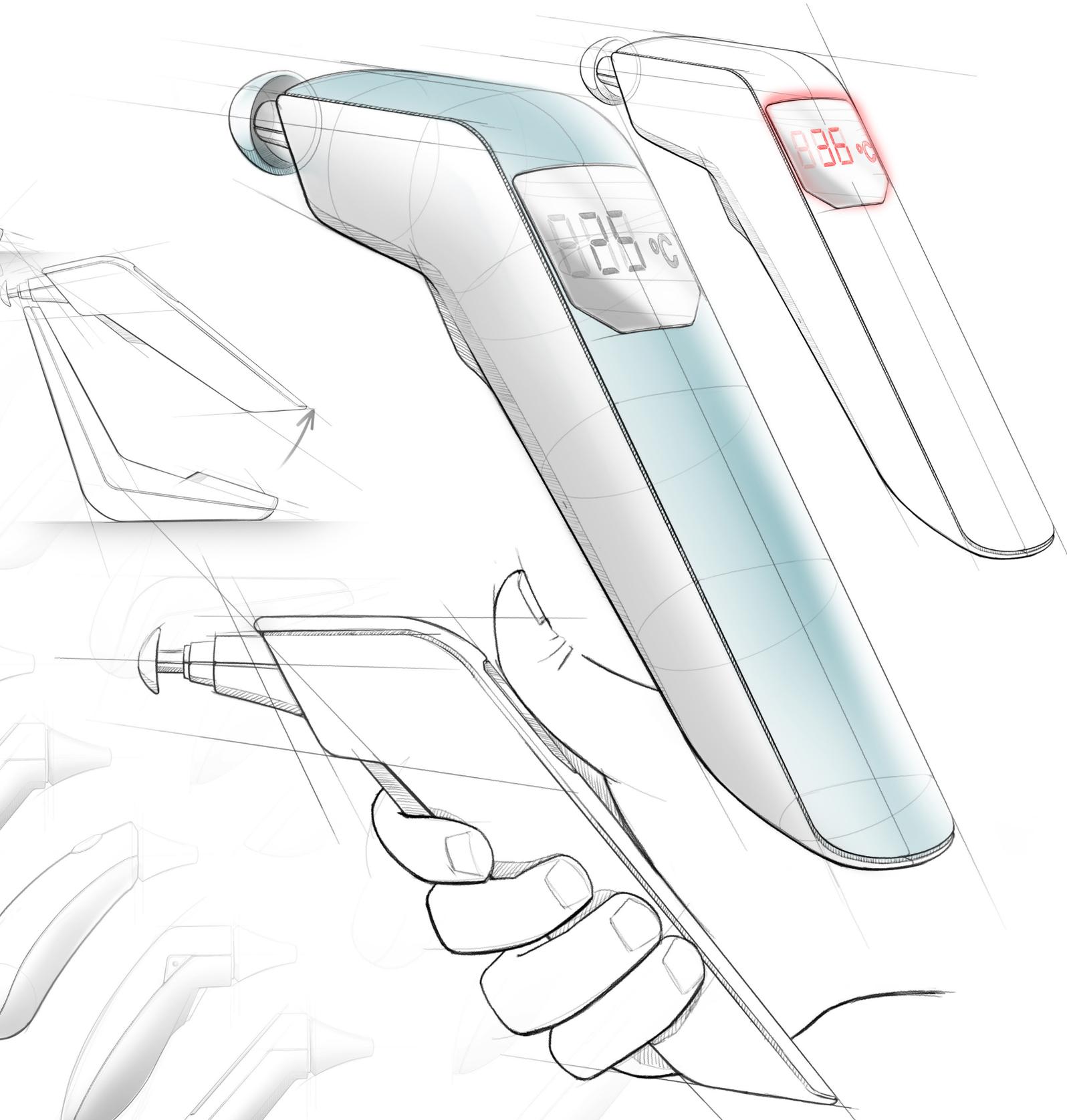


**DEVELOPING YOUR
CONCEPT INTO REALITY**



Welcome to the MTC's Product Manufacturing Incubator (PMI)

A de-risked environment for UK manufacturing and industry

The PMI is a hub of innovation, set up to support businesses and bring ideas to market.

With support from the Manufacturing Technology Centre (MTC), this unique technology and manufacturing incubation centre provides up-and-coming entrepreneurs, start-ups and businesses from across all sectors with the expertise, tools and space to develop their product in a de-risked environment.

PMI works collaboratively with companies and individuals to evaluate ideas, determine the feasibility, and support the journey to develop the concept into a manufacturable product.

