

GCSE Design and Technology

Fashion & Textiles Ffasiwn a Thecstilau

Iterative
Design
Process

Modelling



Ideation, Presentation & Creativity



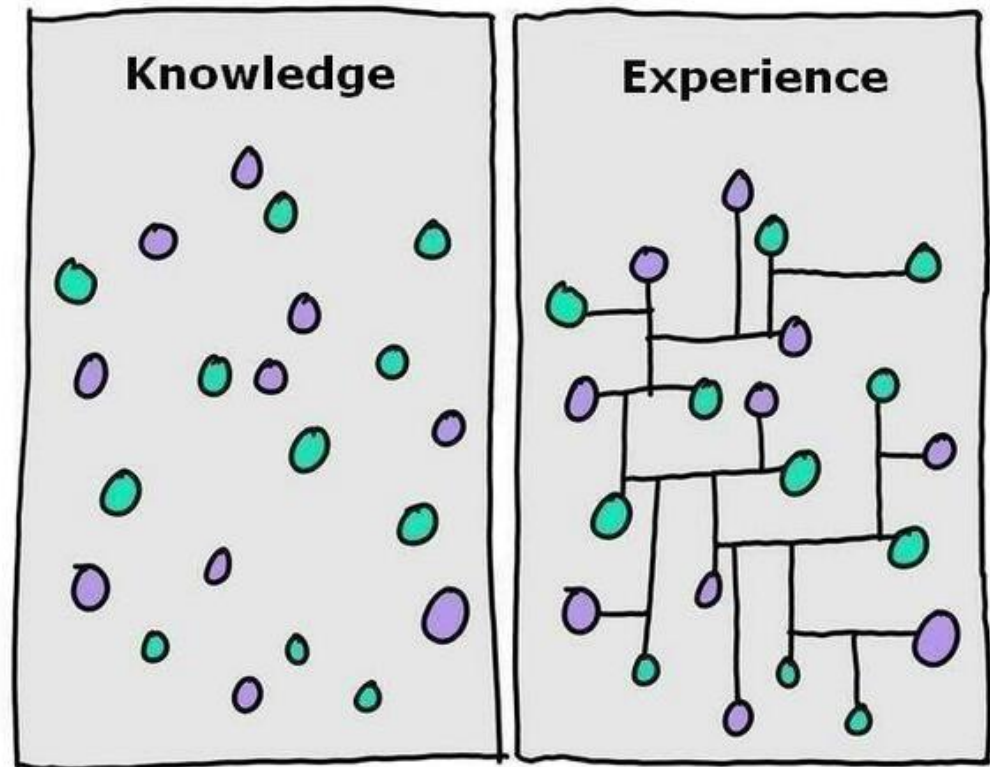
DYLUNIO CYNNYRCH
BANGOR
PRODUCT DESIGN

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Ysgol Addysg
Dylunio Cynnyrch a Thechnoleg

