



[Watch Webinar Recording Here](#)

How to Enhance Building Decision-Making Processes Through BIM

Thursday, 19 May 2022 | Technical Topic Webinar

Mrs. Karoline Figueiredo | EIT Lecturer

We are dedicated to ensuring that you receive a world-class education and gain skills that you can immediately implement in the workforce.



Engineering Specialists

EIT is one of the only institutes in the world specializing in Engineering. We deliver professional certificates, diplomas, advanced diplomas, undergraduate and graduate certificates, bachelor's and master's degrees, and a Doctor of Engineering.



Industry Oriented Programs

Our programs are designed by industry experts, ensuring you graduate with cutting-edge skills that are valued by employers. Our program content remains current with rapidly changing technology and industry developments.



World-Class Australia Accredited Education

Our vocational programs and higher education degrees are registered and accredited by the Australian Government. We have programs that are also recognized under three international engineering accords.



Industry Experienced Lecturers

Our lecturers are highly experienced engineers and subject specialists with applied knowledge. The technologies employed by EIT, both online and on-campus, enable us to source our lecturers from a large, global pool of expertise.



Unique Delivery Model

We deliver our programs via a unique methodology that makes use of live and interactive webinars, an international pool of expert lecturers, dedicated learning support officers, and state-of-the-art technologies such as hands-on workshops, remote laboratories, and simulation software.

Agenda

1	Welcome and Introduction
2	What BIM is
3	BIM Dimensions
4	Building Life-cycle
5	Enhancing Building Decision-Making Processes
6	The advantages of BIM solutions
7	Conclusion and Q&A



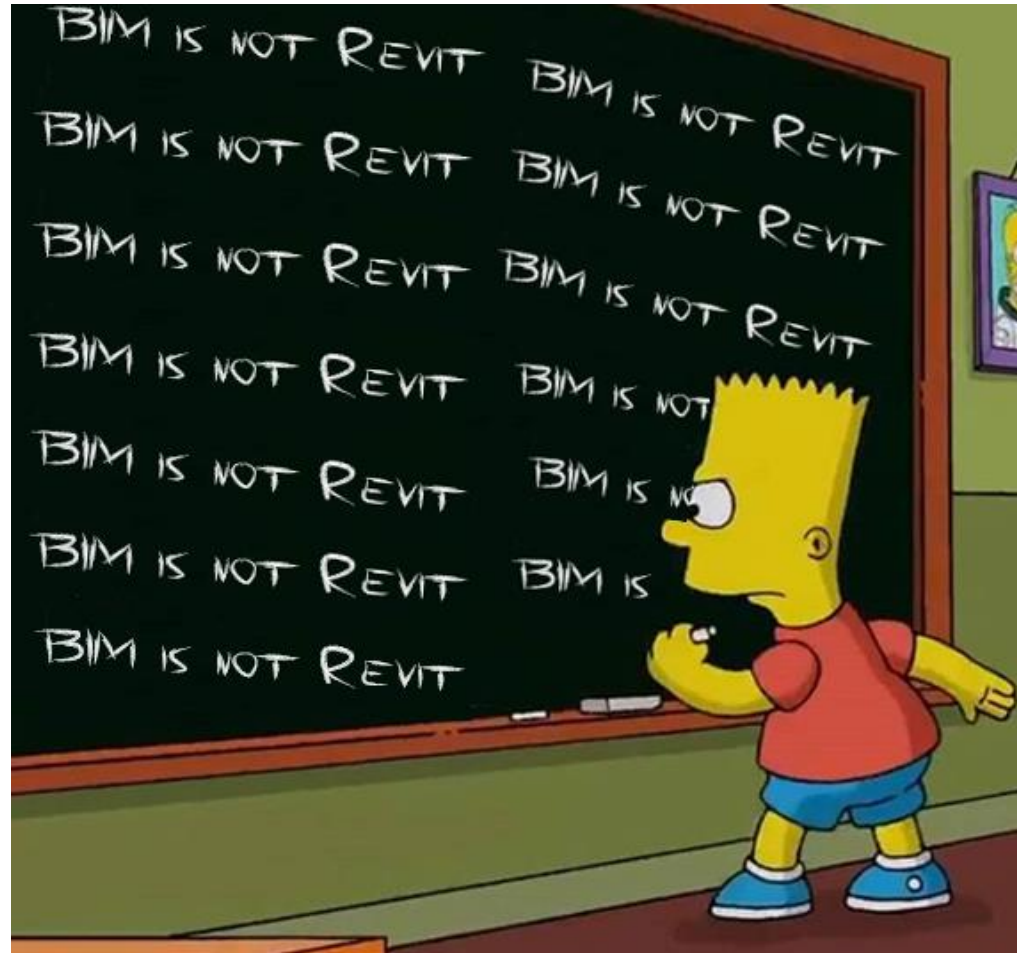


Karoline Figueiredo

Karoline Figueiredo holds a bachelor's degree in Civil Engineering and a Master's degree in Environmental Engineering, both from the Federal University of Rio de Janeiro, Brazil. She was a Visiting Researcher at Universitat Rovira i Virgili, Spain, and at Western Sydney University, Australia, and in both situations, she developed research about sustainable construction. She is currently a doctoral candidate, and her research focuses on improving the selection of construction materials in order to achieve a smart and sustainable built environment through the integration of the Building Information Modelling (BIM) methodology and Blockchain. She has expertise in Sustainable Construction and has developed several projects related to Smart Buildings and BIM applications. She is a lecturer in a postgraduate course at the Federal University of Rio de Janeiro, Brazil, responsible for planning and coordinating a unit about Building Information Modelling (BIM), and a lecturer at the Engineering Institute of Technology (EIT), Australia. She is currently working as a Book Editor for Woodhead Publishing – Elsevier, developing a book named “Materials selection for Sustainability in the Built Environment: Environmental, Social, and Economic aspects”, to be published at the beginning of 2023.

What BIM is

Just a reminder!



What BIM is

BIM Authoring



3D Visualisation & VR



3D Model Viewer - Mobile



Clash Detection - Coordination



Productivity



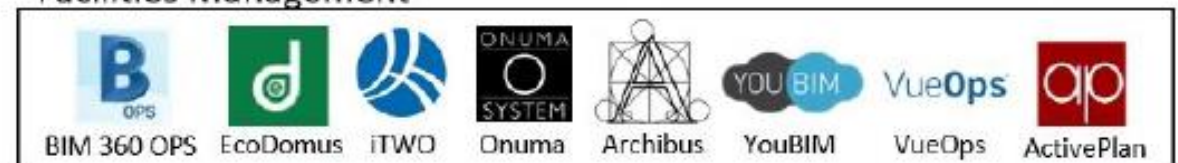
Construction Sequencing



Costing



Facilities Management



What BIM is

Building
Information
Modelling



What BIM is

Building Information Modelling



What BIM is



“Build it first as a digital model, and see that everything works”

What BIM is



“Building Information Modelling (BIM) is one of the most promising developments in the architecture, engineering, and construction (AEC) industries. With BIM technology, one or more accurate virtual models of a building are constructed digitally. They support design through its phases, allowing better analysis and control than manual processes. When completed, these computer-generated models contain precise geometry and data needed to support the construction, fabrication, and procurement activities through which the building is realised.”

