The skyline’s the limit: The future of architecture

Jane Clancy, Advanced Building Studies
Associate Professor John Sadar, Course Director of Architecture

Building Design

Jane Clancy
Advanced Building Studies

The construction problem….

The construction problem….

The construction problem….

Communication

Client

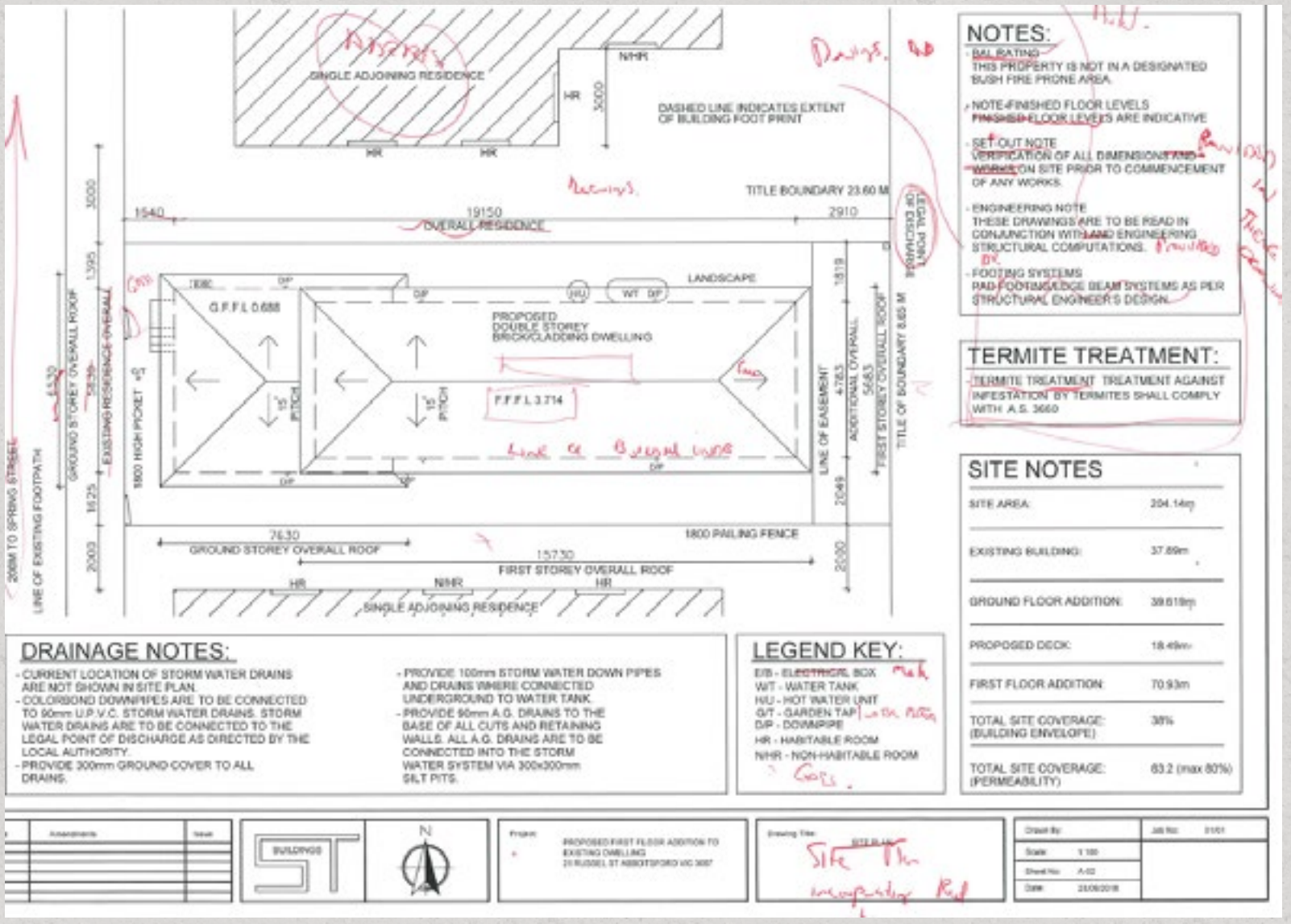
Supply chain

Regulators

The construction **solution**….

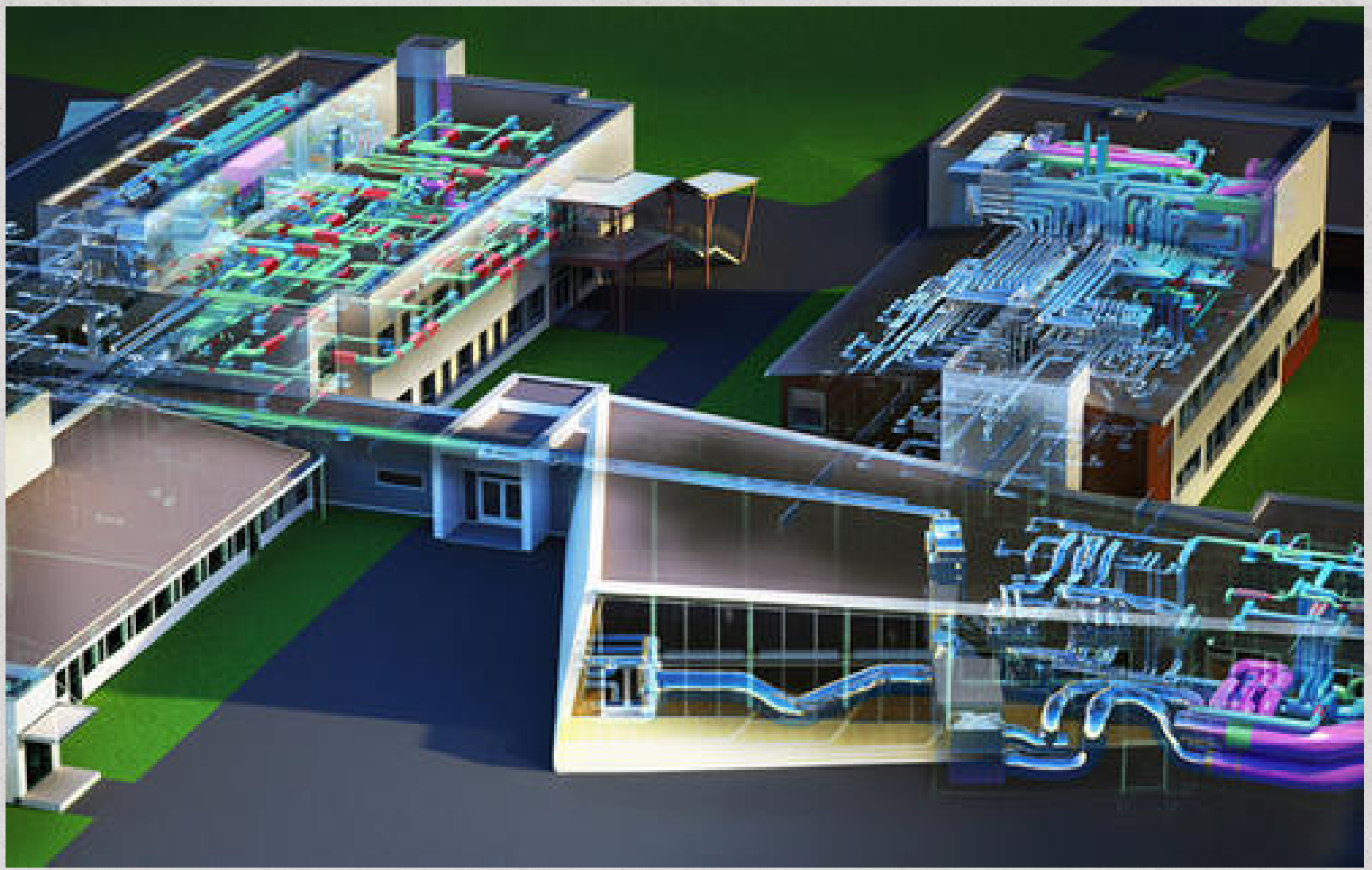
Using technology to improve communication

