

# Software libre en el sector de la construcción



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difusión de la metodología BIM y la tecnología en el sector AECO



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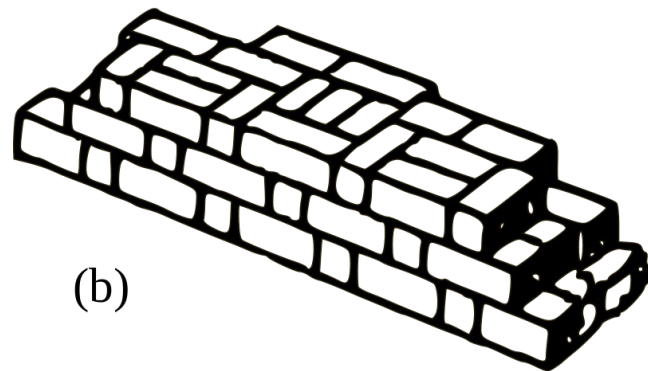
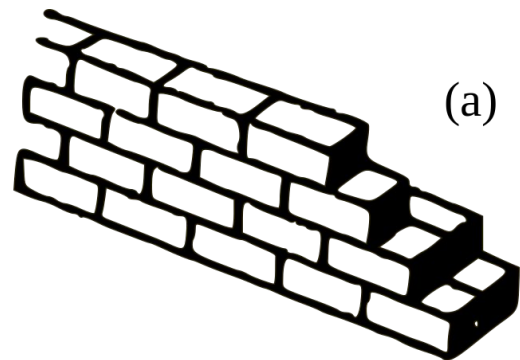
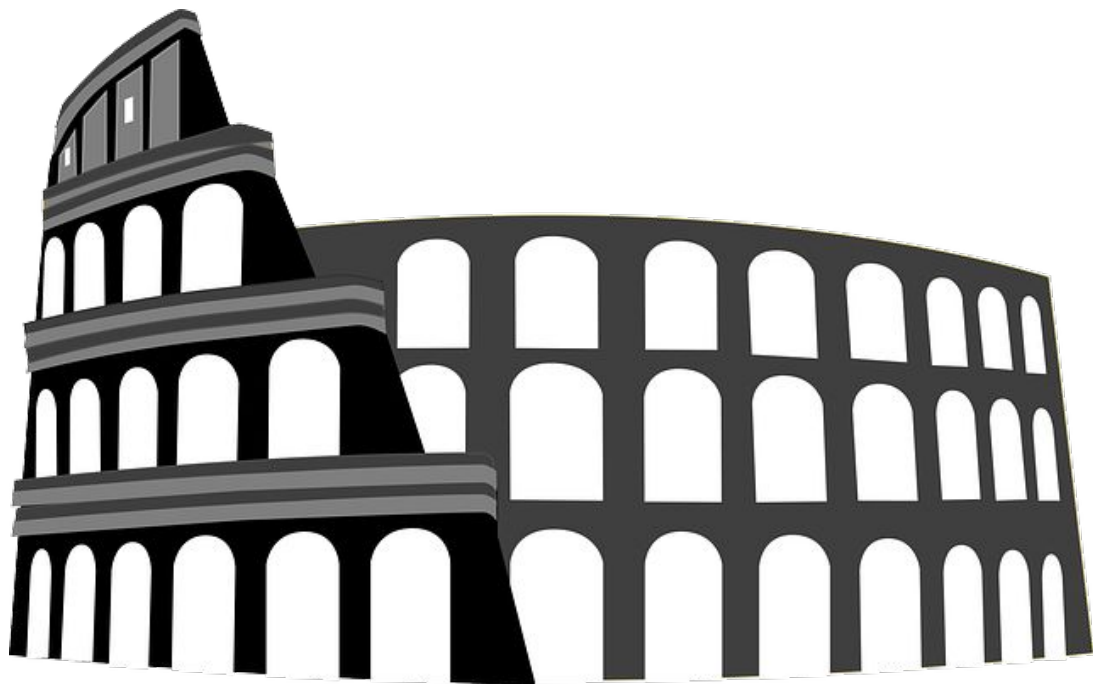
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La comunidad BIM en español más activa





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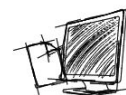
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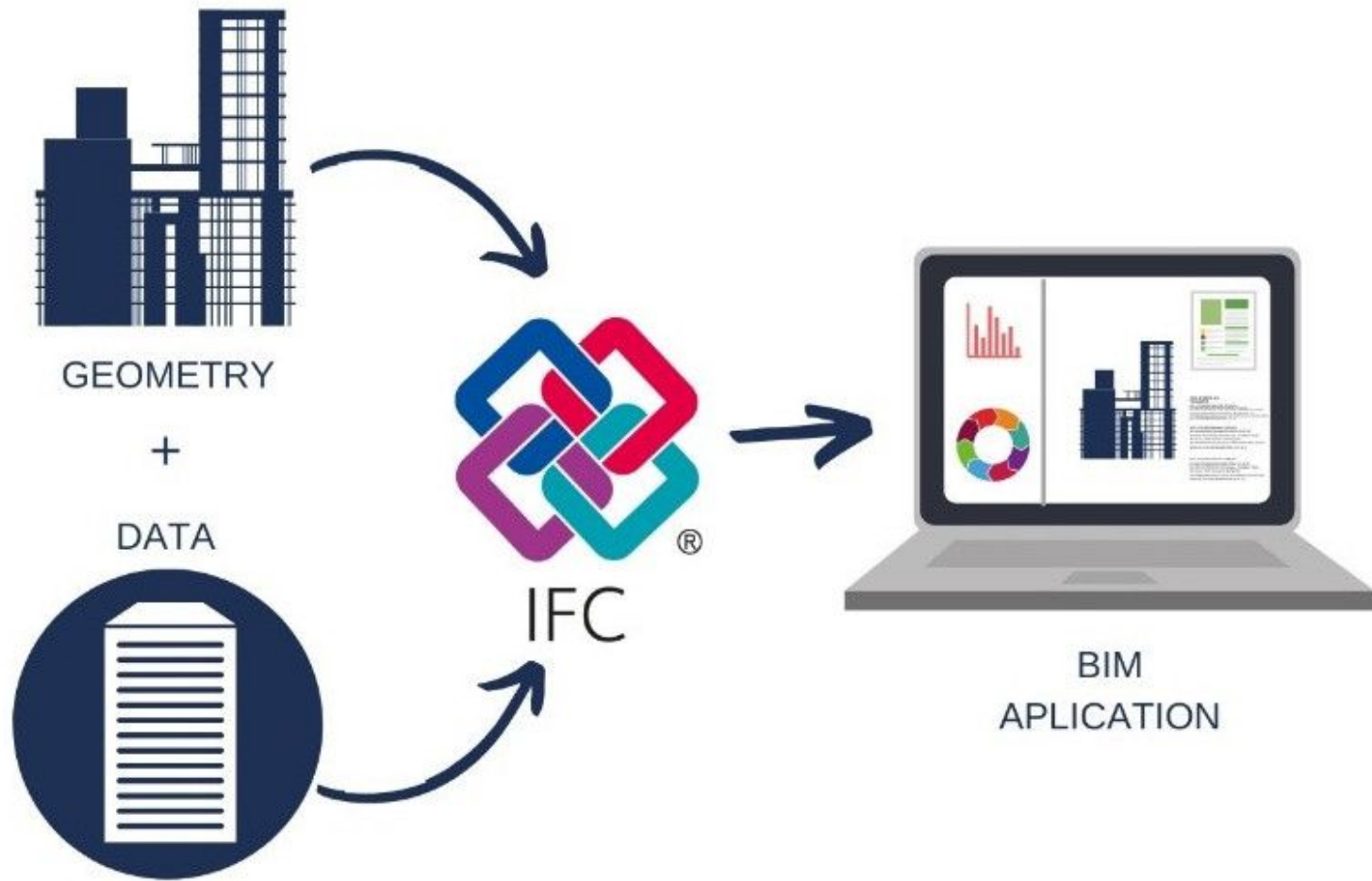
IFC2x3



