

Creating History with BIM: Crowdsourced Reconstruction of Sir Soane's Bank of England

Shaun Frazier

RAMSA: Director of IT

Lindsey DuBosar

STV Inc.: BIM Operations
Manager

Paul Aubin

Paul F. Aubin Consulting
Services, Architecture

Jeff Mottle

CGarchitect Digital
Media Corp: CEO

Rick Davis

Autodesk: Marketing Manager
– Design Animation



Class Summary



Sir John's Soane's Bank of England (built from 1788 to 1833) was destroyed in the 1920 in what is considered by some architectural historians to be the greatest modern architectural travesty. Today, Soane's Bank of England is revered by architects worldwide for its spectacular use of natural lighting and mesmerizing effects of scale, and inspires the neoclassical architectural approach of Robert A.M. Stern Architects (RAMSA). Autodesk, HP, and NVIDIA® have joined forces with RAMSA, CASE, CG Architect, and Sir John Soane Museum to engage the world's architects to help recreate Soane's Bank of England in BIM, in the first crowdsourcing project of its kind. Shaun Frazier, Paul Aubin, and Lindsey DuBosar will discuss the approach to modelling classical architecture with Revit, and how technologies from HP, NVIDIA, and Autodesk are enabling global BIM collaboration. Please join to learn more about The Soane Project, and how you can contribute.



Key Learning Objectives

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

- Autodesk A360 for global collaboration and crowdsourcing
- Modeling classical architecture in Revit
- Collaboration in Revit
- Rendering Project Soane with 3ds Max



Project Soane Launch: July 2015



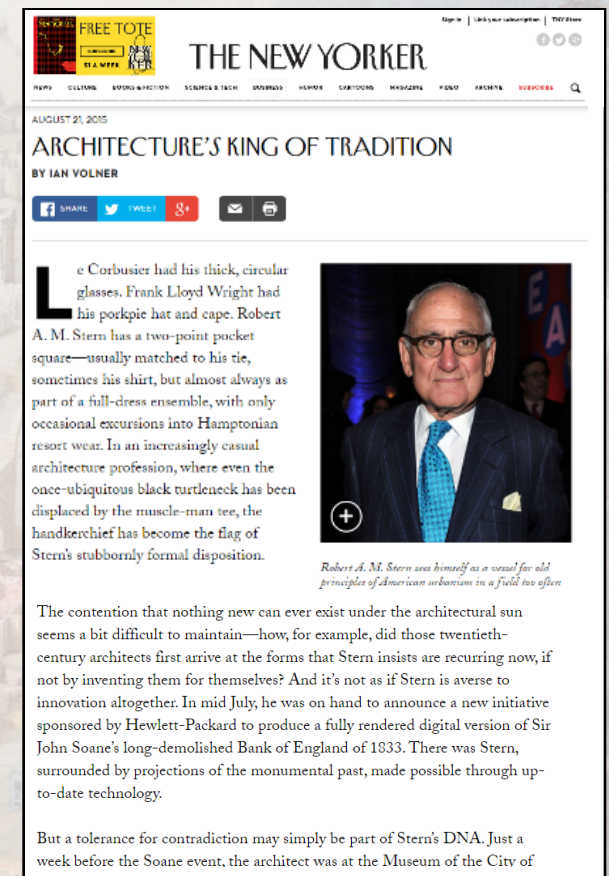
New York City, NY Launch Party with Robert A.M. Stern



Washington D.C. Launch with Shaun Frazier, Lindsey DuBosar & Paul Aubin



Project Soane in the Press



Project Soane in the Press



Project Soane: The worldwide crowdsourced effort to reconstruct Sir John Soane's Bank of England using BIM will run through December. Conceived in part by Robert A.M. Stern Architects, it is being supported by a host of tech companies, including HP, Nvidia, Autodesk, CGarchitect, and Case Inc.




Project Soane Launches Virtually Worldwide

The crowdsourced effort to reconstruct Sir John Soane's Bank of England using BIM will run through December.

ARCHITECTMAGAZINE.COM

Like · Comment · Share

Sareddy Renuka, Juanito Mas Jr.,  and 661 others like this.

83 shares



Joseph Gandy's skilled and detailed drawings express the Romantic fascination with ruins, fashionable at the time, and also show that fantasy in architectural drawing is not just a recent trend.

Yesterday at 12:30am



Oh RAMSA, you make me so happy.

Yesterday at 10:02am



Nice

Yesterday at 5:51am



Here in NYC for the launch of Project Soane <http://www.projectsoane.com> a project CGarchitect has been working on with many people for the better part of a year.

Participate in a worldwide crowdsourcing effort to virtually reconstruct the lost treasure that is Sir John Soane's Bank of England. Join Autodesk®, HP, NVIDIA, Robert A.M. Stern Architects, CASE, CGarchitect and Sir John Soane's Museum for this first of its kind project that leverages modern BIM technologies to collaboratively re-create Classical architectural forms. Contributors will receive worldwide recognition and a chance at winning over \$25,000 in prizes.



Like · Comment · Share

Shaidhi Kiran, Anton Kopylov, Balu Ganapathy and 15 others like this.

CGarchitect.com Project partner RAMSA's own Robert A.M. Stern!



July 14 at 3:47pm

A360 @edsA360 · Aug 14
Rick Davis, Autodesk giving a #ProjectSoane presentation at Siggraph2015
[autodesk/ITF9Ulw](#) @HP @AutodeskAFC



Autodesk Revit @AutodeskRevit · Aug 14
Join the #projectsoane mission to recreate the Bank of England in #BIM on
[@edsA360](#) [autodesk/ITF9Ulw](#)



Architizer @Architizer · Jul 14
Crowdfund Sir John Soane's Bank of England and win @HP's competition! Register now: [arc.hk1IXNJDQ](#)



View photo

Project Soane @projectsoane · Sep 1
Russell Fuller Hill's incredible contribution to #projectsoane [buff.ly/1X5KK1X](#)



Like · Comment · Share

Javier Alonso Madrid @javieralonsoad · Aug 31
Great collaboration from @paulfaubin in #projectsoane
THANKS!!!!!!
#Revit #architecture



BOMThoughts



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The Mission.....





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Phase 1: How it Works

Register



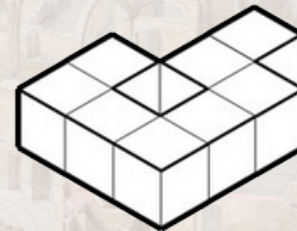
Review Plan Data



Model



Model Aggregation
& Review



Judging



Sir John Soane

1753-1837

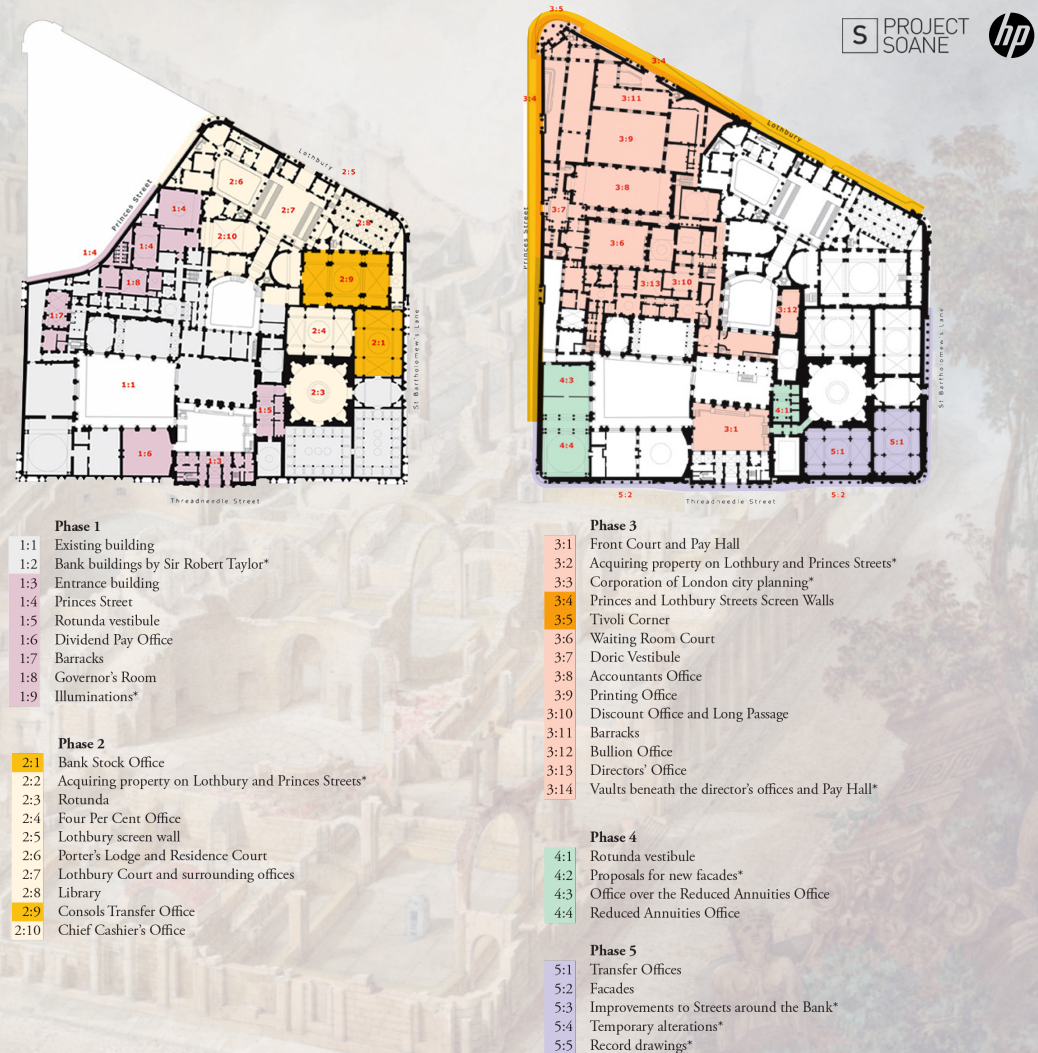
- English architect specializing in the Neo-Classical style.
- Rose to the top of his profession, becoming professor of architecture at the Royal Academy and an official architect to the Office of Works.
- On 16 October 1788 Soane was appointed architect and surveyor to the Bank of England, where his work would continue for the next 45 years.
- During his tenure, Soane rebuilt much of the bank, and vastly extended it.
- Received a knighthood in 1831.