**Excerpt from the BIM handbook, 2nd edition (2011),
written by Chuck Eastman et al.**

What BIM is

QUANTIFICATION AND DOCUMENTATION



Automatic and accurate quantification of materials, automated budget, documentation of all information, etc.

DESIGN AND VISUALISATION



Testing various types of solutions for buildings, presenting a complete spatial view, etc.

COLLABORATION AND COMPATIBILIZATION



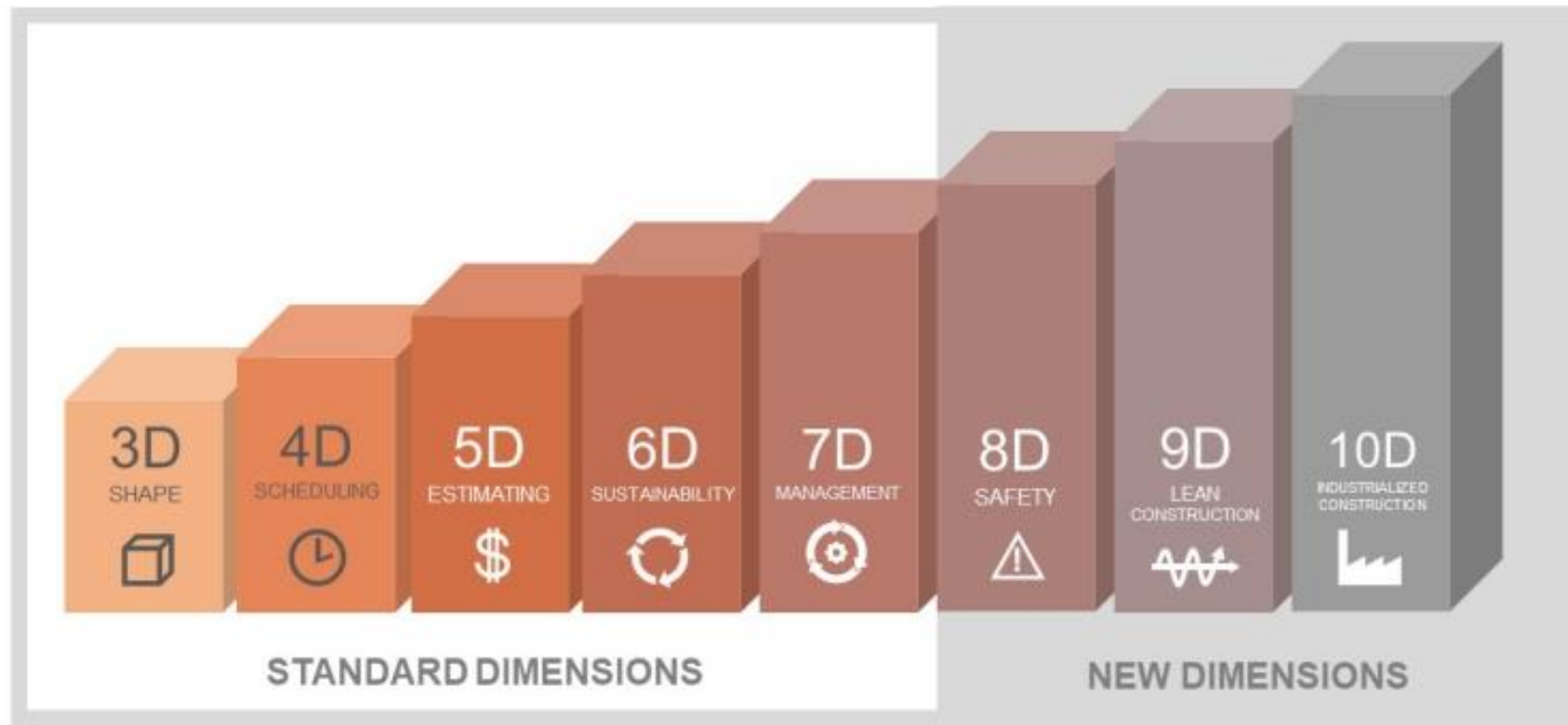
Multidisciplinary participation incorporated, where everyone has a global understanding of the project. Verification of model incompatibility, identifying overlaps, conflicts, errors and omissions.