IFC4

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Autodesk	Autodesk Revit	IFC4	Structural Reference Exchange	Export	Finished	2017-08-29	2020-11-09	
DICAD Systeme GmbH	STRAKON	IFC4	Structural Reference Exchange	Export	Finished	2018-09-07	2020-11-02	
Autodesk	Autodesk Revit	IFC4	Architectural Reference Exchange	Export	Finished	2017-08-29	2020-10-19	
TOPSOLID SAS	TopSolid	IFC 2x3	CV 2.0	Import	Finished	2019-06-03	2019-12-06	<a href="https://ifc2x3.b-cert.org/ords/ifc/certification/getCertificationReport/903">https://ifc2x3.b-cert.org/ords/ifc/certification/getCertificationReport/903</a>
Trimble	Tekla	IFC4	Structural	Export	Finished	2017-10-	2019-09-22	







Geometry

+



Data

# BiM



IFC

TM



BIM Applications

blm



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Geometry

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Data

BiM



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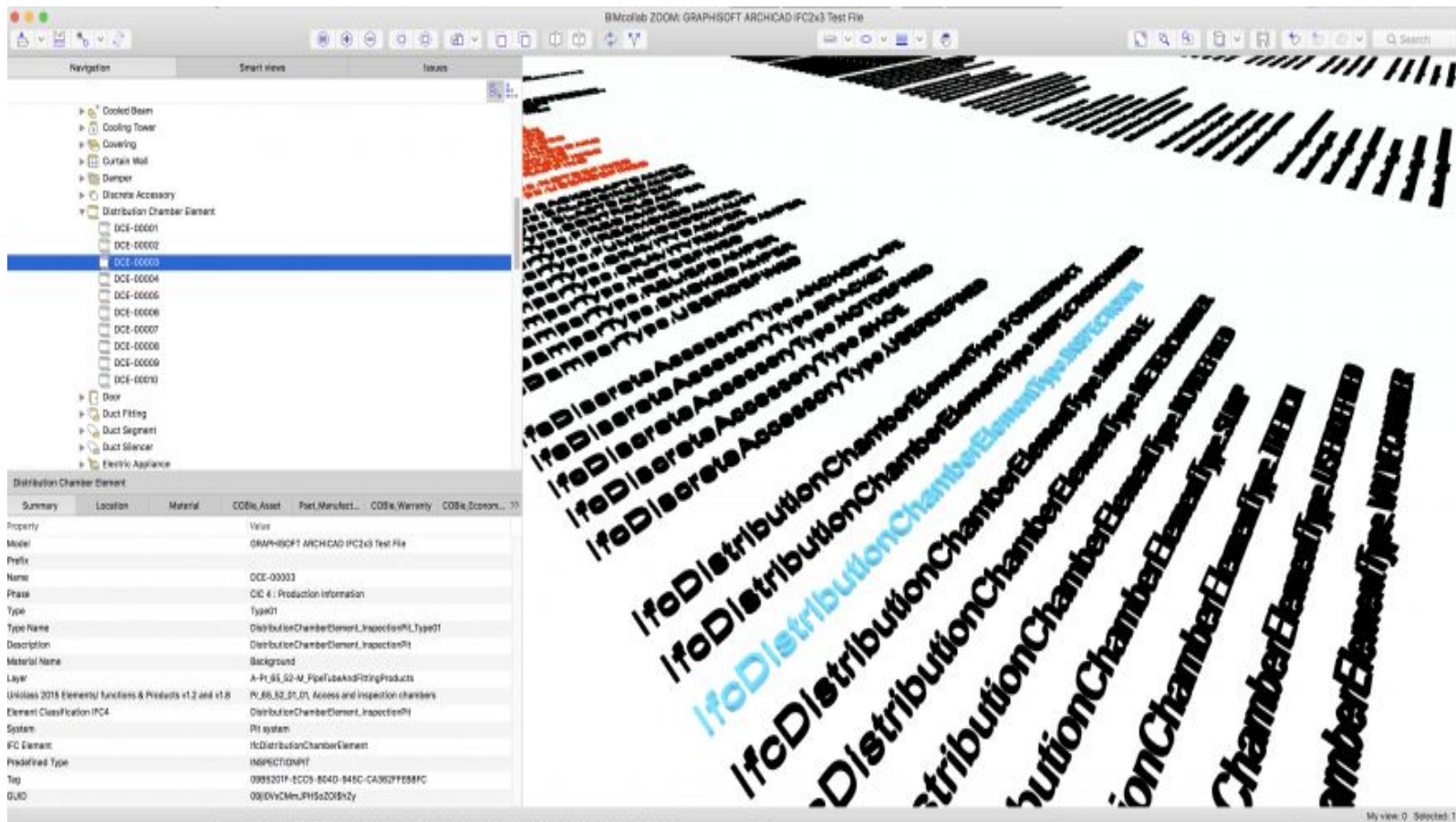
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blm





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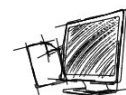


