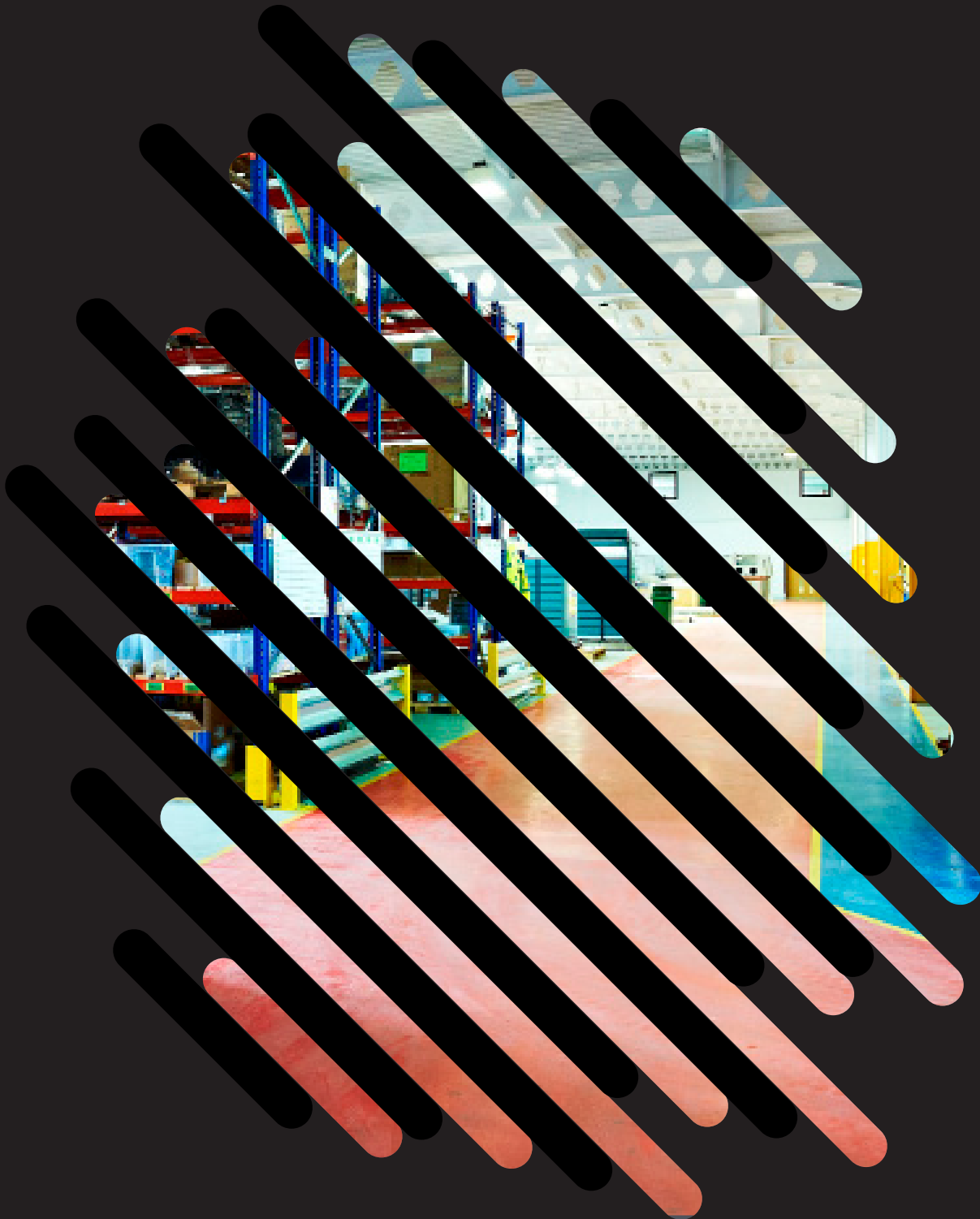


Designers, Developers &  
Manufacturers of Commercially  
Successful Products.

