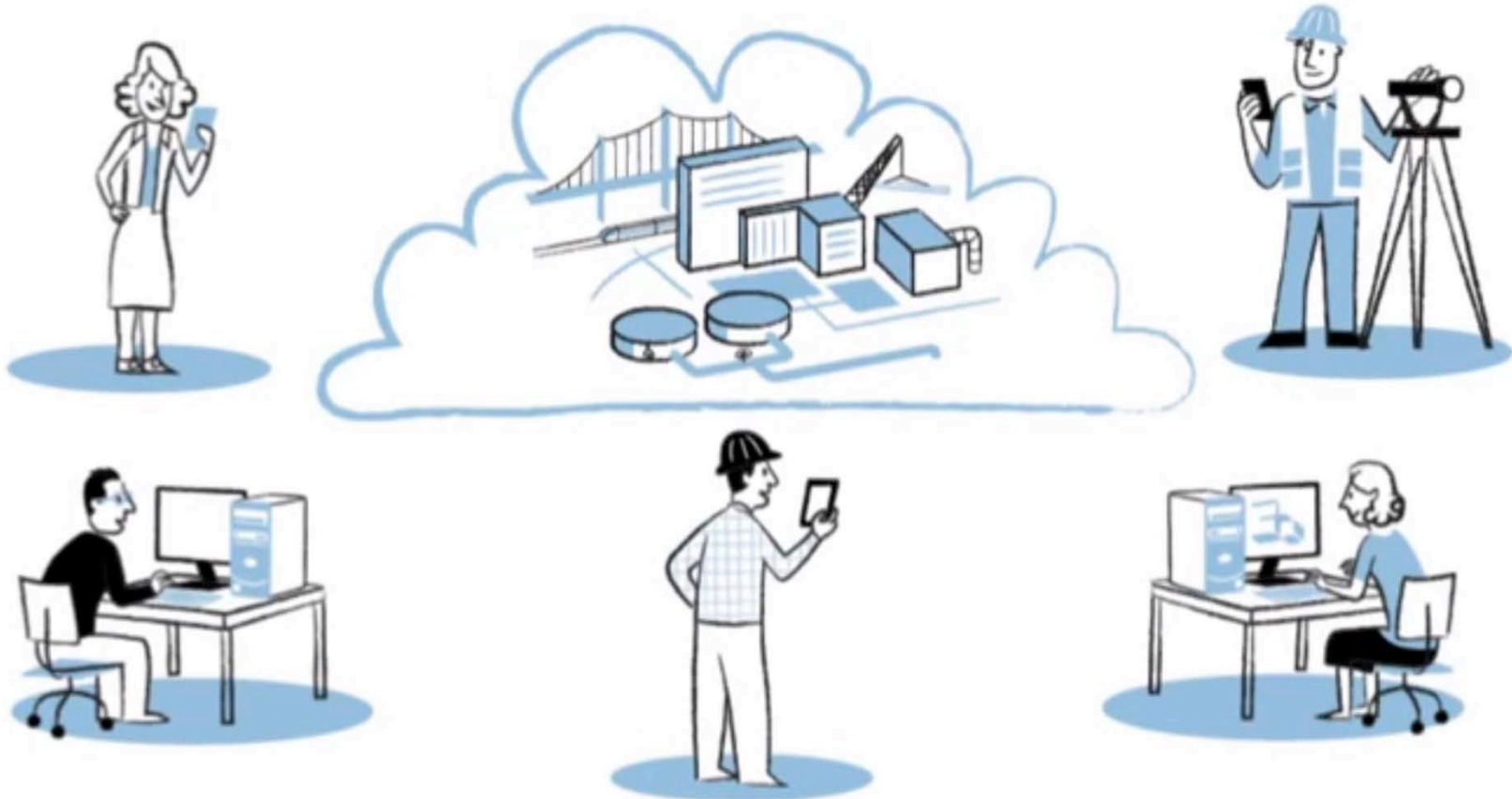
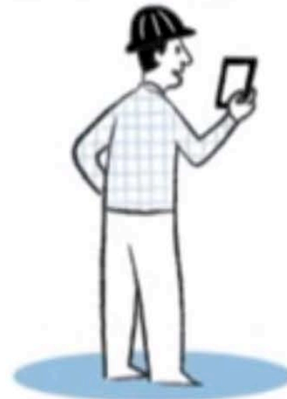
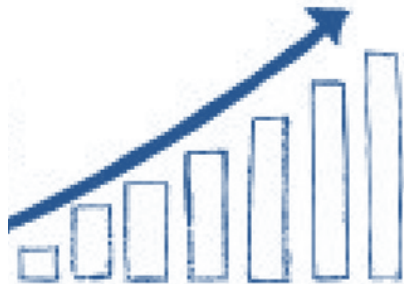


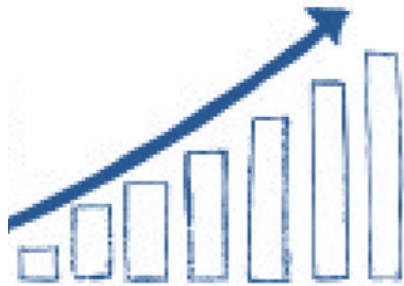
# BIM in the Cloud

Michael Moran, Dipl.-Ing. BSc. MSc.

