulce Gallardo, Rabiya Kayhan

**NSERC GRANT 4:** Facilities Management  
Students: Jessica Frasca, Abdallah Darwish
Development Teams

Facilities Management

Kristian Pal
Lead Specialist
Digital Practice
3 years at TF

Marco Marcoccia
Knowledge Manager
Digital Practice
5 years at TF

Srujana Janardan
Laser Scanning Specialist
Digital Practice
1 year at TF

Abdallah Darwish
Designer/Technologist
Commercial + Industrial
3 months NSERC Research Student
4 months at TF
Development Teams

Facilities Management
Training

Onboarding
Training

TF Academy
Training
On-Demand
DEVELOPMENT

TEAMS

Technique
Virtual Reality
Automation Nation
Facilities Management
Academic Research

OUTREACH

PRACTICE

Workflow
Support
Research & Development
Analytics
Technology
The Lab

Digital Practice

Newton
Staff
Management
Leadership
Newton
Staff
Management
Leadership
Newton
Staff
Management
Leadership
Newton
Staff
Management
Leadership

TRAINING

Onboarding
TF Academy
On-Demand

Academia
Conferences
Community
Outreach

Academia
Outreach

Conferences
So... Why Implement a Digital Practice and Look Beyond BIM Management?
It was all about BIM, but in reality it’s all about establishing a new operational standard.
When something isn’t working, Stop, Disrupt and Start again.
Harness the power of a mind-map to visualize the depth, breadth and impact on your practice.
Before hiring, look inward and empower your subject matter experts.
Create a team that encourages curiosity, nurtures creativity and fosters collaboration.
Make it the foundation of your studio.
Thank You