The Expert as Leader

Jonny Gifford and Liz Finney

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Foreword

During the global economic downturn, we have witnessed a faltering recovery in the UK and the US whilst other regions have bounced back more quickly, some nation states returning to rapid growth and many such as Singapore and India continuing to enjoy this. Economists debate the balance in these different global economies between manufacturing – good, 'honest' production of things you can see and hold – versus more knowledge based industries where business outputs are more often ideas, patents, financial trading and so on. But whilst some of the more knowledge based economies may now wish to return to their hay days in manufacturing, with ships laden with exports, surely this is now just a pipe dream.

A more realistic ambition for the knowledge based economies, where higher education churns out highly qualified experts in science and engineering, is to harness this intellectual capital in well-run technical businesses. This begs the question: what constitutes a well-run business? How do such businesses grow and succeed? Yes, there is the business model, the financial management of the business and of course the quality of their technical market offerings, but key to their success is the leadership of such businesses.

In this research, Roffey Park has enlisted the support of flourishing businesses and institutions seen to be at the forefront of their fields, many of which continue to grow rapidly in their local and global markets. This research report shares with you some of the secrets of scientists, engineers, financial specialists involved in leading their firms so successfully as well as the wider perspectives of OD and HR directors on the transition from expert to leader.

From the perspective of my own experience of designing and delivering leadership development for some of the smartest people in many different technical fields, I can recommend this report for its honesty and insights. The interview and survey data drawn upon here rings true and helps to explain some of my first hand coaching experiences and the recommendations made here are grounded and practical.

In fields where evidence and proof is held in such high esteem, showing rigour in our own evidence-based practice is vital if we are to be given the permission to support the leadership and ultimate business success of these technical entrepreneurs.

Jo Hennessy, Director of Global Research, Roffey Park Institute

Acknowledgements

Contents

Executive Summary

The backbone of information-based economies is comprised of organisations whose work centres on the application of technical expertise. How these organisations develop effective leadership – both strategic or 'distant' leadership and 'nearby' leadership of individual employees – is hugely important and something in which views have shifted over the last decade. In particular, there has been a growing recognition that:

- Where possible, technical experts should be led by people who can draw on relevant technical expertise themselves
- Technical experts can be developed into effective leaders, although they often need particular support to do this.

This research report contributes to the understanding of leadership development by exploring common traits of technical experts as leaders, challenges they face in developing leadership skills and how this development can be undertaken most effectively. By 'technical experts', we refer to professionals who have fairly narrow specialisms, in particular those with a scientific base, that require advanced technical knowledge.

Our focus came from conversations with development consultants at Roffey Park, who, over a number of years, had built considerable experience of designing and delivering leadership development programmes specifically for technical experts. They noted an increased demand for leadership development among this population and perceived a number of common challenges, especially relating to emotional intelligence.

Through our research, we have investigated these perceptions. We have striven to look at technical experts in a measured way, examining the stereotypes to see what truth there is in them and looking beyond them to show how they are inaccurate or oversimplifications. In doing so, we have attempted to build a fuller, more balanced understanding of experts as leaders.

The research comprised a review of academic literature, analysis of our Management Agenda data and case study research in seven organisations from a range of sectors, namely agricultural research, clinical research, construction, insurance, the NHS, science funding and semiconductor design and manufacture.

The main areas of our research findings are outlined below.

Expert leaders: the benefits and motivations

There was a common view among our case study organisations that having leaders with relevant technical expertise brings several key benefits:

- Leaders have credibility, both inside the organisation and externally
- They are more able to hold technical experts to account within the organisation
- They provide strong role models for technical employees at all levels.

However, technical expertise is more an enabler, helping managers establish themselves as leaders, than an essential attribute of leadership, and its relevance declines as leaders progress.

For technical experts themselves, there are both motivations and disincentives for stepping into leadership roles. Besides the financial rewards of career progression, a particular driver was seen to be broadening one's sphere of influence within one's field.

However, many technical experts are averse to taking on people management roles. Firstly, it dilutes the attention they can give to the specialist areas that attracted them to their careers in the first place. There can also be a lack of value placed on leadership as an activity, as it is about achieving through others and not what one knows and can do as an individual. Indeed, for many experts, moving into leadership can present a direct challenge to some of their values and threaten to strip them of much of their sense of self worth.

Common characteristics of technical experts

There are various personality traits common among technical experts that are relevant to the subject of leadership. For example, they tend to rely on logic and analysis for making decisions, rather than personal relationships or feelings, and are drawn to solving complex problems based on tangible evidence. The focus on detail can bog down how technical experts manage personal relationships, as their strength of critical thinking can lead to a deficit orientation, which often creates confrontation and division.

However, our research suggests that, contrary to some perceptions, technical experts are not averse to collaboration and in general prefer working in small teams to working independently. Nor did we find – with the exception of researchers in an academic setting – that they are generally low on organisational commitment.

There is an element of 'chicken and egg' in the reasons for certain personality types being prevalent among technical experts. As well as vocations attracting particular personality types, disciplines also breed their own cultures and one may need to be a certain type to fit in. What is more, where technical experts lack people skills, this is often in part a result of limited exposure to people with different mindsets. Thus, we argue that the mindsets and behaviour of technical experts are cultural, not just a result of innate personality traits, and that emotional intelligence in particular can be developed.

Experts and leadership competencies

More specifically, we looked at the leadership competencies of technical experts and explored their natural strengths and weaknesses as leaders.

We obtained a mixed picture on technical experts' ability to build common purpose, some leaders seeing them as typically only concerned with their individual work areas, but others seeing them buy into organisational vision very strongly. We argue that the dedication of technical experts is strongly determined by what makes intellectual sense to them. If their own areas of interest are not closely related to the overall focus of the organisation – for example, as for researchers in a university – it will be a struggle to get technical experts to buy into and help build a common organisational purpose.

As a result of being used to situations in which there is a clear right answer, technical experts can be uncomfortable dealing with uncertainty and ambiguity, taking calculated risks and planning for unexpected changes. Their reliance on the evidence base can lead to a paralysis of analysis and delayed decisions. Nor are technical experts used to making strategic contributions by commenting outside their areas of expertise, or to taking on board the perspectives of other leaders on points that do fall within their expertise. However, if they can overcome these challenges, they can make highly adept strategic thinkers.

Technical experts are often characterised by maintaining a strong focus on the 'facts' and correspondingly, lacking emotional intelligence. In leading organisational change, this means that they often do not grasp the importance of how people feel about changes being made and winning hearts and minds. It also affects how adept they are at networking and influencing people – for example, by considering how and when to put forward their views so that they land well with their interlocutors.

Clearly, using emotional intelligence is an important aspect of managing teams, but the style of expert leaders often fits well enough with technical specialists they manage. For example, managers' feedback can be extremely robust and critical, but many employees appear to take this in their stride. This may explain the clear difference we found between the opinions of senior leaders and expert managers on how appreciative the latter were in their interactions with direct reports.

When it comes to supporting others' development, we found that technical experts often do not see the value of coaching and mentoring people, flitting straight from a directive or 'teaching' style to leaving people unaided. They can also struggle to understand why reports might underperform when they have the right technical skills and knowledge, for example, because of a lack of confidence.

How do excellent expert leaders develop?

Drawing on interviews with expert leaders who had successfully made the transition into senior leadership, we identify common influences and lessons from the journeys they had taken.

While these leaders each reached a point where they recognised the benefits to be had from leadership, several found that actually making this step was unnerving and took a sort of courage they had not used before. One thing that helped considerably was positive role models, in particular leaders who were recognised experts in their fields.

As they moved into leadership, our interviewees found that, as well as progressing their own careers and being more influential, an important reward was the satisfaction that came from supporting the professional development of others.

Particular learning points included the need to be resilient and move on from failures; and to be authentic and open in how one communicates and interacts with people.

Learning and development strategies

Finally, our research looks at successful strategies and approaches to leadership development

in highly technical organisations. We found learning and development programmes to play an important role, with some caveats. They work best if they are fast paced, led by people who are recognised experts in their field and based on experiential learning. They should also be practically relevant to the participants' jobs and the demands they will face as leaders.

Developing self awareness is key to many technical experts becoming effective leaders. Thus, we argue that receiving feedback on one's leadership style is extremely valuable, whether as part of a learning and development programme or within the day-to-day work context. Another practice that supports technical experts step into leadership is encouraging and recognising thought leadership.

There is a balance to be struck between developing leadership skills across the board and selecting technical experts who are most suited and motivated to become leaders. Encouragement and persuasion is needed, but some technical experts will never make the calibre of leaders needed to be effective in certain leadership roles. Parallel career structures, which enable technical experts to progress their careers without taking on people management, can thus be an important element in harnessing the potential of some valuable individuals and keeping them motivated and committed to the organisation.

Why read this report?

This report provides practical, evidence-based learning for anyone with an interest in developing technical leaders. It will be of use to technical experts looking to develop as leaders; learning and development professionals who are supporting these experts, and HR leaders responsible for people strategies within highly technical organisations.

In particular, insights and lessons are drawn from a range of successful technical organisations, including ARM, BAM Construct, Cmed, RBS Insurance and Syngenta.

1. Introduction

This research was born of conversations with consultants at Roffey Park, who, over a number of years, had built considerable experience of designing and delivering leadership development programmes specifically for 'experts': people whose professional and personal identities had been built around a very specific area of technical knowledge. As they became more senior in their organisations, these experts were now required to take on management and leadership roles.

Why experts as leaders?

Drawing on this experience of delivering leadership development programmes for technical experts and conversations with our clients, we identified a number of important areas for investigation.

A central question relates to the 'softer' people skills, such as listening and showing empathy.

Technical experts are often seen to focus on task over, and at the expense of, relationships

Technical experts were often seen to focus on task over, and at the expense of, relationships. For example, they were seen to look for the holes in an argument, or the weaknesses in a piece of work, which may be desirable for ensuring rigour, but may lead to a deficit orientation (i.e. a tendency to be critical rather than appreciative) which can be detrimental to interpersonal relationships.

Another perceived tendency of technical experts we wanted to explore was that they feel uncomfortable with ambiguity and uncertainty, something very necessary for effective leadership in a modern world (Strohmeier, 1998). If one's training and comfort zone is within the relatively black-and-white world of science, finance or technology, where there is generally a right answer and a wrong answer, the whole messy, chaotic world of human relationships and change is likely to produce feelings of anxiety or frustration.

We were also aware that technical experts are often wary of taking on leadership roles. As a result, we wanted to understand more about how these experts view leadership; what deters them from pursuing leadership roles and what rewards they get when they do step into positions of leadership.

From a learning and development perspective, we wanted to understand what kind of development was needed and what activities worked best for technical experts. What are the key challenges to them becoming effective leaders? What, typically, do they need to learn or change? And what challenges might developers expect to encounter in facilitating this?

Finally, at a less individual level, we wanted to explore how organisational structures and cultures can best support the development of good leadership among expert populations.

Who are the 'technical experts'?

So what exactly do we mean by 'technical experts'? Broadly speaking, we are talking about the people who have a talent for, and deep interest in, the detail and technical aspects of a given area of expertise. They are those who have specialised in a particular academic discipline, developing

depth rather than breadth of focus. Whether academics, civil servants or corporate professionals, they have moved into – and are most likely predisposed to – some of the more esoteric fields. These people come from a range of professions, including research scientists, construction engineers, lawyers, financial analysts, IT experts, clinicians and academics. Yet, while their areas of expertise are diverse, their development needs as managers and leaders have much in common, and are significantly different from more generalist management populations, in ways in which we will discuss in this report.

Obviously, expertise exists at different levels and in all manner of professions, from widget making to HR, plumbing to policing; so at first sight, defining a population as 'experts' may seem unhelpful. In this research, we distinguish between general professional expertise and *technical* expertise, which we see as having a broadly scientific foundation and being based on a higher level of specialised knowledge.

From this perspective, there is a continuum between experts and generalists, rather than a clear-cut division. Indeed, while some of the more extreme examples we will look at come from academic scientists, there is anecdotal evidence that many of the less scientific experts (for example, lawyers) have much in common with them and share many of their challenges in developing leadership. Thus, it is more for practical than conceptual purposes that we have focused on experts with a scientific background. We have focused on the far end of the technical expertise continuum to understand the leadership issues more clearly, but the findings will be relevant to a wider audience of experts.

What do we mean by leadership?

At this stage, and in the face of the proliferation of writing on the subject, it's worth defining what we mean by the term 'leadership' and especially how we differentiate it from 'management.'

Drawing on the work of Kotter (1995) and Bennis (1995), Brian Strohmeier (1998) writes about the difference between leading and managing in the context of technical organisations. He proposes that the role of management is to deal with complexity by planning company targets and goals, budgeting, organising, staffing, controlling and problem solving. In contrast, leaders deal with organisational change by building shared vision, setting direction and motivating, empowering and inspiring people to perform at a higher level. In the context of this report, it is leadership, rather than management that most concerns us.

Leaders deal with organisational change by building shared vision, setting direction and motivating, empowering and inspiring people to perform

More specifically, we look at three types of leadership. The first two were usefully defined by Shamir (1995) and further developed by Alimo-Metcalfe and Alban-Metcalfe (2001). They are:

- **'Distant' leadership.** Here the leader holds responsibility for the organisation's vision and mission, strategy, environmental awareness and culture in order to achieve organisational aims.
- **'Close' or 'nearby' leadership.** This is closer to the notion of line management. The nearby leader has a positive effect on the performance, productivity, job satisfaction and self-esteem of the people they work alongside. These roles typically involve the direct supervision of employees.

We also identify a third category, which we refer to as 'thought leadership'. Here the leader has no line management responsibility, nor responsibility for the strategic direction of the organisation, but instead leads the technical aspects of a project and guides or co-ordinates the contributions of other experts.

How we did the research

In order to investigate all these aspects of expert leadership, we designed a five stage research study. The core of this was case study research in seven highly technical organisations. The organisations came from a range of sectors, including agricultural research, clinical research, construction, insurance, the NHS, science funding and semiconductor design and manufacture (see Appendix 1).

Below we describe the approach we took to the research.

Literature review

Firstly, we conducted a review of academic literature on the subject of technical leadership to map the field and inform our thinking and research design.

Internal conversations

In parallel with our literature review, we undertook detailed conversations with those members of Roffey Park's consultant community most involved in the design and delivery of bespoke leadership programmes for technical, professional and academic organisations. These conversations were designed to explore the field in more depth, to identify suitable case study organisations and to begin to uncover the main themes of our research.

Strategic interviews

We recruited seven case study organisations, and conducted a semi-structured interview with a senior leader in each of them. The purpose of these interviews was to explore the strategic challenges these organisations currently face, to understand the leadership behaviours necessary to meet these challenges and to gain a picture of how each was supporting their technical populations in acquiring and developing appropriate leadership competencies.

Survey of expert leaders

We wanted not only to talk *about* these expert leaders; we wanted to hear from them directly. In order to test some of our hypotheses we surveyed over 400 technical and professional experts from across our seven case study organisations. This was a self-completion web based survey focusing on respondents' management and general working styles, emotional intelligence and people skills, views of leadership, and experiences of leadership development. The survey participants were technical experts with leadership and/or managerial responsibilities. Characteristics of the sample can be seen in Appendix 2.

As well as running a bespoke survey for this project, we have also drawn upon the Management Agenda, Roffey Park's annual survey of managers (Boury et al, 2011). Specifically, we have made comparisons between the line management practices of 'skilled or technical expert' respondents and 'professionals'.

Appreciative interviews

Finally, we wanted to understand what common factors were present in the career and life stories of excellent leaders who had started their careers as technical or professional experts. We asked our case study organisations to nominate experts with a reputation – either internally, externally or both – as outstanding leaders. We conducted semi-structured interviews with five individuals, drawing on appreciative inquiry and narrative analysis. In these conversations, we asked these leaders to tell us the stories of their education and careers, focussing on the key milestones, influences and learning points that they feel had the most impact on their success.

Data analysis

We conducted a thematic analysis of all interviews and open survey questions, and statistical analysis of survey data. Our findings are presented in this report; we hope you find it as engaging and enlightening as we have found our research process.

Outline of this report

This research report aims to provide practical learning for the various parties with an interest in developing technical leaders. Primarily, we see these as:

- Technical experts who are looking for guidance in their leadership journeys
- Learning and development professionals who are supporting them
- HR leaders who are responsible for people strategies within their organisations.

Thus, the research is intended to be of use in the identification of development needs, the effective design of training interventions, and in the creation of organisational cultures which nurture and support effective technical leaders.

Following this introduction, Chapters 2 and 3 consider the need for, and benefits of, developing technical experts as leaders and what the motivations are from their own perspective. In Chapter 4, we then look at general characteristics of technical experts and, in Chapter 5, we examine more specifically how these are manifest in relation to leadership competencies. Chapter 6 draws lessons from the journeys of five technical experts who have successfully made the transition to senior leadership. Finally, Chapter 7 builds on this by examining what makes effective leadership development strategies for organisations with technical experts.

Appendix 1 presents overviews of the seven organisations that participated in this research.

2. Do experts need to be led by experts?

The need for effective leadership in technical organisations is in sharper focus now than ever before. Many organisations operate a global, collaborative business model, where it is rarely possible to achieve results in isolation; success depends on influence, cooperation and relationships as much as it does on technical knowledge. Clearly, the organisations that can leverage both are most likely to succeed.

Over the years, there has been significant debate over how technical organisations can best be led; or more specifically, *who* they should be led by. In this chapter, we consider the necessity and benefits of developing technical experts into leaders, as opposed to recruiting more general professionals to manage and lead technical experts.

Leading technical experts: two broad options

The challenge of developing leadership in technical organisations has long been recognised. Historically, the most common approach has been to promote from within the expert population. This strategy has often been criticised; people are promoted into leadership positions because of their technical ability, not their ability to manage people. Technical expertise is seen to have little bearing on leadership skills, and when these career moves are unsupported by training it isn't surprising that leadership and management are often poor. As one interviewee put it:

> *"The classic situation is someone who's technically good at their job becomes the manager. Those who are the most technically good at their job are often not the best managers, I've seen that so many times." David Connelly, Cmed*

An alternative approach is to bring in what we might term 'professional managers': non-specialists with generic management skills who make more gifted leaders. This was a noteworthy practice in the NHS in the 1980s and 1990s, but has now been widely discredited as a strategy, particularly in the light of Lord Darzi's report (Department of Health, 2008), which highlighted the importance of clinical leadership. Indeed, the popularity of recruiting professional managers has generally waned over recent years, in favour of making more concerted attempts to support the development of technical experts into leaders.

Yet there remains a common belief that technical experts are not generally suited to leadership. So, it is worth asking the question: *to what extent do experts need to be led by experts?*

Several interviewees thought that it was crucial for leaders in technical organisations to have relevant technical expertise

Part of any practical answer must be to turn this question on its head and focus on the supply of, as well as the demand for, leadership talent. If technical experts are denied opportunities to progress into leadership roles, on the grounds that they often have less natural aptitude than other professionals, they may become disengaged and disillusioned, leading to a reduction in performance and loyalty, and organisations could be in danger of losing these talented experts. Put simply, technical experts should be considered for leadership because they are valuable employees with their own expectations of career progression.

In fact, our interviews highlighted several major advantages of leaders in technical organisations having relevant technical expertise. Several interviewees were of the opinion that this was crucial for all their leaders, including those of non-core functions like HR.

> "The worst thing you could be called was a 'Mr. Manager' … It was simply saying that someone who was good at management and leadership, but swanned around being an articulate bureaucrat wouldn't cut it." Bill Parsons, ARM

Below we discuss the main benefits cited for expert leaders and the relevance of expertise for leadership roles.

Being a credible leader

The most common benefit cited of leaders having a technical background was credibility. Most of our interviewees were clear that, in a knowledge intensive world, it is crucial that leaders are seen to have a solid grounding in the technical aspects of the work. If leaders share common intellectual ground with their followers, they are better, as one interviewee put it, at "understanding what people think" which enables them to "speak to all aspects of the business" in appropriate language. The importance of this should not be underestimated, as leaders will never be effective if they cannot engender trust in people (Borst, 2009; Clapp-Smith et al, 2009; Gifford et al, 2010).