**THARSUS**



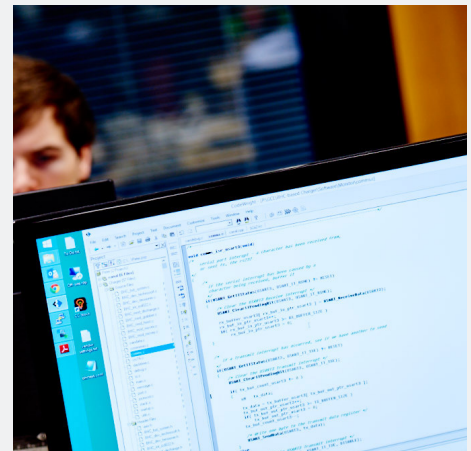
For further questions visit us online at:  
[www.tharsus.co.uk](http://www.tharsus.co.uk) or email us at: [info@tharsus.co.uk](mailto:info@tharsus.co.uk)

## WE RECOGNISE THE POTENTIAL OF YOUR MARKET OPPORTUNITIES.

We work with customers we believe in to develop, manage and manufacture products that make it to market and sell.

Whether it's a project driven by an established IP owner or a seed stage opportunity, our customers benefit from working with a single development and manufacturing partner focused on their products success; one who is fluent in technology and focused on delivering the competitive advantage achievable through our business model alignment and vested interest approach.

Are you looking to: Turn a concept into a commercially successful product? or adapt an existing product to disrupt a new market?



Our teams have extensive experience working across multiple industries, delivering technically complex products that deliver on our customer's knowledge and strengthen IP.

Knowledge-based development,  
management and manufacture

**T.0001**  
EMBEDDED TECH  
CUSTOM PCB

Photographer: John Donahue

**T.0002**  
EMBEDDED TECH  
ROBOTIC CODE SCRIPT

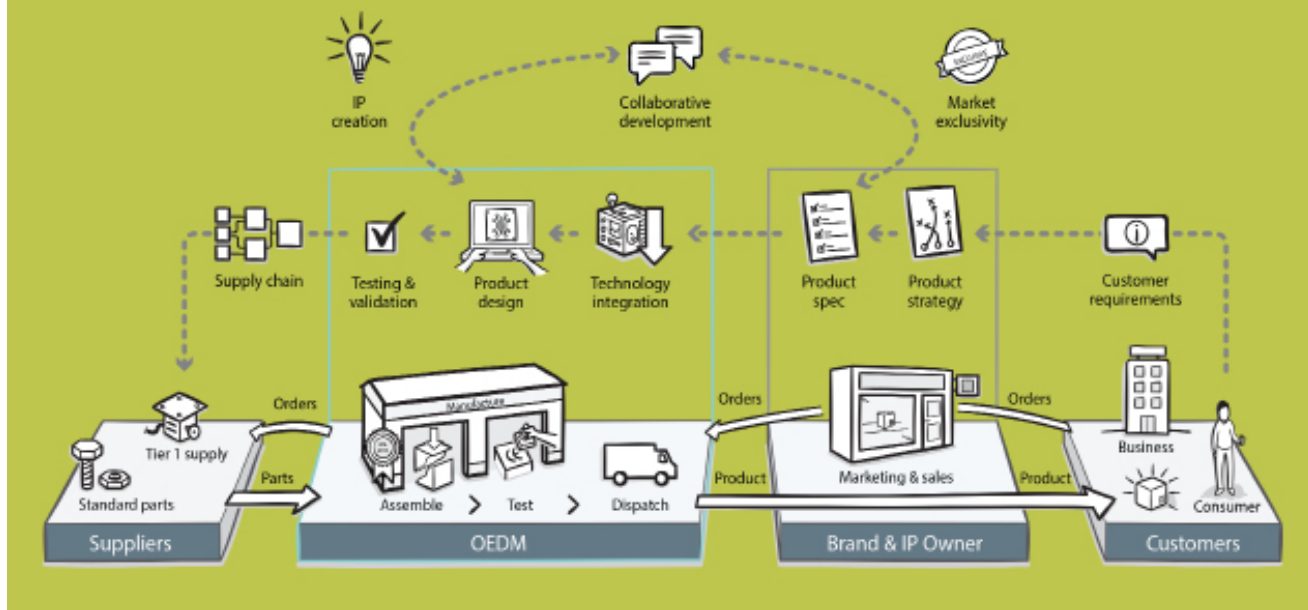
Photographer: John Donahue

# WHAT SETS US APART?

An Incomparable blend of people, processes, facilities and proven track record.

