What are the challenges in turning great engineers into great leaders?

Leaders are critical to getting the most out of employees and engaging them in their role and the objectives of the business. The research by Marcus Buckingham and Kurt Koffmann on the 12 factors in high performing teams clearly demonstrates the direct impact that leaders have on performance.

This is not just a "nice to have", but is core to achieving high performance, outstanding profit and the highest safety standards. Here we outline the specific challenges for those in the manufacturing and engineering sectors in developing great leaders.

1. Spotting leadership talent

The very attributes that make brilliant engineers are the same attributes that can get in the way of making great leaders. All too often, an engineer's strengths, without careful adaptation, will be their weaknesses when it comes to managing people.

To become chartered, engineers need to demonstrate and strive for continuous improvement, find solutions that are well founded in robust research and show compliance with key processes. These require critical analysis, fault-finding, the rigour of a black/white answer and compliance to process – there is one right/best way. When applied to people management, these strengths may get in the way of more ambiguous issues.

A great technical manager may not necessarily be a great people manager.

So if we need different or adapted strengths, the challenge for manufacturing/engineering organisations is identifying people with the potential to become great leaders - great performance in a technical role, will not necessarily infer great performance in a leadership role. It's a classic" what got you here won't get you there".

Questions for managers:

Marcus Buckingham and Kurt Koffman set out these 12 areas of management responsibility, ranked in order of importance.

1. Do I know what is expected of me at work?
2. Do I have the materials and equipment I need to do my work right?
3. At work, do I have the opportunity to do what I do best every day?
4. In the last seven days, have I received recognition or praise for doing good work?
5. Does my supervisor, or someone at work, seem to care about me as a person?
6. Is there someone at work who encourages my development?
7. At work, do my opinions seem to count?
8. Does the mission/purpose of my company make me feel my job is important?
9. Are my coworkers committed to doing quality work?
10. Do I have a best friend at work?
11. In the last six months, has someone at work talked to me about my progress?
12. This last year, have I had opportunities to learn and grow?

2. Managers who don't want to manage

The traditional manufacturing model has been to promote those best at their current jobs.

If the only way to realise the ambitions of your top employees is to reward them with a generic leadership role, you are not necessarily playing to the skills that made them great.

Often, your best engineers may not want to become leaders. They know their strength is to solve problems and find innovative solutions to engineering and production issues and, in reality, may have little appetite for taking on the challenge of leadership. One leader said to me, "I am not enjoying this role, I miss the challenge of being given problems that I can fix."

In another case, a brilliant engineer was put on a leadership fast-track programme but, when he understood what the role would entail, he turned it down. He wanted the job satisfaction of resolving technical challenges with a finite end – he felt he would no longer be able to do that if he had to manage a team of people.

3. Managers who want to lead – but are ill-equipped to do so

While you will have brilliant engineers, can they translate their skills into the leadership domain? Many can, but the process can be more challenging than is often recognised in standard leadership development processes.

One firm I work with says "engineers have brilliant hard skills, but struggle when it comes to softer skills". These softer skills relate mostly to emotional intelligence (self-awareness, social awareness, self management, relationship management).

Manufacturers have to think carefully about how they cultivate leadership talent to ensure the business delivers through its people.

Engineers need to be able to understand themselves and the behaviour of the people around them – this can be a hard skill to develop without the right assistance.

4. The language of engineers

The language of technical experts is very precise and pragmatic, anchored in research and applying scientific rules, many of which have been around for hundreds of years.

The language for managing people is very different – and can initially feel 'fluffy' to leaders. Typical leadership programmes can lose an engineer. Thinking about your team and their emotions and what will motivate and engage them, can all feel a bit vague and ambiguous – if not a waste of time and unnecessary.

The challenge is to tap into the language and thinking of an engineer to explain the process of leadership and managing people. Years ago I worked with an organisation to help their first line managers use people processes more effectively. The people processes were originally presented in very wordy long documents. For each process we took the document and translated each one into a one- page process flow. The results were amazing, the processes were understood and application improved.

