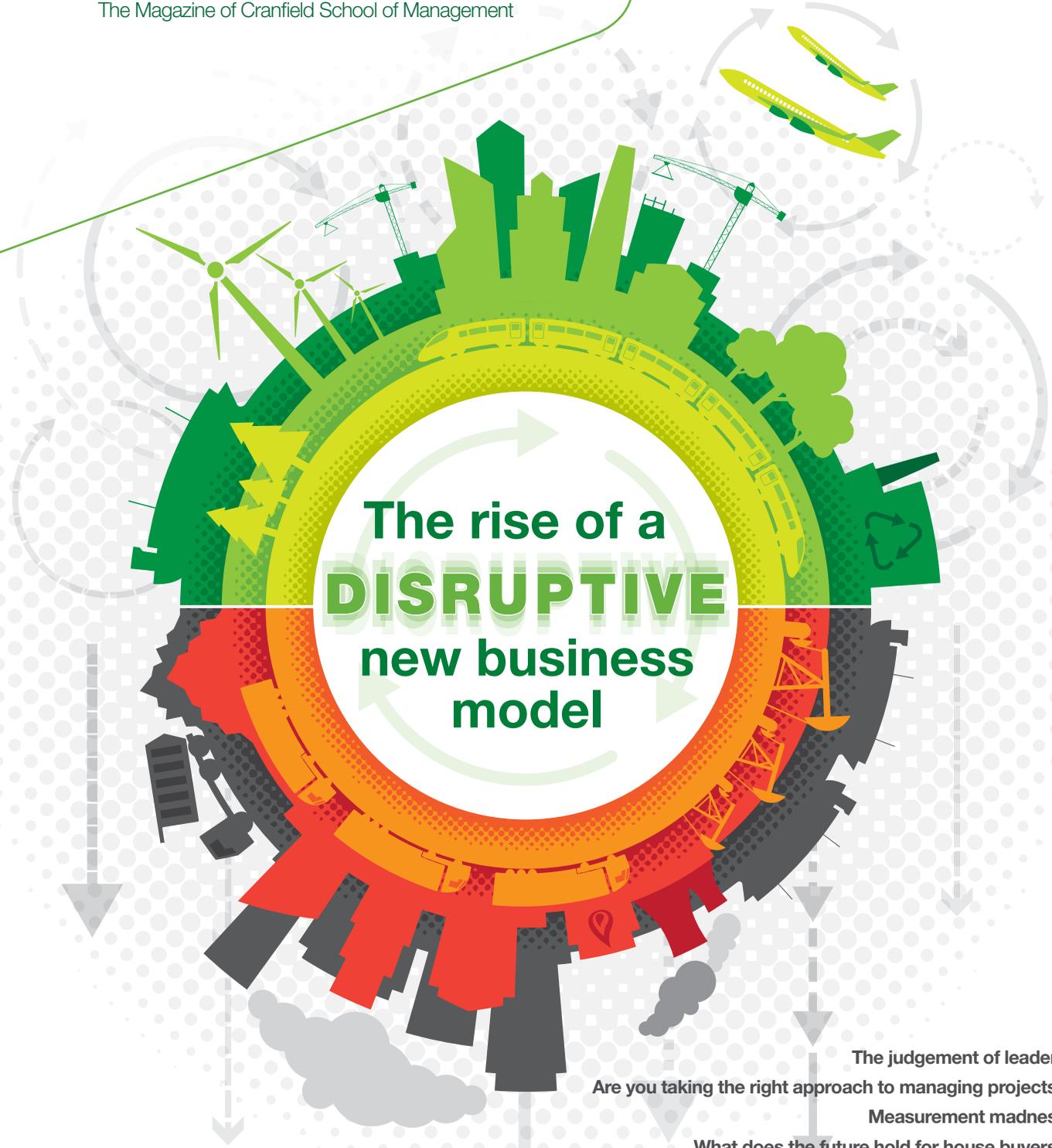


Management **FOCUS**

The Magazine of Cranfield School of Management

Cranfield
UNIVERSITY

School of Management



The rise of a **DISRUPTIVE** new business model

The judgement of leaders

Are you taking the right approach to managing projects?

Measurement madness

What does the future hold for house buyers?

Why the right contacts can make all the difference for women entrepreneurs

Is a sea change needed for the shipping industry?

Issue 38 // Spring/Summer 2015

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Editorial



There has never been a more exciting and challenging time for business schools, in no small measure because there has never been a more fast-changing time for our partners and customers. Global challenges new in human history now offer us an imperative to explore and develop more sophisticated business models that will work better for a new socio-economic era. As I settle into my new role at Cranfield, I am excited about the impact our university—in many ways uniquely—can have on the future of business and the wider world.

Progressive companies, including many of the world's largest blue-chip organisations, are increasingly focused on sustainability. So are a host of start-ups, NGOs, charities, and governments.

The model of the circular economy represents a fundamental shift for businesses to an economic model that aims to decouple economic growth from resource constraints. Cranfield's partnership with the Ellen MacArthur and Schmidt Family Foundations shows our commitment to accelerating the circular economy model.

In our lead article, Professor David Grayson CBE explores what the circular economy means for businesses and how companies across the globe are already discovering the benefits of adopting this new model. He explains how our pan-University approach and our focus on technology and management puts Cranfield in a unique position to help managers and companies understand both the science and the technology of the circular economy.

If businesses are able to embrace CE models, at least two problems could be addressed: first, rising commodity prices and, second, the shocking amounts of resource that end up in landfill. Beyond these, a re-thinking of the basis on which businesses operate, and on which we measure their success, could lead to a whole new era of socio-economic value creation.

Our alumnus Dr Paul Leinster CBE knows only too well the importance of looking after the environment. In this issue he talks about the challenges he has overcome as CEO of the Environment Agency. Paul also talks about the unquestionable relevance of the MBA to today's leaders.

I hope you enjoy these and the many other articles from our faculty in this issue.

Professor Maury Peiperl
Pro-Vice-Chancellor and Director of Cranfield School of Management

“
The circular economy represents a fundamental shift for businesses.”

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School News

In a league of our own

There was a move in the right direction for the School in the 2015 *Financial Times* Global ranking of full-time MBA programmes.

Cranfield is now ranked 45th in the world and joint seventh in the UK and improved in several of the criteria including overall value for money (18th in the world, seventh in the UK) and international mobility (11th in world, third in the UK).

In the 'A league of their own' category, which is based on the views of alumni, we excelled by finishing above the likes of Harvard and Yale to come first in organisational behaviour. Led at Cranfield by Dr Richard Kwiatkowski and Dr Deirdre Anderson, organisational behaviour is defined as 'the study of both group and individual performance and activity within an organisation'.

The School was also second in the economics category and has been consistently ranked in the top 10 for the past decade.



Global MBA Ranking 2015



Dr Richard Kwiatkowski



Dr Deirdre Anderson

New research club to confront the issues associated with lobbying

The School has joined forces with The Open University Business School to launch a research club to explore the challenges organisations face when dealing with government affairs.