What BIM is

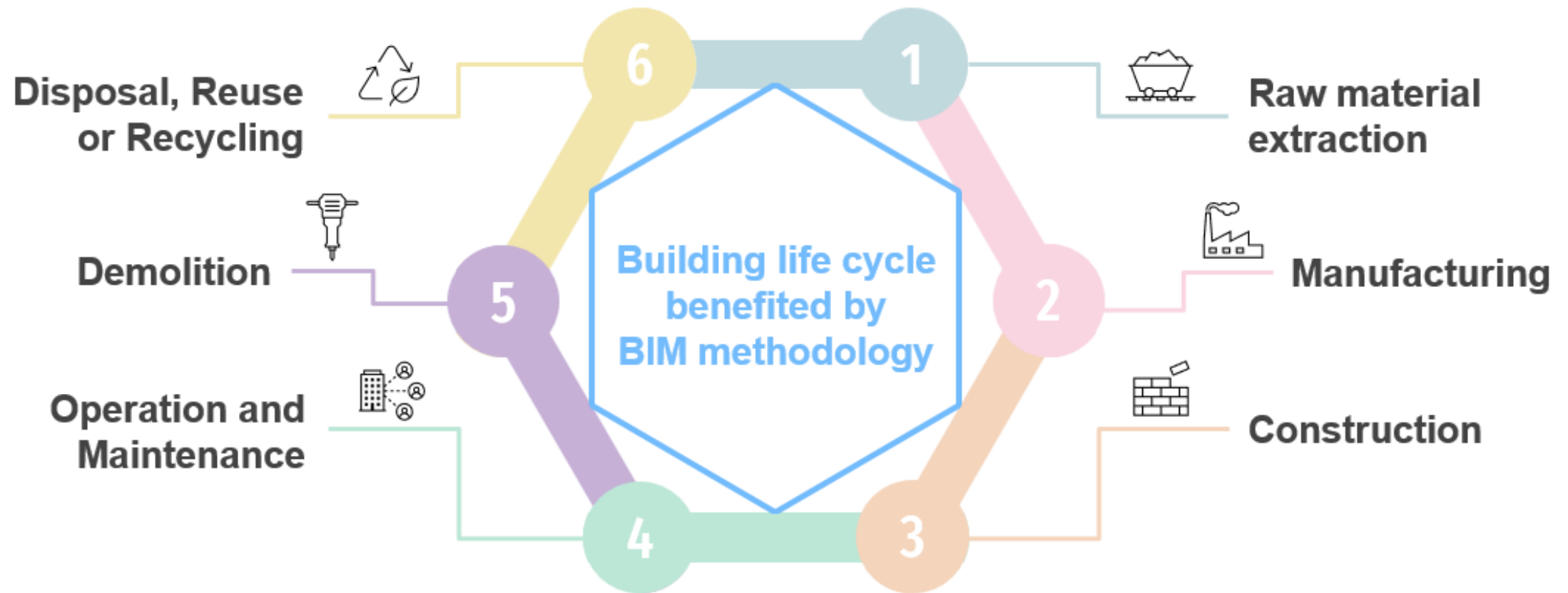


BIM Dimensions

DIMENSIONS OF BIM



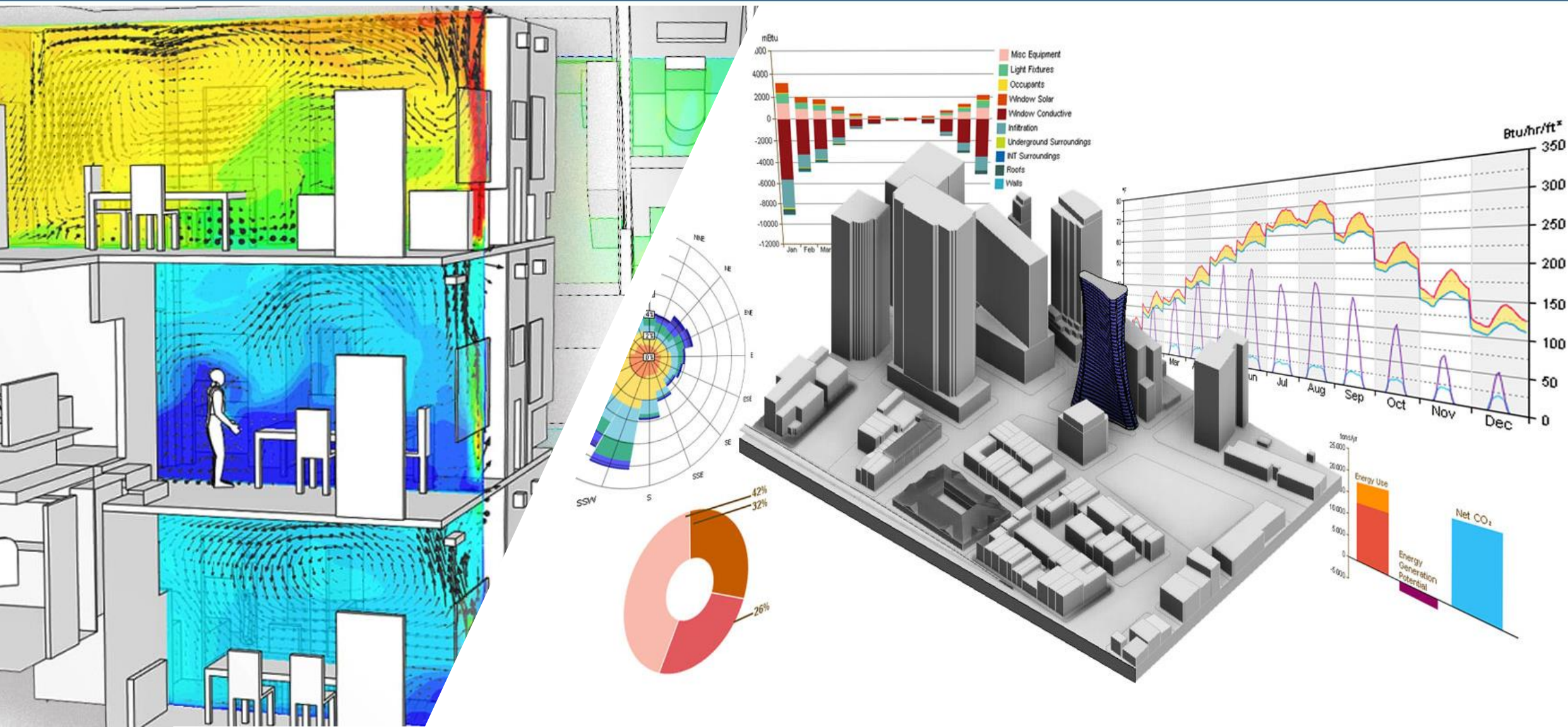
Building Life-cycle



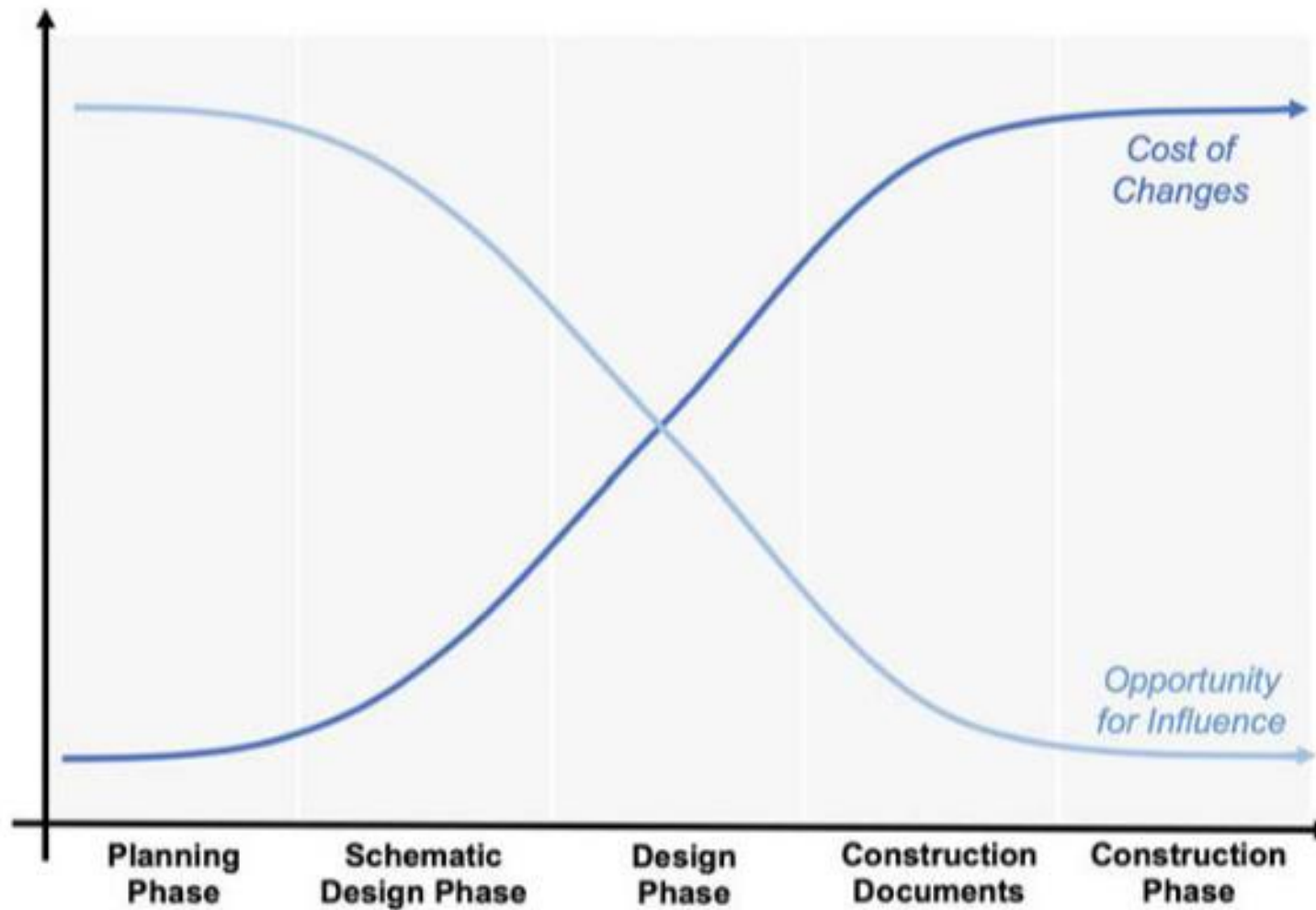
Enhancing Building Decision-Making Processes