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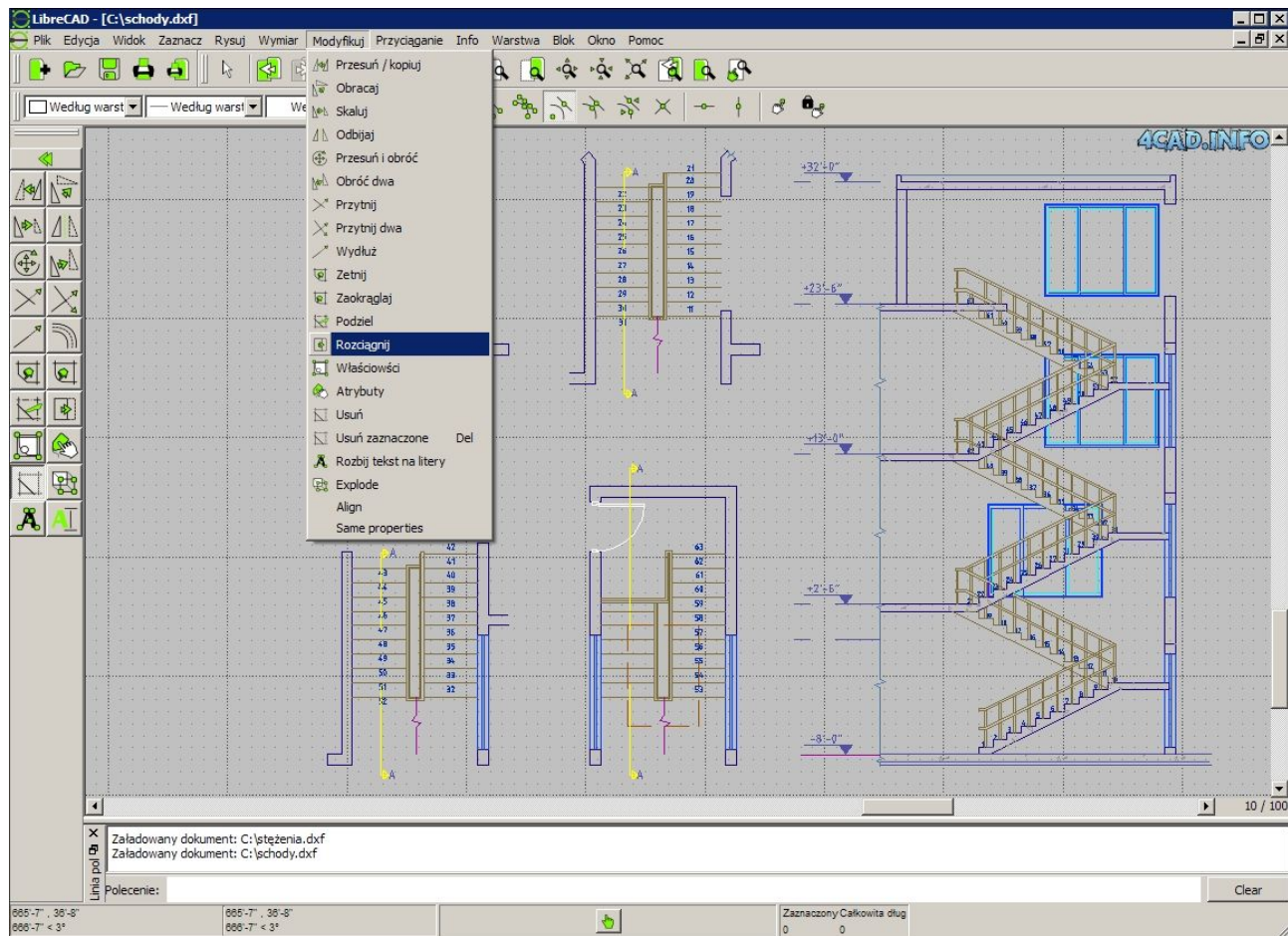
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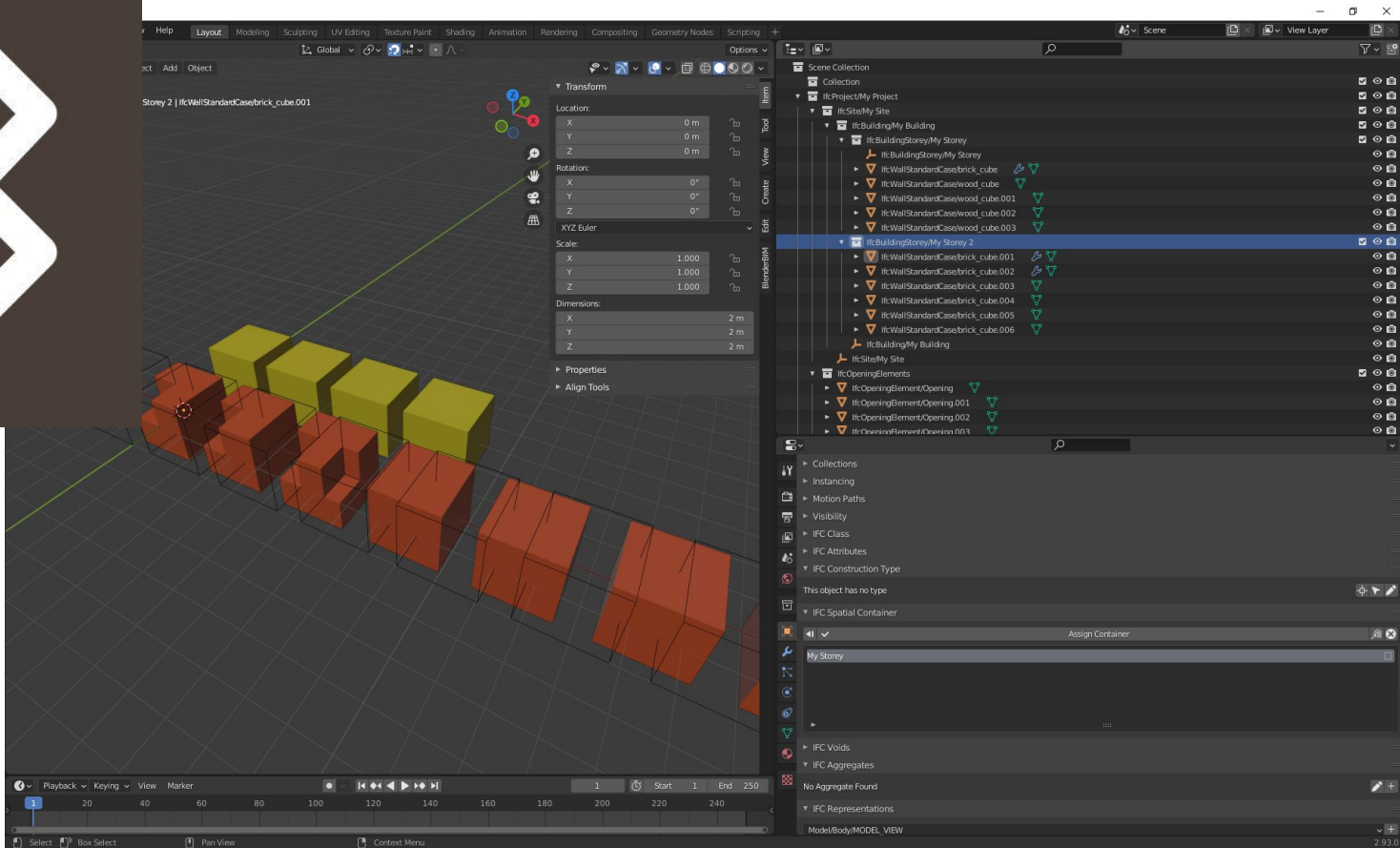