The Government Affairs Research Club (GARC) will develop thought leadership around business-government affairs and provide an opportunity for those responsible for relationships with government to meet and discuss the challenges they face and how these can be overcome. Aimed at practising government affairs, regulatory and communications professionals, the club will focus around quarterly forums.

Professor Paul Baines and Dr Tazeeb Rajwani from Cranfield are co-directors of the new club. Paul, Professor of Political Marketing, said: "All organisations need a voice to communicate with their customers and governing bodies in order to inform and advise, but also to argue for their interests. Very often when this activity is undertaken by an organisation, it is described as lobbying and viewed undesirably.

"There is a strong business case for companies and governments to improve their relationships and to ensure that the relevant communications are in place so that transparency is achieved and the negative stereotype around lobbying is eradicated."



Professor Paul Baines



Dr Tazeeb Rajwani

New iTunes U course

The School has launched a new iTunes U course on preparing a periodic cash flow forecast. Led by Dr Ruth Bender and originally developed for the MBA programme at Cranfield, the course is designed for business professionals, educators and students.

This course will take you through the necessary steps to prepare a suite of forecasts for a business, incorporating eight transactions into a three-month forecast. The forecast, whether done weekly or monthly, projecting a rolling three months or a financial year, can be used to plan for the future, to evaluate investments and to support funding requests to investors or the bank.

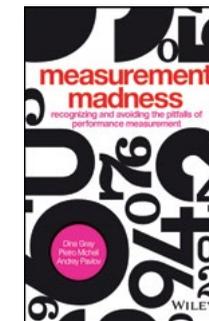


Dr Ruth Bender

Books

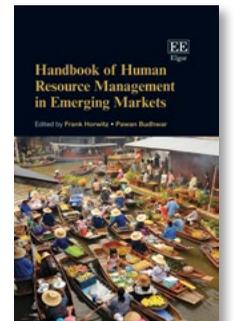
Performance measurement

Dr Andrey Pavlov's book *Measurement Madness: recognizing and avoiding the pitfalls of performance measurement* was co-authored with former Cranfield faculty Dr Dina Gray and Dr Pietro Micheli. It is a practitioner book based on stories and anecdotes of performance measurement gone amok, which also offers advice on how to avoid the dysfunctional consequences of performance measurement.



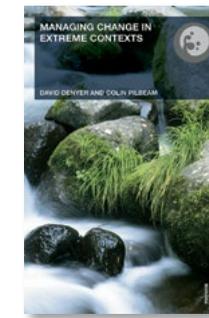
Human resources

Professor Frank Horwitz has co-edited a new book *Handbook of Human Resource Management in Emerging Markets*. Frank has co-authored three chapters and the book also has chapters co-authored by Cranfield colleagues Professor Michael Dickmann, Dr Emma Parry and Professor Clare Kelliher on 'Careers in emerging markets' and 'Employee engagement in emerging markets'.



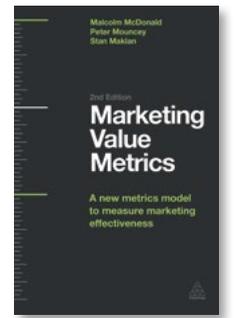
Change management

Professor David Denyer and Dr Colin Pilbeam have co-authored a new book *Managing Change in Extreme Contexts* which provides a comprehensive analysis of organisational change and crisis management. It identifies a common event sequence and recurrent issues, themes and mechanisms and includes a number of research-based cases such as a leak at Sellafield nuclear reprocessing plant and the multi-agency response to bush fires in Australia.



Marketing effectiveness

Dr Stan Maklan and Emeritus Professor Malcolm McDonald's co-authored book *Marketing Value Metrics: a new metrics model to measure marketing effectiveness* (second edition of the now renamed *Marketing Accountability*) has been published by Kogan Page. The book, based on research undertaken through the Cranfield Return on Marketing Investment Club, describes a general framework for assessing marketing and then describes in detail the key steps in the process as well as the procedures for applying it in practice.



Research

Competitive intelligence

The widespread and continued use of competitive intelligence requires more scrutiny, according to new research co-authored by Professor Patrick Reinmoeller.

Many business leaders, thinking that competitive intelligence helps in 'winning' against their rivals, overlook that engaging in a range of practices – from market research to stigmatised snooping – can lead to losing the trust of the public, investors and their customers.

The study was of a number of cases from US companies and Patrick discovered that while there is an absence of 'clearly demonstrable benefits' from competitive intelligence, firms persist in this legal but risky practice sometimes in order to harm competition by 'creating fear, uncertainty and doubt' among rivals.

Patrick said: "The research shows that firms seek to cushion the negative effects or stigma of competitive intelligence by keeping their efforts opaque with little transparency about what they or their contractors are actually doing or why.

"Businesses justify their ongoing investment in and use of competitive intelligence by 'constructing' a defence that it is useful. The practice is further entrenched by

accepted beliefs 'we can't be the ones not using competitive intelligence'. They also increase this diffused 'acceptability' by creating multiple versions of competitive intelligence. Businesses need to ask: 'Is this a game which is more about entertainment for high rollers than about savvy investment with high returns?'"



Professor Patrick Reinmoeller

How many identities do you have?

An article by Dr Emma Macdonald and Professor Hugh Wilson, along with former PhD student Guy Champniss, on why social identity is so important to marketers has been published in the *Harvard Business Review* (HBR).

The article explores how social identities guide people's behaviour at any given moment. Emma said: "We know that companies can subtly influence which social identities customers will tap into and can even foster new identities altogether with very little effort."

Our social identity depends on context such as who is around us and what is being told to us, according to the research. Through a series of experiments, it was shown just how easy it can be to make consumers switch identities and even to give them new ones. Their five-year study involved working with organisations in sectors as diverse as consumer packaged goods, retail, professional services and philanthropy.

Hugh added: "People are highly social animals, belonging to many social groups, each with a distinct identity."



Dr Emma Macdonald



Professor Hugh Wilson

Does gender impact credit?

New research from Cranfield challenges the claim that banks discriminate against women when it comes to giving credit.

Report co-author Dr Andrea Moro looked at a sample of 42,000 businesses from 13 European countries, who were asked about their experience with obtaining finance. Businesses that applied for loans and those that had not were examined to see if there was any connection to the gender of a company's management and its ability to access credit.

When looking at the firms that applied for loans, no evidence was found that the banks were discriminating against women in their lending decisions. However, when attention turned to those businesses that had not applied for finance, it was discovered that women were more likely to avoid applying as they expected to be rejected by the bank.



Dr Andrea Moro

The future of sustainability

The School's Doughty Centre conducted research with 50 CEOs and almost 150 MBA and MSc students and recent graduates from across Europe to gather their views on the future of sustainability. The 'Combining profit and purpose' report was in partnership with Coca-Cola Enterprises (CCE) and the *Financial Times*.

