

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

ARCHITECT THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS [Login or Register](#) [SIGN UP FOR OUR DAILY NEWSLETTER](#)

TECHNOLOGY PROJECTS TECH & PRODUCTS PRACTICE CULTURE & CRITICISM AWARDS CONTINUED AIA Q

MOTHER NATURE DISAGREES CAST STONES AS NATURALLY STRONG AS LIMESTONE INDIANA LIMESTONE FIND OUT WHY

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

By GIDEON FINK SHAPIRO [Printed on: July 10, 2015](#)

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ABOUT THE AUTHOR Gideon Fink Shapiro Gideon Fink Shapiro is a researcher and writer based in Brooklyn, N.Y. A frequent contributor to ARCHITECT and other publications, he is currently a Ph.D. candidate in History and Theory at the University of Pennsylvania.

Aerial cutaway view of the Trustee's Office from the southeast, drawn in 1830

When the majority of the Bank of England building, expanded and reworked by Sir John Soane, was demolished in the 1920s in the course of a new renovation, London lost Project Soane, a crowdsourcing effort launched yesterday at an event in New York, to recreate the site virtually using BIM.

Conceived in part by Robert A.M. Stern Architects (RAMSA), Project Soane is underwritten by technology companies, including Hewlett-Packard (HP), Nvidia, Autodesk, CGI, and others. It also has the blessing of the Sir John Soane's Museum, in London, which is providing archival reference drawings.

In the first phase, which runs through November 1, the team will collectively develop 3D models of two awe-inspiring interior spaces—the bank stock office and the consular transfer office—as well as the partially conserved street walls and the intricate Tivoli Corner, a colonnaded, round vestibule inspired by Soane's studies of the ancient Temple of Vesta, in Tivoli, Italy. Anyone who has a reasonable

AECMAGAZINE

Building Information Modeling (BIM) for Architecture, Engineering and Construction

Spatial reconstruction
BIM meets British banking heritage

Education for BIM
Autodesk 2016 products
Heritage BIM: Kings Cross

July / August 2015 • Vol. 79

THE NEW YORKER AUGUST 21, 2015 ARCHITECTURE'S KING OF TRADITION BY IAN VOLNER

FREE TOTE **STAMPED** **ART**

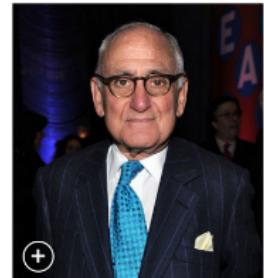
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L e Corbusier had his thick, circular glasses. Frank Lloyd Wright had his porcupine hat and cape. Robert A. M. Stern has a two-point pocket square—usually matched to his tie, sometimes his shirt, but almost always as part of a full-dress ensemble, with only occasional excursions into Hamptons resort wear. In an increasingly casual architecture profession, where even the once-ubiquitous black turtleneck has been displaced by the muscle-man tee, the handkerchief has become the flag of Stern's stubbornly formal disposition.

Robert A. M. Stern *sees himself as a vessel for old principles of American urbanism in a field too often*

The contention that nothing new can ever exist under the architectural sun seems a bit difficult to maintain—how, for example, did those twentieth-century architects first arrive at the forms that Stern insists are recurring now, if not by inventing them for themselves? And it's not as if Stern is averse to innovation altogether. In mid-July, he was on hand to announce a new initiative sponsored by Hewlett-Packard to produce a fully rendered digital version of Sir John Soane's long-demolished Bank of England of 1833. There was Stern, surrounded by projections of the monumental past, made possible through up-to-date technology.

But a tolerance for contradiction may simply be part of Stern's DNA. Just a week before the Soane event, the architect was at the Museum of the City of





Project Soane in the Press

S PROJECT SOANE 

ARCHITECT magazine  July 15 at 3:00pm

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

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

83 shares

Timothy Weston 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

Rahma Mohammed Oh RAMSA, you make me so happy.
Yesterday at 10:02am

Rafik Khokhar Nice
Yesterday at 5:51am

CGarchitect.com July 14 at 3:36pm · Edited

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.



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Shalini Kiran, Anton Kopylov, Bala Ganapathy and 15 others like this.
Yesterday at 3:47pm

A360  Aug 14 · Edited

Rick Davis, Autodesk giving a ProjectSoane presentation at Siggraph2015 autode.sk/1TF9Uly @HP @AutodeskAEC



Like · 2 · Share

Autodesk Revit  Aug 14 · Edited

Join the projectsoane mission to recreate the Bank of England in iBIM on autodesk360.autodesk.com/1L43ubL



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PROJECT SOANE Crowdsourced Virtual Reconstruction of Sir John Soane's Bank of England Creating History with BIM [JOIN THE MISSION](http://www.projectsoane.com)

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Architizer  Jul 14 · Edited

Crowdsource Sir John Soane's Bank of England and win @HP's competition! Register now: arc.hn/1XNjDP



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Project Soane  Sep 1 · Edited

Russell Fuller Hill's incredible contribution to #projectsoane buff.ly/1X5KK1X



Like · 1 · Share

Javier Alonso Madrid  Aug 31 · Edited

Great collaboration from @paulaubin in #projectsoane THANKS!!!! #Revit #architecture



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BIMThoughts

The Mission.....

