



Re-engineering the board to
manage risk and maximise

↗ growth

“To increase the **competitiveness** of the UK economy we need more directors in our boardrooms that have both the **knowledge** of how things are made and first class **management skills**.

This will help us to drive organisations forward while **controlling** the inherent **risks** in rapid growth businesses.”

Lord Sainsbury of Turville,
founder of Sainsbury Management Fellows (SMF)
the not for profit organisation that opens the doors for professional engineers to become business leaders.

We hope this booklet encourages you to seek more information on the role of professional engineers in the corporate world and that the skills matrix (page 13) assists in the assessment of your organisation's needs and how an engineer can enhance the board.

Navigating the company through an increasingly turbulent and unpredictable global sea of opportunity ↙

Is there a case for re-engineering boards and the senior management team to create greater success in an increasingly complex global market and an unpredictable economic climate? Experience, especially in the last two to three years, suggests there is.

The recent spectacular failure of a number of high profile organisations has resulted in unprecedented challenges to the experience and skills of directors. Financial, legal and accountancy qualifications and experience were not enough to avoid the disasters. At such times, directors need to re-evaluate all aspects of the business – including the calibre of the board – to ensure it is robust, able to manage the risks and create new strategies that will achieve its goals. Yet traditionally, board directors have not been trained to identify and manage the risk of failure positively by working with variables where mistakes, unknown consequences or side-effects might develop. These risk analysis skills are, in fact, an integral part of the skill set of professional engineers who have complementary business education and experience.

This unusual combination of skills and their application (illustrated in this booklet through examples and case studies) by [new professional engineers](#) outside purely technical problems may seem, at first, to be against conventional wisdom. However, there is a growing body of opinion that boards are not as diverse in their knowledge and skills as they should be to ensure they are robust and able to manage risks and opportunities across many facets of business.

Diversity should encompass more areas than gender, colour or creed – skills diversity is becoming increasingly important⁽¹⁾ to manage risk and capitalise on opportunities.

This booklet aims to demonstrate how forward-thinking boards may benefit by transferring the statutory responsibility for risk management, typically delivered through purely financial skills, to professional engineers who arguably have a broader perspective on risk analysis. It does this by arguing that professional engineers have a unique combination of technological and commercial knowledge developed against front-line/practical experience that makes them particularly suited to the strategic decision-making and risk management experience needed at the modern board table.

This booklet also aims to bring new insight into the skills that are lacking on many UK boards and that often these resources already exist within organisations but are hidden or under-utilised.

The new professional engineer: an experienced individual holding both chartered engineering and MBA qualifications.

“

Engineers can help with optimising the design of companies. In Correos, Spain they created an Innovation Director reporting directly to the CEO so innovation became central to the company and wasn't hidden in individual departments.

”

Richard Wishart,
MD, Delivery
Management Ltd

SMF

The Sainsbury Management Fellowship Society,

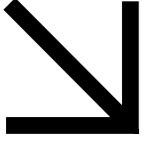
which assists professional engineers to develop themselves through continuing education into business leaders, conducted research to establish and contrast the skills HR directors attach to their image of professional engineers and those capabilities they considered important for the board to have in relation to risk management.

Historically, professional engineers have not been seen as a natural choice to be members of boards of blue-chip companies. Historical trends mean candidates, on average, come from financial and legal disciplines. Today HR directors are discovering that once professional engineers possess the essential supplementary legal, financial, personnel and marketing training, they have a breadth of skills that can be used to help organisations grow faster and more reliably, maximising the opportunities while proactively managing risks.

One of the greatest challenges facing HR directors is identifying candidates who will strengthen a board's ability to make strategic decisions that propel the organisation forward, while also controlling the inherent risks in dynamic businesses.

SMF's survey among 100 HR directors showed that the career backgrounds most valued in the boardroom are accountancy, sales, marketing, HR and legal, with professional engineering coming way down the scale. Yet when asked if professional engineers with MBAs are suitably qualified for board positions, 80% of the HR directors agreed that they are.

Risk factors exist at every level of organisational structure, spanning finance, legal, operations, supply, technology, marketing, customer relations and human resources.