Leadership credibility also has more practical benefits, in particular with respect to holding experts to account in technical rigour and business decisions. Several interviewees explained that, while experts should be respected and empowered to take decisions where possible, there was a point at which their leaders were expected to be able to step in to challenge them. To do this effectively, leaders need to be able to dive into the detail and hold their own in technical discussions. As one respondent put it, leaders sometimes need to use their technical "antennae" and play a "bluff card". Another interviewee explained it further:

> "The issue … [with non-clinician managers in the NHS] was credibility with people you're leading and … not having the wool pulled over your eyes … I got to a senior level within a clinical role, people know that. So … if they say they need 20 more [consultants], I've got some basis on which to challenge the reasoning behind that. I've got the credibility and enough authority and knowledge to say, 'Well, hold on, take me through what you mean,' to understand it a little bit. You know, not to assume I can actually make the decisions or do the things that the technical experts are doing, but I can have a conversation with them which hopefully they'll treat me with a bit more respect … because I know some of the language and concepts that they're dealing with every day." Director of Operations, Countywide NHS Foundation Trust

Equally, technical knowledge was thought to be important so that leaders can support people. Again, because the experts are the most knowledgeable, this is more an ability to be kept in reserve than to be used regularly, but it is valued nonetheless.

> "If you don't understand the technical aspects, it means that sometimes you reach a point where you can't really help people with the exact answer they are looking for. You don't necessarily understand the problem the way it is and you can't really offer

any solution. Sometimes that's good, because it forces people to take more ownership and accountability for what they're doing, but sometimes they need a bit more practical guidance." Stephanie Langouet, Cmed

Role models for employees

Another advantage of generating leaders from technical experts is that they can be extremely good at articulating organisational strategy in a way that inspires technical staff. Talking about one previous exemplary leader in Syngenta, one interviewee recalled,

Expert leaders can be extremely good at articulating organisational strategy in a way that inspired technical staff

"When he was on good form and able to spend time with the people on the ground, they just loved him to bits because he was able to really think big and understand the strategy … [but also] communicate it in a way that they could relate to. He would set them what he used to call 'mini impossibles'; challenges for them, technical challenges that related to the strategy … [Leaders like that] are absolute gold dust … it's very hard sometimes for non-technical people to talk to technical people in a way that motivates them, because their brains just work slightly differently." Alison Craig, Syngenta[1]

Further, another benefit of such leaders is that they provide role models for other technical experts to become leaders, making the progression seem more natural. This will help organisations with succession planning.

Waning relevance of technical knowledge

Notwithstanding the benefit that expert leaders can make great role models, a technical grounding is mainly important as a facilitator that enables an expert to build credibility as a leader. What it should not be taken for is a core component of skilled leadership. Leaders have to 'pull', relying on the knowledge of their people and empowering them to make decisions and act to the best of their ability, more than 'push', relying on their own knowledge and micro managing.

In line with this, several interviewees felt that their technical knowledge became less relevant as they developed as senior leaders.

"I think you reach a level … where it [a technical understanding] is almost irrelevant. You come to a point where you have to have a vision; you have to know where you're going and you have to make it happen." Stephanie Langouet, Cmed

Summary

There are clearly both advantages and disadvantages of having leaders with technical expertise. For example, while non-specialists may lead too much by process, experts may lead without due process, effectively flying by the seat of their pants. In general, our interviewees saw that the strengths of having expert leaders outweigh the weaknesses. We are not going to go into a

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1   At the time of interviewing, Alison Craig was at Syngenta. She has now left the organisation.

detailed debate on the relative merits of leaders with technical or non-technical backgrounds. The key point we would make here is that technical leaders need to be part of the picture and cannot be ignored.[2]

Regarding the relevance of expert knowledge to leadership roles, it is not cut and dried. It is beneficial to have experts in leadership positions and in some technical organisations it may even be necessary. However, we would stress that, in such cases, technical expertise was not seen as a necessary attribute for good leadership, but rather an enabler that allowed leaders to function in certain circumstances.

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2   Research by Wadhwa et al (2008) confirms that 'technical expert' leaders are a reality. Their survey of U.S. chief executive officers of engineering and technology companies showed that 'technical expert' leaders form the single largest group, 47 percent of their sample holding terminal degrees in STEM (science, technology, engineering and mathematics) related fields.

3. Why be a leader?

We have looked at the organisational need for leaders with technical expertise, but what about from the perspective of the technical expert? Apart from promotion, what do they stand to gain from taking on the mantle of leadership? And indeed, what do they stand to lose? In this chapter we discuss what motivates experts to become leaders, what might hold them back and how can they be encouraged.

What motivates experts to be leaders?

Our survey pointed to a real mixture of preferences among technical experts to become leaders (see Figure 3.1). On the one hand, well over a third of respondents (38%) had a clear aversion to nearby leadership in that they would avoid managing other people if they could. On the other hand, eight in ten (82%) said that being able to influence other people was a necessary part of their job. This gives some confirmation to the view that many experts see management as a necessary evil: something they may need to do to progress but not something that engages them vocationally.

> *"I meet a lot who will say, 'I'd never want to do your job for all the tea in China, you know';
> and they're quite certain about that." Director of Operations, Countywide Foundation Trust*

> *"One senior IT manager said to me, 'Give me a technical problem anytime, rather than a
> people issue.'" David Connelly, Cmed*

Figure 3.1

Motivation to lead

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
If I could progress in my career without having to manage other people, I would	11.8%	19.4%	30.9%	24.6%	13.3%
To do my job well I have to influence other people	4.9%	12.1%		49.4%	32.9%
The main benefit of career progression is to extend my sphere of influence	5.8%	25.5%	31.3%	30.4%	7.0%
I see supporting other people's development as a key benefit of leadership		9.9%		49.7%	38.4%

N= 344 to 346

Technical experts can be persuaded to become leaders by tapping into their desire to make a difference

Different things motivate people to become leaders, including financial rewards, status and more varied work. These will always be important factors, but what interests us here are the more profound drivers that might be used to encourage experts to step forward for leadership, or indeed, to help identify those who are likely to make effective leaders. We then move on to consider some of the impediments that make technical experts reluctant to become leaders.

Broadening one's sphere of influence

For several interviewees, a key motivation for taking on leadership had been that they wanted to have more influence in their field. They realised that for this to happen, they needed to be involved in the meetings where financial priorities were set and strategic decisions made.

In a similar way, interviewees believed that other technical experts could be persuaded to become leaders by tapping into their desire to make a difference, for example:

> "… the idea that the service they've always hoped for could be realised … if they actually use their energy in that way, and develop those skills" (Director of Operations, Countywide Foundation Trust).

Our survey results give some confirmation of this, with over a third of experts (37%) saying that extending their sphere of influence was the single greatest benefit of career progression (see Figure 3.1).

> "For someone who at heart is a scientist, persuading them that they're going to enjoy managing budgets and performance management and stuff is probably a bit of a long shot … [I would focus on] the difference they can make by taking on a larger and broader remit within the organisation … Your impact on the organisation, as a compensation for your loss of … the excitement you get from your very detailed technical job." Alison Craig, Syngenta

Supporting others' development and achievements

Among the leaders we interviewed, there was also a great deal of gratification in seeing the people they led develop as individuals and achieve outstanding results. They talked about the real sense of pride they got from seeing a team member present confidently for the first time, seeing teams working together well to develop innovative and effective solutions, or receiving positive feedback from clients on their reports' work. The fact that they had helped facilitate these things, rather than being involved in them directly, only seemed to add to this sense of gratification.

> "What I get a kick out of, is that when I see good work done in Cmed and I had nothing to do with it … because I've helped to create a company and a living organisation of people who have taken on the mantle. That's what I like." David Connelly, Cmed

Clearly, this way of thinking is a long way from the individualistic frame of mind associated with technical experts. Our survey confirms that, underneath it all, the great majority of technical experts (88%) see the value of developing others through leadership (see Figure 3.1).

What stops experts wanting to be leaders?

Despite the factors that can make leadership attractive to technical experts, we found various aspects that often put them off or make it difficult for them to envisage becoming leaders.

Focus on specialisms

Firstly, moving into leadership requires a significant shift in mindset for technical experts, from working on specialised, discrete areas to broader, strategic thinking. Many whose attention and energy are so firmly focused can struggle to step back from this and engage with the 'bigger picture'.

> *"If you're very much into the weeds and the detail, it can sometimes be hard to let that go" Alison Craig, Syngenta*

It may also be that an expert is simply unwilling to develop a more varied range of interests. As one interviewee put it, moving into a leadership position changes the permutation of a job and can make one feel, "this is not what I signed up for". This can be true for any profession: it may, for example, be experienced by police officers or teachers who are taken away from frontline work or the classroom by increasing amounts of paperwork. What makes it so salient for technical experts is the strong, deeply rooted identification that they often have with their work, to which we now turn.

Identification with specialisms

For technical experts, reticence to become a leader is not simply a question of what they enjoy doing; it can go far deeper, to what they consider to be of value. It is inevitable that technical experts strongly identify with their disciplines, as their whole profession is based around acquiring and applying specialised knowledge, which takes years of study and practice. But this can mean that moving into a leadership position threatens to strip them of much of their sense of self worth.

> *"Your identity is engineering. That's your passion, your love, and all the rest of it … So much of their time is being invested in being a great engineer … [that it's difficult to get] people to take their leadership development as seriously." Bill Parsons, ARM*

> *"I think one of the big shifts in identity is … [taking the] responsibility to comment on and to contribute outside of my area of expertise as well as delivering my core contribution … How do you now measure your contribution? … Before, it would be measured in: Do I know as much as everyone else? Am I able to give as much technical contribution? And now it's something different … As they progress further, their success is going to be measured on what their people do, rather than what they do as an individual." Alison Craig, Syngenta*

Technical experts often place a relatively low value on leadership and management

Lack of value for leadership

To replace someone's sense of worth as an expert with one based on their position as a leader is not straightforward. Several interviewees suggested that a flipside to the veneration of expertise is that there is often a relatively low value placed on leadership and management. Technical experts can be highly cynical about managers and may even mock colleagues who move into management

for "turning into one of them". This sort of prejudice makes it difficult for many experts to aspire to lead other people, especially if they are to have different areas of expertise from themselves.

Summary

Although many technical experts will naturally aspire to leadership, many others will find the decision to move into leadership much more difficult. They may fear losing the closeness they enjoy to their specialism – which, after all, is what first drew them to their line of work – and they may not see the value of leadership. But there are benefits to be had in addition to the obvious one of career progression. Existing leaders would do well to emphasise these if they want to encourage more technical experts to step forward and realise their potential as leaders.

4. Common characteristics of technical experts

Technical experts are the people whom high end technical organisations and the world of science cannot do without. They possess high levels of intelligence and focus, and an unusual ability to process, analyse and make sense of dense specialised information.

But what of their personalities? What are they like to work with? In this chapter, we look at typical personality traits that are relevant to understanding technical experts as leaders. We do not want to over generalise: although there are general tendencies, there is also great variation within these. Thus, the aim is not to create a blueprint of how to work with technical experts, as ultimately, leadership development needs to be done with people as individuals. Rather, we aim to draw together common challenges and successful approaches from existing evidence and our own research to help develop understanding of how leadership development generally works best among technical experts.

Personality types

Technical experts tend to rely on logic and analysis for making decisions, rater than personal relationships or feelings

A good place to start is to consider personality traits or types that are associated with strongly technical professionals. For example, research by Culp and Smith (2009) on Myers-Briggs Type Indicator (MBTI)[3] results shows that among engineering consultants, there is a prevalence of Introversion (as opposed to Extraversion), Intuition (over Sensing), Thinking (over Feeling), and Judging (over Perceiving). Putting all these preferences together results in an INTJ type, which describes a person who is normally drawn to work that requires depth of concentration and analysis; likes working alone on complex tasks; has a high level of trust in logically made judgements; is task-focused; and likes to apply abstract models, theories and insights to practical settings (CAPT, 2011).

The single most common preference of technical experts is Thinking (T). This describes people, often found in professions where detail and accuracy are paramount, who tend to rely on logic and analysis for making decisions, rather than personal relationships or feelings (Hammer, 2000). Similarly, John Holland's (1997) research into the links between personality and vocational choice points to the most common personality type in technical experts being Investigative (I), which can be described thus:[4]

> *"The I type usually has math and science abilities, and likes to work alone and to solve problems. They might be described as analytical, complex, critical, curious, independent, intellectual, introverted, pessimistic, precise, and rational." Reardon et al, 2001*

So how might technical experts compare to other people? Focusing specifically on scientists, research by Cohen and Cohen (2005) shows that compared to non-scientists, they are:

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3   There are a wide range of publications on MBTI. Good introductory texts include Briggs Myers (2000), Hammer (2000) and Rogers (2007).

4   To a lesser extent, our population would also be characterised by the Realistic (R) type, which "usually has mechanical and athletic abilities, and likes to work outdoors and with tools and machines". Holland's other types are Artistic (A), Social (S), Enterprising (E) and Conventional (C).

- More conscientious and orderly
- More driven or achievement oriented
- More emotionally stable or impulse controlled
- More independent and less sociable.

It is the last of these, sociability, which is commonly seen to pose the greatest challenge for technical experts in developing as leaders. In the case of scientists, Cohen and Cohen argue that they often show a lack of awareness of team, organisational and interpersonal dynamics. As a result, poor communication is relatively likely and people problems are often ignored and escalate because there is not the inclination to recognise or deal with them. Below we focus in more detail on such areas.

But before we discuss these general characteristics in more detail, we would like to make the following notes of caution.

The limits of generalisation

Firstly, the prevalence of certain personality types in no way means that all technical experts will exhibit these types. For example, in MBTI terms, many technicians will not fall into the 'IN' quadrant of Thoughtful Innovators, but the more pragmatic Thoughtful Realist or 'IS' quadrant, who are less theoretical and more focused on practical details.

Many of our interviewees acknowledged this variance, giving clear caveats to their generalisations on the people skills of technical experts. For example, one interviewee argued that, although technical experts often struggle to deal with the more irrational, emotional aspects of people management,

> "It's too easy to go down the route of: technical equals geeky, can't deal with people … [It] is an extreme prejudice, and whilst it might have some truth in some cases it's not universal. There are individuals who can do both." Alison Craig, Syngenta

Personality and career choice: cause and effect?

Holland argues that vocational choice is largely determined by one's personality, and there is no doubt that there is a lot of truth in this. At the more extreme end of technical experts, it is well known that many of the world's top mathematicians and engineers are on the autistic spectrum. But there is also evidence that vocations can in effect 'choose' certain personalities, in that the established modes of thought in a field or organisation perpetuate and heighten the prevalence of certain personality types.

To understand this, it is important to realise that psychological instruments based on type (like MBTI) gauge an individual's *preferences*, rather than their *ability* to think in certain ways. Thus, although Culp and Smith (2009) found a predominance of I, N, T, and J preferences among engineering consultants, they found that a number of individuals with Extraversion (E) and Feeling (F) preferences have a natural ability for engineering, but almost all of them (96%) transfer to other fields during the first two years of college.

Culp and Smith argue that part of the reason for this is the nature of the curriculum and that if more relational, collaborative ways of working were introduced, it would ultimately help create a more balanced pool of talent in the field of engineering. In short, as well as certain personality types being attracted to certain vocations, it is also a question of a discipline breeding its own culture and one needing to be a certain type to fit in.

The role of experience and confidence

Any lack of people skills is not purely a result of deep-seated personality traits, but also of experience

Further, our interviews suggest that any lack of people skills is not purely a result of deep-seated personality traits, but of experience. People are clearly drawn to technical fields because of their propensity for scientific thought and detail, but as they specialise, narrowing their focus, they become steeped in a particular mode of thought. This can be reinforced because historically, technical experts have often not needed to interact a great deal with people outside their field (in the words of one interviewee, "they don't get out much"); and, as mentioned in Chapter 1, they can often progress quite far without having to take on line management and develop the requisite people skills.

Thus, some of our interviewees were of the view that a lack of people skills only really becomes an impediment when experts are working with non-specialists or people from a very different technical background.[5]

> "[They] tend to be highly analytical and used to working with highly analytical people … They find it very difficult to move a long way outside their comfort zones." Andrew Goldby, RBS Insurance

Unfortunately for these people, moving out of their comfort zones is becoming nigh on compulsory. It is increasingly a fact of life that collaboration, networking and influencing other people are essential aspects of modern work, regardless of the sector in which one works. Still, there is encouragement to be had in that it may not be dealing with people *per se* that presents a challenge for technical experts, so much as interacting with certain environments, personalities and ways of thinking.

Drawing these points together, we can see that the personality types to be found among technical experts are not set in stone. Given the right experience, the people skills need for leadership can be learnt. In short, there may be deep seated barriers for many technical experts to becoming effective leaders, but both for them and their organisations, all is not lost.

Just the facts, please

A key characteristic attributed to technical experts is that they generally think logically and are used to situations in which there is a right answer. The resultant tendency to focus on facts can mean that they struggle more than most to deal with uncertainty and ambiguity. In particular, they are often seen to lack natural awareness or perceptiveness of variations in thinking styles and personalities. As one interviewee put it, they are "less likely to think about how other people work".

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5   This can be used to support the argument for developing parallel career paths for employees who are technically skilled but not cut out for leading people (see Chapter 7).

"They're used to arguing and debating and agreeing, based on data. And when they have to lead people, it's no longer just data and facts, it's someone's emotion, and they need to use judgement and intuition, and that can be quite uncomfortable I think, for some of them." Alison Craig, Syngenta

This also affects the way that decisions are made. Technical experts work on being rational rather than doing what is appropriate; indeed, in the extreme, they may not see how the latter may differ from the former, taking an attitude that if it makes logical sense, do it!

"[They tend to use their] mind rather than heart, so a lot of them will find it very difficult to come to the conclusion unless they've got enough data and enough hard analytics. And once they have those that will be the conclusion and they will tend to shut down other people who might have another idea because they've got the answer backed up by the numbers." Andrew Goldby, RBS Insurance

Critical thinking and deficit orientation

Scepticism and the skill of critical thinking is the backbone of research and applied science, so it should be no surprise that, as followers, technical experts do not take things on trust and want explanations. To a large extent this is often reflected in the organisational culture.

"People will critique ideas in a very challenging way. It sets a very high bar. The CEO has a thing about rigour. It doesn't matter what kind of decision it is, people like to see a very good analysis as to why whatever's being proposed is a good thing, whether that's financial, strategic, or whatever. It's a very apolitical environment." Bill Parsons, ARM

However, while it contributes to the rigour of decision making, on a practical level it does slow the process down.

"It just takes twice as long to get anything done … They have to argue about everything. Well, of course they do, because that's what they do, they test the hypotheses … If you're trying to implement anything … [you] are going to be tested, so you're going to have to be strong with your arguments, you're going to have to be clear about your facts and you have to be really concise and not be wishy-washy." Head of Learning, Bioscience Research

Further, as Cohen and Cohen (2005) point out, in a corporate setting, critical questioning and scepticism can create division and confrontation. This is confirmed by our analysis of Myers-Briggs Type Indicator (MBTI) tests with scientists (Griffin, 2010). In particular, we found that scientists can often come across as being deficit oriented, for example, giving personal criticism rather than constructive feedback (see Chapter 5).

Identifying with one's specialism

A key characteristic of experts is that their identity is strongly defined by their specialist knowledge and skills. For example, our analysis of MBTI results (ibid.) found that our scientist population placed a high value on their autonomy and were more interested in their specialist area than in the organisation. This is typical of the MBTI 'Introverted-Intuition' or 'IN' function, which describes inward focused energy and less focus on practical action that needs to be undertaken (e.g. as part of the day-to-day management of an organisation).

Where this is the case, it can be hard to get technical experts to think beyond their specialism:

> *"In order to do what they do, they really, really have to believe in it, because that's what motivates them … It's very personal for them … [Cutting a project may be the rational decision] but … it starts to cut at their own identity because they identify so much with their work." Alison Craig, Syngenta*

Equally, there can be a challenge with the 'Thoughtful Realist' or 'IS' quadrant more common among less senior technical experts:

> *"I often catch myself talking to my direct reports and reminding them that we need to get our managers to understand that their role is not just about being heads down, reviewing data or coding programs; but their responsibility is also to manage the whole area and step away from the technical constraints." Stephanie Langouet, Cmed*

Value placed on individual knowledge and thinking

The whole premise of technical expertise places a high value on knowledge and individual achievements. This breeds a culture in which the most knowledgeable person on a given subject is deferred to. It can be difficult to have genuine consultation as meetings are often dominated by whoever is seen to be the most knowledgeable.