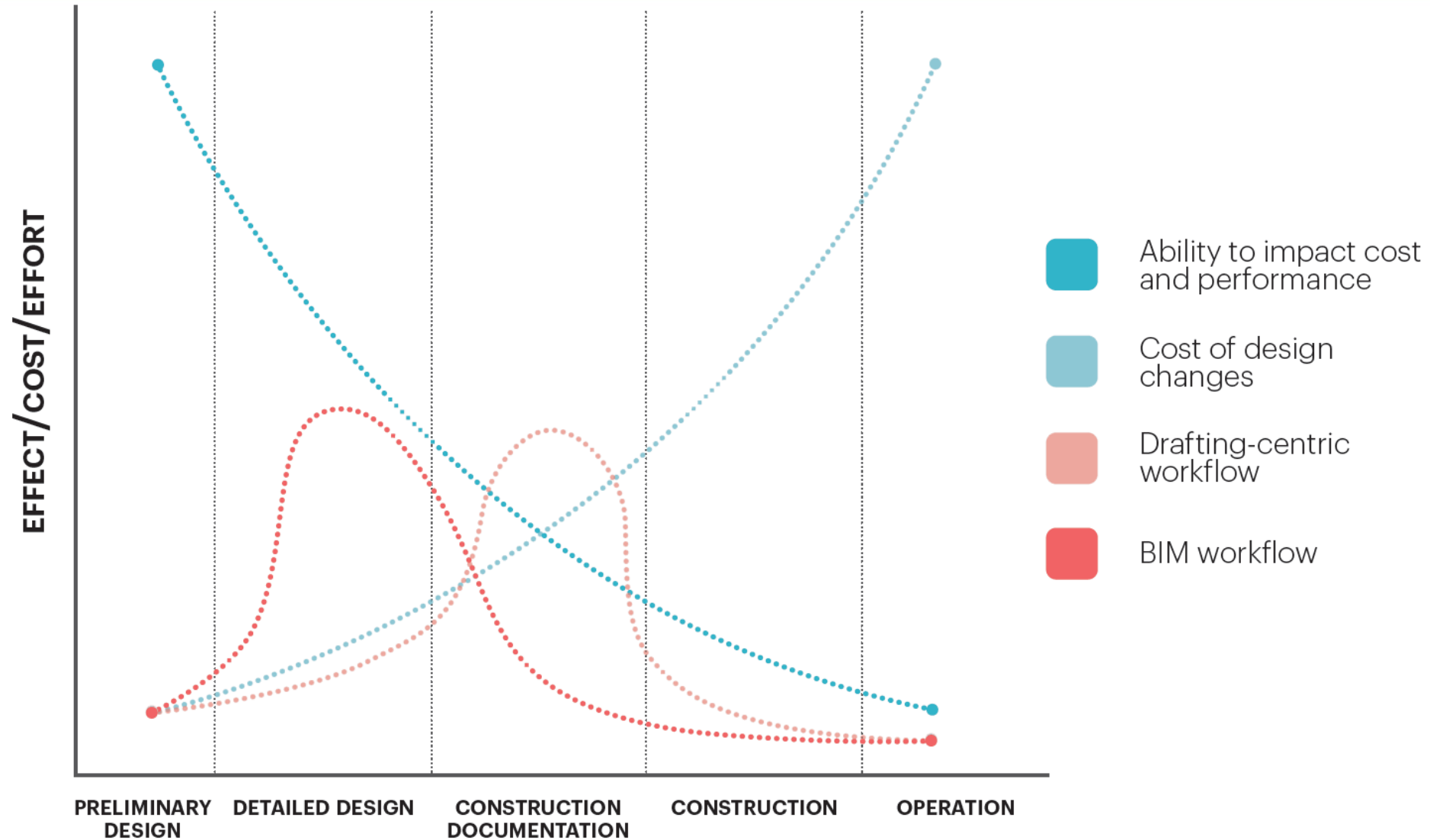
Enhancing Building Decision-Making Processes



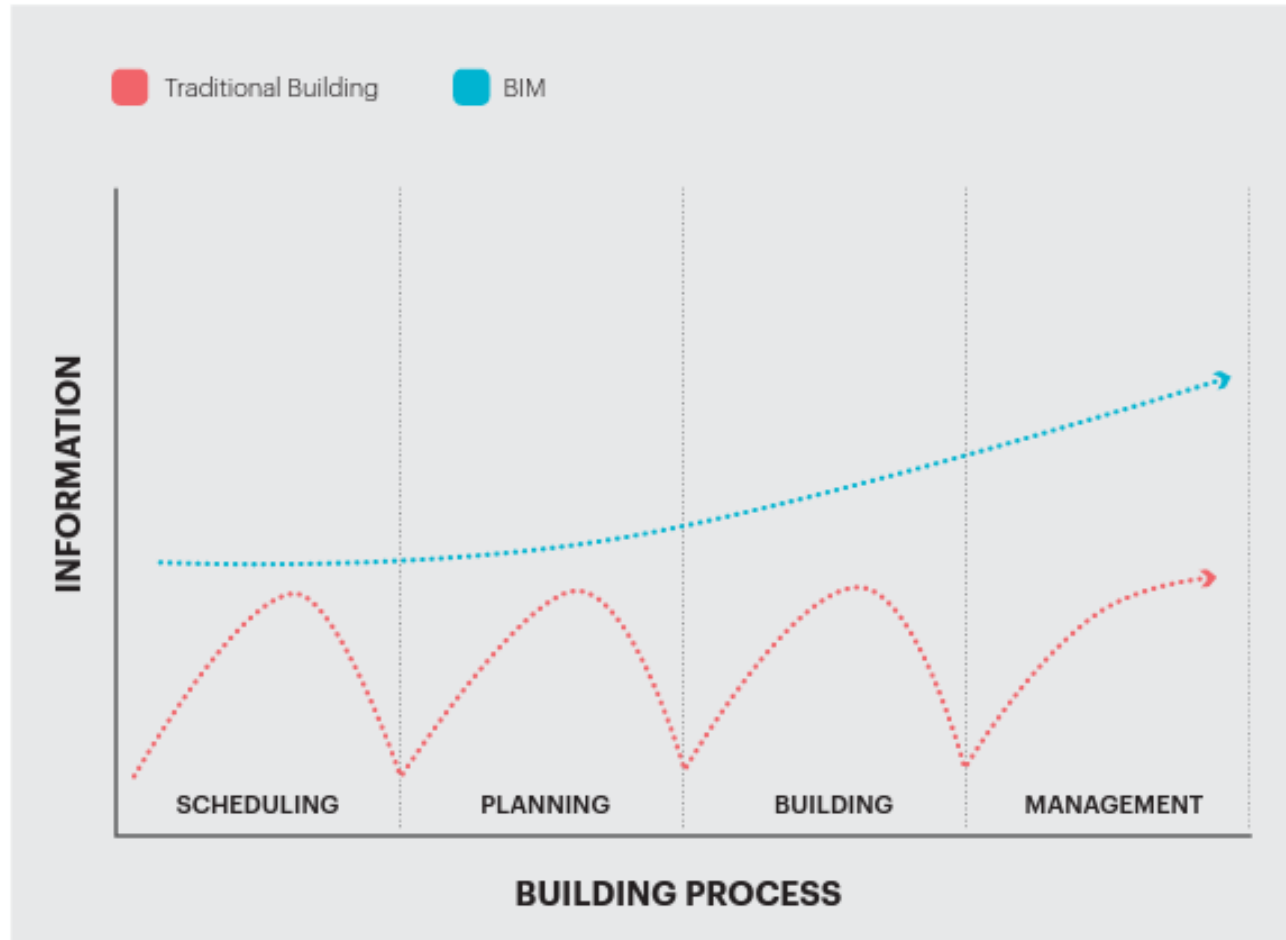
Enhancing Building Decision-Making Processes