## Original Equipment Design and Manufacture

**Product :** Development | Management | Manufacture



People with a Passion for Technology and Expert Knowledge in Developing World-first Products.

Our OEM Business Model is centered around our alignment with customer success; If the product is the best we can make it for the purpose it's designed for, then our customers will do well, sell more and we'll in turn – make more.

As an all-inclusive developer and manufacturer we prefer to be part of the entire journey, however our modular business model allows us to intervene at any stage; from product

development activities and product management strategies to lean manufacturing and all critical stages in-between.

Our goal is to collaboratively develop and manufacture the best possible products; pairing our customers breadth of market knowledge with our depth of technology insight to produce commercially successful products that exceed expectations.



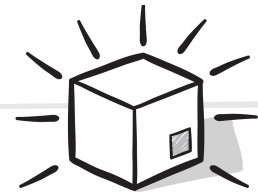
Our service provides customers with absolute peace of mind; allowing them to focus on their core business activities whilst we nurture their product through the development process.

OEDM  
The Value Proposition

01.  
Collaborative partnership

Tharsus helps create technology led products that meet market needs.

Sharing investment risk to exploit the opportunity.



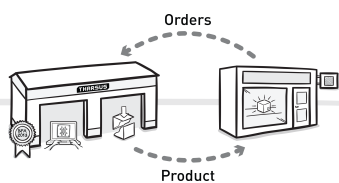
02.  
Increased ROI on development investment.

We Develop, manage and manufacture products under one roof to accelerate the products route to market.



03.  
Market exclusivity

The customer retains any IP generated and gets a guarantee that we wont work with any competitors.



04.  
Win-Win

We have a vested interest in creating products that sell. The more you sell, the more we make.





WHO WE ARE

Tharsus is an industry-leading manufacturer and developer of technology led products; ideally positioned to transform our customer’s knowledge into commercially successful products with reduced risk and time to market benefits.

- 20% ANNUAL GROWTH**  
YEAR ON YEAR FOR 10 YEARS
- EXPORTING TO 11 COUNTRIES**
- 1 IN 10 EMPLOYEES IS AN APPRENTICE**
- THE Manufacturer OF THE YEAR AWARDS 2012**  
SME Manufacturer of the Year (Under 125 employees) **WINNER**
- 6% OF TURNOVER SPENT ON RESEARCH & DEVELOPMENT**
- BRIAN PALMER NAMED INVESTOR DIRECTOR OF THE YEAR**
- 42% OF TURNOVER IN EXPORTS**
- 70.000 SQ FT OF MANUFACTURING FACILITIES**
- Cranfield BFA 2013 WINNER**

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We believe that through being both a product development and manufacturing business we provide customers with absolute peace of mind; allowing them to focus on their core business activities whilst we nurture their product through the development process and all critical stages in-between.

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**“People with  
a passion for  
technology and  
expert knowledge  
in developing world  
first products”.**

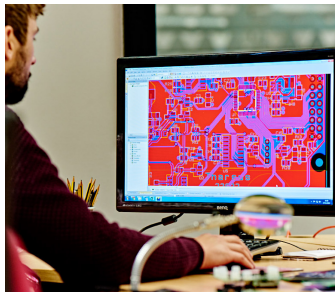
- Brian Palmer ceo



## EXPERTISE

### WHY CHOOSE US?

As an all-inclusive developer and manufacturer of technology led products we prefer to be part of the entire journey, however our modular business model allows us to intervene at any stage; from product development activities and product management strategies to lean manufacturing and all critical stages in between.



### Product Development

We take a multi-disciplinary, cross-sector approach to product development that translates our customer's market insight into new and or improved products and service offerings

#### Are you looking to...

Turn a concept into a commercially successful product? or adapt an existing product to disrupt a new market opportunity?

The holistic system definition approach we take ensures we unleash your product ideas by taking action based on a shared understanding of your market insight.

This involves transforming concepts into functional models and proof of principle demonstrators, leading to detailed design and full development activities, along with accompanying documentation of the product.