Inspiration



Make connections



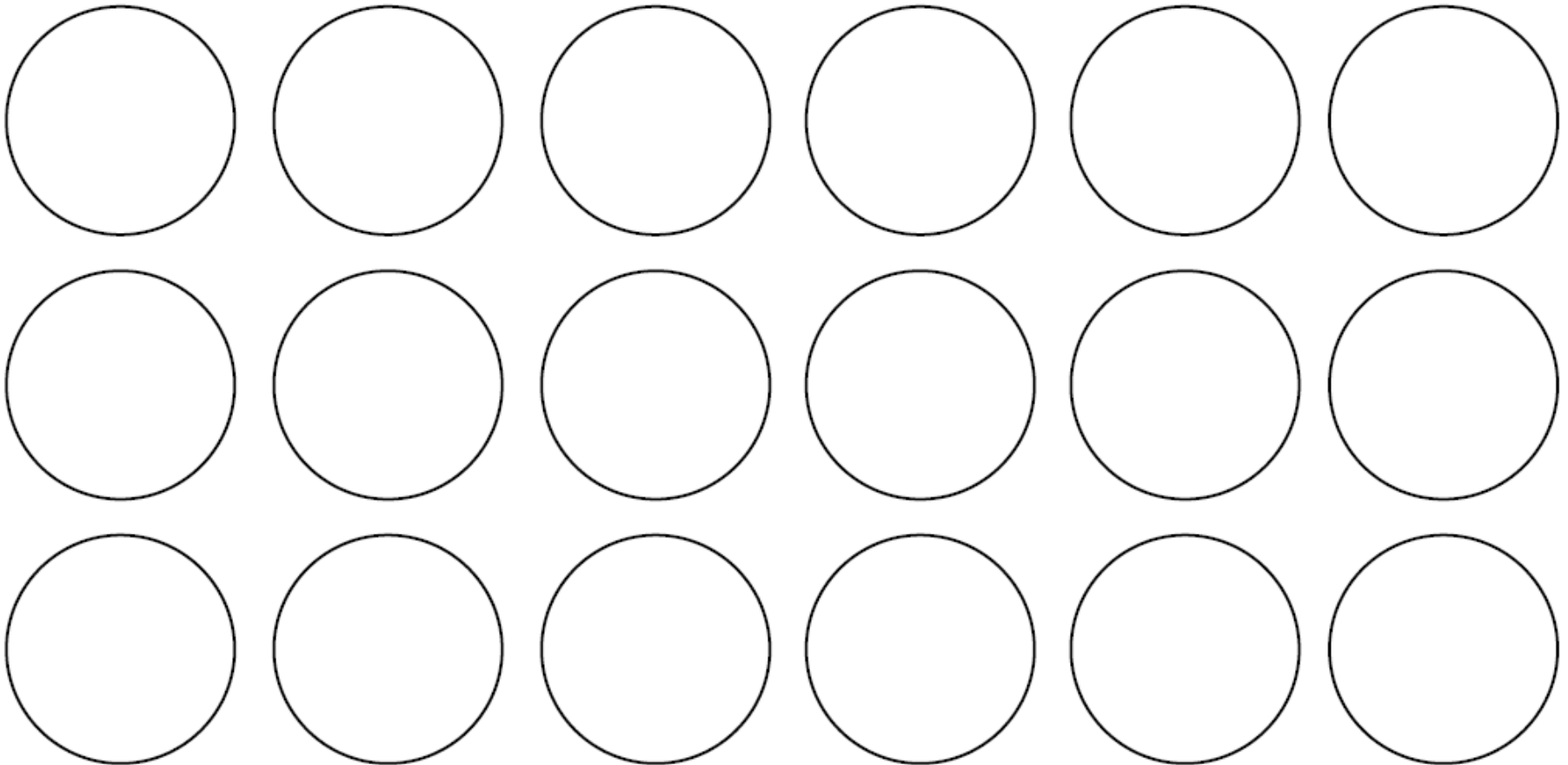
Make mistakes



Come up with lots of ideas



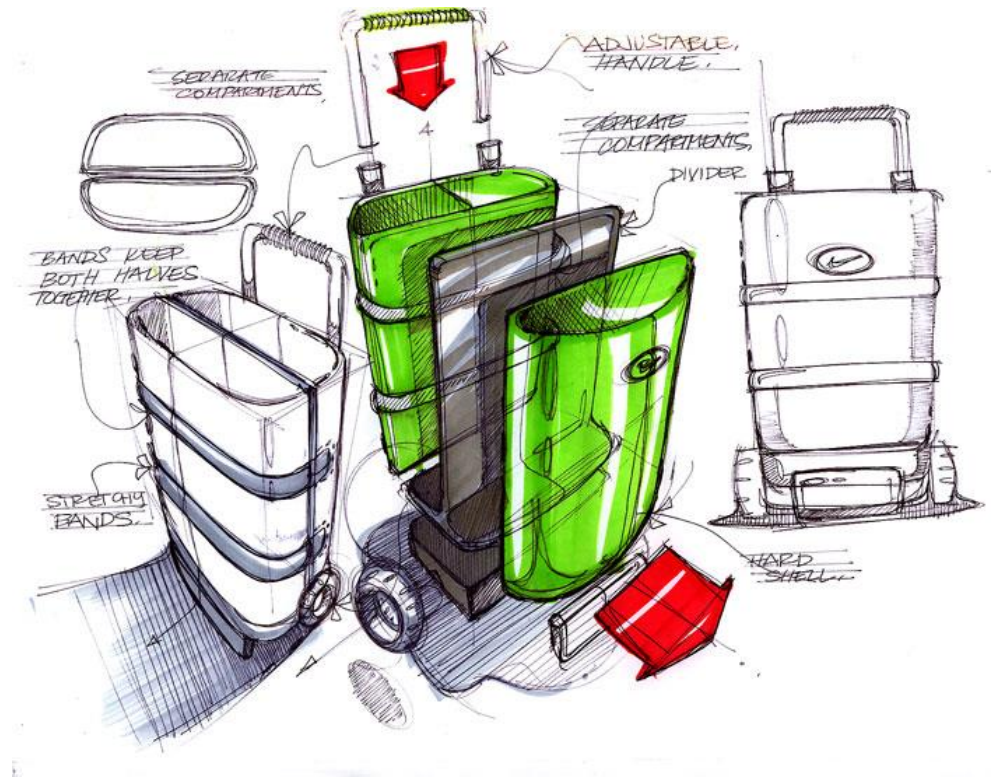
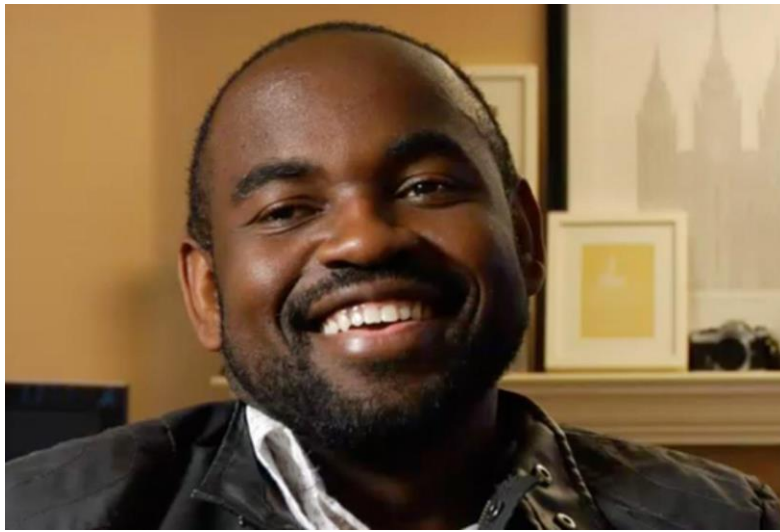
The circle challenge



