

IEEC 2019 Conference

From Design Student to 'Intrapreneurial' Graduate:
Staging the Enterprise Journey

Oxford Brookes September 2019

Today's session

- Some Background
 - About us, the course, our alumni
 - Design Education
- Entrepreneurial v's Intrapreneurial
 - What's the difference anyway
 - Skillsets and soft skills
 - Designers as natural intrapreneurs?
- Building business relationships into teaching and Knowledge Exchange
 - Tripartite Model for business engagement
 - Challenges of working with business
 - Building and sustaining capacity
- Case Studies – Live projects to KTP
 - Intrapreneurship through the Student/Graduate Learning Experience

About us

Peter Reid

Senior Lecturer in Product Design at Teesside University
Enterprise Fellow, Strategic NPD with interests in
Design innovation within business

Lewis Brown

Graduate of Teesside's, BSc (hons) Product Design (1st class)
KTP Associate – 2 year project (Oct, 2018)
Product Development Engineer, NYMAS



The Course

BA (Hons) Product Design at Teesside

- Since 1972 though it has evolved much since then
- A long history with prestigious Alumni
- We continue to develop 'core' product design skills for graduates to become practical product designers
- Pride ourselves on our technically competent design graduates 'ready to work' in design related careers

At Teesside our focus is on,

- **Creating a community** of learning rather than teaching people to design
- The course is **Project based** and **Problem focused**



nobia



dyson



TEAGUE

47 years educating Product Designers

Our Alumni

throughout industry, around the world

seymourpowell



Kruse Chair

By David Fox for Boss Design



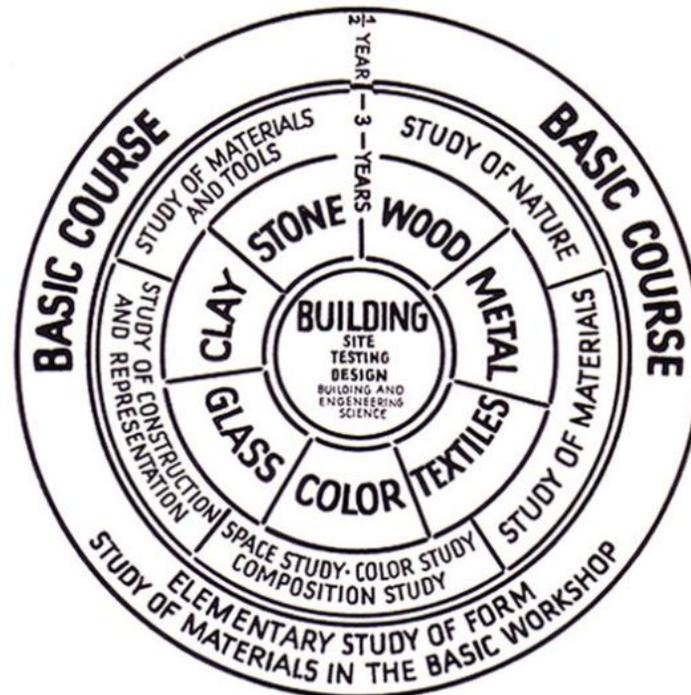
Aston Martin DB11

Marek Reichman, Chief Creative Officer

The Bauhaus Design School (1919 – 1933)

“The Bauhaus teaching method replaced the traditional pupil-teacher relationship with the idea of a community of artists working together.”

- <https://www.tate.org.uk/art/art-terms/b/bauhaus>



Are Product Designers natural Intrapreneurs?

We support our students by,

Teaching – technical skills and knowledge
(the practitioner)

Facilitating – industry and real world experiences
(the whole person)

Mentoring – sharing experiences and thoughts on problem solving
(the team player)

Coaching – allowing mistakes and reflecting as a process of learning
(the independent thinker)

**Pedagogy,
Andragogy,
Heutagogy
compared.**

**Heutagogy:
The
management of
self-managed
learners**

	Pedagogy Children's learning	Andragogy Adults learning	Heutagogy Self-directed learning
Dependence	The learner is a dependent personality. Teacher determines what, how and when anything is learned.	Adults are independent. They strive for autonomy and self-direction in learning.	Learners are interdependent. They identify the potential to learn from novel experiences as a matter of course. They are able to manage their own learning.
Resources for learning	The learner has few resources – the teacher devises transmission techniques to store knowledge in the learner's head.	Adults use their own and other's experience.	Teacher provides some resources but the learner decides the path by negotiating the learning.
Reasons for learning	Learn in order to advance to the next stage.	Adults learn when they experience a need to know or to perform more effectively.	Learning is not necessarily planned or linear. Learning is not necessarily based on need but on the identification of the potential to learn in novel situations.
Focus of learning	Learning is subject centred, focussed on prescribed curriculum and planned sequences according to the logic of the subject matter.	Adult learning is task or problem centred.	Learners can go beyond problem solving by enabling pro-activity. Learners use their own and others' experiences and internal processes such as reflection, environmental scanning, experience, interaction with others, and pro-active as well as problem-solving behaviours.
Motivation	Motivation comes from external sources – usually parents, teachers and a sense of competition.	Motivation stems from internal sources – the increased self-esteem, confidence and recognition that come from successful performance.	Self-efficacy, knowing how to learn, creativity, ability to use these qualities in novel as well as familiar situations and working with others.
Role of the teacher	Designs the learning process, imposes material, is assumed to know best.	Enabler or facilitator, climate of collaboration, respect and openness.	Develop the learner's capability. Capable people: * <ul style="list-style-type: none"> • Know how to learn • Are creative • Have a high degree of self-efficacy • Apply competencies in novel as well as familiar situations • Can work well with others.



A question I have...

Should we trying to develop **entrepreneurs** or **intrapreneurs**?

...and what's the **difference** anyway?



Entrepreneur vs. Intrapreneur

Definitions of Entrepreneur :

“A person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk” - www.dictionary.com

“An entrepreneur is a person who sets up businesses and business deals” - www.collinsdictionary.com

Forbes perhaps offers the best definition...