The study revealed 88% of current CEOs and 90% of future leaders believe businesses should have a social purpose. However, only 19% of future leaders think businesses already have a clear social purpose, compared to 86% of CEOs.



Professor David Grayson CBE

Professor David Grayson CBE, Director of the Doughty Centre, said: "While it's not surprising to learn that social purpose is now seen as a priority for business, the big challenge is to ensure more business leaders define what the real purpose of their business is, and identify how they are going to achieve that purpose."

Follow our Faculty on Twitter

As well as the School's official Twitter account @cranfieldmngmt, there are a number of Faculty tweeting about their specialist areas of expertise including:

Dr Ruth Bender @Ruth999
Corporate governance, executive pay, bonuses

Professor David Denyer @DavidDenyer
Leadership, change, resilience

Dr Monica Franco-Santos @MonicaFranco_S
Rewards and performance management

Professor David Grayson CBE @DoughtyDavidG
Responsible business, corporate sustainability

Professor Mark Jenkins @F1professor
High performing teams, business of F1

Dr Denyse Julien @DenyseJulien
Food supply chains, quality management

Professor Elisabeth Kelan @EKelan
Women and leadership, diversity and inclusion

Dr Emma Macdonald @DrEmmaMacdonald
Customer engagement and customer experience

Dr Emma Parry @DrEmmaParry
HRM, talent management, age diversity

Dr Tazeeb Rajwani @Tazeeb
Lobbying, business strategy, business models

Dr Muhammad Azam Roomi @MARoomi
Entrepreneurship, business growth, family businesses

Professor Richard Wilding OBE @Supplychainprof
Supply chain management

Cranfield in numbers

1st
... in the world
for Organisational
Behaviour in the 2015
Financial Times Global
MBA ranking

55,000
... University alumni, across
166 countries

90%
... of the MBA class of
2014 employed within three
months of graduating

300
... free pieces of
Cranfield research
on iTunes U

7th
... in the world in the *Financial Times*
annual ranking of customised executive
education providers

The JUDGEMENT of LEADERS

by **Patrick Reinmoeller**, Professor of Strategic Management

Making the right decisions is central to strategic leadership. The most effective leaders will make the right judgement calls, when it counts the most. However, many top managers find it difficult to exert judgement when addressing the unprecedented challenges they face today, especially when it comes to climate change, social unrest, economic uncertainty and advances in technology.

The recent UN Climate Summits in New York and Lima drove home the message that climate change is not a myth but a real and present concern. The message at the summits was loud and clear that stronger leadership is what is needed to develop cleaner business processes and coordinated action across the world's populations, private enterprises and public administrations.

Such coordination can seem daunting. Not long after the 'Occupy' demonstrations dwindled, social unrest returned to the United States and also to Hong Kong and Greece. These spikes of violence occur at times of continued economic uncertainty for large groups in many societies.

The rapid growth of the middle classes in emerging economies, where they gain a voice, coincides with their relative economic decline in industrialised countries, where voices are not being heard. The return to growth in the UK is encouraging to many but felt by few. While the positive performance of the US economy, rather than

bringing back optimism, appears to be choking it by driving the wedge of inequality deeper into an ever more divided society.

Recently, the tension around the issue of rights has made coordination within and between countries excruciatingly difficult. How can freedom of speech go together with the right not to be insulted? How can privacy be safeguarded and terrorism averted? Does the right to equal treatment by law go against advances in predictive crime prevention?

This brings us to technology. Stephen Hawking, who communicates through artificial intelligence, has warned mankind: 'The development of full artificial intelligence could spell the end of the human race'. While some may dismiss this as the dark vision of an academic genius, they may be swayed by Elon Musk, a leading Silicon Valley entrepreneur, whose highly automated factories illustrate the wonders of robotics. He sees AI to be 'our biggest existential threat'. Clearly though, doing nothing is worse for mankind than innovating.

These global changes make leading an organisation extremely challenging, especially when there is pressure to meet high expectations in terms of improved financial performance. Perhaps the big salaries that we hear of in the media are justified for those who know how to lead with the common good in mind.

What is needed for strategic leadership?

Long-term survival requires successful navigation of disruptive changes. How will industry and public sector leaders in the UK and Europe deal with the increasing influence of IT? Remember retail before online retail. This is a sector with great examples of how creativity, innovation and progress can be harnessed for a common good.

There are three kinds of strategic capabilities that allow leaders to develop good judgement – contextual, cognitive and pragmatic.

Contextual capabilities allow us to understand different contexts. Reading how the minds of the working man had changed, allowed Benjamin Disraeli to significantly advance societal reforms in the UK which ensured the Conservatives' success for a decade.

Cognitive capabilities allow us to discover and create opportunities

or to recognise threats. Cognitive abilities are brain-based skills we need to carry out any task from the simplest to the most complex. They have more to do with the mechanisms of how we learn, remember, problem-solve, and pay attention rather than with any actual knowledge.

Pragmatic capabilities allow us to deal with things realistically in a way that is based on practical rather than theoretical considerations. Pragmatic leadership is made up of two essential components: principles and experience.

Sharpening your strategic capabilities

Most leaders in organisations, public or private, have succeeded in the past with one or more competences. This will no longer suffice. Following success, most then face two very personal challenges.

The first is success itself as this tends to degrade strategic capabilities. Nelson Mandela felt

more 'imprisoned' as South African President than as a prisoner on Robben Island. The security cocoon of a head of state protected him but also obstructed direct contact with his constituents. Many successful leaders inherit, build or even perfect such cocoons. Breaking through this artificial bubble, often filled with people who think exactly like you, is hard.

The second challenge to success is often the leader themselves. Making an organisation dependent on one's leadership may be flattering but it is dangerous. To turn an organisation into a resilient institution you must help co-workers to develop the very strategic capabilities that lead to better judgement. **MF**



Making an organisation dependent on one's leadership may be flattering but it is dangerous.

Are you taking the right approach to managing projects?

by **Dr Elmar Kutsch**, Senior Lecturer in Risk Management and **Dr Neil Turner**, Director of the Executive MSc in Programme and Project Management

Businesses today operate in a world of unprecedented risk, uncertainty and complexity, and consequently many struggle to achieve the performance they strive for. In order to deal with this, organisations are relying more and more on a mix of 'rule-based' and 'mindfulness-based' ways of working.

Rule-based practices are developed as organisations implement processes and compliance systems in order to achieve greater control and reliability of their operations. A rule-based system can help to achieve consistency and also reduce the room for human error.

