Introduction

Seven years after the global financial crisis the world economy is evolving with the “new normal” of lower economic growth, lower productivity and high unemployment. And while prospects are positive, it is clear that economic growth rates will remain slow for the foreseeable future. Growth prospects could still be derailed by the uncertainty fuelled by a slowdown in emerging markets, geopolitical tensions and conflicts around the world. But at the same time the developments in technology provide great promise for innovations that could drive longer term growth.

As the workplace becomes increasingly automated, we are experiencing the potential displacement of lower level and process-related roles and an increased proportion of technical experts to manage emerging technologies, analytics and automation.

With continued growth in technical-related industries and the majority of organisations reliant on the application of technical expertise for operational delivery, the rise of the technical expert means an increasing requirement for technical experts to take on leadership positions.

Based on our research and expertise, this paper aims to explore a number of key considerations:

- How is the nature and prevalence of ‘technical experts’ within the workplace changing?
- What are the key competences of expert leaders that may impact leadership capability?
- How can organisations employ practical strategies and interventions to improve leadership capability amongst technical experts?

We welcome your own views and experiences of developing experts as leaders. Either contact us directly or join the continuing debate online by following us on LinkedIn and Twitter. We look forward to hearing from you.
Many economies around the world are shifting away from traditional industries such as manufacturing and construction and increasingly towards technical industries such as technology, creative and knowledge-based expertise.

In particular, knowledge intensive services have been a major source of growth over the last two decades. Knowledge intensive services include communications, digital, creative and information services, financial services, business services, research and development as well as education.

Other emerging industries with a high concentration of technical experts across the world include renewable energy and environmental goods and services. And of course, traditional industries such as construction and manufacturing have a high proportion of technical experts which includes pharmaceuticals, engineering, chemicals, aerospace, automotive, transport equipment and ICT instruments.

**CONTINUING IMPORTANCE OF LEADERSHIP**

Good leadership is crucial for employee engagement and motivation, successful change management and ultimately, organisational performance and sustainability. In particular, strong leadership is becoming increasingly important in highly technical organisations as competition, change and globalisation drive a need to collaborate with and influence a more diverse range of people. Technical organisations need experts who can contribute to strategic discussions, actively promote change, develop other employees and raise the profile and influence of the organisation in its market.

Historically, organisations promoted individuals from within the expert population due to their technical ability, a strategy that has often come in for criticism. Technical expertise is seen to have little bearing on leadership skills, and when this progression is unsupported by development, it is hardly surprising that leadership and management skills are often poor.

**WHAT DO WE MEAN BY ‘TECHNICAL EXPERT’?**

We define ‘technical experts’ as “people whose professional and personal identities had been built around a very specific area of technical knowledge,” developing depth rather than breadth of focus.

These individuals come from a range of professions, including research scientists, construction engineers, lawyers, accountants, financial analysts, IT experts, clinicians and academics. Although their areas of expertise are diverse, our research indicates the leadership development needs of technical and professional experts have much in common and are significantly different from more generalist management populations.
How organisations develop effective leadership – both ‘distant’ strategic leadership and ‘nearby’ leadership – is hugely important for general leaders and technical expert leaders.

DEVELOPING EXPERTS AS LEADERS: BENEFITS AND MOTIVATIONS

Through our research (Gifford et al. 2011) and conversations with client organisations, there are clear benefits to having technical experts as leaders, both for the business and individuals.

• Leaders with technical expertise have increased credibility, both inside the organisation and externally.
• They are more able to hold technical experts to account, challenge and support technical decisions and manage the technical performance of their teams.
• They are able to articulate organisational strategy in a way that inspires people, particularly when the strategy is highly contingent on technical knowledge of the market and new product development.
• They provide strong role models for technical employees across their teams and organisation, especially those with leadership potential.

For technical experts themselves, there are benefits but also drawbacks to stepping up into leadership positions. Financial reward is a clear motivator, but our research has also found that broadening an individual’s sphere of influence within their field of specialism was also important.