“Entrepreneurs, in the purest sense, are those who identify a need---any need---and fill it. It's a primordial urge, independent of product, service, industry or market”

- <https://www.forbes.com/sites/brettnelson/2012/06/05/the-real-definition-of-entrepreneur-and-why-it-matters/#4ca48ba24456>

Entrepreneur vs. **Intrapreneur**

Definitions of Intrapreneur :

“An employee of a large corporation who is given freedom and financial support to create new products, services, systems, etc., and does not have to follow the corporation's usual routines or protocols” - www.dictionary.com

“A person who while remaining within a larger organization uses entrepreneurial skills to develop a new product or line of business as a subsidiary of the organization” - www.collinsdictionary.com

“An intrapreneur is an employee who is tasked with developing an innovative idea or project within a company. The intrapreneur may not face the outsized risks or reap the outsized rewards of an entrepreneur. However, the intrapreneur has access to the resources and capabilities of an established company” - <https://www.investopedia.com/terms/i/intrapreneur.asp>

In Essence...

An intrapreneur is someone within a company, given extraordinary freedom to work on a project of special interest to the business.

A question I have ...

What **skills** do entrepreneurs have?

...and are they **different** to those
of **intrapreneurs**?



Entrepreneur vs. Intrapreneur

Skills Needed by Successful

Entrepreneurs

Intrapreneurs



...and this is all about Soft Skills

- Commercial awareness
- Project and time management
- Interpersonal skills and communication
- team working
- Leadership Skills.
- Problem Solving Skills
- Work Ethic
- Flexibility/Adaptability
- Positive Attitude
- Self-Confidence
- Ability to Accept and Learn From Criticism
- Conflict resolution

Intrapreneurs



Soft Skills list compiled from a variety of sources

Design in Innovation

Early stage interventions

Innovate UK
Knowledge Transfer Network



Product Design Graduates are likely to be intrapreneurs during their careers

Design is often considered late in a typical development process

Design is often considered late in the innovation process, if at all, and many organisations fail to capitalise on the benefits it can provide.

Whilst design is often associated with creating the look and feel of a product, many organisations are unaware that design can also be used strategically, for example to develop systems, improve services, build in sustainability and create new approaches to collaboration for social, economic and environmental aims.

Design can be used from concept to commercialisation

Design is a powerful tool when used effectively throughout the entire life of an innovation project – from concept all the way through to commercialisation.

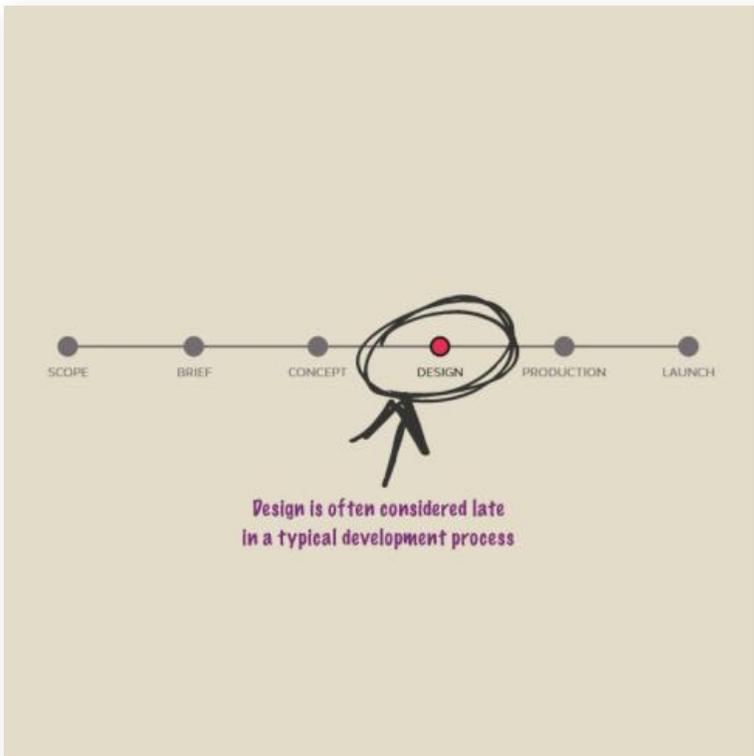
It can lead to time and cost savings and better project outcomes, especially when embedded early in a project's life cycle.

Exploring design activities, risks and risk mitigation

Using design to shape the brief

Uncertainty → Convergence → Focus

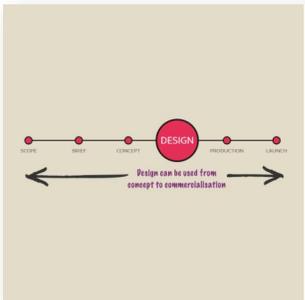
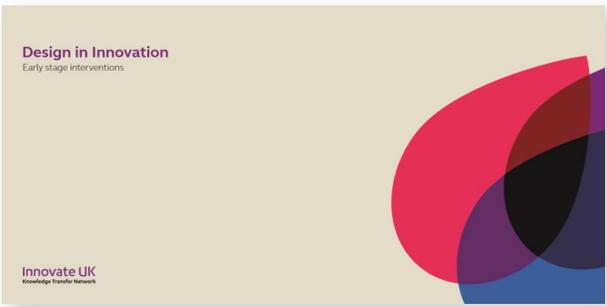
STAGE	understand	discover	synthesis	iterate	implement
UNDERSTANDING THE PROBLEM	<ul style="list-style-type: none"> Understand the problem Identify stakeholders System evaluation & mapping 	<ul style="list-style-type: none"> User driven ideas (brainstorming) Challenge assumptions Keep the workshop Co-creation workshops Clear results & control mapping Need gathering & iterative testing Prototyping 	<ul style="list-style-type: none"> System synthesis & mapping Customer journey mapping Service complexity to create multidisciplinary teams Collaboration Early prototyping Concepts for design, needs, opportunities, challenges 	<ul style="list-style-type: none"> Evaluation & re-evaluation Iterative prototyping Support the commercialisation that leads to real ideas across multidisciplinary teams Iterative development Service development 	<ul style="list-style-type: none"> Finalise the problem Prototype development showing Optimisation Finalising product, services Final development Service blueprint
UNDERSTANDING THE USER	<ul style="list-style-type: none"> Understand the user Lack of understanding the value of design & belief in designer to deliver Uncertainty in pricing No budget to invest in design Change of requirements & equipment not being acknowledged Not clear on what to expect 	<ul style="list-style-type: none"> Not having an agreed problem definition or clear realistic direction Not always involved and not focusing on the right problem Not willing to engage Quantitative vs qualitative measurements 	<ul style="list-style-type: none"> Unclearable objectives No buy in from team 	<ul style="list-style-type: none"> Unclearable objectives No buy in from team 	
NEEDS	We need people, activities and tools to enable empathy and understanding, build trust and maintain confidence		We need to resolve conflict to enable everyone to move forward together		We need buy in from the organisation