Bank of England

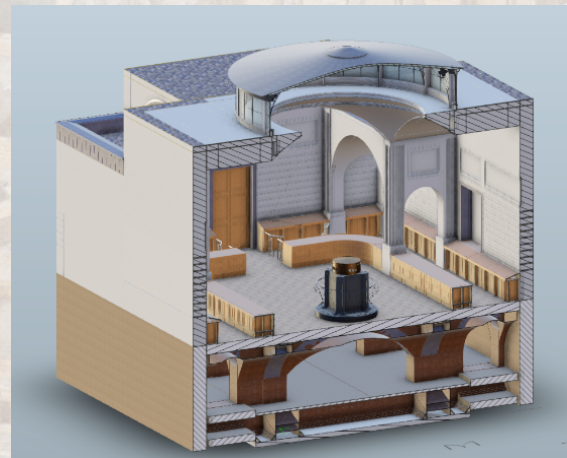
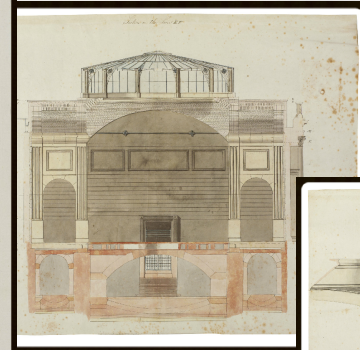
1788-1833

- Nearly every part of the building was rebuilt and more than doubled its area.
- The complex arrangement of corridors, courts, top-lit banking halls, storage and offices lay concealed behind the fortified screen wall.
- Soane's contributions to the Bank of England were destroyed in the 1920s to make way for renovations.



Bank Stock Office

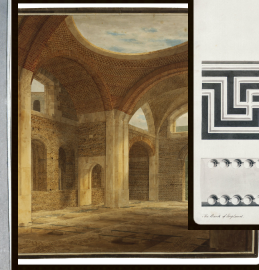
- Soane's first major work at the Bank of England
- Reduces classical elements to their structural essentials
- Substitution of linear for modeled ornamentation
- Frequent use of shallow domes and top lighting
- Demolished for Sir Herbert Baker's rebuilding in 1925



Contributed by: Alberto Vilas Blanco

Consols Transfer Office

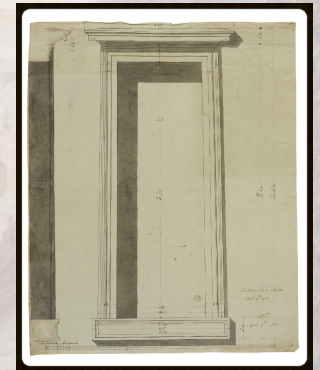
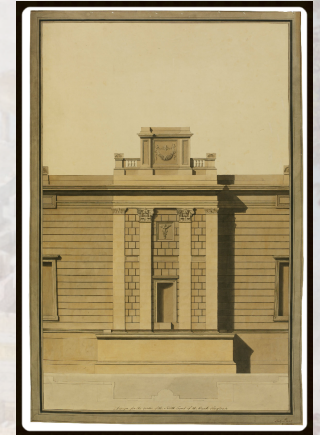
- Freed from any preexisting structural conditions
- More Orthodox use of classical vocabulary
- Ornamental/decorative attitude
- Largest of Soane's banking halls
- Demolished for Sir Herbert Baker's rebuilding in 1925



Contributed by: Alberto Vilas Blanco

Princes & Lothbury Streets Screen Walls

- Exemplifies the aesthetic used in the design of predominately windowless walls
- Includes motifs such as the Corinthian capital taken from the Temple of Vesta at Tivoli, Italy, as well as scrolled acroteria ornamenting the wall's tall parapet
- Somewhat intact today



Contributed by: Andrew Milburn

Tivoli Corner

- Precedent was the Temple of Vesta at Tivoli, Italy
- Intended as a focal point of the new cityscape
- Contemporaries appreciated it as one of Soane's best works
- Referenced in Soane's own lectures and publications

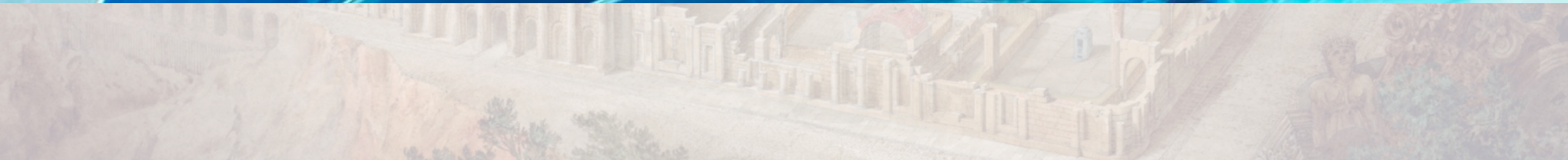
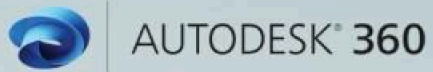


Contributed by: Paul Aubin & Others (A360 Viewer)

Global Collaboration Made Easy.....