 No organisation is immune from risk, nor can they avoid strategic decisions on issues that can either make or break them.

Making properly considered decisions requires not only vision and leadership, but also the ability to analyse and interpret information, a sound understanding of how competition and market dynamics affect business and the talent to develop creative solutions and harness technology to best advantage.

The examples below highlight the complexity of decisions facing boards and the depth and breadth of skills and experience required to ensure successful outcomes:

Technology and competitive risk:

Polaroid, an iconic global name in imaging, failed to recognise the dramatic effect that digital photography would have on its market. Despite many years' investment in patented inventions, it went bankrupt with shareholders losing everything.^[2]

Operational and PR risk:

In the 1990s high levels of the toxic substance benzene was found in bottles of Perrier water. The company failed to treat the problem as a global issue, resulting in a lack of coherent international action and messaging. This led to extremely negative media exposure and a significant decline in brand and shareholder value.^[3]

IT and legal risk:

In 1999 the Passport Agency felt the impact of poor management decisions, poor specification, weak contracts and the failure of the new Siemens computer system. This led to thousands of holiday makers missing their trips. Not only was this a PR disaster but Siemens reportedly received a considerable fine.^[4]

Financial risk:

The collapse of Merrill Lynch arguably arose from its over-reliance on a simplified mathematical accounting model (albeit mandated by regulation): one that contained fundamental flaws in its assumptions on credit risk and that only worked within a stable economic environment in conditions that had already been encountered. Professional engineers would call the events of 2008/2009 'testing to destruction'.^[5]

Marketing and customer satisfaction risk:

In 1993, Hoover lost a reputed £20m on an ill-conceived free flights promotion. It was both a financial and public relations nightmare for the company because it led to a fundamental, yet arguably predictable, change in customer behaviour.^[6]

Specification, design and supplier risk:

Nike fell foul of this particular risk when it was alleged that child labour was being used in its manufacturing chain. With a trend now for companies to report on social and environmental responsibility, this came at a heavy reputational cost even though the allegations were never proven.^[7]

Human resource risk:

In 2002, UBS Pain Webber suffered at the hands of a disgruntled ex-employee who caused millions of dollars worth of damage by planting a virus on two-thirds of the company's computers in an attempt to force down the share price and profit on the back of personal stock deals.^[8]

Cultural and political risk:

A good example of this risk is the challenges currently dogging oil explorers in West Africa and Russia, with significant impact on both their reputation and their bottom line.

Risks rarely come in isolation from each other and when they occur simultaneously they can create a very volatile situation. HR directors can demonstrate the value of their department by ensuring board appointees have the qualities and skills required to control risks and to manage crises effectively, as well as the foresight to identify opportunities and to act upon these in a timely fashion. Speed and agility are key requirements. It could be argued that keeping an open mind on where these skills may be found is the best way for HR directors to manage the key risk of the board - that of 'GroupThink'.

GroupThink - a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' striving for unanimity override their motivation to realistically appraise alternative courses of action - Irving Janis 1972

cultivating professional engineers for Board Positions

The work to cultivate professional engineers for board positions started over 20 years ago with the foresight of David Sainsbury (now Lord Sainsbury of Turville) who observed that in comparison to the UK, overseas businesses had more senior executives with professional engineering qualifications at the top of industrial organisations. Lord Sainsbury was convinced that in order to increase the competitiveness of the UK economy there should be more directors in UK boardrooms with the knowledge of how things are made, how things are sold and how senior management teams perform.

The professional engineer's ability to span both technological and business spheres enables him or her to help with the rapid commercialisation of new products, services and innovations that lie at the core of UK technology companies with global ambitions.

To help change the UK business culture, Lord Sainsbury set up a scholarship scheme - Sainsbury Management Fellows (SMF) - to develop highly motivated professional engineers into business leaders. Professional engineers with excellent academic qualifications and existing leadership qualities are sponsored to study for a Masters degree in Business Administration at the world's leading business schools.

Lord Sainsbury believes - and we support the view - that the combination of a professional engineering education and an MBA, combined with business experience make a professional engineer highly-suited for the complexity of boardroom decisions.