Building plans: Our core job role



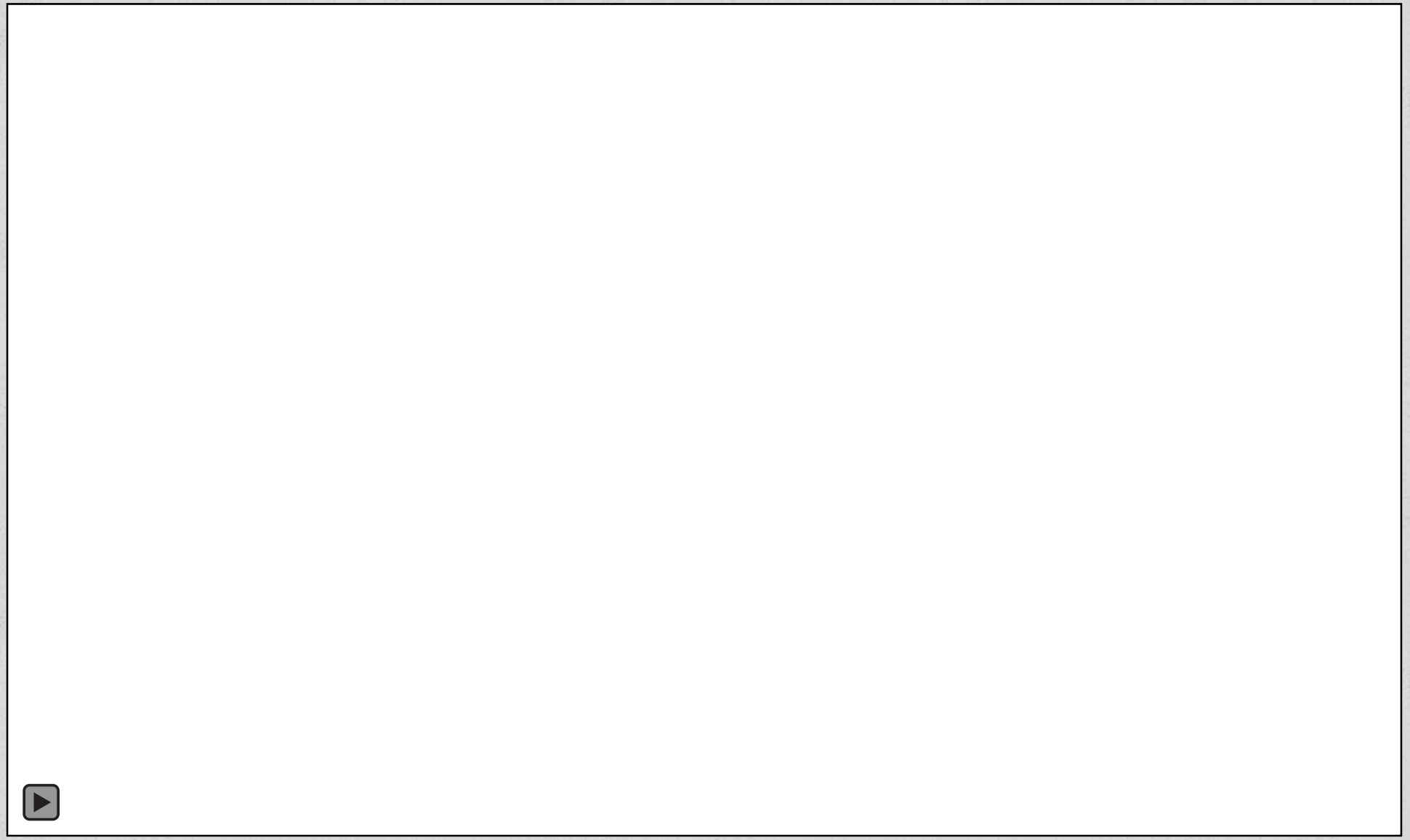
3D modelling: Communication

Complicated communication

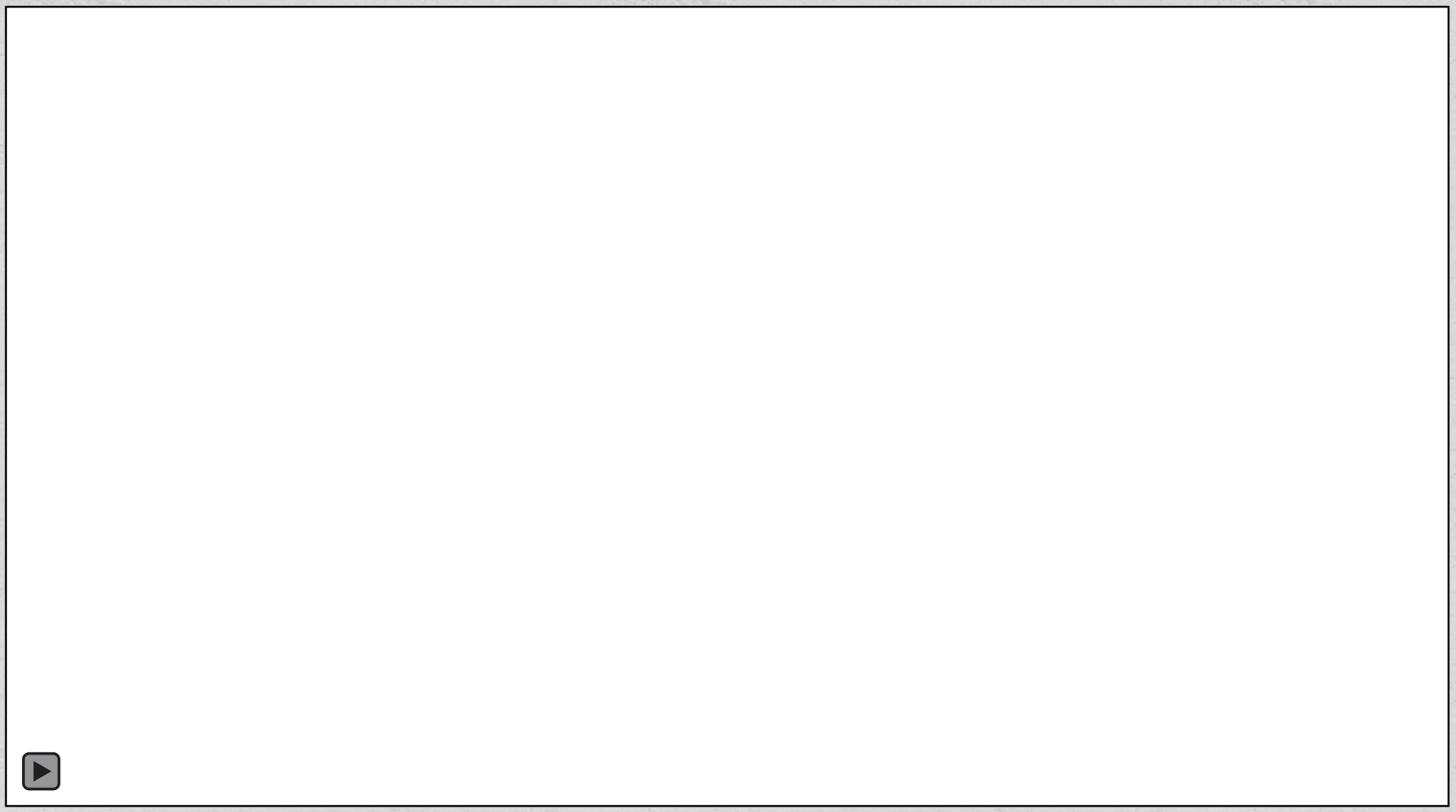


Technological tools: Communication

Technological tools



Technological tools: Drones



Technology: AI

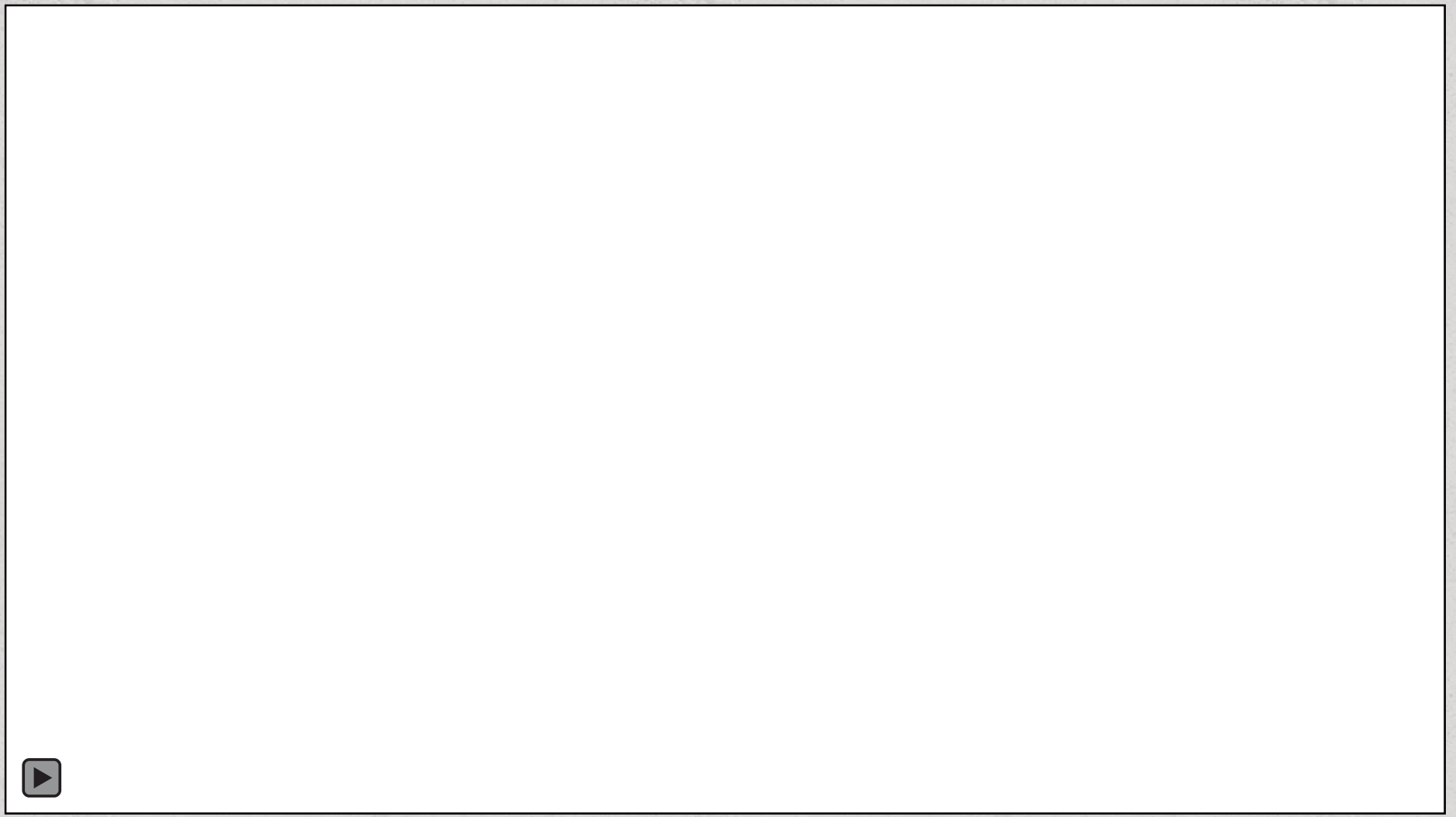
Wait! Are you seriously teaching this?