> *"Either as leaders or [followers], they'd rather tell you the answer or expect you to work it out yourself. If you can't, you're probably not able to do the job anyway" Bill Parsons, ARM*

It can be difficult to have genuine consultation as meetings are often dominated by whoever is seen to be most knowledgeable

However, this does not mean that technical experts prefer to work on their own. In fact, our survey suggests that in general, they are fairly collaborative (see Figure 4.1). By far the strongest preference among our respondents was to work with one or two others (61% enjoying this 'a lot'). Working in a team of three or more people was also a popular way of working (49% enjoying 'a lot'). However, we found that technical experts do prefer to work on their own than in a larger network. This may in part be due to the lack of confidence or social skills they have with people from very different disciplines.

Figure 4.1

In general how much do you enjoy the following?

Working on my own: Not at all 2.6%, Not that much 21.4%, Quite a lot 37.7%, A lot 38.3%

Working with one or two other people: Not at all 2.3%, Quite a lot 36.4%, A lot 61.3%

Working in a team of three or more people: Not that much 10.0%, Quite a lot 40.9%, A lot 48.8%

Working with a larger network of people: Not at all 3.5%, Not that much 28.9%, Quite a lot 40.1%, A lot 27.4%

Legend: Not at all, Not that much, Quite a lot, A lot

N=339 to 350

Organisational commitment

Individualistic thinking can result in low organisational commitment. This seems to be most evident among academics, in particular eminent scientists who have been observed to exhibit more neurotic behaviour.[6] For example, an interviewee from Bioscience Research explained that some senior scientists refuse to carry out administrative tasks, displaying a self-important attitude that because they uphold the organisation's reputation, there is nothing it can do about the matter.

However, outside of academia, our research does not support the notion that technical experts are individualistic to the detriment of organisational commitment. Other interviewees described workforces that were highly engaged with and loyal to their organisations. In line with this, our survey found that overall, technical experts place equal importance on the future of their organisation, the credibility of their discipline and their own professional standing (see Figure 4.2).

What lies behind this stark contrast? The best explanation focuses on the alignment of purpose between the experts and their organisations. For researchers based in academic institutions their common purpose may lie within a small group of scientists, or with an epistemic community that could be a global network across many organisations; whereas, when it comes to the organisations that employ them, they may only see a limited overlapping of interests.

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6   Cohen and Cohen (2005) found that eminent and creative scientists tend to be more: dominant, arrogant, self-confident, or hostile; autonomous, independent, or introverted; driven, ambitious, or achievement oriented; and open and flexible in thought and behaviour.

Figure 4.2

**Values and alignment with the organisation
(mean scores)**

I care about the future of my organisation

I care about the credibility of the discipline I
work in

I care about my personal professional standing

2.00   2.50   3.00   3.50   4.00   4.50   5.00

I = strongly disagree, 5 = strongly agree
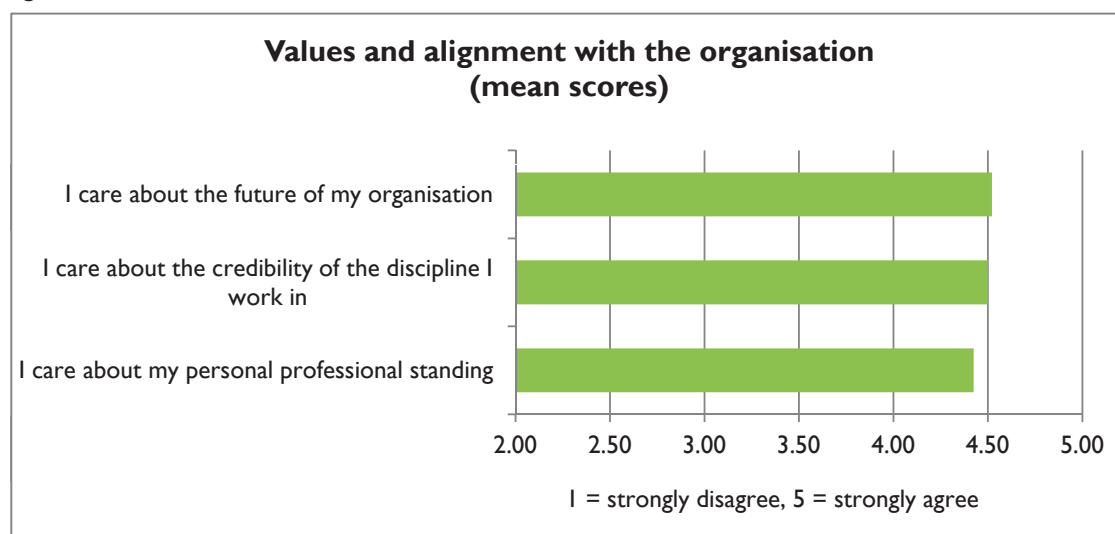
Yet where their purpose does align with that of the organisation, technical experts can show very strong commitment indeed. The key point is that they are not necessarily individualistic; rather, their purpose and commitment are strongly intellectualised and based on rational thinking:

"We all absolutely intellectually buy in to what we're trying to do. Our whole culture … is essentially about the greater good … I don't know of an organisation that is more aligned [in having a] common narrative … or collaborative to get the job done, irrespective of whether you're in sales, engineering or legal." Bill Parsons, ARM

Generational differences

Finally, it is worth noting that there appear to be differences between the generations of technical experts. In particular, some of our interviewees saw the younger generation to be more outward looking and less defined by their academic discipline. This may result in them not only having a better work-life balance, but in being able to work with a broader range of people and ultimately having more natural ability to become well balanced leaders.

Summary

In this chapter, we have looked at general characteristics of technical experts. We have seen that they tend to be less socially oriented and more independent than most people. They tend to focus on facts and logic, at times to a fault, and place a high value on personal knowledge and the ability to think independently. In the next chapter, we consider what these traits can mean for their capability to act as leaders.

5. Experts and leadership competencies

Having considered some of the key characteristics of technical experts, we now ask more specifically: how do they match up to what is required of successful leaders? In doing so, we take a more granular look at the leadership behaviours that technical experts typically exhibit. Where are their strengths and where do they struggle? What is it most difficult for them to do or to change, and why?

We acknowledge that this account will inevitably involve a degree of generalisation and, as we will show, some experts may not agree with others' assessment of their competencies. But nonetheless we feel confident that our research findings demonstrate significant consistency in this area, and will provide a useful guide for developers to focus their support for expert leaders.

The Roffey Park competency model for expert leader

Figure 5.1

We at Roffey Park have spent many years working in leadership development with technical experts. Our work covers a range of sectors, including scientific research, financial services, legal services, engineering, higher education, and health services. Based on our experience, we have developed the model shown in Figure 5.1. Placing self awareness at its centre – 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 technical experts.

Through the course of our interviews, we found that the Roffey Park model closely mirrors the experience of experts in leadership positions. Below we discuss the evidence from our research on some of the challenges technical experts face in developing these competencies and where their natural strengths lie.

Self awareness

Reflecting on their own experience, expert leaders often saw watershed moments at which they gained a greater understanding of the way they function as individuals and the impact they have on others. This has usually happened because they have been offered direct feedback on their personal style, either as part of a development programme or during an internal performance review. Our interviewees saw these moments as pivotal points in their leadership journeys. They built on these revelations to achieve more effective relationships at work leading to better results.

One successful expert leader recalled how, in meetings and when giving presentations, he let his natural thought processes dictate his personal style. His presentations involved huge numbers of slides containing enormous detail, and he tended to dominate in meetings. Following feedback he realised that people found it hard to identify the conclusions in his presentations and that in meetings he inhibited fruitful discussion.

> *"I was thinking and processing pretty fast and proposing lots of alternative ideas; and in the end you realise you're preventing other people from thinking … and you need to give them time to do that. So my style has changed quite a lot in meetings … I'm more likely to be the one that's listening, processing, and then I'll come out with something and engage more." Peter Middleton, ARM*

This sort of insight was not uncommon. The senior leaders we interviewed not only saw self awareness as an important trigger point or catalyst for developing leadership ability, but felt that this was often found wanting among technical experts. As one of our research participants commented: "If I had my way, I'd inject everybody with a cocktail of self-awareness" (Head of Learning, Bioscience Research).

Common purpose

A key role for senior or 'distant' leaders is to build the sense of common purpose within the organisation (Gifford et al, 2010). Clearly, this requires first of all that they themselves buy into the organisation's set purpose and help develop it into more concrete direction and strategy.

For technical experts to assume strategic leadership, it is important that they understand their corporate roles as well as their roles as experts. However, because their foci and interests are often very firmly on their own technical endeavours or professional standing, they can easily fail to embrace the wider needs of the organisation.

This problem seems to be relatively common for technical experts working in academic settings. Here, we heard reports of the individual research agendas of senior academics taking precedence over the needs of the organisation. For example, the requirement to publish regularly in order to enhance one's future career can be seen as more important than pursuing applied research

projects in the service of the organisation's objectives.

But this is not always the case in organisations populated by technical experts. Bill Parsons of ARM described the organisation's very strong sense of shared purpose. He pointed out that this sense of common purpose was based on intellectual conviction, and not on social affiliation, but that it was nonetheless extremely strong and led to high levels of organisational commitment.

> "We have a very clear view as to how we're changing the world. We measure how people feel, literally about things like the sense of meaning in their jobs, which is incredibly high … It's not driven by huge levels of empathy. It's driven by intellectual respect for each other and our leaders. A common narrative … we all absolutely intellectually buy into what we're trying to do." Bill Parsons, ARM

Common purpose can be based on intellectual conviction, not social affiliation, but nonetheless be extremely strong

If we assume that technical experts *are* bought into the purpose of their organisation, for them to become effective leaders, they need to be able to share this with their followers and actively foster shared purpose across the organisation. Analysis of our Management Agenda survey data (Boury et al, 2011) shows that 'skilled / technical expert' managers set direction significantly less with their teams than 'professionals' do.[7] In short, developing shared purpose does seem to be an area of relative weakness for technical experts.

Thinking strategically

The economic challenges caused by the 2008 banking crisis continues to pose problems for organisations and their leaders. Political change and natural disasters regularly throw new obstacles into the paths of professional organisations, which need to prepare themselves for a future that is unpredictable and complex. An unpredictable world requires leaders who are comfortable with ambiguity and can plan for the unexpected.

The early career of technical experts is predicated on what they know. They use their knowledge to assess evidence and draw conclusions that can be tested, not moving on until all the evidence has been assessed and a robust conclusion is clear. But leadership doesn't work like that, as it involves working with the unknown and emergent. Several of our interviewees talked of the need to move on, to take calculated risks, and to plan for unexpected changes in external factors. They saw learning how to move forward without being in possession of all the facts as an important challenge for the expert leader.

> "If you're a junior nurse on the ward, if you don't know what's going to happen in the next hour, that's a problem. But as a director, not knowing what the health bill is going to give you in the next year is your job … You've got to have a plan for what might unfold." Director of Operations, Countywide Foundation Trust

This is not something that comes naturally to technical experts. They have typically spent most of their academic and professional lives developing specialised knowledge which is, by definition, deep

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7 ρ (Spearman's Rho)=0.08, p=0.01, N=877. This difference is small but clearly statistically significant. Using a regressional analysis to control for gender, we found that the difference between 'skilled / technical expert' and 'professional' managers was still significant.

and narrow, and are used to either being deferred to as experts themselves, or deferring to others as experts.

A further difficulty is that people with strong scientific and technical backgrounds are trained to seek certainty based on knowledge and facts. As such, they often find ambiguity an uncomfortable concept. This can manifest in 'analysis paralysis', where the insistence on taking decisions based on robust data inhibits change.

> *"We must … dot every I and cross every T before we can move … It can be an issue in complex change, recognising the fact that you just have to move and then find solutions to the problems that pop up, as opposed to you're sure you've managed everything before you take one step forward." Alison Craig, Syngenta*

Thus, several interviewees felt that while evidence-based models or processes for change often proved useful guides for strategic change, they were over-relied upon. Taking calculated risks, improvising and using one's instincts are also important components of strategic thinking, and these are areas where technical experts often feel uncomfortable.

Experts are very good at being able to hold lots of unrelated or apparently conflicting pieces of information and make sense of it

In order to assume strategic leadership, another major shift technical experts need to make is to step outside their personal areas of expertise and comment on what might be seen as other people's domains. Equally, the reverse is true: that when dealing with areas that *are* closely related to one's specialism, they need to take on board ideas and challenges from other people.

However, if experts do develop broader strategic interests, they can become very skilled leaders. Not only can they draw on relevant experience and knowledge; they also have core intellectual capabilities that are useful for strategic thinking. As one interviewee put it, "they're very good at being able to hold lots of conflicting pieces of information and make sense of it" (Alison Craig, Syngenta).

Leading change

In his influential book on leading change, John Kotter (1996) describes how effective change management involves articulating a compelling vision of a future state and encouraging people to buy into that vision, not just cognitively but also emotionally. Our research provides a mixed picture on how well placed technical experts are to do this.

On the one hand, technical experts can have the potential to be very effective at getting employees to buy into purpose and vision. A key element in this is communicating strategy in a way which gives people a line of sight between their own activities and the organisation's goals. As discussed in Chapter 2, expert leaders know how technical employees think and are often able to talk to them in language that they relate to and find inspiring.

On the other hand, our interviews found that the propensity of technical experts to focus on the facts can lead them to miss the more emotional side of building shared purpose. They may pay insufficient attention to the 'hearts and minds' aspect of change, relying on data (and often too much data – change messages need to be simple and clear) to make their case.

> *"[Technical experts] sometimes struggle … because … making a change is not just*

a rational activity. So I think once they can quite quickly work their way through the technical plan to make a change, sometimes … just dealing with the emotional fallout is more tricky … Sometimes it can be a bit confusing, because if it made sense, why wouldn't you do it?" Alison Craig, Syngenta

They can also struggle with the less tangible aspects of planning change. Interviewees suggested that, while they are often good at telling you *what* needs to change, because their training has made them good at critical analysis; but they are less often able to articulate what success will look like, *how* things should change and how they will facilitate that change.

Emotional intelligence

As a result of their natural preferences and academic training, we reasoned that technical experts are likely to work by using data and logical reasoning to achieve objectives. Softer skills, such as empathy and listening, may not reflect their preferences. Barbara Eiser (2008) suggests that, for technical experts to successfully navigate from the role of subject matter expert to that of leader, they need to recognise that leadership is not about being good at the technical task at hand. It is more about listening to and understanding people and their motivations, and allowing them to develop and contribute effectively.

Thus, it is perhaps not surprising that emotional intelligence is seen to be a significant differentiator of successful leaders. Goleman (2001) suggests that, while it is to be expected that people working in a field requiring sophisticated technical knowledge will have a high level of cognitive intelligence (IQ), *emotional* intelligence (EQ) is a predictor of professional advancement among this group.

At the core of emotional intelligence is the ability to understand the impact we have on others, and to gauge the emotional temperature of a team 'climate'. One of the responsibilities of a leader is as creator and guardian of this 'climate', developing rapport and sympathy and modelling adult-to-adult relationships.

At the core of emotional intelligence is understanding the impact we have on others and guaging team 'climate'

In a positive climate people are more likely to feel able to speak up and offer ideas and feedback; in a negative climate they might avoid doing so in case they cause upset. An open climate means that an organisation is able to critically examine itself and continuously improve. To create such a climate leaders need to understand the people working for them, developing empathy and perception, so that they can sense the atmosphere and respond appropriately.

Most people are able to develop emotional intelligence through learning and, as already acknowledged, there are people who have both technical (cognitive) and emotional intelligence. However, our research findings and experience in the field of learning and development indicate that emotional intelligence is often lacking among technical experts.

There appears to be both a 'nature' and 'nurture' side to this. On the one hand, personality traits are often associated with our cognitive ability and affect the careers we choose. At the most extreme end, people on the autistic spectrum, who have very poor social skills, often have excellent technical, scientific and mathematical ability (Baron-Cohen et al, 2001). But on the other hand, scientific academic and professional training often places little importance on people skills, and as a result, this area of capability can be neglected.

As described in Chapter 3, a high proportion of technical experts are ISTJ or INTJ personality types, as described in the Myers Briggs Type Indicator (MBTI). This personality type is characterised by a preference for hard facts over emotion, and ISTJs may dismiss people's feelings as being less important than data. The prevalence of this personality type among technical experts may also go some way to explaining why emotional intelligence can be an under-developed trait in this population.

In our survey of technical experts we tested the hypothesis that they were likely to feel uncomfortable in situations requiring high levels of emotional intelligence. Figure 5.2 illustrates our findings. The lowest scores, indicating where people felt least comfortable, were assigned to giving emotional support: networking in informal situations; managing confrontation; expressing feelings such as annoyance, disappointment or frustration; exploring emotional issues at work and talking to a member of your team about their underperformance. More positive were activities such as listening to other people; giving praise; influencing those less senior than you; making requests of others; influencing co-workers or colleagues; receiving and giving feedback; expressing disagreement and managing emotions under pressure.

How comfortable are you with the following?
(mean scores)

Activity	
Listening to other people	3.46
Giving praise	3.36
Influencing those less senior than you	3.32
Making requests of others	3.19
Influencing co-workers or colleagues	3.18
Receiving feedback	3.17
Giving feedback	3.15
Expressing disagreement	3.12
Managing your emotions under pressure	3.10
Acknowledging other people's emotions	3.00
Influencing people with more authority or status than you	2.98
Giving emotional support	2.87
Networking in informal situations	2.76
Managing confrontation	2.63
Expressing feelings such as annoyance, disappointment or frustration	2.57
Exploring emotional issues at work	2.47
Talking to a member of your team about their underperformance	2.46

1 = not at all, 4 = very comfortable

N=341 to 347
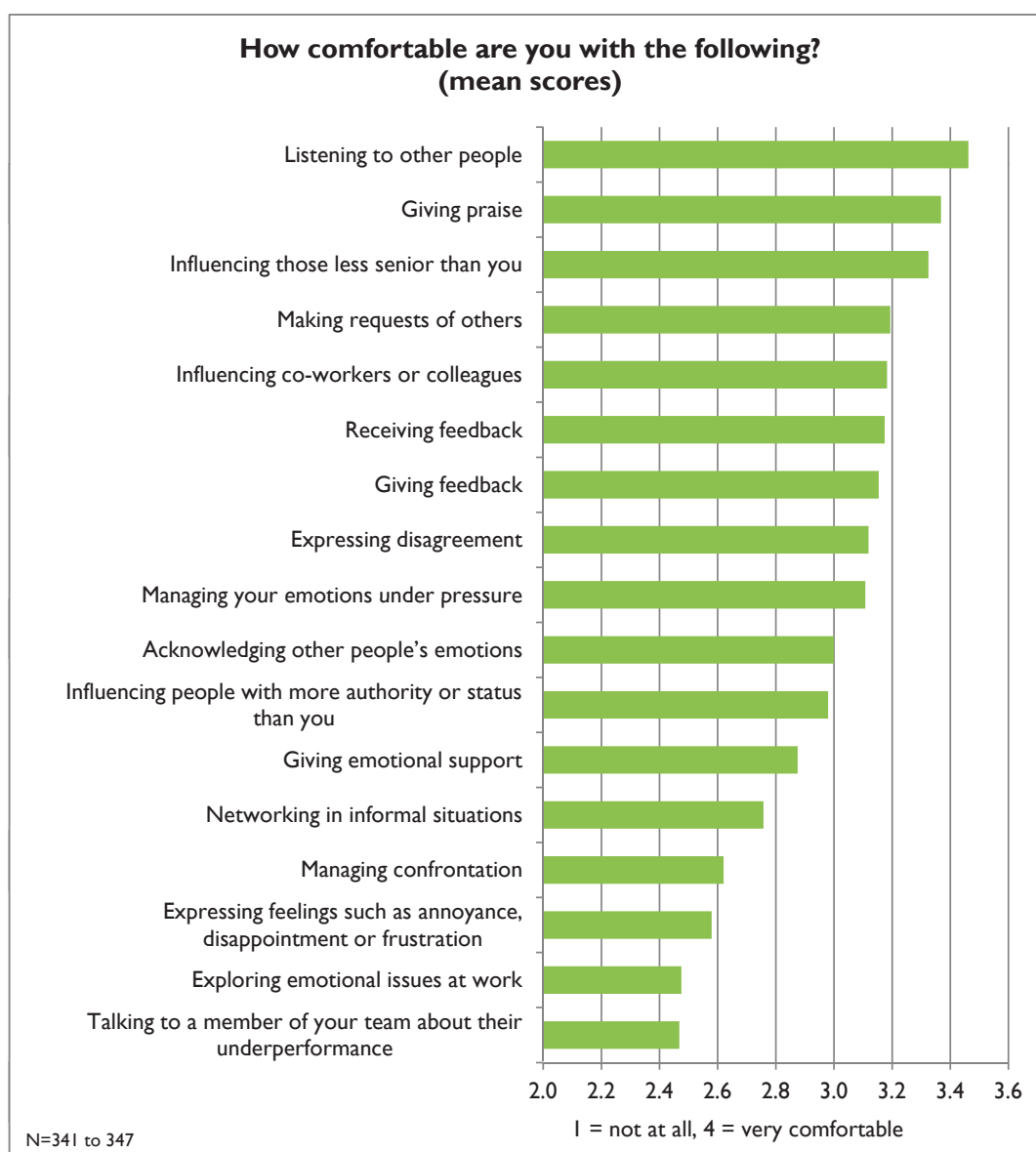
So what can we conclude from these findings? By comparing individual items in this question, we can see that networking in informal situations is less comfortable than influencing people with more authority or status; an activity some might consider reasonably challenging and potentially stressful. People felt reasonably comfortable about listening to other people, but the least comfortable situation of all was exploring emotions at work. It seems that there is indeed some evidence that situations which are based on relationships and emotion are indeed less comfortable for this population than those which can be associated with tasks.