↙ The New Professional Engineer

As this skills matrix shows, new professional engineers have a mix of technical and process knowledge, creative ability and risk management skills. In addition, they have hands-on experience: working with real people and real-time issues to bring together theory and practice. This untapped pool of talent can play a key role in strategic business development, balancing creativity, risk and profitability.

Professional engineers have learned how to deal with multiple conventions (different ways of working) and languages (foreign and specialist), how to draw up and translate specifications/needs between different professional engineering methods and how to communicate to suppliers, customers and stakeholders.

These skills can be used to help UK companies develop and implement dynamic business strategies, partnerships and offerings and thus compete more effectively at an international level.

The world is changing at an unprecedented rate, creating new challenges for UK businesses such as globalisation and cross-culturalism, the rise of the Asian markets, significant flux in the international economy, technology and environmentalism. These are forcing boards to consider how a much wider range of issues affects their business. To make sound strategic decisions, the board needs to ensure that it is able to deal with different paradigm shifts and the challenges they bring. It is vitally important to restructure businesses to take advantage of new technologies.

The new professional engineer

Skills	Attributes	Benefits
Creative and innovative	Ideas generation and internal ambassadorship	Recommendations and credibility to champion new innovation
Strategic	Analyse complex problems and find solutions Financial astuteness Globalisation and cross cultural experience Used to dealing with ethical dilemmas	Identification of strategies that will have a big impact Ability to compete at international level
Analytical	Risk analysis including health and safety Data analysis and synthesis Conflict resolution	Ensuring focus on business critical issue Links vision and delivery Reduces threat of failure
Technology	Understands environmental impacts Skilled at applying technology to benefit society	Keeping pace with environmental developments Identification of most profitable projects
Expert project management	Short term and long term viewpoints Knowledge and skills underpinned by hands-on practical experience	Efficient and cost-effective cross departmental and cross functional team working Strategic and detailed planning resulting in positive results faster Process and governance
Finance	Core accounting and investment justification skills/knowledge	Bridging the 'reality' gap between projects, managers and shareholders

New professional engineer: an individual holding both university and chartered qualifications

Navigating Paradigm Shifts:

Radical shifts in behaviour and/or technology (e.g. use of the Internet, environmentalism and reaction to recession) need to be embraced and managed to both identify new opportunities and avoid damaging shocks. A good example is the evolution of digitally stored and downloadable music. Apple is often credited with the development of the technology that led to the creation of the iPod but it was, in fact, the brainchild of British serial inventor Kane Kramer. Kramer devised the idea of the digital audio player back in 1979 – a credit card sized device with a small screen and central scrolling button which by 1986 played up to five minutes of music. However, boardroom divisions left the company short of money and patents lapsed.^[9]

Professional engineers are likely to identify paradigm shifts more swiftly. Their training means they tend to look at problems from multiple angles simultaneously and question accepted assumption sets/wisdom. While this can sometimes make them seem risk averse, in fact it normally means they are risk-aware and can spot potential shifts easily when they overlay them with human psychology and behaviours. The insights they provide can help to steer decisions right across the business including investment, R&D, environmental and marketing strategies.

Harnessing Analytical Skills:

Directors and managers need to analyse situations and products from many different dimensions and to assimilate a huge volume of information (facts, theories, calculations and estimations) to restructure and simplify data and at all times maintain objectivity.

This is central to professional engineering skills. On real projects, professional engineers have to contend with an unlimited range of variables. A major advantage of having directors with deeply analytical minds is objectivity. They are 'wired' to identify what is important and de-prioritise the superfluous; which can help ensure that decisions are not diverted by red herrings and instead focus on business critical issues.

Professional engineers, rather like lawyers, are trained to put themselves in the opposing position and develop reasoning and arguments in favour or against a particular proposal. Their training highlights options rather than absolutes, enabling them to think broadly about business problems and creatively about solutions, rather than in black and white as the stereotypes might imply. Furthermore, professional engineers tend to find win/win solutions, leaning towards the discovery and negotiation of common needs to achieve compromises.

innovation



Despite corporate mission claims, some established companies effectively discourage internal innovation through prioritisation and resource allocation that favours small incremental improvement over bolder visions. Risks are usually over-priced through lack of knowledge or under-estimated through lack of awareness. Engineering skills often call for 'back to fundamental' analysis that reveals how base assumptions have changed, opening up new opportunities that, although they may require a step change, would also yield step changes in growth rates.