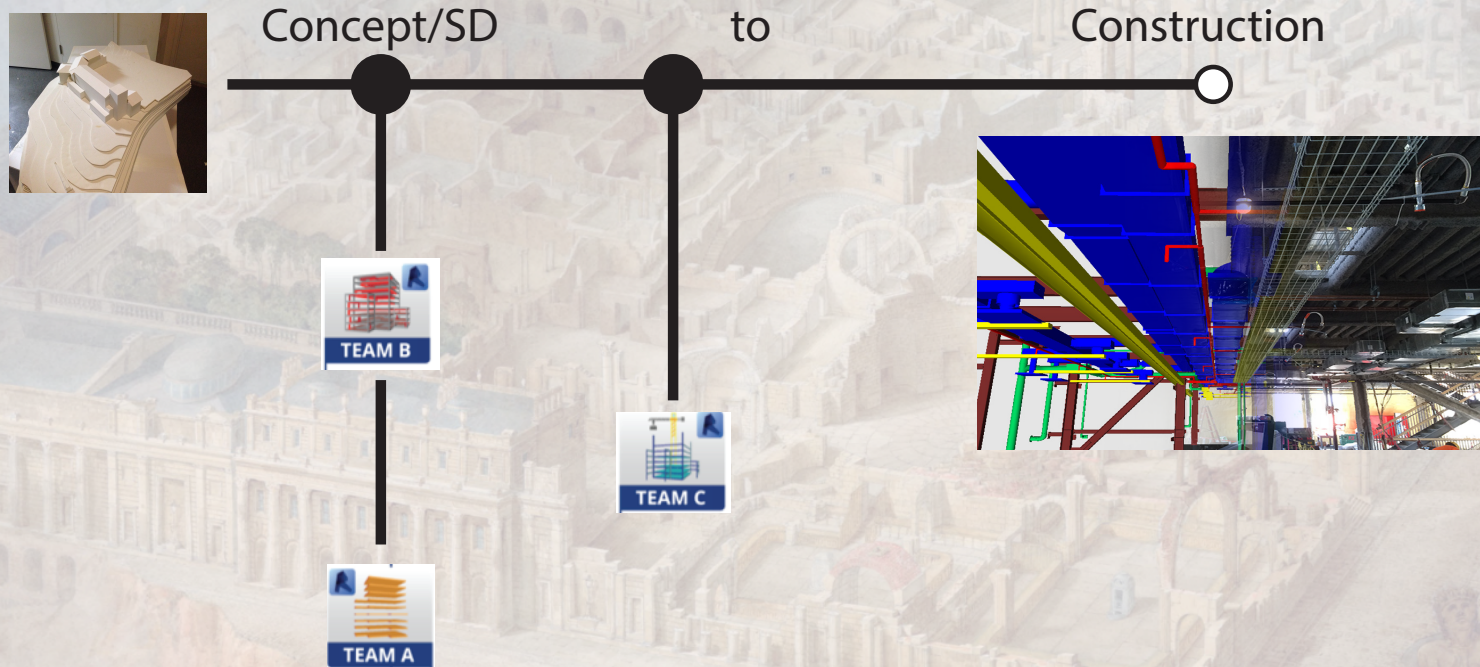


Cloud Collaboration



Cloud Collaboration

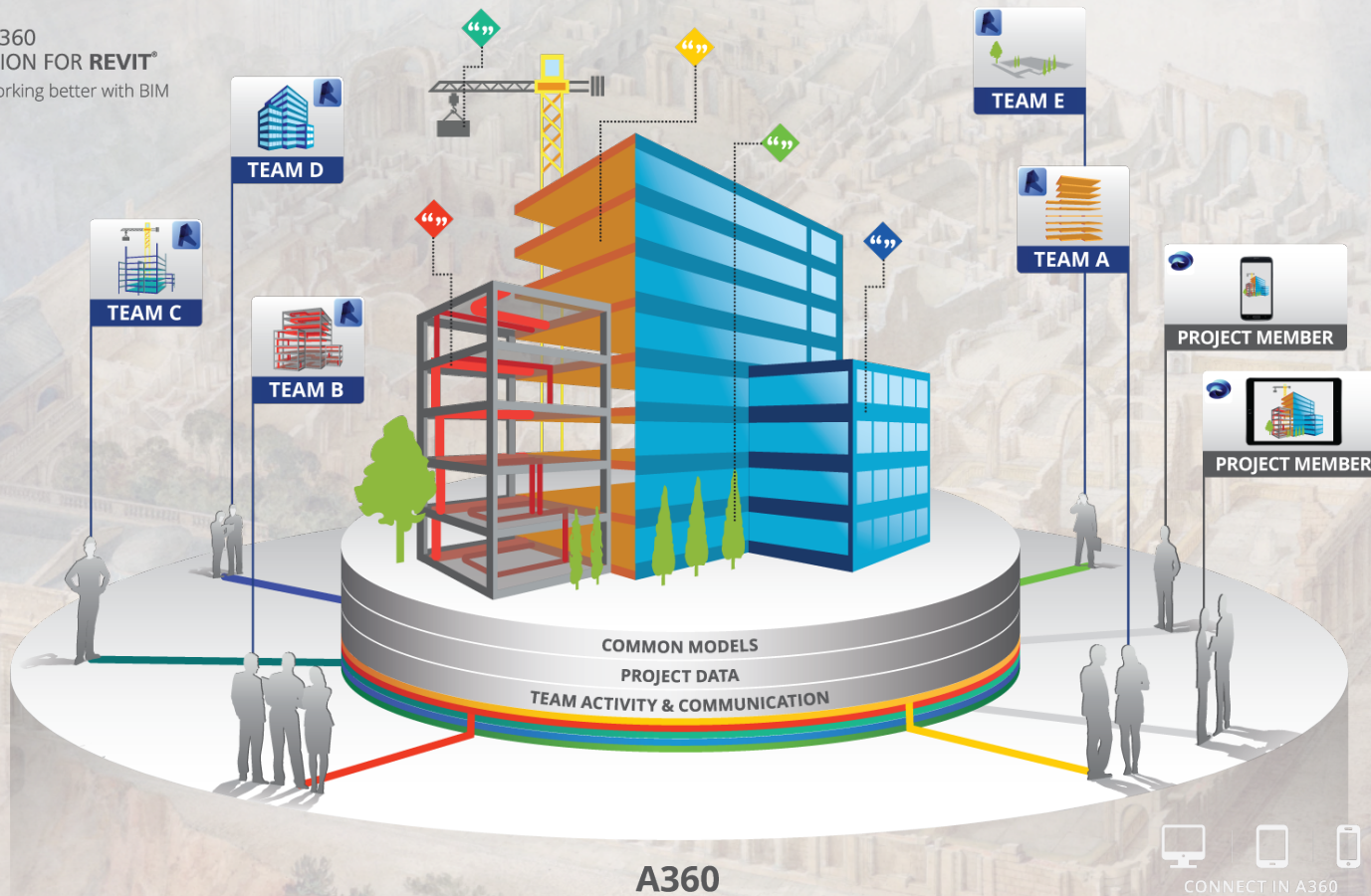
Linear Model Exchange



Cloud Collaboration



AUTODESK® A360
COLLABORATION FOR REVIT®
Project teams working better with BIM



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Crowdsourcing History in the Cloud

www.projectsoane.com



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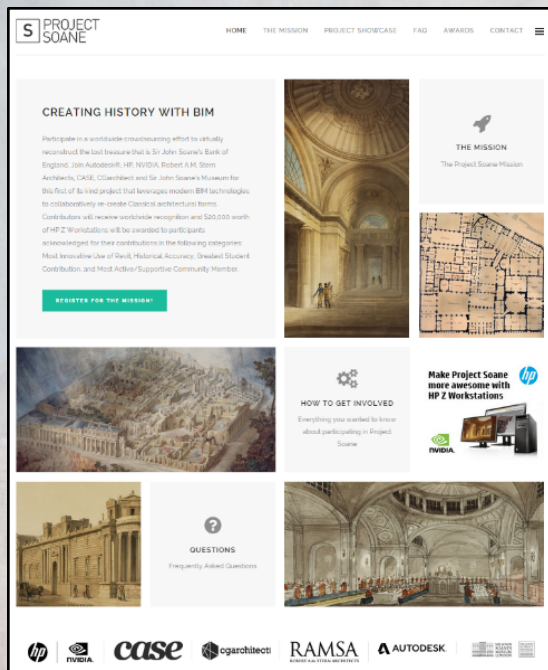
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Getting Started

www.projectsoane.com



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REGISTER

To participate in the Project Soane competition, please register below. Within 24 hours on business days an account will be created for you on Autodesk A360 and an invitation sent for you to join the group. Simply follow the instructions in that email, and you will gain access to all of the competition rules and information.

For more information about Project Soane and our crowdsourced mission, [visit our Mission page](#).

Fields marked with an * are required

First Name * Last Name * Email *

Country *
Please Select Your Country

Number of letters in the word "Soane"?
(Numeral) *

☐ I AGREE to the Official Project Participation Terms *

☐ May our sponsors send you personalized information (product/service updates, offers, or event info) via email?

REGISTER

+ OFFICIAL PARTICIPATION TERMS

+ CGARCHITECT DIGITAL MEDIA CORP. PRIVACY STATEMENT

2



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Autodesk A360 for global collaboration and crowdsourcing



A360 > Dashboard > All Projects > Project Soane

Search Project Soane

Project Soane

Creating history with BIM: A crowdsourced recreation of Sir John Soane's Bank of England Building.

Settings

PROJECT MEMBERS

Wilson Erik, Tomáš Kučo, Patrick Scott, Shaun Frazier, Lindsey DuBosa, Greg Hale, Simon Moreau, Cord Nation

46 More

FEATURED

Welcome to Project Soane
Project Soane is a worldwide crowdsourcing effort to virtually reconstruct...

ACTIVITY

Colleen Creighton
Project Soane
9 days ago

2.1 Bank Stock Office - R2016.rvt

Like | Share

1 comment

Andrey Nikolaev a day ago
Added central heating "Pedestal". Is there any instructions about LOD?
Reply

Enter a comment. Use @ to mention and alert specific people.

Daniel Davis
Project Soane
2 days ago

RECENT

All types Modified by | Anyone

2.1 Bank Stock Office - R2016.rvt
Modified 23 Jul 2015 by Andrey Nikolaev

BOE Selections Guide.pdf
Modified 23 Jul 2015 by Daniel Davis

Welcome to Project Soane
Modified 22 Jul 2015 by Arianne Kouri

SM_1_6_20v.jpg
Modified 21 Jul 2015 by Arianne Kouri

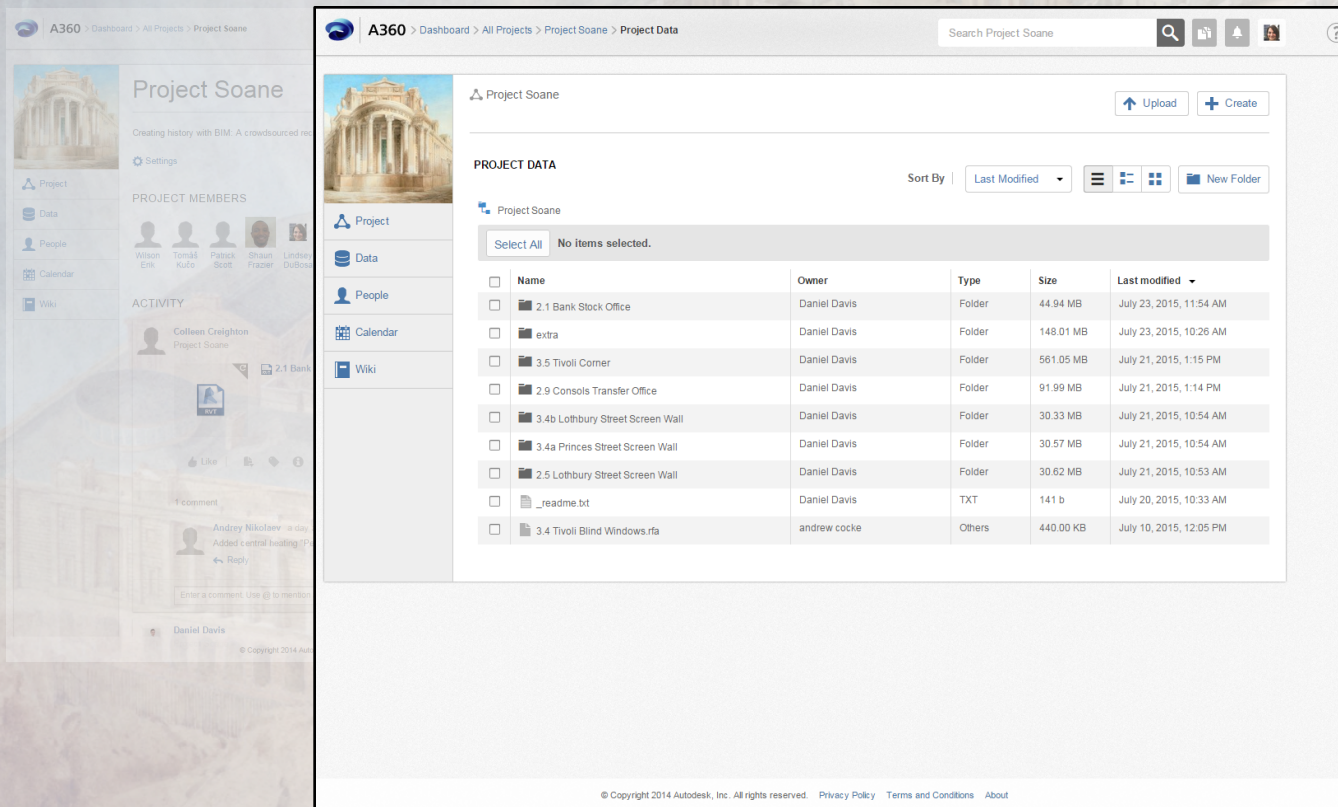
10_4_9 v.jpg
Modified 21 Jul 2015 by Arianne Kouri