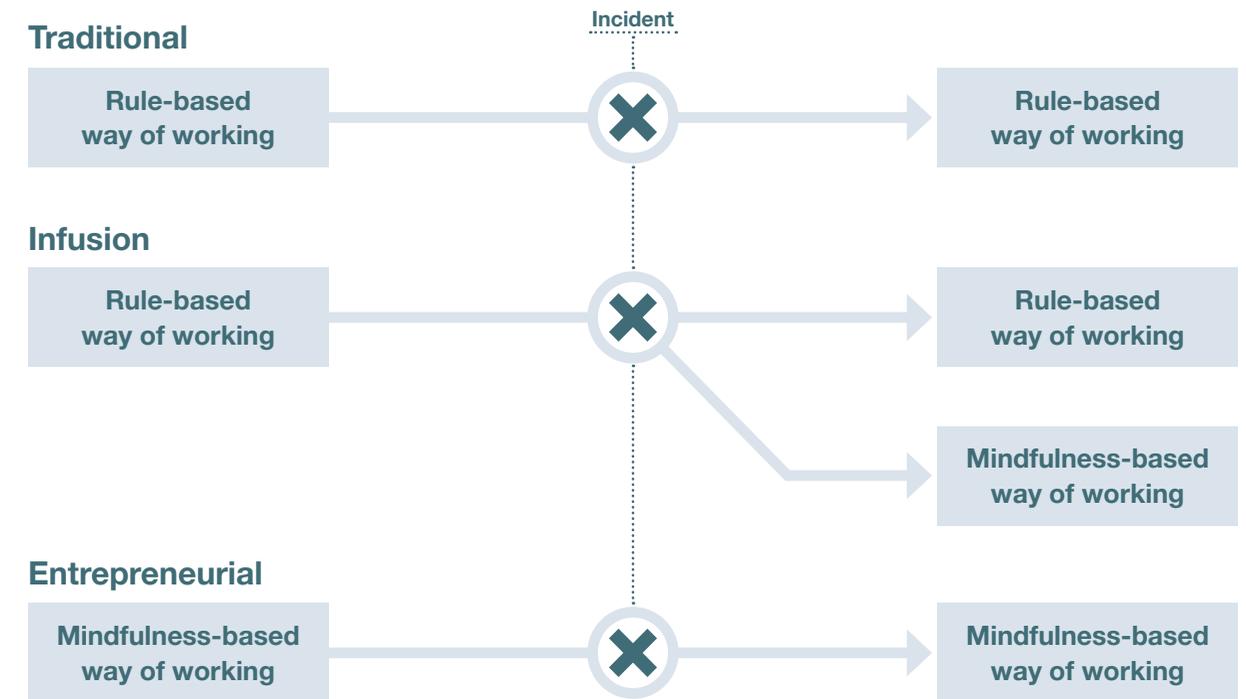
In contrast, taking a 'mindful' approach to project management allows human cognition, perception and flexible thinking to take more of a priority. People can act on and manage problems as they occur using their expertise, imagination

and knowledge of the business. This flexibility allows for pragmatism and innovation depending on different situations.

So, how can a mindful approach be activated when an incident occurs that threatens performance? At Cranfield our research team looked at five major companies based in the UK, in different sectors including financial services; power generation; and high-tech R&D (for the 2014 'Roads to Resilience' report). Using key projects from each organisation as case studies, we looked at how each company responded to major incidents that occurred.



Are you taking the right approach to managing projects?



We identified three different response styles. The first we called the 'Traditional' approach. This is when an organisation uses a predominantly rule-based approach. Our observations revealed that when unexpected issues arose, the organisation was less adaptive and the response time was slower with this operation style compared to others. Reliance on pre-existing rules reduced the opportunity to implement a suitably tailored solution.

In the second mode – Infusion – we saw shifts in operating style when problems occurred. Applying expert judgement and working differently was endorsed. It could also involve deploying extra resources to help deal with the situation, with teams of cross-functional experts, emotionally and structurally detached from the unfolding incident, being brought in to help. This allowed others to remain focused on contributing to normal operations.

The final option in dealing with uncertainty – Entrepreneurial – is to create and maintain permanent mindful capabilities. We identified this in technology R&D projects that deliberately used limited rules and procedures and allowed decision-makers relative freedom in work methods. Here, uncertainty was acknowledged and accepted, and seen as an opportunity for innovation. Critical incidents were genuinely perceived as opportunities to learn and improve, with no 'switch'

from one mode to another. However, these are difficult skills to build up and cultivate.

What does this mean for managers? Well, one size does not fit all. An organisation's approach must be aligned with the levels of uncertainty and complexity in the business. Broadly, a rule-based approach is suitable for a low-uncertainty, low-complexity environment. However, as uncertainty rises, the benefits of a more flexible, 'mindful' approach increase. This needs careful nurturing, though. Parachuting in extra resources might send the message that the issue is 'somebody else's problem'. Sanctioning a mindful response is only effective if decision-makers can also continue to oversee day-to-day operations.

Finally, although the pure mindfulness approach seems to be the most effective in high-uncertainty work, it is also the most difficult to maintain, as continued success over a long period of time can bring about complacency and a gradual switch to rule-based practices.

Is your work environment really so certain that your organisational rules are sufficient? Would you benefit from the flexible thinking that mindfulness affords? Consider challenging the constraints of what you 'should' do and contemplate instead what you might be able to do. **MF**

Are we seeing the rise of a **disruptive new business model?**

by **Professor David Grayson CBE**,
Director of the Doughty Centre for Corporate Responsibility

“Another industrial revolution is coming and it’s circular,” declared Jeremy Warner, one of Britain’s leading business and economics commentators and assistant editor of *The Daily Telegraph*.

Warner explains: “The circular economy (CE) is basically about making finite resources go further in an era of ever-increasing consumer demand.” Instead of the ‘take-make-use and throw-away’ linear model which the world has been used to, CE is all about sustainable raw materials; renewability; reusing; repairing; upgrading; refurbishing; sharing and dematerialisation.

Doughty Centre visiting professor and sustainability guru John Elkington remarks: “The circular economy has been promoted for years with concepts such as industrial symbiosis, industrial ecology and cradle-to-cradle, but got a new shot of adrenaline with the work of the Ellen MacArthur Foundation, Green Alliance, the European Commission and the World Economic Forum.”

CE is becoming increasingly important for business. The 2013 UN Global Compact/Accenture CEOs triennial sustainability survey found that although the CE was

almost entirely absent from their conversations in 2010, the concept had quickly taken hold among CEOs focused on innovation and the potential of new business models. Already, a third of CEOs in the 2013 survey report that they are actively seeking to employ CE models.

The circular economy was a major topic at the 2015 Davos World Economic Forum with at least four major sessions, as well as the announcement of the winners of the first ever ‘Circulars’ (Oscars for the CE) and the launch of a new e-book (*Waste to Wealth: creating advantage in a circular economy*) by Doughty Centre advisory council member Peter Lacy, a managing director of Accenture.

“

It could save businesses over \$1 trillion on a global scale by 2025.

McKinsey & Co has also produced a series of influential reports on the economics of CE, concluding that it could save businesses over \$1 trillion on a global scale by 2025. Stefan Heck and Matt Rogers (current and former McKinsey consultants) have also written a powerful book *Resource Revolution: how to capture the biggest business opportunity in a century*, which encourages adoption of the CE. They argue that rather than settling for historic resource-productivity improvement rates of one to two per cent a year, leaders must deliver productivity gains of 50% or so every few years.