It is not just technology innovation associated with engineers, but also factors such as procedural, partnering, project management and sourcing opportunities. Key to this is a very wide range of knowledge of all the elements of the 'chain', from customers' changing needs; through idea creation, manufacturing realities and environmental enablers or inhibitors; through to long term support and warranties. Innovation very rarely comes in isolated spots but normally triggers advances across the whole organisation that rarely can be seen from inside the traditional silo. It is perhaps no surprise, therefore, that professional engineers are often employed as change agents, either internally or externally.

Assessing Risks Rationally:


Most businesses thrive on new ideas and innovation that deliver benefits to society. With new ideas comes risk and organisations can unwittingly stifle potential success by imposing artificial limitations on creativity, because boards are often ill-equipped to analyse and manage risks outside broadly financial factors.

The production of original yet risk-balanced ideas is intrinsic to the work of professional engineers. They can advise on the unknown elements that could affect the new idea and recommend safeguards to control any downsides, bridging these with the financial goals and limitations of the company. This means they focus on 'planning-out' risks when making strategic decisions on research and development, using their diagnostic skills to consider a multitude of scenarios and looking at the strengths, weaknesses, opportunities and threats of a new concept, product or change. The use of these skills can dramatically increase the ability of organisations to grow swiftly yet safely.

Putting Finance in Context:

Although boards have financial experts who guide a wide range of decisions, a professional engineer with business qualifications will have usually gained wide experience on projects with sizeable budgets (£60m plus) that require not only technical, but financial analysis of their viability. The connection between the numbers (financial or otherwise), their physical meaning and most importantly their associated assumptions and risks are too often lost in translation up to the board.

The professional engineer can therefore bring a different and valuable dimension to financial considerations and board decisions. They can identify the true cost, 'risk-reward equation' or the real trade-offs that can be managed to make a huge difference between what is financially viable and what could be a costly error for the organisation. This insight is vital to successful business outcomes.



The development of new products and services results in complex assignments with many dimensions and inbuilt risks. Making sound decisions on how such assignments are managed and delivered relies on the quality of the assessment of the different dimensions and their associated risks. Professional engineers are adept at segmenting complex problems into manageable chunks, structuring them, defining inputs and outputs, specification and deliverables. In addition, professional engineers tend to consider not just technical but sales, legal, HR, health and safety, security and political dimensions at the planning stage, flagging up potential problems. This significantly reduces the risk of business failure.

synthesis

governance

Managing Complexity:

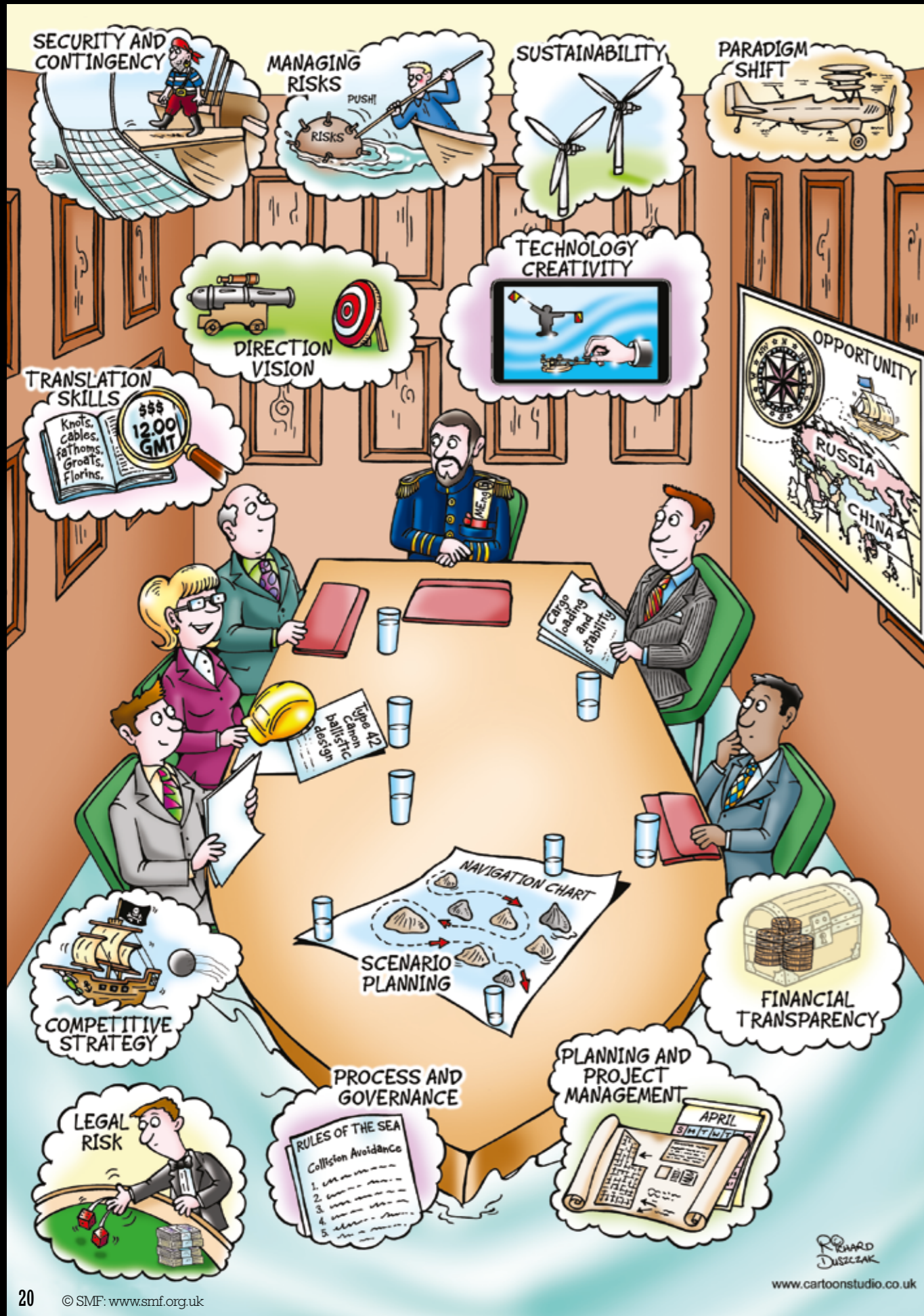
Complex new products and organisational change require expert project management. The art of good project management is being able to see and communicate the big picture across organisations. This means holding and managing two concurrent views of a challenge: a short-term detail view and a long term strategic view. Professional engineers with business education and experience have much to contribute in this area. For example, a major building project will require the project manager to lead specialists in planning, architecture, transport, environment, political lobbying, community engagement and media communications. Professional engineers with MBAs have extensive experience of managing cross-functional teams, making them a natural choice for boards of organisations that comprise many departments and cross-functional teams with time-critical plans and interlinked/interdependent responsibilities.



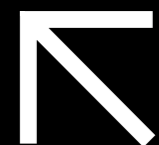
Embracing Environmental Challenges:

Today, reducing environmental impacts is imperative for businesses. Professional engineers can use their knowledge of the composition and decomposition of materials and products to steer the development of products that are kinder to the environment, and set out sound commercial and societal arguments for pushing environmental policy higher up the board agenda. Despite the old stereotypes, professional engineers are experts on how man and technology work together in the modern world and can therefore help organisations bring innovations that are better for the environment to market faster.

sustainability



New professional engineers are already adding value to leading UK corporations and not-for-profit organisations, applying their expertise and experience to help boards make key decisions, manage risk, create and capitalise on opportunities



Keep a good look out - you may already have your ideal board candidates on board

Where does the innovative HR director find suitable candidates for main or management board responsibilities?

In some cases, the talent is already within the organisation that is seeking to strengthen its board; professional engineers stereotyped by their title and often frustrated because there is limited (or no) opportunity to influence the strategic direction of the business. Professional engineers, who by the very nature of their job are creative problem solvers, are not seen as board material and are often lost to more forward-thinking international organisations. HR directors can avoid this talent leakage by encouraging their professional engineers with leadership qualities to expand their existing skills by studying for a first class business education and degree qualification.