Impact and influence

The world is changing and the need to network and influence widely is now central to success. Organisations are often more focused on developing strategic, integrated solutions for their clients than simply developing products and selling them. As Syngenta's Alison Craig reflected, this can pose a challenge for the more technically minded employees, because "It requires a much more intimate relationship and level of understanding and ongoing relationship with customers".

Bill Parsons, EVP HR at ARM, confirmed that the combination of technical and relationship-building expertise is both valuable and relatively rare:

> *"Our biggest skill shortage of leaders are what we call the techno-commercials. They're people that are deeply technical, but are also very good with customers and commercial decision making." Bill Parsons, ARM*

Stakeholder relationships need to be attended to in all organisations, whether commercial or not. In scientific research, for example, there is the need to maintain grant relationships and to build the support of influential sponsors. One of our research participants told us the story of a senior politician who visited a research site. Leading scientists refused to make time to meet him, prioritising their research tasks for that day over the funding needs of the organisation. Often it is necessary to balance the needs, sometimes conflicting, of multiple stakeholders. Several of the leaders we interviewed commented that this was a key learning point for them as they progressed in their careers.

People with professional expertise have a power base of knowledge and experience. Those who know their field well are generally respected and listened to, so they start with an advantage when it comes to influence. But the actual skills used in networking and influencing don't always come naturally to technical experts, especially when, as is often the case (see Chapter 4), they are introverts by nature. However, this is something that our interviewees thought could be learnt.

> *"I began to learn how to influence the right people and to play the political game … The idea of meeting people socially, for example, wouldn't have been something I would prioritise: networking, social events, that sort of thing. But in my job now it's quite important, so … whereas before I might have preferred to stay finishing off a paper than going to an event where there would be a lot of people … now I find I can do the latter." Director of Operations, Countywide NHS Foundation Trust*

Effective influencing skills in a leadership context involve being tactical and strategic instead of just needing to be right. Thus, knowing whether to concede or stand one's ground should not just be based on one's view of the facts, but what is likely to be constructive or get the desired result. Our research findings show that experts, trained to know the right answer in fields where answers are generally either right or wrong, sometimes find it difficult to leave an argument unless they have won it conclusively. This can result in them not seeing the difference between influencing and foot stomping.

Political awareness

Effective leaders need to be politically astute, in order to gauge organisational climate, act cannily and get results. This is less to become the psychological game-playing 'clever foxes', than to embody the 'wise owls' who act with integrity (Baddely and James, 1987); to drive forward the right decisions at the right time, in the most constructive way.

Effective influencing skills in a leadership context involve being tactical and strategic instead of just needing to be right.

Technical experts can find it difficult to engage with this mode of thought, as they are used to making decisions based on verifiable facts, rather than judging how people are likely to react to certain circumstances. Identifying points of power and influence, which do not always lie where staff structure might lead you to expect, and then using influencing skills to initiate shifts in attitude has little to do with data and a great deal to do with instinct.

It should not be surprising, then, that several interviewees saw this as an area in which the expert leader needs guidance and practice in order to feel comfortable.

> *"Those political skills I think are absolutely critical and they are lacking in the bulk of the workforce … In particular, I think it's the interaction between the intrapersonal and the political and personal space … [The NHS is] a highly politicised environment … So having the skills to steer a change through those politics and people issues … is a key competency that we are very keen that we develop more."* Director of Operations, Countywide Foundation Trust

Our survey results also give some support to this. We asked experts how often they interacted in a number of different ways (see Figure 5.3). Interestingly, the lowest score was for the time spent developing stakeholder relationship, a key political and strategic activity. Higher scores were noted for interactions which are likely to be aimed at progressing operational aspects of a project, such as team meetings.

Some interviewees pointed to a common reluctance among technical experts to play what might be seen as political games. However, in the name of integrity, they may be falling to another danger, namely failing to use 'nous' to guide strategic decisions and missing opportunities to influence others.

Figure 5.3

In a typical working week, how often do you do the following?

Activity	Never	Rarely	Fairly often	Very often
Meet with the team you lead (face-to-face or virtually)			39.1%	53.6%
Have conversations with senior colleagues		10.1%	47.4%	42.5%
Hold a one-to-one meeting with a direct report	11.3%	14.1%	41.6%	33.1%
Communicate across the organisation		36.9%	40.9%	19.6%
Spend time developing stakeholder relationships	3.6%	36.6%	44.3%	15.5%

N=320 to 347

Leading teams

Increasingly, experts are required to build and work with interdisciplinary and international teams, which requires a good understanding of team dynamics. Ultimately, effective leaders develop the ability to adapt their leadership styles to suit different individuals and situations.

This requires an understanding of the different ways in which people function at work, something that does not come naturally to most technical experts. Firstly, technical and non-technical employees can be, as one interviewee put it, "very different animals" and technical experts are typically used to working with people from similar academic backgrounds. Secondly, as pointed out in our interviews with leaders, technical experts often lack awareness of how other people think.

> Pulling things apart, dissecting problems and critically reflecting on issues are key skills in science, but create defensiveness in human relationships

Another aspect central to effective teams is employees who feel engaged and motivated (e.g. Macleod and Clarke, 2009). For this, they need to feel that they are in a job that plays to their strengths and feeds into a purpose to which they can relate, and that they are respected and valued for their contributions (Gifford et al, 2010).

Clearly, this feeling will not be fostered by line managers or 'nearby' leaders who have a tendency towards criticality, or deficit orientation, as is seen to be common among technical experts (see Chapter 4). Pulling things apart, dissecting problems and critically reflecting on issues are key skills in science, but in human relationships can create defensiveness. Having said this, it seems that among technical experts, the threshold for unvarnished critical feedback is unusually high. Bill Parsons of ARM commented:

"I think our employees… because of their personality type, some are pretty outwardly resilient. They almost intellectualise criticism. They are amazing. If you ask them to provide feedback to each other, it can be brutal, but they cut and paste it into appraisal forms and things." Bill Parsons, ARM.

Nonetheless, adopting a more appreciative approach can still reap rewards in employee motivation, and technical experts may do well to manage any natural tendency they have to be critical when dealing with team members.

Interestingly, our survey results suggest that the extent of deficit orientation among technical experts may be overstated. In contrast to the views of our interviewees, our survey respondents indicate that they are more likely to be appreciative than critical (see Figure 5.4). Perhaps most notably, eight in ten (83%) of our respondents said that they 'fairly' or 'very' often talked to people about what they are doing well; whereas just half (51%) said the same for talking to people about what they have done wrong. Even taking into account bias that may have occurred in the survey due to socially desirable response options, these findings strongly suggest that technical experts have no fundamental problem in being appreciative.

Figure 5.4

How often do you do the following?

	Never	Rarely	Fairly often	Very often
Critique a piece of work thoroughly		42.9%	47.2%	7.5%
Analyse a piece of work to find its weaknesses		32.8%	56.5%	9.2%
Talk to people about what they are doing wrong		47.8%	43.8%	7.0%
Talk to people about what they are doing well	16.6%		61.9%	20.9%
Encourage people to work to their natural strengths	14.9%		54.7%	28.9%
Give people credit for their contributions	3.8%		38.3%	57.6%
Praise the strengths of a piece of work	11.2%		57.9%	30.6%
Publicly praise others' achievements		22.3%	52.7%	23.8%
Express frustration at below-standard work	4.6%	64.3%	25.8%	5.2%

N=329 to 345

However, two thirds of people still say that they often analyse a piece of work to identify its weaknesses and over half say they frequently critique work thoroughly, which is what we might

expect given their academic training and the comments made in our strategic interviews. In terms of building engagement, however, these tendencies may be less than helpful.

Further, analysis of our Management Agenda survey data (Boury et al, 2011) suggests that, compared to 'professionals', 'skilled / technical expert' managers are significantly less encouraging of their teams in various ways. Most notably, these include how often they gain buy in from their reports, canvass opinion, encourage ideas and suggestions and listen to feedback.[8]
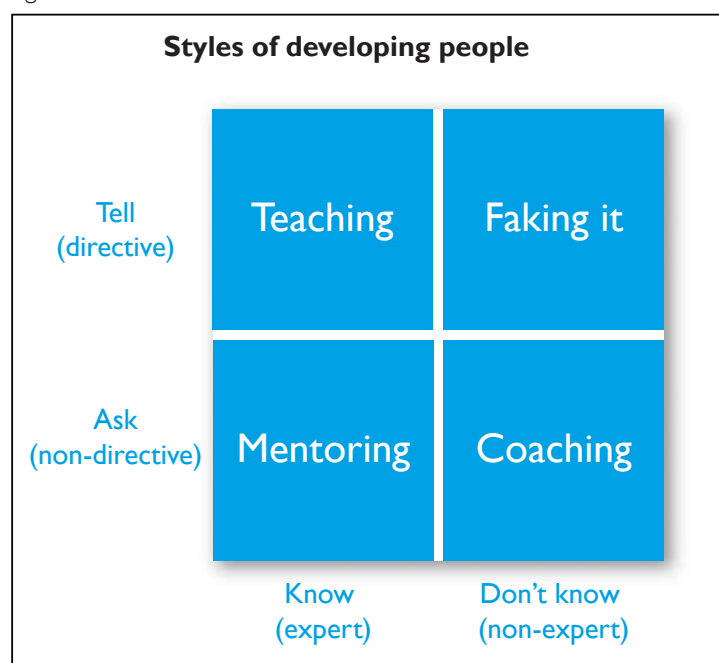
Overall, while the picture is not black and white, there would appear to be clear room for improvement in how technical experts lead their teams.

Developing individuals

Supporting other people's development as professionals is a core aspect of nearby leadership. As Margi Gordon of Roffey Park puts it,

> *"The best leaders recognise that they cannot do it alone. They inspire and develop others, but to do this sustainably, they need the ability to coach. This means stopping themselves from giving advice – a strategy designed to create dependence – and developing the ability to ask searching questions. The outcome is short, focused conversations where people go away with a new perspective on a problem or a resolve to make an improvement, and a sense of being valued for their expertise." Margi Gordon, Director of Tailored Programmes, Roffey Park Institute*

Figure 5.5

Styles of developing people

	Know (expert)	Don't know (non-expert)
Tell (directive)	Teaching	Faking it
Ask (non-directive)	Mentoring	Coaching

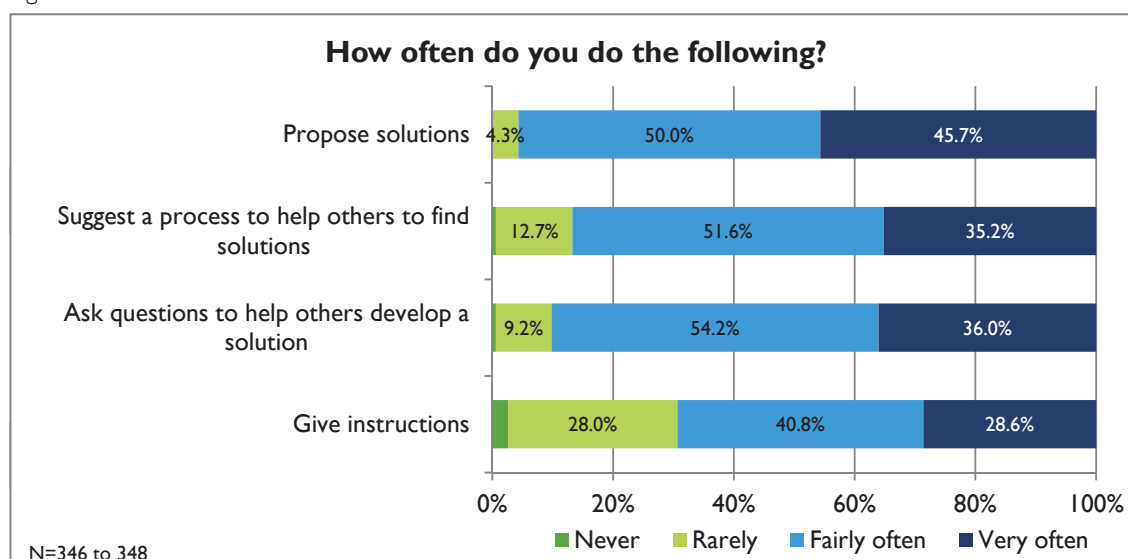
8 'Buy in': ρ=0.08, p<0.05, N=843; 'canvass opinion': ρ=0.12, p=0.001, N=876; 'encourage ideas': ρ=0.11, p<0.01, N=881; 'listen to feedback': ρ=0.08, p=0.01, N=875. These differences are small but clearly statistically significant. Using a regressional analysis, we found that these differences remained significant controlling for gender.

Our interviewees confirmed that technical experts tend not to find coaching a natural skill and, indeed, are often impatient with those with less knowledge or ability.

> *"Typically … they can train but they find it quite hard to coach because … when you know how to do it it's very easy to tell someone how to do it, very hard to sit down, sit there and, in your own mind, waste time trying to encourage them to work out how to do it themselves." Andrew Goldby, RBS Insurance*

As shown in Figure 5.6, responses to questions in our survey appear to refute somewhat the view that they under-use coaching techniques. Nine in ten respondents (90%) said they asked questions to help others develop solutions either 'fairly' or 'very' often. However, even more (96%) said that they often proposed solutions and, while fewer people said that they often gave instructions, the figure here was still quite high at 69 per cent. This suggests that despite the use of questioning techniques, a directive style is still prevalent.
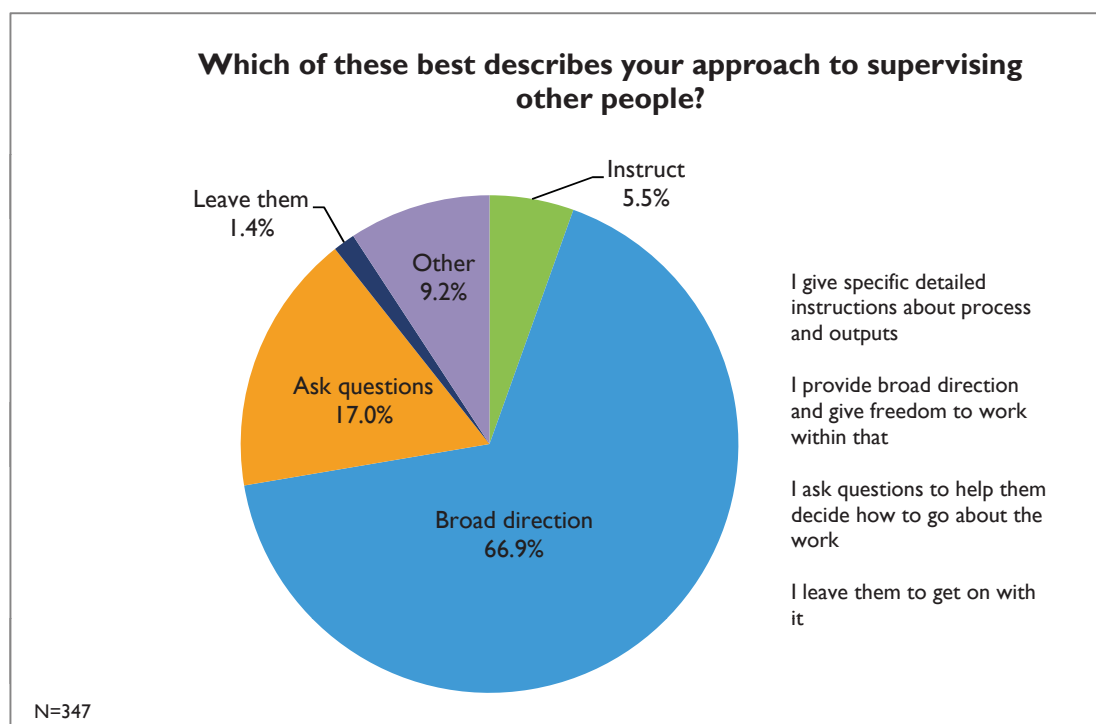
Figure 5.6

How often do you do the following?

	Never	Rarely	Fairly often	Very often
Propose solutions		4.3%	50.0%	45.7%
Suggest a process to help others to find solutions		12.7%	51.6%	35.2%
Ask questions to help others develop a solution		9.2%	54.2%	36.0%
Give instructions		28.0%	40.8%	28.6%

N=346 to 348

We also asked our survey respondents more directly about their natural, or 'baseline' approach to supervising other people (see Figure 5.7). The most common was to provide broad direction and give freedom to work within that (67%); and notably more asked questions to help them decide how to go about the work (17%) than gave specific detailed instructions about process and outputs (5%). Of the 32 respondents (9%) who said they used 'other' approaches, the open comments all pointed to using a mixture or varying the style according to the person or situation in question.

Comparing 'skilled / technical expert' managers with 'professional' managers using our Management Agenda survey data (Boury et al, 2011), we found that experts hold one-to-one meetings with their reports significantly less frequently.[9] If this reflects the general disposition to develop one's reports, it seems likely that technical experts are similarly less supportive of personal development in the aspects shown in Figures 5.6 and 5.7.

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9   ρ=0.14, p<0.001, N=878. This difference between 'skilled / technical expert' and 'professional' managers is small but highly statistically significant. Using a regression analysis, we found that the difference remained significant controlling for gender.

Figure 5.7

Which of these best describes your approach to supervising other people?

Leave them
1.4%

Instruct
5.5%

Other
9.2%

Ask questions
17.0%

Broad direction
66.9%

I give specific detailed instructions about process and outputs

I provide broad direction and give freedom to work within that

I ask questions to help them decide how to go about the work

I leave them to get on with it

N=347

Managing performance

Another important aspect of delivering through teams is performance management. This is closely related to helping other people develop, as in general the most effective approach is to treat underperformance primarily as an opportunity for learning, rather than cause for scolding or punishing.

Overall, technical experts seem to be as good as managing performance as others

Findings from Roffey Park's *Management Agenda* (Boury et al, 2011) an annual survey of over 1,500 managers across all sectors, indicate that relatively few managers feel very confident about doing this well, and this finding is supported by our qualitative studies in a range of organisations. Issues range from avoidance of difficult conversations because of a dislike of conflict; insufficient authority or training; and sometimes managers see performance management as the application of sanctions rather than a learning opportunity. However, comparing 'skilled / technical expert' respondents with 'professionals', this survey shows no significant difference between how confident they feel to tackle underperformance. This suggests that overall, technical experts are no worse at managing performance than others.

Our interviews with senior leaders in the case study organisations found that technical experts generally had no problem with managing performance of average to good performers, but did when it came to dealing with poor performance. Our *Expert as Leader* survey confirms that few technical experts (8%) feel very comfortable about talking to people about their underperformance, while over half (55%) feel not very or not at all comfortable with these conversations.

Part of the reason for this was felt to be that they lacked the people skills to lead such difficult conversations; it was also suggested that they may not see the full importance of robust

performance management, as they are less focused on the impacts of underperformance on the wider organisation. As such, there was thought to be a tendency to bury their heads in the sand.

However, there was also a suggestion that technical experts find managing underperformance difficult because they "can struggle to understand why [a report] is a poor performer" (Andrew Goldby, RBS Insurance). They can cope with issues that can be addressed through didactic training – i.e. where the report is missing the requisite knowledge or skills – but if this is not the case, expert leaders can be left bewildered, feeling:

> *"'Why do you not see that? Why do you not understand that's a better way of doing it?' … It becomes: 'I don't understand you, therefore it's very difficult for me to deal with you.'" Andrew Goldby, RBS Insurance*

There was a common view that, even where conversations about poor performance do occur, they can be fleeting and not followed up. Several of our interviewees commented on the need to make performance management an ongoing, rather than an isolated conversation, and one which is proactively driven by the manager – otherwise it might not take place at all.