SM_11_1_22.jpg
Modified 21 Jul 2015 by Arianne Kouri

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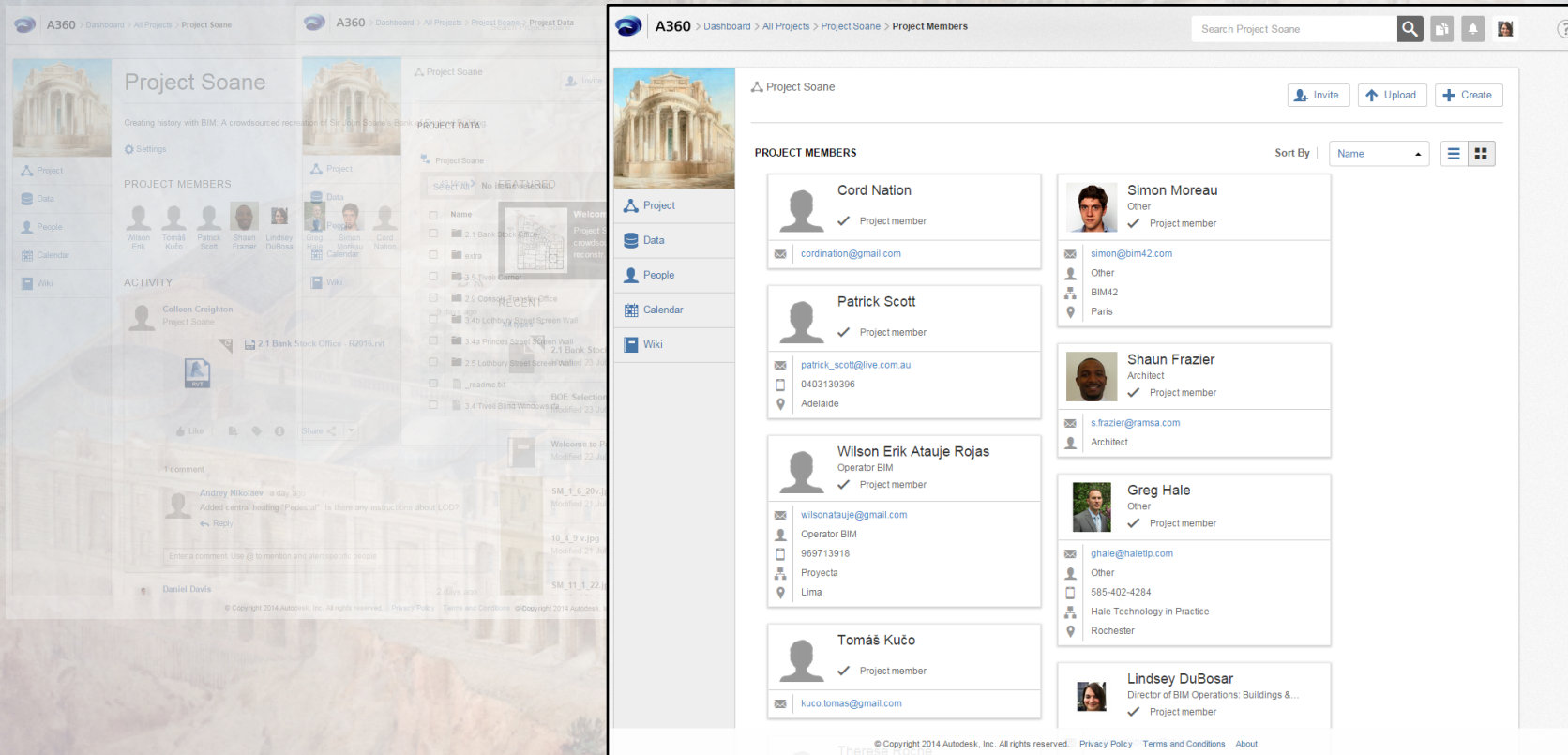
The screenshot displays the Autodesk A360 web interface for the 'Project Soane' project. The left sidebar shows navigation options: Project, Data, People, Calendar, and Wiki. The main content area is titled 'Project Soane' and includes a search bar, 'Upload' and 'Create' buttons, and a 'PROJECT DATA' section. The 'PROJECT DATA' section shows a table of project items, sorted by 'Last Modified'.

<input type="checkbox"/>	Name	Owner	Type	Size	Last modified
<input type="checkbox"/>	2.1 Bank Stock Office	Daniel Davis	Folder	44.94 MB	July 23, 2015, 11:54 AM
<input type="checkbox"/>	extra	Daniel Davis	Folder	148.01 MB	July 23, 2015, 10:26 AM
<input type="checkbox"/>	3.5 Tivoli Corner	Daniel Davis	Folder	561.05 MB	July 21, 2015, 1:15 PM
<input type="checkbox"/>	2.9 Consols Transfer Office	Daniel Davis	Folder	91.99 MB	July 21, 2015, 1:14 PM
<input type="checkbox"/>	3.4b Lothbury Street Screen Wall	Daniel Davis	Folder	30.33 MB	July 21, 2015, 10:54 AM
<input type="checkbox"/>	3.4a Princes Street Screen Wall	Daniel Davis	Folder	30.57 MB	July 21, 2015, 10:54 AM
<input type="checkbox"/>	2.5 Lothbury Street Screen Wall	Daniel Davis	Folder	30.62 MB	July 21, 2015, 10:53 AM
<input type="checkbox"/>	_readme.txt	Daniel Davis	TXT	141 b	July 20, 2015, 10:33 AM
<input type="checkbox"/>	3.4 Tivoli Blind Windows.rfa	andrew cocke	Others	440.00 KB	July 10, 2015, 12:05 PM

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Autodesk A360 for global collaboration and crowdsourcing



The screenshot displays the Autodesk A360 interface for the 'Project Soane' project. The left sidebar shows navigation options: Project, Data, People, Calendar, and Wiki. The main content area is divided into two sections: 'PROJECT DATA' and 'PROJECT MEMBERS'.

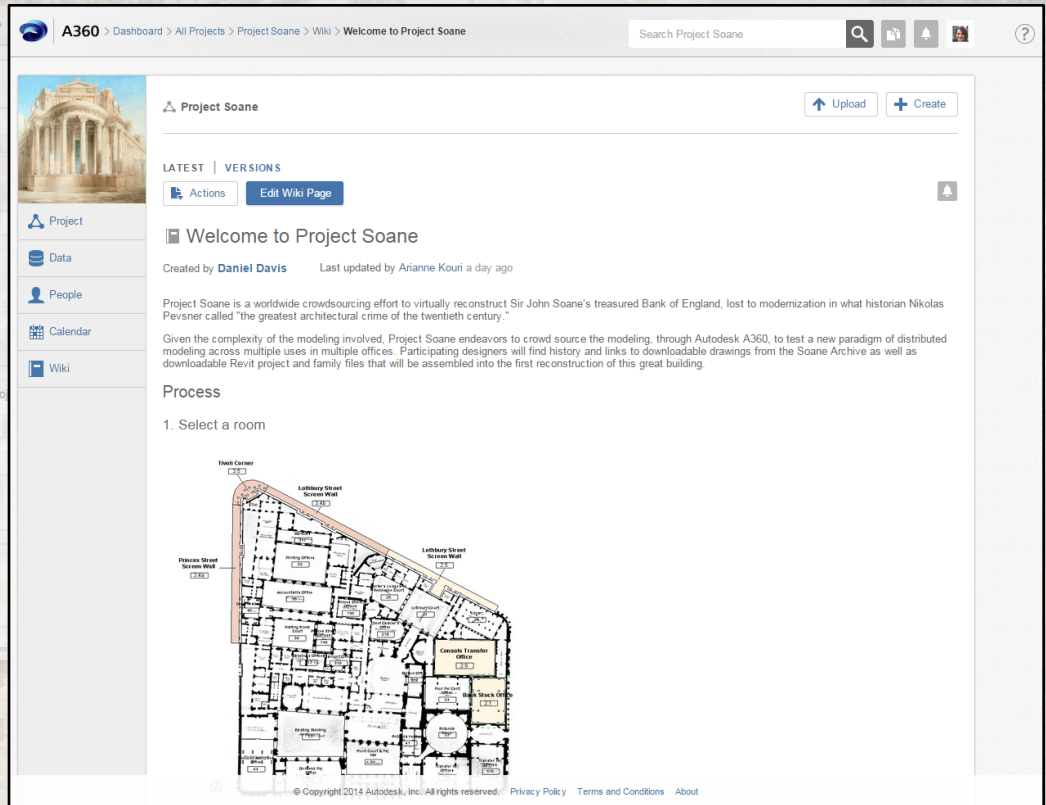
PROJECT DATA: This section shows a list of project data items, including '2.1 Bank Stock Office', '2.5 Consultancy Office', '2.4b Lobby Street Screen Wall', '3.4a Prince Street Screen Wall', '2.5 Lobby Street Screen Wall', 'readme.txt', and '3.4 Third Floor Windows'. Each item has a small thumbnail image and a date.

PROJECT MEMBERS: This section lists the project members, sorted by Name. The members are:

- Cord Nation** (Project member): cordinaton@gmail.com
- Patrick Scott** (Project member): patrick_scott@live.com.au, 0403139396, Adelaide
- Wilson Erik Atauje Rojas** (Operator BIM, Project member): wilsonatauje@gmail.com, 969713918, Projecta, Lima
- Tomáš Kučo** (Project member): kuco.tomas@gmail.com
- Simon Moreau** (Other, Project member): simon@bim42.com, BIM42, Paris
- Shaun Frazier** (Architect, Project member): s.frazier@ramsa.com, Architect
- Greg Hale** (Other, Project member): ghale@haletip.com, Other, 585-402-4284, Hale Technology in Practice, Rochester
- Lindsey DuBosar** (Director of BIM Operations: Buildings &..., Project member): ldubosar@hale.com