Through PMI, SMEs can also potentially access up to 50% REACH match funding to support the project and ensure PMI can help you drive the sustained, profitable growth of your business.

Start your journey

If you would like to discuss your requirements in more detail or arrange a meeting with one of our dedicated consultants, please email pmi@the-mtc.org

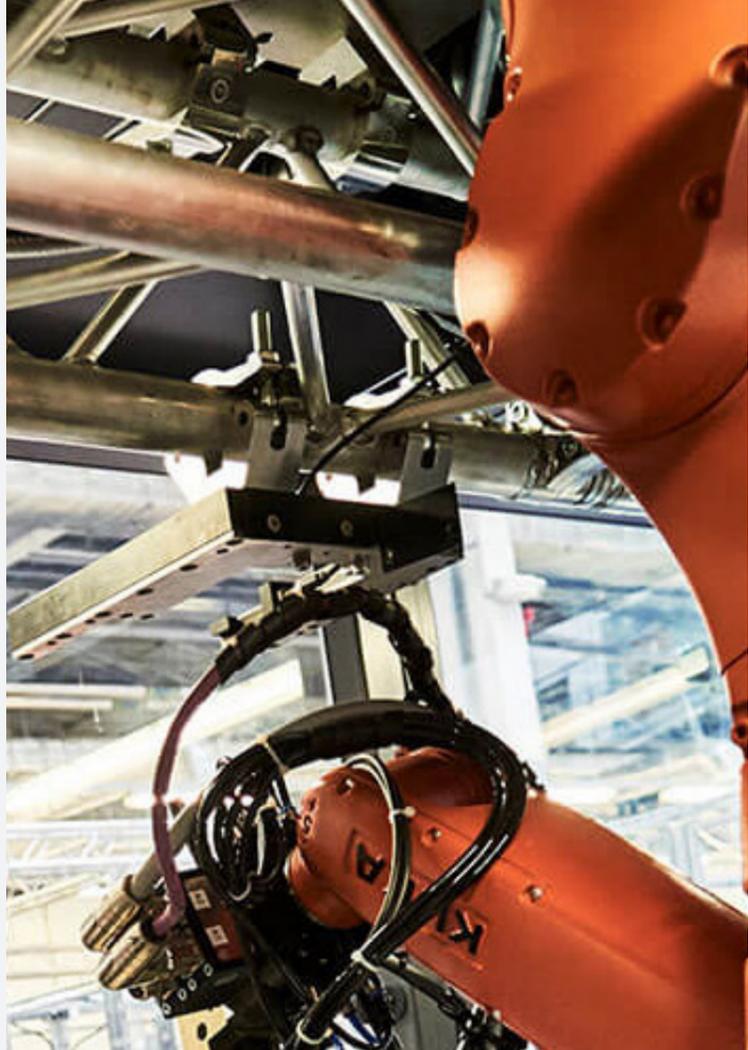


The PMI Journey

Once engaged with our team, we provide access to the MTC's world-class advanced manufacturing and research facilities, as well as its team of engineering and manufacturing experts.

We use Design Thinking methodology to support your journey from start to finish through the three stages of the PMI Product Design Pathway:

- The Discovery Phase
- The Iterative Phase
- The Launch Phase



Through these phases, there are a number of key stages that will be incorporated including:

- An assessment of your Technology Readiness Level (TRL) / Manufacturing Readiness Level (MRL)
- Ideation and concept generation
- Design evolution
- Prototype development, testing and iteration
- Maturing your product to commercialisation

By utilising this approach, it enables us to work collaboratively with you to de-risk your product's development and support the manufacture of your market seeding product.

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As well as seeing our ideas come to life through each step of the project, the knowledge and experience we have gained is immeasurable.

Simon Precious
Albeego Director

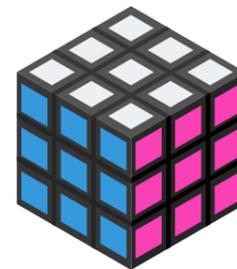
Phase One: The Discovery Phase

This is the first, introductory phase of the PMI Product Design Pathway. Here we will work with you to determine if we can support you through the process and support the manufacture of your product.



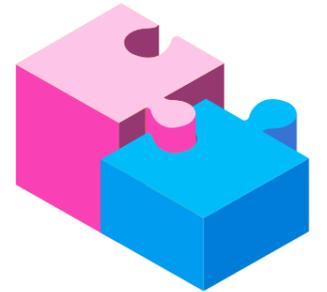
IDEA

Entrepreneur, start-up, SME or larger business enquires to PMI with an idea.



