COLLABORATE

A GUIDELINE TO COLLABORATIVE PROJECTS AT BRUNEL UNIVERSITY LONDON

Brunel University London

INTRODUCTION

50 YEARS OF EXPERIENCE

Brunel University London has over 50 years of experience working closely with industry on collaborative ventures. Projects with students, which is one type of collaboration, are our most successful collaborative channels. Through our track record we can demonstrate that with planning and support the outcomes can lead to significant benefits to the companies we work with.

> **Collaborating with Brunel students can add an extra dimension to how your business develops**

Design-driven innovation is increasingly recognised as a key activity to bring ideas to the market, transforming them into user-friendly and appealing products or services.

Companies can gain value from collaborative projects in many ways, whether they are recent start-ups with limited resources for new product development, charities, hospital trusts, multinationals or SMEs interested to work with an enthusiastic designer looking at a brief from a fresh perspective, backed by grounded research and academic rigour.

Our students work in depth on projects set by industry partners, taking them from an idea through to prototype design (or other defined deliverables).

Past projects have included: consumer products, digital services, medical devices, lighting, furniture, internet based devices, architectural applications, user-experience design products, screen based product or service design.

OUR STUDENTS

Our Undergraduate students study Industrial Design and Technology BA, Product Design BSc, Product Design Engineering BSc – all disciplines combine commercial awareness with creative and inspirational thought, validated by sound technological reasoning, defined through the design process.

Our Postgraduate students study Integrated Product Design MSc which focuses on the design of innovative products, emphasising the balance between the interest of users, industry and society. Companies can also choose to sponsor one of our PhD students in the following three thematic priorities: Human Centred Research in the Human Centred Design Institute, Design for Sustainability or Design for Innovation and the Creative Industries.

All students are supported by our academic team and have full access to research data and facilities, giving the final results credible market value and support future growth. We have prototyping, testing and model making facilitates on site that students use for their projects.

Many projects are exhibited at the end of year graduate show, which we call MADE IN BRUNEL, that takes place in June and chosen projects are also included in an internationally distributed book of graduate design work.

FREQUENTLY ASKED QUESTIONS ABOUT COLLABORATIVE PROJECTS

Eligibility

We are interested in open briefs that allow students to research and generate new thinking, possibilities and ideas for companies that are grounded by the realism of manufacturing, time and budgets. We believe the synergy between industry and academia leads to better academic grades and enhanced commercialisation potential.

Levels of Company Commitment

Typically, the more you put in the more you get out! At a minimum, we would recommend monthly face to face progress review meetings and adhoc Q&A via email/phone. Your student will also meet their academic supervisor weekly to discuss and gain feedback on the project. Your role is to help support your student through expert advice, connect them with relevant people (for example experts and target consumers) and resources (materials, research etc).

Benefits & Academic Requirements

Collaborating with one of our students is an opportunity not only to access fresh thinking and new ideas, but also to add considerable value to a student's education and career prospects, supporting the next generation of innovators.

We must however stress that Brunel's student academic requirements come first. The collaboration can have benefits for everyone concerned, but it needs to be a wide reaching and challenging brief. Therefore, we spend time ensuring that the project briefs have the potential to be a basis for in-depth challenges which - if managed well by the student, supervisor and company - will produce excellent results.

Cost

This initiative is about providing students with an opportunity to work with organisations and apply their academic learning on commercial projects. You are expected to cover travel expenses (the figure to be agreed between the company and student), and help fund materials and prototyping costs (these can vary but typically between £1,000-£3,500). You will need to allocate project management time to review and support students throughout their project and have a budget to cover student and project expenses.

Design Outcomes

Typical outcomes are proving proof of principle prototypes and physical or CAD visual models together with a final design report.

IP Ownership

Title to any intellectual property made or conceived in the performance of the Project by the Student shall be vested in the Company. However, it is essential that in doing so you provide a sufficient level of help, advice and funding for materials/prototypes required by the project to make it a fair exchange. We also ask that companies acknowledge the student's contribution in the event that the company exploits the project results commercially by paying a reasonable sum/royalty to the student. The project contract covers all the relevant details.