Equally, we find that technical experts can be averse to taking on people management responsibility. Moving into leadership requires a significant shift in mindset for technical experts, from working on specialised, discrete technical areas to broader, strategic thinking and this dilutes the time and attention they can devote to their specific area of expertise. There can also be a lack of value placed on leadership, managing people and achieving through others compared to what a technical expert knows and achieves through solo efforts; this runs the risk of “stripping” them of their sense of self-worth and their professional identity, ultimately resulting in the technical expert feeling that management responsibility is in fact a clear ‘identity demotion’.

COMMON TRAITS OF TECHNICAL EXPERTS

Our research identifies several personality traits common to technical experts that may impact leadership capability.

Technical experts tend to rely on logic and analysis for making decisions, rather than deploying softer skills around listening, personal relationships, empathy and feelings; they seek to solve problems based on tangible evidence. This focus on detail and a preference for critical questioning rather than constructive feedback can have a negative impact on those they manage, creating confrontation and division amongst employees.

The notion of technical expertise places a high value on knowledge and individual achievements. However, contrary to belief, our research suggests that technical experts are not averse to collaboration, the majority actually preferring to work in small teams rather than working independently. In fact many enjoy working with a larger network of people.

There is an element of ‘chicken and egg’ behind the reasons for certain personality traits being prevalent amongst technical experts. Specific vocations attract specific personality types, but disciplines also breed their own cultures and specific personality types more naturally fit in. A perceived lack of people skills may be due to personality but also limited exposure to people of different mindsets.

So the mindsets and behaviours of technical experts are due to both personality and culture. We also know that emotional intelligence is a soft skill that can be developed, with the right support. Ultimately, and not surprisingly, leadership development initiatives need to consider people as individuals, rather than dealing with technical experts as though they were a homogenous demographic. Strategies for leadership development need to deal with technical experts as individuals with specific needs as technical leaders.
HOW DO EXCELLENT EXPERT LEADERS DEVELOP?

Based on our conversations with technical experts who successfully made the transition to senior leadership, we have identified common influences and lessons from their journeys.

Motivation helped. From the outset, effective technical leaders recognised that leadership would enable them to achieve results on a greater scale than would be possible alone or from a non-managerial position. Another common thread is how great leaders seek out and thrive on personal challenge.

Many leaders found the initial step into leadership unnerving, requiring a specific type of courage. Positive role models helped, especially leaders who were recognised experts in their field, either demonstrating effective leadership behaviours or as mentors and counsellors.

Once in a leadership role, the successful expert leaders we interviewed found satisfaction from progressing their own careers, being more influential and supporting the professional development of others. These leaders point to valuable learning around building resilience, moving on from failures and being open and authentic.

However, there is an important distinction to be made between technical experts with the qualities and motivation to become effective leaders and those who will never make the calibre of leadership required. As a result, it is important to provide clear parallel career structures, enabling talented technical experts to progress their careers along a purely technical track without requiring them to take on people management or leadership responsibilities, or to motivate and retain valuable individuals.
KEY EXPERT LEADER COMPETENCIES

At Roffey Park, we have spent many years working on leadership development with technical experts. Our work covers the full range of technical roles and sectors and, increasingly, technology and creative industries. Based on our experience and research, we have developed a model (see Figure 1) to outline the key leadership skills and behaviours that technical experts require.

Placing self-awareness at its core – for we believe that this is the root of great leadership – we have found that the model provides an excellent paradigm for the diagnosis, design and delivery of leadership development programmes for expert leaders.

Self awareness

Expert leaders often experience watershed moments which provide greater understanding of the way they function as individuals and the impact they have on others. This usually happens because they have been offered direct feedback on their personal style as part of a development programme or during a performance review. In our experience, many expert leaders see these moments as pivotal points in their leadership journeys which enable them to achieve more effective relationships at work, leading to better results.

DEFINING DIRECTION

Common purpose

For expert leaders to assume strategic leadership, it is important that they understand their corporate roles as well as their roles as experts. However, because their interests are often firmly on their own technical area, they can easily fail to embrace the wider needs of the organisation.