> *"I think the key thing is to keep the conversation going. Sometimes the mistake we make is to provide feedback and 'tell' people once: 'You need to do more of this or more of that, or less of this'; and then that's it, there's no follow-up. You then start seeing them revert back into natural behaviours. It's better to keep an eye on it and continue to provide the guidance, the support on an on-going basis … What I've also noticed is that, with some people, no matter what you tell them or how many times you tell them you are there for them, the discussion does not happen if I don't get it started." Stephanie Languouet, Cmed*

Our research also considered the use of coaching styles in performance management and treating performance issues as learning points. A typical view from interviewees was that:

> *"The moment things start to go a bit wrong they will grab control and do it themselves rather than spend more time coaching and so on." Andrew Goldby, RBS Insurance*

To investigate this view further, the survey asked respondents what they would typically do if a piece of work done by one of their team was not up to scratch (see Figure 5.8). Only a very small minority (4%) said that they would take the work back and make it better themselves; and although a fifth (20%) would give detailed corrections, more said they would explain at a broad level what needs to change to make the work better (54%) or ask questions to help the person decide on how to improve the work (23%). Overall, these findings run contrary to the above quotation, but it is still notable that a quarter of respondents admitted to very directive ways of dealing with the problem.

Figure 5.8

**If a piece of work done by one of my team
is not up to scratch, I am most likely to:**

Do it myself
3.8%

Ask questions,
22.8%

Give corrections,
19.7%

Explain, 53.8%

Take the work back and
make it better myself

Give detailed corrections

Explain at a broad level
what needs to change to
make the work better

Ask questions to help the
person decide on how to
improve the work

N=346
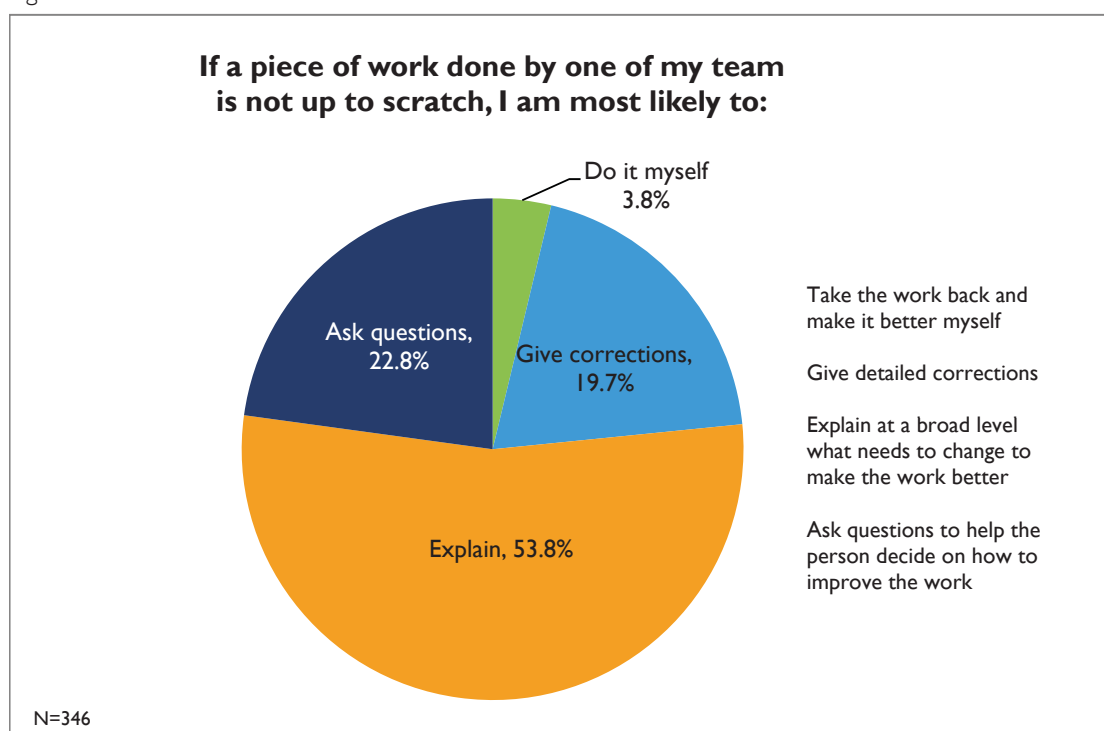
Summary

So how do technical experts match up to leadership competencies? Clearly, there is a real divergence of opinion between the technical experts who completed our survey and the views of their senior leaders. This is particularly the case with whether they use directive or non-directive styles of management. On the one hand, it should be recognised that the survey was self-reported and, as mentioned above, there is the very real potential for social desirability bias. On the other hand, the senior leaders we interviewed could be relying on unrepresentative stereotypes rather than actual experience; or it may be that their negative experiences are the most memorable. As with the true extent of deficit oriented and appreciative approaches, further research may be needed in this area.

But moving beyond the argument over the *extent* of directive styles of management, it is clearly the baseline style for some technical experts in leadership roles. Respondents typically justified this on the grounds that it was what was needed for the job, which may well be the case for some technical tasks, but as a general style is unlikely to foster learning and independence. So where technical experts do have an overly directive approach to management, why is this the case?

Weed out the philosophy that gives primacy to individually held expertise and instead reinforce that collaboration is the most important

The best explanation may lie in the tendency to value independent thinking and ability over mutually supportive collaboration (see Chapter 4). By very nature of being experts, they are not only steeped in the assumption that there must always be a 'right' answer or a best way of doing things, but are also used to primacy being given to individually held expertise. Thus, highly technical organisations may need to weed out the philosophy of individually held expertise and instead reinforce that the most important is collaboration. As Steve Jobs, the co-founder of Apple Computers, famously put it:

"My model for business is The Beatles … They balanced each other and the total was greater than the sum of the parts. That's how I see business: great things in business are never done by one person, they're done by a team of people." Steve Jobs, Interview with 60 Minutes, 2003

A related challenge is that technical experts may not be attuned to the more relational styles of leadership (coaching and mentoring) and, as such, may misinterpret one of their direct report's lack of confidence as a lack of competence. In essence, in the terms expressed in Figure 5.5, (above) it seems that when it comes to helping others develop, some technical experts see the only options as 'teaching', 'faking it' or simply leaving people to get on with it on their own.

The situational leadership model is also of relevance here (Blanchard et al, 1986). This explains two things: firstly, that leaders should move from a directive to non-directive managerial approach as their reports develop their ability to work independently; and secondly, that to enable this shift, the manager needs to move through stages of highly supportive behaviour. This results in four natural stages in developing and empowering reports:

1.   Directive with little support
2.   Directive with a high level of support
3.   Non-directive with a high level of support
4.   Non-directive with little support.

Crucially, it seems that many technical experts skip from the first of these to the fourth without moving through the relational styles of guiding and supporting.

It has to be said that, in almost all of the areas of competencies we looked at, our interviewees saw distinct barriers that often made it difficult for technical experts to develop as leaders. But these were not seen to be insurmountable and if they can be overcome, the signs are that technical experts can make good strategic thinkers who can connect with and lead employees, especially those from technical backgrounds.

Further, the typical culture among experts may be evolving naturally, as generational shifts occur. One interviewee opined that the younger experts were more flexible and dynamic than the 'old gentlemen with cardigan and sandals', and less resistant to developing away from their technical specialisms.

6. How do excellent expert leaders develop?

In the preceding chapters we have established that experts will and probably should progress into leadership roles, but that many of them may be naturally ill equipped to live up to the leadership competencies required to do this well. An obvious next question is how do technical experts become great leaders?

As part of our research we conducted an appreciative inquiry into the careers of people who had trained in a technical or professional specialism, moved into a leadership role and now had a reputation, either within their organisation, externally or both, as an outstanding leader. We interviewed five people, all nominated by their colleagues, about their lives, the key turning points in their careers, the lessons they have learned and their advice for aspiring expert leaders.

We begin with a brief biography of these leaders.[10] We then analyse some of the common factors we uncovered in our enquiry, in an attempt to distil the experiences and qualities that make great experts into great leaders.

David Connelly: Chief Executive Officer at Cmed Group Ltd

David Connelly is the principal founder and Chief Executive Officer of Cmed Clinical Services, another of our case study organisations.

David has a degree in biochemistry and a PhD in pharmacology. His early career was as a clinical scientist. He moved into clinical science and clinical research in the pharmaceutical industry to broaden his skills.

He performed clinical project management roles first at Astra Pharmaceuticals and then at Ciba-Geigy. Later positions were as Head of Data Management for Ciba-Geigy and Worldwide Head of Data Management for Novartis.

By his late thirties David had for some time pondered the idea of starting his own business, attracted by the freedom and challenge of such a venture. He co-founded Cmed in 2000, and it has since enjoyed considerable success, expanding rapidly. Cmed now employs over 300 people and operates in three countries.

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10 We present four summaries here, not five, as one of the interviewees has been anonymised.

Andrew Goldby, Director of Motor Pricing and Underwriting, RBS Insurance

With a First Class degree in Maths, Operational Research, Statistics and Economics from Warwick University, Andy is a qualified actuary. Over a 20-year career, he has held a number of actuarial roles both in pensions and in general insurance, working both for consultancies and in the company market. Before joining RBS in January 2008, Andy was Motor Director at Groupama, which represented his first significant leadership role. He is currently Director of Motor Pricing and Underwriting and Acting Director of Personal Lines Pricing and Underwriting for RBS Insurance. He holds a number of industry roles including sitting on the ABI Motor Committee and as a member of the ISDL board managing industry data.

Peter Middleton, VP Engineering, Processor Division, ARM

ARM's Processor Division has multiple design centres and some 350 engineers around the world. Those engineers based in the UK report to Peter Middleton. Peter also works with other divisions across the organisation; about 800 engineers are involved in the process of moving products from research and development through to market, and part of his role is to ensure the alignment of all their contributions.

Peter holds a First Class degree in Applied Physics and Electronics from Durham University. He held a number of posts as an electronic design engineer before joining ARM in 1994; he was the new company's 45th UK employee.

In the late 90s Peter was made technical lead for one of ARM's key products (ARM920T) and subsequently a line manager. In the early 2000s he spent three years as engineering manager of ARM's design team in France. On his return to the UK he was made Director of Engineering.

Martin Rogers, Executive Director, Royal BAM Group

Martin Rogers has been a member of the executive board of Royal BAM Group since 2009, and has worked for the company for over 30 years.

His secondary education was followed by a diploma in construction and building management. In parallel with his studies he worked with a civil engineering company and, during his first job, undertook further studies and achieved membership of the Chartered Institute of Building (CIOB).

His first building and construction management jobs took Martin from Hertfordshire to London, where he was able to tackle major inner city projects, gaining experience both in construction management and planning, as well as in leading teams in times of change. He moved to the organisation that would become BAM in 1979. A number of internal job moves followed: in 1990 he became construction director and around 2001 he was promoted to the UK Board and, eight years later, to the Group Board.

What can we learn from these leaders' stories?

These five leaders are clearly all exceptionally able people with high-level aptitude and training in a very specific field of expertise; but this is true of many people working in specialist areas, and it is not, as we have seen, necessarily an indicator of great leadership. So what marks these people out and what lessons can we draw from their stories and reflections? What, in the first place, drew them to the idea of taking on leadership responsibility?

Seeing the benefits of leadership

Firstly, although they are committed to their field of expertise, all five research participants recognised that leadership would enable them to achieve results on a greater scale than would be possible alone or from a non-managerial position.

> *"[As a clinician] I realised that no matter how good I was at knowing what was needed for the service, I wasn't in the meetings where the money was discussed." Director of Operations, Countywide Foundation Trust*

Of course, some of our interviewees acknowledged that the material rewards of leadership can also be an incentive:

> *"Leaving academia, I would wear a suit as opposed to a lab coat and I got a nice company car as opposed to the wreck I had at the time!" David Connelly, Cmed*

However, it seems that the real catalyst is the realisation that they can contribute more to their organisation and field. This should be emphasised to encourage technical experts to step forward for leadership.

Moving out of the comfort zone

The people we are describing in this study have typically spent their lives, from schooldays onwards, developing expertise in a deep and very specific field. They are used to being good at what they do; at knowing the right answers. This is their comfort zone.

All five research participants recognised that leadership would enable them to achieve results on a greater scale than would be possible alone

They may also have become used to working on their own, or with small groups of similarly trained people with whom they can use task-focussed, technical language and among whom they are recognised and respected for their expertise.

Stepping into situations in which they are not helped by their expert knowledge; where others may know more than them about the area at issue; where progress might depend more on intuition and judgement than knowledge, was at times deeply uncomfortable for them.

Each of our interviewees in this appreciative exercise spoke, unprompted, of the moments in their career when they chose to challenge themselves by taking on situations for which they felt under-qualified, or had been told were un-doable. In each case they learned that they were able to function and achieve in these challenging situations. This gave them confidence to take further steps in their career. They were often described as scary moments, but always recognised as key turning points. Indeed, a common thread in these interviews is how great leaders seek out and thrive on personal challenge.

For example, David Connelly described his trepidation at working with a group of people with MBAs, only to discover that he was able to bring value to the collaboration despite his lack of formal business qualifications. One interviewee spoke of her relish in taking on a job that she had been told was a poisoned chalice, and would make her the most unpopular person in the organisation, and making a success of it. She also described how her very decision to take on leadership roles represented a great personal challenge for her naturally introverted, analytical personality type.

> "I'm quite introverted, so [the challenges] were to do with … engaging in the world, acting in the world, and by sustaining the energy to do that … And, yet, I have chosen to do a job where I need to be highly visible and communicate with people, and for people to find me approachable. They need to know who I am, what I'm thinking, and that's actually almost the opposite to my natural style." Director of Operations, Countywide Foundation Trust

These are important lessons for all leaders; progress generally doesn't happen unless one is prepared to take a few risks.

Mentors and role models

A common thread in our appreciative interviews was the presence in our participants' stories of individuals who influenced their path to leadership, either by acting as a role model for effective leadership behaviour from which they learned or as a mentor and counsellor.

For example, David Connelly described two or three key figures in his life who threw down challenges for him, persuading him that he was capable of taking them on. These individuals included a chemistry teacher, the medical director of a pharmaceutical company and even his mother. Listening to and acting on their advice proved pivotal at key points in his life and career.

Several leaders talked of how much they had learned from observing the behaviours of truly effective leaders

Several leaders talked of how much they had learned from observing the behaviours of truly effective leaders, and how these behaviours produced results. Martin Rogers, for example, spoke of a project manager who he encountered early in his career.

> "He was a real leader; he never, ever showed any degree of stress … he made everybody feel extremely important on that project whether you were his deputy or the most junior person on the project. He had a style of talking to people which made everybody feel relaxed and able to present what they felt was important, but you still knew he was the boss and he was respected … by the client, by the customer and … not just by his own people … but also people outside of the business as well." Martin Rogers, Royal BAM Group

Developing others

In Chapter 5 we discuss the importance for all leaders, not just those from a technical background, of focussing on the development of other people, for only in this way will organisations build a wide enough skill base to deliver success.
In these appreciative interviews a very common theme was the pleasure and pride these leaders

take in identifying talent and helping people to develop. Often they described this as an important part of the reward of being a leader.

> *"One of my rewards as a leader has been to watch the company grow; the departments, its people. There are people who joined Cmed almost as fresh graduates ten years ago … and now they are good, decent managers; they've had international travel and lived abroad, developed as individuals. It's been really nice to see them grow and know that I and my managers have helped shape and grow people." David Connelly, Cmed*

Resilience and wellbeing

It's a cliché to say that it's lonely at the top, but several of our expert leaders told us that they had learned the importance of acknowledging one's moods and emotions and attending to them, as well as one's physical wellbeing. This is partly because, if you don't, you will become less effective, perhaps even burning out or becoming ill. But these leaders also recognised that people take their signals from their leaders, and need to see them surviving and thriving, despite the challenges they meet.

> *"There was a group of people … who didn't want me there, and didn't want to change, but there were other staff who did want change … the first three months, they were just watching me, to see whether I survived … And when I did survive, when I showed that no matter what happened I'd still be back on the next day at nine o'clock, then people started to follow me and join in." Director of Operations, Countywide Foundation Trust*

Resilience, Martin Rogers pointed out, is also about learning from things that go wrong, taking remedial action and moving on; not allowing oneself to become paralysed by failure.

> *"I can remember a couple of events even now where I got things wrong and that created some difficult discussions for me … but at the same time you found a solution, you got through it and … what you learned was that this isn't as easy as it looks, you will make mistakes but if you do you've got to find a way out. What you can't let it do is to throw you off your career; one event shouldn't be a disaster for you." Martin Rogers, Royal BAM Group*

Open communication and visible leadership

The threads running through these appreciative interviews is that, asked to pinpoint the pivotal moments in their leadership journeys, these leaders all point to the things they have learnt about themselves and about other people; about acknowledging and managing emotions and relationships.

They often talked about the importance of authentic, honest, open, face-to-face communication, not only with those with whom they share expertise, but with a wide spectrum of colleagues and other stakeholders.

> *"That's one of the lessons I've learnt: to be yourself, to be more human, to be more natural and I think you get better results for it." Director of Operations, Countywide Foundation Trust*

Martin Rogers talked of the power of visible leadership, confirming some of the findings of Roffey Park's recent research on employee engagement (Gifford et al, 2010). His perceptive comments recognise how people create a mystique around their leaders which can inhibit their willingness to contribute and make suggestions.

"As you go up an organisation people have this tendency to see you as more important than they are or sometimes they do, and that's wrong. I've always tried to create - when I go to a project or talk to a team of people - you try to set it up that you're going as a visitor, as a colleague and you're seriously interested in learning and I've never found, as far as I can remember, anybody not wanting me to come and it's always been a good experience." Martin Rogers, Royal BAM Group

Summary

We interviewed these five people because their colleagues described them as outstanding leaders; certainly their careers all show that they have achieved great things and achieved considerable seniority. Most acknowledged that, in the process, they have become less expert in their field; inevitably, the demands of leadership have taken them away from the development of their technical knowledge. But in return they have reaped the benefits of leadership, being rewarded by seeing their impact on the success of their organisations and on the development of their colleagues. They all communicated a strong sense of achievement, fulfilment and having developed much deeper self knowledge.

Most acknowledged that they became less expert in their field, but in return they reaped the benefits of leadership

In the following chapter, we build upon these success stories by investigating how technical experts can best be developed into effective leaders and considering what the key elements are of learning and development strategies that achieve this.
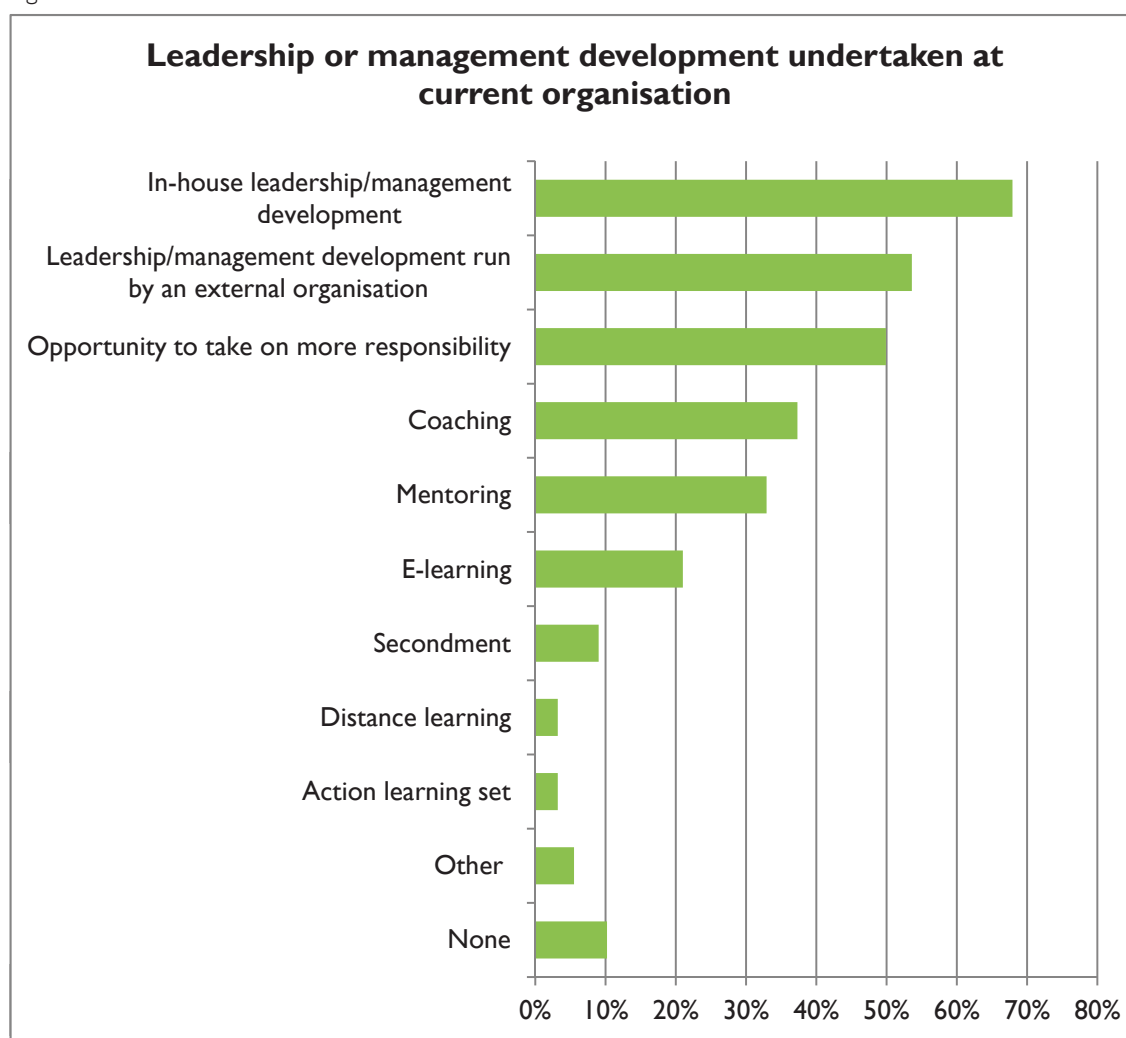
7. Learning and development strategies

In the previous chapter, we considered lessons from the journeys of five successful leaders. We now move on to look at how organisations can replicate this, by developing other technical experts into effective leaders.