COLLABORATIVE PROJECTS ARE MUTUALLY BENEFICIAL

HOW STUDENTS BENEFIT:

- Applying accumulated academic knowledge to a real-world challenge
- Exposure to company working practices, working to deadlines and defined constraints
- It develops the skills and experience they need to stand out in the job market
- It allows them to build industry links and enrich their academic learning by developing a specific design or business concept

HOW COMPANIES BENEFIT:

- Gives access to fresh design thinking backed by academic rigour
- Gain additional resource to explore a challenge that would otherwise be left at the drawing board
- Add value to a student's education and support the next generation of innovators
- Providing a bridge between a student's academic life and career prospects

GETTING STARTED

HOW TO START THE COLLABORATIVE JOURNEY:

Submitting A Brief

You will be asked to fill out a Collaborative Template Brief, where we will ask you to include as much detail as possible.
Our academic and Co-Innovate team will review your project for suitability for our students. We may ask you to revise the brief based on our feedback to help strengthen the project to better meet the academic requirements.

A Note About Providing Briefs

Providing open ended briefs that give students the breadth to explore challenges without prescriptive deliverables give students the ability to:

- Apply their own research into the overarching subject
- Gain valuable end-user or stakeholder feedback
- Explore innovative solutions
- Come up with a final design grounded in academic and creative design principles

KEY DATES

14th to 17th June 2018
End of year graduate show, MADE IN BRUNEL

22nd June 2018
Round 1 project brief submission deadline

2nd July 2018
1st round matchmaking (a pitching meeting between companies and students)

14th September 2018
Round 2 project brief submission deadline

26th September 2018
2nd round matchmaking (a pitching meeting between companies and students)

October - September 2018
Contracts issued and signed by all parties

October 2018 to April 2019
Students work on major projects (400+ hours)

April/May 2019
Projects Completed

June 2019
End of year graduate show, MADE IN BRUNEL

EVENTS

Towards the end of the first term we hold an Industrial Review Evening at Brunel University London. This is an annual event where students will receive feedback from leading Industrial Design experts to help guide and steer early design thinking.

Made in Brunel is the end of year graduate show (being held between 14th to 17th June 2018 for the academic year 2017-18) at The Bardgehouse, behind OXO Tower in London's Southbank. This is an opportunity to see the breadth of projects and the talented student work that will inspire any visitor.

HELPING COMPANIES CONNECT TO BRUNEL UNIVERSITY LONDON

Co-Innovate

Co-Innovate is an innovation support programme for London based SMEs, entrepreneurs and start-ups. Our goal is to help companies achieve business growth through collaboration with Brunel University London's world class academic expertise, knowledge assets and facilities. We are jointly funded by Brunel University London and the European Regional Development Fund.

Designplus

Designplus has been leading events, facilitating projects and matchmaking people with a shared interest in the economic value of design since 2004. We work with individuals with great design ideas, start-ups, Small to Medium Enterprises (SMEs), charities and large multinationals from all geographic regions to provide applied design support for product and service innovation.

Professional Development Centre

The Placements and Careers teams at Brunel can advertise all year round for placement, graduate and part-time roles and our team is on hand to help with your recruitment needs within design and beyond.

CONTACT US

For Co-Innovate and Designplus enquiries please contact our team **co-innovate@brunel.ac.uk** for further information or to start your collaborative journey with us.