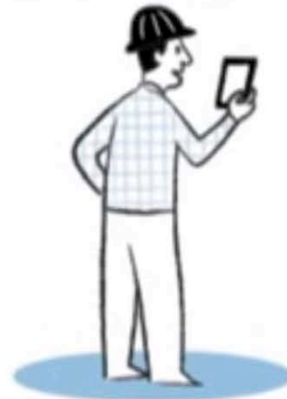








**Social**



**Mobile**



**Analytics**

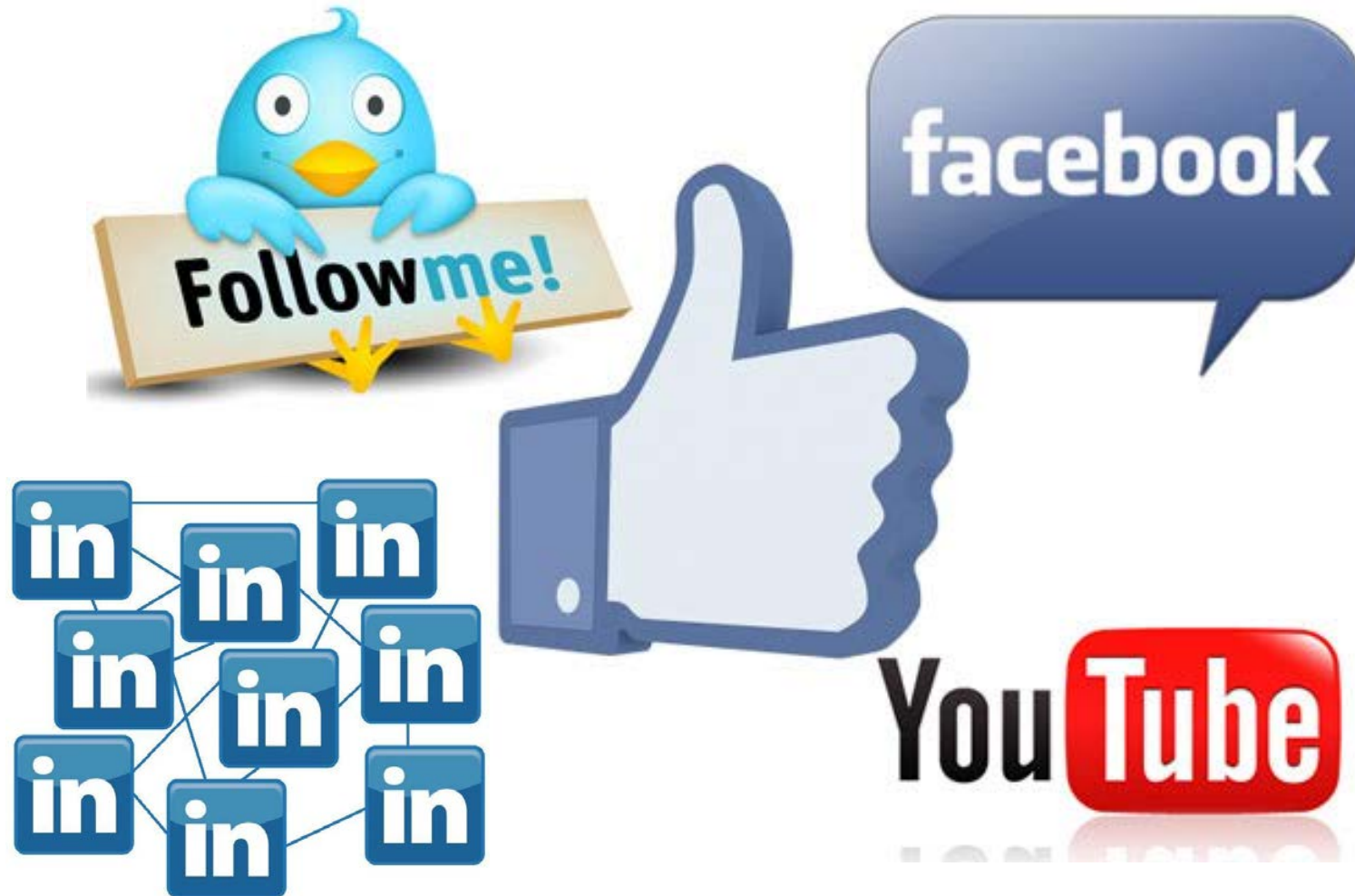


Image courtesy Business Insider

Communicate



yammer



Share Content



jive



SharePoint

Application



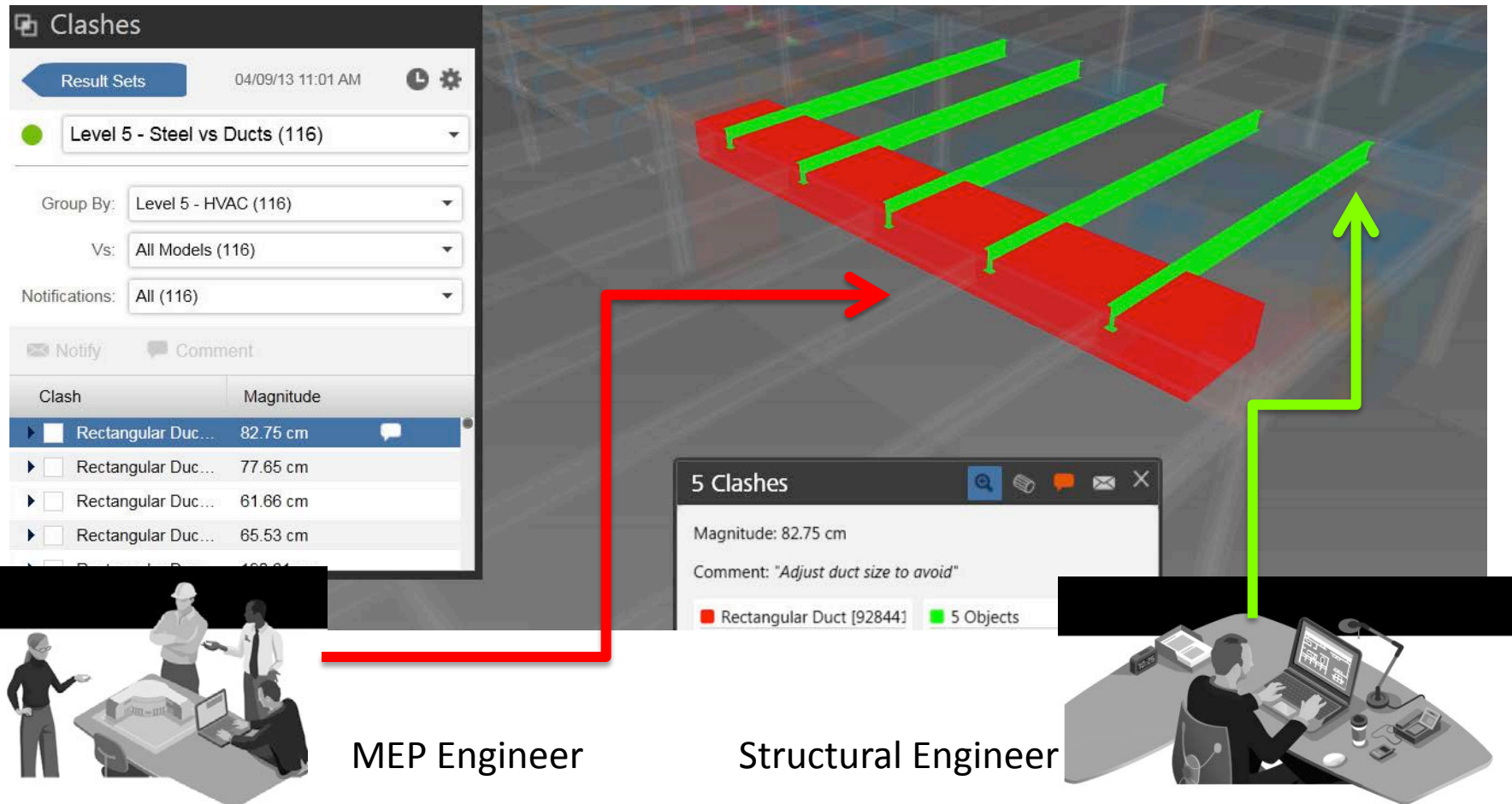
Cloud  
Solutions



SAP







**Clashes**

Result Sets 04/09/13 11:01 AM

Level 5 - Steel vs Ducts (116)

Group By: Level 5 - HVAC (116)

Vs: All Models (116)

Notifications: All (116)

Notify Comment

Clash	Magnitude
▶ <input type="checkbox"/> Rectangular Duc...	82.75 cm
▶ <input type="checkbox"/> Rectangular Duc...	77.65 cm
▶ <input type="checkbox"/> Rectangular Duc...	61.66 cm
▶ <input type="checkbox"/> Rectangular Duc...	65.53 cm