The circle challenge

**Quality
Range
Rules?**

Spencer Nugent

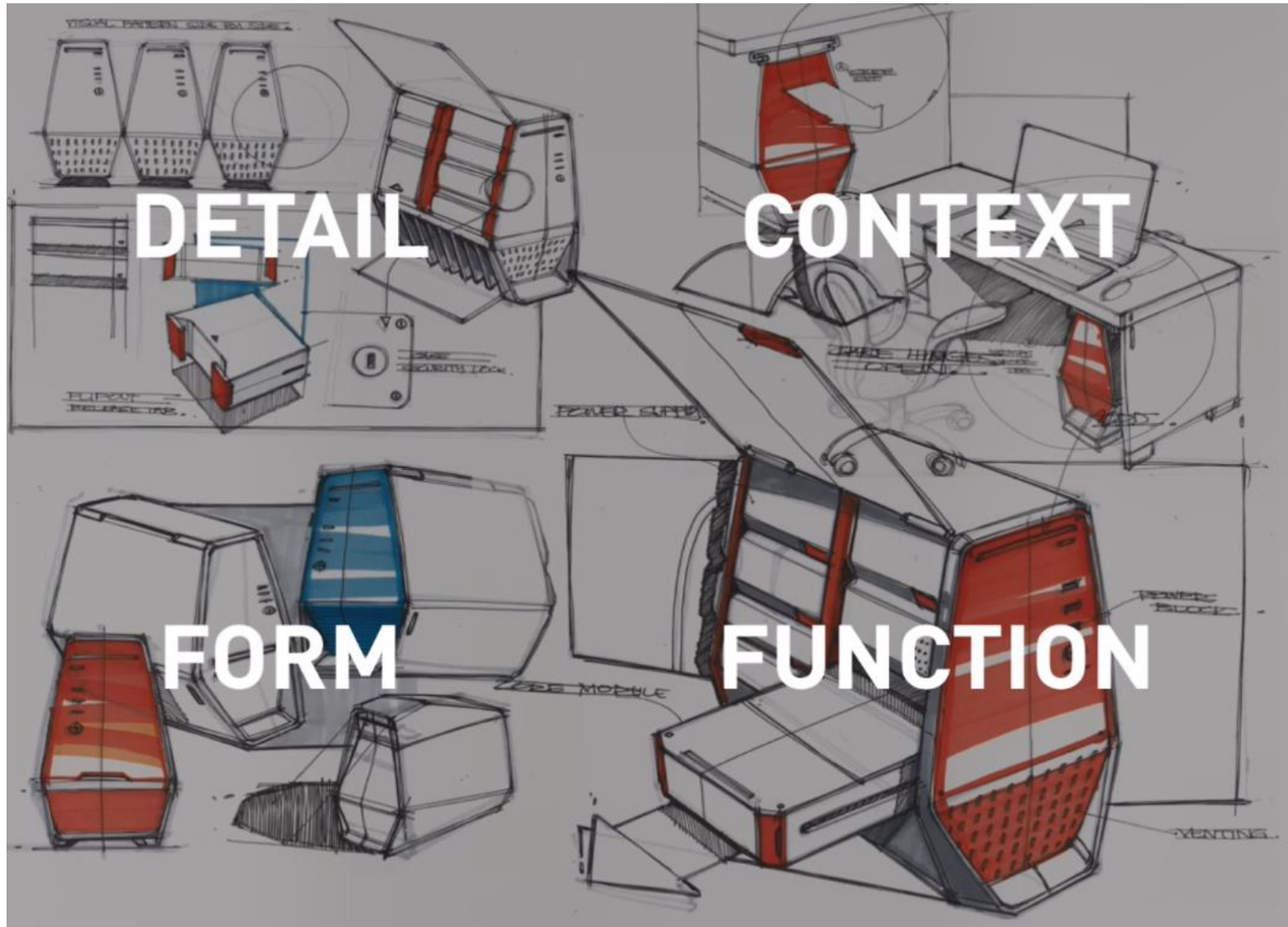


<http://www.spencernugent.com/>

<http://www.sketch-a-day.com/>

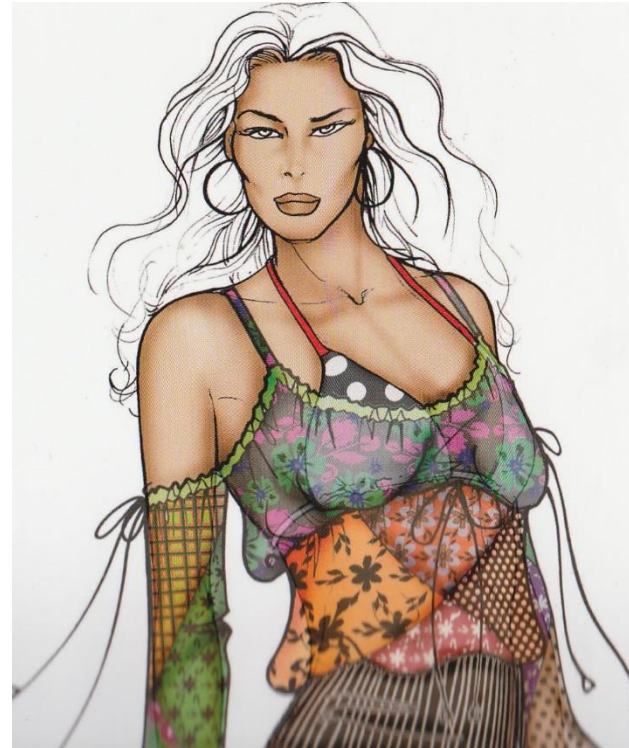
https://www.youtube.com/watch?v=m_0Oz2D--l0

Have a CONVERSATION WITH YOUR
SKETCH.