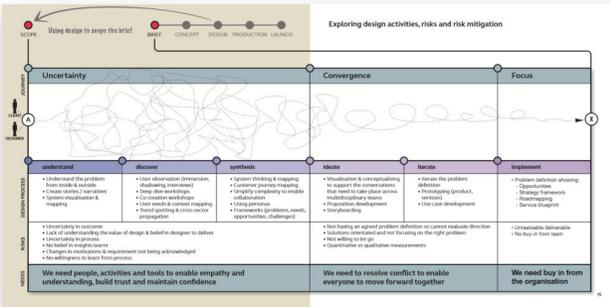
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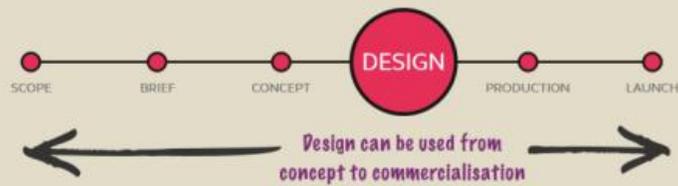
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Design in Innovation

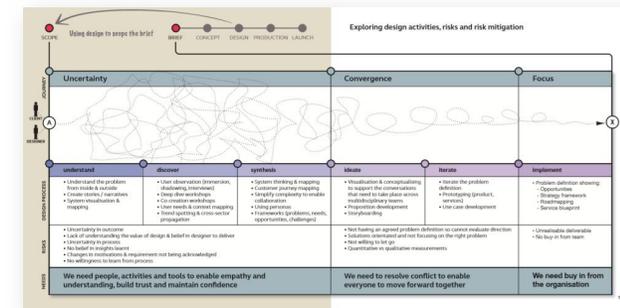
Early stage interventions

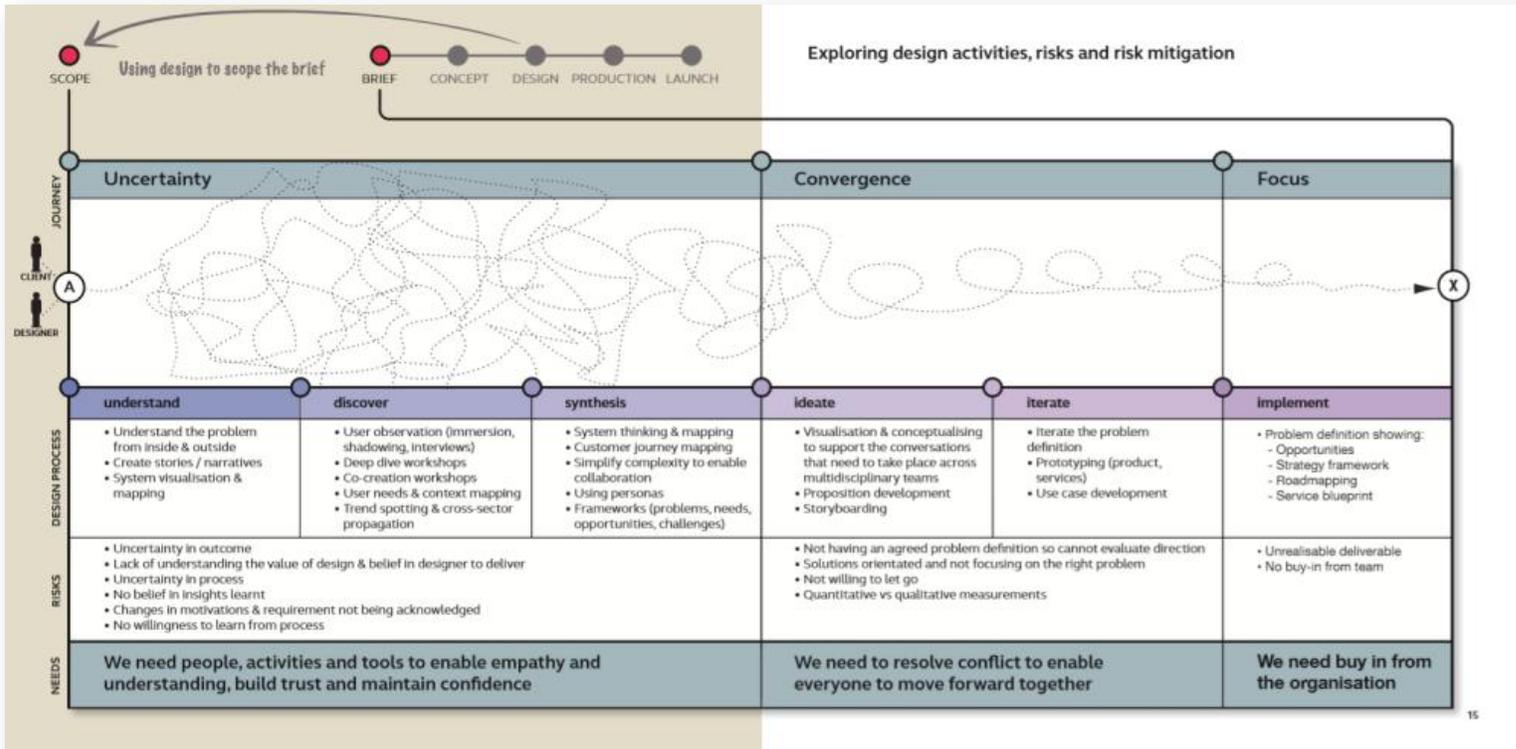


Design is often considered late in a typical development process

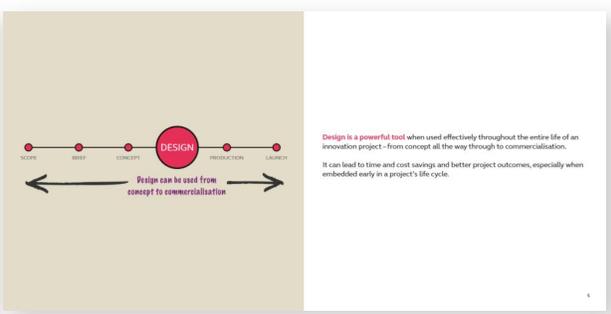
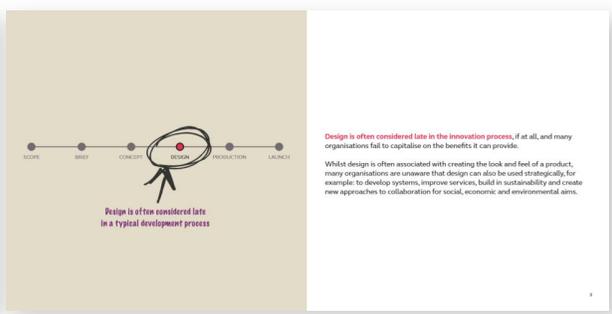
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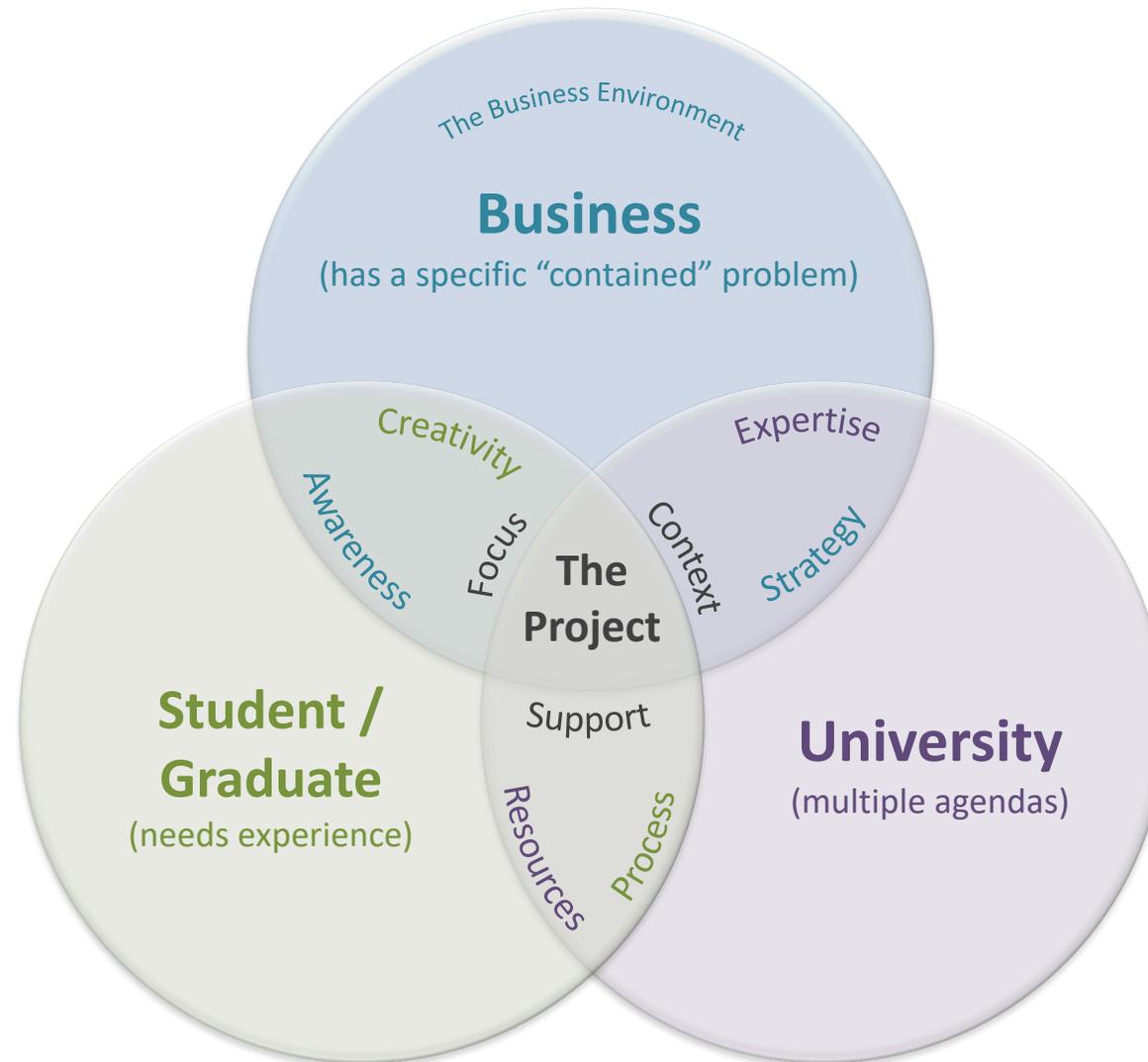
Intrapreneurship should be at the Heart of Higher Education

- For academics
- For students
- It's a defining graduate mindset
- It fits well in a “Design” context
- It also fits well with Knowledge Transfer

How do we build **Intrapreneurship** into the **curriculum** and **student experience**?