### Product Management

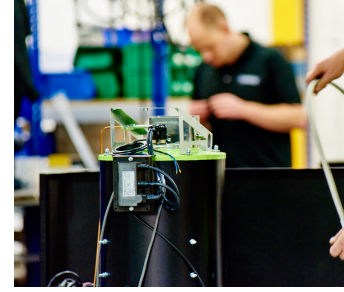
Our project management service is an organizational life-cycle function, One thats focused on developing competitive advantage through lean project management, strategic supply chain planning and account forecasting at all stages of a products' lifecycle.

It's designed to ensure that every product is a commercial success; capitalizing on ROI for development and manufacturing activities whilst allowing our customers to focus on their core business with absolute piece of mind.

#### Are you looking for...

A development and manufacturing partner that can nurture your product from cradle to cradle and accelerate time to market with reduced risk?

Our wholly agnostic management service creates collaborative opportunities that drive business growth and assists in successfully translating customer knowledge into new and or improved products that are commercially viable.



### Product Manufacture

The flexibility of our manufacturing facilities and teams enable us to configure production capacity to accommodate the varying requirements of our customers – rapidly scaling up as necessary, and offering the opportunity for product iteration along the journey

#### Are you looking for...

A manufacturing partner specialising in providing long-term production as well as delivering effective production engineering and product introduction services?

We're confident that we've succeeded in balancing manufacturing discipline and control with a level of autonomy that encourages evolution and continuous improvement both of the production process and the products we build.



# CORE CAPABILITIES

**A single development and manufacturing partner solving complex engineering challenges:**  
Taking responsibility for all or part of the entire process.



## PRODUCT DESIGN & PROTOTYPING

New product concept generation and technology invention, Mechanical & Electrical design, POP prototyping & Functional Models.



## EMBEDDED SYSTEMS

Electronic systems design and engineering, PCB design and Manufacture, C & C++ programming, Robotics systems engineering.



## TEST AND CERTIFICATION

BETA testing and FMEA, Engineering analysis & Development due diligence.



## PROJECT MANAGEMENT

Applying appropriate controls to the full product life cycle.



## TRANSPARENT SUPPLY CHAIN MANAGEMENT

Building collaborative relationships with suppliers to create value to customers, optimizing cost of components and procedures.



## STRATEGIC ACCOUNT PLANNING

Developing strong collaborative relationships with customers to maximise the effectiveness and efficiency of the product.



## MANUFACTURE & ASSEMBLY

Mechanical and electrical sub-system and full product assembly, manufacturing troubleshooting.



## PRODUCTION & QUALITY CONTROL

Source inspection, 'In-process' and 'end of line' quality control & testing, full product traceability.



## LOGISTICS MANAGEMENT

Global shipment account management and tracking for CIF or ex-works requirements.



As new markets emerge, it's essential for businesses like ITM Power with disruptive technologies to focus on their opportunities, responding quickly and effectively to the conditions that will ultimately determine their success.

For the last 3 years, Tharsus has worked with ITM Power to develop the systems that sit around and support their leading-edge hydrogen electrolysis process.

Utilising a number of standard building blocks has not only allowed us to create a 'family' feel across the product range but also creates a starting point for each new product.

We've designed process architecture to be repeatable and the logic behind one product informs the logic of others in the range.

We've developed an in-depth understanding of the characteristics of the core technology and applying predefined principles saves significant time and resources in the development process.