**5 Clashes**

Magnitude: 82.75 cm

Comment: "Adjust duct size to avoid"

Rectangular Duct [92844] 5 Objects

**MEP Engineer**

**Structural Engineer**

Image courtesy Autodesk

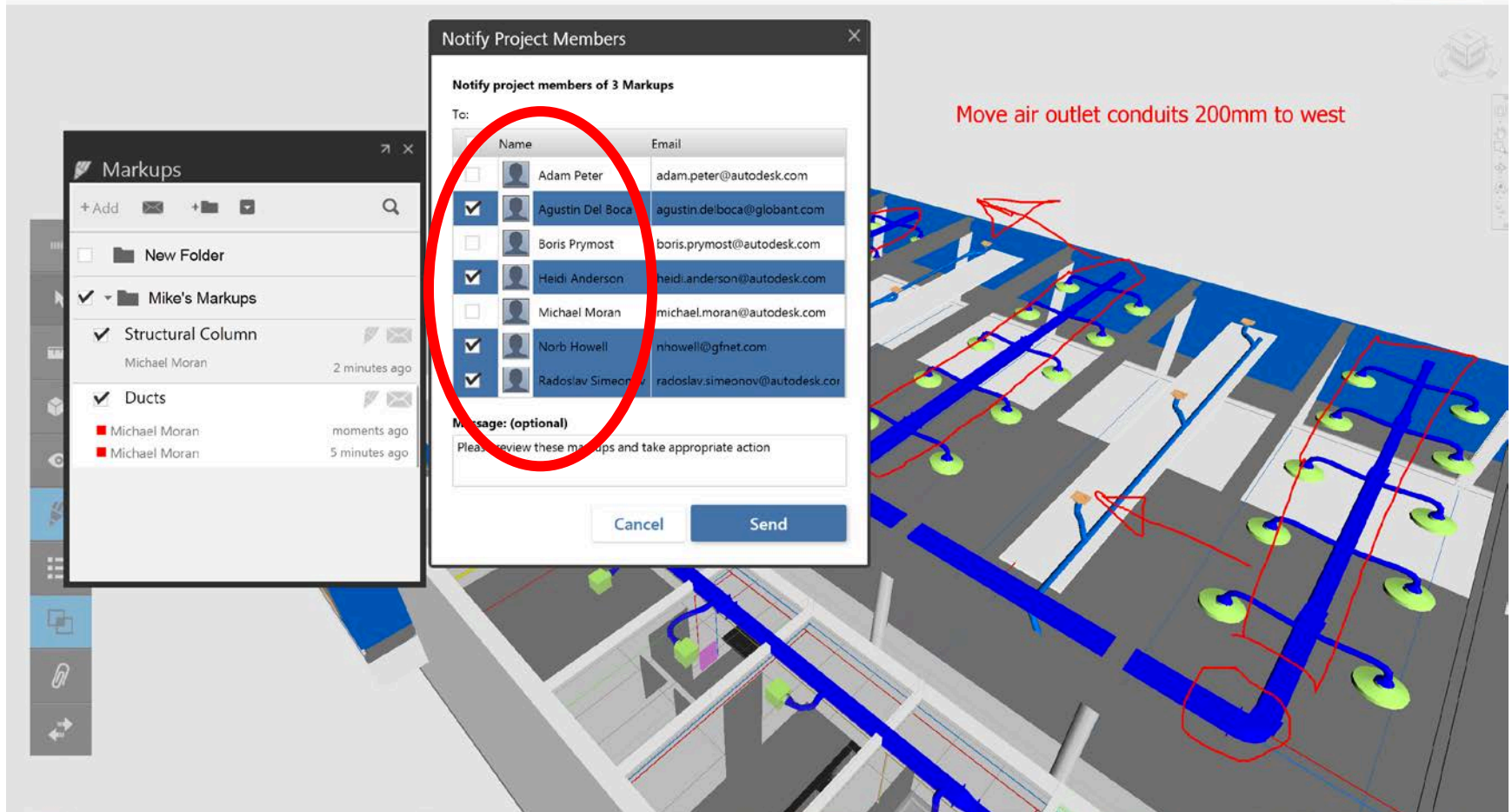
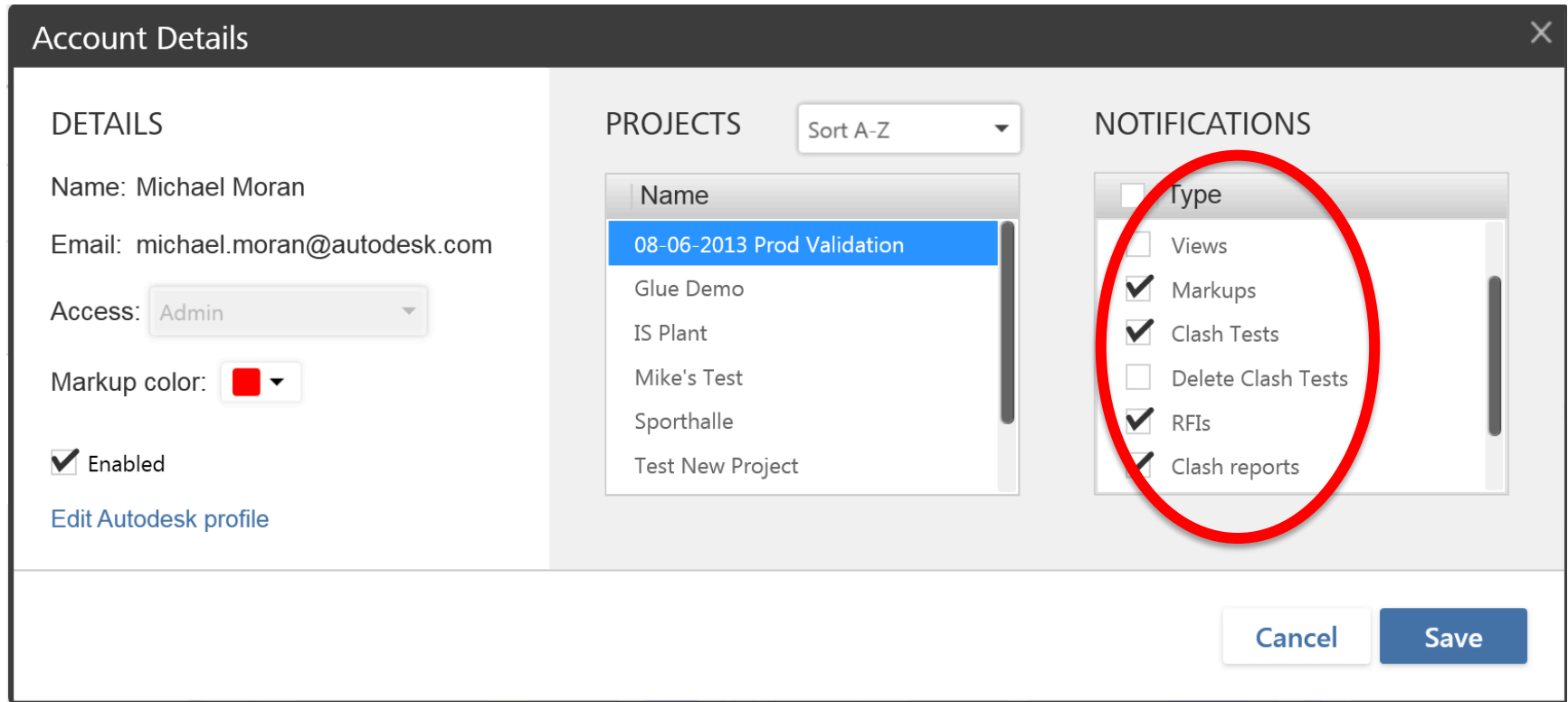