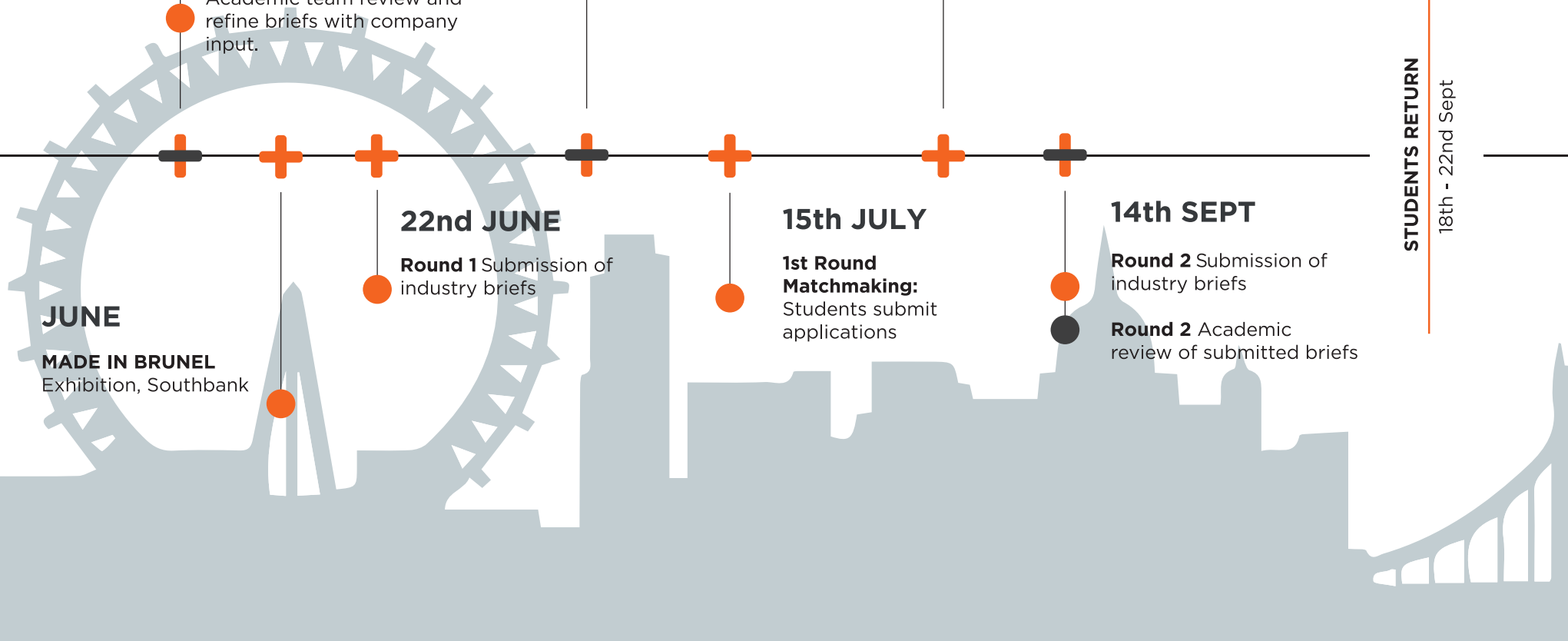
Interested to find out more placements? Contact our Placement Team: **design-placements@brunel.ac.uk**

To find out how you can directly engage with our students, enhance your brand awareness and build a pipeline of talent please get in touch with Alison King, the careers consultant for Design students at Brunel: **alison.king@brunel.ac.uk**

TIMELINE

For the academic year 2018-19

The guide below shows the Collaborative process with a Brunel student to solve your design or innovation challenge, including key dates.
Both company and Brunel commitments are highlighted (please refer to the key provided).



JAN TO JUNE

Companies work on and submit a brief for a Major Project challenge.

Academic team review and refine briefs with company input.

JUNE

MADE IN BRUNEL
Exhibition, Southbank

22nd JUNE

Round 1 Submission of industry briefs

2nd JULY

Round 1 Matchmaking:
Pitching meeting for companies & students

15th JULY

1st Round Matchmaking:
Students submit applications

BY 31st JULY

1st Round Matchmaking:
Students shortlisted and matchmaking confirmed

14th SEPT

Round 2 Submission of industry briefs

Round 2 Academic review of submitted briefs

STUDENTS RETURN

18th - 22nd Sept

Brunel and Company Commitment

Brunel Commitment

26th SEPT

2nd Round Matchmaking:
Pitching meeting for companies & students

SEPT

Project Matchmaking:
Contracts and Administration

OCT-APRIL

Students work on major projects (400+ hours)