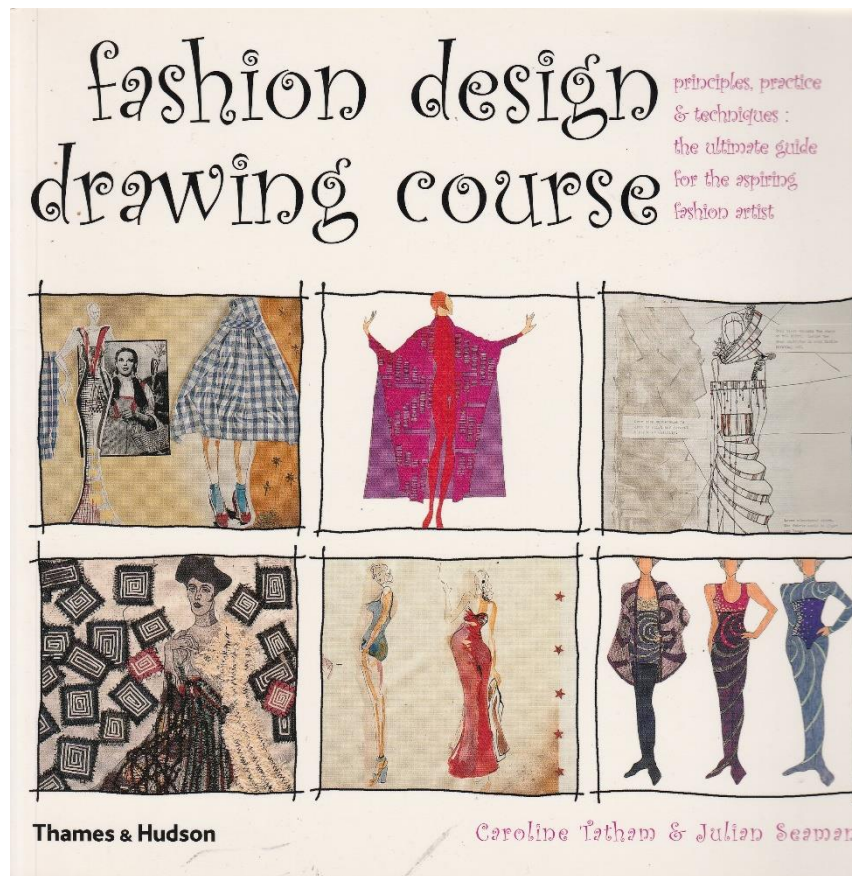
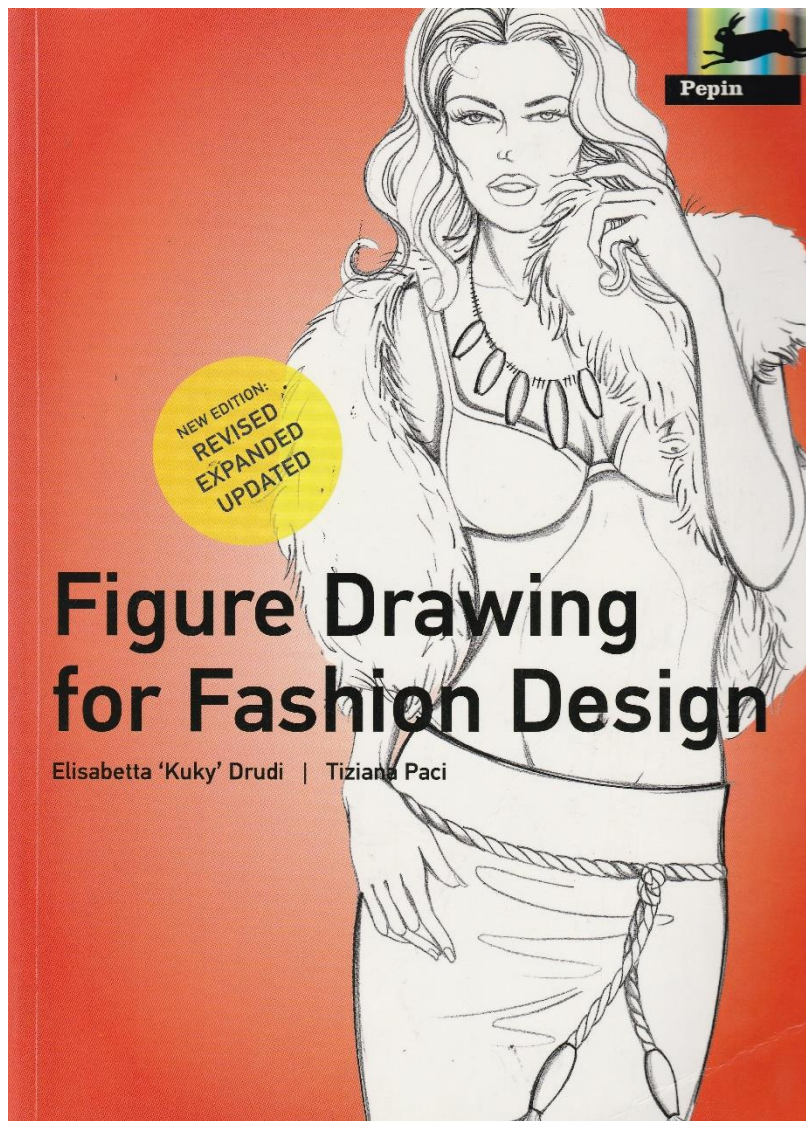


- Quick sketch ideas – some more detailed than others
- Concepts clear





CAD



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Modelling in Design and Technology

