

# Success Story



## Knowledge Transfer Partnerships

**Knowledge Transfer Partnerships (KTP)** provides resources and expertise to thriving businesses and organisations throughout the UK who wish to innovate, expand or improve their performance.

Part funded by Government, these Partnerships involve combining the knowledge and expertise of an academic institution, such as the University of Plymouth, with the appointment of a talented graduate who works within the business or organisation on a strategic project. Visit [www.ktponline.org.uk](http://www.ktponline.org.uk)

## Optimising Efficiency and Reducing Final testing re-work of Kawasaki Staffa Motors



**Kawasaki Precision Machinery at Plymouth** is only six months into a two year Knowledge Transfer Partnership and is already benefiting from the work of their dedicated KTP graduate, Stephen Clarke.

[www.kpm-uk.co.uk](http://www.kpm-uk.co.uk)

Kawasaki's range of Staffa Motors are much in demand as world leaders in high torque low speed hydraulic motor technology and are the first choice of leading industrial, mobile and marine machinery builders around the world. Sales of Staffa Motors are worth £20 million p.a. to Kawasaki. However profits have been eroded for the past 20 years, due to an unacceptable amount of re-work when the motors are tested prior to dispatch. Bottlenecks caused by testing, reworking and retesting have also slowed the company production throughput.

Kawasaki have tried to resolve these problems on many occasions throughout the years and eventually turned to experts at the University of Plymouth for a solution. A Knowledge Transfer Partnership employing Stephen Clarke and supported by an academic team of mechanical engineers from the University is already making great strides towards reducing failure rates across the Staffa Motor range to less than 1%:

### Benefits to Kawasaki after only 6 months:

- 🌀 Detailed mathematical model
- 🌀 A proven method of removing all mechanical efficiency failures
- 🌀 One expensive production process proved unnecessary and eliminated
- 🌀 Failure rates reduced by 50% (*implemented on limited motors in the range to date*)
- 🌀 Increased profitability
- 🌀 Increased productivity

### Benefits to the University of Plymouth after only 6 months:

- 🌀 New equipment for R&D work
- 🌀 Final year project possibilities
- 🌀 Work leading to a publishable research paper



Stephen Clarke, KTP Associate with Kawasaki

# Plastech in unique partnership with the University of Plymouth



*Plastech TT Ltd of Gunnislake, Cornwall*, in partnership with experts from the University of Plymouth's Advanced Composites Manufacturing Centre, has benefited from a range of work delivered over the last 10 years through three Knowledge Transfer Partnerships and other collaborative projects.

[www.plastech.co.uk](http://www.plastech.co.uk)

*"Plastech's long-term partnership with the University of Plymouth has provided us with a unique opportunity to examine systems in detail and test materials on a level that would otherwise have been impractical. Our association has brought economic and technical advantages to the company, accelerating our delivery of innovation to the market place".*

**Dr Alan Harper, Managing Director, Plastech TT**



Plastech T.T. is an innovative and dynamic company, specialising in the Resin Transfer Moulding (RTM) field of composites processing.

The company produces leading edge equipment and tooling technology to all manufacturing industry wanting to use fibre reinforced plastics for a wide range of products from simple general mouldings to aerospace components, supplying to major worldwide clients.

Operating to ISO 9001 standards Plastech's range of machinery conforms to European machinery directives and CE legislation, assuring that all equipment manufactured will meet all essential health and safety requirements.

## ***Benefits to Plastech through their partnership with the University of Plymouth:***

- ⌚ Automated composite production
- ⌚ Automated closed mould development
- ⌚ Aerospace machinery improvements
- ⌚ Glass fibre preform machine development
- Plus a host of solutions to smaller projects*
- ⌚ Valuable long-term collaborative partnership with the University
- ⌚ Practical advice and support to achieving solutions
- ⌚ Unique opportunity to benefit from innovative and commercially exploitable expertise and ideas
- ⌚ Opportunity to examine alternative systems in detail and to test materials on a level that would have been commercially impractical

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**For further information on Knowledge Transfer Partnerships and other University services contact:**

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