It takes time to develop such talent and organisations need a rolling programme of identifying and nurturing unharnessed talent. Fortunately, there is already access to 270 professional engineers who have emerged from the SMF-sponsored scheme. All defy the stereotype, have impressive international business experience and hold senior posts in diverse sectors including financial services, biotechnology, media and information technologies. Many run their own entrepreneurial businesses.





Professional engineer helps university spin-out bring product to market

Among the cohort of 270 SMFs, Mike Astell, a Chartered Professional Engineer and Fellow of the Institution of Mechanical Engineers, is one of 220 statutory directors and senior advisors who give support to boards of UK and international businesses (the remaining SMFs are entrepreneurs).

Mike has an impressive track record - he was recently appointed by the UK Atomic Energy Authority with the intention of becoming managing director designate of Dounreay. Prior to this appointment, Mike joined Shell as a corporate strategist immediately after graduating from Erasmus with an SMF-sponsored MBA and later became one of Shell's operations managers, responsible for an area of the North Sea with a budget of £120m, producing 40,000 barrels a day.



Prior to studying for an MBA, Mike was involved in setting up the services division of Alstom in the UK, including working on contracts for the Channel Tunnel Rail Link and Jubilee Line Extension and project managing the implementation of the Northern Line PFI contract for London Underground.

Four years after MBA graduation, Mike took up his first non-executive directorship at Acrobot, an innovative medical technology company. Mike worked closely with the chairman and directors across the full spectrum of the business, from risk analysis and strategic planning through to marketing. He helped the board crystallise its strategic goals and redouble its efforts to secure new funding to take the business forward.

The new funding enabled Acrobot's surgical product innovations to move from 'the lab' into medical trials and subsequently into the operating theatre, transforming joint replacement surgery techniques.

Mike's involvement in Acrobot is an example of how a board can supplement skills gaps by harnessing the talent of a professional engineer with business qualifications and experience.

Mike joined Acrobot (a spin-out company from Imperial College London) when it was at the development stage with its surgical navigation systems and robotic devices for orthopaedic surgery. Acrobot's systems would improve healthcare outcomes for patients and produce cost-savings for healthcare providers. These systems would reduce operating times, free up theatre space for more operations, reduce pressure on bed space through faster patient discharges and reduce patient aftercare needs. The challenge was to move from development stage into medical trials and then delivery to the healthcare providers.

Bringing new innovations to market in the healthcare sector involves clearing many hurdles such as funding for clinical trials, gaining medical approval, persuading clinicians to embrace new methods, securing a manufacturing partner and gaining distribution.

The company had invested in a product that had huge potential, but had not yet been tested in a clinical environment. "It was all about taking a helicopter view of where Acrobot was, where it wanted to go and how to get there using its resources as efficiently as possible," said Mike. "The board needed objective analysis - my role was to stand back and give a holistic and dispassionate view on the business. I worked with the directors to diagnose short to long-term challenges, give advice on remedies and help the board make key decisions.

"An essential task was bringing focus to the aim of getting the product to market. I brought new approaches to risk management and presented and encouraged a more structured approach, including how to deliver a new product while minimising potential risks.

"I supported the development team's work on product delivery - this involved the creation of a new plan with weekly, monthly and quarterly goals and milestones. Through this process, the team significantly improved its project management skills and worked towards the milestones, monitoring progress constantly and paying particular attention to risks and contingency planning."

Mike worked with the team to create the marketing strategy, addressing not only manufacturing challenges but also strategies on pricing, distribution and building a customer base. For example, he conducted extensive reviews of studies that analysed how new technology is introduced into a marketplace that has been using the same techniques and methods for decades. The intelligence he extracted from these studies was used in the development of Acrobot's marketing strategy.

Mike also helped the directors focus on creating ambassadors for the product. They identified orthopaedic surgeons who are early adopters of new technology and created a user group in a teaching hospital. Their successful use of Acrobot's surgical navigation systems and robotic devices produced advocates who encouraged other surgeons to use the new systems.