Highly technical organisations are becoming increasingly aware of two things: that natural leadership skills are lacking in some technical experts; and that without the potential for progression, these experts are likely to become disaffected, making them more likely to take their skills and knowledge elsewhere.

In response, many organisations have invested more heavily in leadership development and/or created a parallel career structure where, within certain criteria, experts can progress in the organisation without taking on line management responsibilities (Hirsh, 2006). In this chapter, we discuss both these strategies and in particular look at what is seen to be effective in learning and development strategies for technical experts.

Figure 7.1

Leadership or management development undertaken at current organisation

What works in leadership development strategies?

As can be seen in Figure 7.1, our case study organisations used a range of approaches to develop leadership skills among their technical experts. The most common were in-house or external development programmes, but experience-based learning was also common, especially coaching, mentoring and giving more responsibility.

Learning and development programmes

Learning and development programmes play an important role in fostering leaders, and this is no different for technical experts. Well designed programmes can cover a wide range of theoretical and experiential learning – including themes such as resilience, situational leadership, having difficult conversations and personality types – and often blend this with more practical content, for example through coaching or action learning.

Some of our participating organisations structured their leadership development programmes into stages. For example, an initial programme might get managers to think beyond their role and organisation to how they form part of a broader community. Following this a second programme would look more specifically at leadership, focusing on their experiences of managing and being managed, personality tests and peer feedback.

Below we outline some of the key elements of successful learning and development programmes for technical experts.

High level programmes delivered by experts in the leadership field

Technical experts respond best to learning and development programmes that are highly intellectually stimulating. One interviewee said that they often ask training providers to boil down their courses to half the planned length, so that the pace is not too slow for their managers: "They don't want to be patronised or have motherhood and apple pie" (Bill Parsons, ARM).

Experts also appreciate a strong evidence base to any theory that is presented, and may want any tools that are used (e.g. psychometrics) to be explained. They want trainers who are "rock solid" in their subject, just as they are experts in their own. Demonstrable expertise through published research or academic qualifications are often seen as important.

Technicl experts want trainers who are "rock solid" in their subject, just as they are experts in their own

"A lot of very good trainers are, if you like, actors. They know their syllabus very well, but they're not actually [experts in their field]; they're just a very good classroom teacher." Bill Parsons, ARM

"Should they get sniff that the person who's teaching them doesn't know what they're talking about, they'll lose confidence [in them] and can become dismissive." Alison Craig, Syngenta

Experiential learning

But a theoretical understanding of these areas is not enough, as for individuals and their organisations to really benefit, quite profound awareness raising and personal change is often needed. Experiential learning achieves this by combining the chance to practise new behaviours or

approaches with the space and time to review and reflect on one's management style. It enables people to experience different situations and challenges, try out different styles of leadership and receive grounded feedback on their behaviour; and as such, helps people to apply learning to their working lives. Typical forms include role playing and other interactive exercises and then discussing these in groups or one-to-one with others.

Experiential learning has been shown to work well for all groups of people, but some of our interviewees thought that it was particularly appropriate for their technical experts because they were very practically minded and preferred to act or debate, rather than to take notes on presentations or read large amounts of materials. This is notwithstanding the fact that they have a tendency to express a preference for didactic training, because that is what they are used to.

> *"They are used to … going into a classroom, receiving information, asking questions, then going away … I think they're very uncomfortable [with experiential learning] at first, but as they go through into it they find it is really quite positive, and they get a lot from it … It's given them an understanding of not only the subject, but also how to apply it." Chris Jones, BAM Construct UK Ltd*

Experiential learning works well within the context of learning and development programmes, which can provide a non-threatening environment in which to experiment and receive feedback.

Practically relevant learning

Several interviewees stressed the importance of learning and development being rooted in reality and applicable to the participants' work. As one interviewee put it,

> *"The classroom training can get a bit theoretical, and even if it's all interesting and all very good, people struggle to bring that back into the workplace" Stephanie Langouet, Cmed*

Interviewees stressed the importance of learning and development being rooted in reality and applicable to the participants' work

Learning must help them do their job better, prepare them for the challenges faced by leaders, clarify what behaviour is expected and most productive. Drawing on real life examples to illustrate theory will help to some extent, but people also need to be able to firmly locate learning in their own realities. This can be achieved through learning that is focused on people's jobs – for example, coaching, mentoring or action learning; it can also be achieved by tying in learning and development programmes with exercises that engage the manager in learning before and after the course.

But as well as helping people perform in their current jobs, learning and development must also help them deal with the sorts of challenges they will face as they develop as leaders. Specifically, for technical experts, it is important they learn to broaden their horizons outside their specialism, so that they can develop their ability as strategic thinkers.

One way of achieving this is to interact with people from other organisations or lines of work. For example, ARM co-founded 'The Learning Collaboration', through which it shares development activities with about 60 other companies. This reflects its 'open systems' corporate philosophy, which essentially asserts that:

"You're better off learning from the outside world than you are having a bunch of ARM people talking to each other about the company." Bill Parsons, ARM

Feedback and self-awareness

As discussed in Chapter 3, technical experts tend to lack insight into how other people can think and work differently from themselves. Thus, to help them become effective leaders, it is important that they develop self-awareness and a decent understanding of how they can affect how others feel and behave.

One extremely useful way in which leadership development can support this is to unearth and explain different personality types and inter-personal exchanges. This typically includes personality testing and analysis, and discussion of theoretical frameworks or models and relating them to individuals' experiences.
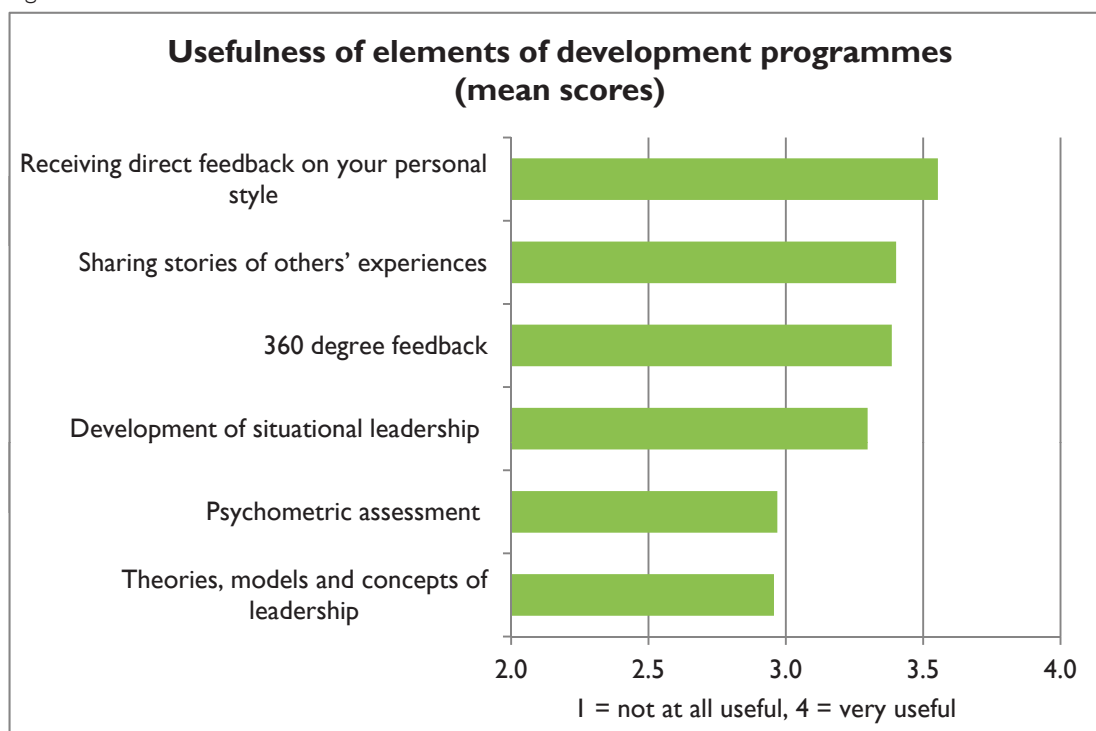
But what technical experts find particularly valuable is feedback on their behaviour and working styles. Being able to see ourselves as others see us can be quite enlightening and transformational, giving profound insights into our own personal makeup. For example, through receiving group feedback on a development programme, one interviewee recalled that he realised for the first time that initially, people often felt intimidated by him and only when they got to know him did they realise he was approachable and a 'normal person'. This had a lasting impact on his behaviour:

"What I started to realise was that actually I could be a lot more effective in my dealing with people if … [resisted] putting on the mask, thinking, 'Now I'm at work I need to be serious' … I stood back from that and said, 'No, I actually need to be a bit more myself.'" David Connelly, Cmed

Feedback often works best incorporated within learning and development programmes, where the main focus is on helping others to improve. Indeed, it often ranks among the most useful elements of such programmes (see Figure 7.2).

By contrast, in the day-to-day work environment, it can be hard to get the honest and constructive feedback that is most conducive to such deep realisations. On the one hand, because of the centrality of critical thinking to their work, technical experts are often seen to be deficit oriented and lacking in emotional supportiveness. As a result, feedback can be highly critical, even "brutal" as one interviewee put it; and although they can be outwardly very resilient to this, a more constructive approach is seen to be more effective. On the other hand, as is more typical in general, some of our interviewees saw a common reluctance to give people honest and frank feedback. This seems to be particularly the case with feedback that forms part of appraisals, as discussions of performance, pay and promotions may detract from the focus on learning and development.

Figure 7.2:

Usefulness of elements of development programmes (mean scores)

Element	Mean score
Receiving direct feedback on your personal style	~3.55
Sharing stories of others' experiences	~3.4
360 degree feedback	~3.38
Development of situational leadership	~3.3
Psychometric assessment	~2.95
Theories, models and concepts of leadership	~2.95

1 = not at all useful, 4 = very useful

But despite these difficulties, feedback should not be seen as the preserve of learning and development programmes. Above all, the key to effective feedback is in keeping conversations going, which is often necessary for it to take root. Indeed, although formalised feedback processes may help, the ultimate aim should be to develop a mature culture where colleagues are willing to point out unhelpful behaviour and make constructive suggestions, and for these to be taken on board for the good of the team.

Thought leadership is a very natural way in which technical experts can progress towards becoming established leaders

Developing thought leaders

One way in which technical experts can naturally progress towards becoming established leaders is though thought leadership. One interviewee described this as:

> *"The people right at the top of that technical expert space to be the ones defining what the organisation needs to know; and giving them accountability for teaching that into the organisation." Victoria Wylde, RBS Insurance*

This is distinct from leading a department or team of people, but is a valuable form of leadership among technical experts nonetheless.

The first step needs to be taken by existing leaders at all levels in the organisation, not only empowering employees to make decisions in the application of their work, but giving them the legitimacy to contribute to wider technical debates, for example through cross-functional forums or collaborations. It is also good to help them get recognition for their contributions beyond the organisation, so that they develop a reputation as an expert within their wider field or industry.

Embedding in performance measurement

Embedding the notion of good leadership in performance measurements can be an effective way of maintaining focus on it and ensuring it is valued by everyone. This can be done at an individual level, for example by looking at leaders' 360 degree feedback scores, or the engagement scores or performance reviews of their direct reports. It can also be done at a higher level, for example by measuring the increased revenue or cost savings from particular projects in which they have taken a leading role. Although it is often difficult to pinpoint the cause of such outcomes with certainty, we can still make decent estimates of the impacts of interventions.

However, as Sue Binks, Senior Consultant at Roffey Park, argues, care should be taken not to develop "blunt motivational instruments" that encourage a transactional approach, as one can incentivise the 'wrong' behaviour and "end up paying lip service to what leadership really means." Rather, any attempts at measuring the impacts of leadership must be balanced with a "more sophisticated approach to persuading people of the value of their engagement".

Role models

Finally a number of our interviewees stressed the importance of role models to emulate, talk to and learn from (see Chapter 6). Several had personally learnt through observing other leadership styles in various contexts from motivating a team to perform, to engaging an audience in a presentation, to simply running a meeting really well.

Role models can also be negative. One can learn from how it felt, for example, to work under "the boss that sweeps in, asks you questions and walks away because they've got the information they want" without giving one time to say what one wanted to say. But the positive role models tend to be the most influential, as the inspiration they give can be profound and long lasting.

One interviewee argued for trying to find leadership roles that experts could fulfil, rather than simply deeming them "inappropriate for the role"

Placing role models and mentors in the paths of aspiring leaders may be something that organisations can arrange, instead of relying on happenstance for these interactions to take place.

Overseeing leadership development

As already discussed, while there is truth in the generalisation that technical experts particularly struggle with the people aspects of leadership, this is not true for everyone. Thus, it is important to identify those who seem most suited to leadership and encourage them to develop towards this. At the same time, there may be some leadership skills that, as far as is possible, organisations would want all their technical experts to develop. Here we discuss these processes and how they are best managed.

Selection for leadership development

Several interviewees felt that there were some technical experts for whom it would be a struggle to develop into leaders.

> "There are some technically very good, strong people who are not well suited to management or leadership. You can spend years investing in training, coaching and mentoring them. Yes, they may well improve but I've come to the conclusion over the

years that with some people it is better to play to their strengths rather than coach their weaknesses." David Connelly, Cmed

However, identifying these people is not black and white, as it was about the desire to learn and become leaders as well as latent capability. Thus, the organisations tended in general to be encouraging, but also balanced the likely gain against the resources needed.

"I would take a pragmatic view … I think with some individuals who show no aptitude and no interest, why try? You're pushing water uphill and, actually, you're probably de-motivating someone who's [otherwise] making a very valuable contribution … If it was someone who had interest but less attributes, we would invest in [them and] … make an effort." Alison Craig, Syngenta

Indeed, one interviewee warned against being overly selective in leadership development, arguing that organisations should try to find leadership roles that people could fulfil, rather than simply deeming that they are "inappropriate for the role". He explained,

"A very good analyst who has good ideas can manage another team of very good analysts. I doubt you would get maximum benefit from an analyst leading a team of non-analysts (e.g. HR, Underwriters), but there are areas they can run and they should certainly be recognised and rewarded for the benefit they bring to the company." Andrew Goldby, RBS Insurance

The motivation to develop as a leader

It is important to have the right motivation to develop as a leader – both to be reasonably sure that it is the sort of role one wants, and to "Be like that sponge: be active in wanting to learn and wanting to improve" (David Connelly, Cmed). In one of our case study organisations, there was an enthusiastic uptake of leadership development programmes, as they held a kudos within the company: to be invited to attend one was "seen as a good thing".

However, this was not the case across the board. In some cases, people may need more guidance and discussion to be clear about their ambitions:

"You want to test where they think they're going to be or where they want to be in five or ten years' time and advise accordingly. For example, if they are saying, 'I want to be the expert in XYZ technology and I want everyone to look up to me as an expert', then advise they stay in the technical area, unless they clearly are not capable of succeeding. But if they are saying, 'Well, I'd love to do this project and that project and influence this activity' and so on, you start thinking, 'There's only one of you and we can't clone you and you're not going to work extra hours beyond what you're already doing, so we're going to have to find a way for you to be able to influence more projects.' And generally that will be some form of leadership." Peter Middleton, ARM

But several interviewees commented that experts often needed to be persuaded to engage with leadership development and in some organisations it had been made obligatory for all managers at certain levels. This scepticism can be quite entrenched: one interviewee recalled that before the first cohort of a learning and development programme, the lead consultant asked her what a

successful programme would look like, "and I said, 'Well, they come back after coffee'" (Head of Learning, Bioscience Research).

Part of the problem is that many technical experts are respected in their field and wholly unused to being challenged on their competence. As discussed in Chapter 3, there is also a lack of value placed on leadership. Thus, one interviewee felt that, while many of their managers asked for leadership development in their annual reviews, this was often mere "lip service":

> "[Leadership] seems to be something they're very comfortable saying they're not very good at … However, when you start to actually roll it out, take-up rates are quite low. We're seeing, I think, a population where it's much easier to admit you don't know how to manage people than it would be say, 'My technical skills aren't up to scratch'. So if you force them to give you a development area, it will be that … they don't value it as important, so it's almost: 'I'll tell you what I'm not very good at but it'll be things that aren't very important'" Victoria Wylde, RBS Insurance

Various approaches can be taken to persuade technical experts of the importance of leadership development. Some used argument to drive home the message, for example:

> "How much time do you actually spend with a team that's dysfunctional? And if you could create and lead a team that was effective, and you could have some critical conversations, and you didn't have that scientist hanging around that's not going to make it but you're too scared to have a conversation; if you could tend to all of that … you could do more science because … you wouldn't have to spend your time on squabbling kids, really." Head of Learning, Bioscience Research

Others coaxed people, for example saying:

> "It may not seem to be applicable at this stage but go on the course. At least you'll get an awareness of what people might expect from other areas and you'll be surprised just how applicable it is for what you're doing now" Peter Middleton, ARM

However, the strongest influence can be the positive reputation that leadership development gains within the organisation, as people come back from programmes and talk to their colleagues. In part this is a question of the prevailing culture or commonly held views changing in the organisation: for example, a shift away from a perception that attending development courses is a sign of weakness. Changing such views – and the value placed on leadership itself – can be achieved but will take time.

Parallel career structures

A final strategy that merits attention is for organisations to develop parallel career structures, through which a more flexible notion of leadership can be pursued. The basic argument for this is that experts can stumble into people management because it is the most straightforward way of getting a promotion, yet it is sometimes not an avenue that is suited to them.

"You get the classical thing, where people get promoted for their technical capability and their promotions outstrip their leadership ability, which [can be] fine as long as they stay in a specialist role, but then starts to become an issue if they need to become more generalist" Alison Craig, Syngenta

"As you make the jump from a technical role into a team management role … you're benchmarked against people who are used to managing people. So it's very easy to end up in a situation where very good technical experts don't have the skills to manage people well; therefore, they struggle to get promoted and they leave." Andrew Goldby, RBS Insurance

If organisations are to avoid this situation, it is important that they offer alternative career paths to the standard route of people management. This can be done by identifying different sorts of leadership that the organisation needs and making sure that they are all well remunerated. For example, line managers can be distinguished from project managers, who draw on resources from different teams, but do not have ongoing responsibility for looking after the staff they use. Further, 'technical leads' can be recognised, who act as consultants as well as thought leaders (see above); these people need influencing skills but do not manage people in any way.

There is likely to be a limit to how far one can progress without taking on line management, as heads of departments will always have managers working under them, and to operate well at the most senior levels, one will usually need to excel in all areas of leadership (e.g. strategic thinking, influencing). Nonetheless, parallel career structures can offer people with technical specialisms a reasonable amount of parity with leaders who have people management responsibilities.