Companies support students & arrange regular meetings

PROJECT COMPLETED

APRIL/MAY

JUNE

MADE IN BRUNEL
Exhibition, Southbank

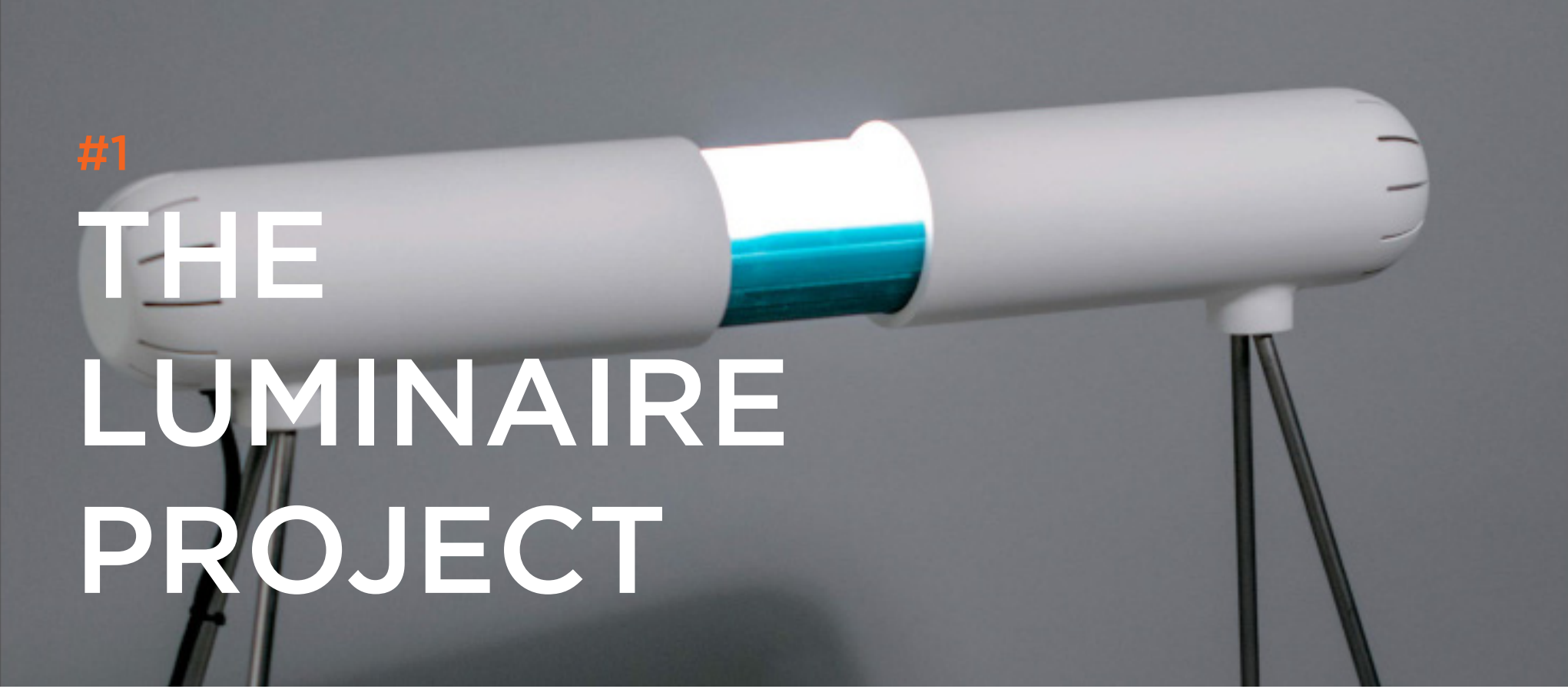
MADE IN BRUNEL

The next few pages contain case studies that are just a few recent examples of collaborations between Brunel students and business. They provide insight and inspiration for the possibilities together with an indication of the research and development challenges that students can be set across a range of disciplines and ways to collaborate: undergraduate final year projects, dissertation and group projects.

Brunel's Design+

#1

THE LUMINAIRE PROJECT



2nd YEAR PROJECT / Amber Sayers

The Luminare Project is a collaboration between the lighting industry and 2nd year students. A brief is submitted by the company (this example is a collaboration with Xicato) who give feedback and advice to the yeargroup. Student outcomes include a functional prototype of their luminaire design, an aesthetic prototype and fully rendered CAD models of the design in situ. Lighting companies supply the LED lights, and in reutrn recieve innovative, fresh new concepts by keeping their brief open. The winning student from the 2017-18 academic year also had the opportunity to present their lighting concept in Munich, Germany at the llight ffestival alongside Xicato.

#2

LITTLE HEROES

MAJOR PROJECT / Sophie Copley

Redesigning Children's Hospital Garments to reduce Patient Perioperative Anxiety Levels
In collaboration with The Bloomsbury innovation Group and UCL Hospital

ABOUT LITTLE HEROES:

Over half of children undergoing surgery develop significant anxiety during their hospital journey. Currently, children are made to wear gowns which leave them feeling exposed and uncomfortable. By insisting children must wear this gown a strain is put on the relationship between the healthcare professional and patient.
Little Heroes was developed specifically for children aged 2-6 years of age, where increased anxiety due to a lack of understanding and critical thinking can lead to worsened outcomes from surgery. The garments' sewing pattern has been co-designed by health professionals and patients at University College London Hospital, ensuring the highest quality ergonomic design, patient experience and dignity. The overall superhero aesthetic aims to empower children during a stressful time while offering a fun, engaging distraction – all leading to an improved hospital experience.