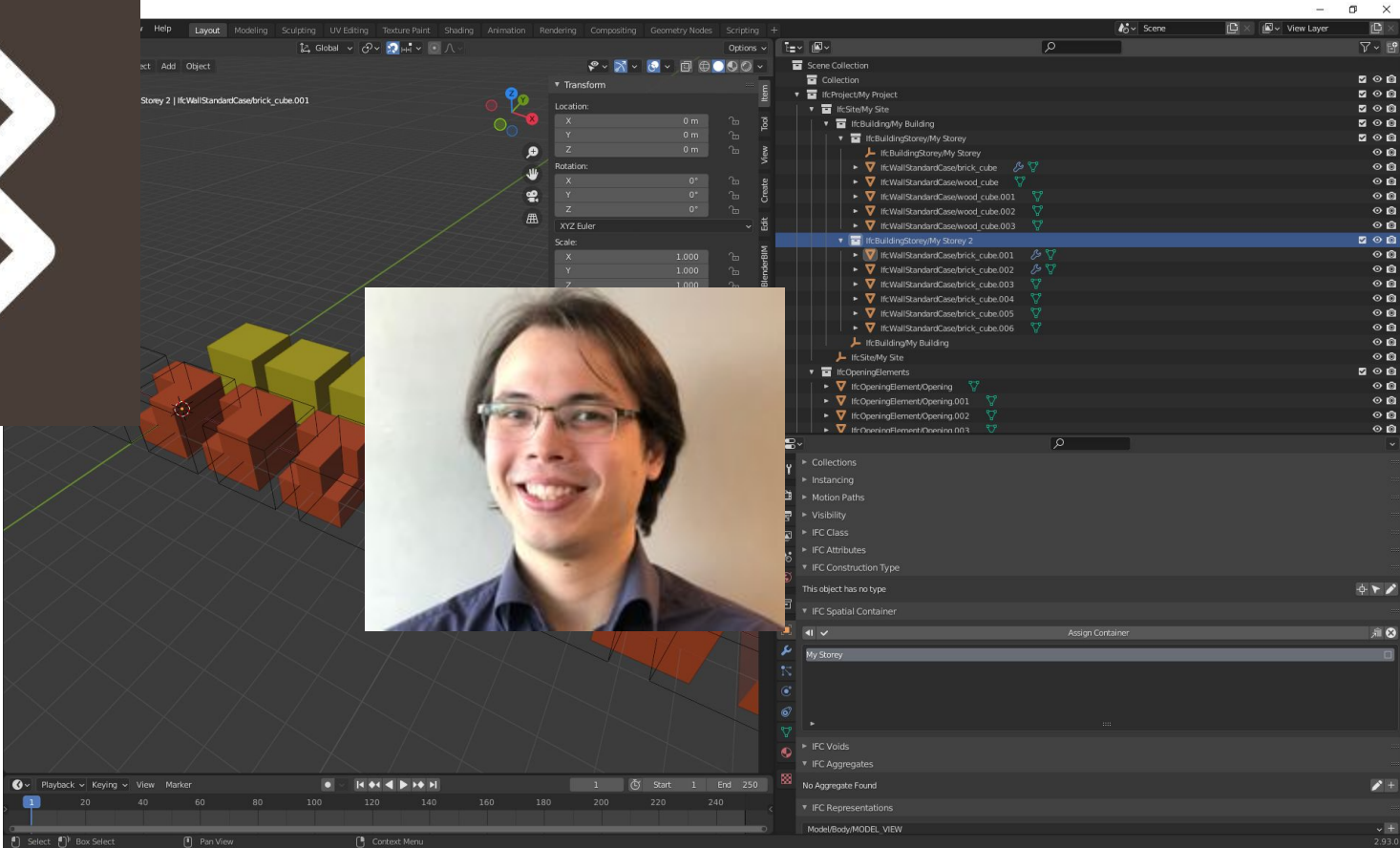


# blender®

10







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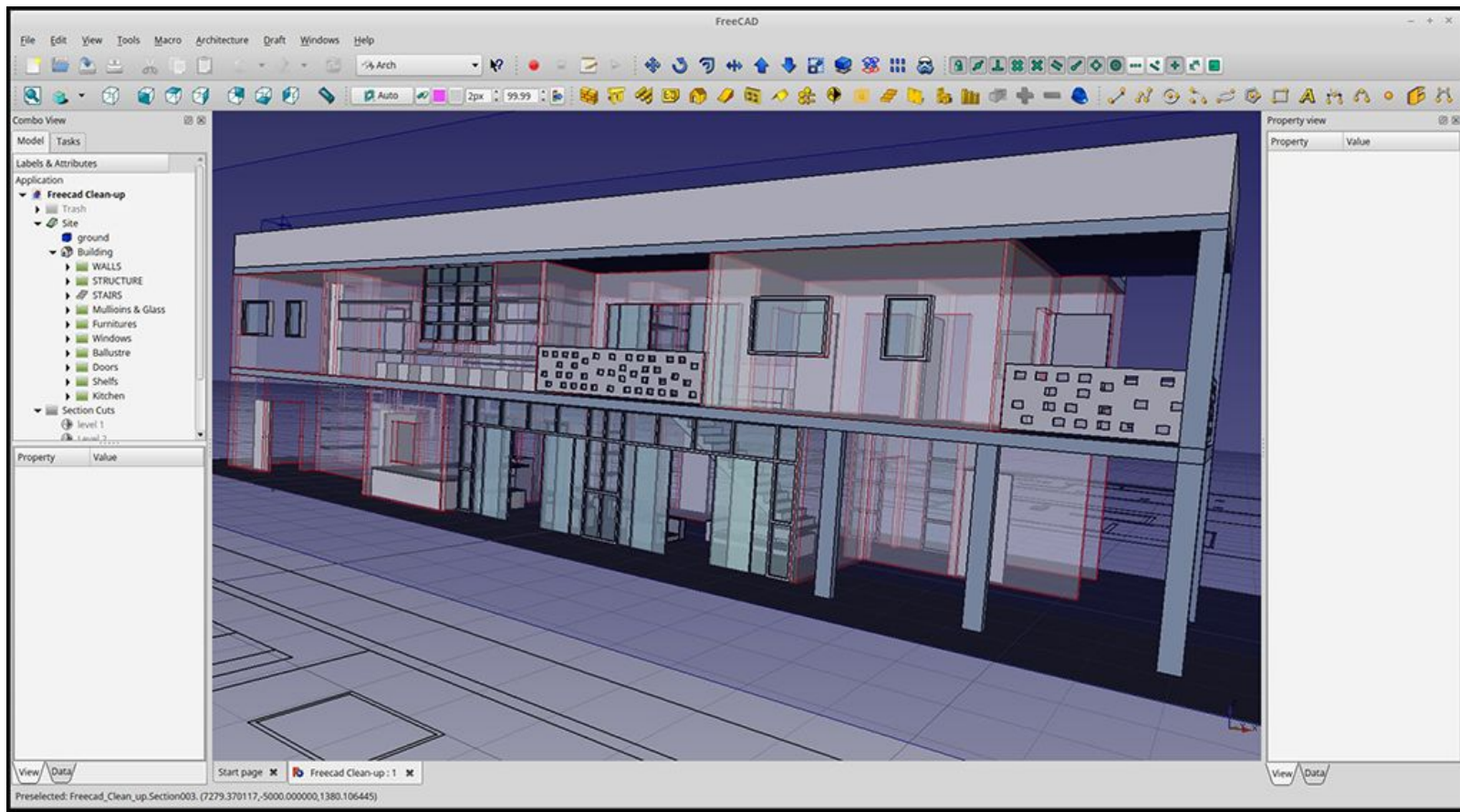
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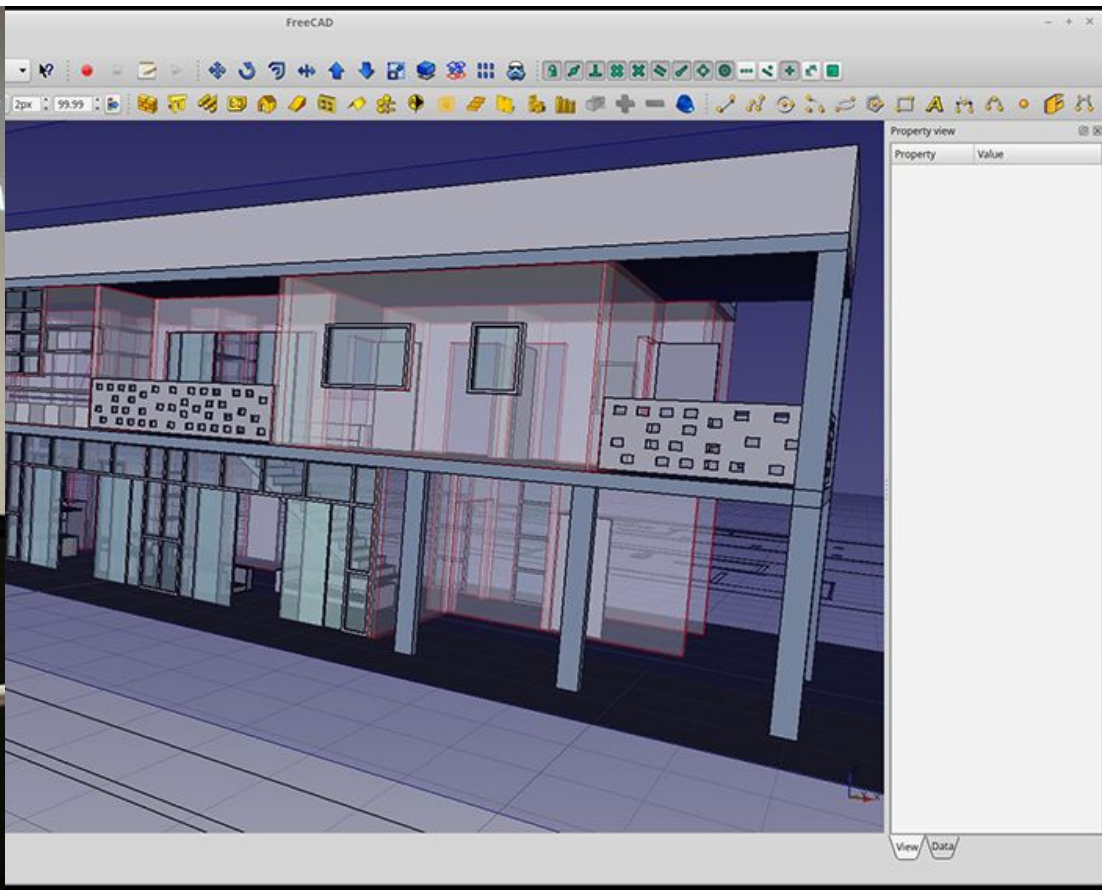
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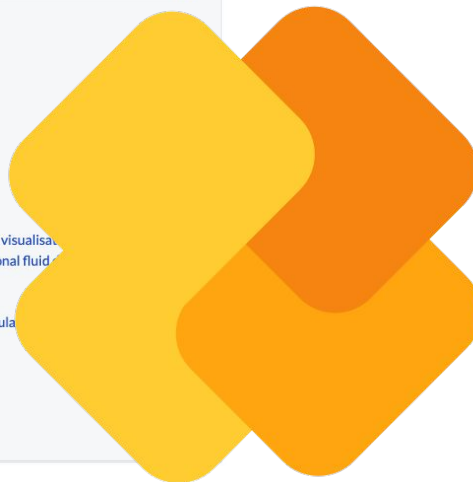
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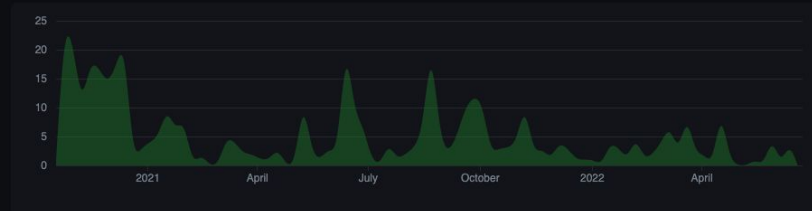
Network