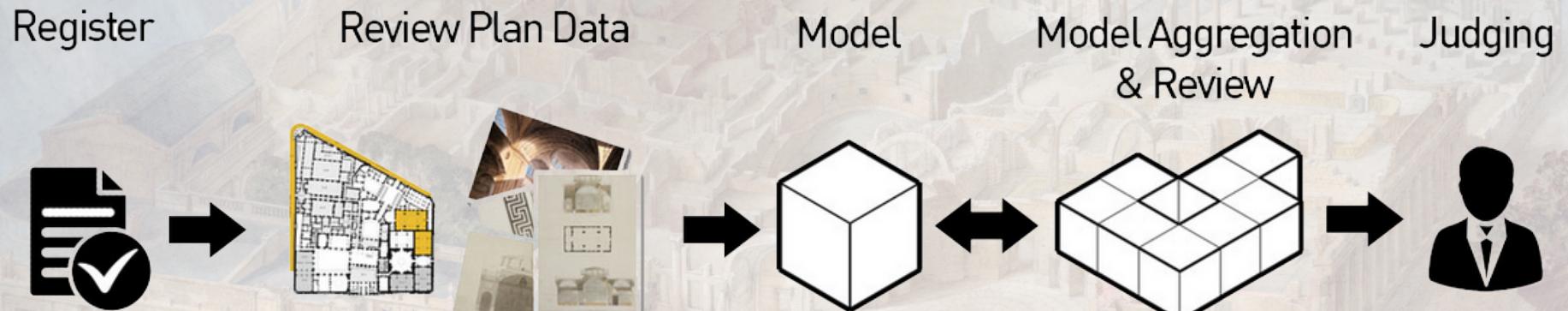


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Phase 1: How it Works



Sir John Soane

1753-1837

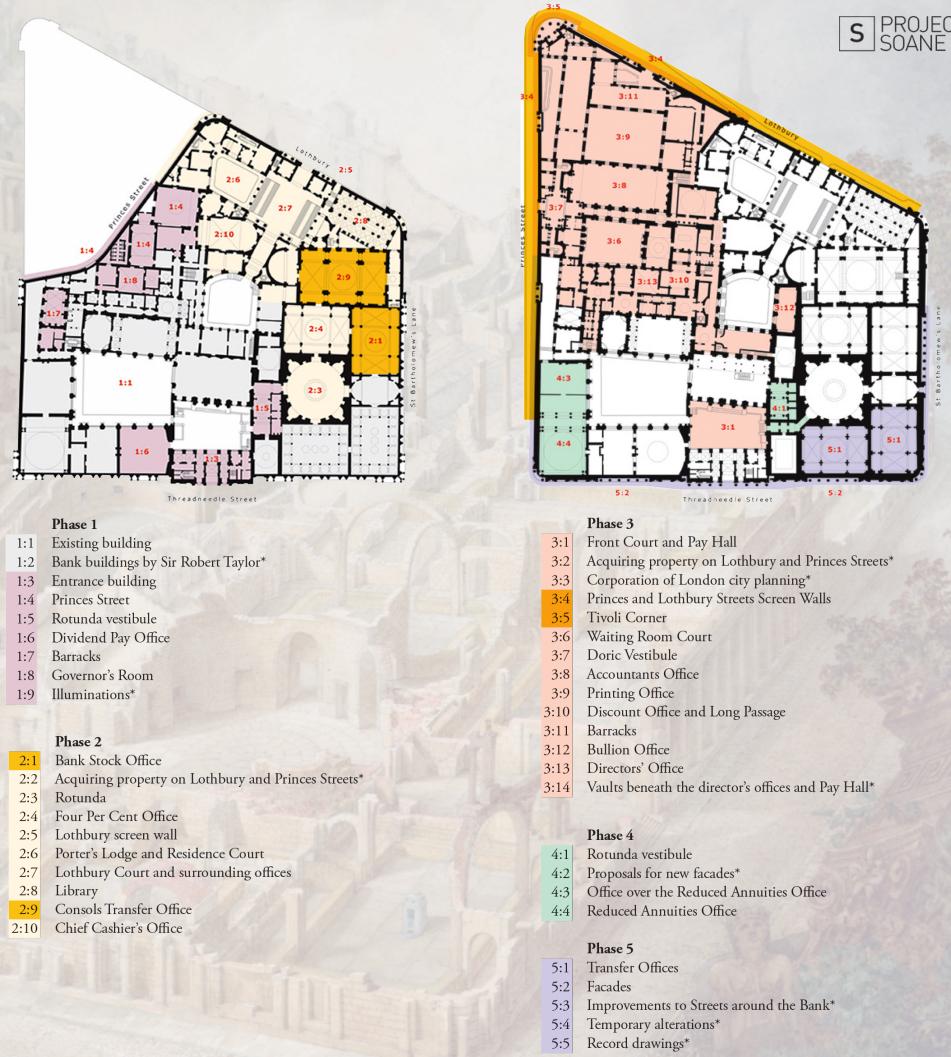
- English architect specializing in the Neo-Classical style.
- Rose to the top of his profession, becoming professor of architecture at the Royal Academy and an official architect to the Office of Works.
- On 16 October 1788 Soane was appointed architect and surveyor to the Bank of England, where his 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

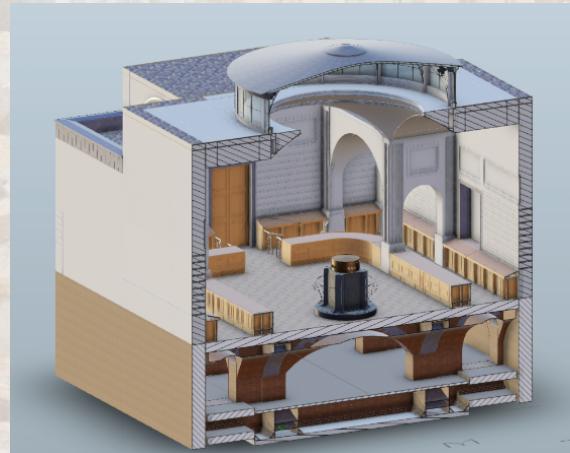
1788-1833

- 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



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Consols Transfer Office

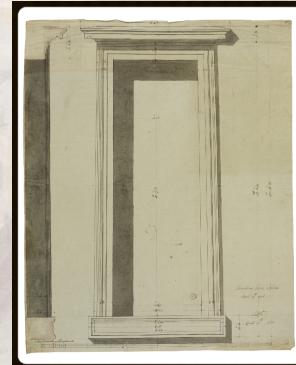
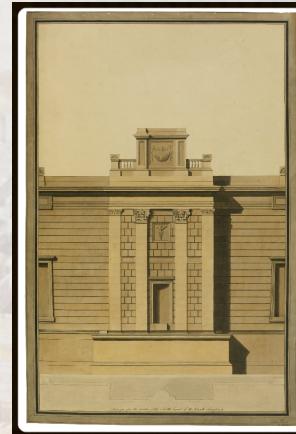
- Freed from any preexisting structural conditions
- More Orthodox use of classical vocabulary
- Ornamental/decorative attitude
- Largest of Soane's banking halls
- Demolished for Sir Herbert Baker's rebuilding in 1925



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



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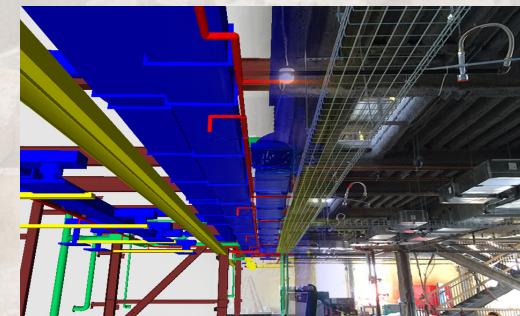
Cloud Collaboration



Linear Model Exchange
Concept/SD to Construction



Concept/SD



Cloud Collaboration



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COLLABORATION FOR REVIT®

Project teams working better with BIM



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Crowdsourcing History in the Cloud

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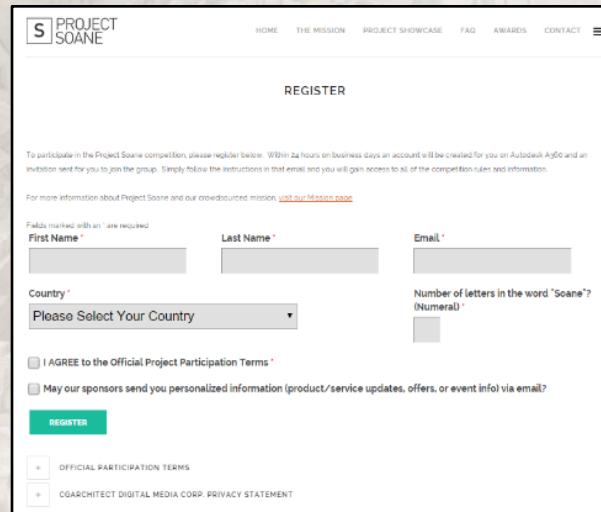
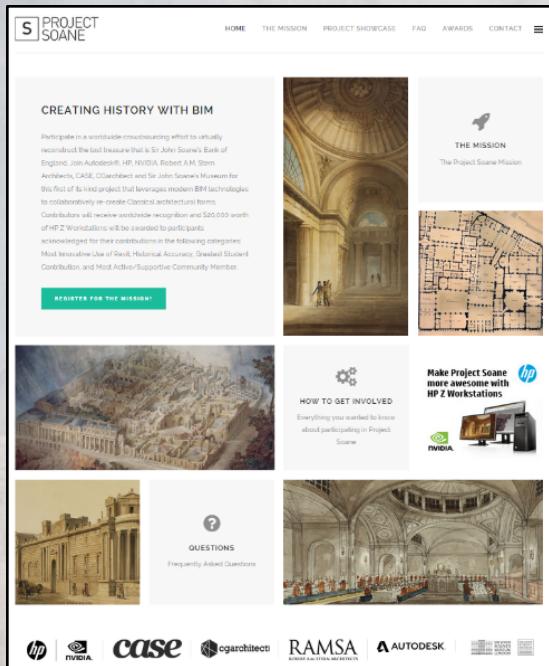
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Getting Started