As Warner writes: “With the traditional take, make, dispose’ model, elements such as gold, silver, indium, iridium, tungsten and many others vital for industry could be depleted within five to 50 years.”

This linear model relies on large quantities of easily accessible resources and energy, and as such is increasingly unfit for the reality in which it operates. Working towards efficiency - a reduction of resources and fossil energy will not alter the finite nature of their stocks but can only delay the inevitable. A change of the entire operating system seems necessary. So the idea is to make all devices, or rather the parts that make them up, recyclable so that the same resource can be repeatedly used.

According to research by McKinsey and the Ellen MacArthur Foundation, the cost of a mobile phone could be reduced by 50% by applying these principles. Similarly, the cost to the consumer of a high-end washing machine could be reduced by a third if they were leased rather than sold, and their parts recycled into new machines.



Cranfield is developing a pan-University focus on CE and is one of the first three university partners of the Ellen MacArthur Foundation and active in CE100, an international network of companies committed to learn from each other about how to implement the circular economy.

Cranfield's unique focus on technology and management makes us the perfect partner to explore the potential and inform the practice of the CE. Managers and companies need to understand both the science and the technology of CE – but also how to manage what is transformational, organisational change. Cranfield experts are

already investigating the scientific and technological aspects of CE: how to replace unsustainable raw materials with those which can be recycled and reused and how to modify manufacturing processes in line with CE principles.

As the circular economy moves higher and higher up the political and business agenda, managers and leaders are being called upon to embed CE thinking throughout their organisations and in doing so they are beginning to see the potential bottom line gains to domestic economies and businesses are huge. In the UK, it has been estimated that a more circular approach to the economy

could boost GDP by £3bn, while generating 50,000 new jobs.

Every aspect of management will be impacted by the CE including; engaging with suppliers so that they are prepared to identify the components they source and are willing to switch where necessary to sustainable ones; managing the internal and outsourced innovation needed; marketing CE and potentially learning reselling techniques; servitization; reverse logistics; motivating and reskilling employees; and embedding strategy so that the transformation is real and not superficial, leaving the organisation open to charges of greenwashing.

Managing the CE will require additional skills to understand the basic science relevant to your industry; to learn how to collaborate and partner (sometimes with unusual and unexpected partners such as NGOs, development agencies or academic institutions); and how to enthuse employees that CE is a positive business transformation which they want to contribute to, and not just the latest management fad.

As Lacy argues: "Continued dependence on scarce natural resources for growth exposes a company's tangible and intangible value to serious risks." Conversely, he says companies can initiate the

transition to a new way of doing business that radically improves resource productivity, enhances differentiation, reduces costs and risks, creates robust new revenue streams, and enhances the customer value proposition. In the face of runaway resource scarcity and rising expectations for better, more sustainable products, there's never been a better time to start.

Business leaders can start by asking themselves, where are the opportunities for adopting CE approaches in our value chain and what can be done to shape our company's journey? Corporate boards have a crucial

role. New research by the Boston Consulting Group (BCG), MIT Sloan Management Review and the UN Global Compact found that only a fifth of corporate boards provide substantial oversight, while 58% of boards are perceived to be not even moderately engaged in sustainability.

As Professor Andrew Kakabadse and I have previously argued, boards need to appoint Non Executive Directors who understand CE and sustainability broadly and integrate it into the duties of the overall board and committees in order to create a mindset for sustainability across an organisation. [MF](#)



Every aspect of management will be impacted by the circular economy.



Measurement Madness

by **Dr Andrey Pavlov**, Lecturer in Business Performance Management

One of the UK's major airports was looking to cut the time passengers spent inside the terminal following landing, and the management identified that the longest part of the passengers' journey was spent waiting at the luggage carousel.

To solve this problem, a performance measure was quickly introduced for the airport's baggage handlers – 'first bag to the belt'. The team were measured on how long it took them to start delivering the luggage after the plane arrived. The performance against this measure was climbing

steadily, and the managers were pleased, until they noticed what was happening on the ground.

The plane would arrive, the baggage handlers would pull up, take a smallish bag and give it to the youngest member of the team. He would then sprint to the terminal and slam it onto the belt – target met! The team then leisurely unloaded the rest of the plane, while the first bag continued to circle on the carousel. Not the outcome the management were trying to achieve.

Measures will change behaviour. On one hand, this is good news – we introduce performance measures hoping that they will help people take actions that are aligned with the organisation's purpose. On the other hand, they often encourage

dysfunctional behaviour, as in the airport example.

The trouble with performance measurement is that it tempts us with an illusion of control and a promise of accountability. We begin to believe that organisations can be engineered according to our desires and that measures and targets can give us the ultimate control over what happens tomorrow. But when measurement becomes a substitute for judgement, disaster is often just around the corner.

There are three principles of performance measurement that will help you steer clear of such disasters:

Numbers are not the reality

When we look at reports, graphs and league tables, it is tempting to believe that they give us a clear picture of what is going on. However, more often than not they mask dozens of decisions, assumptions and concessions that make the information vague and

difficult to interpret. For example, when comparing average pay in the public and private sectors, it's easy to conclude that public sector employees are overpaid. However, this simple comparison does not take into account the fact that many public sector jobs, for example healthcare and education, require highly skilled people. This makes the conclusion flawed. When the age, education and qualifications of the employees are factored in, the pay gap practically disappears.

Similarly, league tables, adored by politicians and regulators, always hide important differences and can mislead by presenting the information as less ambiguous than it really is. Treating these numbers as reality and using them blindly to make decisions can have disastrous consequences.

Behaviour will change – but rarely in the way you expect

The example of the baggage handlers is known as 'gaming' and can potentially do serious damage to an organisation. Gaming is always a reactive behaviour – it springs up in response to managers' attempts to introduce performance measures and targets.

Gaming can be found in any organisation. For example, in order to meet targets for seeing patients in Accident & Emergency within four hours, some NHS hospitals placed patients into a specially designated

area, often in the same room, where the target would technically not apply. In other hospitals, patients were kept in ambulances so as to delay their arrival in A&E which would set off the clock on the four-hour target.

Gaming and cheating are driven by the extraordinary pressure to meet performance targets.

It is often difficult to predict which shape the gaming behaviours will take. So after a performance measure is introduced, it is important to remain engaged and observe the impact that the measure is having.

The tougher the control, the bigger the consequences

It is not the measures themselves but the use of them for control purposes that produces dysfunctional consequences.

The recent inquiry into evidence of police manipulating crime data, along with similar inquiries in the

UK healthcare and US education systems, produced the same conclusion – gaming and cheating are driven by the extraordinary pressure to meet performance targets. As Warren Buffett once said, "Managers that always promise to 'make the numbers' will at some point be tempted to make up the numbers."