Fashion & Textiles

Matt Archer

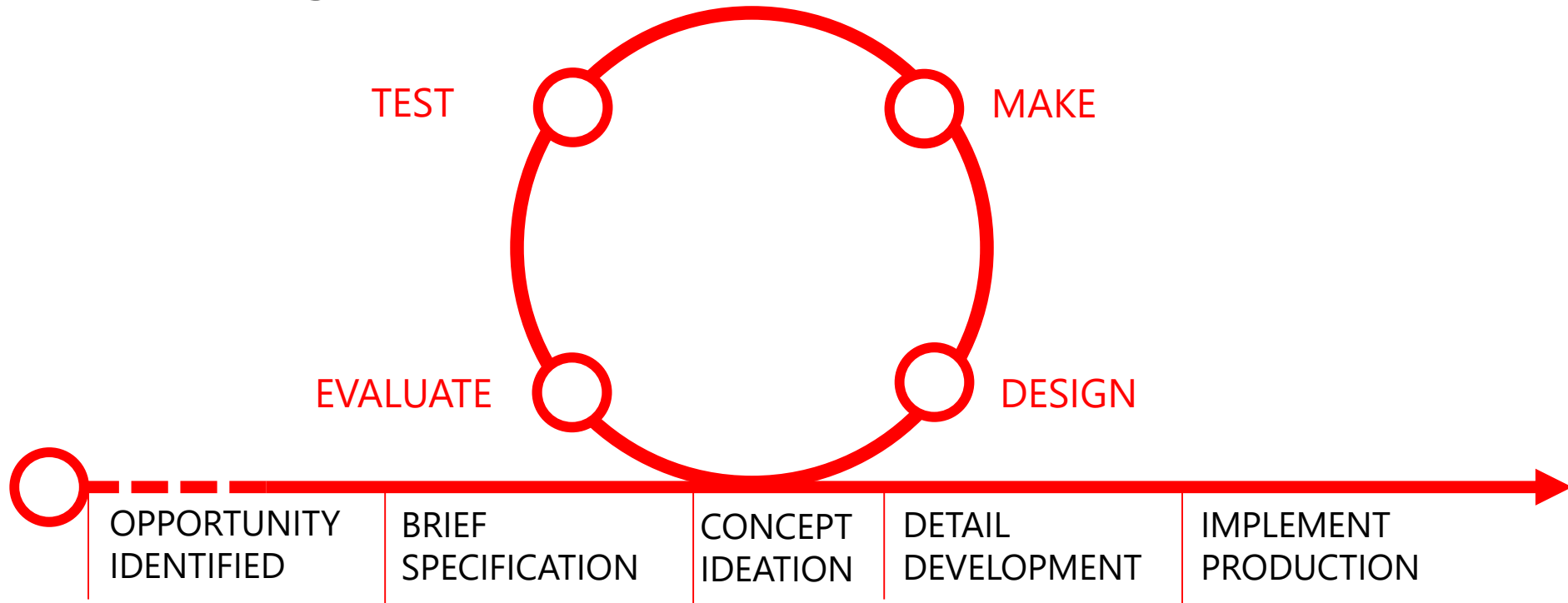


Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

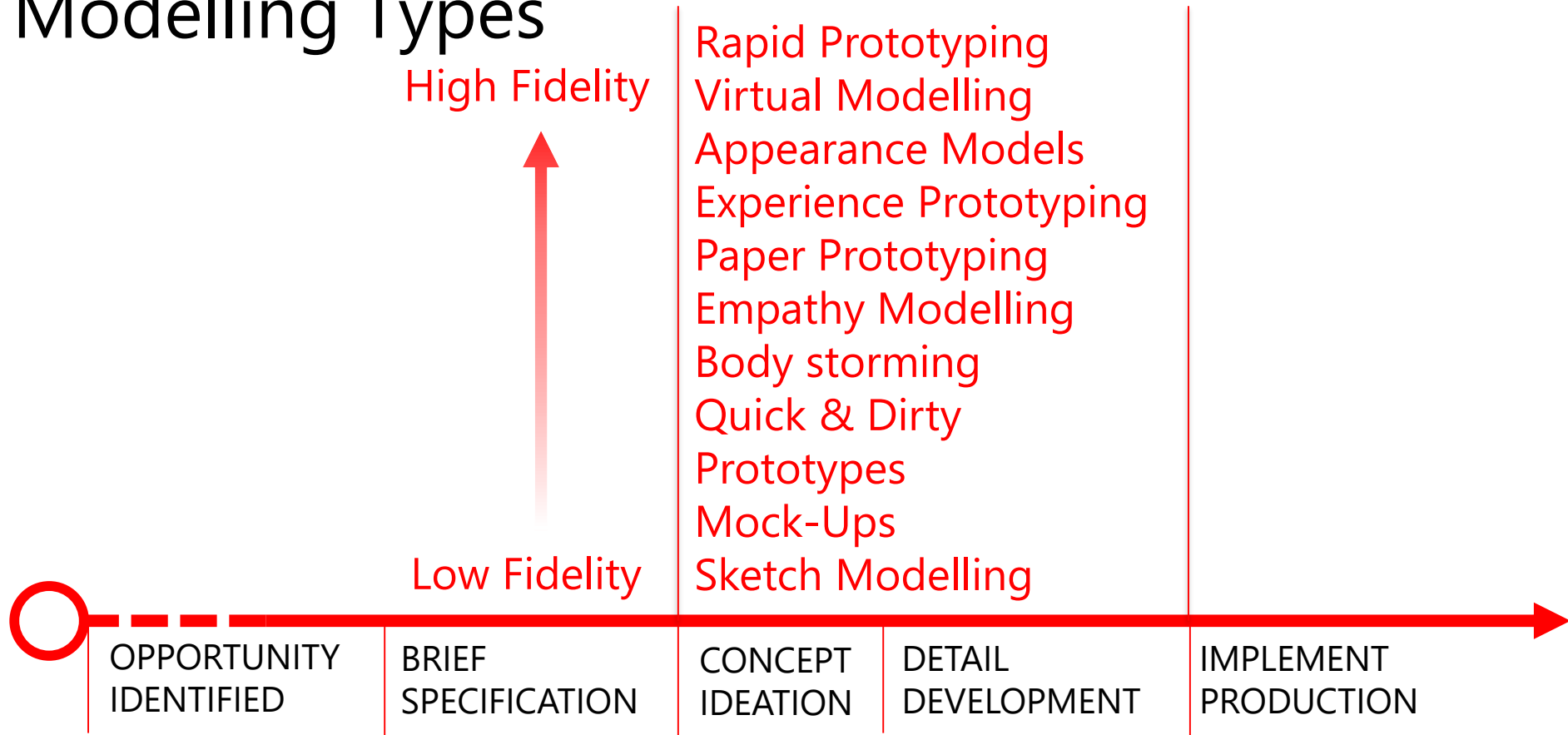
Swansea
College of Art
Founded 1853

Product Design: iterative research process

Modelling: simulation *'looks like'* or *'works like'*