www.projectsoane.com



PROJECT SOANE 

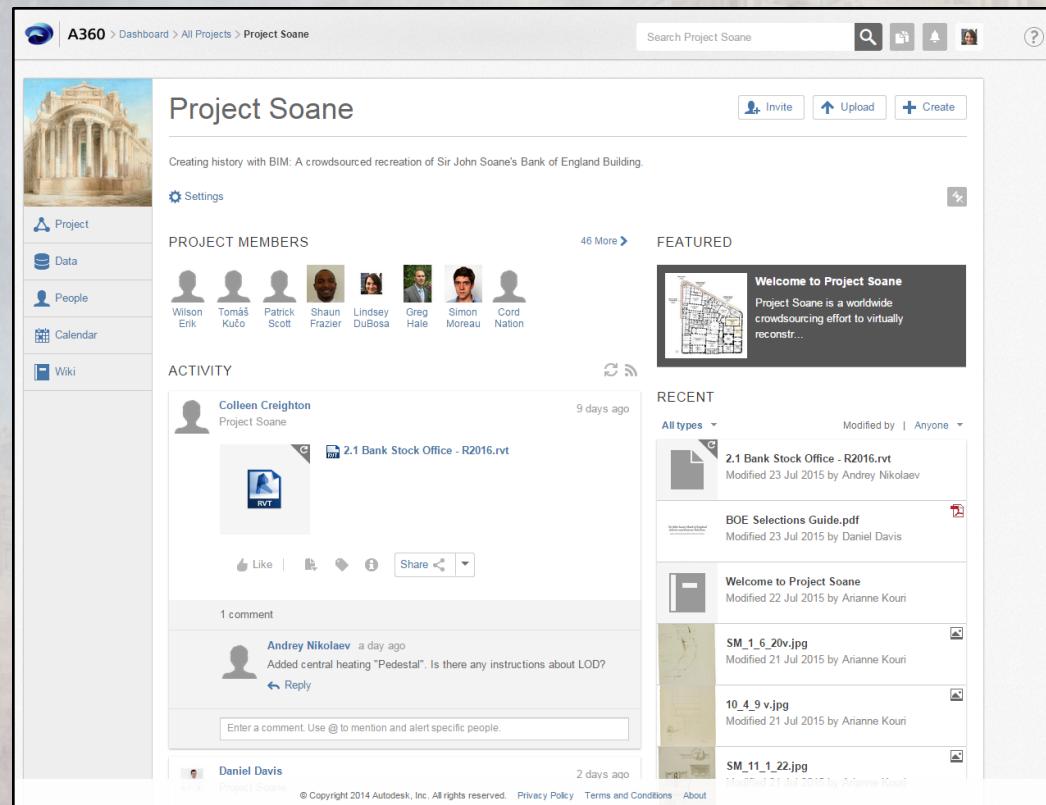
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Autodesk A360 for global collaboration and crowdsourcing



A360 > Dashboard > All Projects > Project Soane

Search Project Soane

Invite Upload Create

Project Soane

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

Settings

Project Members

46 More

Project Members: Wilson, Erik, Tomáš, Patrick, Scott, Lindsey, Frazier, Greg, Hale, Simon, Moreau, Cord, Nation

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.

Recent

All types

Modified by | Anyone

- 2.1 Bank Stock Office - R2016.rvt
- BOE Selections Guide.pdf
- Welcome to Project Soane
- SM_1_6_20v.jpg
- 10_4_9_v.jpg
- SM_11_1_22.jpg