This, however, is not the only way. Performance measurement is a powerful tool for providing feedback, learning about an organisation, discovering trends and patterns, and enabling informed dialogue. It is when this power is overtaken by the desire to control that it turns into a catalyst for dysfunctional and destructive behaviours. **MF**

Dr Andrey Pavlov is co-author of 'Measurement Madness: recognizing and avoiding the pitfalls of performance measurement' with Dr Dina Gray and Dr Pietro Micheli.



TOTAL
 A personal and business leadership programme for Total's high-potential senior managers blending virtual learning and an intensive residential module.

Royal Dutch Shell
 Cranfield is one of four university partners in the Shell Project Academy – providing face-to-face and online programmes in Project and Programme Management globally.

Kuehne & Nagel
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Here is a snapshot of some of the programmes we have run in the last six months.

What does the future hold for house buyers?

by **Dr Catarina Figueira**,
Reader in Economics

After a number of years of depressing news about property prices, 2014 saw the housing market enjoy an uplift. This was mainly the result of a recovery of the general economy, combined with low interest rates, which remain at very low levels.

Although the UK has experienced the collapse of two large housing bubbles over the last 25 years (during the early 1990s and again between 2007 and 2011), buying a house to live in or to let has continued to be regarded as a safe long-term investment. House prices tend to increase in the long run and usually above the rate of annual inflation.

In a market economy, the value of property is the result of the relationship between demand and supply. It is certainly the case in the UK that demand for housing is considerably higher than its supply. The long-term shortage in stock has been estimated at approximately 175,000 houses per year.

There are significant regional differences in the housing market. The London property market commands the highest prices, followed by the commuter belt around London, then the rest of the South East and the rest of the UK. In general, the rest of the UK will experience a ripple effect of what is happening to the housing market in London.

As the main financial centre of Europe, London has one of the largest pools of high earners in the world. It also has one

of the lowest unemployment rates and therefore attracts people from across the world to live there, which creates pressure on the limited amount of housing stock available. In addition, there are very tight planning permissions with respect to house building. This means that investing in property in London is regarded as a safe haven for investment, particularly during periods of low interest rates and low returns on share prices. House prices in London increased by almost 20% during 2014 alone.

This is not the case across the rest of the UK. The regional disparity in terms of wages is well documented and this impacts on housing affordability. This, combined with the fact that there is more housing stock available in certain parts of the country (in relative terms) and more house building opportunities (with respect to land suitability for house construction), makes for what many call a two-tiered housing market.



Homeowners in the UK are willing to stretch their level of debt to over four and a half times their average salary.

Another peculiar aspect to the UK housing market relates to people's approach to housing. Home ownership has been declining since its peak at 71% in 2003, primarily due to the fact that a lot of first-time buyers have been priced out of the market. Nevertheless, home ownership remains at over 65%, which is considerably higher than, for example, Germany, where there are more renters than homeowners (rents tend to be relatively cheaper).

Homeowners in the UK are willing to stretch their level of debt to over four and a half times their average salary and for a period of more than 20 years (as of 2014, the average house price was £183,600, seven times higher than the average salary of around £27,000). By choosing to do so, they often cannot save, even for emergencies, and they sacrifice their pension contributions. The ultimate problem with this is that the debt-to-asset life cycle is increasing and many individuals may end up approaching retirement age having neither their house paid for (and therefore are not able to release equity) nor a decent pension.

There are Government initiatives aimed at creating a stable housing market, but are they actually helping? The 'Help to Buy' scheme has contributed to a renewed increase in demand, but where there is an increase in demand that is not matched by an increase in supply, house prices tend to rise.

The Government has also recently (December 2014) announced changes to stamp duty. This reform is certainly welcomed by buyers and sellers alike (unless your property is worth more than £937,500!). The majority of buyers now pay less stamp duty tax and therefore incur lower up-front costs when taking a mortgage. The Government has also announced new measures to improve planning and claim that up to 100,000 extra homes will be built under new plans to make it easier for people to build their own houses.

As long as demand continues to outstrip supply, investing in bricks and mortar remains a good long-term investment.

Just make sure...

- You do not over expose yourself to debt, ie. that you can comfortably pay your mortgage and still save some money
- You keep an eye on interest rates – they are bound to increase soon
- You don't get too emotional – don't rush to buy what you regard as a lovely yet overpriced house, just because there are other people interested in the same house. Over a quarter of house sales falls through, so there is a good chance that the same house will come back on the market within a couple of months. **MF**

What does the future hold for house buyers?





Why the right contacts can make all the difference for Women Entrepreneurs

by **Dr Muhammad Azam Roomi**, Senior Lecturer in Entrepreneurship and Business Growth and Director of the MSc Management and Entrepreneurship

In an age when women around the world are increasingly gaining access to the same career opportunities as men, it is no surprise that we are also seeing a rise in the number of women entrepreneurs.

Women have become important drivers of economic growth as we see the number of new female-led entrepreneurial ventures across the world increase. Yet despite the rise in the number of women-owned enterprises, they tend to under-perform in a number of areas, such as revenue, profit and growth, when compared to male-owned businesses.

There are many theories for this, including the different approaches to business that women take and the fact that female-owned businesses tend to be concentrated in lower margin sectors such as retail or service.

However, I have found from my research that one of the main reasons women entrepreneurs struggle is because all too often they embark upon their entrepreneurial journey with a lack of social capital (key contacts and networks).

One of my recent studies of women-owned enterprises in the UK confirmed that women entrepreneurs with higher social capital showed significant growth in terms of revenue, and profit compared to those with less. The results of the study confirm a need for women entrepreneurs to focus on building and using the right

social capital if they want their business to be a success.

Women entrepreneurs often make the mistake of employing personal contacts, such as relatives or friends, who can be hugely influential on their decision-making, but who often lead them to make bad decisions for their business. Becoming reliant on a small network of people you know can be fatal for a business. Surrounding yourself with the right people and resources is crucial in order to grow.

“
Social capital should be carefully built and nurtured over time.”

Social capital is critical for entrepreneurs but it is important to understand that the concept of social capital is more than just ‘networking’. It involves identifying key players who can provide access to resources or provide valued advice and developing relationships with them. Social capital includes the resources available through personal and business networks, including ideas, advice, leads, business opportunities, financial capital

and emotional support. A key way that social capital is acquired is through networking because successful networking is all about building and maintaining solid, professional relationships.

Women-only networks can play an important role in the early stages of small enterprises; but you must be open to all networks. Interaction with experienced business owners from all sectors and demographics is important, especially during the early stage of a business and through growth phases.



Those entrepreneurs who believe they can get along without social capital are mistaken.

Women entrepreneurs must look beyond local, regional and professional networks and look strategically at which groups they should nurture in order to build their social capital. Joining mixed-networks adds value to the creation of social capital for those providing services or products to clients irrespective of gender. Similarly, for women entrepreneurs running enterprises in the high-tech and manufacturing sectors, connecting social capital is more crucial in the growth stages.