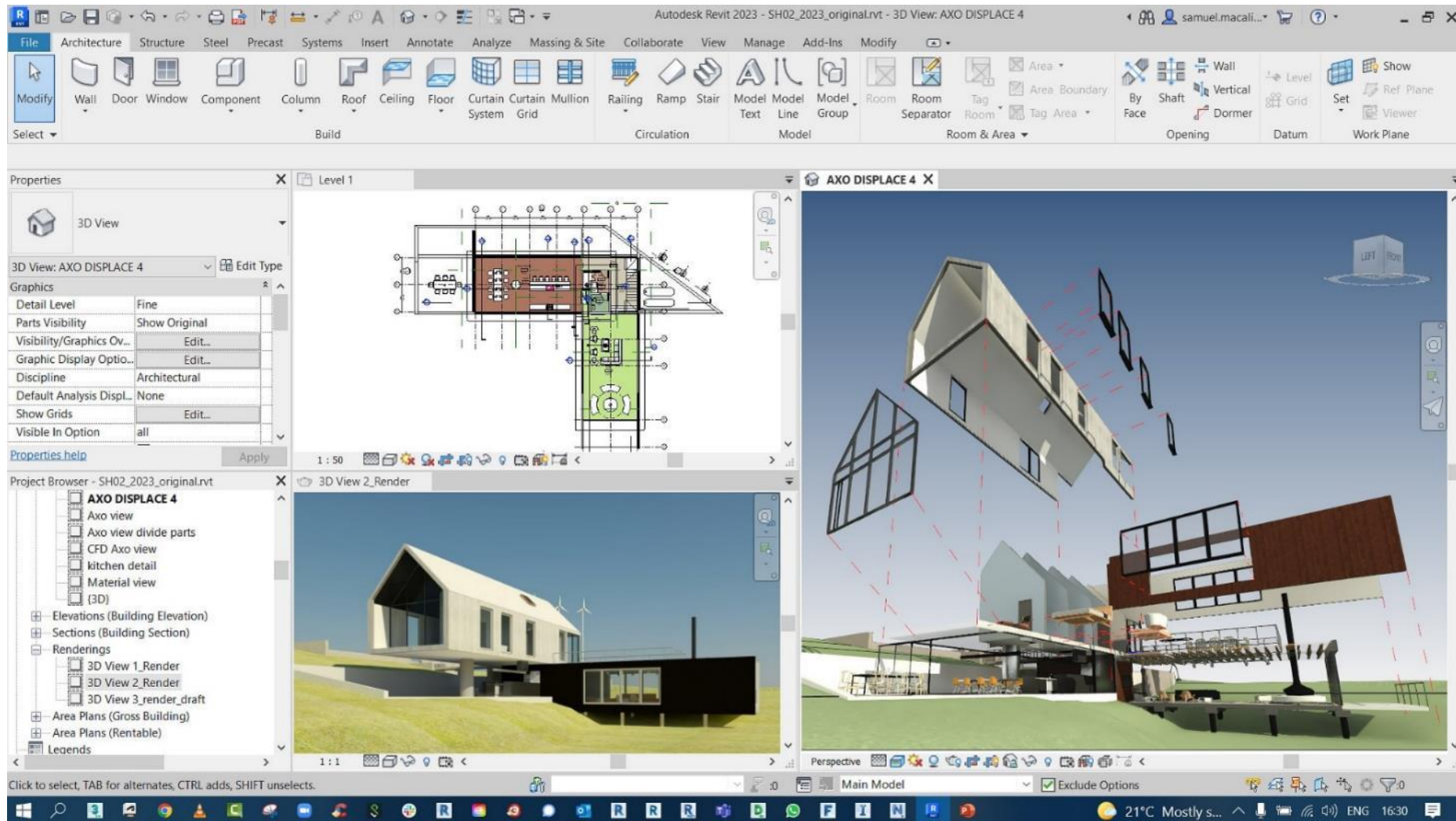
Enhancing Building Decision-Making Processes



Enhancing Building Decision-Making Processes



The advantages of BIM solutions



The advantages of BIM solutions

Pre-Construction

- Different project alternatives can be tested quickly;
- Analysis of costs, human resources, energy, acoustics, lighting, impacts, etc;
- Improvement in the decision-making process;
- Work done collaboratively, without loss of information;
- Design interference between disciplines corrected before construction.

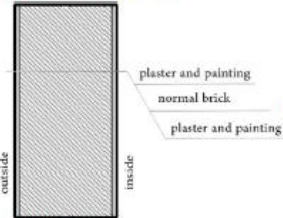
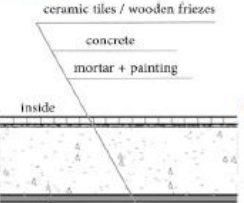
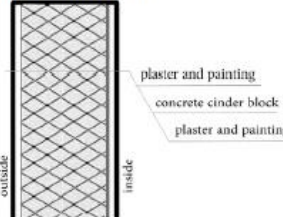
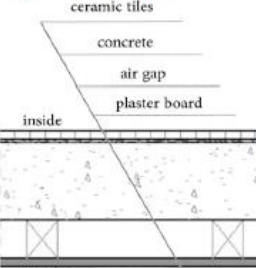
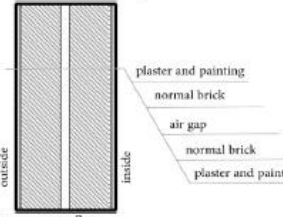
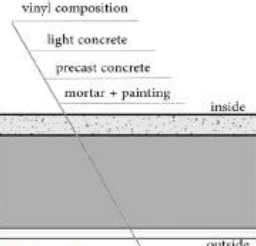
During Construction