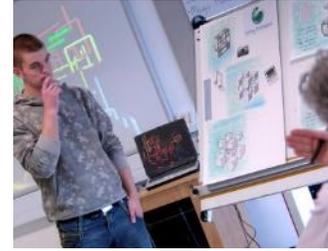


Tripartite Model for Business Engagement



Providing Focus

“Interactions”



Project Briefings

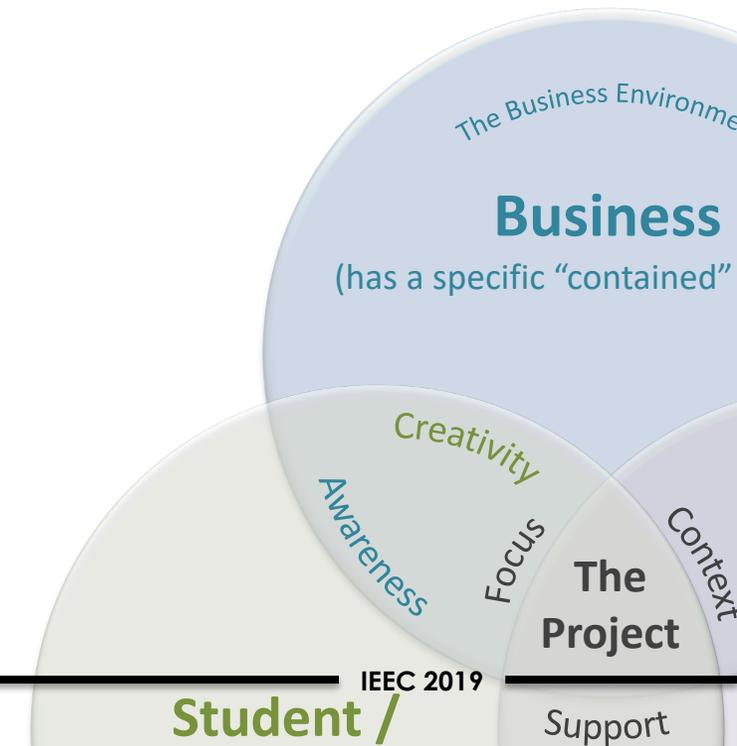
- Project brief fundamentals agreed between the university and company
- requirements of each partner must be achievable
- Project initial brief acts only as a broad introduction to the area
- Students receive Initial Brief ahead of full briefing session and Q&A from the company
- Students then expand their individual brief based on the briefing

Tutorial support maintains contact

- Company's representative is invited to work with the students during the project (e.g. 1/2 day at pre-determined staged points)
- Via email questions for clarification (controlled to avoid co. overload).