3

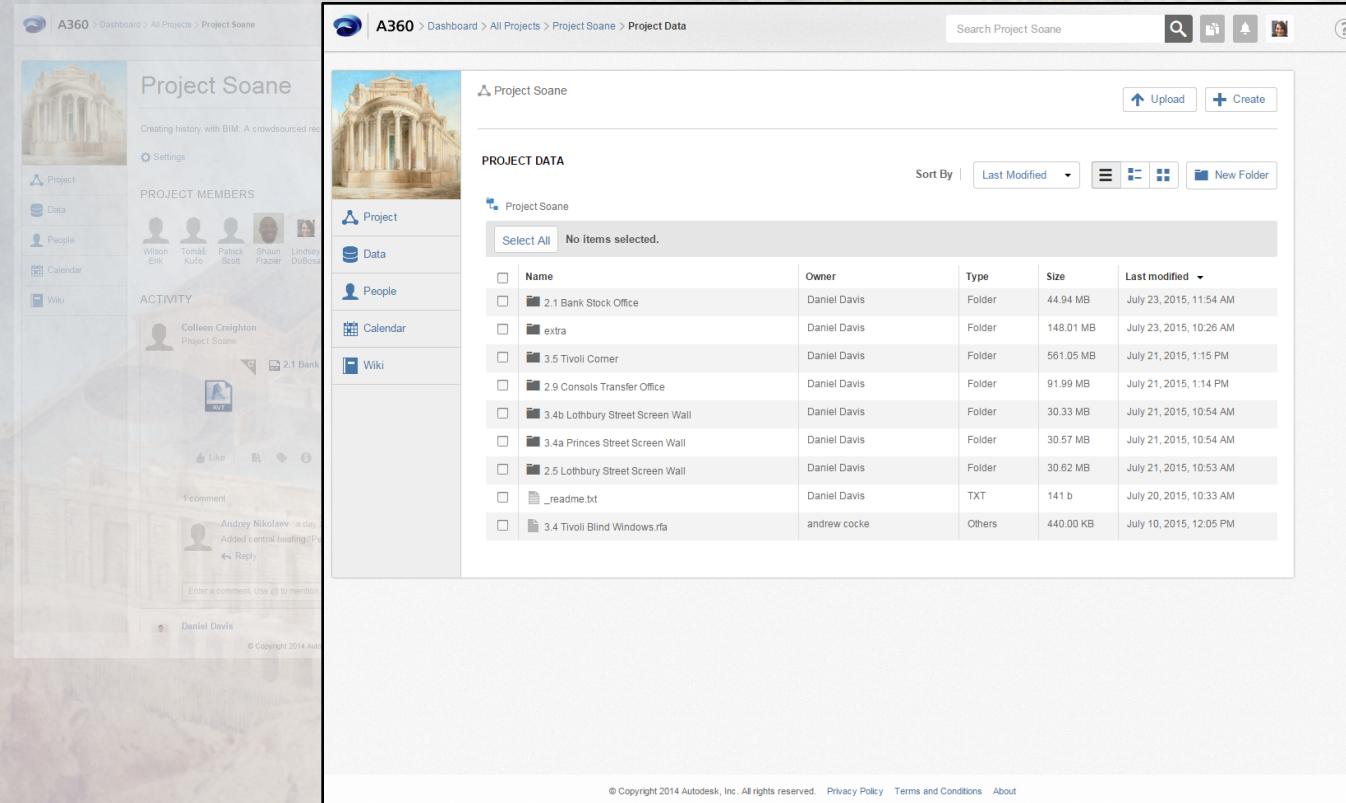


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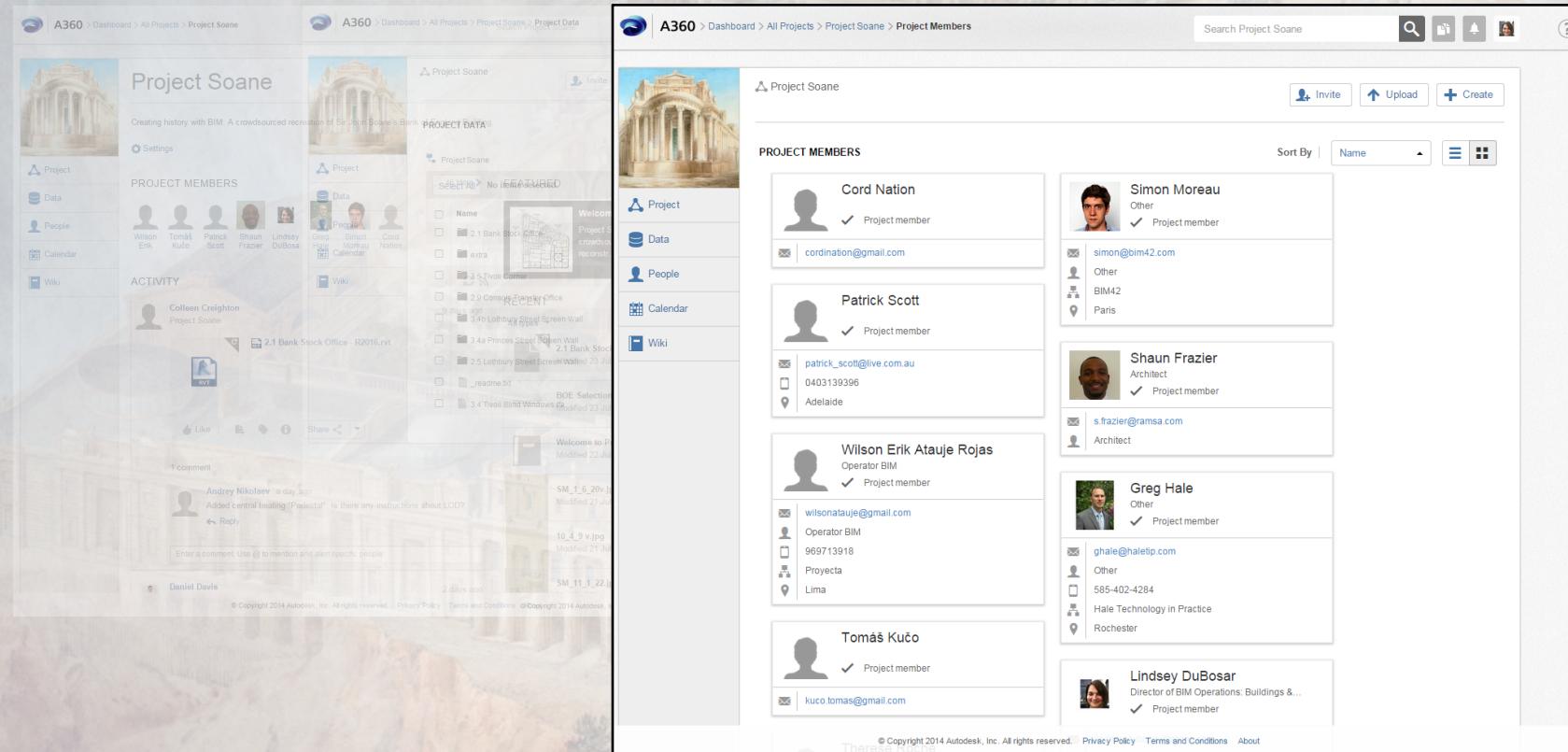


The image shows two side-by-side screenshots of the Autodesk A360 web interface. The left screenshot is the Project Soane dashboard, featuring a main image of a classical building, a sidebar with 'PROJECT MEMBERS' (Wilson, Erik, Tomáš, Kuba, Patrick, Scott, Shaun, Frazer, Lorraine, Dubois), and a central feed with a comment from Andrey Nikolaev. The right screenshot is the 'Project Data' page for 'Project Soane', showing a list of files and folders. The table below lists the items:

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

4

Autodesk A360 for global collaboration and crowdsourcing



The image displays three screenshots of the Autodesk A360 interface, overlaid on a background image of a classical building.

- Project Soane Dashboard:** Shows the main project details: "Creating history with BIM: A crowdsourced recreation of Sir John Soane's Bank". It lists project members (Wilson Erik, Tomáš Kučo, Patrick Scott, Shaun Frazier, Lindsey DuBosar) and recent activity from Colleen Creighton.
- Project Data:** A detailed view of the "Project Soane" data, including sections for "Project", "Data", "People", "Calendar", and "Wiki". It shows a "Recent" list with items like "2.1 Bank Stock Office - R2016.rvt" and "BOE Selection".
- Project Members:** A list of project members with their details:
 - Cord Nation:** Project member, email: cordination@gmail.com
 - Simon Moreau:** Other, email: simon@bim42.com
 - Patrick Scott:** Project member, email: patrick_scott@live.com.au
 - Shaun Frazier:** Architect, email: s.frazier@ramsa.com
 - Wilson Erik Atauje Rojas:** Operator BIM, email: wilsonatauje@gmail.com
 - Greg Hale:** Other, email: ghale@haletip.com
 - Tomáš Kučo:** Project member, email: kuco.tomas@gmail.com
 - Lindsey DuBosar:** Director of BIM Operations, email: lindsey.dubosar@autodesk.com

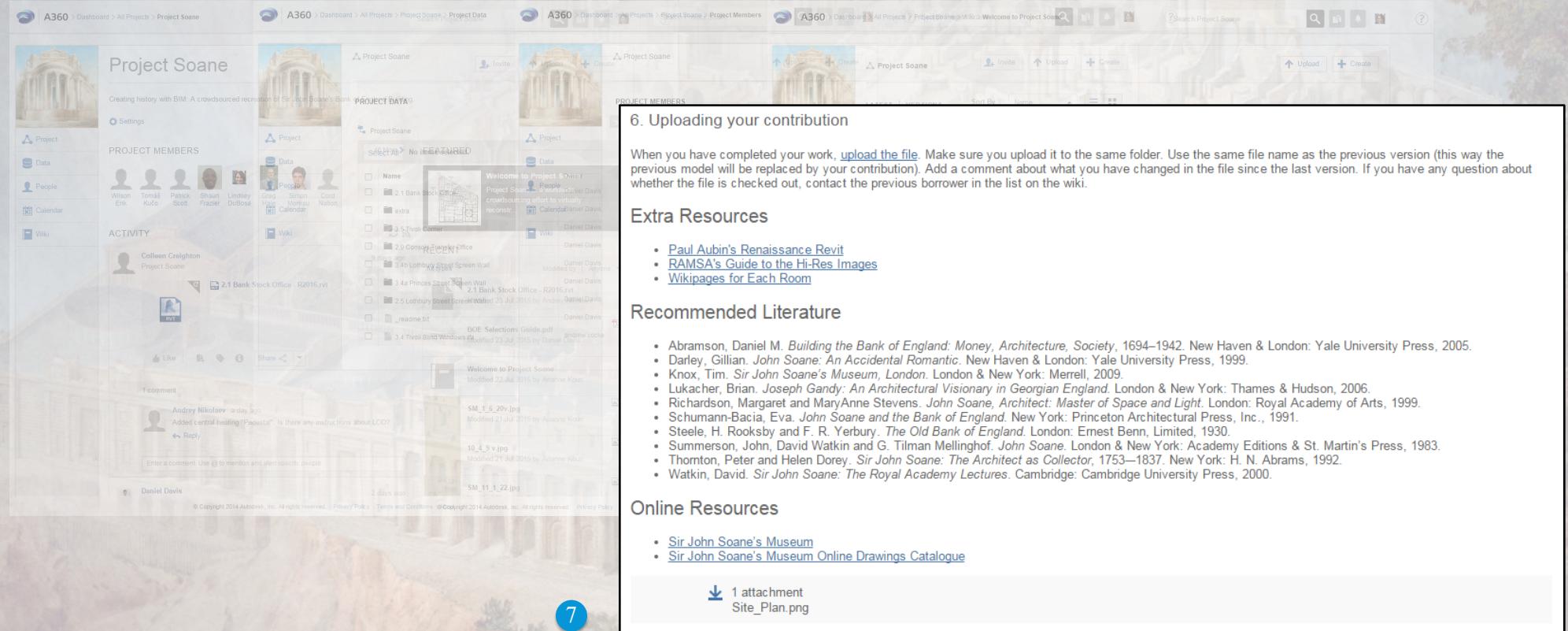
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Autodesk A360 for global collaboration and crowdsourcing

The screenshot displays the A360 interface for the 'Project Soane' project. The top navigation bar shows the path: A360 > Dashboard > All Projects > Project Soane. The main content area is divided into several sections:

- Project Soane** (Header): Creating history with BIM: A crowdsourced recreation of Sir John Soane's Bank.
- Project Members**: Shows a list of members with their profile pictures and names: Wilson Erik, Tomáš Kučo, Patrick Scott, Shaun Frazer, and Lindsey Dubosa.
- Activity**: Shows a recent activity by Colleen Crighton, a file named 2.1 Bank Stock Office - R2016.rvt, and a comment by Andrey Nikolaev.
- Project Data**: A detailed view of the project data, including sections for 'SELECT A...' (No Item Shared), 'Data' (with sub-options like Name, People, etc.), 'Project Soane' (with a thumbnail image of the Bank of England), 'Welcome to Project Soane' (modified 22 Jul 2015 by Andrey Kuk), 'RECENT' (listing files like 2.1 Bank Stock Office - R2016.rvt, 3-4a Princes Street Screen Wall, 2.1 Bank Stock Office - R2015.rvt, 2.5 Lombry Street Screen Wall, and BOE-Selections-Guide.pdf), and 'BOE-Selections-Guide.pdf' (modified 23 Jul 2015 by Daniel Davis).
- Project Members**: A list of project members with their details:
 - Wilson Erik (BIM, 1413, Project member, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Tomáš Kučo (BIM, 1413, Project member, 969713918, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Patrick Scott (BIM, 1413, Project member, 4043136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Colleen Crighton (BIM, 1413, Project member, 4043136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Andrey Kuk (BIM, 1413, Project member, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Lindsey Dubosa (BIM, 1413, Project member, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Shaun Frazer (BIM, 1413, Project member, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
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 - Colleen Crighton (BIM, 1413, Project member, 4043136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Andrey Kuk (BIM, 1413, Project member, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)
 - Tomáš Kučo (BIM, 1413, Project member, 969713918, 4403136336, 30.33 MB, Operator BIM, 30.33 MB)

Autodesk A360 for global collaboration and crowdsourcing



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](#)
- [Wikipegas 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. *Sir 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-Bacía, Eva. *John Soane and the Bank of England*. New York: Princeton Architectural Press, Inc., 1991.
- Steele, H. Rookaby and F. R. Yerbury. *The Old Bank of England*. London: Ernest Benn, Limited, 1930.
- Summerson, John, David Watkin and G. Tilman Mellinghof. *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.

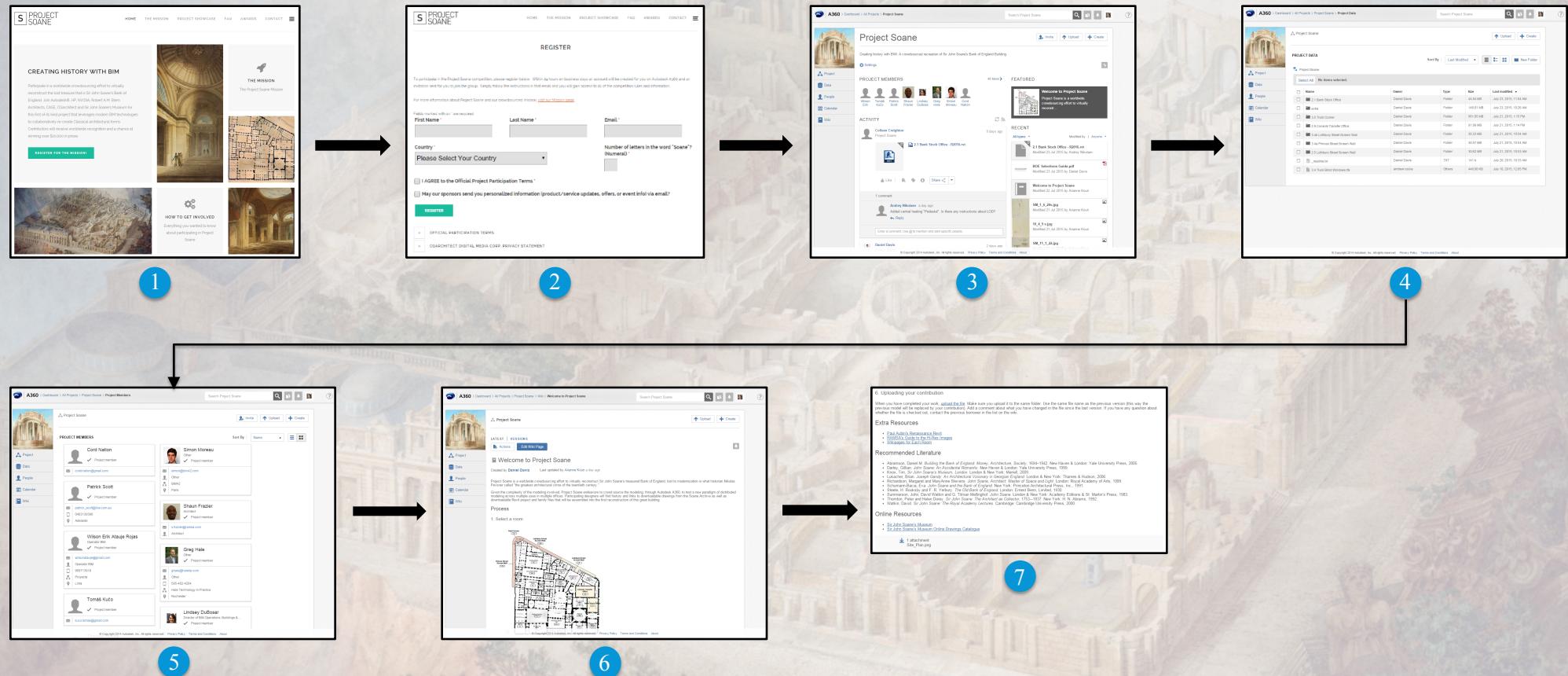
Online Resources

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

 1 attachment
Site_Plan.png

Collaboration Process

www.projectsoane.com



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Revitalizing Classical Architecture.....

BEAII

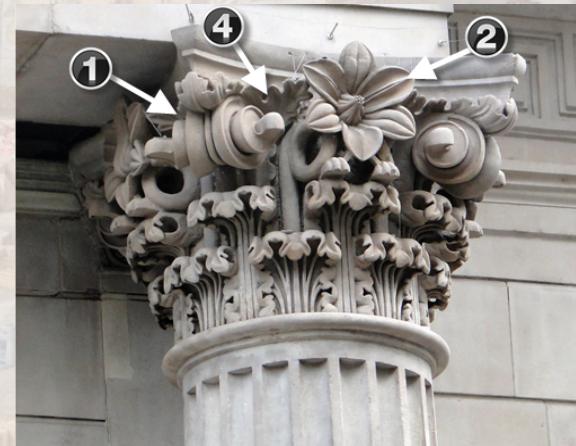
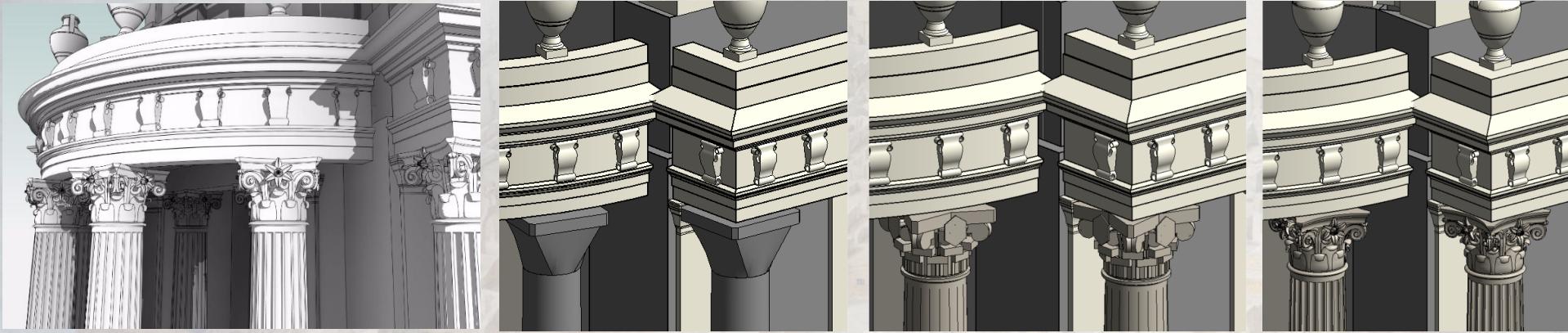