UNDERSTAND

We will work with you to understand the concept, its target audience and the requirements of the end user.



IDEATE

This is where potential solutions are generated collaboratively and ideas are collated, reviewed and down selected.



DEFINE

We will then work collaboratively on the challenges that you are currently trying to solve and how we can support the project.

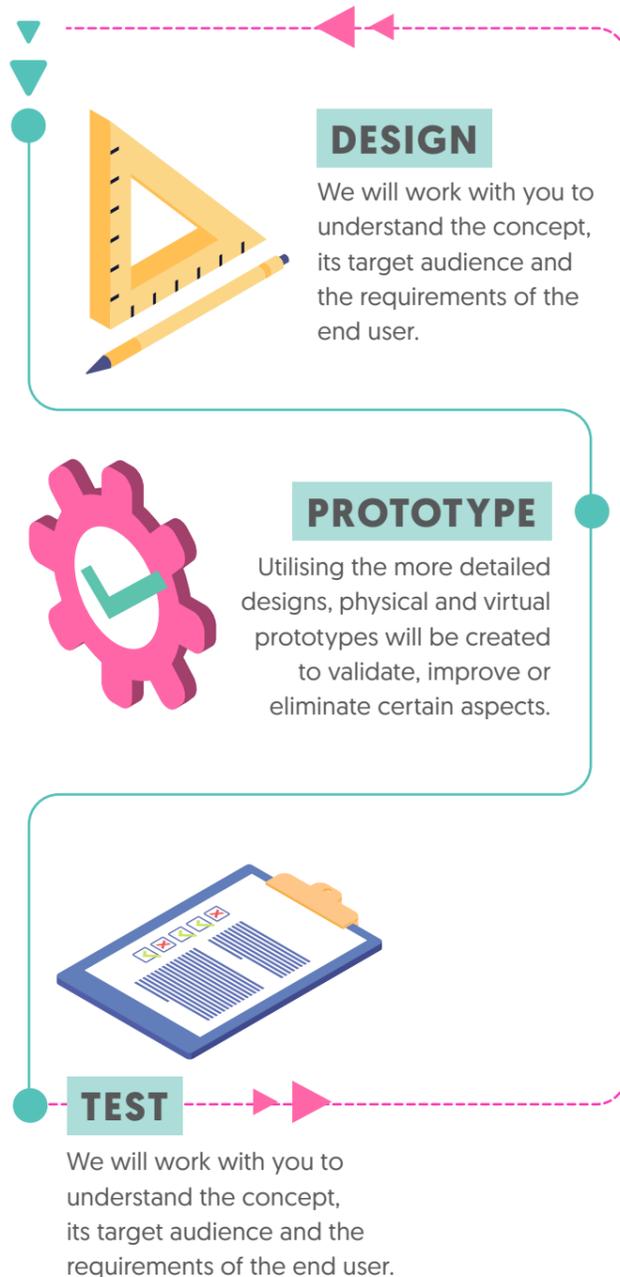


DISCOVER

Our initial report will document the findings from the exploratory phases and will define the requirements. The issues should be clearly defined and identified at this stage.