Critiques

- Senior Company representation (typically director level) and feedback at all critiques including a summation at the end of the project.



Providing Context

“Insights”



Visit to Berghaus Factory

Formal Business Presentation

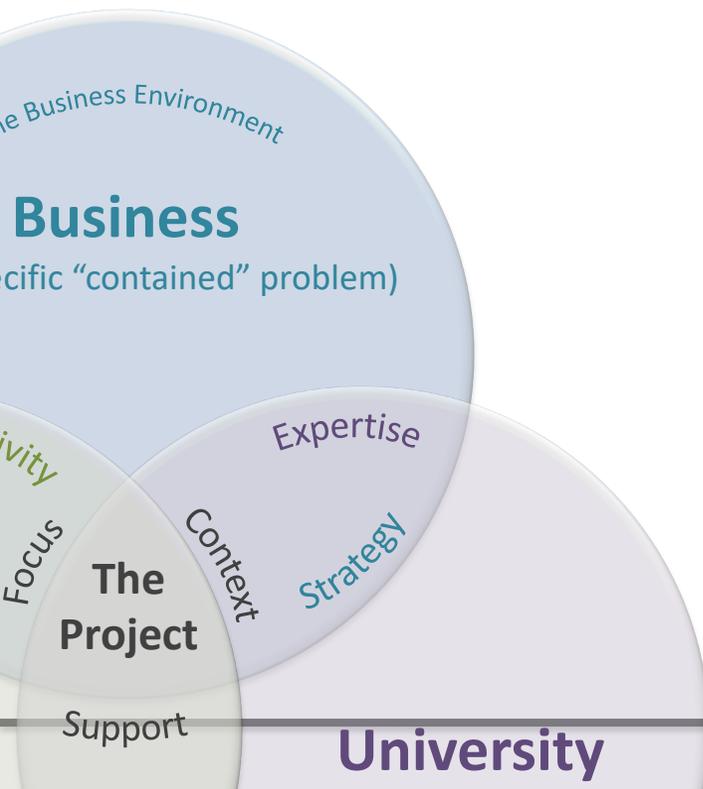
- Illustrate the core business and direction of travel
- The issues and opportunities
- The constraining factors

Factory Visits

- See the current capabilities in operation
- Contextualises and “makes the problem real”

Real World Problems

- See the relationship between degree studies and practical application
- Motivates and demonstrates how design can make a difference
- Highlights possible career directions for the future



Providing Support

“Enablers”

Professional Studio Environment

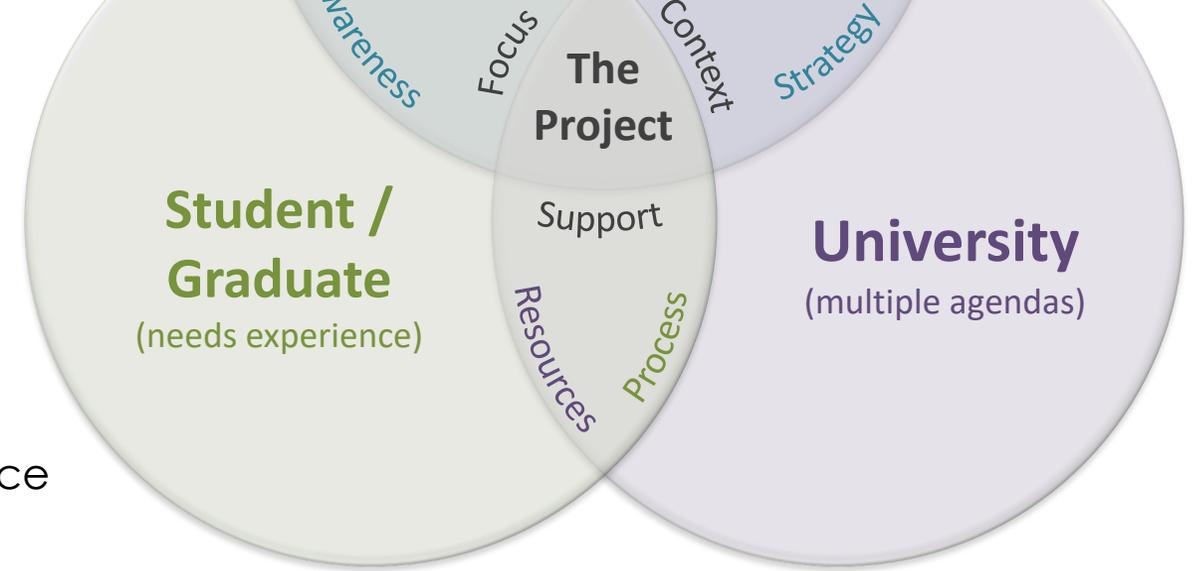
- All years sharing their own open plan studio space
- 24 hr, 7 day a week access
- All resources at hand
(Internet for research, drawing boards, CAD, 3D workshops, etc.)

Workshops

- Explore through drawing, visualising, making and discussion
- Student centred and led. Student/academic and student/student
- Focus on coaching and mentoring support

Group Working

- Group working and research to understand the nature of the problem and explore opportunities



Developing Enterprise Activities

Work with **giving** and **sharing companies**

Over deliver on what you promise

It takes just as much time to work with a poor partner
... and you will achieve less

... so **choose carefully** who you work with

Use **early interventions** to **grow the relationship**
and expand the opportunities

For students at university

Soft Skills + Business Experience

= Confident, Resilient Graduates
outside the university environment



Where does this happen?

- University led

- Invited speakers companies, alumni
- Visits – company/factory
- Live projects

- Student led

- New Designers Society
- Design Exhibitions
- Societies
- Sport clubs



Live Projects



- Building relationships
- University and company
- Company and students

- Enhanced graduation career prospects
- Insight into commercial design



Live Project: *ESSE*

BRIEF:

- Propose concepts that will challenge preconceptions of how people will cook in new homes and how they will be heated.