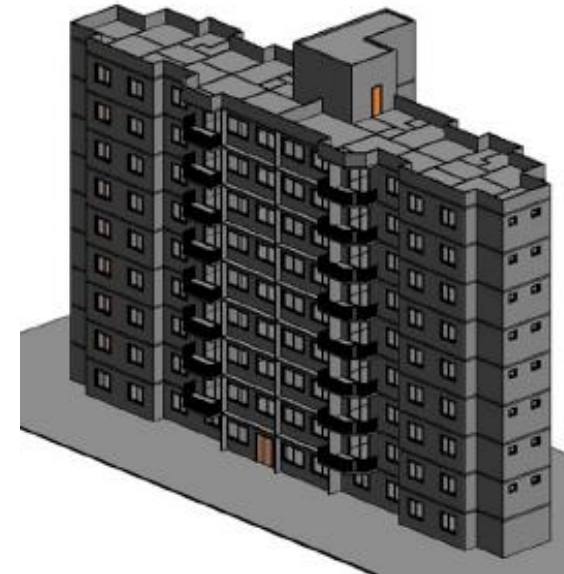
- Constantly monitor project progress in real-time;
- Safer construction, with hazards predicted in advance;
- If changes need to be made during the construction work, the project can be easily updated, and modifications can be tested on the digital model;
- Use the BIM model linked to virtual reality to help monitor the work.

Post-Construction

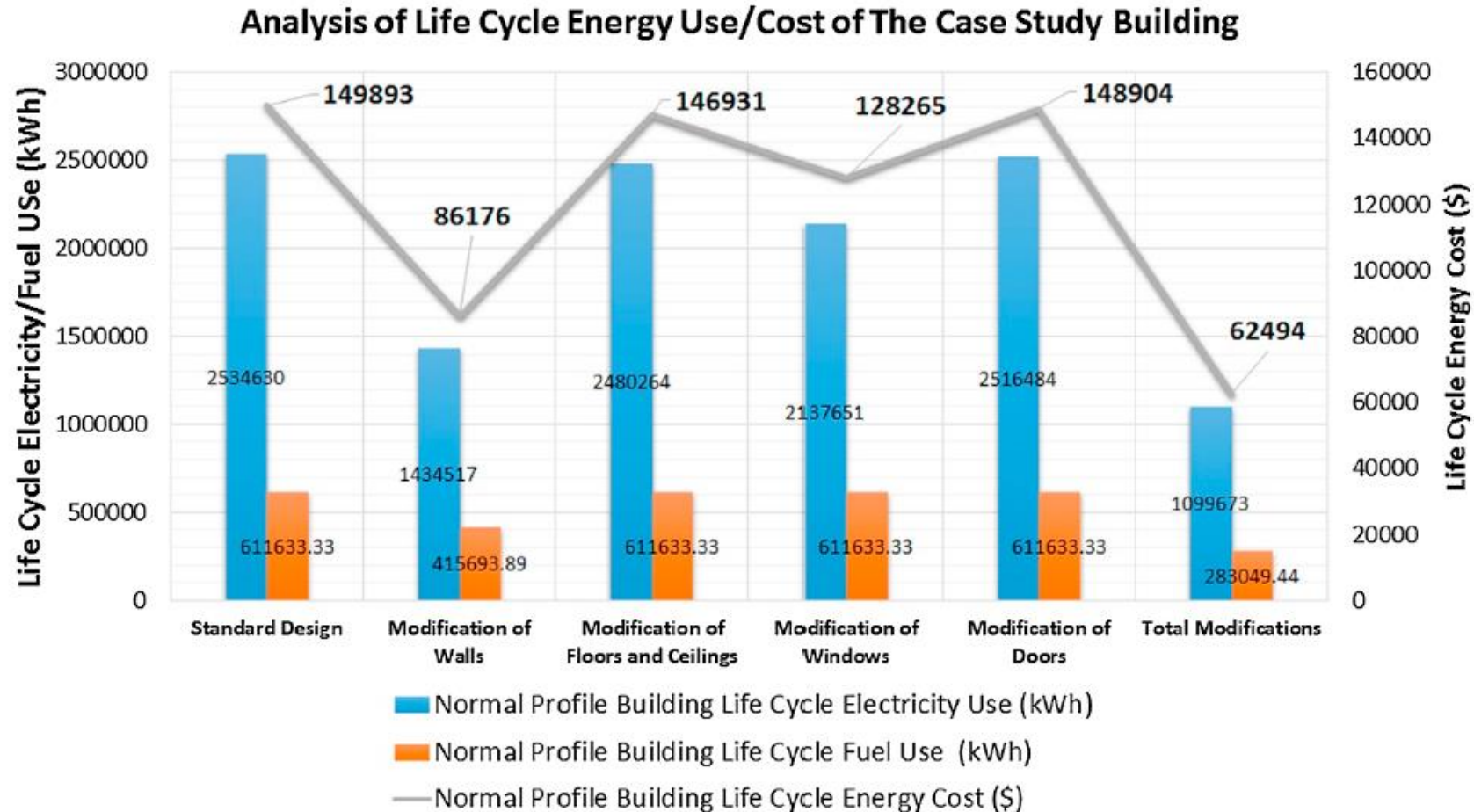
- Project evaluation made quickly, as all information related to all phases of the project is centralised in the same digital model;
- Decisions made in other phases can be audited, and lessons applied to future projects can be generated;
- The BIM model can be fed with information regarding the use and maintenance of the building so that the digital model can be used as a tracking tool.

The advantages of BIM solutions

	Exterior walls	Floors
Standard Design	<p>Ceramic masonry block 9 cm × 19 cm × 19 cm</p>  <p>U-Value: 2.48 W/m² K</p>	<p>Concrete floor with mixed of Wooden friezes and ceramic tiles</p>  <p>U-Value: 2.64 W/m² K</p>
Material Alternative 1	<p>Concrete block wall</p>  <p>U-Value: 2.22 W/m² K</p>	<p>Suspended concrete floor</p>  <p>U-Value: 2.37 W/m² K</p>
Material Alternative 2	<p>Double brick cavity wall</p>  <p>U-Value: 1.50 W/m² K</p>	<p>Precast concrete platform slab</p>  <p>U-Value: 1.98 W/m² K</p>