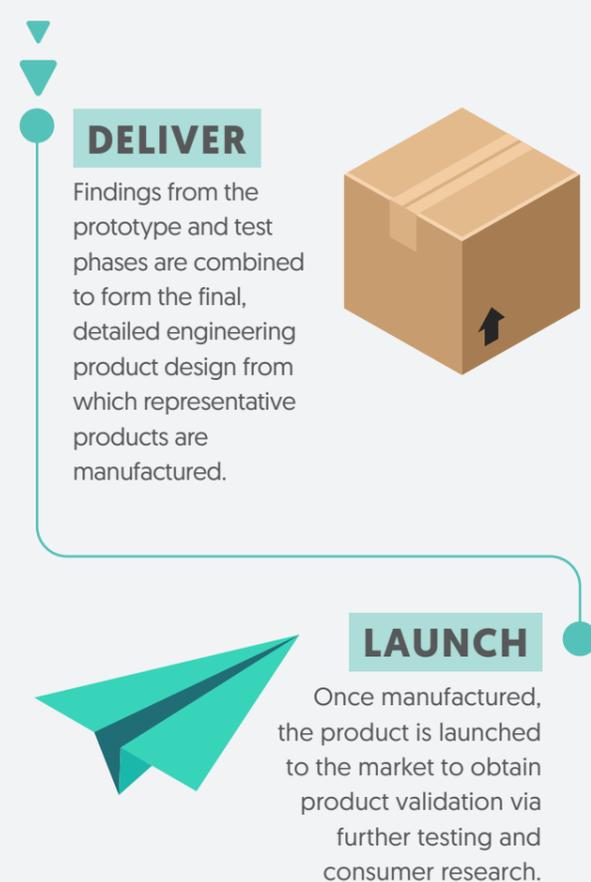
Phase Two: The Iterative Phase

The second phase of the pathway is the most important and can often be repeated. Our iterative design process enables us to work collaboratively to decide on a prototype design that we will take forward to launch.



Phase Three: The Launch Phase

This is the final stage of the journey where the full set of technical specifications have been decided upon and the design is ready for production and launch.



REACH Match Funding: Helping to turn your ideas into reality

PMI is dedicated to supporting up-and-coming entrepreneurs, start-ups and businesses with the expertise, tools and space to develop their product in a de-risked environment.

We are also able to access additional funding support for eligible businesses through Innovate UK REACH funding.

REACH funding, provided by Innovate UK, can be offered to any qualifying SME engaging PMI.

If deemed eligible, SMEs can receive up to 50% funding for a project based on the amount of time allocated to a project.

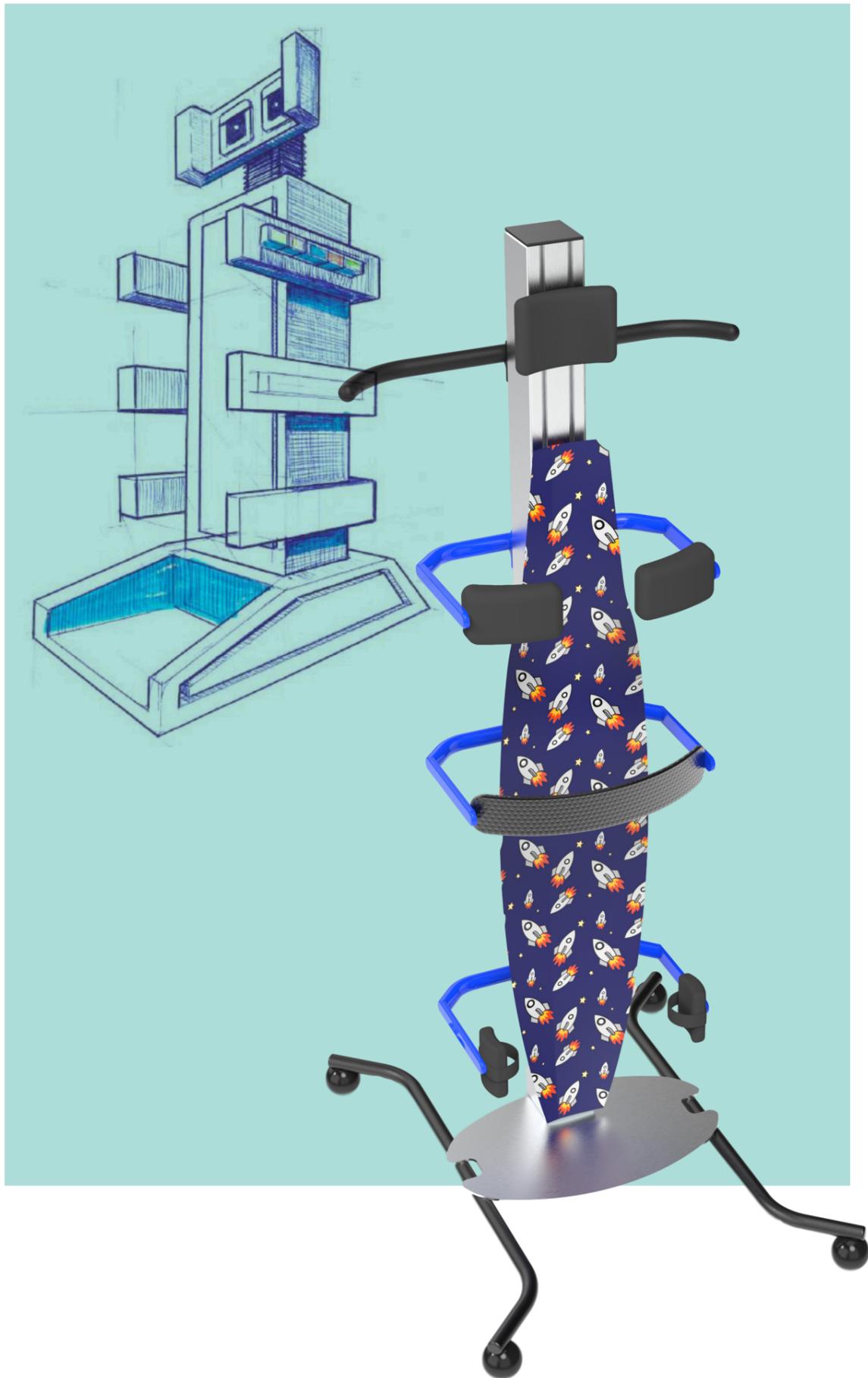
For example, if after the initial discovery stages, it is decided that 12 days should be allocated to running the project, PMI and Innovate UK will fund 6 of those days meaning you will only have to pay 6 days' worth of fees.