Parallel career structures can offer people with technical specialisms a reasonable amount of parity with leaders who have people management responsibilities

Our case study organisations varied as to how well they had developed parallel career structures, but it was something most if not all aspired to.

"It's perfectly possible [to have a system] … where you can evidence that you're outperforming your existing role, you're doing it faster, smarter, better, more productively … Therefore, you could maintain the accountabilities for the role that you're doing but … have some more stretching objectives. If you can deliver the role that you're doing in four days a week because you're that much better than what's required for that role, you've got a day a week to be spent doing some innovation or research or X, Y, Z." Andrew Goldby, RBS Insurance

Key to making it work is clarifying what other responsibilities expert leaders could or should take on. For example,

"It's no longer good enough just to be an expert in your own … core area. We expect you to interact, both internally and externally with experts in your own field and be seen to be a world class expert in your own field, but also to be able to reach across … some of these technical boundaries and actually be able to interact with people in a different technical field to generate something new." Alison Craig, Syngenta

By giving this degree of clarity and making sure that the standards are set suitably high, organisations can avoid the perception that parallel career paths exist to give people an easy life and allow people "to say, 'Well, I don't really want to manage people so I don't have to'" (Andrew Goldby, RBS Insurance).

What are the impacts?

Finally, although this study is not an evaluation of the impacts of leadership development, it is important to be clear about the perceived benefits.

Some interviewees felt able to pin leadership development work to organisational benefits. For example, Cmed had been able to reduce the amount of time it spent on certain key activities, which was attributed in part to leaders having fostered a culture in which employees readily offer support and challenge. And BAM found that it was successful not just in getting onto tendering frameworks, but in winning more work than competitors, which was partly put down to the people and leadership skills it had helped its managers develop.

Other interviewees stressed that it was too difficult to gauge the impact of leadership development in measurable performance outcomes, especially because of the nature of their businesses. Nonetheless, the benefits in how the organisation worked and what it achieved were felt to be tangible and undeniable. This was seen in how strategies were formulated, in how well teams worked together and in the development of broad organisational cultures that were more productive (e.g. respectful, involving and cooperative).

> *"A lot of the learning for some people was sitting in a bar talking to somebody who'd had the same problem and talking through what they did; and they went back and tried it and it worked. You know, how do you ever capture [that impact]?" Head of Learning, Bioscience Research*

Summary

Leadership development programmes were commonly used in our case study organisations. They were seen to be particularly effective where they were high level programmes delivered by people who were convincing specialists in the relevant subjects; and where they were based on an experiential style of learning and content that was practically relevant to participants' jobs. Other effective components of developing leadership were feedback (which worked well incorporated within leadership development programmes), supporting thought leadership, embedding leadership capabilities within performance management systems and having good role models in existing expert leaders.

In overseeing and managing leadership development processes, it is important to balance the selection of those who show aptitude and motivation to be leaders with developing leadership skills in technical experts across the board. There is also another important balance to be obtained between, on the one hand, the need to foster an organisational culture in which leadership and its development are valued; and, on the other hand, ensuring that technical experts do not feel undervalued themselves if they do not wish to move into leadership.

All in all, successful strategies to develop expert leaders will be multifaceted in technique and measured in the way they are applied. We hope we have shed some light on key aspects that should be considered in this somewhat delicate balancing exercise.

Conclusions

The stereotypes about the personalities and leadership skills of technical experts are various and prevalent. This makes it a delicate area to research, as one must avoid two potential pitfalls. On the one hand, there is a danger of churning out tired and unhelpful generalisations about 'techies', who are often seen as simply deficient in people skills and dismissed as nerds. On the other hand, where there are genuine issues, these should be addressed head on, steering clear of glib platitudes and truisms.

It is important not to over-generalise. Like any group of people, technical experts will have as many differences as similarities and, in line with this, we have not given a detailed blueprint for how to develop them as leaders. Nonetheless, looking across a range of sectors, our research shows enough commonalities to confirm that, for the purposes of leadership development, it makes sense to think of technical experts as a group. Drawing on various sources, we have attempted to uncover and explain common traits of technical experts as leaders and challenges they face in developing leadership skills. We hope you find our account sensitive, appropriately nuanced and useful.

Below we present our main conclusions from this study.

Leadership in technical organisations

Good leadership is crucial for employee engagement and motivation, successful change management and ultimately, organisational performance (Alimo-Metcalfe and Alban-Metcalfe, 2001; Gifford et al, 2010; Kotter, 1995). What is more, it is becoming increasingly important in highly technical organisations, as competition and the changing face of the industries drive a need to collaborate with and influence a more diverse range of people. Technical organisations can no longer afford their experts to be permanently 'heads down', burrowed away on their individual work areas. They need experts who can contribute to strategic discussions, actively facilitate the change process, guide and support the development of other employees, and raise the profile and influence of the organisation.

Technical experts and leadership roles

There is a strong case for having experts lead other experts. For a start, experts have career expectations and deserve opportunities to develop them. As a group, they tend not to be the most naturally talented leaders, but this is not across the board (some very clearly do make natural leaders) and even those less skilled should not be routinely disregarded. Rather, organisations should look at what leadership roles they can take on so they can enjoy a fruitful, meaningful and motivating career.

What is more, if the most naturally skilled leaders are consistently those without relevant technical expertise, taking a 'best candidate' approach to selecting and developing leaders is short sighted from an organisational perspective. As has been found in the NHS, it can lead to a layer of decision makers and leaders who lack understanding of the organisation's core operations, are seen to

make questionable decisions and are unable to get employees onside for proposed changes. It is self defeating to have a group of leaders who are thought of as 'Mr. Managers', as one interviewee put it, 'articulate bureaucrats' who do not understand the business. Developing experts into leaders helps ensure that the leadership has credibility and authority and is able to communicate to employees in language they can relate to. It also provides role models for other technical employees, encouraging them to develop others, become thought leaders or contribute to strategic discussions.

It should be noted that technical knowledge is an enabler of leadership rather than an essential part of it, and its importance does wane over time, as leaders build credibility and become less involved with technical detail. Thus, we would argue that there may be a place for bringing in leaders from other industries, but expert leaders must constitute at least part of the picture.

Why do experts struggle with leadership?

Many technical experts are not sure leadership is something they want to develop. There are clear benefits to be had for technical experts in becoming leaders – most notably, career progression, broadening their sphere of influence and building capacity by helping other people develop. But many experts also see drawbacks, including losing touch with their specialisms and having to deal with people management.

In behaviour too, our research shows that, in a number of key areas, technical experts exhibit good leadership less than managers from other backgrounds. In particular, the analysis we conducted of our Management Agenda data showed that, compared to 'professional' managers, 'skilled / technical expert' managers:

- Set direction with their teams slightly less often.
- Communicate slightly less with their reports when it comes to gaining buy in, canvassing opinion, encouraging ideas and suggestions, and listening to feedback.
- Hold one-to-one meetings with their reports slightly less often.

In seeking to understand this and further explore aspects of leadership development that technical experts often struggle with, or which do not come naturally, we have identified a number of key characteristics, which we would summarise as follows:

- Stick to what you know. An 'expert culture' can be seen to exist, in which people expect to be deferred to, or (if it is not their area of expertise) to look to defer to others. This poses a challenge when moving into strategic leadership, as one needs to both step outside one's field of expertise to comment on and question unfamiliar issues, and listen to other people's views one's own area of specialism.
- Decision making. A strong reliance on facts can result in a paralysis in decision making, because too long is spent analysing and debating. Leadership requires one to work with ambiguity, especially with today's increased rate of change. Learning to use instinct and work with unquantifiable risk is a leadership skill that does not come naturally for many experts.
- Influencing skills. There is an important distinction between winning an argument and winning people over. Technical experts often fail to see the latter and often stop listening to other views once they have reached their own conclusion. This weakens their ability to influence

people, as they are not considering what is the right thing to say at what moment and to whom, or how to phrase things in a way that will 'land' well with their interlocutors.

- Leading organisational change. Similarly, there is a tendency when dealing with organisational change to focus solely on what makes logical sense. This misses the emotional side: for example, that people may struggle with change because they feel insecure about the future setup or fearful of what they might lose.

- Individual thinking and developing other people. The very notion of expertise places a strong value on individual thinking and ability. This has implications for how developing other people is seen in an 'expert culture'. Experts are generally happy to teach, as this is a direct transferral of knowledge, but they tend not to value mentoring or coaching, where one spends time encouraging, guiding and helping people to think and learn for themselves.

- Deficit orientation. Technical experts are commonly very strong on critical thinking, which is crucial for analysing complex data. But applied to interactions between people, this can result in being overly deficit orientated, for example, slamming another person's idea in front of them with no regard to how they feel, or offering robust feedback without balancing it against more appreciative opinions.

- Managing underperformance. Paradoxically, however, another common tendency is to shy away from having difficult conversations, in particular regarding underperformance. Technical experts may not have the emotional intelligence to manage this situation adeptly. Further, they can struggle to understand the reasons for poor performance, which is not simply about a lack of skills or knowledge, but can also be due to low confidence or difficult relationships with colleagues.

What are their natural strengths?

However, for technical experts who can overcome these challenges, or those who do not find these challenging areas, the signs are that they can make excellent leaders. They can make enormous strategic contributions, as they are able to hold and make sense of complex information. They can also make excellent role models for technical populations. Because they can speak in the right 'language' and think in the same way, they are able to relate to technical employees more closely than leaders who lack their technical background, which means that they can be particularly inspiring and motivating leaders.

We also found that some of the stereotypes of technical experts do not bear out in reality, at least not across the board. In particular, technical experts are in some respects less individualistic than is imagined. It is true that they place such a strong value on individual knowledge that they often do not see the importance of supportive styles of developing other people. But this does not mean that they are not collaborative. On the contrary, we found that they are highly inclined to working in small teams. Nor does it mean that they are uncommitted to the organisation. While we found support for the view that academics often have low levels of commitment to their host universities, our research equally shows that this is not something common to technical experts in general. Indeed, if their purpose is aligned with that of the organisation, they can clearly have very strong loyalty and commitment.

The capacity for growth

There is a difference between ability and preference. Some things may not come naturally to us, yet we may still be able to do them and, if we choose to apply ourselves, improve in them. Personality testing is just a starting point, providing a base from which we can target our development as well-rounded professionals and leaders more effectively. It does not mean that we are excused certain types of work, such as leading teams.

There are a number of ways organisations can develop leadership skills among their technical experts. For learning to be effective, it needs to focus both on practical skills acquisition and promoting greater self-awareness. Learning and development programmes need to be top notch, delivered by experts in the field, stimulating and preferably fast paced.

There also needs to be a 'burning platform' for technical experts, so they see the need for leadership and understand the consequences of staying where they are. This is not something that should be taken for granted. There is a risk that experts do not get beyond conscious incompetence, because the very notion of leadership can be counter cultural to experts and they are often relatively content to be unskilled in it.

But once technical experts can be convinced of the importance of leadership, a great opportunity opens up. As Cohen and Cohen (2005) remark, they have an unusually high capacity, motivation and willingness to learn and improve. If this is mobilised for the development of leadership skills, the battle will be half won.

Building the right culture and systems

Following this, the future state must be anchored so that experts do not revert to old ways of working. Making sure that senior expert leaders are visible role models and incorporating leadership into performance management are two important ways of doing this. It can also help to make leadership development programmes common knowledge and push the view that they are a good thing to be doing. If they are seen as a sign of confidence in an individual's potential, rather than an indicator of weakness, it will make others more keen to get involved.

Nonetheless, while leadership is clearly something that can be developed in most people, there may be some technical experts who have such little natural aptitude or appetite for it, that one can question whether it is worthwhile. Organisations should consider how to accommodate these people by way of a parallel career path, as this will make sure that they can progress and stay motivated and committed.

This is a balancing act. It is paramount that these people do not determine the organisational culture. The expectation and the norm should be that managers do develop people skills and leadership capability. The bar needs to be set fairly high, not only to push existing managers to improve their leadership skills, but so that more people with a natural aptitude for leadership are attracted to the organisation because they see it as a place in which they will be able to thrive.

The rewards for the organisation

Technical experts are clearly part of the future of leadership in knowledge based industries. To help them develop into effective leaders, organisations should build a multi-faceted approach

and give recognition to different forms of leadership, including thought leadership within the organisation and becoming externally influential within one's field.

Building a systemic approach that acknowledges the importance of organisational culture is complex and one needs to regularly make sure that it is serving the organisation's needs. But the interviewees in this research were clear that the effort was worthwhile. The reward will be to generate inspiring leaders with distinct credibility. These leaders will in turn help attract and retain the best expert talent. As role models, they will help foster a culture of leadership, in which managers and mentors throughout the organisation help others to reach their potential. And as strategic leaders and ambassadors for the organisation, their technical understanding will give them authority and influence. They will be crucial for driving forward highly technical organisations.

Appendix 1: Case study organisations

This report is based on research conducted in seven organisations (see Chapter 1). Here we present a summary of each organisation, including key strategic challenges and their expert populations. Two of the organisations have been anonymised for reasons of sensitivity.

ARM

ARM Holdings is the world's leading semiconductor intellectual property (IP) supplier, designing and developing digital electronic products. Headquartered in Cambridge, UK, and employing over 2,000 people, ARM has offices around the world, including design centres in France, India, Sweden, and the US.

Established in 1990 and now a FTSE 100 company, to date ARM has licensed its technology nearly 750 times to more than 250 ARM partners, who have shipped over 25 billion ARM-based chips.

Strategic challenges

One of the strategic challenges currently facing ARM is its very high market capitalisation. If it were possible to measure all companies on how much they're worth per share, ARM would be one of the highest-valued public companies in the world. This creates challenges since ARM must sustain its extremely high performance in profitability and growth.

ARM competes in a very competitive market place that has the ongoing challenges of quickening time to market, cost sensitivities as well as enabling innovative products for a wide range of end devices.

In order to meet these challenges, ARM needs to be amongst the world's most innovative companies, consistently keeping ahead of the game by diversifying its technology and increasing market share.

A key skill for ARM as a business is managing relationships within the ARM Connected Community®. This refers to about 900 companies who are suppliers, competitors, and customers, sometimes simultaneously. This ecosystem includes Microsoft and Google, as well as most of the other leading players in the world of technology, all of which use ARM technology as their underlying chip architecture, producing products ranging from small industrial controllers to large infrastructure equipment. This huge collaborative network is both flexible and dynamic and, says Bill Parsons, ARM's Executive Vice President of HR, inherently more likely to produce innovation because it can encompass more diversity than a single organisation. It also demands collaborative working, internally and externally, to a very significant degree.

Expert population

In order to achieve the level of innovation on which its business model is based, ARM recruits what Bill Parsons calls "literally world-leading boffins; the best talent in the world." On average, Parsons estimates, IQs in this population are "Mensa level." A significant proportion hold first class degrees and are highly numerate, with degrees mainly in computer science and electronics from top universities.

Roughly two-thirds of ARM's workforce works in designing the digital electronic products for which the company sells IP licences. Outside the engineering population, sales and legal functions work on delivery to ARM's clients. However, most of the workforce, whether in design, sales, legal or administrative roles, started their careers as electronic engineers. As Bill Parsons observes, "You can't really operate in this business unless you are an engineer." Even Bill, the HR director is an engineer by training.

BAM Construct UK Ltd

BAM Construct UK Ltd is part of the European construction enterprise, Royal BAM Group, which consists of 25 companies around the world with some 28,000 employees. Its origins in the UK go back to 1874. The company has a large network of offices covering England, Scotland and Wales and projects in the education, retail, mixed use development, health, office, leisure and law and order sectors.

Strategic challenges

BAM's policy is, wherever possible, to retain, develop and promote people from within the organisation, and maintaining this talent pipeline is seen as a key strategic challenge. Equally, attracting and recruiting young talent in the form of trainees and graduates is seen as important for the future of the company, even in the face of the current economic downturn. BAM sees this policy of internal recruitment as providing continuity and consistency through people who have a thorough understanding of the organisation's culture, although it recognises that there are potential downsides; a lack of 'new blood' can sometimes limit innovation and entrepreneurship.

Another key challenge is to steer a course through the recession, ensuring that the organisation is in good shape as the economy recovers. One element of this is maintaining and improving the company's safety performance. Effective management systems having been established, safety is now seen as a behavioural and a cultural issue that involves empowering, engaging with the workforce throughout the organisation, leading by example, and making sure that people have the right attitudes and values in place to achieve this change in behaviour.

Another challenge created by the recession is the decision by government to end the Building Schools for the Future programme; BAM Construct had invested considerable time in several of these projects and was in a strong position to win the contracts associated with them. The challenge has been how to replace these contracts with other work.

Expert population

BAM employs a large population of technical experts in two main areas; construction and commercial. In the construction discipline people typically have a degree in construction management, building management or civil engineering. They may also hold professional membership of the Chartered Institute of Building, or the Institution of Civil Engineers. The construction discipline also includes specialists in other areas such as construction planning, design management and building services.

The commercial area employs quantity surveyors who hold a commercial degree and may also be members of the Royal Institution of Chartered Surveyors or Chartered Institute of Building. Outside these key areas a number of specialists support BAM's projects; for example those

working in finance, legal, insurance, personnel, safety and environment roles. These people will also typically hold a degree and membership of a relevant professional body.

Bioscience Research

'Bioscience Research' (a pseudonym) is a multi-centre scientific research, training and funding body. It supports the work of over several thousand scientists and research students in institutes and universities in the UK.

Strategic challenges

A government-funded organisation, Bioscience Research is, like many other public sector organisations, examining the strategic implications of the coalition government's spending review, announced in 2010.

The organisation is also in the process of implementing a new structure which will give more operational independence to the institutes it funds. Also, in response to the Government's controversial Agenda for Impact (see Corbyn, 2009) academics will now be required, in return for up-front funding, to complete an "impact summary" for grant applications, setting out how they expect the work to be of benefit. This represents a significant move away from "blue sky research" and into applied research studies.

This change in funding will also have implication for leaders in the institutes funded by Bioscience Research. Instead of ring fenced budgets for specified areas they will be given 'Strategic Programme Grants' and will be responsible for spending these in line with Bioscience Research's strategic priorities. Leaders under this new structure will have to quantify the impact of the research taking place in their institutes, sell on their techniques to related organisations, engage with the public, and create laboratories that other people can come in and use.

Expert population

Leaders in Bioscience Research are usually senior research scientists. They will typically hold a PhD and will be in their third or subsequent research position.

Cmed Group Ltd

Cmed Group is a unique contract research organisation which provides clinical services and technology to drug development organisations world-wide. Its study delivery teams use its own proprietary e-clinical technology, Timaeus, to deliver clinical research for its clients. Established in early 2000, Cmed employs more than 300 people. It is headquartered in Horsham, UK, and has offices in Romania and the USA.

Strategic challenges

Cmed sees the need to grow its business as one of its key challenges. This planned growth is the result of considerable success, which the company attributes to long term partnerships with clients, and its ability to deliver a high quality service at a fair price. Cmed is also unusual in offering expertise across two divisions; contract research and technology. Over ten years it has developed knowledge and skills in early phase studies, translational medicine, and especially complex design studies.

The challenge for the company is to establish how best to achieve this growth, how long it will

take and how to take its people along with the changes. It has recently revised its business strategy, expanding its portfolio of services, giving it access to more clients. Whilst its business will expand, recruitment is not intended to match the extent of this growth. Instead, Cmed is examining areas in which it can increase efficiency, save time and improve technology in order to deliver its clients' projects better and faster than any other organisation on the market.

The organisation is aware that with growth comes the need to think differently; to balance challenge with developing its people, modelling roles against the requirements of the market. As well as technical excellence, it is increasingly important to employ people skilled in client interactions. The challenge is not just delivering a product; it is in how you deliver it. Stakeholder management must also include regulatory bodies; in a highly regulated area good relationships and strong compliance are key to paving the way to challenging and developing regulatory processes; for instance in the introduction of new technology in clinical trials which may change the way in which they are conducted.

Cmed operates in a highly regulated area and Biometrics in particular is very process and system-orientated. As the company grows, it will be necessary to scale and simplify what might otherwise become enormous and difficult to manage processes. Equally, the company sees a need to develop more innovative, less process-driven thinking in some parts of its business, recognising that while routine is essential to quality, innovation is key to improvement and expansion.

Expert population

Cmed employs technical experts from a variety of disciplines, but often those with a background in a clinical area, for example a degree in biology. Alternatively they may have a degree in computer science or programming; some have both. The level of qualification varies; people may enter the company with a bachelors degree, a masters or a doctorate.