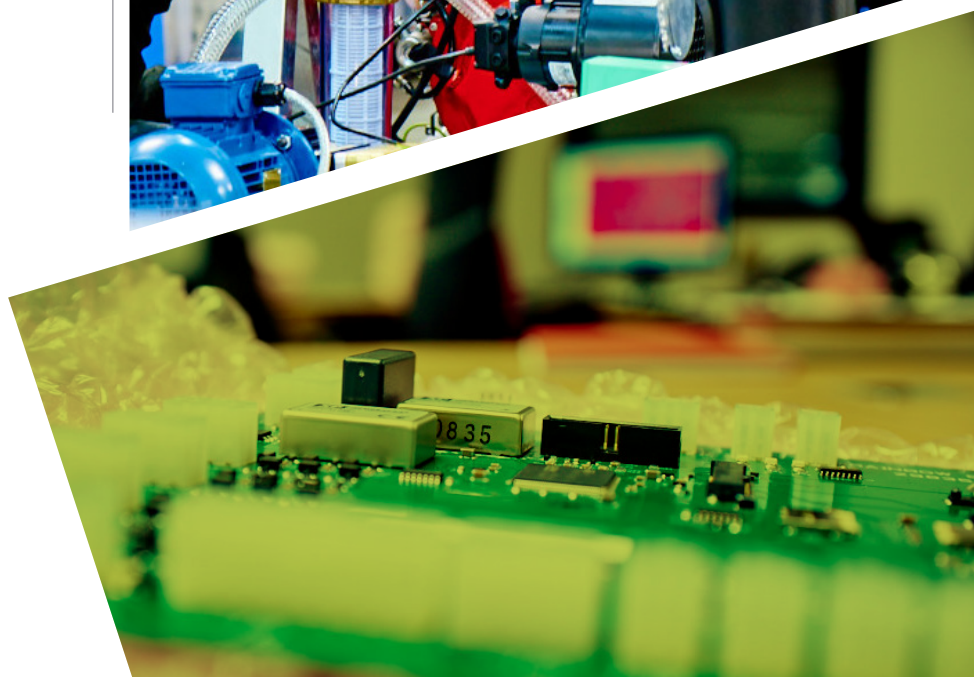
From a practical perspective the physical and mechanical elements of each product such as covers, fittings and switches are consistent, creating a familiar feel and making operation more straightforward for the customers and their users.

It allows us to exploit efficiencies in both supply chain and manufacturing process that are only possible through a genuinely transparent partnership arrangement.

- In-depth understanding of core technology for multiple applications.
- Responsive, leading-edge processes
- Transparent communication processes
- Manufacturing and supply chain efficiencies
- Scalable process architecture
- Building on brand equity across the product range
- Focus on customer opportunities
- Creating user-centric design solutions.

## CREATING A COMPLETE NEW TECH PRODUCT RANGE

Increasingly, businesses are developing core technologies with the potential for multiple applications.



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## DEVELOPING IP FOR OUR CUSTOMERS

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“We firmly believe that the better we make our customers’ products, the better the results we’ll both achieve”

- Brian Palmer CEO

It’s acknowledged that intellectual property or IP can create significant differentiation.

Whilst our customers typically develop the core concepts behind the products we make for them, we’re confident that we can contribute value through innovation.

Thanks to the ingenuity of our talented team, we’ve developed technologies and IP that sit at the heart of our customers’ patents.

- Better products = better results
- Adding value through innovation
- Developing core technologies for customers
- Legal ownership & IP assigned to the customer

Technical Director Dave Swan came up with the control mechanism that makes Propeller GB’s Pro-Vyda work and sits at the heart of the patent application filed successfully by the inventory management systems specialist’s Technology Director Jon Elwell

It’s a technology that we’d never have come up with had we not been working with Propeller, so we were more than happy to assign legal ownership of the intellectual property and all associated rights have been assigned to the customer.

Tharsus have also developed technology that is currently part of a patent application submitted by fast growing glass recycling expert Ekko Waste.

Our reward for developing IP is exclusive long-term manufacturing agreements and the fruitful relationship that results from working in partnership to bring an outstanding product to market.

## EVOLUTION OR REVOLUTION. WHATS RIGHT FOR YOUR PRODUCT?

Product lifecycles are getting shorter but that doesn't necessarily mean a complete overhaul unless there's a genuinely compelling reason.



The key is understanding what is driving demand for change and the implications for component design, integration and manufacturing

- Responsive component design, integration and manufacturing processes.

In the case of the 3M library kiosk, we evolved the product to accept a range of different payment methods, adding new components with only minor alteration to the physical structure or appearance.

At the other end of the spectrum, the fundamentals of Safetykleen's Jetkleen changed with only the footprint remaining from the original product.
- Integration of technologies with minimal impact on production processes

Whilst new electronics, wiring and programming were required, the integration of payment technologies was achieved with minimal impact on production processes.

Tharsus was selected by Safetykleen following a global tender process to transform the product and it became clear that nothing short of revolution was required to turn around a product that was under threat from a new entrant to the parts washing market.
- Adaptive design for market fit.

For Chargepoint Services we built in 3G, GPRS and wireless technology to replace the existing cabled version with virtually no external change.

The architecture for the Jetkleen's fluid handling system was completely redesigned, new robust components identified, the supply chain overhauled and efficient manufacturing methods introduced.