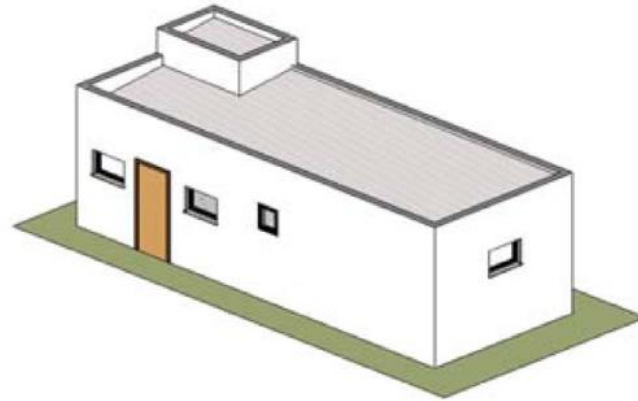


The advantages of BIM solutions

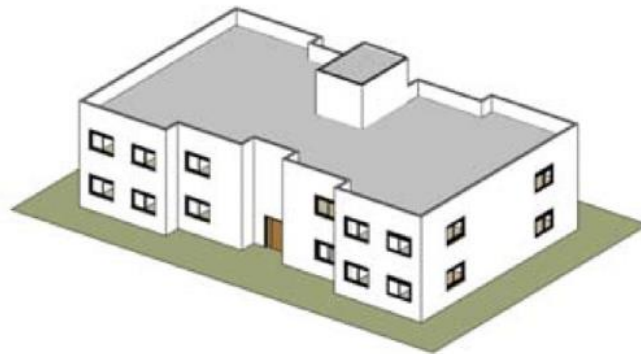


The advantages of BIM solutions

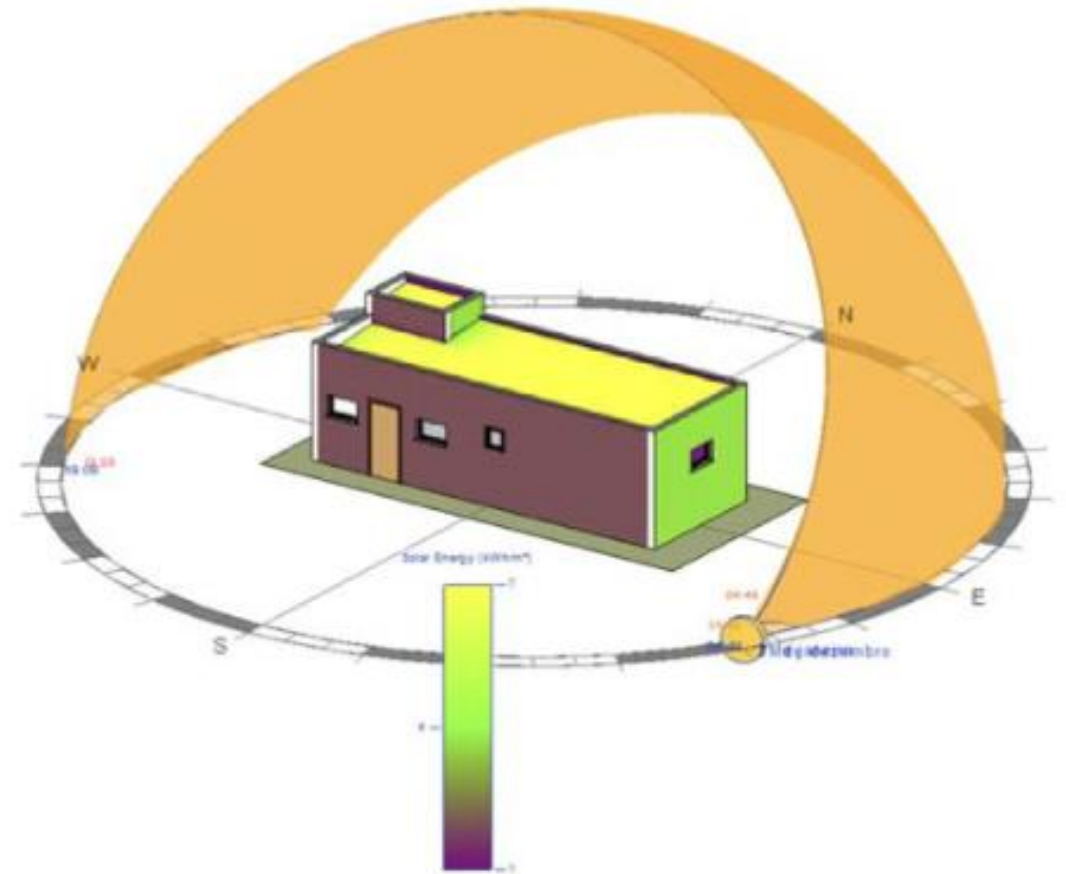
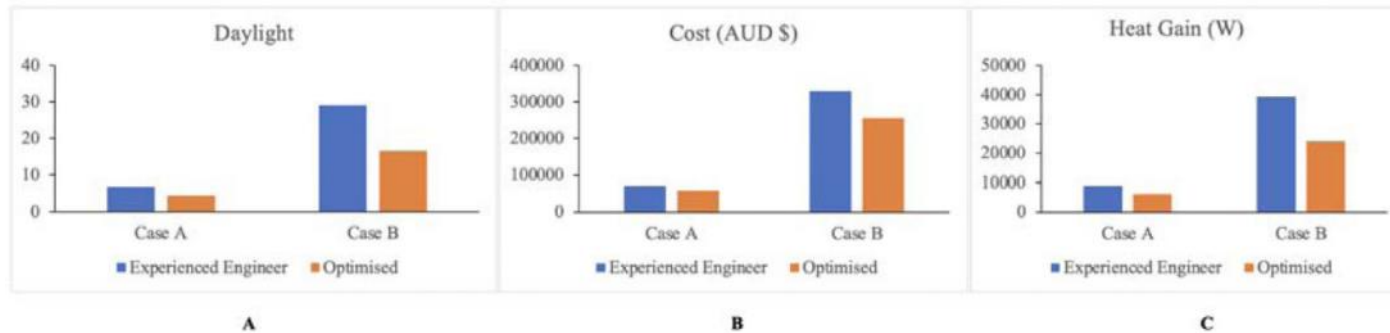
Case A