Forks

Oct 18, 2020 – Jun 23, 2022

Contributions: Commits

Contributions to master, excluding merge commits and bot accounts



agviegas

369 commits 1,643,835 ++ 1,407,874 --

#1



harrycollin

51 commits 108,054 ++ 139,766 --

#2



apemann

9 commits 27,760 ++ 21 --

#3



GP4cK

5 commits 20,966 ++ 19,404 --

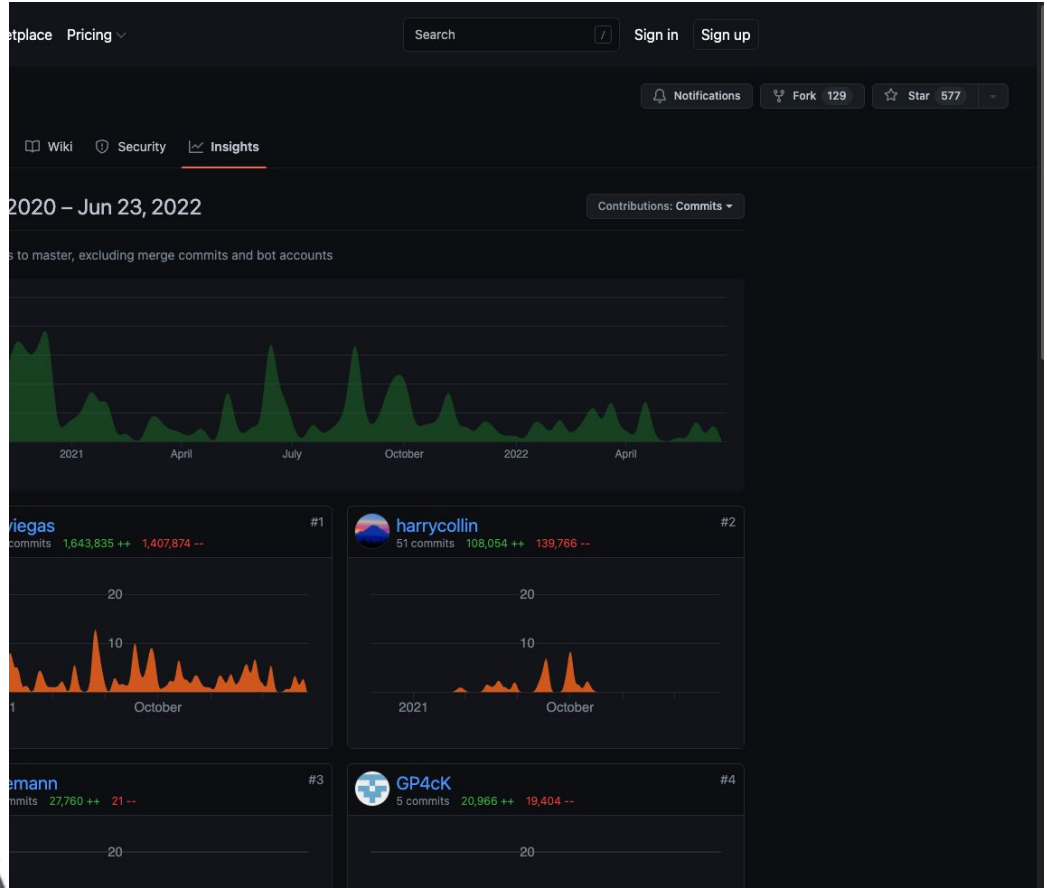