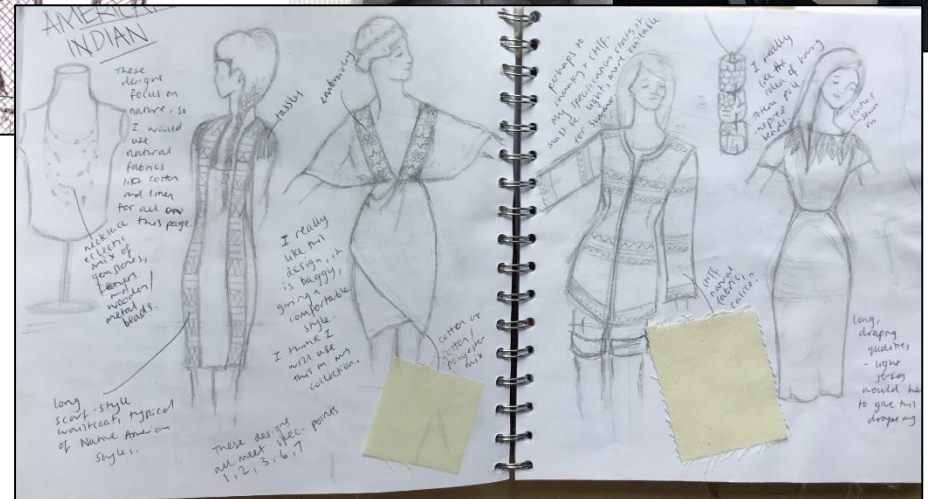
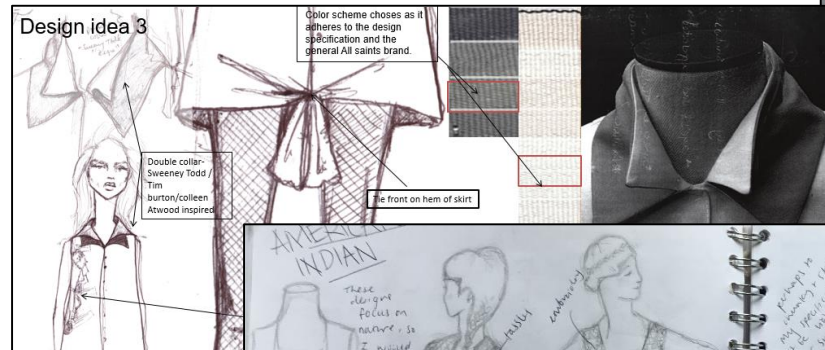
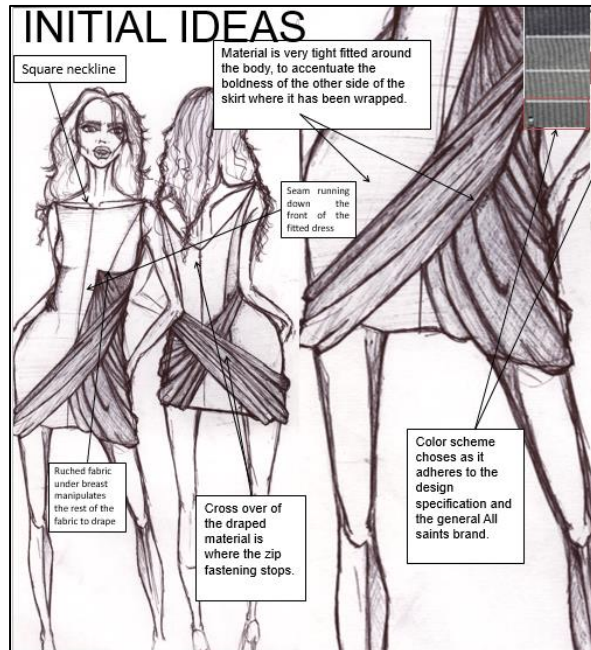


Modelling Types



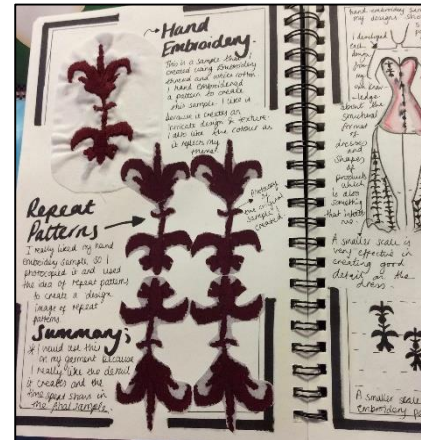
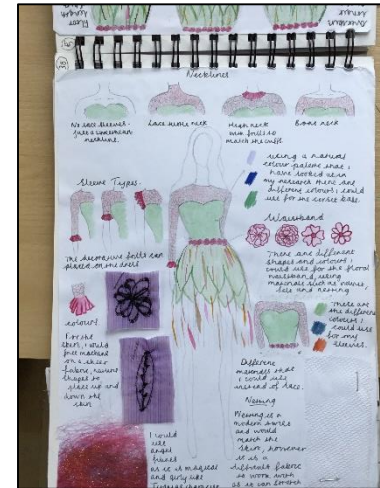
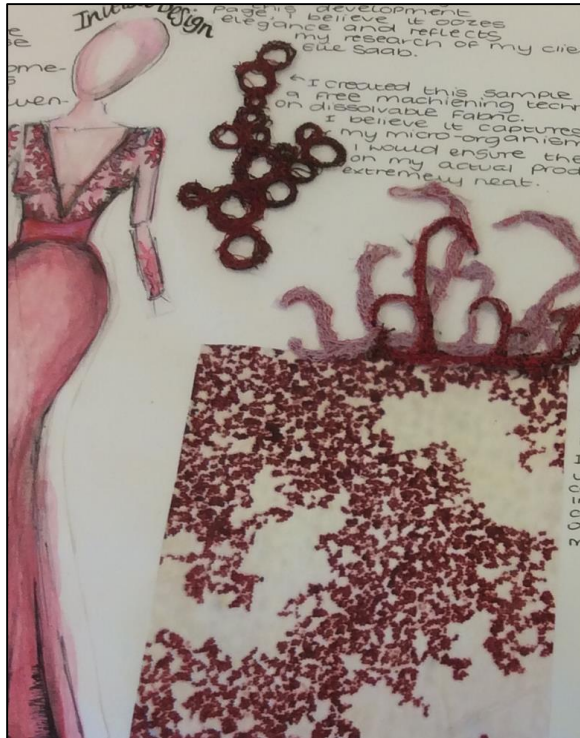
Sketch Modelling:

- Life size or scale
- 3D exploration of initial ideas - toiles
- Evaluate aesthetics | ergonomics | function | usability
- Explore ideas, problem solve and capture ideation phase



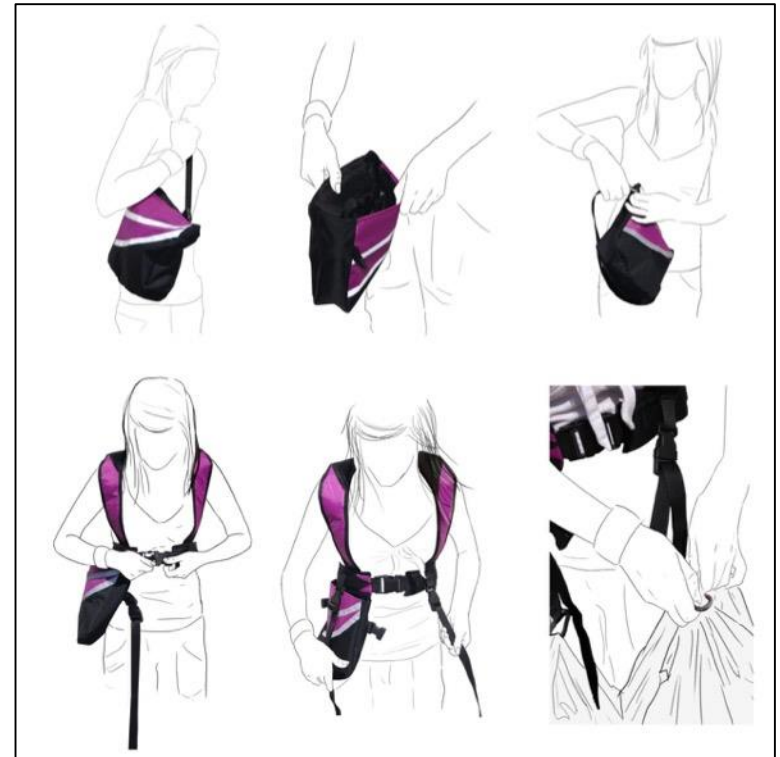
Mock ups:

- Life size
- Practical testing of ideas – style details, processes, decorative details
- Evaluate form | function | ergonomics | style
- Proof of principle [pop]



Quick and Dirty Prototyping:

- Life size
- Communication of ideas and concepts with others
- Evaluate basic format | use
- Rough & ready to speed up design process – use any available materials to test concept



Body Storming:

- Enactment – set up a scenario to establish constraints
- Support ideation and empathy modelling
- Evaluate social & spatial scenarios | behaviour | user experience | understand the problem



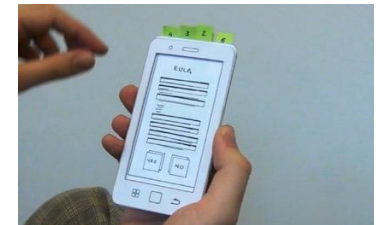
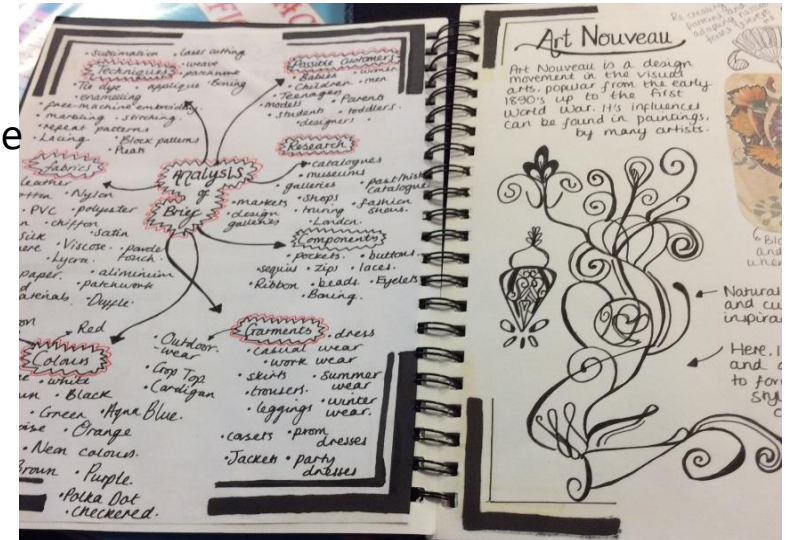
Empathy Modelling:

- Life like or actual
- Simulate user capabilities (physical or cognitive)
- Evaluate usability | user experience | better understanding of issues
- Inclusive design – older or disabled users



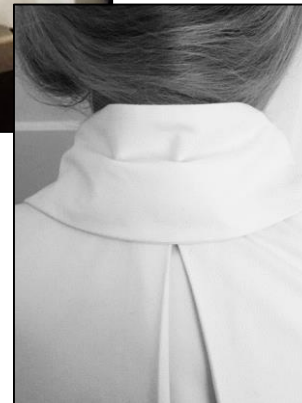
Paper Prototyping:

- Life size
- Testing usability of human-computer-product interface
- Evaluate logic | layout | task effectiveness
- Low cost paper or digital [e.g. powerpoint]



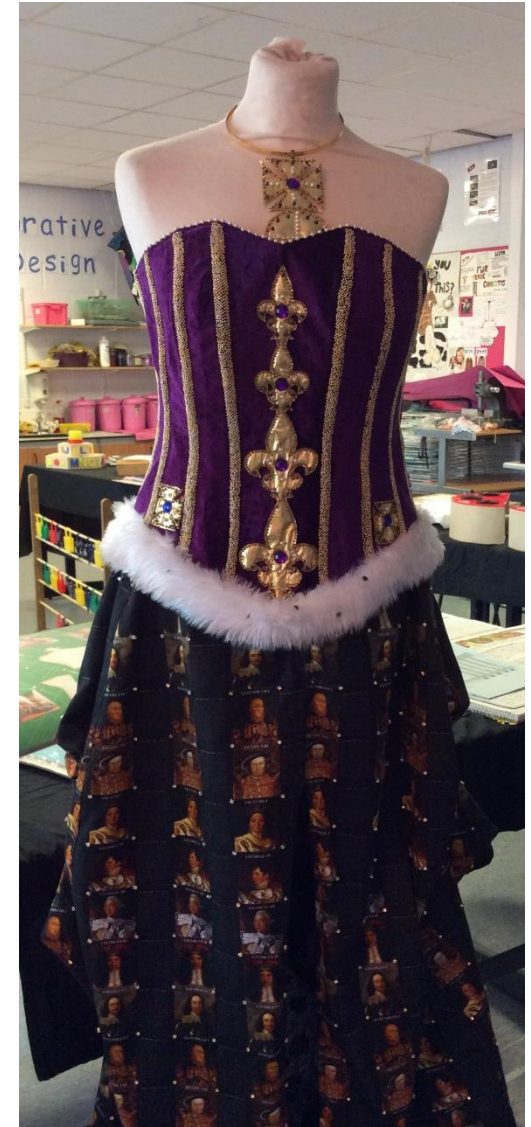
Experience Prototyping:

- Life size – wearer trial of prototype
- Testing user experience of engagement with product | service
- Evaluate interaction | usability | user experience
- Uncover un-anticipated issues or user needs | modify



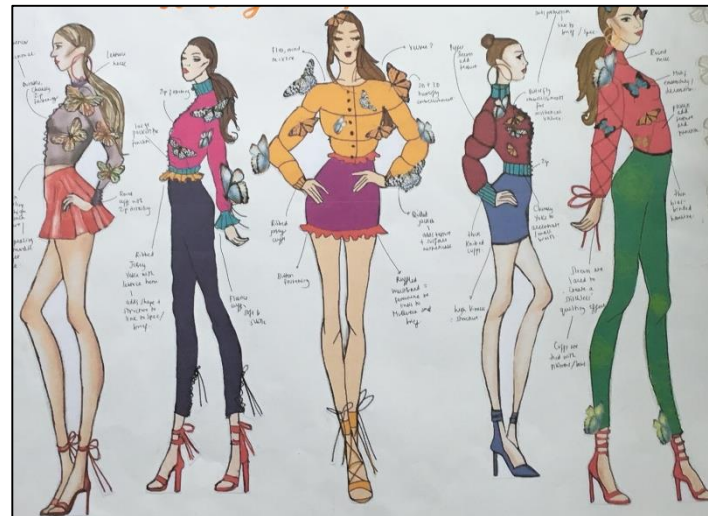
Appearance Models:

- Life size or scale
- Simulate aesthetic qualities (non-functioning)
- Evaluate aesthetics | form | feel | user/wearer response
- Communication | marketing | exhibition



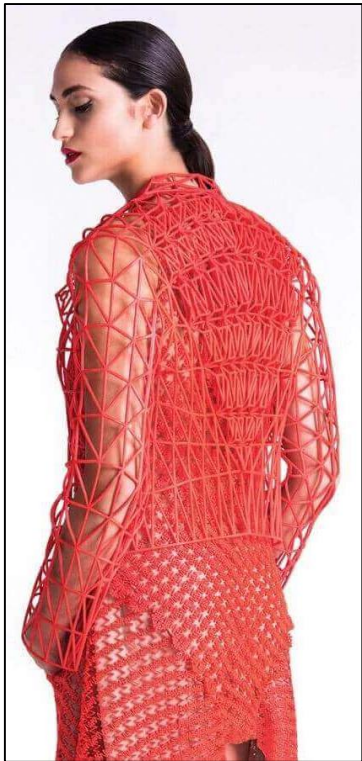
Virtual Modelling:

- Life size
- Accurate representation of aesthetic and functional features
- Evaluate appearance | performance | manufacturing
- Render, animate, check interference, mould/kinematic/heat/stress analysis



Rapid prototyping:

- Life size
- Concept modelling and accurate aesthetic and functional prototypes
- Evaluate all aspects of design specification
- Diverse range of processes and materials



“Fail Often Succeed Sooner”

David Kelley IDEO