Social capital is not a ‘wonder drug’ or miracle for curing all the problems faced by women entrepreneurs; however, it can act as a catalyst to facilitate and accelerate the growth process leading to success for their business.

The following are recommendations for entrepreneurs looking to develop and use social capital:

Developing Social Capital

- Before you start attending networking events, identify what skills you already have, and the areas you need to build on. Once you have identified your strengths and weaknesses, you can select the most suitable networking groups for you. Remember social capital should be carefully built and nurtured over time.
- Never put all your eggs in one basket. Connect with sources from a range of different backgrounds. You never know ‘who knows who’ in the world of business.
- As well as formal networks, informal groups such as the health club, the gym, or the school governing board can be very valuable. Look outside the sector or industry you are in, explore different groups, make new contacts, and mix old and new groups. It will pay off in the long run.

Maintaining Social Capital

- Invest time, energy and resources to maintain your social capital. Maintaining existing social capital improves the chances of using it more effectively and efficiently when you need it.
- Maintain your contacts without the expectation of always benefiting from them. Don’t start out by talking about what you need. Listen to them to see what they may have to offer and also what you can offer them.
- Always honour your word. People trust you if you fulfil your commitments.

Using Social Capital

- Word of mouth is the best way of marketing your business, especially in the services and trading sectors. If a contact is happy with your service, ask them to recommend you. Advertising increases awareness of products and services but personal referrals and recommendations lead to actual decisions to purchase them.
- Keep building your social capital, you never know when you might need it! If you build the right networks then you will have a wealth of resources to call upon as and when you need to.

Those entrepreneurs who believe they can get along without social capital are mistaken and are setting themselves up for failure. Don’t wait until you actually need something, start building your social capital now and continue to do so for as long as you are in business. **MF**



Faculty Focus: **PAUL BAINES**

Professor of Political Marketing

What are you working on at the moment?

One of the busiest periods in my academic life is the six-month period running up to, and after, a British General Election. I am working with Sir Robert Worcester and colleagues at Ipsos MORI to write a polling-based book around the media surveys that Ipsos MORI undertake during the 2015 UK General Election.

What really works when it comes to political marketing?

In Britain, political marketing is particularly focused around PR activities. Overwhelmingly, the most important influence on the voter is the election debates, if they happen, and the media, particularly the broadcast news. So the parties must work hard to manage their press activities and develop broadcasts that appeal to their active audiences and the undecided, floating voters.

How important is social media?

Britain has not yet really been hit, unlike the US, by the power of political social media marketing, although the Conservatives are spending heavily on Facebook advertising this election. In the US, it's hugely powerful both as a device to raise funds, and to build an activist base. However, this power has not yet been harnessed by political parties in Britain. I expect this will occur eventually but I don't expect it to be a strong force in the 2015 election.

What are the biggest challenges facing the parties?

This election is unique because two parties have been in government. For Labour and the Conservatives, the challenge will be to obtain an outright majority, which I expect neither to do. For the Liberal Democrats, the challenge is to win enough seats to form a coalition with either main party should there be a hung parliament (which most pollsters and pundits expect). The challenge for the other 'protest vote' parties, particularly UKIP, is to demonstrate that their vote is not meaningless and to win a few trophy seats in the House of Commons.

Do you have any advice for those responsible for political marketing campaigns?

The marketing campaign in this election really matters; much more than in previous contests. This means much better marketing and communications planning is necessary. I would suggest that the three main parties undertake research to assess the effectiveness of their marketing activities, particularly to assess what they are spending on communications and readjust their strategies during the campaign as necessary, in order to ensure that they have the most effect on floating voters.

What would you like to research in the future?

I'm fascinated by marketing influence. Why do some communications persuade some people but not others? How are such images/messages taken into the consumer mind and how do they link to consumer action? If you think about a terrorist group like 'Islamic State', its fairly sophisticated Jihadi lifestyle magazine, Dabiq, and its hideous, but well-produced, snuff-film videos, represent a dangerous new form of marketing, essentially the marketing of death as a glamorous afterlife – a fantasy most see through immediately but some, sadly, do not.



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Is a sea change needed for THE SHIPPING INDUSTRY?

by **Dr Emel Aktas**, Senior Lecturer in Logistics and Supply Chain Management

The world of container shipping is crucial to our everyday existence. More than 60% of the goods we use every day are transported by sea. This takes its toll on the environment. Maritime transport accounts for approximately three per cent of the world's greenhouse gas (GHG) emissions and four per cent of the EU's total GHG emissions.

Many maritime companies have started lowering the speed of their ships (slow steaming) to help reduce fuel emissions. However, reducing the environmental impact of the shipping industry is complex as there are many uncertainties around a ship's journey at sea. Adverse weather conditions can have a big impact on journey times but also the time that a ship spends at each port on its journey can play a major part in delays and result in increased emissions.

Ships will visit many ports along their journey and the time they spend at each port loading and unloading cargo can vary from a couple of hours to more than a day. The uncertainty around port timings is the result of less than perfect planning and communication systems that are used by port authorities across the world.

Ships are given a time window for their arrival at a port. As long as they

arrive within this time window, they will meet their service objective. If they arrive at the port earlier than their nominated time window, they will have to wait and if they are late, they will have to wait for a new slot. This delay then results in ships increasing their speed in order to try and make up time to get to the next port in time.

The time windows allotted by ports can be very tight, especially when the ports are busy. A good analogy can be made with the bullseye on a dartboard. The smaller the target, the more difficult it is to hit. The tight timescale at which a ship can dock at a particular port often leads to ships rushing to catch a nominated time window to achieve their set service targets. The problem then is the faster a ship travels, the higher the emissions.

The issue of port times is less of a problem for transpacific or transatlantic journeys, as for these journeys the time spent at ports is a small fraction of the total time they spend at sea. For longer journeys, the uncertainty of port times has relatively less impact on the service level since there is usually plenty of time at sea to make up for any delays incurred at ports.

For those ships with shorter journeys, a change in sailing speed

may not always help, as the distance to be travelled to the next port is often not long enough to make up for the lost time incurred by port delays. However, changing speed would help them if they were not so restricted by the arrival time window at their next port.

Based on extensive research with port operators and ship liners over the last two years, we have found that the length of the journey and the level of uncertainty around port times has an impact on the service levels that can be achieved by changing the speed of sailing. This problem poses a trade-off between service levels and carbon emissions. The uncertainty of port times results in speeding of ships, which leads to higher fuel consumption and higher carbon emissions.

Better coordination between ships and ports in terms of available time windows and likely disruptions to service will help both parties achieve higher service levels. To achieve this, the port authorities must review the systems and technology they currently use for communication and scheduling of ships. As the industry continues to grow, ports must adapt and innovate. Out-of-date systems must be addressed in order to improve efficiencies and ultimately the industry's impact on the environment. **MF**

Trade carried by sea has grown fourfold since 1970 and is still growing. There are more than 100,000 ships at sea carrying all the solids, liquids and gases that we need to live. The biggest container ship can carry 15,000 boxes and can hold 746 million bananas. If the containers of the Danish company Maersk were lined up, they would stretch 11,000 miles, more than halfway round the planet. If they were stacked instead, they would be 1,500 miles high, 7,530 Eiffel Towers!