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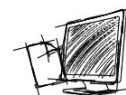
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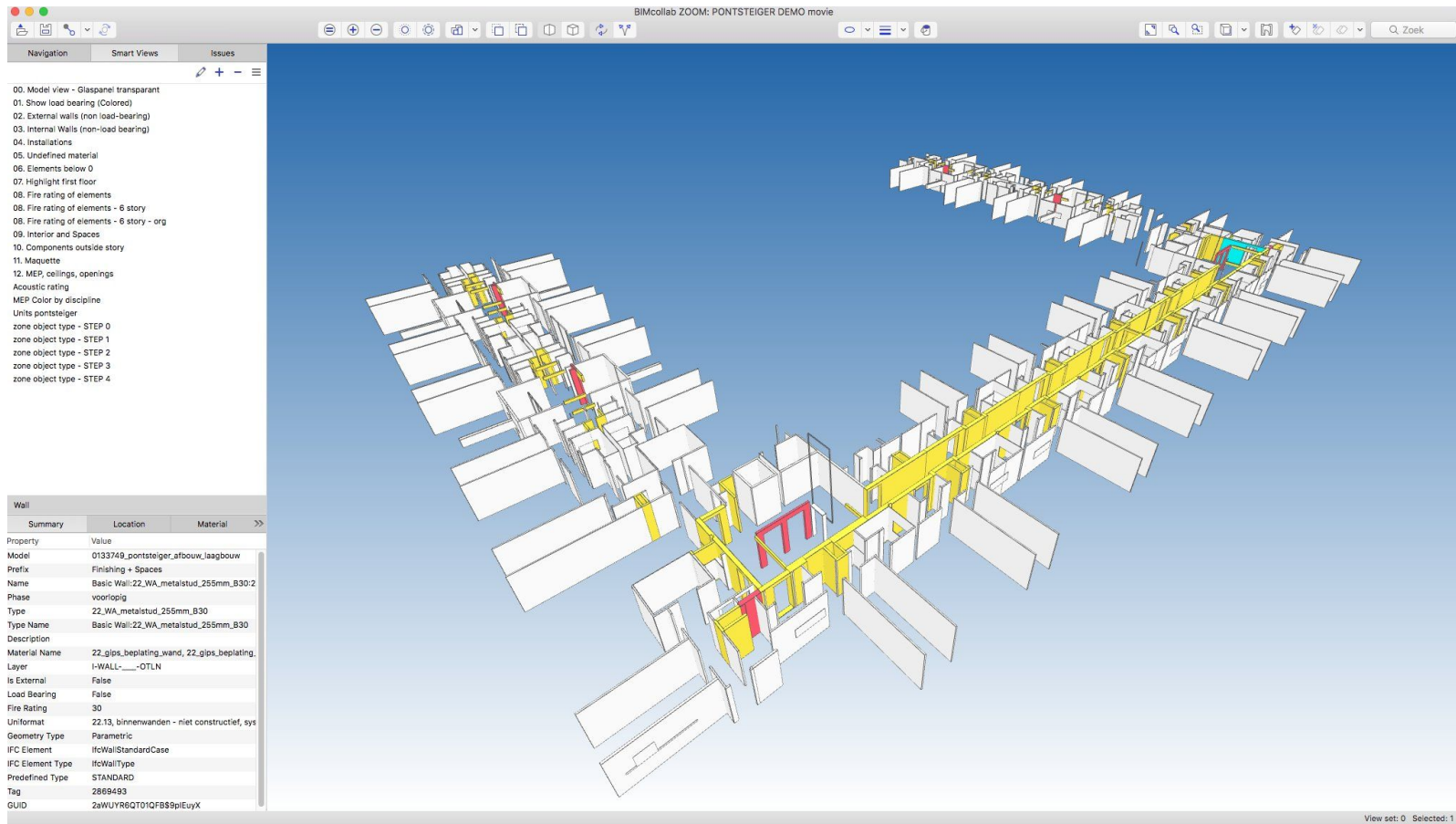
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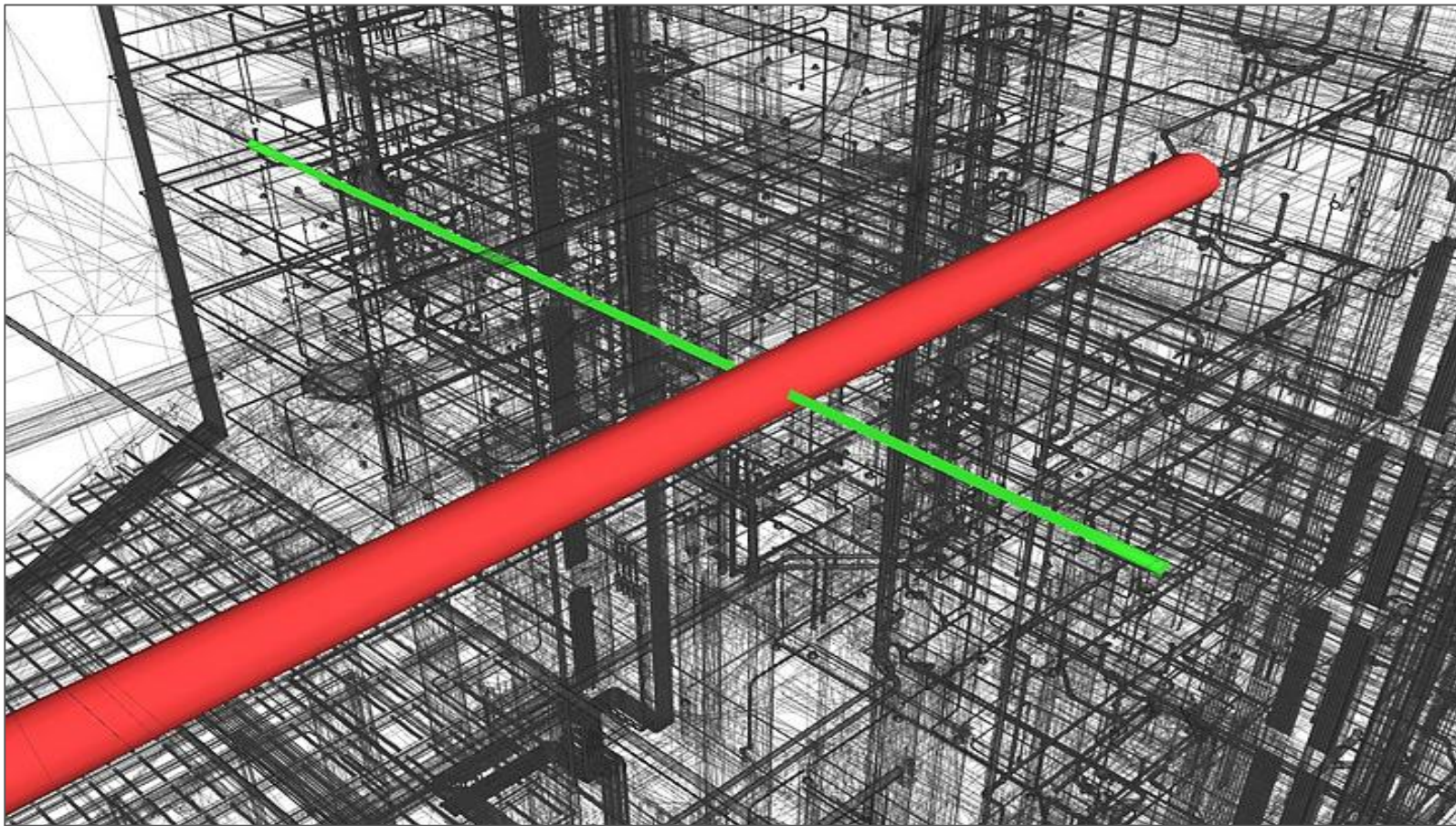
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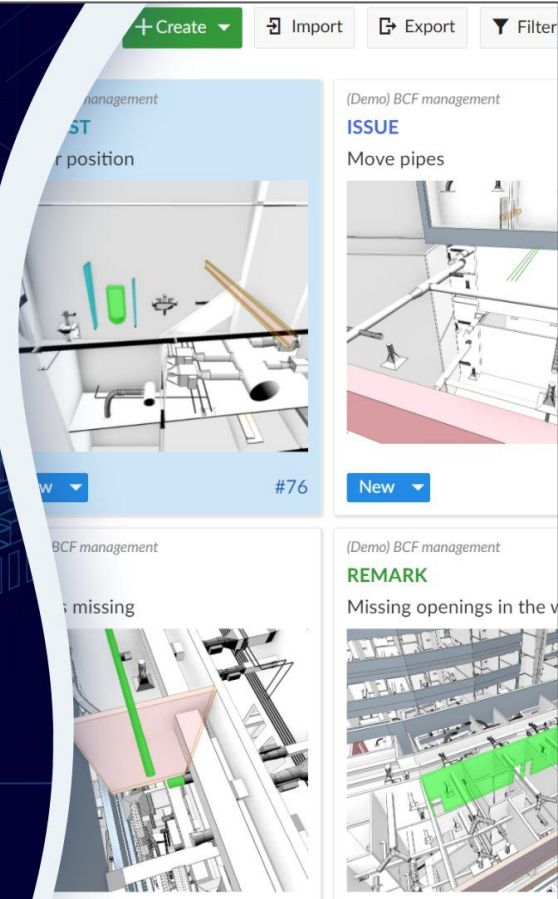