# COLLABORATIVE DEVELOPMENT



Original Equipment Design and Manufacture brings together final assembly with design and development, technology integration, material conversion – sheet metal and fabrication – and supply chain management.

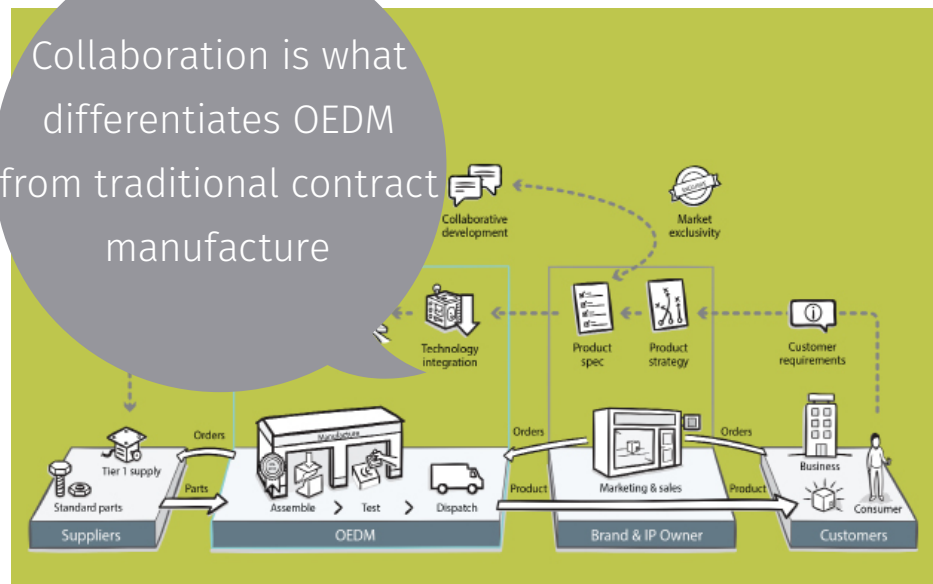


It's important to understand that design doesn't stop when manufacturing starts. Real-time manufacturing feedback puts our engineers at a significant advantage and our production teams appreciate designs that are elegant in their manufacturing simplicity, making component manufacture and final assembly straightforward and efficient.



And what really set us apart (at least that's what our customers and associates tell us) is our intelligent but straightforward approach to both product and production process.

Collaboration is what differentiates OEM from traditional contract manufacture




Our OEM (original equipment design and manufacture) service allows our customers to focus on their world – building the value of their IP – and their priorities while we concentrate on developing the product that they rely on for the success of their business

**The key strength of our Original Equipment Design and Manufacture (OEM) service is our collaborative approach. Most of our customers have the potential to disrupt their chosen market by providing the best product available or ground breaking technology. We become a trusted, competent partner committed to making their product a success.**

This approach allows our customers to focus on building the value of their IP while we concentrate on developing the successful product they are relying on.

Where possible it's about seamlessly integrating with our customers' systems, effectively providing a virtual extension to their business; our development and manufacturing capability – and our facilities – become theirs to promote to their customers and stakeholders.

Because we manufacture as well as all the other components of product development, we always have sustainability in mind. We want your product to be as successful as possible because then we'll be asked to make more. So – our success is the same as your success.



# Tharsus can help you capitalise on your next market opportunity....

We believe in the motto 'better together' and by working with you we make a powerful team that's greater than the sum of the parts.

Tharsus combines the capabilities of the top technical consultancies with an award winning lean manufacturing organisation.

The more you sell, the greater our success! Because of this our engineers focus on maximising the long term success of the opportunity, rather than amassing project fees.

**GET IN TOUCH**  
**CONTACT**

**THARSUS** 50 Years 1964-2014

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**Sheet Metal and Specialist Engineering**  
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Contact Us

Get in touch



Whether its a “build to print” service offering or a full product development and manufacturing activity you require, we would love to hear from you.



**BUSINESS DEVELOPMENT  
MANAGER**  
CRAIG BROWN

As a company, we strive to offer a level of capability and competence that our customers can trust.

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**MARKETING MANAGER**  
MARK ILLMAN

We’re an ambitious company and our customers are too. That shared goal of achieving something great together makes Tharsus a special place to work

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**T.0006**  
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