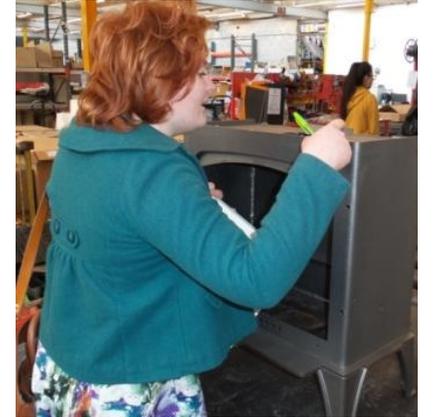
BENEFITS:

- Briefing and interaction with Esse Management
- Factory Tour and Museum Tour
- Manufacturing Facilities



Benefits

- Hands on with the products we were designing
- Able to see the craftsmanship that goes in
- See the design behind ESSE products
- ESSE heritage
- Able to meet the business owners face to face



Key Learning and skills acquired

- Better understanding of manufacturing ability and techniques
- Importance of product family and brand identity
- How design thinking can better define a target market
- Ability to accept and learn From criticism



Live Project: **Portakabin**

BRIEF:

Design and engineer a pre-fabricated, modular, 'pod' for use in National Trust properties across the country.

BENEFITS – access to expertise:

- David Offen (Lead DfMA)
- Daniel Harvey (Leader of architecture & Innovation)
- Phil Dunn (Area Hire Manager)
- Factory tour



Key Learning and skills acquired

- Discussing feedback and defending design ideas
- Scalable manufacturing
- Project management
- Being confident and professional with business representatives
- Dedication and work ethic



Extra Curricular: New Designers Society

- Need to raise approx. £4000
- Events and activities – Christmas decoration sale, sponsorship, band night, raffle
- Successfully secured £16000 Students Union, Student Experience fund
- Most Entrepreneurial Society Award
- Culture developed over years
- Passing the baton to following year.



TEES MADE



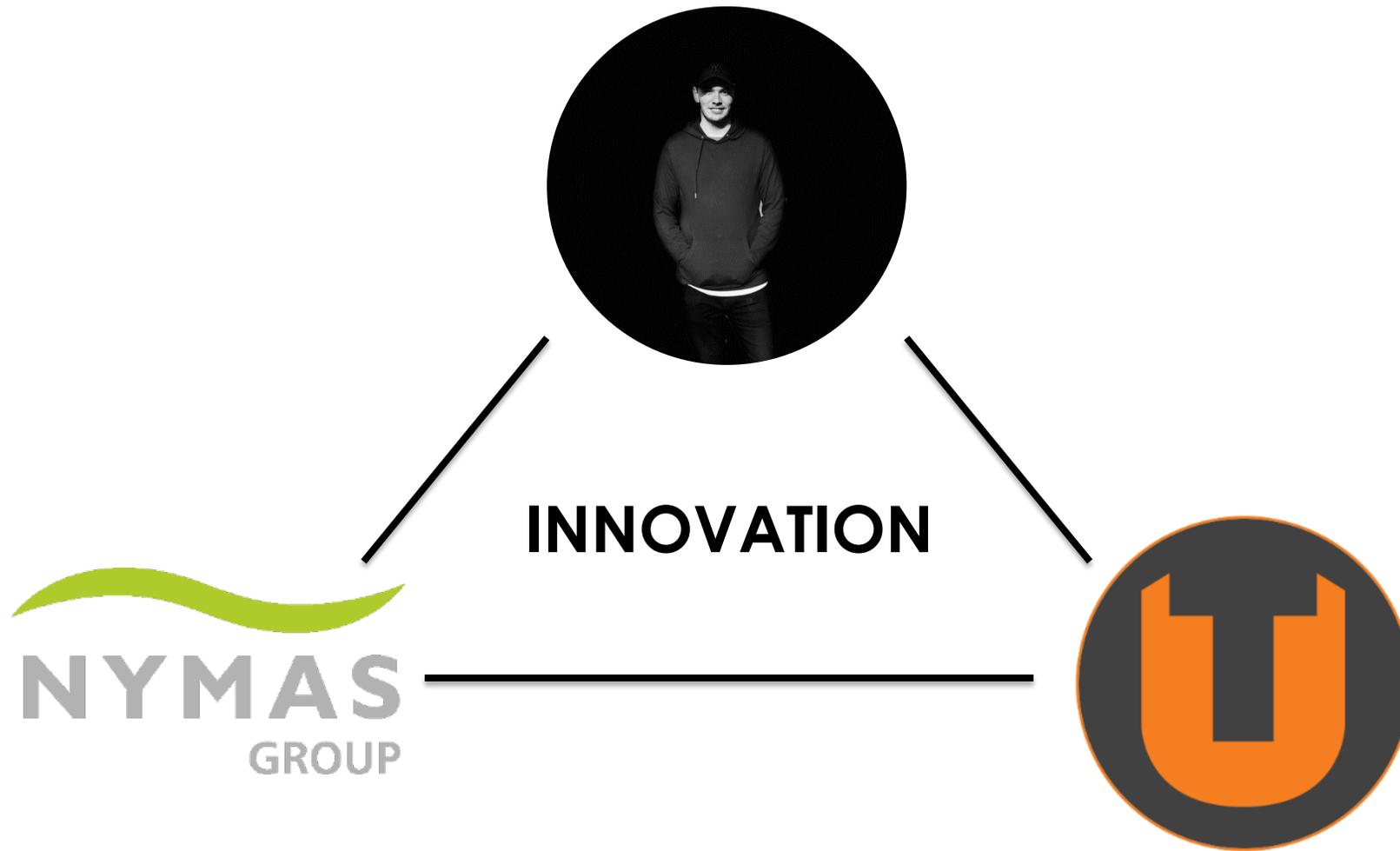
Key Learning and skills acquired

- Organisation
- People management
- Financial management
- Leadership
- Logistical management

NEW. DESIGNERS



NYMAS Knowledge Transfer Partnership



NYMAS Group

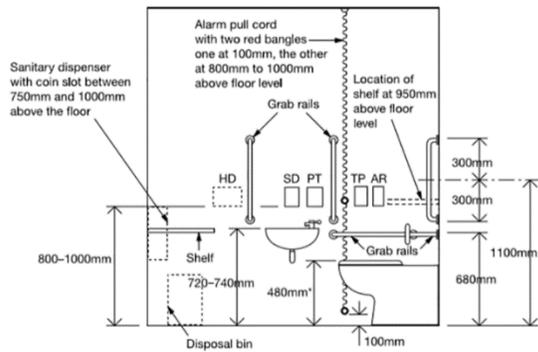
Mission Statement:

We make design led washrooms that are safe accessible and dignified for all

Vision:

Through commitment to our mission and values we will be the leading provider of inclusive washroom products in the UK and beyond by December 2020.