During the four years that Mike advised the board, Acrobot completed its successful clinical trials and secured both medical approval and a European Kitemark. The surgical navigation systems and robotic devices have been in manufacture for several years and the company has built a loyal customer base.

Mike concluded: "Business problems rarely fit into specific issues involving single departments or topics. For example, you rarely face a finance problem on its own: it's nearly always a broader perspective to business issues. Whether you're a multinational or an entrepreneurial new business, problem solving at that level is likely to be multi-faceted, so marketing, financial and technological elements are very often combined to form complex challenges and an analytical approach can help. Being able to bring those issues together is what someone with my background can offer. The ability to understand the bigger picture and translate that for people to see it for themselves can be quite a powerful tool."

SMF Society - developing professional engineers as business leaders

The not-for-profit Sainsbury Management Fellows (SMF) Society exists to develop professional engineers as leaders of UK industry. SMF aims to improve the economic performance of UK businesses, particularly those in the technology, professional engineering, manufacturing and construction sectors. This is achieved by awarding MBA bursaries to highly motivated professional engineers who can then complement their technical qualifications and skills with a first-class business education in an international setting. SMFs have undergraduate or graduate degrees from leading centres or professional engineering education, up to ten years' international business experience and their MBA from a renowned business school.

FACTS AND FIGURES

- 270 nationally and internationally located SMFs
- SMF has awarded £7m in bursaries for MBA study
- SMFs have graduated from the best business schools

EURO

- Harvard
- MIT
- Stanford
- Wharton
- Columbia
- Kellogg
- University of Chicago

NON-EURO

- INSEAD (France)
- IMD (Switzerland)
- London Business School (UK)
- RSM (The Netherlands)
- IESE (Spain)
- SDA (Italy)
- HEC (France)

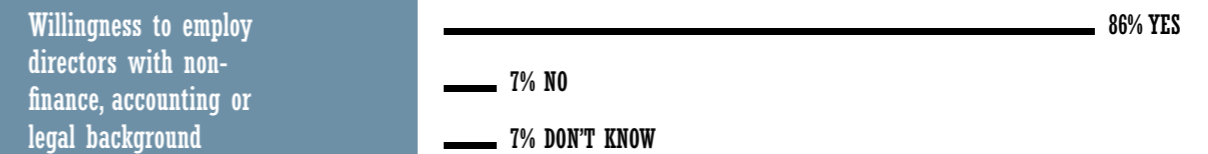
The SMF bursary scheme is administered by the Royal Academy of Engineering. Each year up to 14 professional engineers with exceptional academic qualifications and leadership potential are awarded a bursary to study for an MBA. The sponsored professional engineer automatically becomes a Fellow of the Society on successful graduation and is thereafter referred to as an SMF.

There are now 270 Fellows in the Society. Seventy-two per cent are employed in industry and 70% of these are based in the UK or work for UK firms. Approximately 10% hold senior posts in consulting, with 12% in finance and the remaining 6% in other occupations. Currently 17 Fellows own and manage SMEs.

SMFs are highly networked. They provide a rich source of knowledge and contacts for other Fellows, hold over 200 non-executive directorships in UK businesses and are an independent source of information and advice to non-commercial organisations, professional engineering students and entrepreneurs. SMF provide impartial advice on the commercialisation and economic and social impact of technology across many industries and not-for-profit sectors. Drawing on the expertise within the Fellowship, the Society has created working groups to develop strategies to influence policy on major issues such as climate change.

Do the skills of engineers with business qualifications and experience mean that most UK boards hire engineers?

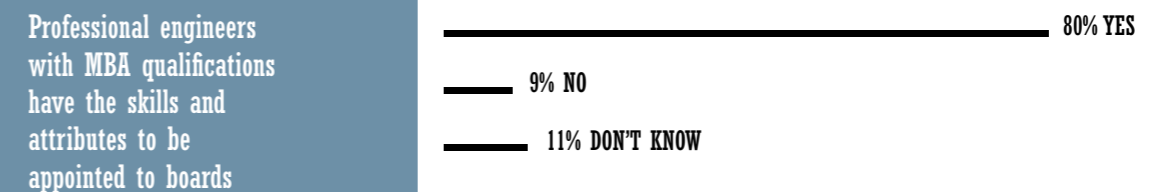
Although attitudes towards engineers are changing, SMF's survey of 100 HR directors in leading UK companies shows a discrepancy between perception and recruitment reality. The key findings are summarised in this section:



The research found that 86 per cent of the HR directors surveyed were open-minded about employing directors with non-finance, accounting or legal backgrounds, yet the career backgrounds they value the most are exactly these, as well as sales and marketing. Engineering backgrounds were not selected.