The business of SUSTAINABLE DEVELOPMENT

Alumni interview:
Dr Paul Leinster CBE (Executive MBA 1990)

by Stephen Hoare

As Dr Paul Leinster CBE, Chief Executive of the Environment Agency, prepares to hand over the reins of the agency to his successor later this year, he talks about the challenges he has overcome to deliver on his ambitious five-year business plan.



Sixty years ago, a combination of high spring tides, a low pressure system and gale force winds coming in from the North Sea combined to create a massive storm surge that on the night of 31 January 1953 overtopped sea defences along the length of Britain's east coast. In England, 307 people were killed mainly in low-lying coastal areas like Canvey Island in Essex.

Fast-forward to the winter of 2013/14 and meteorologists were once again warning of extreme weather and another major North Sea storm surge. Responsible for maintaining the majority of England's flood defences, the Environment Agency was on full alert.

Dr Paul Leinster, the agency's chief executive, recalls a difficult time with the largest storm surge for 60 years followed by a conveyor belt

of storms sweeping in across the south and west of the country. The continual heavy rainfall caused rivers to burst their banks. The storm surge in December 2013 had a significant impact on many communities, but thanks to years of investment in better defences and early forecasting and warning systems fortunately no one was killed. It was the wettest winter on record and certainly tested the Environment Agency's staff and resources. Large tracts of land across the south west and south east were left under water as residents fled their homes. "Many staff including me and my director of operations David Jordan worked continuously from the first of December to the first week of March. We worked closely with all the relevant government departments, local authorities and emergency services. We were an integral part of the government's emergency response committee, COBRA, which

was chaired by senior Government ministers, including the Prime Minister. Last winter was devastating for those who were flooded, with more than 7,000 properties affected, but 1.4m properties were prevented from flooding."

At the helm of an organisation whose tasks include combating the effects of climate change, Paul's vision for the Environment Agency is clear. "Our role is first to protect people and the environment and secondly to create a better place for people and wildlife." One tangible result of the agency's effectiveness was that the flood assets damaged during the storms and floods last year were largely all repaired by the end of October 2014. "This involved more than 800 projects. Two hundred thousand households which had been at increased risk due to the damage had their level of protection restored," says Paul.



Good communication is a vital ingredient in managing a devolved organisation.

The Environment Agency, a non-departmental publicly funded body with an annual budget in 2014/15 of £1.3 billion and a head count of 10,500 people based in area offices throughout England and its national office in Bristol, is both a service delivery organisation and a regulator. While managing flood risk is its most visible responsibility, the agency's diverse remit includes pollution prevention, improving water quality, water resource management, waste regulation, monitoring, inland fisheries and water-related conservation. The agency is sponsored by the Department for Environment, Food and Rural Affairs (DEFRA). The Secretary of State appoints the chairman and members of the agency's board. The chief executive is appointed by the chairman.

Appointed CEO in 2008, Paul with the board launched an ambitious five-year business plan to slim the organisation and make it better equipped to meet its public obligations. The plan has seen the Environment Agency become more accountable and pass on more money directly to projects which will have the most impact. These include river management schemes, better drainage, and flood storage areas. For the first time the agency has been awarded a six-year £2.3bn capital settlement for its flood risk management work from 2015/16 to 2020/21. It also receives around £345m of revenue funding on a cost recovery basis from those it regulates and around £108m for other environmental protection work. Value for money is gained by the use of private contractors and organisational efficiency.

Despite a falling revenue budget, Paul has increased investment and improved effectiveness by adopting a risk management approach. "Over the last five years we have reduced our corporate support service costs such as HR, IT, finance and procurement by 34%. And we have moved from a national, regional and area structure to a national and area-based organisation," he says. Paul benchmarks the Environment Agency with other national public and private sector organisations. "We look at Network Rail, the Highways Agency, and big supermarkets to see what they do. Like them, we have devolved management and deliver

a consistent and efficient service with a large dispersed workforce. Part of our success is due to achieving brand recognition whether you are operating in Cornwall or Cumbria," he asserts.

Good communication is a vital ingredient in managing a devolved organisation. Paul believes the CEO should be highly visible and his working week includes meetings with people who are not his direct reports, visits to hear about work on the ground and web-based Q&A sessions with people at all levels in the agency known as a "chat with the chief" every four to six weeks. Communicating effectively is a key to business efficiency. "I meet regularly with my seven direct reports and their direct reports and I always encourage people to know and talk to people two levels down. The secret of management is to have a good team," he explains.

“ Studying for the MBA is of unquestionable relevance to today's CEO.

Paul gained an Executive MBA from Cranfield in 1990. At the time he was managing director of an environmental consultancy. This included research on sick building syndrome for the Building Research Establishment (BRE) and advising chemical and process companies how to comply with the COSHH regulations – (Control of Substances Hazardous to Health). His chairman and business partner, Cranfield alumna Nancy Thomson, who herself had established the company out of a business start-up at Cranfield University, suggested he take an MBA. "As a scientist and technologist I wanted to understand business more and my dissertation was a strategic business plan for the consultancy," he says.



Paul adds that studying for the MBA is of unquestionable relevance to today's CEO. "Business and innovation has to be part of the solution. The MBA has helped me ask the right questions."

After a period in SmithKline Beecham he then joined the Environment Agency in 1998 as a director of environment protection and then after six years in this role he was appointed as director of operations. Paul's strategic focus was essential. Having gained considerable experience of working in both the private and the public sector, he sees the challenges as no different from those facing any large organisation. "Within a company you are focused on improving shareholder value and being profitable. The only difference here is that the government is the major shareholder and our value derives from protecting people and wildlife. We use a slightly modified balanced scorecard to measure our results which are reported quarterly at our board meeting and are available on our website for all to see."

With plans to retire in September, Paul regards his contribution to running the Environment Agency as work in progress – good successes but more to do. With a change of government, and with flood risk management still on the agenda and continuing interest in high-profile issues such as fracking for shale gas, it is time to recruit his successor and give the new CEO the chance to influence and shape the next five-year plan.

And just in case you feel that Paul has been a bit hard-headed in his drive to balance the books, his satisfaction at leaving an organisation in good health takes second place to his overwhelming love of the environment as a place for people and a habitat for wildlife. He returns to the agency's core mission. "At the end of my time here, the quality of the air and rivers in England in terms of the issues we have responsibility for has measurably improved. Fish are back in rivers they have been absent from since the industrial revolution and otters and water voles are now present in all English counties." Now that is an achievement to be proud of. MF

What do you call someone who has a BIG idea?



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Mover and shaker?
Go-getter?
Big shot?
entrepreneur?
Innovator?
Superstar?
VIP?

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