*Height subject to manufacturing tolerance of WC pan

HD: Possible position for automatic hand dryer (see also Diagram 20)
 SD: Soap dispenser
 PT: Paper towel dispenser
 AR: Alarm reset button
 TP: Toilet paper dispenser

Height of drop-down rails to be the same as the other horizontal grab rails

Company Focus

- Sales Driven
- Service orientated
- Product Quality
- Doc M compliance

Key Markets

- B2B
- Healthcare
- Residential
- Commercial
- Hotels/hospitality

Our Brands



Nyma[®]PRO

*simple, cost effective and durable solutions for any accessible washroom.
ease of installation and client safety
for home adaptations, residential care homes, social housing, private use*



Nyma[®]CARE

*for high use public areas
essential features of durability, infection control, vandal
resistance, and aesthetics*



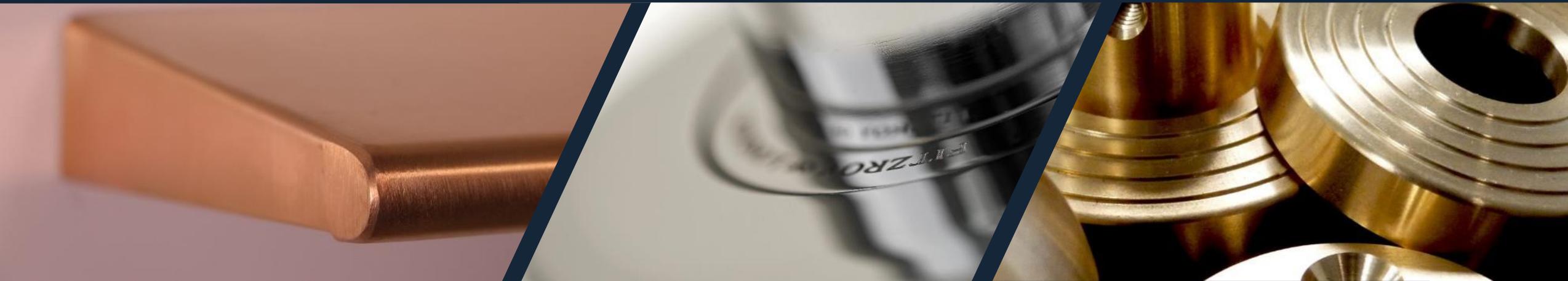
Nyma[®]STYLE

*design-led class with full compliance... for a wide variety of
installations for the more discerning end user*





Fitzroy of London





Nyma[®]PRO



Nyma[®]CARE



Nyma[®]STYLE



Further Premiumisation



Our Markets



Differentiate Fitzroy of London within the marketplace and add value through design

Company Focus

- Premium hotel developments
- Private healthcare

Key Markets

- Mid/high end market opportunities in
- Premium market segments with
- Aesthetically improved, high specification, 'luxury' offerings.

KTP Objectives

To embed a bespoke New Product Development function into NYMAS utilising emerging concepts in “design thinking”, novel material applications and associated manufacturing methods creating a portfolio of innovative accessibility bathroom products.