To access the funding, you will be required to declare any other state aid that you may have received previously and be an SME as defined by the European commission.

Once engaged with PMI following initial consultations and exploratory meetings, our experienced team will secure the funding for you.

To find out more about REACH Match funding and your eligibility visit the-mtc.org/pmi or email pmi@the-mtc.org





Orthotic Research & Locomotor Assessment Unit (ORLAU)

The Orthotic Research & Locomotor Assessment Unit (ORLAU) based at the Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Oswestry, approached MTC's PMI to see if they could support in the design and production of a new standing frame for patients with cerebral palsy.

The frames, which help individuals to stand supported for periods of time, are used to aid rehabilitation, and can bring about important health benefits that cannot be achieved in seated positions. However, the current standing frames had a number of limitations including limited flexibility to re-adapt for other patients, the cost to manufacture and, the industrial look and feel of the product.

ORLAU set out a series of objectives for the new design concept:

- Greater comfort and more aesthetically pleasing for the user
- Improved ease of use for medical professionals / carers
- Reduced production cost to support low volume manufacture
- Improved ease of assembly

After a period of exploratory workshops to agree the project scope, the Design and Build team came up with a series of design concepts. The ORLAU team chose the aluminium extrusion concept with modular design to take forward to prototype with its infinite adjustability and modularity enabling simple assembly and set up for each patient.

Pending review by both ORLAU and the Design & Build technical governance teams, the prototype will then be assembled to present to ORLAU and showcase at the MTC.

“

We were amazed with the discovery workshop and very impressed by the professionalism and energy that was brought by the team. We found it extremely valuable and that was testament to the manner with which the MTC team interacted and fuelled the discussions on the day. The non-engineers amongst us were blown away by the whole process and amazing facilities. We came away with more in that one day than we hoped for; it was way above our expectations.

Keith Miller CEng MIMechE Clin Sci
Rehabilitation Engineer
The RJAH Orthopaedic Hospital NHS
Foundation Trust

Build Test Solutions (BTS)

Build Test Solutions (BTS) commissioned the PMI team to help support in advancing the Pulse product to the next stages of commercialisation.

Pulse is an innovative air leakage measurement system used to rapidly measure the air permeability of a building or enclosure at a near ambient pressure level. Based on user feedback it was discovered that the overall portability, ergonomics and weight needed to be improved upon.

BTS also wanted to improve the buildability of the unit, ensuring that the product can be produced cost effectively at volume within the UK.

Drawing on established product design processes, manufacturing know-how and market access via its role in the Construction Innovation Hub, the PMI team was able to:

- Reduce production costs by around 27%
- Improve portability by reducing to just 7kgs in weight
- Make the product commercially viable for UK based production

The more compact model has been created with a portable air receiver unit which has straps for carrying on your back or over the shoulder. This is then paired with a small control module which is stored within a pocket on the air receiver unit alongside other cable ancillaries leaving both hands free to carry the portable compressor unit required for charging the air receiver when on site.

“

Our work with the MTC to realise an updated version of the Pulse product that both responds to customer feedback whilst ensuring the commercial viability of UK based production and assembly has been extremely rewarding. This redesign from the ground up will prove vital as we advance with scaling up production and supply into the UK market and beyond.

Luke Smith
Managing Director
Build Test Solutions Ltd





Start your journey

PMI is a de-risking accelerator for SMEs and other companies who wish to manufacture their first 1 to 100 market seeding products.

If you would like to discuss your requirements in more detail or arrange a meeting with one of our dedicated consultants, please email

[**pmi@the-mtc.org**](mailto:pmi@the-mtc.org)