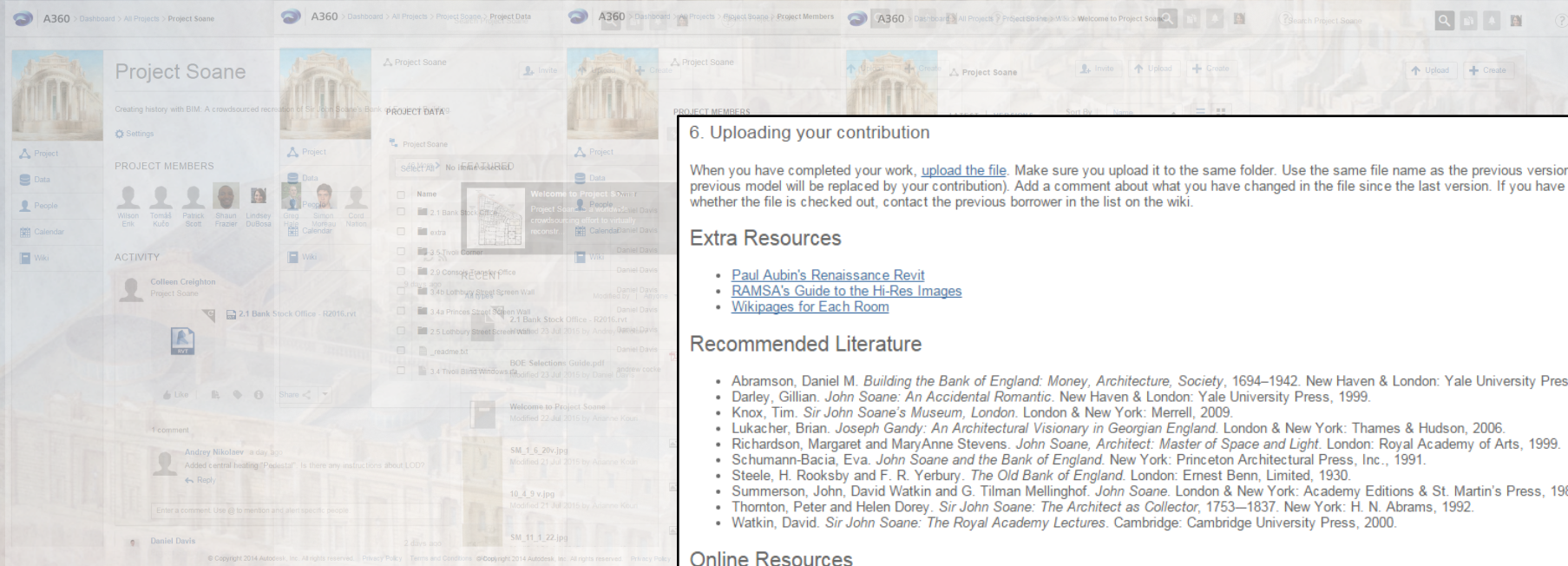
The interface also includes a search bar at the top right and a footer with copyright information: © Copyright 2014 Autodesk, Inc. All rights reserved. Privacy Policy Terms and Conditions About

Autodesk A360 for global collaboration and crowdsourcing



6

Autodesk A360 for global collaboration and crowdsourcing



The screenshot displays the Autodesk A360 interface for the 'Project Soane' project. The top navigation bar shows the project name and various tabs like 'Project Data', 'Project Members', and 'Project Activity'. The left sidebar contains navigation links for 'Project', 'Data', 'People', 'Calendar', and 'Wiki'. The main content area is divided into several sections: 'Project Soane' with a description, 'PROJECT MEMBERS' listing team members, 'ACTIVITY' showing recent updates, and a 'PROJECT DATA' table. The table lists various files and their upload dates. A comment section at the bottom shows a user's comment and a reply.

Name	Modified
2.1 Bank Stock Office - R2015.rvt	Modified 23 Jul 2015 by Daniel Davis
2.5 Lobby Street Screen Wall	Modified 23 Jul 2015 by Daniel Davis
3.4a Prince Street Screen Wall	Modified 23 Jul 2015 by Daniel Davis
2.5 Lobby Street Screen Wall	Modified 23 Jul 2015 by Daniel Davis
readme.txt	Modified 23 Jul 2015 by Daniel Davis
3.4 Three Bird Windows	Modified 23 Jul 2015 by Daniel Davis

6. Uploading your contribution

When you have completed your work, [upload the file](#). Make sure you upload it to the same folder. Use the same file name as the previous version (this way the previous model will be replaced by your contribution). Add a comment about what you have changed in the file since the last version. If you have any question about whether the file is checked out, contact the previous borrower in the list on the wiki.

Extra Resources

- [Paul Aubin's Renaissance Revit](#)
- [RAMSA's Guide to the Hi-Res Images](#)
- [Wikipages for Each Room](#)

Recommended Literature

- Abramson, Daniel M. *Building the Bank of England: Money, Architecture, Society, 1694–1942*. New Haven & London: Yale University Press, 2005.
- Darley, Gillian. *John Soane: An Accidental Romantic*. New Haven & London: Yale University Press, 1999.
- Knox, Tim. *Sir John Soane's Museum, London*. London & New York: Merrell, 2009.
- Lukacher, Brian. *Joseph Gandy: An Architectural Visionary in Georgian England*. London & New York: Thames & Hudson, 2006.
- Richardson, Margaret and MaryAnne Stevens. *John Soane, Architect: Master of Space and Light*. London: Royal Academy of Arts, 1999.
- Schumann-Bacia, Eva. *John Soane and the Bank of England*. New York: Princeton Architectural Press, Inc., 1991.
- Steele, H. Rooksby and F. R. Yerbury. *The Old Bank of England*. London: Ernest Benn, Limited, 1930.
- Summerson, John, David Watkin and G. Tilman Mellinshof. *John Soane*. London & New York: Academy Editions & St. Martin's Press, 1983.
- Thornton, Peter and Helen Dorey. *Sir John Soane: The Architect as Collector, 1753–1837*. New York: H. N. Abrams, 1992.
- Watkin, David. *Sir John Soane: The Royal Academy Lectures*. Cambridge: Cambridge University Press, 2000.

Online Resources

- [Sir John Soane's Museum](#)
- [Sir John Soane's Museum Online Drawings Catalogue](#)

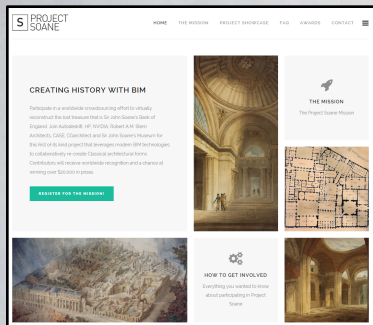
↓ 1 attachment
Site_Plan.png

7

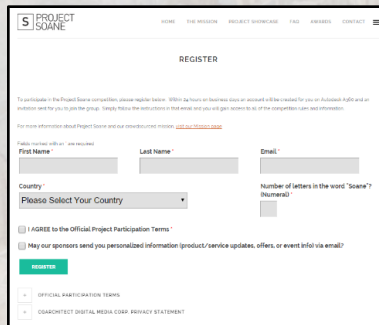


Collaboration Process

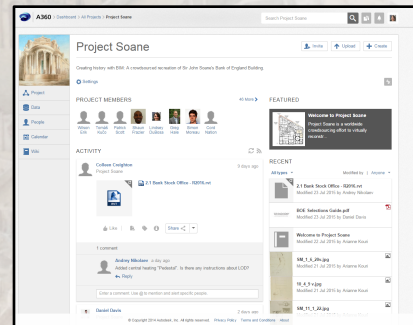
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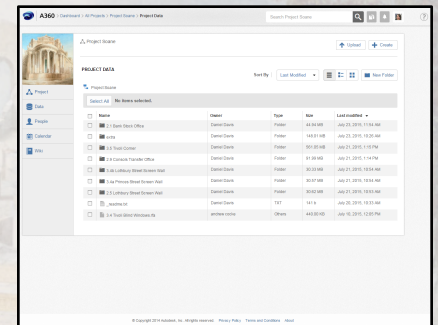
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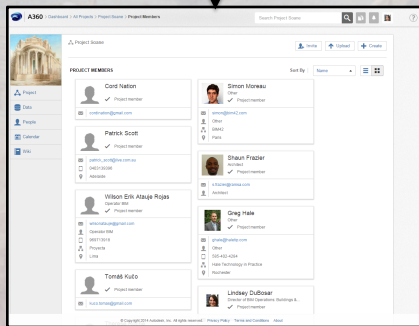
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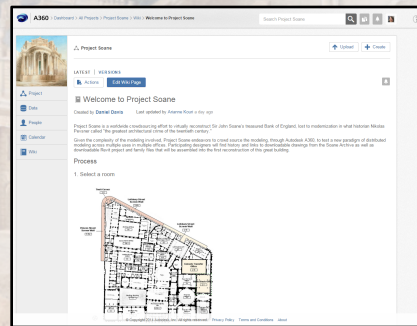
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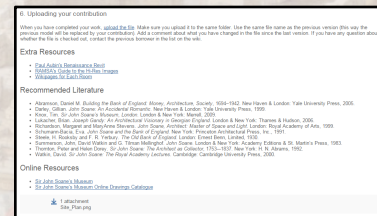
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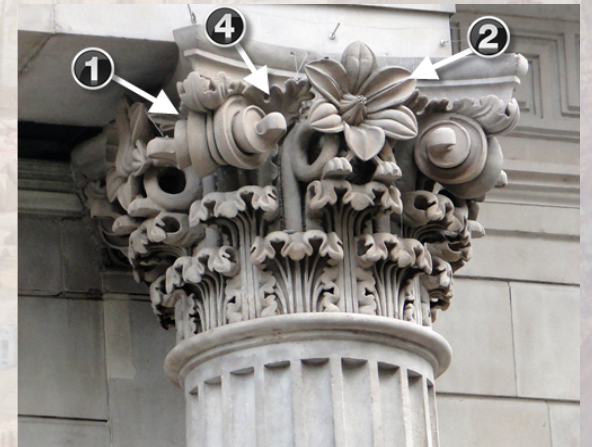
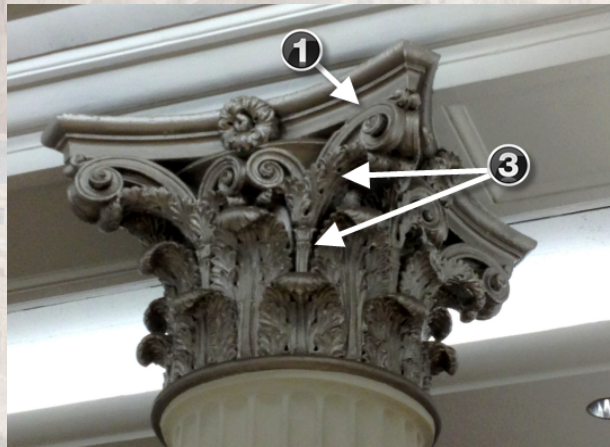
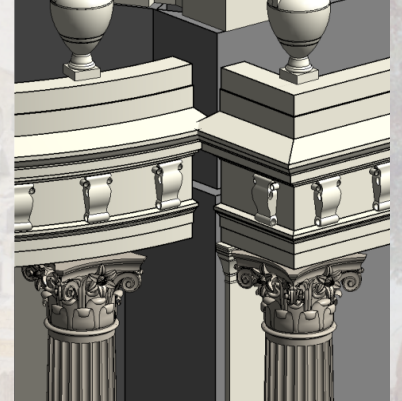
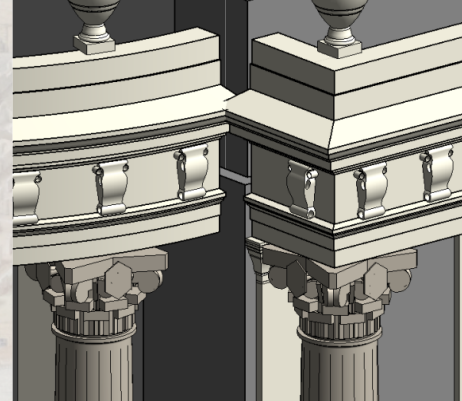
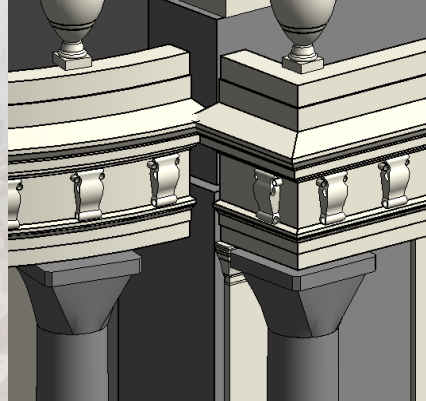