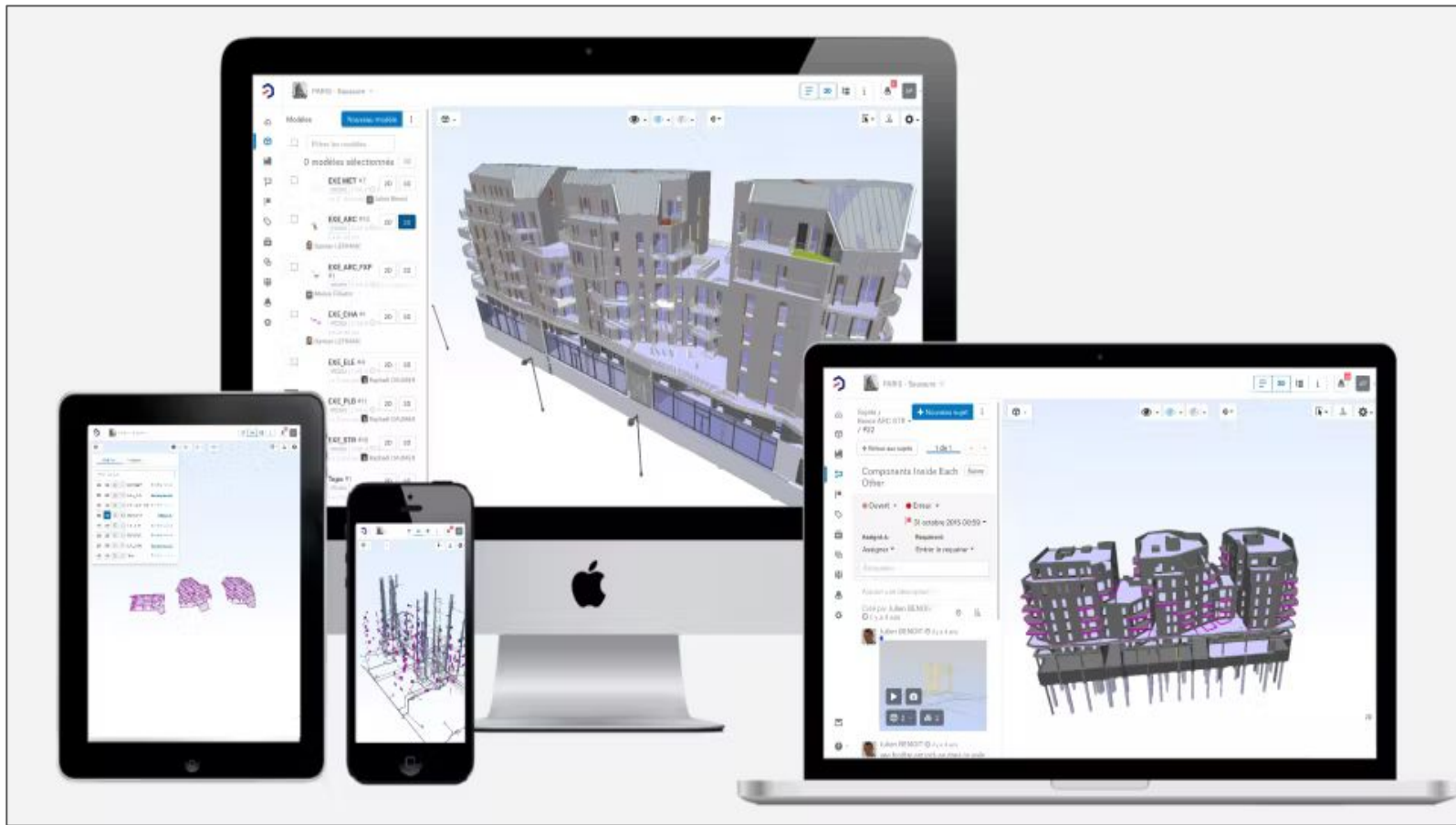


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project  
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Icon ▴	Name ▴	Description ▴	Licen[Collapse] se ▴
	<a href="#">blastFoam</a>	A CFD solver, built on top of OpenFOAM, for multi-component compressible flow with application to high-explosive detonation, explosive safety and air blast.	<a href="#">GPL-3.0</a>
	<a href="#">CalculiX</a>	CalculiX is a package designed to solve field problems. The method used is the finite element method. With CalculiX Finite Element Models can be built, calculated and post-processed.	<a href="#">GPL-2.0</a>
	<a href="#">Code_Aster</a>	Code_Aster offers a full range of multiphysical analysis and modelling methods that go well beyond the standard functions of a thermo mechanical calculation code: from seismic analysis to porous media via acoustics, fatigue, stochastic dynamics, etc.	<a href="#">GPL-3.0</a>
	<a href="#">Code_Saturne</a>	Code_Saturne is the free, open-source software developed and released by EDF to solve computational fluid dynamics (CFD) applications. It solves the Navier-Stokes equations for 2D, 2D-axisymmetric and 3D flows, steady or unsteady, laminar or turbulent, incompressible or weakly dilatable, isothermal or not, with scalars transport if required.	<a href="#">GPL-2.0</a>
	<a href="#">Elmer</a>	Elmer is a multiphysical simulation software that includes physical models of fluid dynamics, structural mechanics, electromagnetics, heat transfer and acoustics, for example. These are described by partial differential equations which Elmer solves by the Finite Element Method (FEM).	<a href="#">GPL-2.0 (software) and LGPL-2.1 (solver)</a>
	<a href="#">Energy2D</a>	"Energy2D is an interactive multiphysics simulation program that models all three modes of heat transfer—conduction, convection, and radiation, and their coupling with particle dynamics. Energy2D runs quickly on most computers and eliminates the switches among preprocessors, solvers, and postprocessors typically needed to perform computational fluid dynamics simulations." <a href="#">source</a>	<a href="#">LGPL-3.0-only</a>
	<a href="#">EPANet</a>	EPANet is a software application used throughout the world to model water distribution systems. It was developed as a tool for understanding the movement and fate of drinking water constituents within distribution systems, and can be used for many different types of applications in distribution systems analysis.	<a href="#">MIT</a>
	<a href="#">Estru3D</a>	Program for structural analysis using the Stiffness Matrix Method. It has its own graphical interface and full GUI. Now being translated to english. It is developed in Gambas3 basic only.	<a href="#">GPL-3.0</a>
	<a href="#">Fino</a>	Fino is a free and open source tool that uses the finite-element method to solve (i) steady-state thermo-mechanical problems, or (ii) steady or transient heat conduction problems, or (iii) modal analysis problems.	<a href="#">GPL-3.0</a>
	<a href="#">Fire Dynamics Simulator (FDS)</a>	Fire Dynamics Simulator (FDS) is a large-eddy simulation (LES) code for low-speed flows, with an emphasis on smoke and heat transport from fires. It can use <a href="#">BlenderFDS</a> as open source interface.	<a href="#">GNU3.0</a>