Image courtesy Autodesk



Account Details

DETAILS

Name: Michael Moran

Email: michael.moran@autodesk.com

Access: Admin

Markup color: ■

Enabled

[Edit Autodesk profile](#)

PROJECTS Sort A-Z

Name
08-06-2013 Prod Validation
Glue Demo
IS Plant
Mike's Test
Sporthalle
Test New Project

NOTIFICATIONS

Type
<input type="checkbox"/> Views
<input checked="" type="checkbox"/> Markups
<input checked="" type="checkbox"/> Clash Tests
<input type="checkbox"/> Delete Clash Tests
<input checked="" type="checkbox"/> RFIs
<input checked="" type="checkbox"/> Clash reports

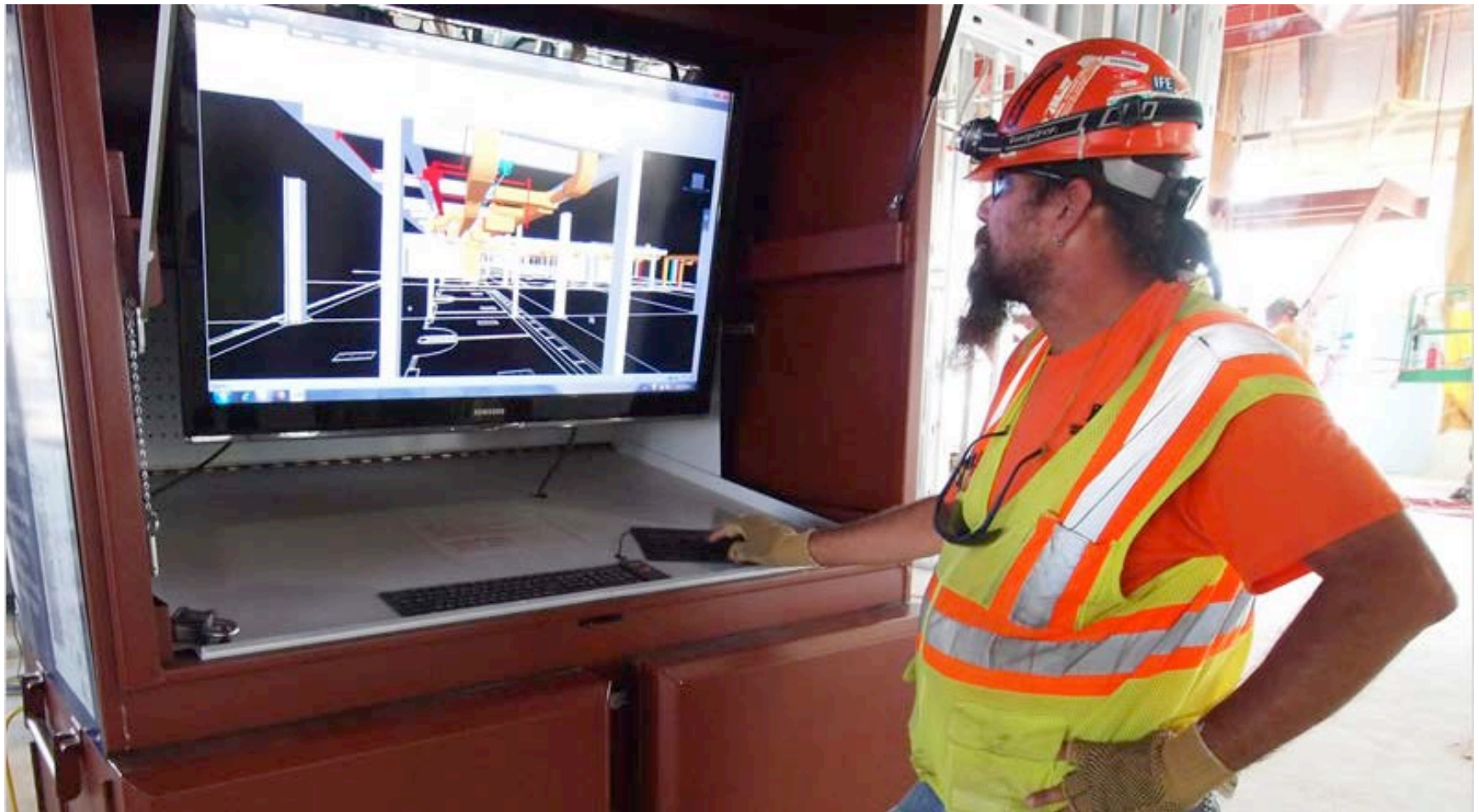
Cancel Save

Embed video:

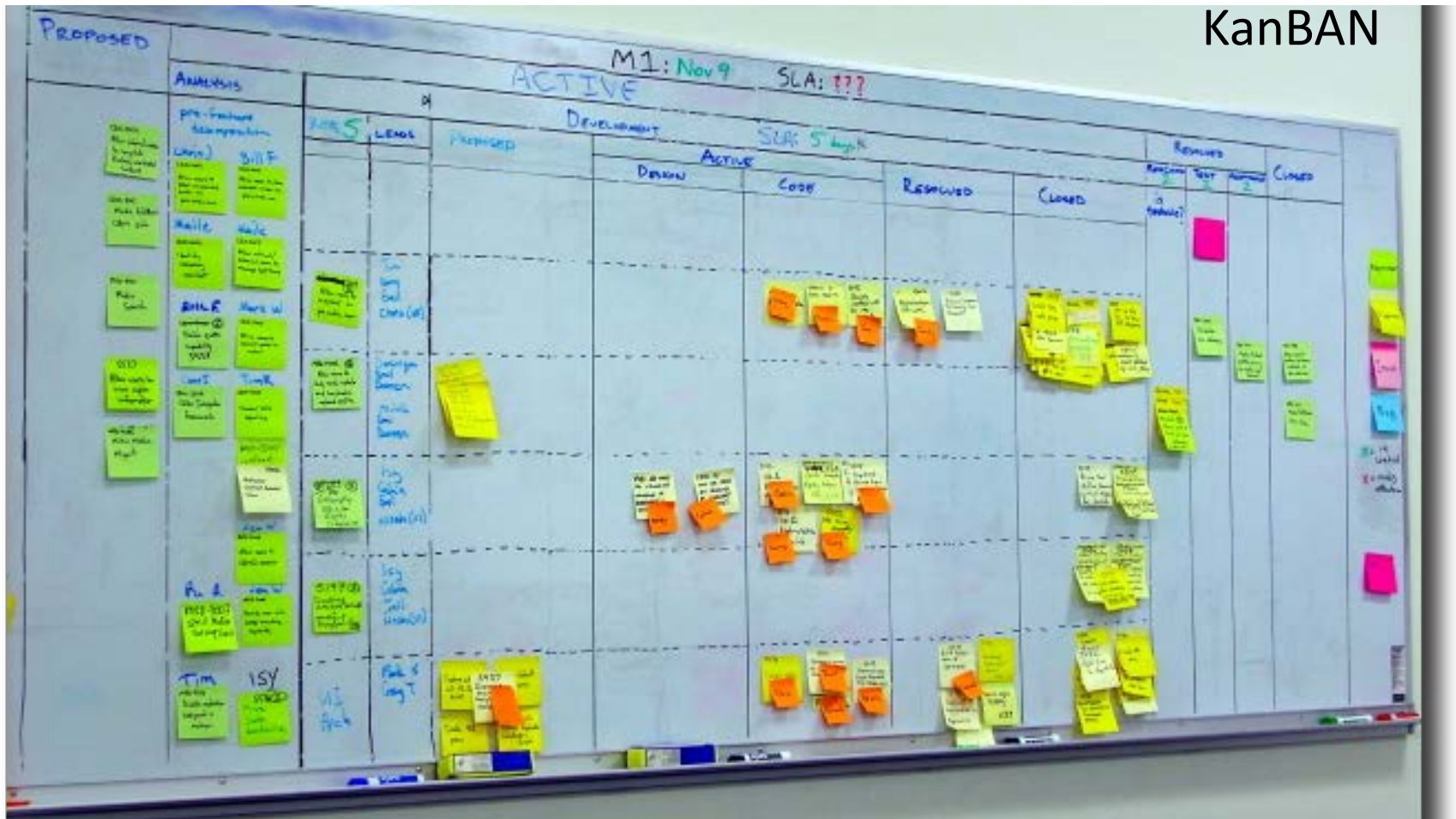
[http://www.youtube.com/watch?v=dEDtJ\\_S2ii0&feature=c4-overview&list=UUoqeAW0dNkH1\\_AERJESXHkQ](http://www.youtube.com/watch?v=dEDtJ_S2ii0&feature=c4-overview&list=UUoqeAW0dNkH1_AERJESXHkQ)



*Image courtesy Autodesk*



*Image courtesy SKANSKA Building USA: Hunt Library*



KanBAN

Image courtesy nullpaperexception.com



Model View

Floor Plan

Section



Data View

Contractor

Work Package

Space

Resource

Daily  Week  Project Target WIP  Project Actual WIP  KanBIM

◀ Week of 30/3/2009 ▶

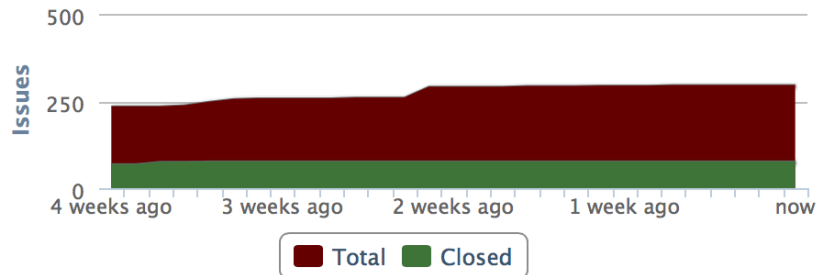
Contractor	Monday	Tuesday	Wednesday	Thursday	Friday	Contingency
Precast - PreCon	1 1 12 150	1 1 12 120	1 1 12 80	2 2 18 200	2 2 18 185	1 1 5 40
Erect Hollowcore Floor 5 Grids A1 to D4		Erect Hollowcore Floor 5 Grids A5 to D8	Prepare and pour topping Floor 5 Grids A1 to D8	Erect columns Floor 6 Grids E5 to H8	Strip and clean Floor 5 Grids A1 to D8	Cut HVAC access holes Floor 4 Grid B3-C4
Masonry Walls - Bricks Inc.	1 1 7 65	2 1 7 75	2 1 7 90	2 2 15 142	1 1 7 73	1 1 4 32
Partitions Basement 1		Lintels and ring beams Basement 1	Complete to ceiling Basement 1	Partition walls Storerooms Basement 3		Close openings above HVAC Stairwell 2 Basement 1
Partitions Basement 2		Partitions Basement 2	Lintels and ring beams Basement 2	Complete to ceiling Basement 2		
Drywalls - A&B Limited	2 2 13 123	2 2 13 123	2 2 13 103	2 2 13 114	2 2 13 107	1 1 5 44
Framing West side Basement 1			Side A West side Basement 1	Framing East side Basement 1		Fix cracks West side basement 3 W12
Framing for false ceiling Entrance floor Lobby					Side A East side Basement 1	
Electricity - Volt Limited	2 2 8 62	2 2 8 62	2 2 8 58	2 2 8 84	0 0 0 0	0 0 0 0
Main distribution board - Wiring Entrance floor Lobby						
Support installation of hoist South side facade						
Duct installation in drywalls West side Basement 1						
Electrical connection HVAC end unit zone 1						
Plumbing - Aqua1	2 2 12 115	2 2 12 115	2 2 12 115	3 3 15 147	3 3 15 147	1 1 5 46

MEP Engineer

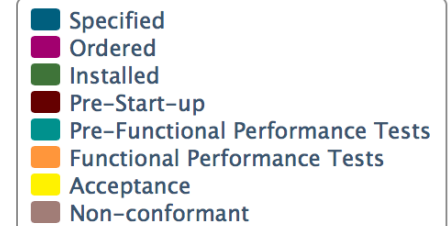
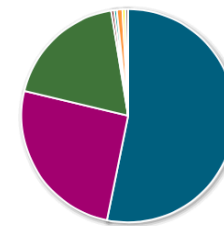
Image courtesy Rafael Sacks: Technion Institute, KanBIM Project



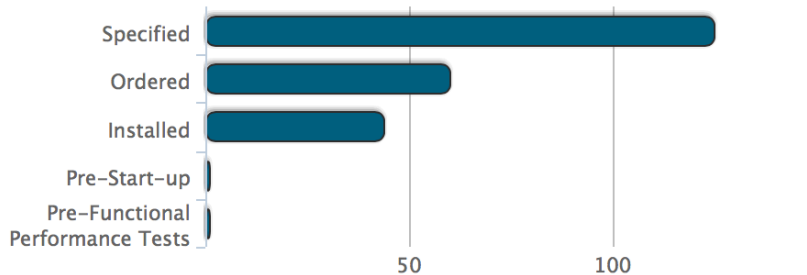
## Latest Issue Trend



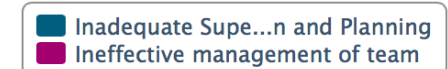
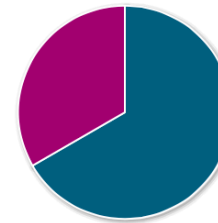
## Equipment Progress Tracker