"For a second year, Little Sparks Hospital have collaborated with Brunel University to develop exciting and innovative products to help reduce anxiety and distress in children undergoing surgery. The collaboration has enabled computer science and product design students to work together with healthcare professionals on real-world issues We are impressed and humbled by the work achieved by the students each year and hope to continue this relationship with Brunel University and the students we've worked with this year in the future."

Dr Chris Evans - Fellow, Bloomsbury Innovation Group

NEW DESIGNERS AWARD WINNER

#3

MUSHROOM GROWN STRUCTURES

MAJOR PROJECT / Aleksi Vesaluoma

In collaboration with Astudio
Environmentally friendly structures grown mushroom mycelium

Mycelium is the root structure of mushrooms and the digestive system of the environment. When mixed with agricultural waste, it grows through the matter holding it together like glue.

Celebrating nature's wisdom, this project explores new ways of seeing the future of materials and construction. Growing our materials from bottom up depletes no resources, creates no waste and results in robust yet biodegradable products.

The dome structure is grown over 4 weeks by mixing oystermushroom mycelium with recycled cardboard. Gourmet mushrooms that pop out from the structure can be used to prepare a top ramen! Soon our architectural surroundings could also be our source of food.

"Co-Innovate is an exciting opportunity for us to share knowledge with upcoming designers from Brunel University. We find this exchange highly rewarding and a valuable time to build new relationships."
Christian Kerrigan, Associate
Research & Development Team Lead
Astudio

#4 4D LUMINAIRE

MAJOR PROJECT / Abby Ball

In collaboration with Plumen
A luminaire uniting smart materials and 3D printing to unveil a 4D colour changing transformation recycling lost heat from the Plumen 001 lamp.

In collaboration with Plumen, the creators of the 001 lamp, a state ofthe art luminaire has been imagined. Inspired by Plumen's futuristic design style, 3D printing technology and smart materials, a novel lighting experience has been created, intended to be an exhibition piece.

After just a few minutes of the lamp being active, the organic transformation occurs, utilising the lost heat from the lamp. The colour change flares through the 3D printed geometric structure,changing the surface from black to a vibrant colour spectrum.

The shade fits modular to a Plumen pendant set and the 3D printed design allows for future adaptation. A simplified design with the same combination of materials will allow for a saleable version of the shade capable of being integrated into Plumen's product range.

"Our experience was very positive - we got access to a very enthusiastic designer with a different way of looking at the project and an eagerness to learn new processes. It was also a way to explore something that we would otherwise not have been able to resource, and we learned a lot about the processes involved as well."
Buster Palmano, Technical Director Plumen

WHAT WE EXPECT

Expectations From Students

Students will be asked to submit their CV and an expression of interest to work on collaborative projects. Our academic and Co-Innovate team will select and match students to briefs, based on the interests of students and knowledge of their capabilities. If there are a number of strong candidates for one brief we will also involve companies in this process by sending out the students' CVs. It is a must that they meet their academic supervisor weekly to discuss and gain feedback on their project. The programme is full time and demanding so efficient and effective project management is essential.

The Major Design Project is a student-centred piece of work. It requires a high degree of commitment, motivation, resourcefulness and stamina!

Expectations from Companies

To complete the Collaborative Template Brief in as much detail as possible. Topics that can be concluded with the definition of a tangible product or service package (or equivalently acceptable prototype or system/ form model combination) are usually the most appropriate. We may ask you to revise the brief based on our feedback to help strengthen the project to better meet the academic requirements.

To support your student through expert advice, connect them with relevant people (e.g. experts and target consumers) and resources (e.g. materials, research).

We encourage all parties – students, companies and academic supervisor - to meet at the start of the project, at the major project review and at the end of the project during the Made in Brunel Exhibition.

WHO TO CONTACT

For Co-Innovate and Designplus enquiries please contact our team at co-innovate@brunel.ac.uk for further information or to start your collaborative journey with us.

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