Environmental analysis [edit](#)




Icon ▾	Name ▾	Description	Lic [Collapse] ense ▾
	Ladybug Tools	Ladybug Tools is a collection of free computer applications that support environmental design and education connecting 3D Computer-Aided Design (CAD) interfaces to a host of validated simulation engines. Ladybug Tools can be used as a suite of Python libraries, or as a set of visual programming nodes with Blender (via Sverchok), or with proprietary software like Rhino (via Grasshopper) or Revit (via Dynamo).	GPL-3.0
	OpenLCA	The world's leading, high performance, open source Life Cycle Assessment software. openLCA is an open source and free software for Sustainability and Life Cycle Assessment, with calculation of your Sustainability Assessment and/or Life Cycle Assessment, detailed insights into calculation and analysis results, best in class import and export capabilities; easy to share your models  Life Cycle Costing and social assessment smoothly integrated in the life cycle model, and more.	MPL 2.0
	Radiance	Radiance is a suite of programs for the analysis and visualization of lighting in design. Input files specify the scene geometry, materials, luminaires, time, date and sky conditions (for daylight calculations). Calculated values include spectral radiance (ie. luminance + color), irradiance (illuminance + color) and glare indices. Simulation results may be displayed as color images, numerical values and contour plots.	Project-specific FOSS
	SAM toolkit <a href="#">↗</a>	SAM Toolkit is designed to help engineers to create Analytical Model.	AGPL-3.0
	VI-Suite	<b>Blender Add-on.</b> VI-Suite is a node-based add-on for performing environmental analysis in blender. The add-on acts as a pre/postprocessor for the EnergyPlus and Radiance simulation engines. Stable Version (0.4) released for blender 2.7, a version for blender 2.8 (0.6 <a href="#">↗</a> ) is awaiting release.	GPL-2.0(citation needed)
	SIMPLE	SIMPLE is a Building Performance Simulation tool developed with the purpose of more appropriately integrating how "people" experience and interact with the buildings they use. That is to say, it aims to perform simulation of multiple domains (e.g., visual, thermal, air quality... because people feel all these things together), and it aims to go beyond just building physics by incorporating aspects of human psychology <a href="#">↗</a> .	MIT

Energy analysis [edit](#)

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			LGPL-3.0-



Energy analysis [edit](#)




Icon ▴	Name ▴	Description ▴	License [Collapse] ▴
	<a href="#">BIMxBEM</a>	A tool which analyze IFC data to feed local standards compliant energy related data to energy simulation softwares.	LGPL-3.0-only
	<a href="#">CEA</a> <a href="#">↗</a>	The City Energy Analyst (CEA) is an urban energy simulation platform and one of the first open-source computational tools for the design of low-carbon and highly efficient neighborhoods and districts. The CEA combines knowledge of urban planning and energy systems engineering in an integrated framework. This allows to study the effects, trade-offs and synergies of urban design options, building retrofits and energy infrastructure plans. <a href="https://github.com/architecture-building-systems/CityEnergyAnalyst">https://github.com/architecture-building-systems/CityEnergyAnalyst</a> <a href="#">↗</a>	MIT
	<a href="#">EnergyPlus</a> <a href="#">↗</a>	EnergyPlus™ is a whole building energy simulation program that engineers, architects, and researchers use to model both energy consumption—for heating, cooling, ventilation, lighting and plug and process loads—and water use in buildings.	BSD-Style
	<a href="#">OpenStudio SDK</a>	OpenStudio® is a cross-platform (Windows, Mac, and Linux) collection of software tools to support whole building energy modeling using <a href="#">EnergyPlus</a> and advanced daylight analysis using <a href="#">Radiance</a> . OpenStudio is an open source (LGPL) project to facilitate community development, extension, and private sector adoption. OpenStudio includes a Software Development Kit (SDK) that allows building researchers and software developers to quickly get started through its multiple entry levels, including access through C++, Ruby, and C#.	LGPL-Style
	<a href="#">OpenStudioApplication &amp; OpenStudio Sketchup Plugin</a> <a href="#">↗</a>	The OpenStudio Application is a fully featured graphical interface to OpenStudio models including envelope, loads, schedules, and HVAC. The OpenStudio SketchUp Plug-in is an extension to Trimble's popular SketchUp 3D modeling tool that allows users to quickly create geometry needed for <a href="#">EnergyPlus</a> using the built-in functionality of Trimble SketchUp including existing drawing tools, integration with Google Earth, Building Maker, and Photo Match. These two tools make use of the <a href="#">OpenStudio SDK</a> and are being developed and maintained by the OpenStudio Coalition.	LGPL-Style

Traffic and pedestrian analysis/simulation [edit](#)


Icon ▴	Name ▴	Description ▴	License [Collapse] ▴
	<a href="#">3D Street</a> <a href="#">↗</a>	3DStreet an open-source web-based tools to visualize safer streets	AGPL-3.0
	<a href="#">AB Street</a> <a href="#">↗</a>	A/B Street is Transportation planning and traffic simulation software for creating cities friendlier to walking, biking, and public transit through simulation and gamification.	Apache-2.0



Project Management [edit](#)

Icons ▾	Name ▾	Description	Lice[Collapse] nse ▾
	<a href="#">GanttProject</a>	GanttProject is a free desktop project scheduling application for small and medium businesses which need Gantt charts.	<a href="#">GPL-3.0</a>
	<a href="#">OpenProject</a>	OpenProject is the leading open source project management software. Support your project management process along the entire project life cycle: From project initiation to closure. Includes support for <a href="#">BCF[1]</a>	<a href="#">GPL-3.0</a>
	<a href="#">ProjectLibre</a>	ProjectLibre is a free and open-source project management software system intended ultimately as a standalone replacement for Microsoft Project. ProjectLibre was developed by the founders of the abandoned project OpenProj.	<a href="#">CPAL</a>
	<a href="#">ProjeQtOr</a>	ProjeQtOr is a collaborative and free open source project management software. It's a tool designed to be a Project Organizer as a Rich Internet Application. Web mode, once installed, you can work from the web browser.	<a href="#">AGPL-3.0</a>
	<a href="#">Qex Studio</a>	Software with a data base for cost analysis and estimate.	<a href="#">GPL-3.0</a>

Facility Management [edit](#)

Icon ▾	Name ▾	Description	L[Collapse] icense ▾
	<a href="#">OpenJardin</a>	OpenJardin is a free open source software for the management of a permaculture oriented garden (available languages: Français-Italiano-English). It allows interactive management of crop plots, with annual planning and crop rotation .	<a href="#">GPL-3.0</a>
	<a href="#">openMAINT</a>	openMAINT is the application for the management of mobile assets, plants and technical devices, furniture, etc., and the related logistical, economical and maintenance activities, scheduled and breakdown ones.	<a href="#">AGPL-3.0 &amp; GPL-3.0</a>
	<a href="#">Vi-Sense</a>	Vi-Sense is a project that visualizes data of heating systems in a 3D model of the building they're installed in. Technicians or system administrators get an overview of all sensors located in a building, can take a closer look at the measured values of these sensors, and get information about data anomalies that indicate potential errors. The combination of the 3D representation of buildings and the visualization of measured values in a timeline makes it possible to perform detailed analyses of error sources such as the failure of heating or pump systems. In addition, sensor states in the building model are supported by color highlighting, which ensures a quick orientation and an intuitive overview.	<a href="#">MIT</a>

Software Development