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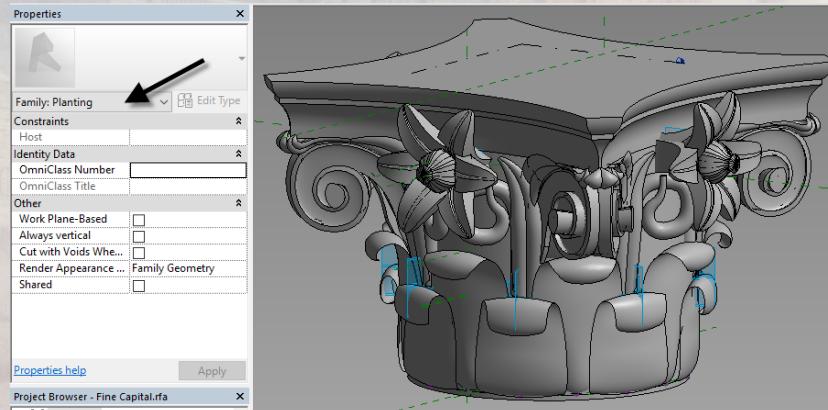
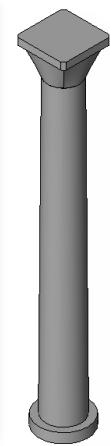
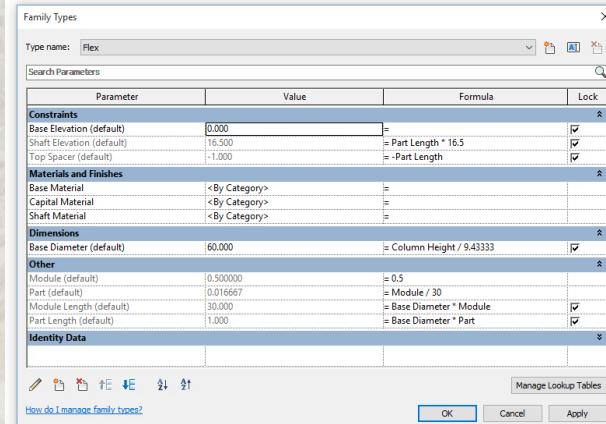
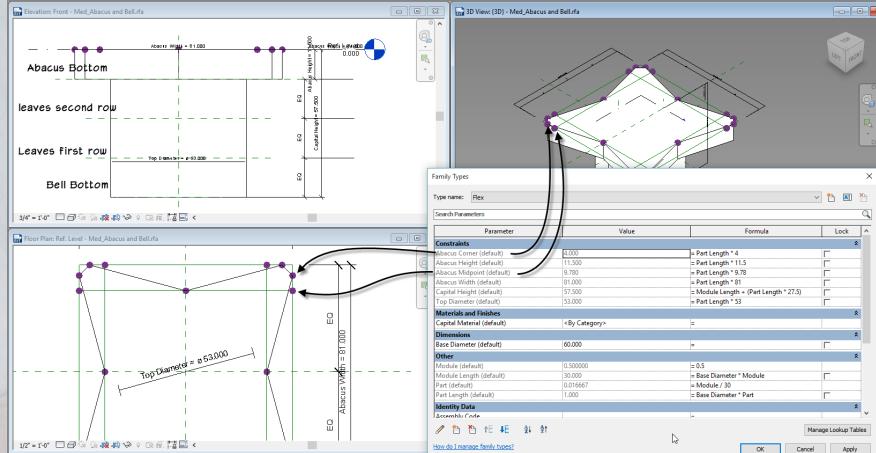
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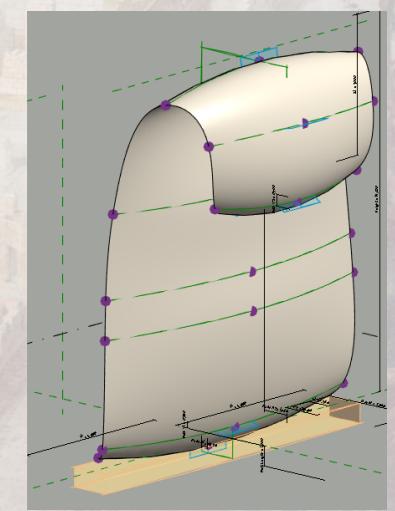
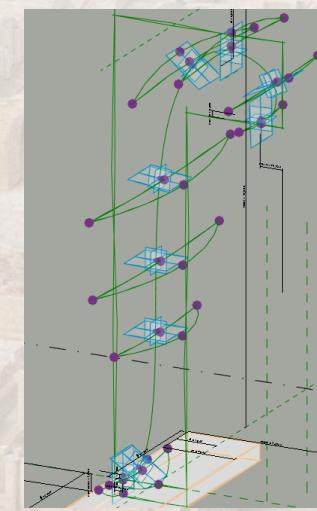
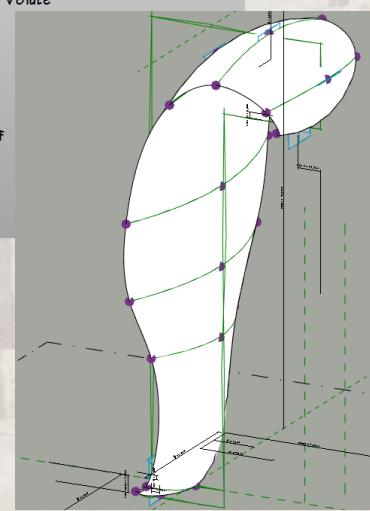
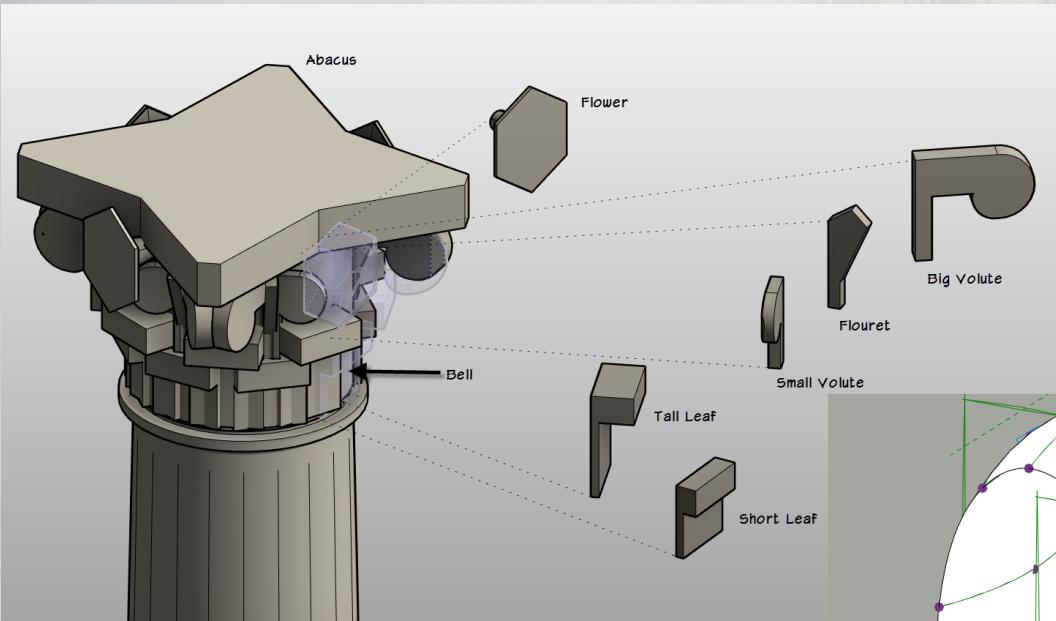
Modeling Classical Architecture in Revit