Countywide Foundation Trust

'Countywide NHS Foundation Trust' (a pseudonym) provides a range of specialist services to well over 10,000 people and employs over 2,000 staff in a variety of clinical and non-clinical roles.

Strategic challenges

Two issues lie behind the key strategic challenges currently facing Countywide NHS Foundation Trust. The first is the Health and Social Care Bill 2011, which represents the biggest change in the NHS since its foundation. At the time of writing the Government had recently completed a listening exercise on the bill, and the NHS Future Forum had published its recommendations for NHS modernisation. The Government published its response on 20 June 2011, setting out the changes it intends to make.
Should the Health and Social Care Bill be passed, the trust will operate with a greater degree of independence from the Department of Health. This level of freedom will create a very different set of strategic challenges from those faced within the current NHS model, including the opportunity for the trust to decide to operate in areas currently not strictly within the remit of a foundation trust. It is possible that healthcare commissioners in the future will be GPs who will want one package of care for someone with two unrelated conditions, not two fragmented and largely unrelated services. The trust sees this freedom to integrate its services as both a challenge and an opportunity.
At the time of research, the trust was also considering a proposal to merge with another NHS

trust. The proposal was designed to reduce overall running costs, enhance clinical services and improve staff development. Should the merger take place it would represent a significant restructure of both trusts, including a new management structure and board.

The trust's Director of Operations described the need to operate in an environment which was much more competitive and customer focussed than the traditional NHS model.

> *"A few years ago … we simply used to receive over a hundred million pounds a year. And … no matter what we did, you would still receive that money. Clearly in the world I'm describing, the income is linked to … a level of activity and if you don't do the work, you don't … get paid." Director of Operations, Countywide Foundation Trust*

Customer relationships, efficiency and understanding costs and income are all set to become increasingly important and must become part of the trust's culture.

Expert population

The trust employs a range of technical experts with a range of clinical backgrounds.

RBS Insurance

RBS Insurance is the largest personal lines insurer in the UK. It sells and underwrites personal and business insurance over the telephone and internet as well as through independent brokers and partnerships. Its wide range of businesses includes household names like Direct Line and Churchill. Its international division also sells general insurance in Europe.

Currently part of the Royal Bank of Scotland Group, by 2013 RBS Insurance will be a fully independent company.

Strategic challenges

RBS Insurance summarises its current key challenges as increased claims, competition and regulation.

RBS believes that a prevailing 'compensation culture' has created an increase in insurance claims, often erroneous, which have an impact on policy pricing. The insurance markets in which it operates are highly competitive, ever-more regulated and increasingly innovative.

For example the Financial Services Authority (FSA), the regulator of the financial services industry in the UK is currently undertaking many "skilled person reviews", making sure companies in the financial services sector have the relevant skills within their organisations. In the wake of the global financial crisis there is also significantly increased regulation of the amount of risk to which companies can expose themselves. It is against this backdrop that RBS Insurance must seek to sell policies and increase the profitability of the business.

Expert population

There is a significant expert population across a number of areas in RBS Insurance. This includes actuaries, statisticians, underwriters, analysts and accountants. Some people, who specialise in negotiating bodily injury claims, must also have specialist medical knowledge; others have legal

accreditation through the Chartered Insurance Institute.

Syngenta

Syngenta is a world-leading agri-business committed to sustainable agriculture through innovative research and technology. With more than 26,000 employees in over 90 countries, its work aims to increase crop productivity, protect the environment and improve health and quality of life.

Strategic challenges

Syngenta considers innovation to be at the heart of its strategic challenges. It aims increasingly to focus on providing integrated solutions for its customers, rather than on producing specific products. This focus requires a more intimate level of relationship with customers than one based on a traditional sales model. A long term partnership and understanding is necessary, as well as cross-category innovation in geneti cs, production, methodology and other areas.

Another challenge for Syngenta lies within the increasingly stringent regulatory environment in which it operates. And as with other large scale research organisations, cost efficiency in order to maximise return on investment is essential; an ongoing challenge is how to achieve that efficiency in an ever-more technically complex world.

Finally, Syngenta is also focussed on the global challenge of sustainability; of growing crops to feed an expanding population in a way that doesn't damage the environment. This creates the technical challenge of developing ways to improve yields so that more land need not be put into production.

Expert population

Syngenta's expert population includes the scientists working in research and development; legal, tax and finance specialists and engineers working in production and supply areas.

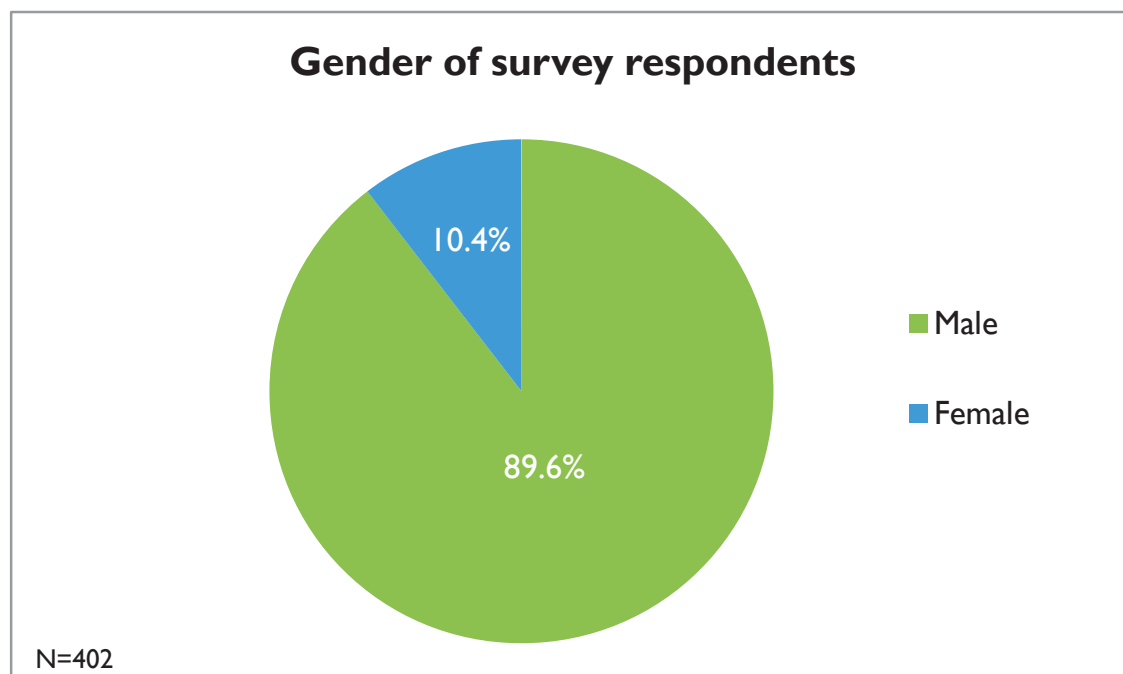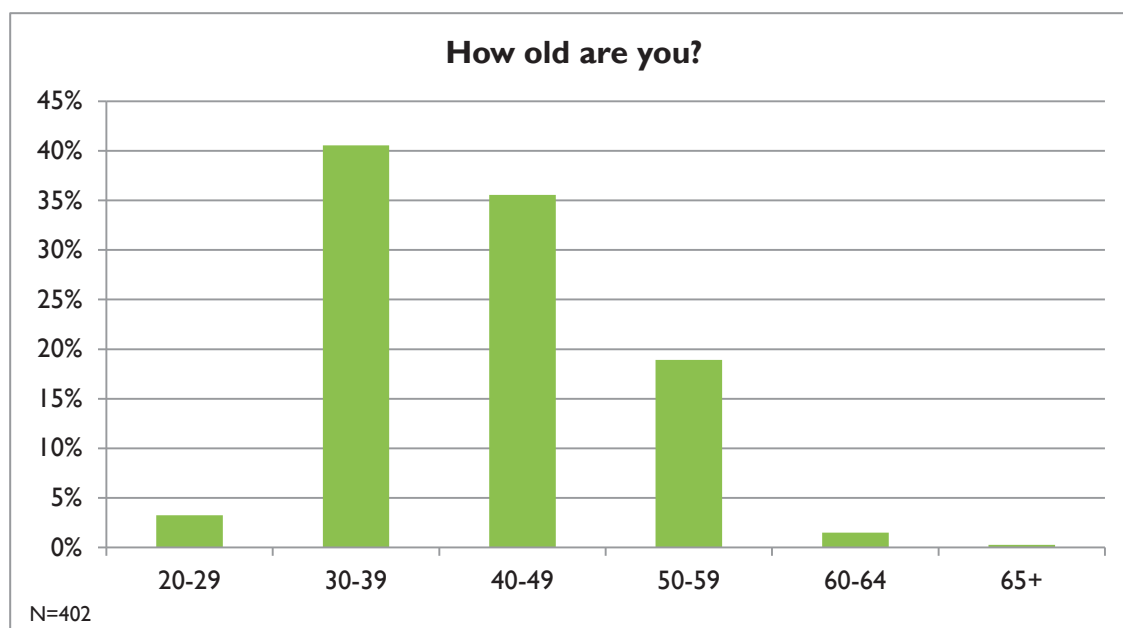# Appendix 2: Characteristics of survey respondents

Figure A1

Gender of survey respondents
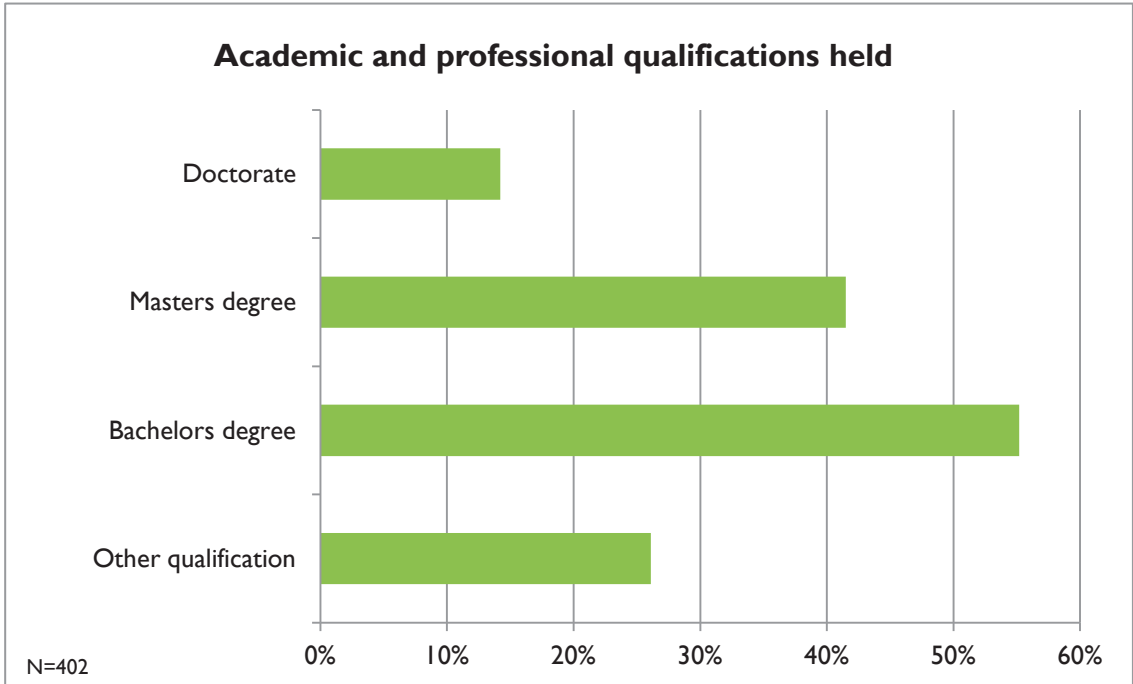

10.4%

89.6%

- Male
- Female

N=402

Figure A2

How old are you?

N=402

Figure A3

Academic and professional qualifications held

N=402

Figure A4

Main area of expertise

N=402

Figure A5

Are you based in...?

N=402

Figure A6

Leadership responsibilities in current role

N=402

Figure A7

Including direct reports and staff managed by your direct reports, how many people report to you?

N=367

Figure A8

How long have you been in a role that involves leadership responsibility?

N=356
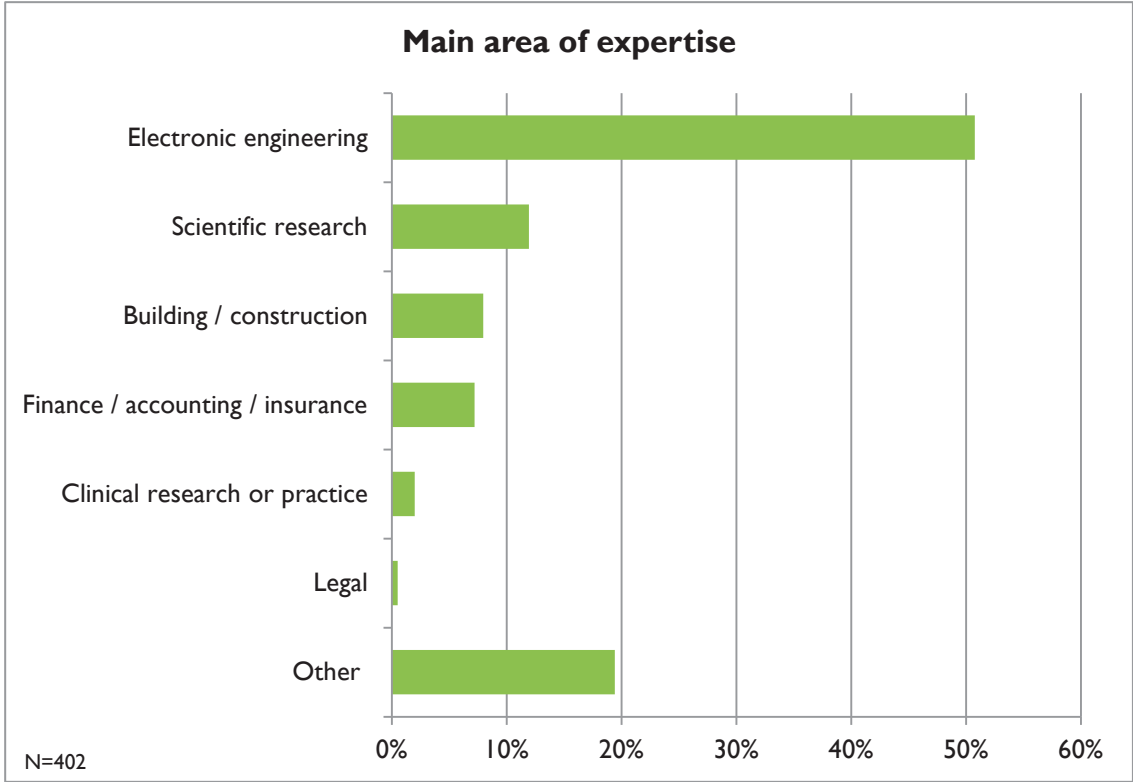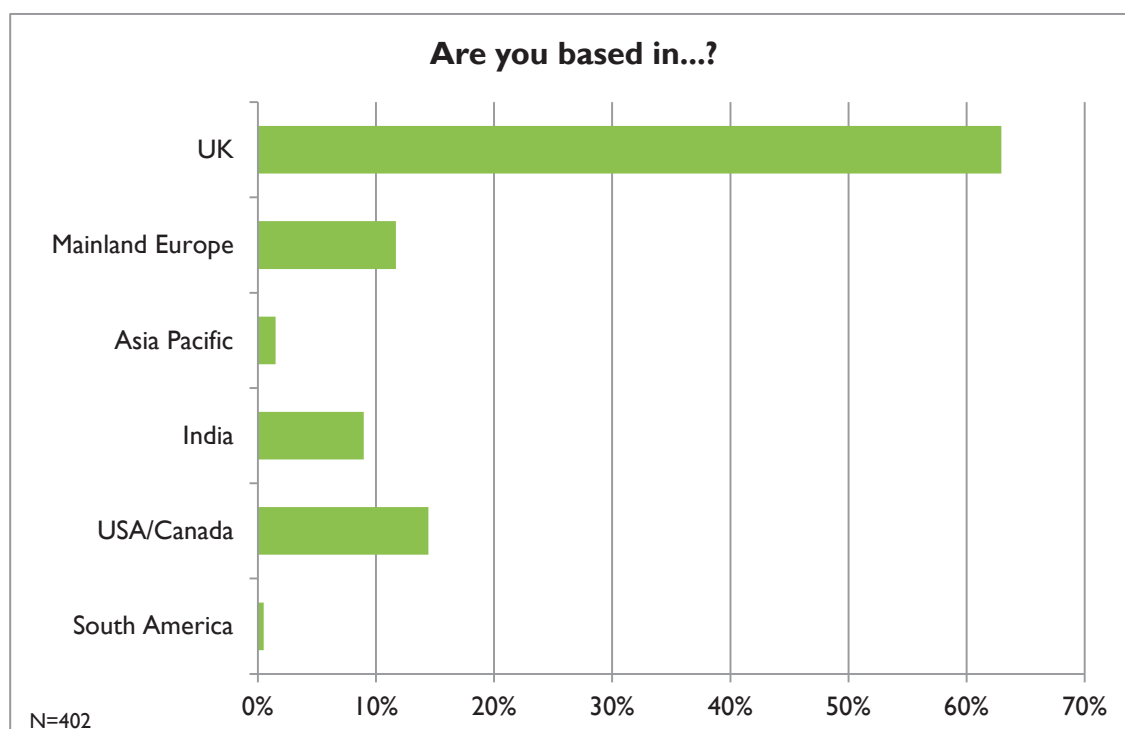
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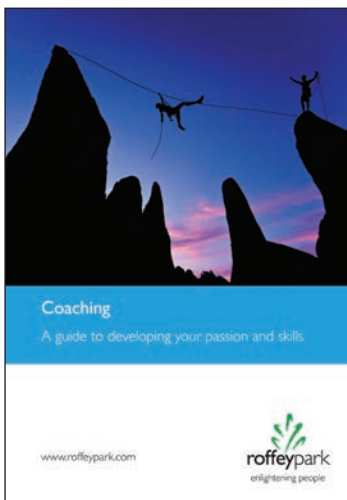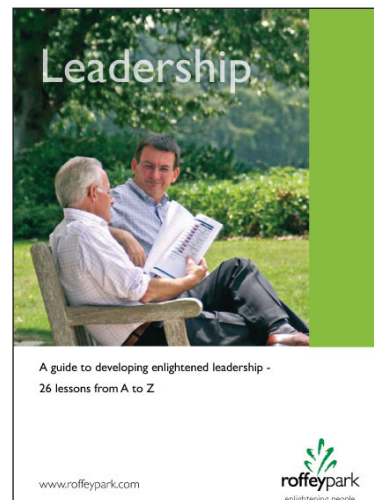
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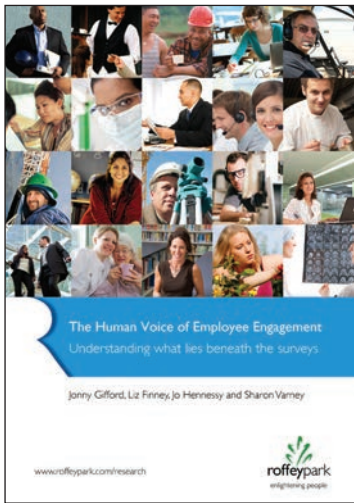
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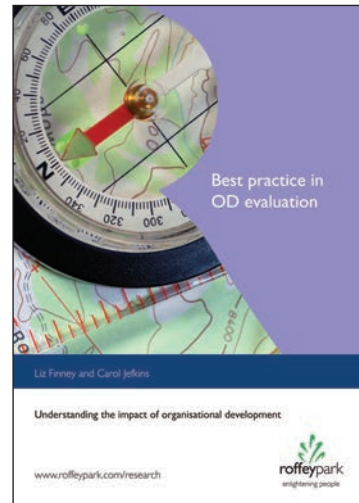
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People skilled in specialist technical or professional areas are often wary of taking on leadership roles. Those that do take the plunge often find a lack of development opportunities limits their success. Whether you are a technical expert in a leadership role or an HR professional responsible for developing people strategies for experts within your organisation, this research will help you to understand:

• Do experts need to be led by experts?

• What motivates experts to become leaders and what stops them?

• What are the common characteristics of technical experts and the impact of these on their leadership style?

• How do excellent expert leaders develop?

• What are the effective learning and development strategies to develop experts as leaders?