Are there jobs?

Second year

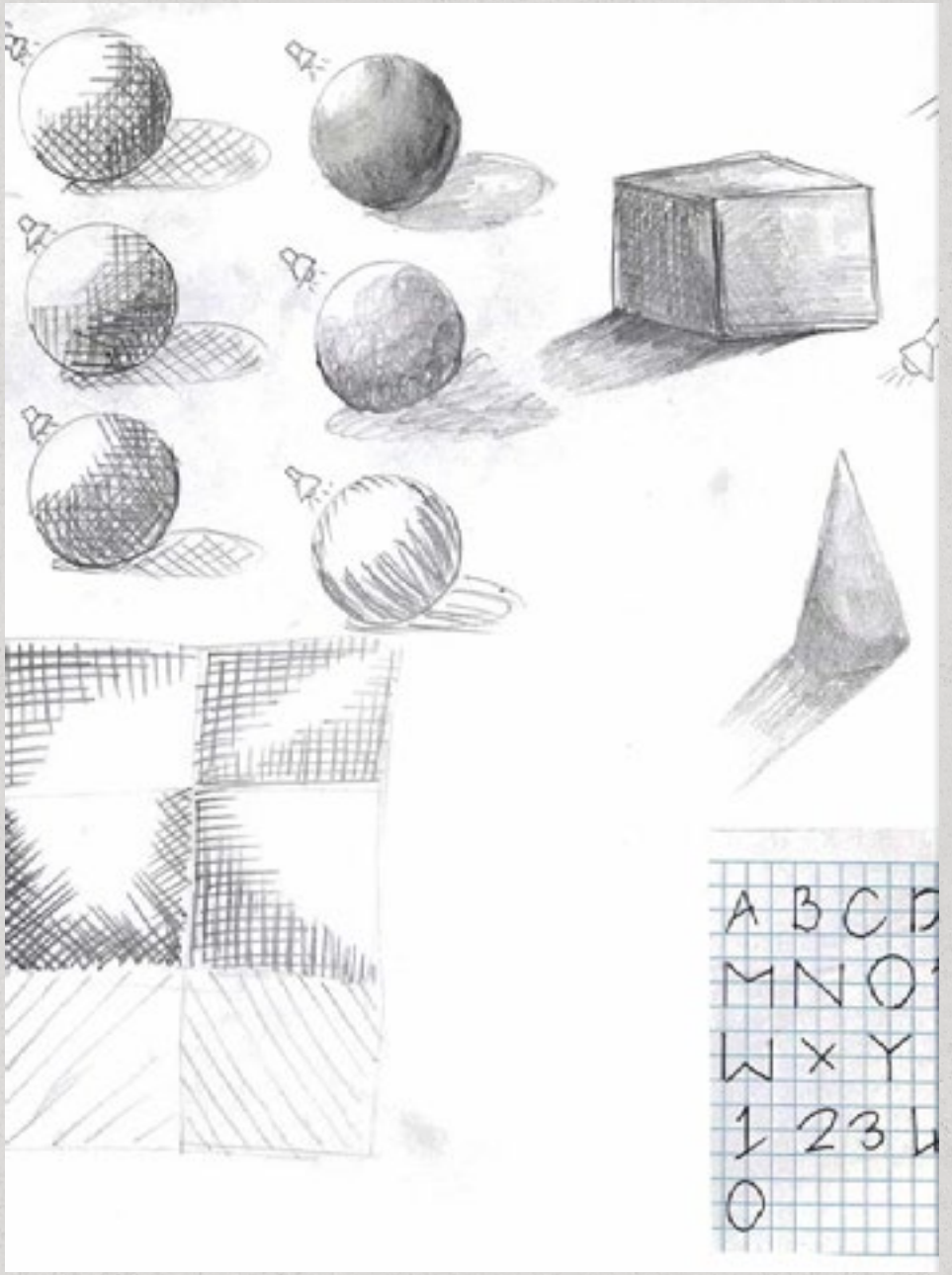
Technological tools: VR

Oculus Rift



Design theory

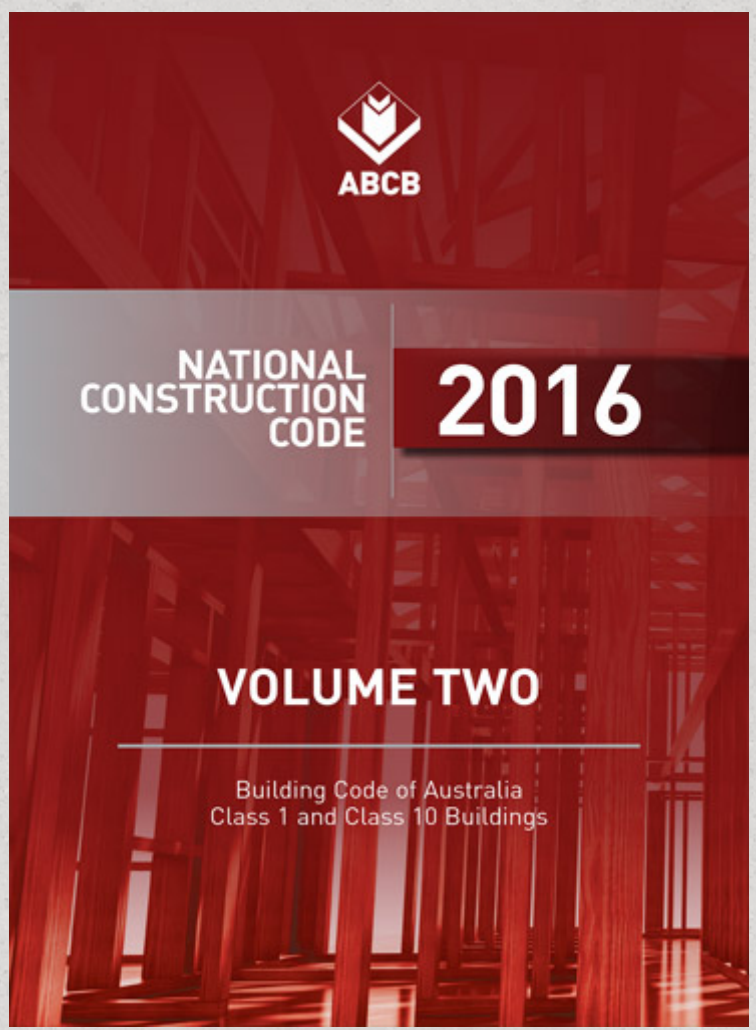
Design theory

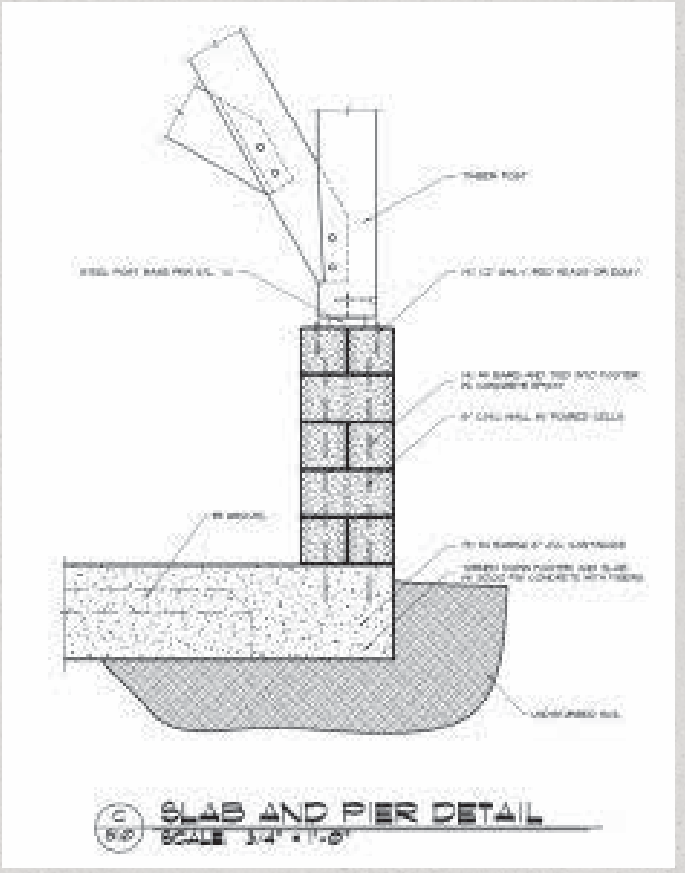


Working drawings

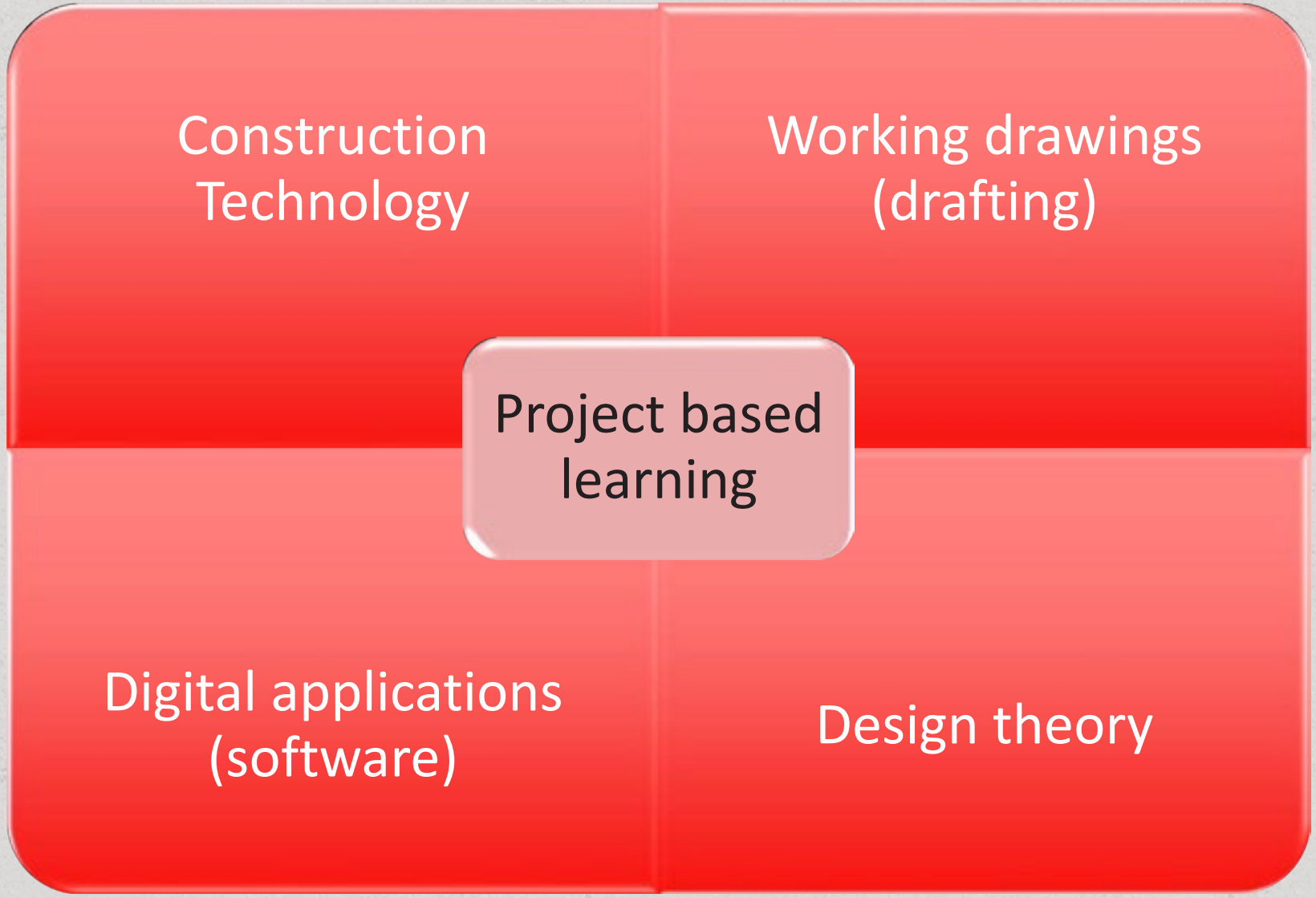
Digital apps: CAD/Revit

Construction technology and legislation





Course structure



Building Design: Key Facts

Advanced Diploma of Building Design (Architectural)

- 2 years full time (3 days per week)
- No ATAR score required