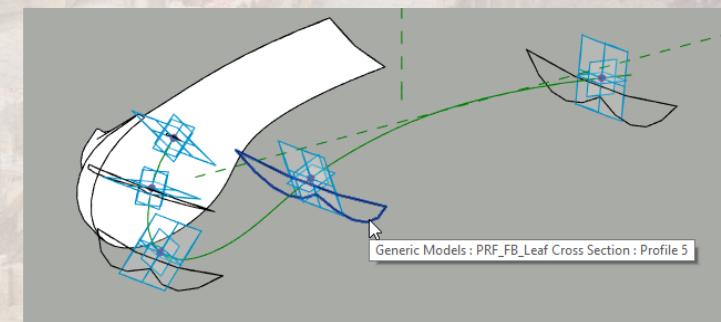
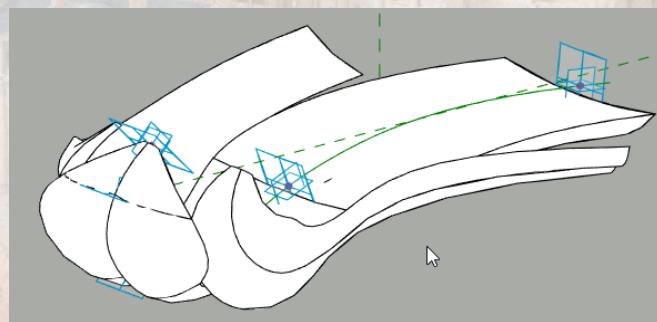
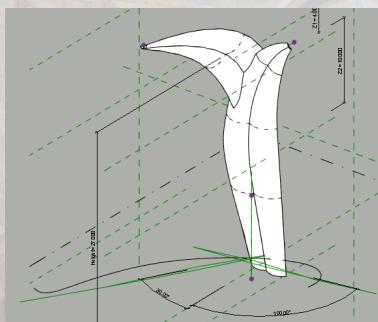
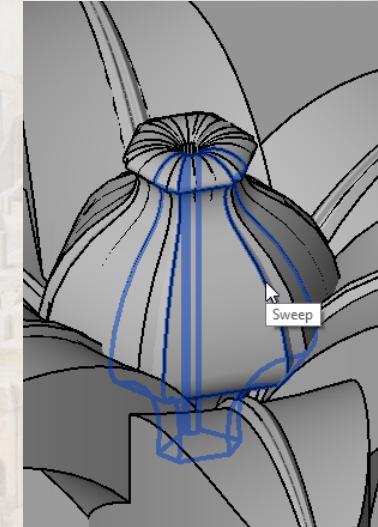
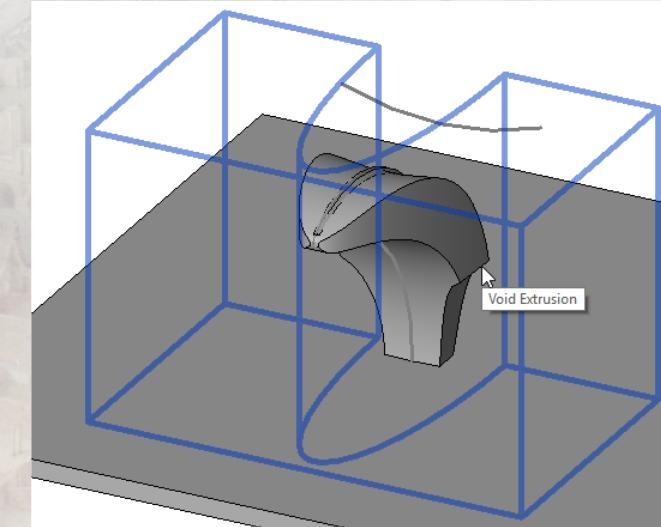
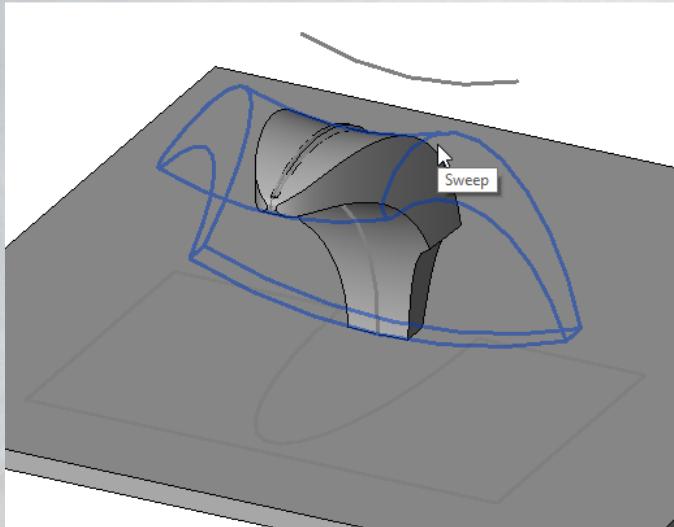
Modeling Classical Architecture in Revit



Modeling Classical Architecture in Revit



Modeling Classical Architecture in Revit

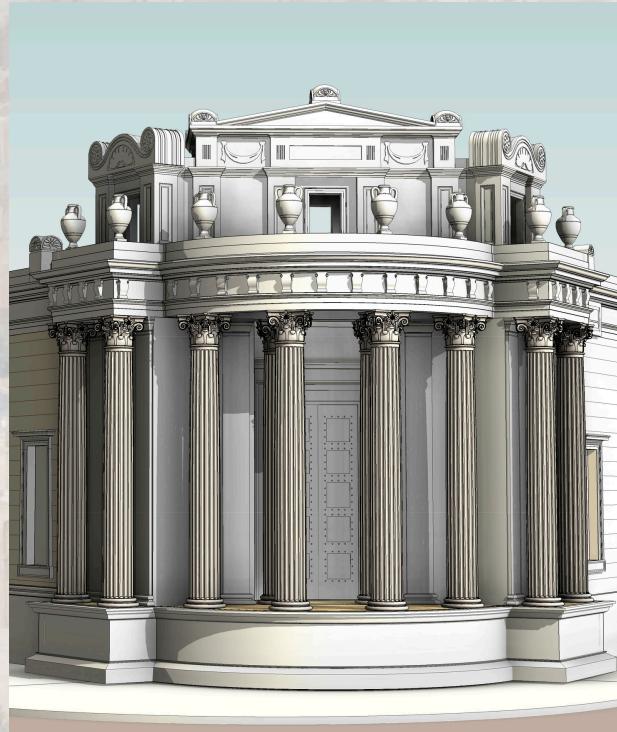


And the Phase 1 Winners Are.....

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



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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.