## Equipment Status Counts



## Root Cause



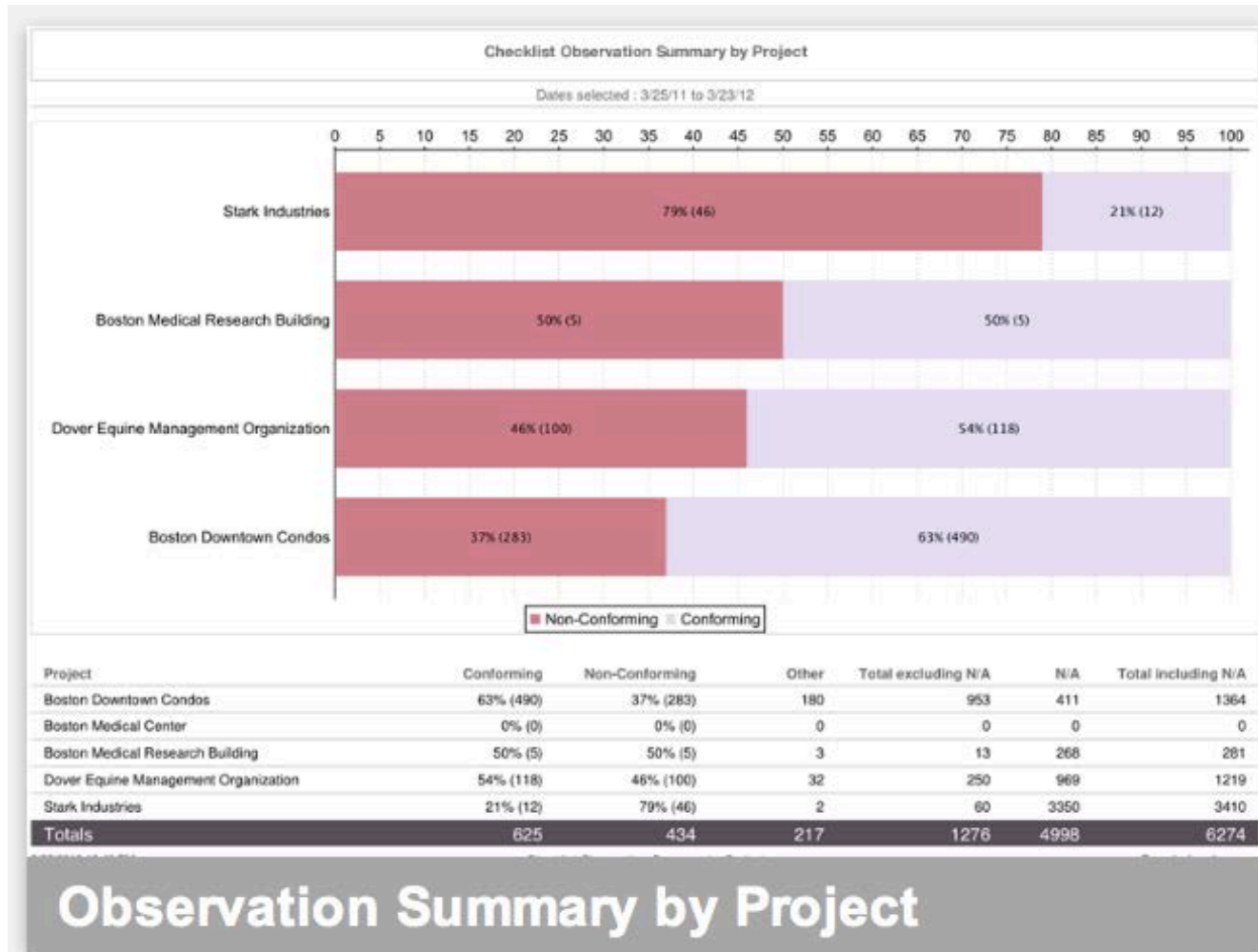


Image courtesy Autodesk

## Fabrication and Installation