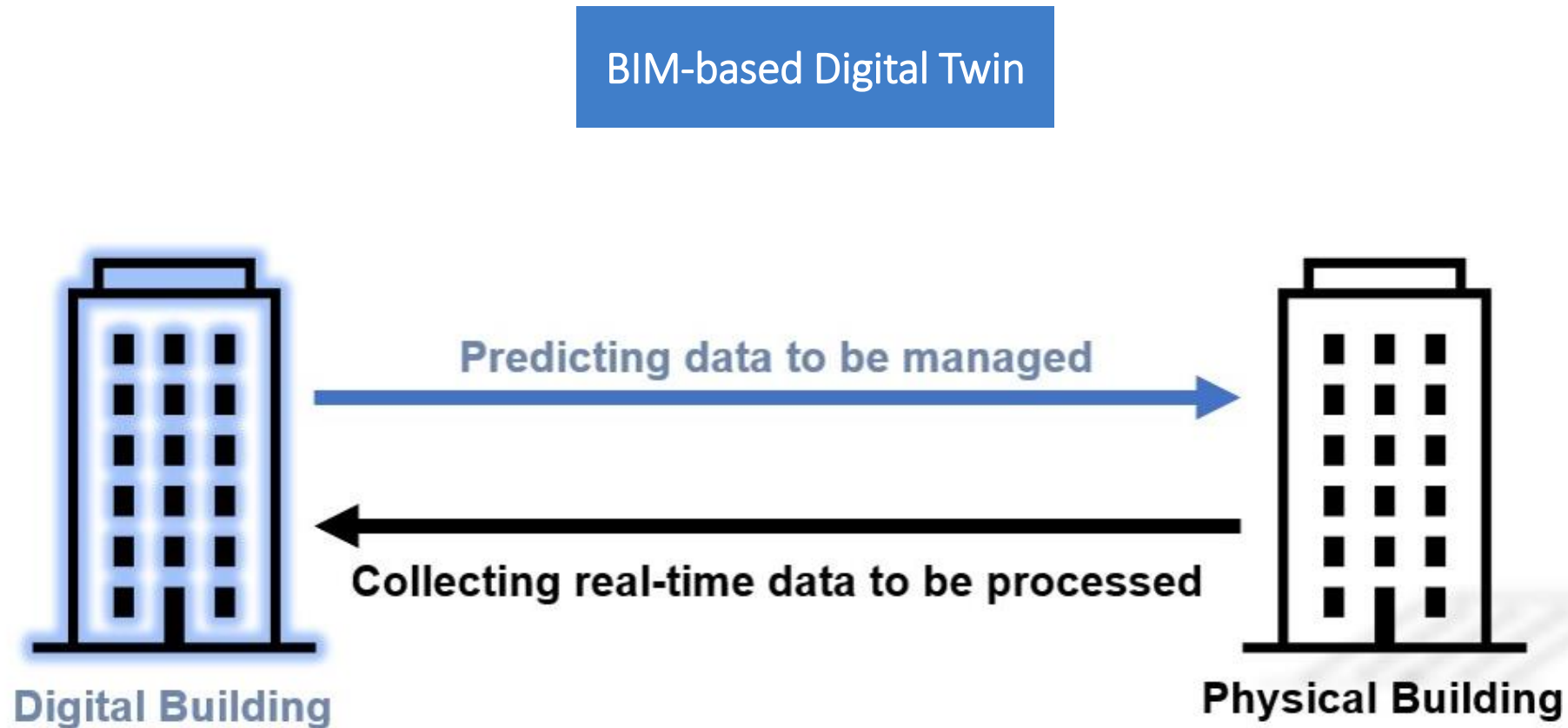
Case B



The advantages of BIM solutions

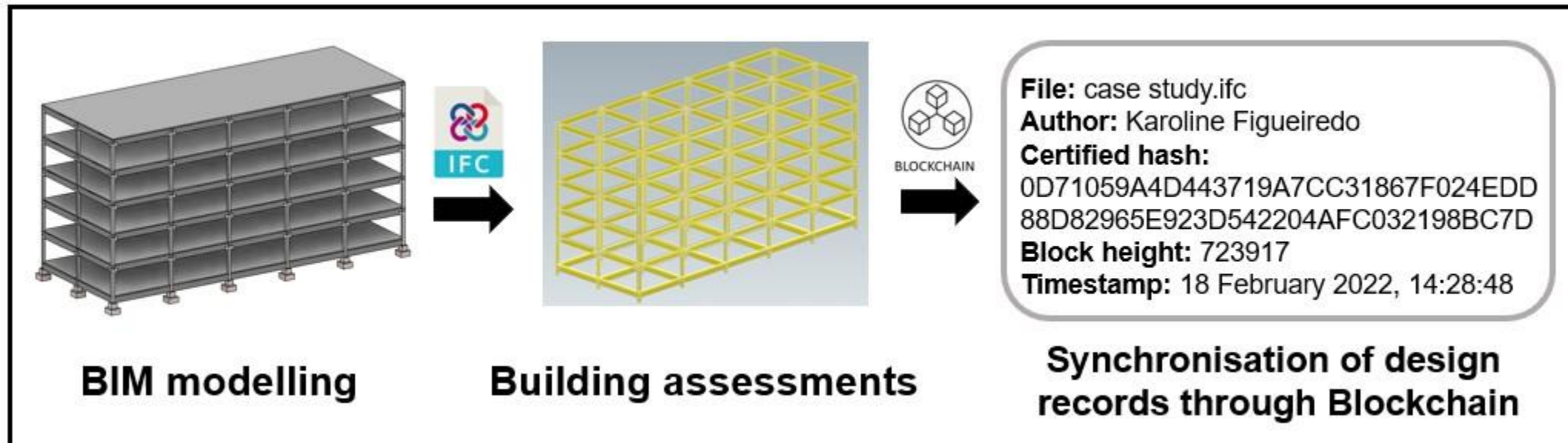


The advantages of BIM solutions



The advantages of BIM solutions

BIM-Blockchain Integration



Conclusion



Conclusion

A black and white photograph of a person sitting at a desk, viewed from behind. They are using a laptop. The laptop screen displays two images of construction sites. The top image shows a crane lifting a large concrete slab. The bottom image shows a construction site with a truck and building structures. A blue horizontal bar is overlaid across the middle of the image, containing the text 'Thank you!'.

Thank you!

Upcoming Technical Webinars



EIT Engineering Institute of Technology

Free Webinar

The Energy Transition - How Will It Evolve?

Presented by
Dr. Lucas Skoufa - EIT Lecturer

3:00PM - 4:00PM (AWST)
Thursday 26 May, 2022

[Register Now](#)

CRICOS Provider Number: 03567C | Higher Education Provider Number: 14008 | RTO Provider Number: 51971



EIT Engineering Institute of Technology

Free Webinar

Introduction to Low Voltage Protective Devices

Presented by Ms. Alexandra Gregory -
EIT Lecturer & Senior Electrical Engineer

3:00PM - 4:00PM (AWST)
Thursday 2 June, 2022

[Register Now](#)

CRICOS Provider Number: 03567C | Higher Education Provider Number: 14008 | RTO Provider Number: 51971



EIT Engineering Institute of Technology

Free Webinar

Current Trends on Concrete as Construction Material to Capture CO2

Presented by
Dr. Ana Evangelista - EIT Lecturer

3:00PM - 4:00PM (AWST)
Thursday 9 June, 2022

[Register Now](#)

CRICOS Provider Number: 03567C | Higher Education Provider Number: 14008 | RTO Provider Number: 51971



EIT Engineering Institute of Technology

Free Webinar

The Importance of Considering the Three Sustainable Pillars in Construction

Presented by
Mrs. Karoline Figueiredo - EIT Lecturer

7:00PM - 8:00PM (AWST)
Thursday 23 June, 2022

[Register Now](#)

CRICOS Provider Number: 03567C | Higher Education Provider Number: 14008 | RTO Provider Number: 51971

Upcoming webinars: www.eit.edu.au/news-events/events/

Upcoming EIT Courses



We have a range of courses in Civil, Electrical, Mechanical and Industrial Automation Engineering.

Course Type	Intakes/start date
Professional Certificate of Competency courses (short courses)	Throughout the year
Diploma & Advanced Diploma courses	Throughout the year
Undergraduate Certificates	25 July 2022
Bachelor of Science degrees	25 July 2022
Graduate Certificates	27 June 2022
Master of Engineering degrees	27 June 2022
Doctor of Engineering	25 July 2022
On Campus Bachelor's, Master's and Doctor of Engineering programs	1 August 2022

See our full course schedule here: www.eit.edu.au/schedule/

Certificate of Attendance

To receive your digital certificate of attendance for participating in this webinar, please fill out the form and survey here (or scan the QR Code):

qrco.de/bd2LKW

Please note that Certificate of Attendances will be sent out in the next 1-2 business days.



Q&A

Thank you for attending.

Contact Us:



Website
www.eit.edu.au



Email
webinars@eit.edu.au



Head Office
1031 Wellington Street West Perth
Perth, WA 6005



Courses
<https://www.eit.edu.au/schedule/>



Phone
Inside Australia: 1300 138 522
Outside Australia: +61 8 9321 1702