KTP Work Plan



Research into
Development
projects



Strategic
Business
Development

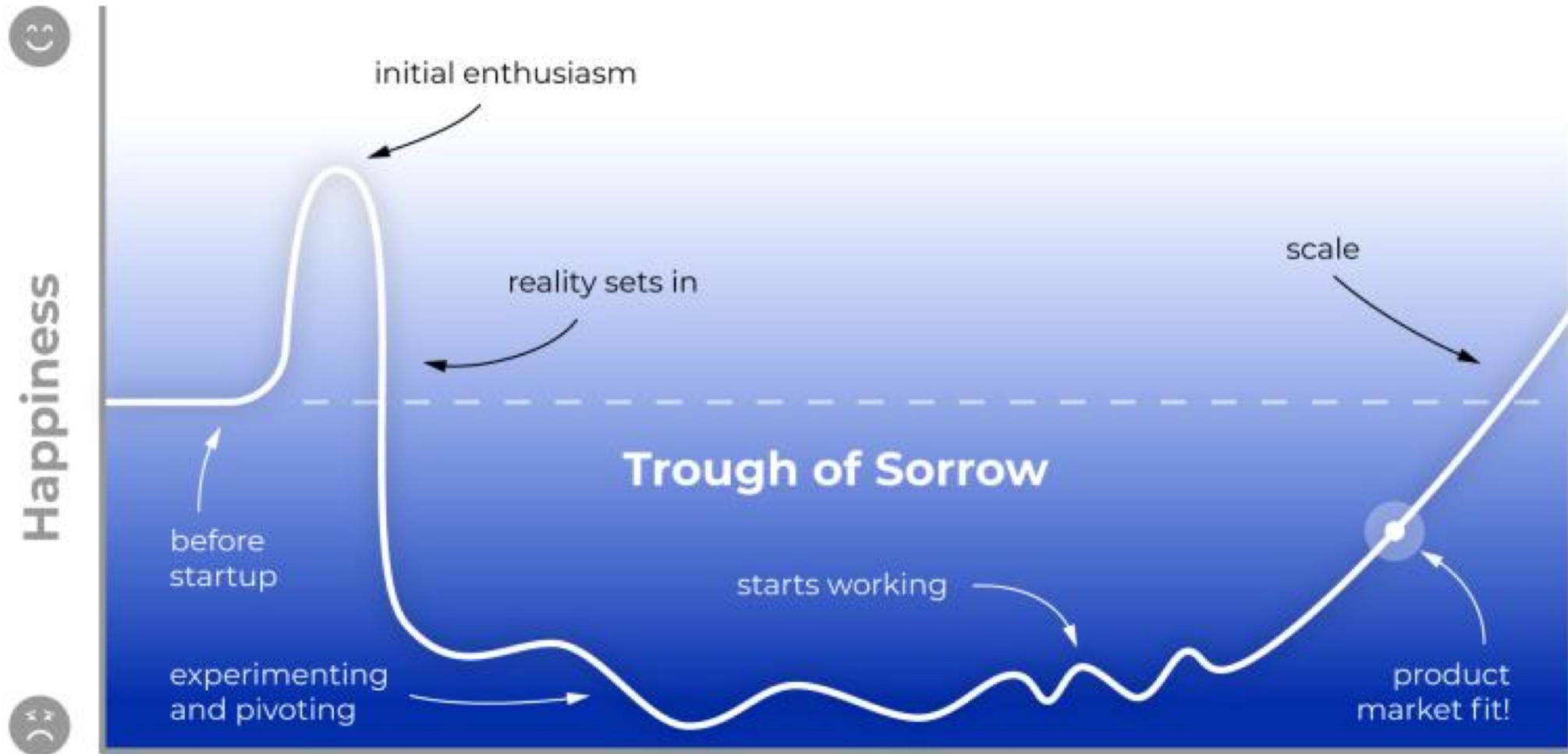


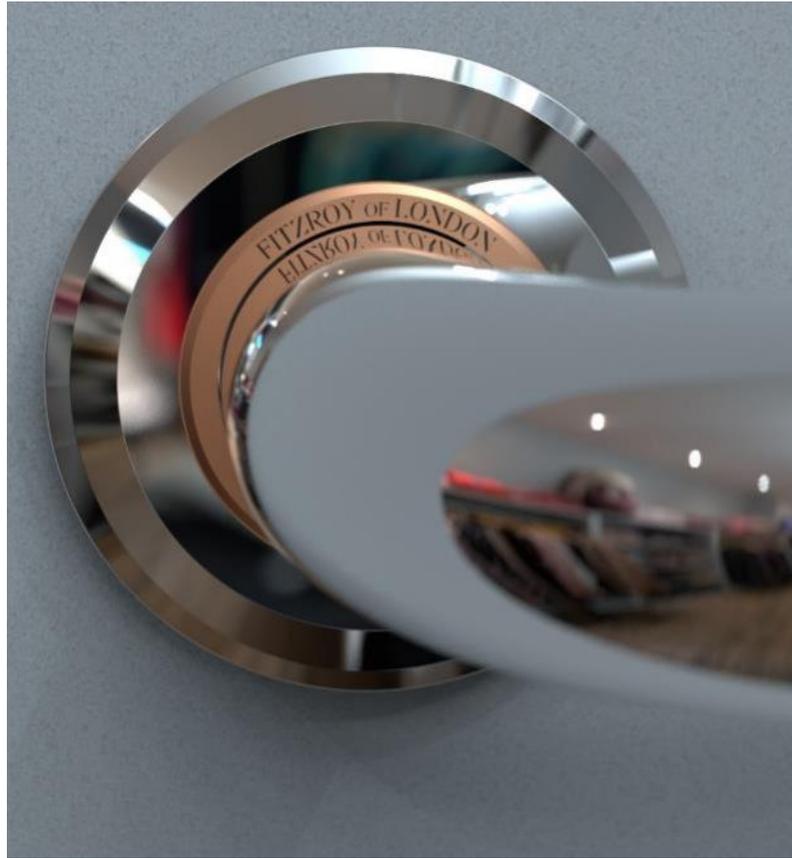
Academic
Support



Student
Development &
Mentoring

The Intrapreneurship Journey



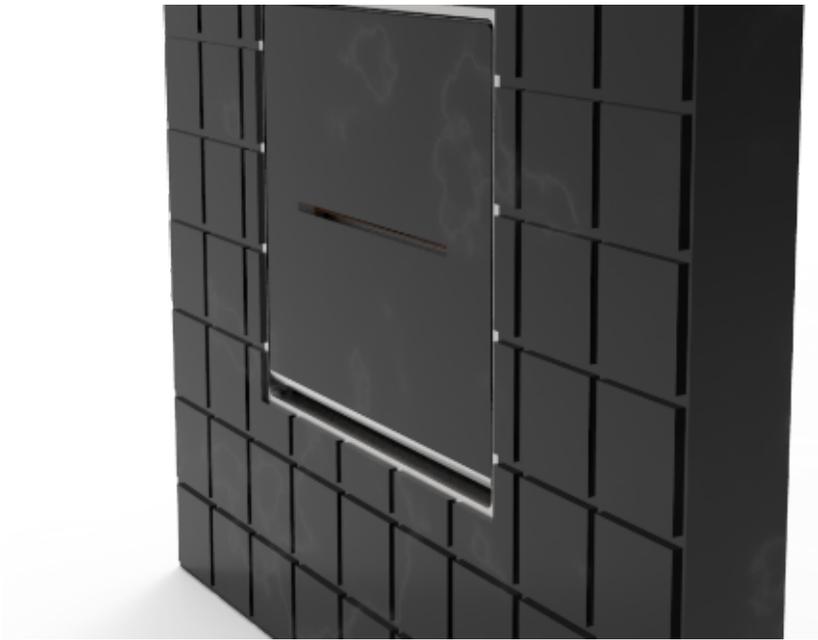
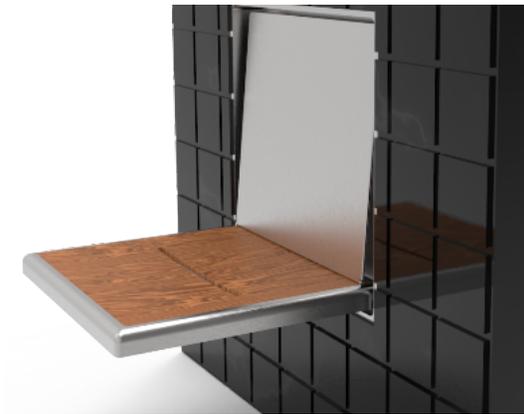


R into D Projects

Student Projects

Skills Developed:

- Developing **mentoring** skills
- Giving **constructive criticism**
- Knowing when to **criticise** and when to not
- Appreciating not everyone is at the same **skill levels**
- Managing expectations
- Communication



Procedural Change – NPD Process

Skills Developed:

- Evaluating existing procedures
- Implementing stage gating and evaluation
- Getting 'buy in/ from all areas of the business
- Managing projects

Procedural Change – NPD Process

Skills Developed:

- Evaluating existing procedures
- Implementing stage gating and evaluation
- Getting 'buy in/ from all areas of the business
- Managing projects

Key Learnings

- **Commercial Awareness**
- Project and Time Management
- Interpersonal Skills and Communication
- **Leadership Skills.**
- Problem Solving Skills
- **Work Ethic**
- Flexibility/Adaptability
- Positive Attitude
- Self-Confidence
- **Conflict Resolution**



Any Questions?

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NYMAS

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