- Pathway to:
  - Employment
  - Contract work
  - Bachelor of Architecture

Thank you

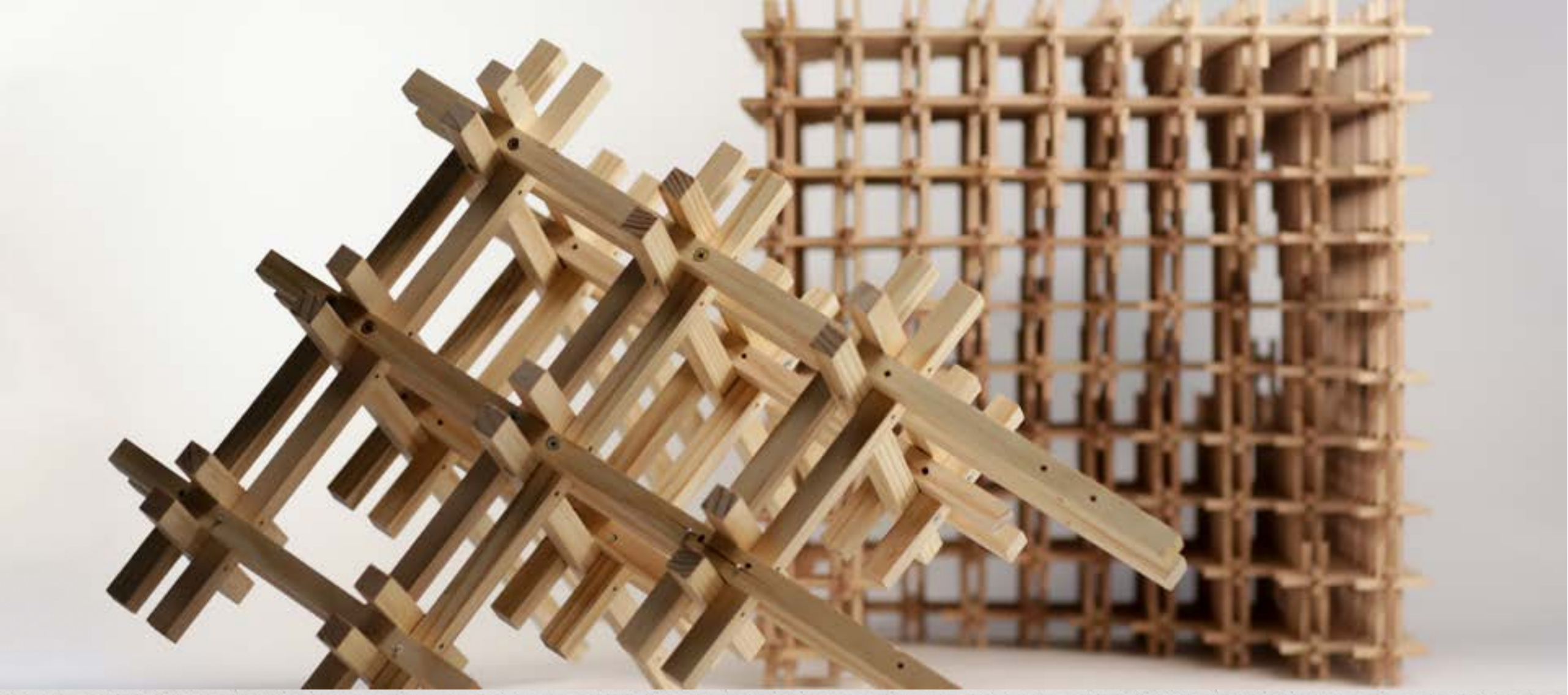
Questions?

Bachelor of Design (Architecture)

Associate Professor John Sadar, Course Director of Architecture

Architecture is about how we imagine, conceptualise, organise, detail and construct our habitat

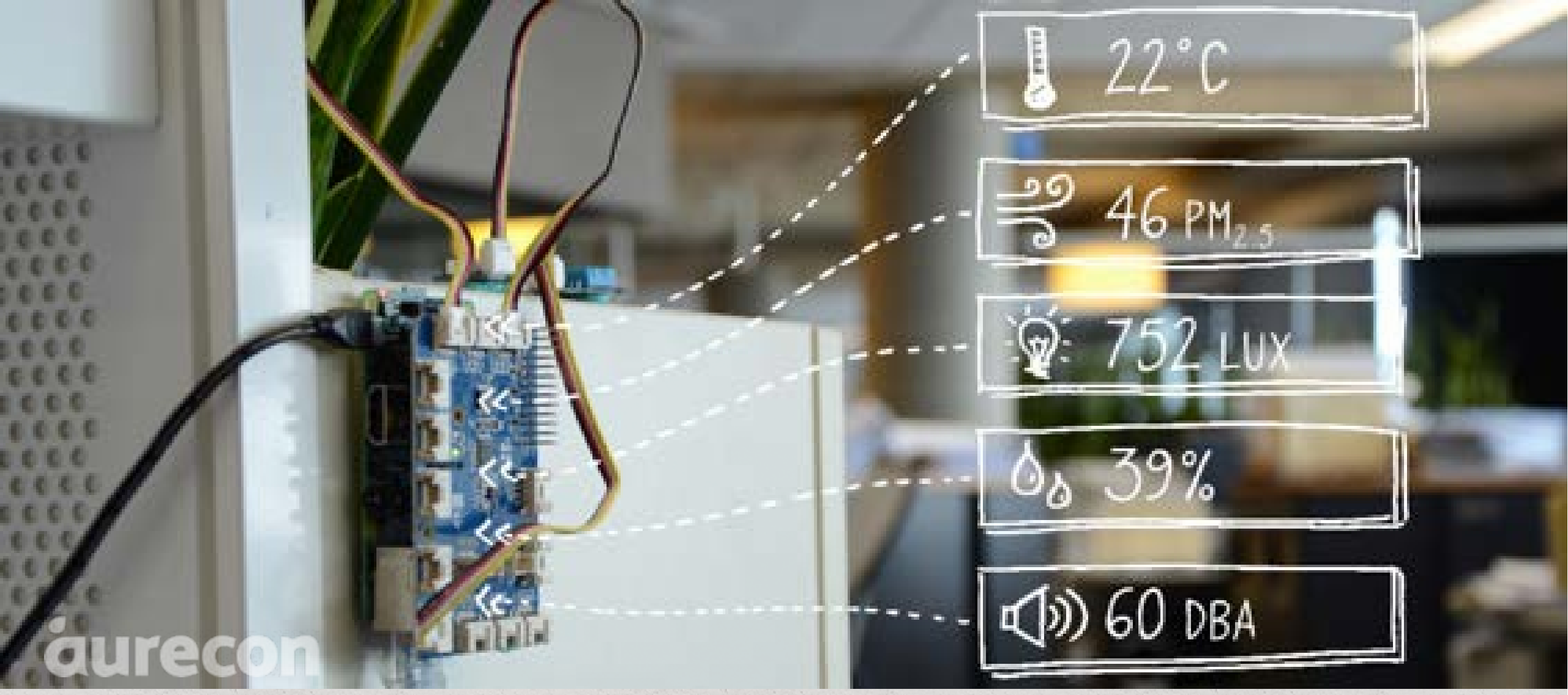
Architecture is concerned with both form and space, process and performance, mass and light, perception and comfort, values and expectations