5. The ambiguity of people

By the very nature of their role, engineers deal with very little ambiguity (or deal with it and get rid of it!). They break down problems, analyse information and quickly identify the root cause of issues. They use this information to develop a process that delivers clear and measurable results – which can be repeated with consistency every time.

When it comes to leading people, pretty much everything becomes ambiguous and individuals don't tend to match 'hard data'. For engineers, this ambiguity can be extremely unsettling and they have to learn that, as leaders, ambiguity is the norm.

Everyone is different and successful leaders accept and embrace this.

6. Leadership development is too generic

As we've discussed, great engineers have a very different skillset to most other sectors and it is applied in a specific way.

The personality profiles of engineers and scientists can tend towards introverted with a preference for facts and data, decision making through logical cause and effect analysis and methodical planning. This means typical leadership programmes can feel dull, irrelevant and uncomfortable.

The working environment that engineers operate in can make it really challenging to sit in a room with other delegates, sharing examples and learning theory from a rather dull set of Powerpoint slides!

When designing a bespoke solution for a major manufacturer, we discovered that many of their Shift Managers walk up to 12 miles per shift! So there can be a challenge just in sitting still!

Leadership development solutions need to embrace all preferences and deliver programmes in a style fit for the audience.

Ten-point plan to turn engineers into great leaders

Where do you start in transforming engineers into great leaders? We have covered the issues that manufacturing and engineering businesses typically face. Here, we outline the logical steps to develop your engineers, recognise leadership talent and, as a result, deliver outstanding business performance.

1. Innovative talent spotting

How are you spotting your future leaders? There can be a tendency to promote those who have been leading in frontline functions.

But are you thinking about talent in less obvious support areas – areas from training and catering to marketing? Every manufacturer we know wants more diversity – across the business and in leadership teams. Imaginative talent development can spot people in unexpected places, address diversity issues and produce outstanding leaders.

A good way of spotting talent is the use of development/assessment centres that include exercises where participants walk in the shoes of future leaders. This can help both individuals and the business see whether a leadership move is the right one.

2. Provide dual career options

Clearly some engineers do become great leaders. But what is your career path for those who don't want, or can't, manage people?

Every business still needs outstanding technical experts – finding a career route that gives them prestige and recognition without managing people can ensure you have an outstanding leadership team with the right mix of skills.

Some may want to take the lead on a project, but dread the thought of permanently managing a group of people. By delivering different avenues for staff to fulfil their ambitions, you will get dedicated and engaged employees who deliver fantastic results throughout their career.

It's important to support engineers and provide career growth. Help them make the right decision by exploring options, help them to understand what made them great in the first place and consider where the best use of these strengths and potential strengths can be.

> **CASE STUDY**
> **'Coaching transformed me'**
> A new manager at a leading paper and packaging product manufacturer had coaching to help him become a better leader. He says: "Coaching has transformed me. People see me differently - they have more respect and seek me out for my opinions. You can't change anyone else's behaviour, but you can change your own so that others perceive you differently. I'm now much more confident leading people."

3. Adapt leadership styles

Adaptive, situational and agile leadership has been much written about, for good reason. We need to recognise the needs of our team and create the right climate and culture for members in it to thrive. Part of the leadership development process needs to think about personality types and roles, their strengths and weaknesses and then adapting leadership styles to get the best out of different teams.

If you are managing a team of experts, consider their needs. Often we see sub cultures developing amongst teams of specialists. From the outside these are sometimes seen as silos and people want to break them down. Perhaps you could consider them think tanks and optimise the collective brain-power instead?

4. Tailored engineering leadership programmes

Engineers flourish if development is tailored to their personality types and experience – as well as the culture of your organisation.

While a good programme should take new leaders out of their comfort zone, it also needs to respect the preferences, environment and culture of an engineering team. The style of the facilitator is important, the content needs the theory and research behind the learning, exercises need to be pragmatic and experiential debriefs need to be really clear about the relevance to their work.

