



Business Zone

The future Calculating the dividend

How mathematics can boost your business

How do you find new ways to add value to your business? A growing number of companies are turning to mathematics for the answer. The UK has world-leading expertise with innovative ideas in this field. With timely access the right scientific expertise can give companies the competitive edge, accelerating process and product development in new ways.

The Smith Institute for Industrial Mathematics and System Engineering has recently launched a new programme of mathematical associates offering companies and government agencies the opportunity to tap into and quickly apply postgraduate level expertise to solve their business challenges. This programme provides an accessible and agile investment mechanism to leverage mathematical sciences on short projects.

We all know the story behind Google's success of using algorithms to build a business, but there are many other impressive examples where companies have capitalised on the expertise of mathematicians to develop new products and processes. Take Lein Applied Diagnostics, a medical devices company that harnessed the power of mathematics to demonstrate the principle of its non-invasive blood-glucose monitoring device and secure



Firms can use the expertise of mathematicians to develop new products and processes

its next round of investment funding, develop several patents and employ more staff. Now millions of people in the UK and around the world have the hope of avoiding finger-prick blood glucose tests.

Value also accrues in the public sector and society more generally, with mathematics playing a fundamental role in cyberspace, aviation security and radio spectrum.

Taking a broader view, a recent study by Deloitte measured the economic benefits of mathematical sciences research in the UK. The resulting report highlighted not only the enormous value of the contribution of

mathematical sciences research to UK gross value added, some £208bn or 16 per cent, but also the pervasiveness of maths across all sectors of business and the importance of its role in productivity and the future prosperity of the UK's position in the world economy.

Impact on this scale is hard to argue with.

Now there is an easy way to access the UK's world-leading expertise in mathematics to find out for yourself how much value it can add to your business.

.....
www.smithinst.co.uk
associates@smithinst.co.uk

Using design to drive innovation

Mike Culverwell, director, Engine Service Design, offers a creative solution

Developing the capacity for design is a growing response from many organisations to successfully change how they operate, and systematically invent and improve the experiences they provide to their customers over time.

More and more companies are not only developing their internal customer experience and service design teams but are also engaging people from across the whole business with design thinking and techniques to develop new strategies, tangible propositions, working practices and to guide frontline interactions.

Design in business has extended far beyond the product, to defining the purpose and culture of organisations. Virgin, E.ON, Jaguar Land Rover and BUPA are examples of companies investing in design as a means to differentiate and change the way they form sustainable and profitable relationships with their customers.

What customers experience and come to value requires many factors working elegantly together to satisfy complex functional and emotional needs. Beyond analytical approaches to identify patterns, human creativity is needed to understand and respond to this complexity and to make the leaps businesses need to make.

It is the design process that draws out people's innate creative and collaborative spirit and directs it in a definable and measurable way to successfully generate and turn ideas into reality.

Moreover, it can be applied at all levels of a business, from designing the role a company or service plays in people's lives, to how the whole service comes together as a desirable set of experiences and journeys; covering the systems and processes, operational elements and touchpoints, and the beliefs and behaviours of the people involved in delivery.

.....
mike@enginegroup.co.uk
www.enginegroup.co.uk

The way ahead: innovation solutions

RODD/



ideas2market

Rodd brings a user-centred approach to design and innovation. We work with global brands, government and innovative start-ups to create growth.

Our work includes user research to identify latent needs and aspirations, user-centred innovation across a multitude of consumer sectors and product design that brings brands' propositions to life.

.....
www.rodd.uk.com

ideas2market helps owners of intellectual property to successfully commercialise their ideas by ensuring that product development is informed and guided by real market needs.

With a background in multinational company corporate venturing and, more recently, university tech transfer, ideas2market is able to service the needs of a wide range of clients both large and small.

.....
www.ideas2market.co.uk



Innovation is key to success in any company and should form the heart of its business strategy. We provide innovative management and purpose-built strategies and solutions to help you understand the process and put it all into practice. With clear insights in key areas including strategy, performance, organisation, business development and funding, we get innovative results.

.....
www.ascendtwentyone.com



Developed by the Defence Science and Technology Laboratory (Dstl) for the MOD to prevent "dazzle" of light sensors. Applications for this innovative technology include protection from sunlight arc welding, headlights or lasers.

Contact Ploughshare Innovations, Dstl's technology transfer specialists, to discuss potential applications and commercial licenses.

.....
www.ploughshareinnovations.com

Steve Jobs

“Innovation distinguishes between a leader and a follower”