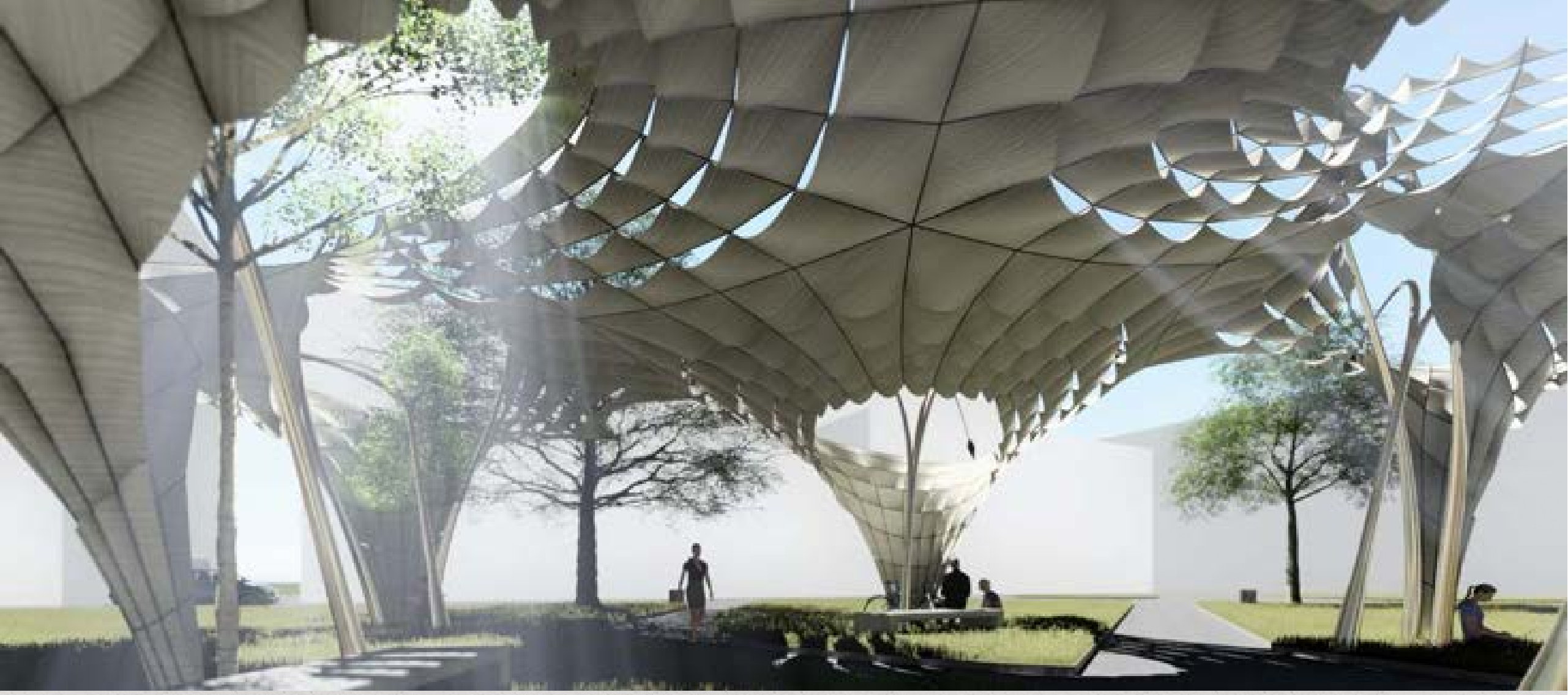
Architects thus must learn
to think at a variety of
scales from the city...

… down to the individual human down to the water molecule

Architects arrange materials in response to the flow of forces and the logistics of construction



Architects think about health and comfort, and how we manage our environments



Architects think in terms of systems

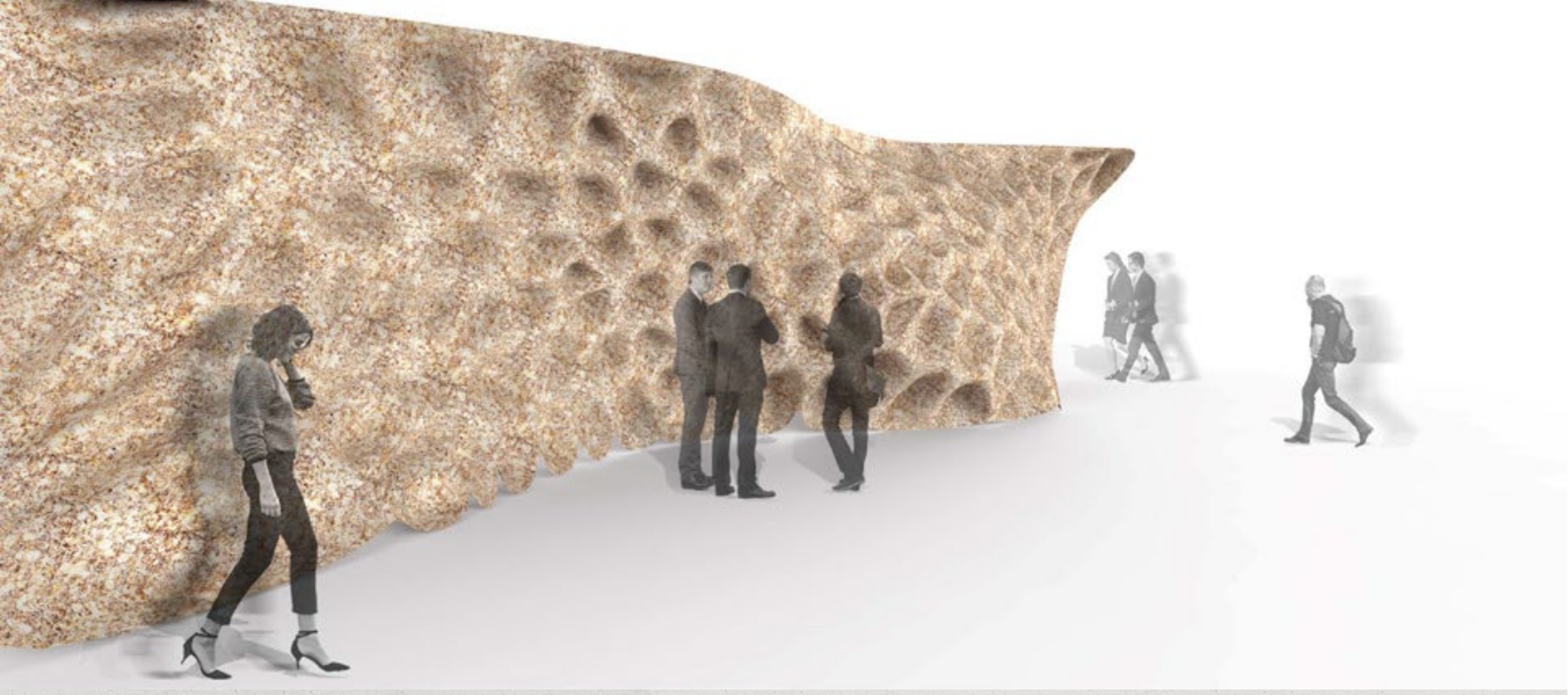
Tooling for bespoke bending of plywood

Architects must also think about processes: how do we build? How do we orchestrate often oppositional forces to create useful and pleasing wholes?