When asked if they believe engineers have the skills and attributes to move onto boards, only 66 per cent of HR directors responded positively. But this figure leapt to 80 per cent where the engineer has MBA qualifications and experience. This highlights the discrepancy between the careers valued and the belief that engineers can be effective directors.



Research methodology: Research conducted in January 2009 by Golley Slater Contact Management. 100 companies were surveyed from 1,000 top UK companies.

We gain more insight into the views of HR directors by looking at how they rate engineers' individual skills.

Despite the belief in engineers' competency, only half of the companies that took part in the survey have board directors with engineering backgrounds - 25 per cent had less than 10 per cent of directors with engineering backgrounds and just 13 per cent had a more respectable 40 per cent representation at board level. This low penetration of directors with engineering backgrounds demonstrates that perceptions and actions are misaligned.

Qualities respondents associate with engineers

Quality	% of respondents selecting a quality
DEAL WITH COMPLEXITY	70.8%
CREATIVITY	54.8%
IDEAS/SOLUTION SELLERS	52.4%
STRATEGY	49.4%
WELL NETWORKED	47.6%
COMMUNICATIONS	46.8%
PEOPLE/TEAM ORIENTATED	46.4%
MULTI-DISCIPLINED	45.4%
FINANCIALLY ASTUTE	40.6%
RISK TAKERS	39.4%

On a more positive note, engineers are recognised for their ability to deal with complex issues (70 per cent). But even this respectable score should be higher to reflect the reality of their role.

The scores for the remaining areas are also unrepresentative of the reality. The combination of their technical and business qualifications and experience means they are highly skilled in all these areas and have strong professional networks, as SMF illustrates.

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Almost 200,000 chartered engineers are employed in the UK and considering that the engineering industry remains the backbone of the UK economy, the misperception of engineers is worrying. SMF believes that it is essential that organisations understand the benefits they can derive from having an engineer with an MBA among its executive and non-executive directors and is working to change perceptions and recruiting strategies.

Some of the misperceptions may be attributed in part to a common theme of the survey – even the most senior professionals failed to market themselves effectively through CVs. Some 83 per cent of the HR directors said 'quantifiable results' are the most important feature for a CV, yet 70 per cent of CVs they received focused on positions rather than results. Only 30 per cent of CVs were adequately prepared.

With senior professionals not clearly communicating the key drivers for employing them, identifying talent is harder for HR directors. In the case of engineers with an MBA, where their strengths are not always recognised immediately, aspiring directors need to convey the skills that make them particularly suitable for a board position. It is up to professional engineers to make themselves attractive to HR directors through improved communication of the benefits they bring to business.

Nearly 50 per cent of the HR directors said they employ more than 40 staff with engineering backgrounds and the remainder have between one to ten engineers. Seventy-five per cent of the respondents said they would encourage their engineers to apply for an internal board position, and 55 per cent said they would encourage them to study for an MBA.

HR directors are in a unique position to nurture and develop engineers within their organisations, harnessing the available talent while improving employee retention and staff satisfaction.



To learn more about SMF, its work and the bursary scheme, visit our website at www.smf.org.uk

Details of the SMF bursary scheme can also be found on The Royal Academy of Engineering's website - www.raeng.org.uk

This HR Booklet can be downloaded from www.smf.org.uk

↙ SMF would like to extend its
thanks &

gratitude

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Alison Pilpel, Consultant, David Stevens International

The Sainsbury Management Fellows' Society
33 Ormond Crescent
Hampton
Middlesex TW12 2TJ
T: 020 8941 8584
F: 020 8941 4670
E: cathy.breeze@smf.org.uk
W: www.smf.org.uk