Production

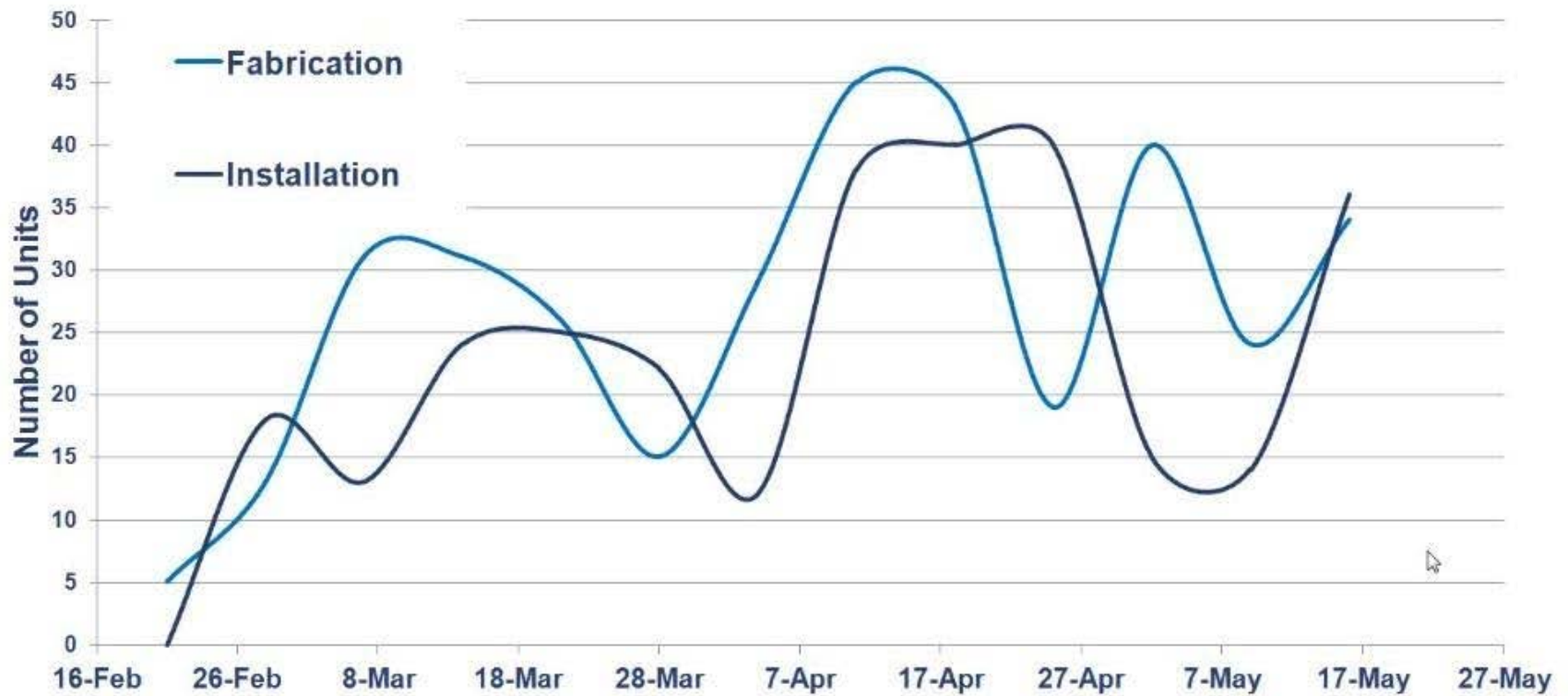
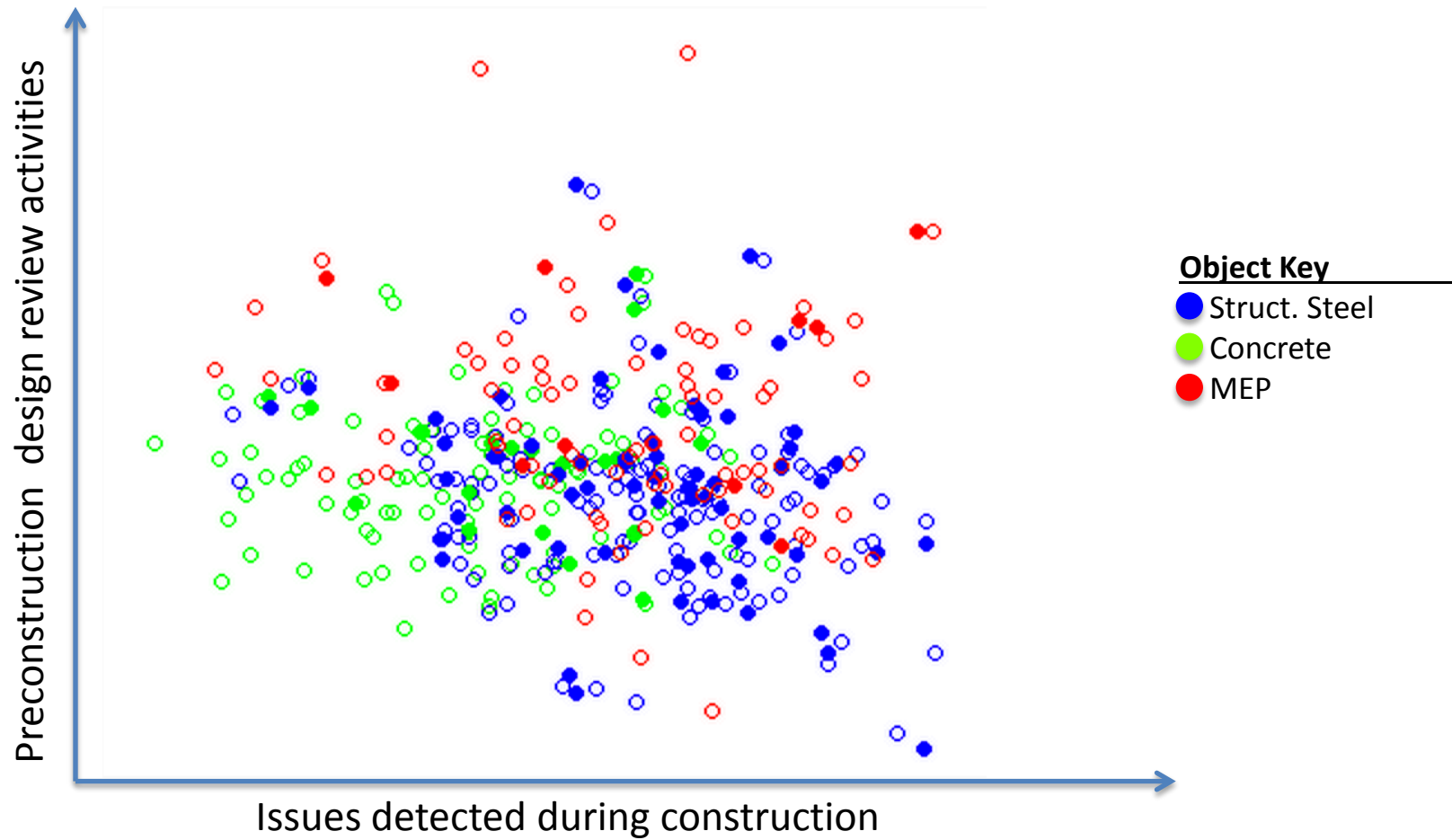
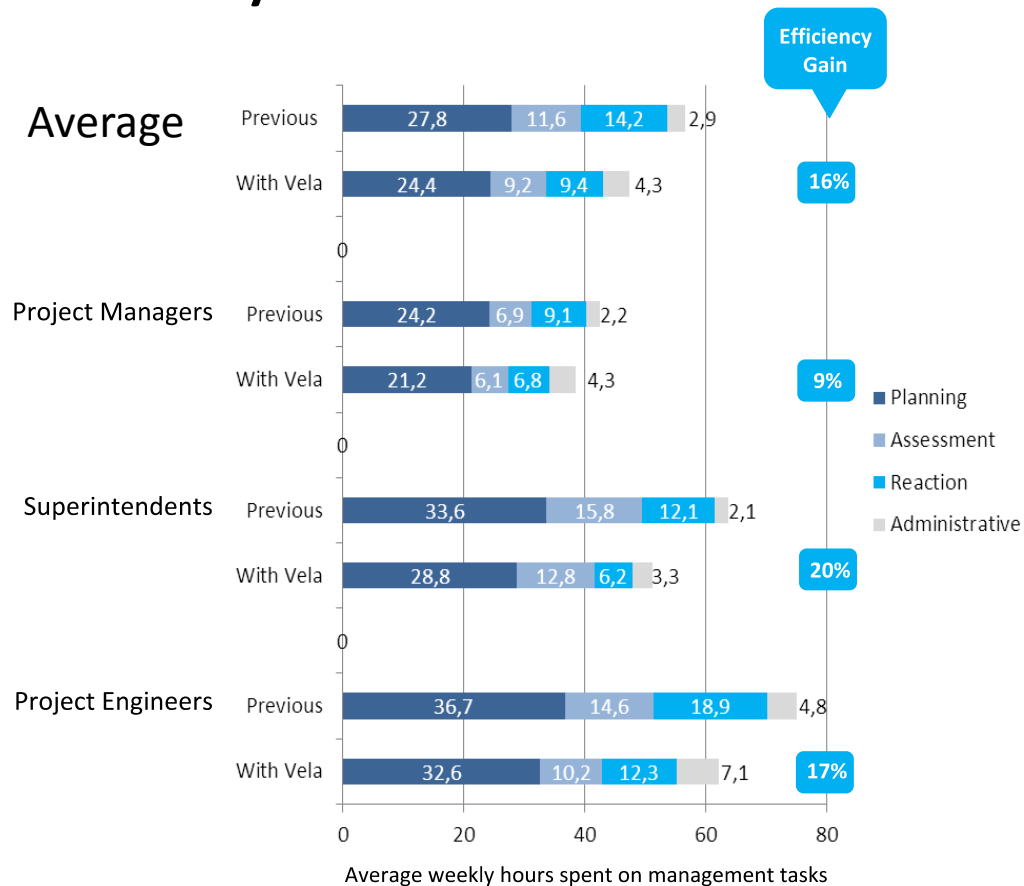