Architects must even think about the materials we use to build

Mycelium study

Intensive Workshop: IaaC GSS Biodigital Futures: From Coding to Cultivating



Architects must think about changing the paradigms of practice

Mycoustic project

Intensive Workshop: IaaC GSS Biodigital Futures: From Coding to Cultivating

Architects work in spaces like this

Architectural Education: 3 + 2 Structure

- Architectural education consists of two parts
- 3 year undergraduate degree
- 2 year postgraduate degree
- Both are needed for the professional qualification
- Education is only one part of professional qualification as an architect
- Professional qualification also requires work experience, an exam and an interview

Architecture Key Facts

Bachelor of Design (Architecture)
foundation for Master of Architecture

- Hawthorn Campus
- 3 years full-time
- Guaranteed Entry ATAR: Range of Criteria

Course Content
- Design Studio
- Construction
- Communication
- Contextual Studies (History/Theory)
- Electives (possible minor)

Postgraduate courses launching in July 2019

Master of Architecture

- Hawthorn Campus
- 2 years full-time

Master of Urban Design

- Hawthorn Campus
- 2 years full-time

Master of Architecture and Urban Design

- Hawthorn Campus
- 2 years full-time

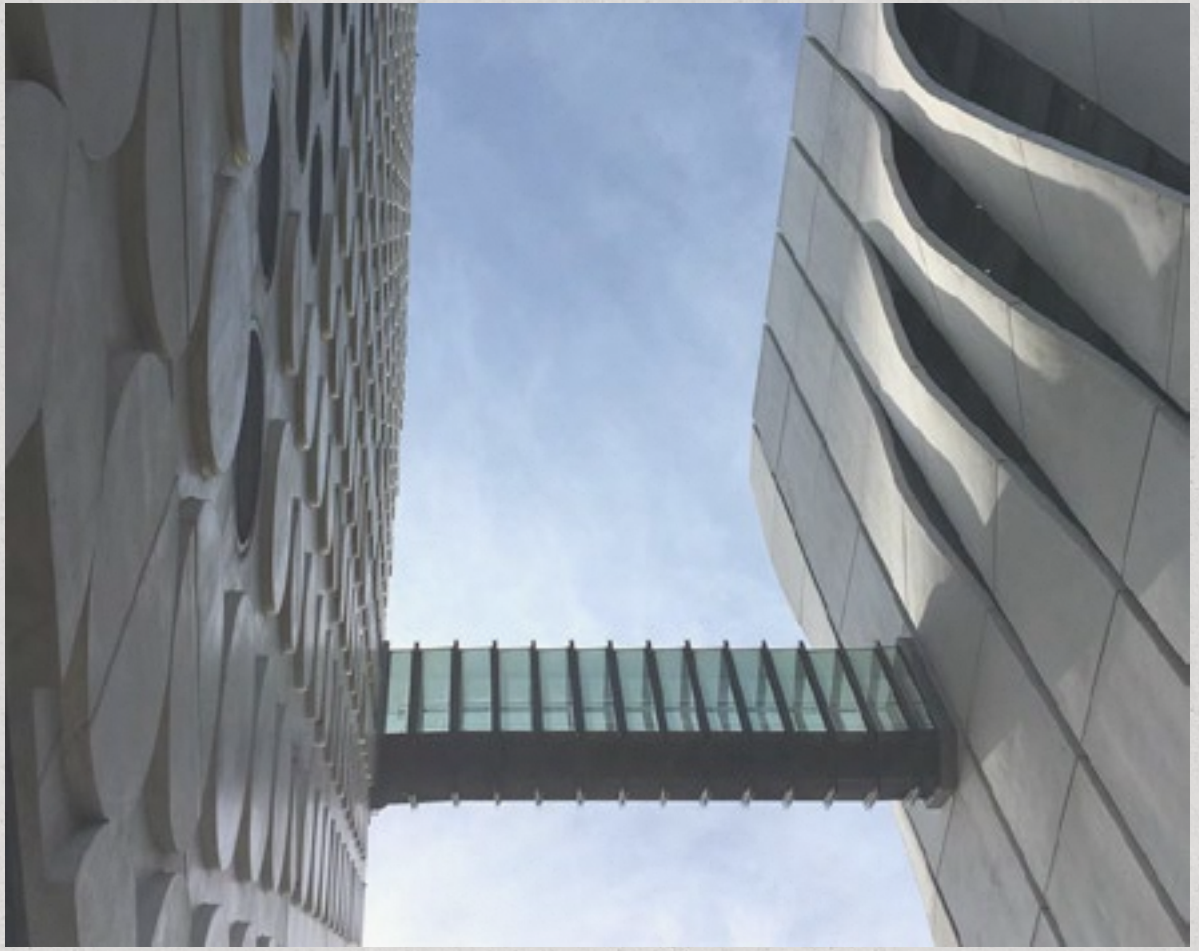
Engineering (Architecture) Key Facts

Bachelor of Engineering (Architecture) (Honours)
foundation for Master of Architecture

- Hawthorn Campus
- 4 years full-time
- Guaranteed Entry ATAR:
  - Bachelor of Engineering (Architecture) (Honours): 75
  - Bachelor of Engineering (Architecture) (Honours) (Professional): 85

Course Content

- Design Studio
- Structural Engineering
- Mathematics + Physics
- Environmental Performance
- Electives (possible minor)



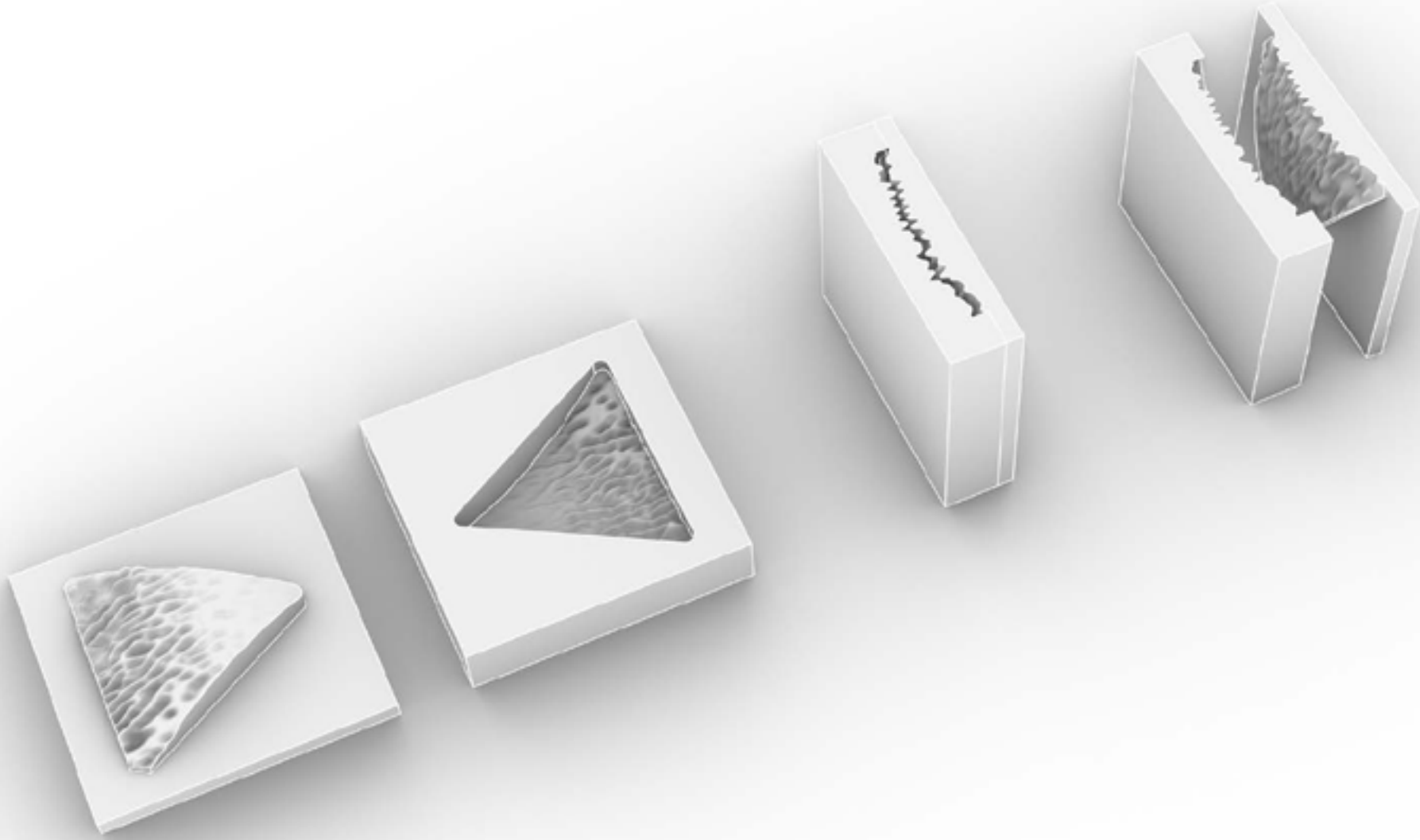
Our learning takes a variety of forms and happens in a variety of places, from classroom to workshop...