Thinking strategically

Organisations need leaders who are comfortable with ambiguity and can plan for the unexpected. Our experience suggests that this is not something that comes naturally to expert leaders. They have often spent their academic and professional lives developing specialised knowledge and are used to either being deferred to as experts themselves or deferring to others as experts. Experts also naturally seek certainty based on knowledge and facts and, as such, they can find ambiguity a difficult concept to deal with. By broadening their strategic interests, expert leaders can become skilled leaders. Not only can they draw on relevant experience they also have the core intellectual capabilities that are useful for strategic thinking.

Leading Change

Kotter (1996) describes that effective change management involves articulating a compelling vision and encouraging people to buy into that vision. Expert leaders can be very effective at getting employees to buy into purpose and vision because they know how technical employees think and are often able to talk to them in a language that they relate to and find inspiring. The flipside of this is that they may rely heavily on the facts and data and pay less attention to the “hearts and minds” that matter during any change initiative.
Emotional intelligence
At the core of emotional intelligence is the ability to understand the impact we have on others. Most people are able to develop emotional intelligence through learning, and there are people who have both technical (cognitive) and emotional intelligence. Our research and experience suggests that emotional intelligence is often lacking amongst expert leaders. One of the reasons behind this is that scientific, academic and professional training often places little importance on people skills, so this area of capability can be neglected.

Impact and Influence
Being truly effective at work relies on our ability to network and influence. Expert leaders have a power base of knowledge and experience. Those who know their field are respected and listened to, so they start with an advantage when it comes to influence. But influencing skills don’t come naturally to experts, who have been trained to know the right answer in fields where answers are generally right or wrong. This means they can sometimes find it difficult to leave an argument unless they have won it conclusively.

Political awareness
Leaders need to be politically astute in order to gauge the organisational climate and get results. Expert leaders can find it difficult to engage with this mode of thought as they are used to making evidence-based decisions, rather than judging how people are likely to react in certain circumstances. Our experience and research found that, in this area, expert leaders need guidance and practice in order to feel comfortable.

These competences are not insurmountable for expert leaders and our experience and research tells us that if they can be overcome, the signs are that expert leaders make good strategic thinkers who can connect with and lead the people they work alongside.
What leadership development strategies work for technical experts?

Findings from our research and experience of working with clients are that a range of approaches is necessary to develop leadership skills among technical experts. These include in-house and external leadership development programmes as well as experience-based learning, especially coaching, mentoring - and giving more responsibility and challenge through secondments and project-based work.

So how can organisations develop practical, evidence-based learning to develop technical experts as leaders?

1. High level programmes delivered by experts in the leadership field

   Technical experts respond best to learning and development programmes that are highly intellectually stimulating and not just “motherhood and apple pie”. Experts also appreciate a strong evidence base to any theory that is presented and may want any tools, such as psychometrics, to be explained. They want facilitators who are experts in their subject, just as they are experts in their own. Demonstrable expertise through published research or qualifications are often seen as important.

   "Our staff are highly academic and intellectually challenging. People were also skeptical about the role that leadership development plays in delivering cutting edge science. It was therefore critical that our provider could deliver a bespoke programme and provide facilitators who add value and conduct robust debates with participants."

   The Biotechnology and Biological Sciences Research Council (BBSRC)

2. Experiential learning, rooted in reality

   Theoretical understanding is not enough. For individuals and their organisations to really benefit, quite profound awareness-raising and personal change is often needed. Experiential learning achieves this as it enables people to experience different situations and challenges, try out different styles of leadership and receive grounded feedback on their behaviour.

   In our experience, experiential learning works well for technical experts because they are practical and pragmatic and prefer to act or debate, rather than take notes on presentations or read large amounts of material. Experiential learning needs to be balanced with the fact that technical experts have a tendency to express a preference for didactic training, because that is what they are used to in their professional world.

   "Learning is set in the participants’ real world. The main programme is followed by nine months of working in an Internal Consultancy Project Group. Participants apply learning to develop solutions to real projects and issues in the sector and implement these within their organisation. This drives change and ensures a clear return on investment."