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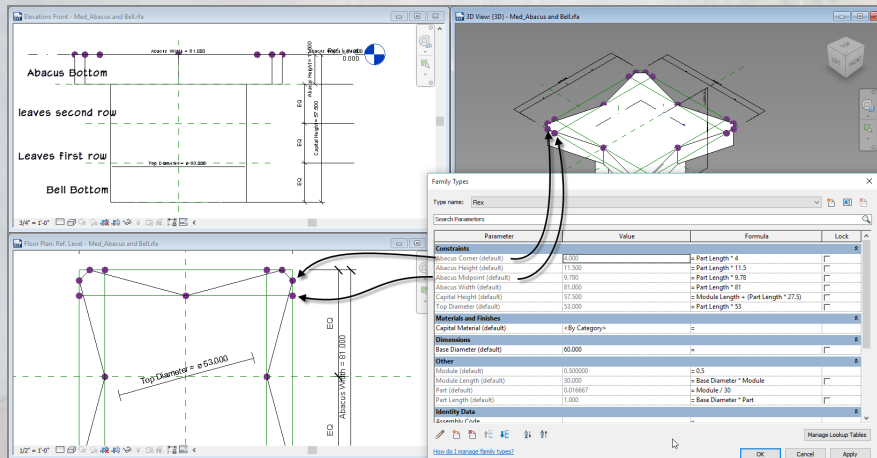
Revitalizing Classical Architecture.....



Modeling Classical Architecture in Revit



Modeling Classical Architecture in Revit



Family Types

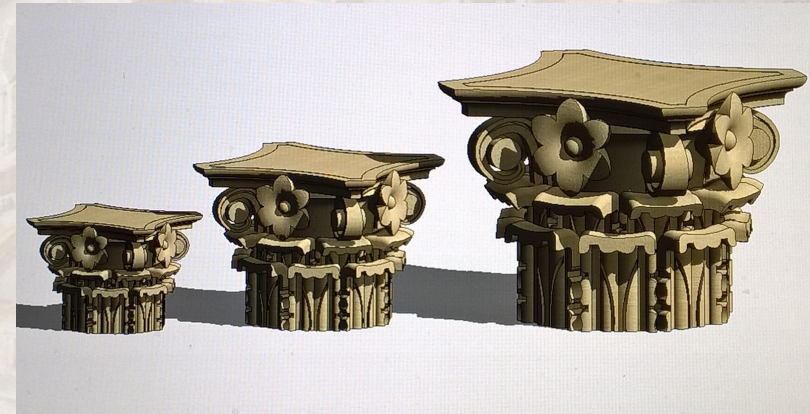
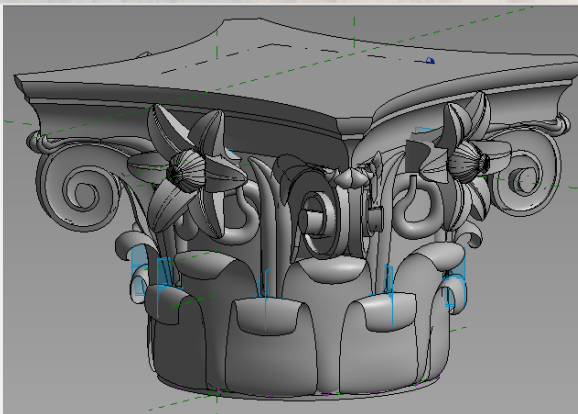
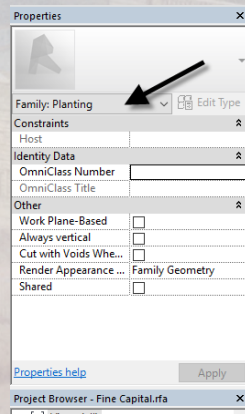
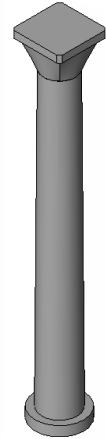
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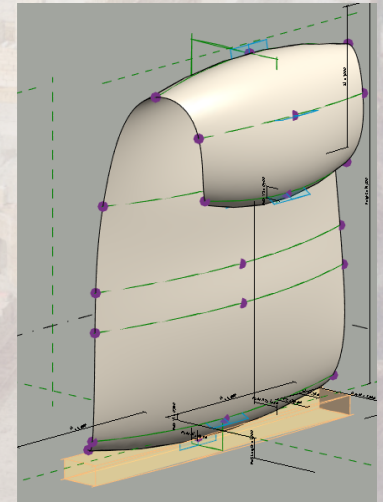
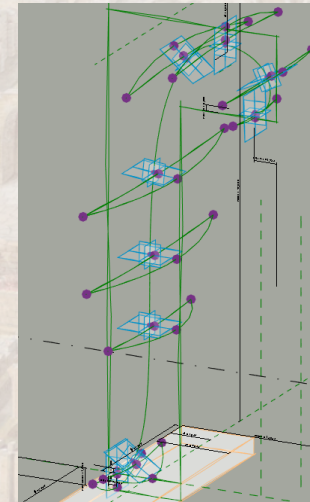
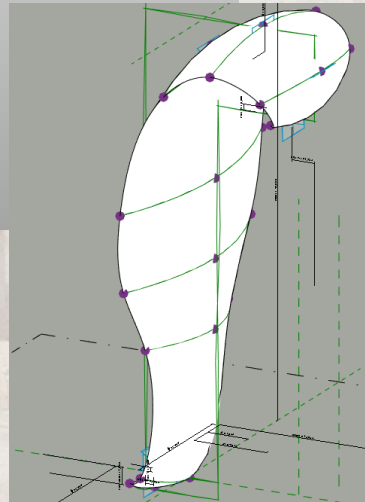
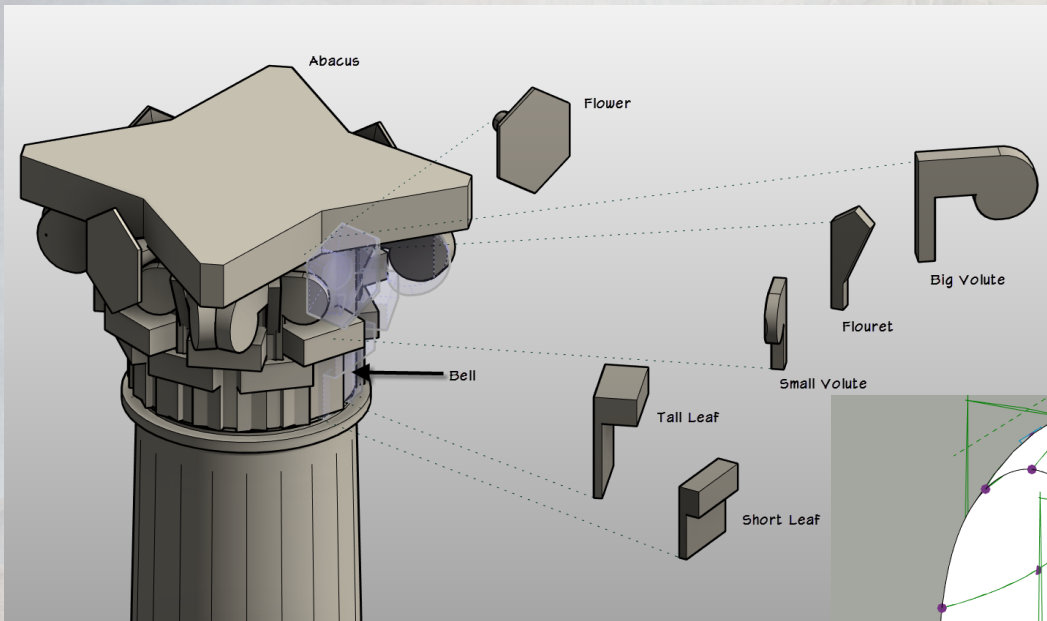
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Constraints			
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Shaft Elevation (default)	16.500	= Part Length * 16.5	<input checked="" type="checkbox"/>
Top Spacer (default)	-1.000	= -Part Length	<input checked="" type="checkbox"/>
Materials and Finishes			
Base Material	< By Category >	=	
Capital Material	< By Category >	=	
Shaft Material	< By Category >	=	
Dimensions			
Base Diameter (default)	60.000	= Column Height / 9.43333	<input checked="" type="checkbox"/>
Other			
Module (default)	0.500000	= 0.5	
Part (default)	0.016667	= Module / 30	
Module Length (default)	30.000	= Base Diameter * Module	<input checked="" type="checkbox"/>
Part Length (default)	1.000	= Base Diameter * Part	<input checked="" type="checkbox"/>
Identity Data			