… to the design studio

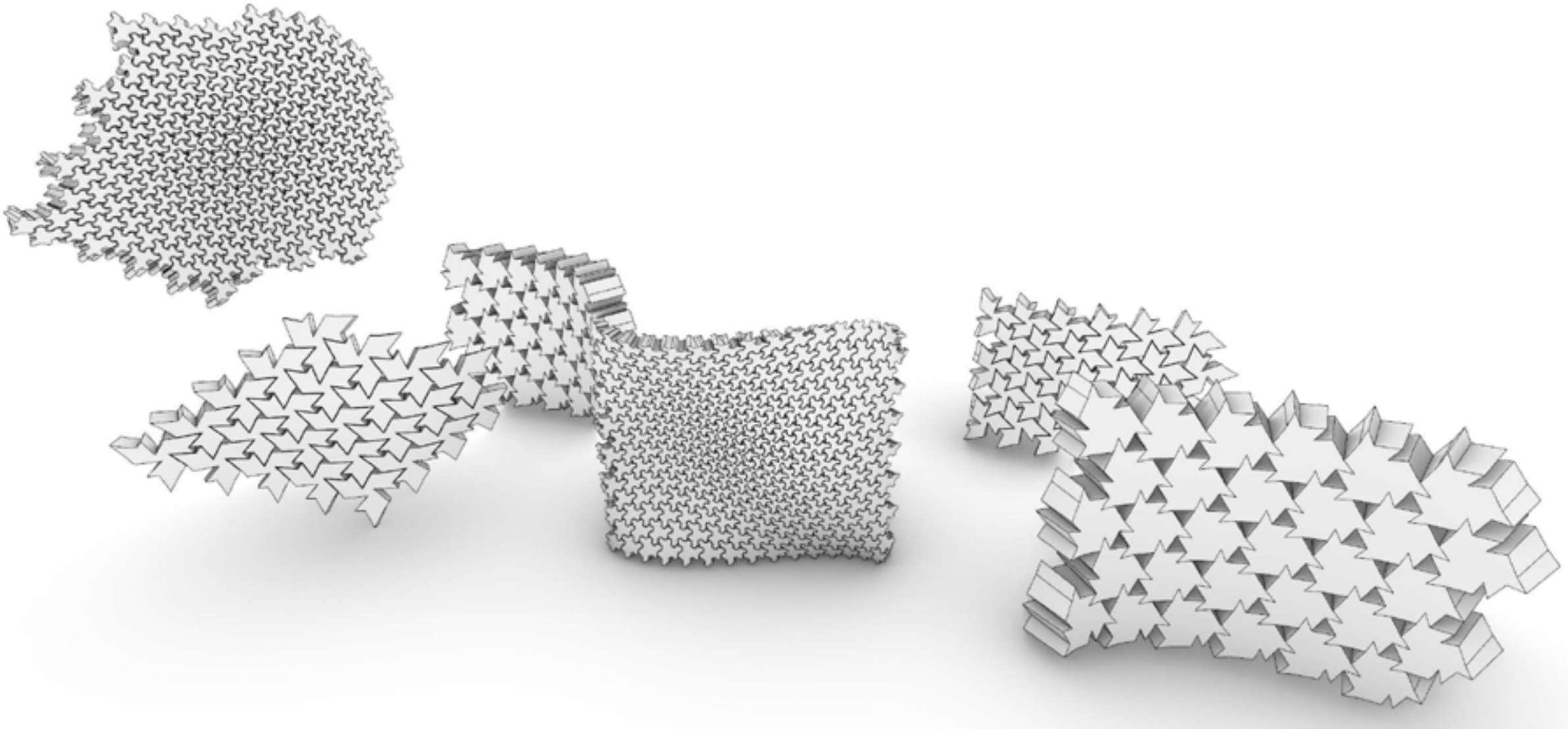
Studying Architecture at Swinburne

- Face-to-face, project-based learning including:
  - lectures
  - seminars
  - studios
  - maximum 24 students: 1 instructor

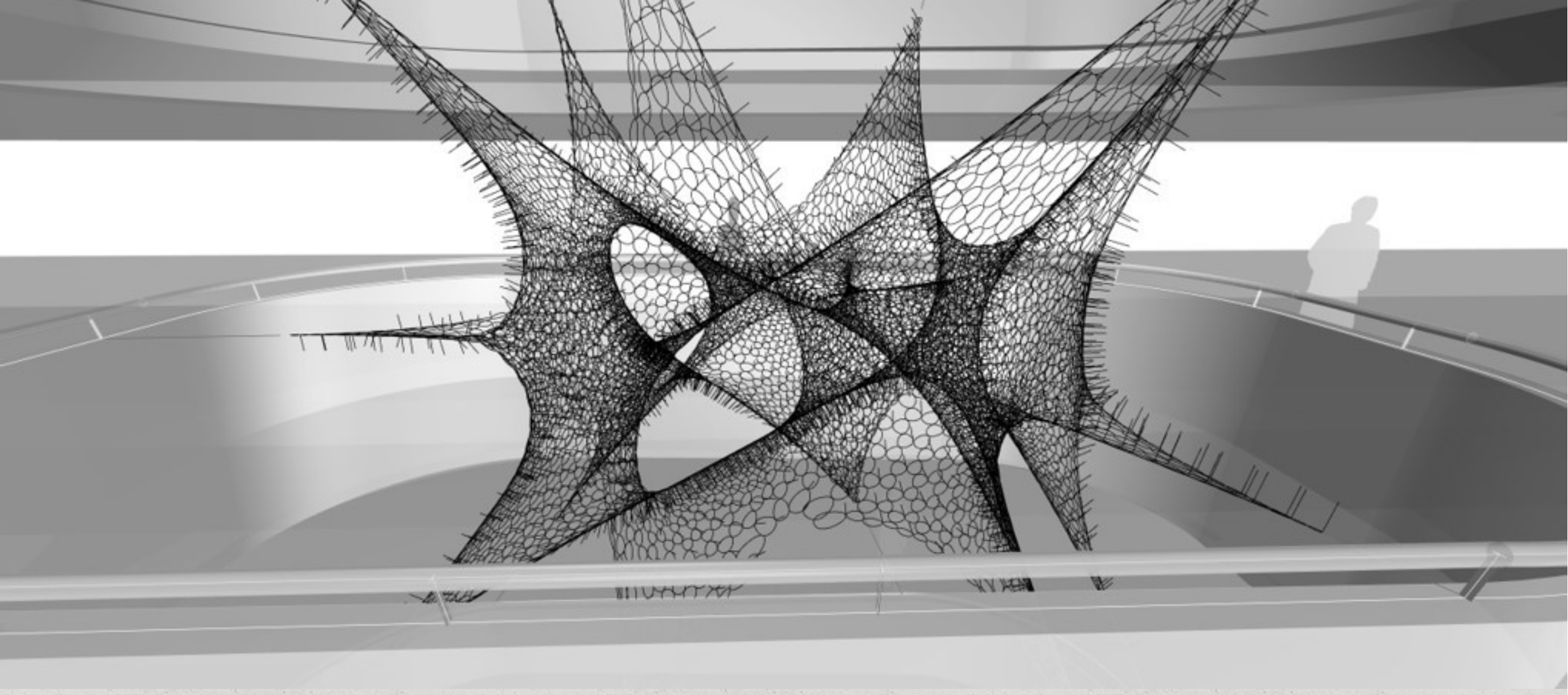
- Active, participatory learning
- Studio-based learning
  - students work on practical projects
  - learn to develop cohesive proposals out of often disparate, complex, competing interests
  - propose ideas verbally, graphically, and three-dimensionally
  - receive immediate verbal feedback from a panel of jurors



We use a variety of media and methods...



from computation...



to visualisation...

to drawings and templates...

to manual making...

to digital fabrication

These are our exams...

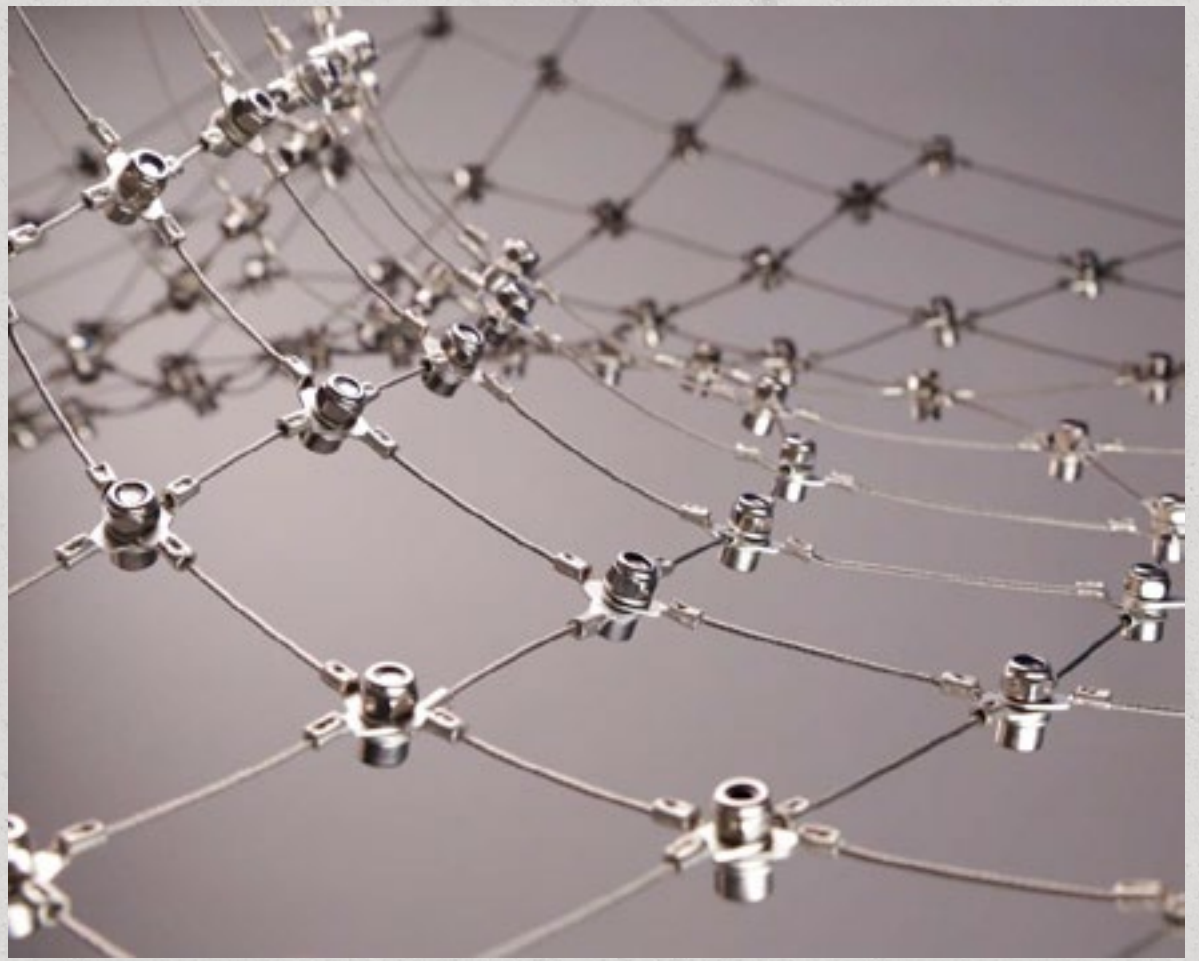
we call them crits

Students present their proposals...

and receive comments
on them

Architectural graduates

- Have the ability to:
  - Critically and creatively think, represent and analyse buildings, correlate diverse and often discrepant demands and interests, manage diverse teams of experts and stakeholders
- Can attain roles as:
  - Architects in large and medium-sized practices
  - Sole proprietors of architectural practices
  - Architects within government and non-government agencies
  - Academics/Researchers/Educators



Why Architecture at Swinburne?