   Roads Academy
Feedback and self-awareness

Our experience suggests that technical experts can lack insight into how other people think and how and why they might approach work differently, so helping technical experts to develop their self-awareness is crucial. One way of achieving this is to unearth and explain different personality types and inter-personal exchanges, which typically include personality testing and analytics and discussion of theoretical frameworks or models, relating them back to individuals’ experience. But what technical experts find particularly valuable is feedback on their behaviour and working styles. Being able to see themselves as others see them can be enlightening, transformational and profound.

Focus on building relationships and influencing

Increasingly, collaboration, networking and influencing other people are essential aspects of modern work, regardless of vocation, sector or organisation, yet these are areas where technical experts have underdeveloped skills. Any learning and development needs to help prepare technical experts for the challenges they will face as a leader and help them to understand what behavioural changes they need to make to be productive. Drawing on real-life examples help but people also need to be able to locate their learning in their own realities. Our work with clients often involves cross-functional action learning projects that enable leaders to collaborate with their peers and colleagues across the organisation.

There is a greater understanding and collaboration across the many different roles in the BBSRC, which contributes to the success of the whole organisation.
In addition, the programme has enabled the BBSRC to achieve a level of change that wouldn’t have been possible previously.
BBSRC

Encourage thought leadership

One way in which technical experts can naturally progress towards becoming established leaders is through thought leadership, encouraging recognition for their technical expertise as a means of developing leadership status. Giving experts the legitimacy to contribute to wider technical debates, for example through cross-functional forums, collaborations and externally through industry bodies and technical journals, helps technical leaders gain recognition for their contributions beyond the organisation.

Introduce role models

Expert role models are essential for technical experts to observe leadership styles and behaviours, and to emulate, talk to and learn from. Placing role models and mentors in the paths of aspiring leaders may be something that organisations can arrange, for example through coaching and mentoring programmes, instead of relying on these interactions to happen by chance.
Despite the construction industry bearing the brunt of the recession, a 25-year partnership with Roffey Park to develop management talent has enabled BAM Construct to evolve and remain one of the UK’s leading construction groups.

THE CHALLENGE
In business since 1874, BAM Construct UK is part of Royal BAM Group, one of Europe’s largest construction companies. With a turnover of £840m and employing 2,535 people across fifteen UK offices, the company delivers construction projects to clients in the commercial, retail, mixed use development, health, leisure, education and public sectors. In a sector hard hit by the recession, BAM Construct has focused its strategy on creating a customer-centric, creative and sustainable business. As people are the company’s main asset, equipping technical managers at all levels with the required leadership skills is critical to business performance and sustainability.

THE APPROACH
Roffey Park’s experiential, participative approach provides a different way of learning. Removing people from the typical hustle and bustle of a construction site to a setting conducive to learning gives participants the time and space to focus on personal development, share knowledge and practise new skills.

THE SOLUTION
Three management development programmes for junior, senior and middle managers, each an essential component of the company’s main talent management programme. The programme’s aim is to align management skills with technical excellence. ‘Expert speakers’ from within the business co-deliver modules to ensure strategically relevant content. 360 degree appraisal and psychometric assessment helps to build self-awareness and a structured selection process ensures the business cultivates the right talent.

THE RESULTS
The fact that BAM’s business performance has remained relatively unscathed throughout the recession is, in part, down to investing in and retaining the best management talent. Leadership development programmes have enabled the promotion of technical experts with leadership potential, enhanced employee engagement and ensured a high retention rate.

Roffey Park delivers bespoke programmes that help our managers develop and evolve as leaders and, in doing so, has helped to keep our company at the cutting edge of management development.

Chris Jones, Director of Learning and Development, BAM Construct UK
Faced with changes in funding, governance and organisational purpose, the BBSRC invested in wide-scale management development, to equip managers at all levels and across all establishments to manage people effectively and cope with change.

The BBSRC is the leading funding agency for academic research and training in the biosciences at UK universities and institutes. One of seven research councils working together as Research Councils UK (RCUK), the BBSRC is funded by the Government’s Department for Business, Innovation and Skills (BIS).