Manage Lookup Tables

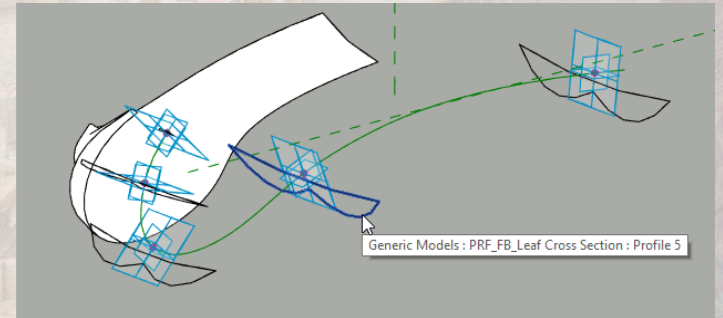
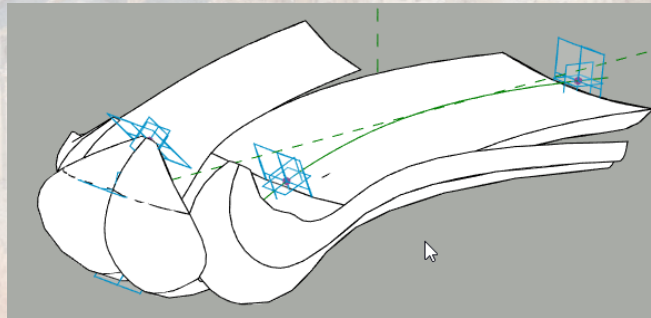
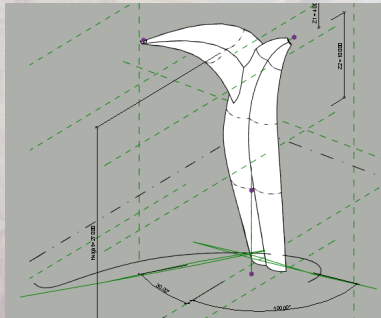
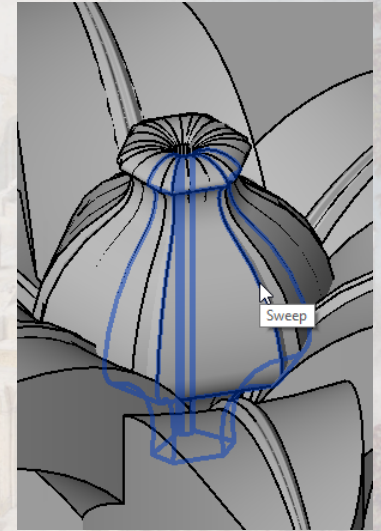
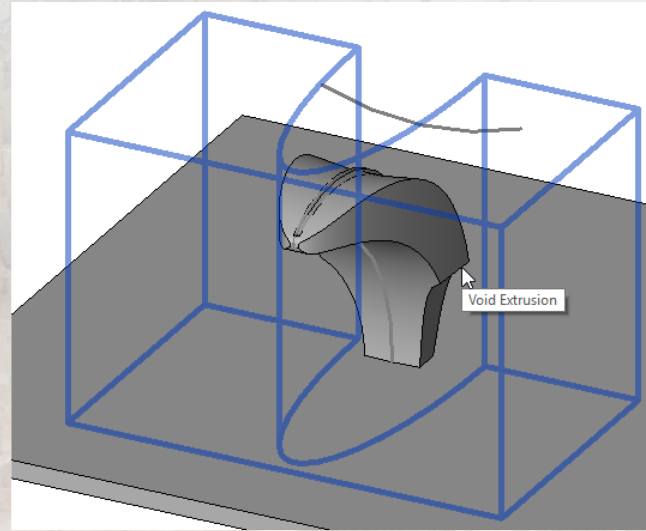
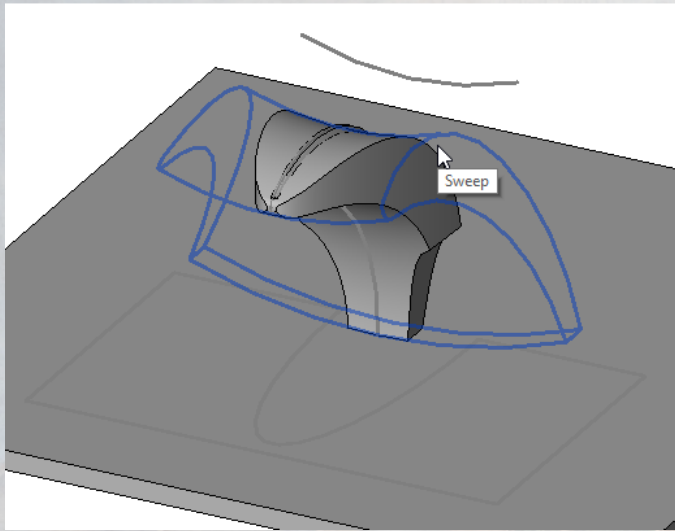
OK Cancel Apply



Modeling Classical Architecture in Revit



Modeling Classical Architecture in Revit



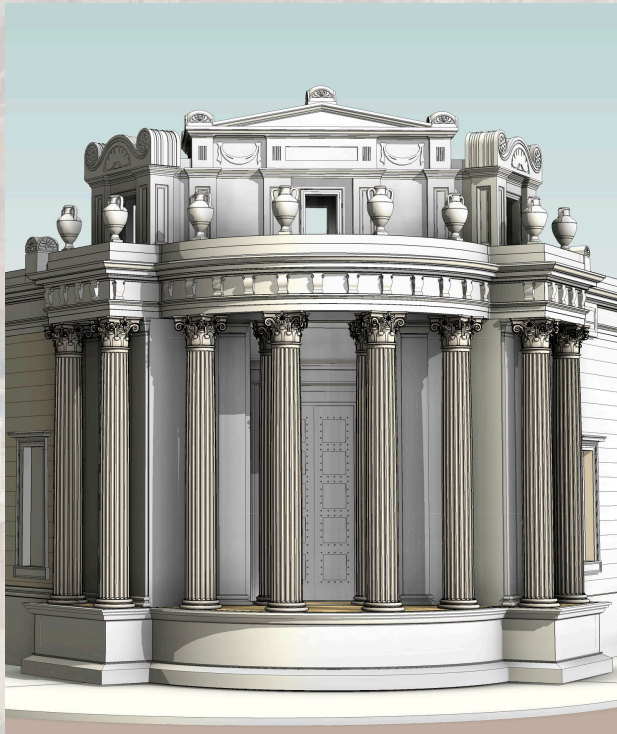
And the Phase 1 Winners Are.....



Sir John Soane Award for Outstanding Achievement

The Sir John Soane Award for Outstanding Achievement was created to recognize and honor exemplary dedication and outstanding contributions by a single participant. This community member has served the Project Soane community in the broadest sense throughout the program.

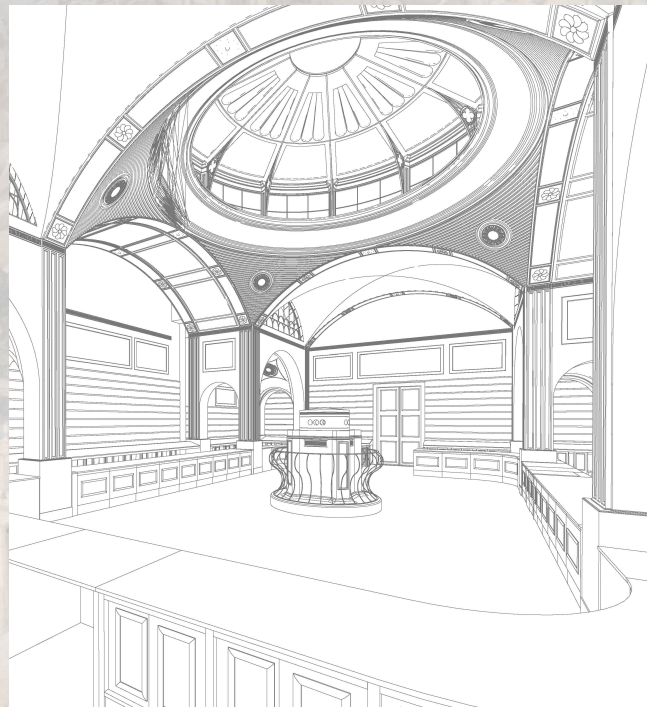
Andrew Milburn



Historical Accuracy Award

The Historical Accuracy Award will be awarded to the community member who most accurately represents Sir John Soane's Bank of England through in BIM.

Alberto Blanco



Most Innovative Use of Revit

The prize for most innovative use of Autodesk® Revit® software will be awarded to the individual or team who, as determined by our panel of expert judges, makes the best use of the technology.