You can't avoid tackling the ambiguous issues of people. The best way is for engineers to work through exercises that address the need for emotional intelligence in a way they can apply in their own work. This often needs spelling out and working through in more explicit ways than might be done on many leadership programmes.

And since most engineers rarely sit still, programmes need higher levels of experiential learning than is typical.

5. Apply engineers' strengths to their leadership roles

Engineers have considerable strengths that can be applied to leadership and it's important to recognise these and show them how to adapt these for a leadership role.

For example, engineers are great problem solvers. In a leadership role, if someone is displaying inappropriate behaviour, an engineer can still do a root cause analysis and then work with the person to agree a path to the solution. In the process, the ambiguity and unpredictability of people still has to be recognised.

6. Take risks

Boards across the country are lamenting their lack of diversity. There are initiatives galore to develop and recruit leaders, yet still you hear complaints that they fail to deliver significant change at the top.

The reality is, if you want a diverse leadership community, you will have to take some risks along the way and give new types of leaders a chance. Some may work, some may not – but these risks will improve the quality of your leadership team over time.

7. Walk the talk

If your organisation says leaders must have a specific set of skills, make sure you promote people who role model these key behaviours.

It is not just a case of identifying the best engineers and then rewarding them with a role that they may or may not be equipped for. Work through what a leader in your organisation should look like and how should they bring your values to life? Looking for people that match your values can help in finding the best leaders and possibly more diverse talent.

CASE STUDY
A new language for the business

Trelleborg UK managing director Jon Drury says improving leadership and communications skills transformed the business: "We are engineers and are great at identifying technical issues and skill needs. However, we had a glaring gap when it came to knowing how to behave and deal with people in the business. We had to learn to understand ourselves and the behaviour of other people around us. The impact it had on me was massive and it provided the company with a brand new language that allowed us all to communicate in ways we'd never managed before."

8. STEM ambassadors

The manufacturing and engineering sector is putting considerable resources into recruiting and promoting people into STEM careers.

Perhaps this is more an observation and may seem obvious, but your strategy for finding and developing leaders is as critical to the success of all this work, as finding new recruits to the business. You want leaders to be role models, reflect your business and play a key part in attracting and retaining your hard-recruited talent.

Everyone has a responsibility to grow the industry and that means promoting and developing the right people, in the right way.

The case studies featured in this report are from clients from within the manufacturing and engineering sector - many of whom we have worked with for several years - that we have supported to transform key managers and staff into great leaders. We are happy to discuss these examples in more detail.

9. Help engineers be OK with ambiguity

It's important to develop a leadership style that shows engineers it is OK to accept ambiguity. Engineering leaders have to understand that people problems can't be resolved with an engineering-style solution.

With people, engineers have to understand the behaviour of those around them and then support them to find a solution themselves. While most will want to find a black and white answer to managing people, they have to be taught it is OK not to follow the same path they have used throughout their career to solve each issue. Ambiguity is OK.

10. Engineers don't always need to have the answer

In manufacturing there is a culture and expectation that engineers must always have the answer to every problem. However, as leaders, engineers have to learn they don't always need to provide an answer to the issues their people face.

Great leaders support people to find an answer on their own and this is another key skill engineers need to develop to fulfil their potential as the next generation of leaders in your organisation.

A well engineered leadership solution

Please find below a summary of the challenges your organisation may face in turning great engineers into great leaders, and our proposed solutions.