THE CHALLENGE

Due to economic uncertainty and Central Government changes, the BBSRC faced considerable change in terms of funding, governance and organisational structure. The institutions affiliated under BBSRC tended to operate autonomously and senior managers were often more comfortable with scientific concepts than managing people. But the world is changing; collaboration within and between organisations and improved management skills are increasingly crucial.

THE APPROACH

The organisation felt the time was now right to create a leadership development programme, to equip all senior and middle managers across BBSRC and affiliate institutions with the skills to manage effectively and cope with a changing landscape and working practices.

BBSRC staff are highly academic and intellectually challenging, leading to cynicism about the role that leadership development can play in delivering cutting-edge science. Finding a leadership development provider with the right level of academic understanding and credentials to add value and conduct robust debates with participants was essential.

THE SOLUTION

Roffey Park worked closely with BBSRC to design the Management Development Programme, comprising around 60 cohorts across five different levels of management; executive, senior manager, middle manager, supervisory and aspiring manager. To date, around 1,000 participants have attended the programme, which aims to support ‘excellence in science’ and develop effective leaders across all management levels.

THE RESULTS

The management programme makes a positive impact on individuals, the management culture and wider organisation. Over 90 per cent of participants report that they have changed their management and leadership behaviours significantly or noticeably as a direct result of attending the programme, particularly around communication, personal effectiveness, vision, leadership and engaging and developing others.
Faced with ongoing uncertainty in the global steel industry, Harsco Metals & Minerals needed to equip leaders across its international business with the leadership skills and capability to drive operational consistency and growth.

Harsco Metals & Minerals provides logistics and resource recovery services for the steel industry, operating at more than 160 customer locations across 30 countries. Working on-site under multi-year contracts, customers rely on Harsco to deliver critical services on a daily basis.

**THE CHALLENGE**

Faced with conflicting pressures around business growth and global economic uncertainty, Harsco needed to equip leaders across its international business to drive business performance and develop industry-leading practices.

As a technical business, leadership was seen as a challenge but also an enabler to take the business forward. It became evident that Harsco needed to equip UK site managers with consistent skills and capabilities, in terms of standards, behaviours and results. Developing a leadership programme based on UK business challenges but portable for other international markets would bring additional benefits across the whole business.

**THE APPROACH**

Business leaders specifically didn’t want a programme based on classroom learning but, instead, wanted a focus on the individual as leader and how they can contribute to others and the business; a programme that develops authentic, self-aware leaders with the confidence to be individual and drive results.

**THE SOLUTION**

Roffey Park consultants worked with a team of global Harsco leaders - senior managers, L&D specialists and technical experts – to design three distinct leadership development programmes for site managers and operations managers. Each programme is delivered in the UK and across the globe. Using subject-matter experts and senior business leaders as internal facilitators provides context, understanding of business challenges and ensures an intrinsic connection with the group.

**THE RESULTS**

The programmes form a key element of the organisation’s leadership development strategy, aiming to deliver long-term behavioural change, new concepts and technical practices and develop commercial understanding.

"The programmes create leaders with a different set of armour, a different perspective and equipped to lead in a different way. The ‘golden thread’ throughout these learning outcomes is enhanced leadership."

Brian Kilminster, Harsco Metals & Minerals
When the economic climate brought new challenges to organisations in the roads sector, the Highways Agency and its primary partners established the Roads Academy to drive leadership, collaboration and change within the sector.

The Roads Academy is a joint initiative from Highways England (formerly known as the Highways Agency, a government-owned company responsible for the strategic roads network in England and Wales) and the roads industry. Established in 2011, the Roads Academy drives leadership and collaboration amongst member organisations across the sector.

THE CHALLENGE

Following a series of strategic reviews, the Director of Major Projects at the Highways Agency was keen to encourage collaboration and innovation in the roads sector and felt that a leadership development partnership for senior managers within the Highways Agency and its tier one partners would achieve this.