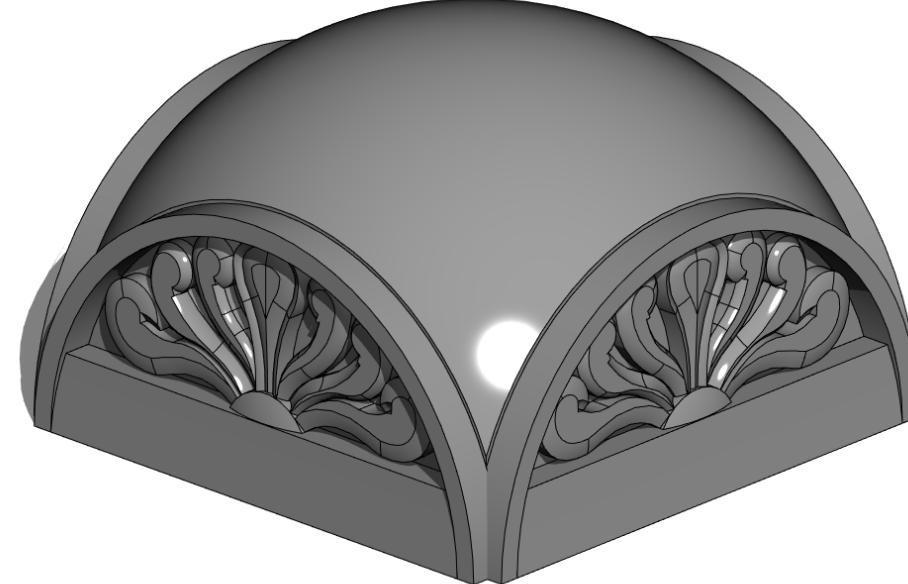
Russell Fuller Hill



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 Mereces



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CONVERGENCE

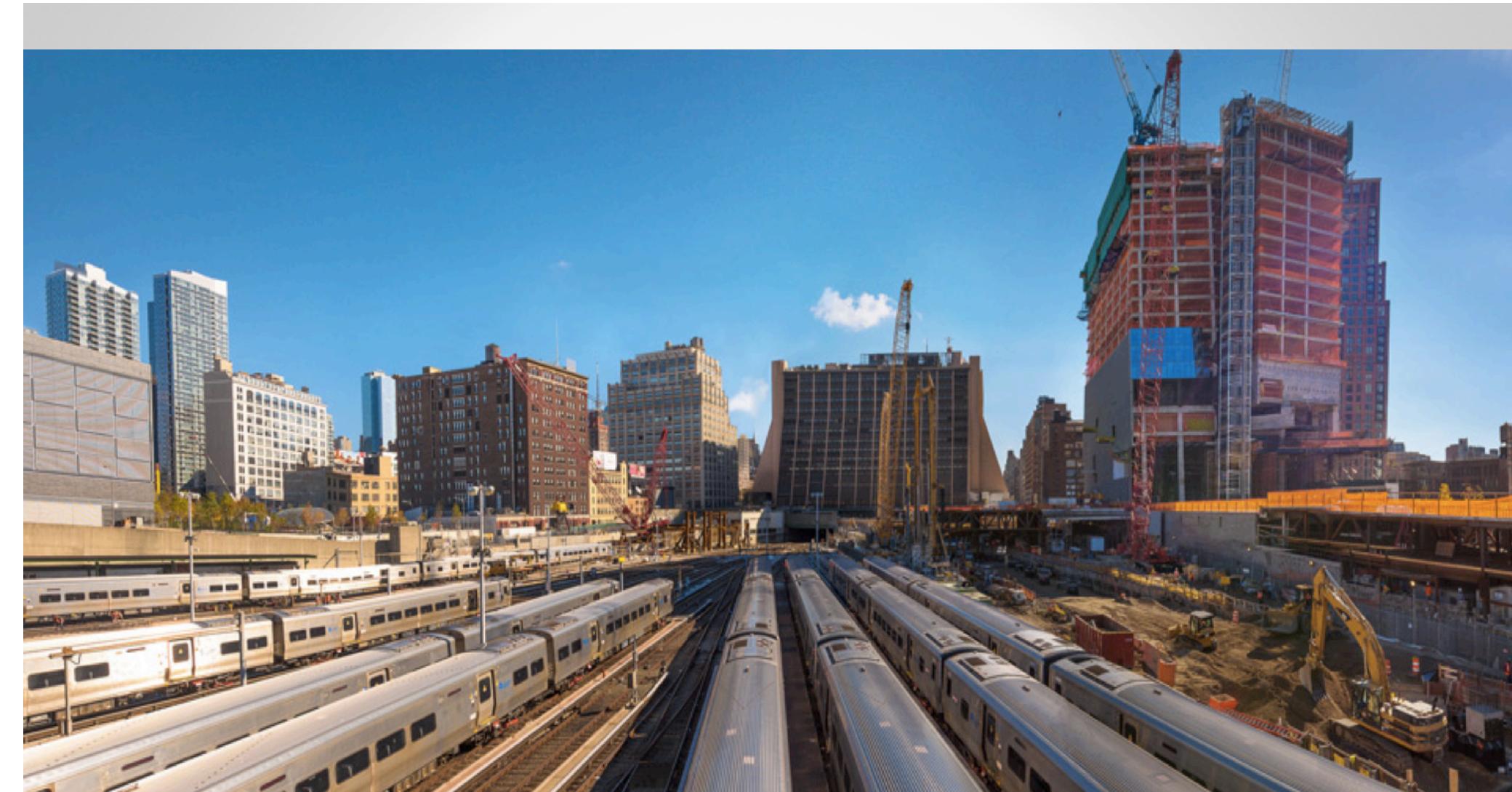
IT'S HAPPENING



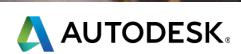
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Courtesy of Neoscape



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Image courtesy of Sérgio Merêces



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© Sony Computer Entertainment America LLC UNCHARTED 4 A Thief's End. Image courtesy of Naughty Dog

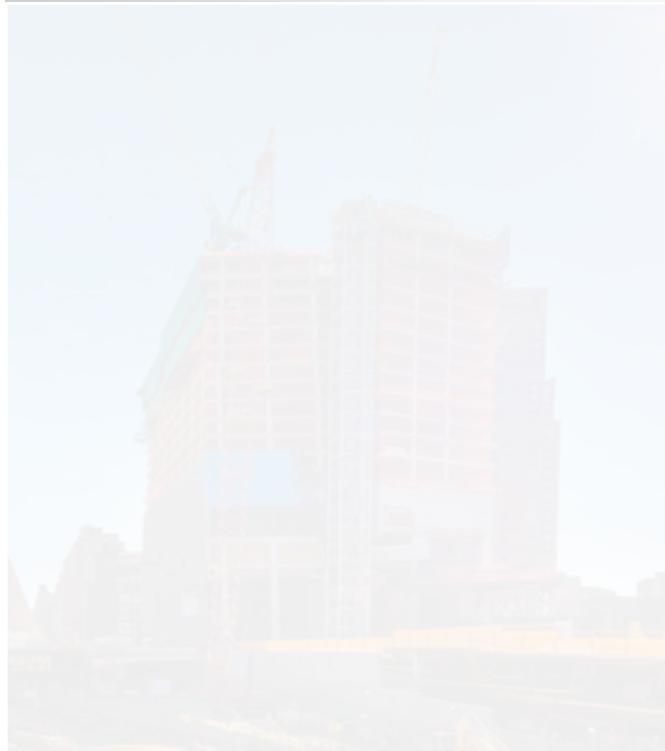


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THE FUTURE CONVERGENCE



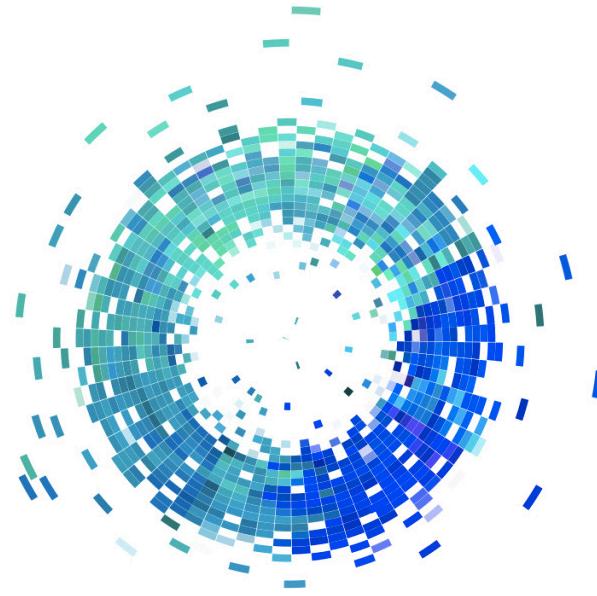
Courtesy of Neoscape

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