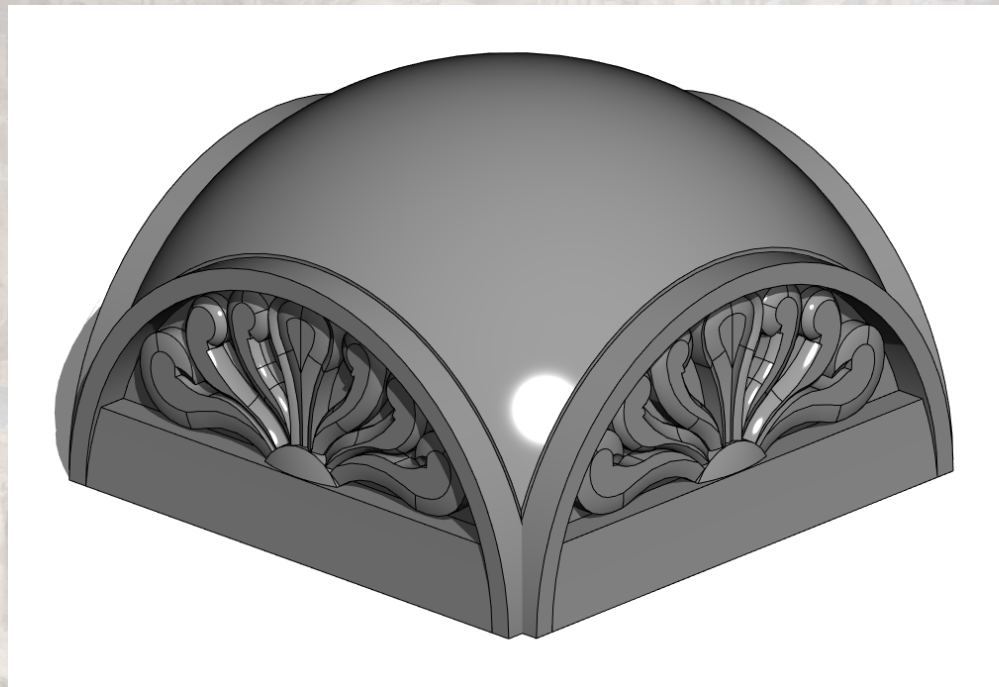
Russell Fuller Hill



Most Active/Supportive Community Member

The Sir John Soane Award for Outstanding Achievement was created to recognize and honor exemplary dedication and outstanding contributions by a single participant. This community member has served the Project Soane community in the broadest sense throughout the program.

David Mettler



Rendering in 3DS Max.....



Rendering Project Soane in 3DS Max



THE CONNECTED FUTURE OF DESIGN VISUALIZATION

Rick Davis
Design Visualization Industry Manager



Image courtesy of Sérgio Merêes



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An aerial night view of a city, likely New York City, with numerous skyscrapers and buildings illuminated. Overlaid on the city are three glowing, golden-yellow digital paths that converge towards the center. The paths are composed of many small, connected segments, giving them a pixelated or digital appearance. The paths start from the bottom left and bottom right, and converge towards the top center. The text "CONVERGENCE IT'S HAPPENING" is overlaid on the image, with "CONVERGENCE" on the top line and "IT'S HAPPENING" on the bottom line. The text is in a large, bold, serif font. The background is a dark, hazy sky.

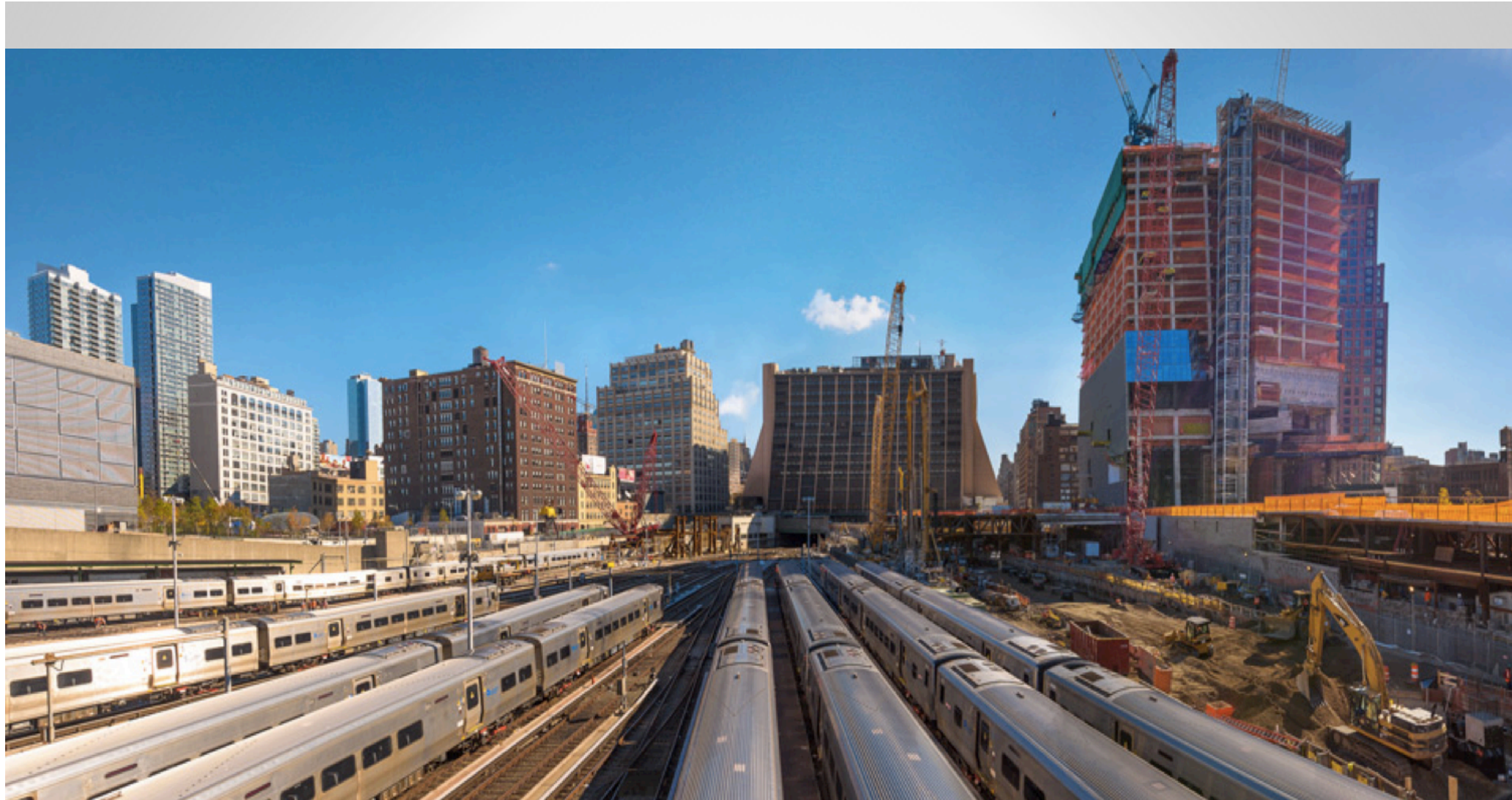
CONVERGENCE

IT'S HAPPENING



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Courtesy of Neoscape



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Image courtesy of Sérgio Merêes



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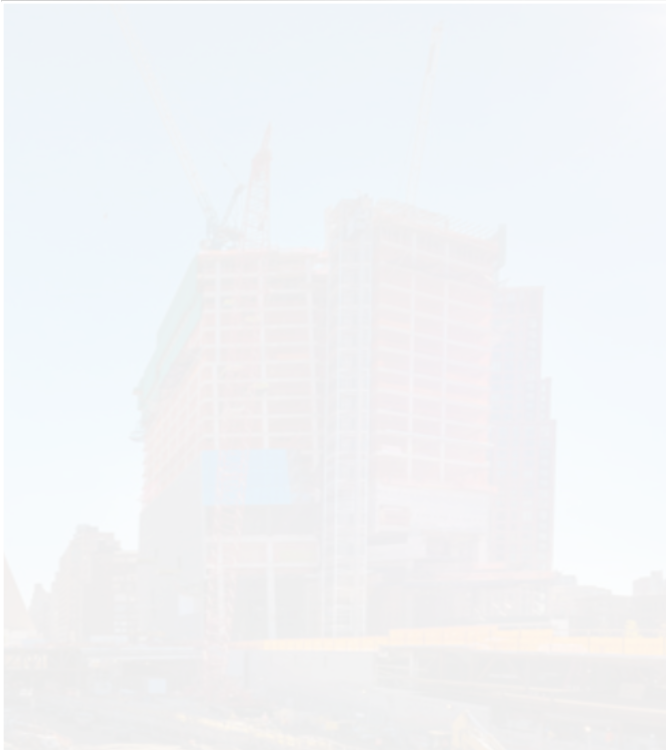




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THE FUTURE CONVERGENCE



Courtesy of Newsapi

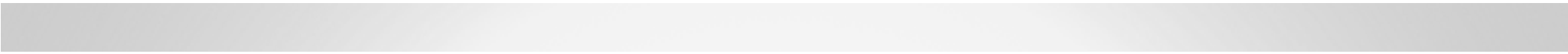


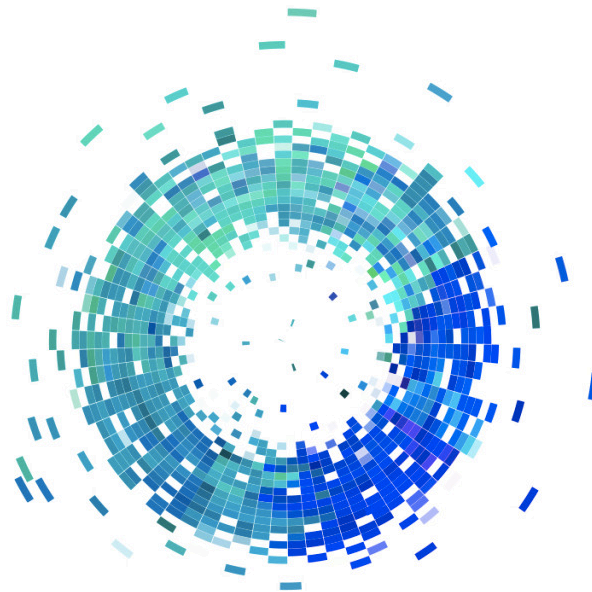
© Sony Computer Entertainment America LLC, UNCHARTED 3: Thief's End. Image courtesy of Naughty Dog



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