Challenge	The Impact	Evidence	The Solution	Impact
Spotting Leadership Talent	Strengths sought out as a chartered engineer (critical analysis, fault finding, compliance, one perfect solution) can get in the way of the strengths needed as a great leader (recognition, dealing with ambiguity, emotional intelligence)	Do you have leaders who would far rather work with machines than people as they then don't have to manage the emotional response to their actions?	Look for leadership talent in unexpected places Use innovative assessment methods such as 'day in the life of' assessment centres Take some appointment risks.	This will give you a broader talent pool to select from, and it gives both the business and the individual an opportunity to see if the move is right.
Managers who don't want to manage	When career progression depends on taking on a people management role, job dis-satisfaction may set in as it's not a great match for the individuals strengths.	Have you ever promoted a great technical expert into a leadership role and both parties have regretted it?	Provide a dual career route, and offer other ways that experts can deploy their strengths and still enjoy career growth. No doubt you have a definition of what a good leader looks like in your organisation – only promote those who role model this.	This will ensure you retain your expertise (often a competitive advantage) and get the right people on the bus in the right seats!
Engineers who do want to lead people but are ill equipped to do so	Because core skills need to be adapted and new skills learnt, without the right support you may have a leader who is really damaging team performance.	Do you have a motivated new leader who is finding the transition into a leadership role more challenging than expected?	Provide bespoke leadership development support in a timely manner that embraces adaptive leadership. Use strengths based development to grow confidence.	By embracing difference we will heighten engagement and performance.
The language of engineers	The language and communications associated with people management processes and learning and seem in accessible.	Does it seem that some of your engineering leadership community just don't 'get' some of your people management processes?	Communicate in a manner accessible to engineers.	As many people management processes are designed to improve engagement, making them accessible and well managed will have a positive impact on team performance.
The ambiguity of people	The ambiguity of people can be unsettling and challenging to deal with.	Do you have leaders who avoid tackling difficult people management situations?	Grow skills by using a more 'pull' style of communication when dealing with ambiguity. Help new leaders understand that ambiguity is okay – it's a norm in our VUCA world.	Ambiguity is ok! Leaders relax when they realise they don't have to have all the answers!
Leadership Development is too generic	Delegates with an engineering background can find typical leadership development programmes uncomfortable and hard to learn from.	Do some of your engineering leaders dread leadership development programmes and find a multitude of reasons not to go?	Provide tailored engineering leadership development programmes. Use alternative development methods, such as STEM ambassadors to grow leadership skills.	By designing a bespoke solution your development shifts from being mandated or dreaded programme to one that is envied and stimulating.

About us

h2h is an organisation development consultancy with specialist expertise in designing and delivering bespoke leadership programmes for the engineering and manufacturing sectors.

Its expert team has spent most of their industrial careers in manufacturing and engineering and specialise in supporting this sector.

Founded more than 13 years ago, h2h has 27 highly-skilled people who have a wealth of experience across key sectors. The consultancy mostly works with large, complex, international corporates – though it does have a few smaller clients. The business has a proud history of retaining clients for years.

Using decades of experience and honed insights, h2h delivers high impact, tailored organisation development solutions with integrity and commitment.

The unique development programmes ensure:
- Leaders achieve greater commitment and performance from their teams
- Employees are more engaged, stimulated and prepared to go the extra mile
- Tangible business benefits are realised

The skilled h2h team achieves these results by:
- Working with businesses at a strategic level to facilitate organisational change
- Providing high impact business coaching
- Designing and delivering bespoke leadership and management development programmes
- Enhancing a variety of personal and professional skills needed by key teams

To find out more about how h2h can help improve your business and learn about the range of services and programmes that can transform your team, please contact Managing Director Susan Binnersley on 01347 879056 or email susan@h2h.uk.com

About Susan Binnersley

Susan is a Chartered Fellow of the CIPD and a multi-lingual business partner whose career spans challenging and high profile organisations. As a former Human Resources Director within large multinational manufacturing organisations, Susan has worked with a broad spectrum of senior leadership teams in both highly unionised and politically sensitive environments. She has played a key role in transformational change programmes that have included merger, acquisition and multi cultural situations. Following a successful career in industry Susan founded h2h resources limited in 2004 and has continued to deliver tangible business benefits to major businesses in a range of sectors. Susan is passionate about the capability and potential of individuals and works with organisations to develop strategies and approaches that will enhance individual contribution and thereby overall business performance.