- Studio-centric curriculum with opportunities to focus on particular research topics that align with student interest
- Small cohort surrounded by excellent academic staff
- World class technology and facilities
- Opportunity to learn about all scales from the fabrication of the detail to the interface with the city
- Industry engagement in day-to-day teaching, regular critiques, and invited lectures
- Preparation for the future of practice locally and globally, such as Industry 4.0
- Potential to work with the Design Factory Melbourne and its global network through electives

KNOW ING

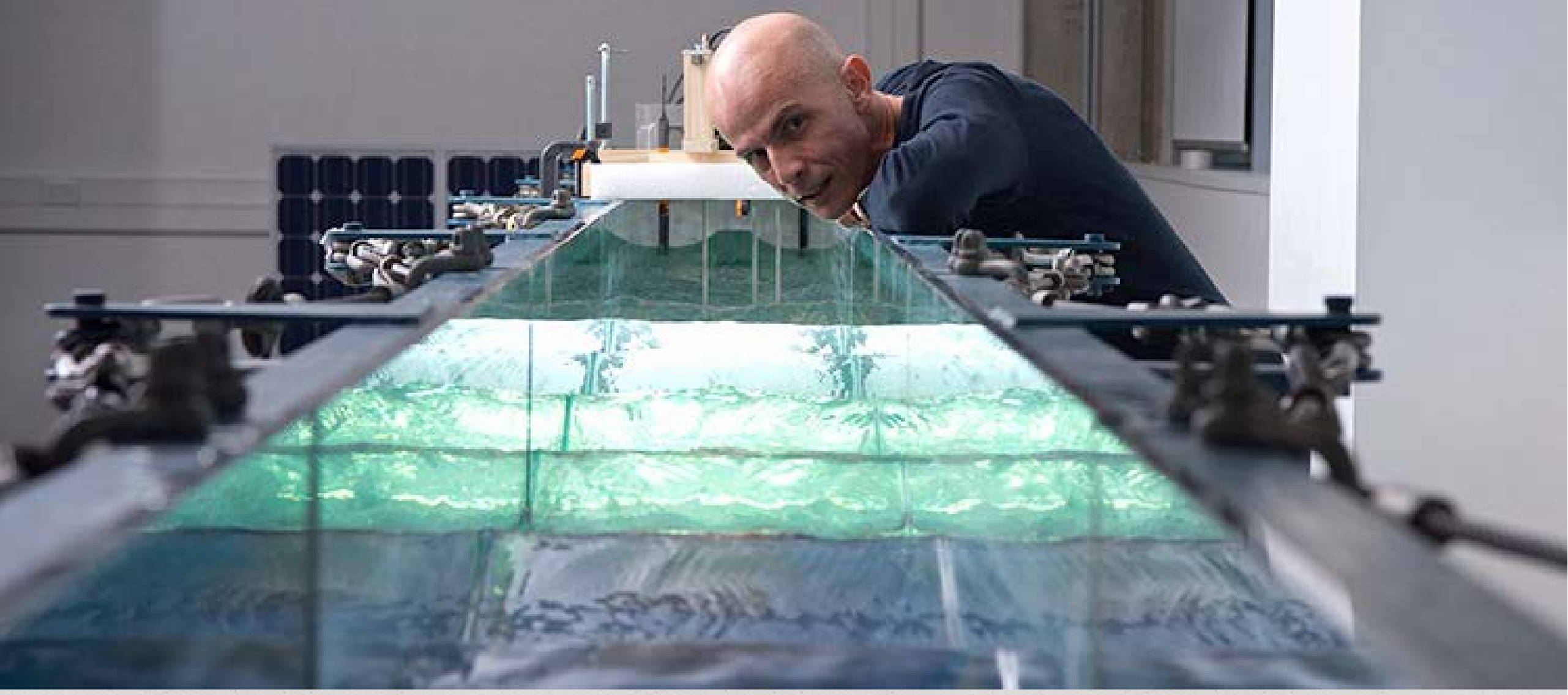
World Rankings

- Rated among the top 1/5 of design schools in the world
- Rated among the highest for student experience in the country
- Rated the highest for student experience in Architecture and Built Environment in Victoria

Soft prototyping lab with robotic, laser and additive fabrication and physical computing facilities

Fabrication Facilities

Factory of the Future



Energy Transformation Lab

Smart Structures Lab

Interdisciplinary Collaboration

Mycelium studies in collaboration with biological sciences

Intensive Workshop: IaaC GSS Biodigital Futures: From Coding to Cultivating

Course Advisory Committee

Neil Stonell

Ann Lau

Debbie Ryan

Andrew Maher

GRIMSHAW

hayball

McBride Charles Ryan
Architecture + Interior Design

aurecon

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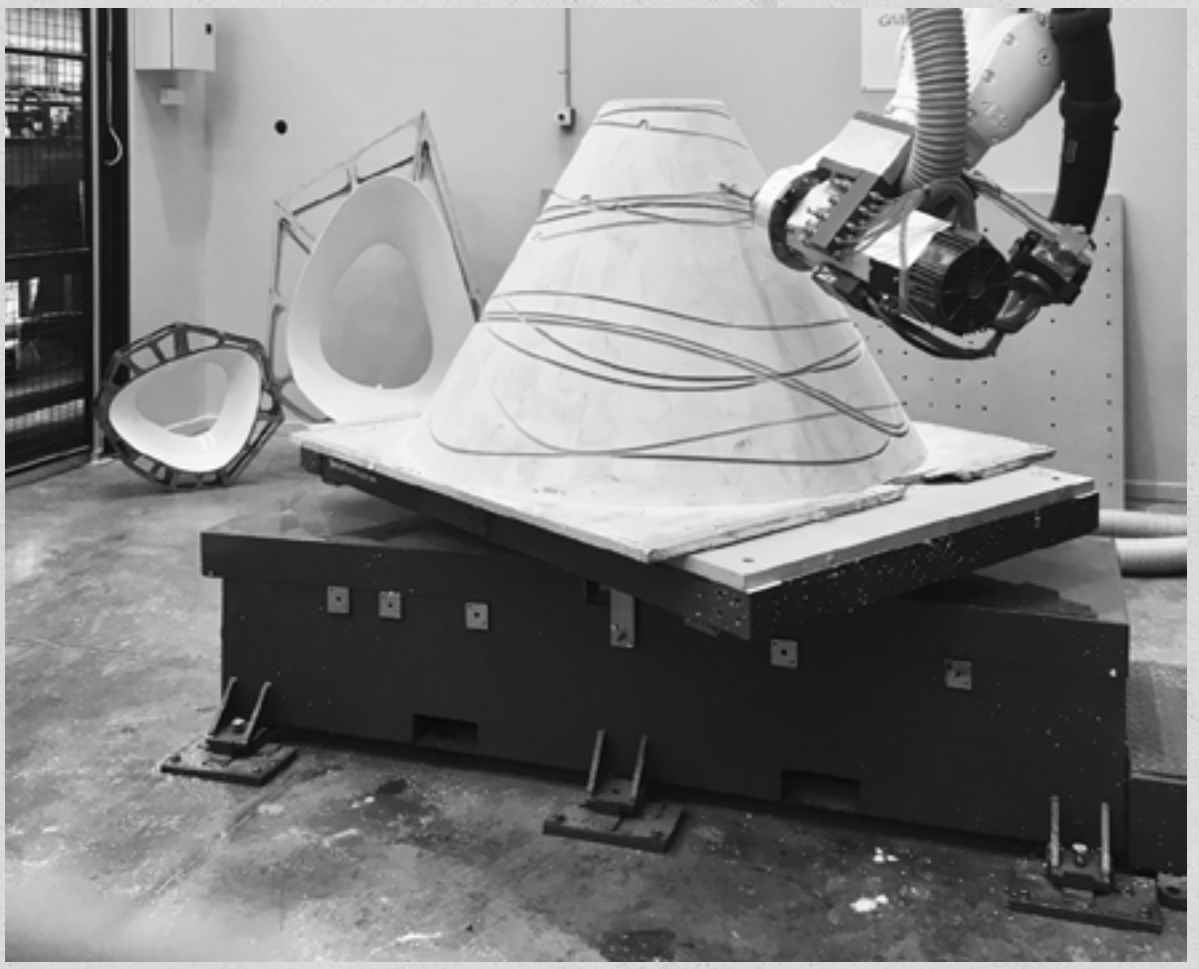
Career Outcomes

- Professional architectural practice
- Multi-disciplinary building services practices
- Government advisor
- Regulatory agencies
- Non-government organisations
- Set design
- Designers of virtual environments
- Fabrication
- Project management



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Questions?