THE APPROACH

Senior technical, HR and L&D representatives from primary partner organisations involved in the construction, maintenance and management of the roads network, were invited to be part of a steering group. As a result, the Roads Academy was established, a membership organisation offering a cross-sector leadership programme with the primary purpose of “developing catalysts for change”; skilled and influential leaders equipped to tackle complex challenges and drive significant change in how the industry thinks, behaves and performs.

THE SOLUTION

Roffey Park worked closely with the Roads Academy to design the Developing Catalysts For Change programme, a cross-sector leadership development programme delivered in cohorts of up to 18 people and comprising five key elements; residential workshops, learning sets, coaching sessions, master classes delivered by leading industry experts and a group consultancy project.

THE RESULTS

The programme succeeds in producing future leaders and makes a significant impact at an individual, leadership, organisational and sector level. The programme helps participants to collaborate across the roads sector, network effectively, improve the supply chain and become leaders of the future, able to deliver projects of the future. At an organisational and industry level, the Roads Academy is building a critical mass of talented individuals who have a greater understanding of the sector, work in partnership and build a shared perspective.

Julie Macavoy, Roads Academy Team Leader
Summary

In this paper we have explored the changing nature of technical experts, the common attributes and behaviour that may impact leadership capability and specific challenges that technical experts face in becoming leaders. We have also provided insights and advice on how organisations can employ practical strategies and interventions to improve leadership capability and support technical experts to make a successful transition into leadership.

It is important not to over-generalise. Like any group of people, technical experts will have as many differences as similarities and, as such, we have given a general framework for how to develop groups of experts as leaders. This framework can be finessed to reflect specific organisational nuances and the peculiarities of certain technical sectors.

Technical experts define the future of leadership in knowledge-based industries. To help them develop into effective and inspiring leaders, organisations should build a multi-faceted approach and give recognition to different forms of leadership, including role models, thought leadership within the organisation and becoming externally influential within their field of expertise.

Developing technical experts to become effective leaders is crucial for organisational performance and success, not only within technical-related industries but across all organisations and sectors as the impact of technology, automisation and globalisation takes hold.

Please contact us for more information on leadership development for technical experts:

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THE EXPERT AS LEADER RESEARCH

Looking beyond the stereotypes, this practical research report builds a fuller, evidence based understanding of experts as leaders. Whether you are a technical expert in a leadership role or an HR professional this research will provide some useful insights for developing people strategies for experts within your organisation.

To purchase visit www.roffeypark.com

REFERENCES

About Roffey Park

Roffey Park is an internationally renowned leadership institute based in the UK and Singapore. With over 65 years’ experience of leadership, organisational development, human resources and coaching, we provide executive education and research to many of the world’s leading companies and organisations.

We offer tailored leadership development programmes, management consultancy and coaching, training courses and research services. Our qualifications are accredited by the University of Sussex.

What we offer

TAILORED PROGRAMMES

Roffey Park works with organisations across the world to design innovative, tailored development solutions to meet specific organisational needs, focusing on maximising the full potential of your people and delivering lasting results. Our solutions are informed by our practitioner-based research. Our consultants are all talented people and organisational development professionals. All are committed to our distinctive approach to learning, devoting their experience, expertise, energy and enthusiasm towards helping client organisations and their people to develop – and succeed.

OPEN PROGRAMMES

Our programmes offer deep personal learning; informed through knowledge and experience, transformed by facilitators with unrivalled skills and passion. We challenge and support participants constructively, providing an eclectic mix of activities which will appeal to different learning styles. This powerful learning enables individuals to increase their self-awareness and empowers them to engage more effectively within your organisation.

QUALIFICATIONS

All our qualification programmes share a common learning and assessment strategy that puts participants in charge of their own learning. Self-Managed Learning provides the core framework and structure for the programmes. Our range of qualification programmes are validated by the University of Sussex and include the MSc in People and Organisational Development, Graduate Certificate in Business Partnering, Graduate Certificate in Organisational Development and a range of bespoke qualifications for organisations.

RESEARCH

Our research improves the world of work and organisational performance. Through our research we develop and spread understanding of good practice in people management, leadership and organisational development – what genuinely impacts and why. We conduct in-house research for our clients as well as publishing our own research reports and guides.
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