Image courtesy SKANSKA Building USA: Hunt Library



## Productivity Gains



Moran (2012), *Assessing Benefits of a field data management tool*

## Quality improvements

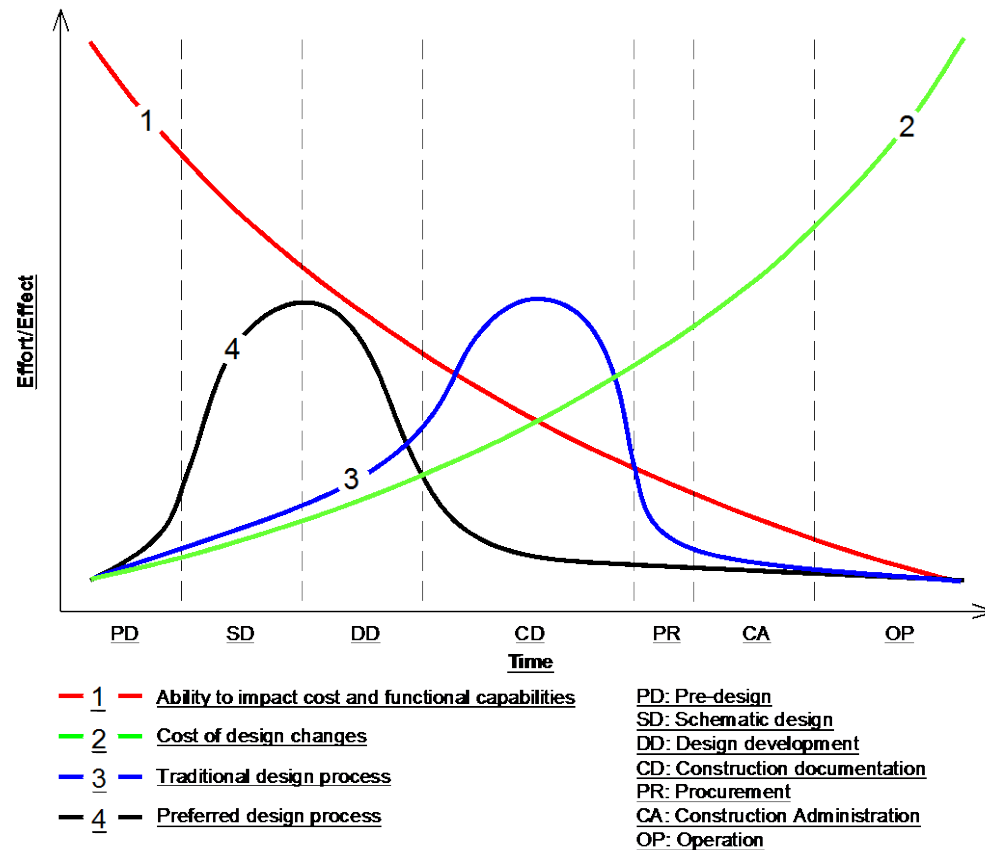


Image courtesy Patrick MacLeamy, AIA/HOK

## Schedule improvements

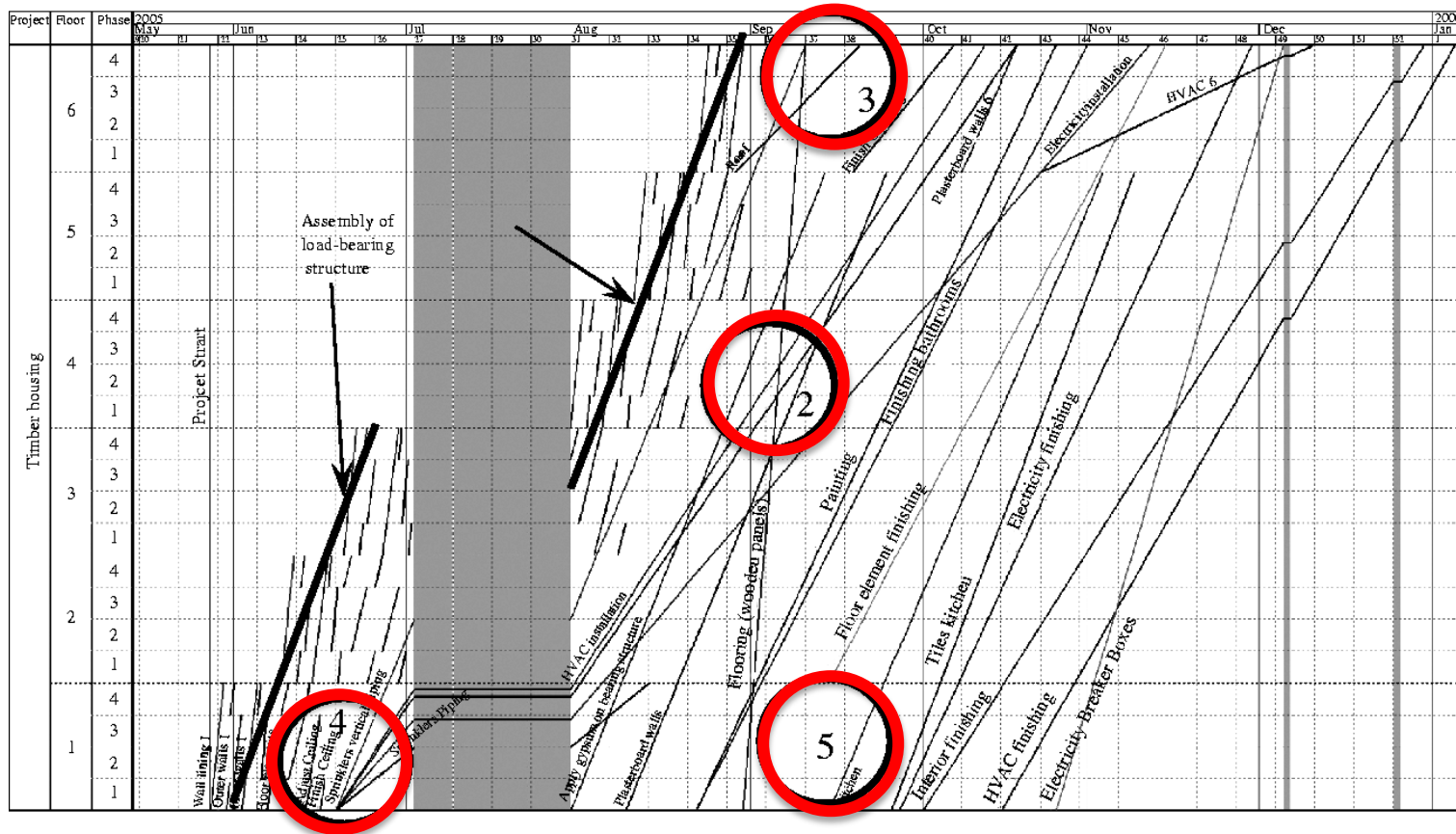


Image courtesy VicoSoftware



*Image courtesy Sean O’Gorman*





*Image courtesy stltoday.com*

## Coming soon... ?



*Images courtesy Forbes, Wired*