LEADERSHIP TO SUPPORT THE FOURTH INDUSTRIAL REVOLUTION
The fourth Industrial revolution is upon us...

'We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before. We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive.'

Klaus Schwab, Founder and Executive Chairman, World Economic Forum.

The Fourth Industrial Revolution: what it means, how to respond.
Fundamental Questions Ensue:

The 4IR involves understanding forces that disrupt roles, organisational structures and the competitive landscape as well as changes in the socio-economic environment. Disrupted organisations need to become more agile, with faster decision making whilst also looking ahead at continued technological advances in the form of AI and automation. The ability to absorb new technology and assimilate it into value adding activities is as essential as it is challenging. Technology does not reside exclusively with the CIO but with the CEO downwards. Whereas smaller new entrants have ruled the last decade, the scale of the options available suggests bigger and established companies may have an opportunity to beat that trend in how they reskill and use size to command. No company is without its challenges. As PwC recently announced, as an advisory company they too must ensure their workforce is upskilled. As the 4IR unfolds, the nature of working life is changing how people wish to learn and how to learn effectively to embrace the 4IR. On the one hand employees are time-short and have shorter attention spans and organisations want learning to have impact tomorrow, if not today. This stance leads to bite sized learning that is relevant and contextualised to today’s business needs.

On the other hand, as the 4IR beckons and sustainable competitive advantage becomes more elusive, it is unlikely that any learning that is not deep, and is lacking in time and distance from work to stand back, will have sufficient impact.

01 How will the 4IR shape leadership and therefore what capabilities will the 4IR leader need to have?

02 How must organisations support its leaders to best respond to the unpredictability, as well as the enormity of the expected changes, to create great leaders who can drive the strategy and culture while retaining and attracting the best talent?

QA has a tradition in technology based learning. As organisations have learnt technological skills, we have seen the challenges of organisations move towards the interface between technology and people. More recently, we have witnessed organisations not only grapple with this interface but also the need to focus on today’s business (exploitation) alongside tomorrow’s business (exploration) driven by the knowledge that the 4IR is arriving very soon.

We, at QA, are also more than aware of the multitude of articles that talk of digital transformation, organisational agility, organisational ambi-dexterity, fast decision making and much more. Such information, as welcome as it is, and as much as it frames the picture, does not tell you how to paint the picture for your organisation, nor how to make all your organisation skilled painters, whose art is always commercial and following the new disruptive trend.

In this paper, we use these sources of information to summarise drivers for change and their leadership implications (answer to question 1). We then proceed to illustrate how learning, in a format that allows for learners to internalise this content and contextualise, is vital to answering question 2.

We advocate that learning is framed as helping with these different perspectives as they are not easy to manage; we do after all face it in our own organisation let alone in our clients’ organisations and challenges. Our learning solutions make this clear and motivates people to change their behaviours to embrace that challenge, rather than do underestimate the challenge with simple answers and simple recipes.
DRIVERS FOR CHANGE AND LEADERSHIP

Disruption from technology is predictable when looked at broadly and yet unpredictable at a more detailed level. Leaders therefore need to prepare for disruption in the following ways; written in a sequence of how they might be logically engaged with within a learning programme.

Technology Literacy

Is every member of your staff able to have productive conversations about technology? Increasingly companies are asking QA to help their staff become knowledgeable and confident in talking about technology. This creates so called ‘absorptive capacity’ – a state of readiness. Conversations with technical people can be more frequent and more productive. Opportunities not see before become visible to staff. The societal and ethical implications of technology can be embraced in ways that are thoughtful and considered.

Literacy within technical topics is needed to support both Digital Transformation and gaining/sustaining competitive positions for organisational growth and profitability despite and because of disruption. To help drive Digital Transformation, leaders need a basic literacy understanding of the following areas, and a more advanced understanding depending on their roles:

- Cyber
- Data
- Cloud
- DevOps
- Agile software development

Such digital literacy helps in supporting strategic decisions as they speed up, carry risk and involve morphing team members across virtual environments. People now talk of Z skills (rather than I or T) whereby people delve deep into successive technology areas to know enough to have conversations within teams of varying technical and strategic know how. Knowing how to ‘perspective make and take’ in such conversations is key to leading. Studying team dynamics in the light of such conversations can be enlightening and a form of learning.

Preparing for disruption

Can your leaders compare and contrast the dynamics of disruption in their own sector with others? For example, what can be learnt from comparing disruption in the oil/energy sector with trends in fashion, given both share environmental challenges. Disruption needs to be understood in terms of the balance between power lying in new entrants versus established players and partnerships. Leaders who understand the impact of the competitive environment on their role and that of others adds more value to the business. Once employees have technology literacy they can prepare for disruption in more concrete ways. They can start to thrive rather than survive in digital environments. They can start to simulate models of the future.

Leaders and followers

Leaders have followers of course. Leadership and followership in disrupted environments frequently switch between the two. Do your leaders have the confidence to become followers in situations and switch back to leadership as needed? Allowing leadership and followership to switch and organisational structures and teams to morph is a powerful way of creating the capacity and capability to deal with technology disruption. It allows more people to be strategic in how they engage with customers and opportunities. It allows and promotes distributed decision making.

Creativity, Innovation, and an Entrepreneurial mind

It can be too easy for those facing disruption to assume creativity cannot be enhanced and yet it is a precursor to innovation that seizes opportunities that technology brings. Creativity can be learnt and the ways of making creative thinking turn into commercial innovation be taught. Entrepreneurial mind-sets within corporates can be engendered and often are best combined with team structures, organisational structure and infrastructure to support changes in behaviour brought about through learning. If surveyed, would your employees feel supported as regards creativity, innovation and entrepreneurship?

Agility

Whether agility involves Agile working or ‘just’ more agile ways of working, the assimilation of IT into organisational strategy can liberate absorptive capacity to deal with IT that impact customers too. Agility also comes from distributed leadership and faster decision making that comes from more modern forms of leadership. Agility often dovetails into projects; being careful that projects often treated in isolation in some small Agile team are not thought through in terms of interfaces with non-Agile teams and benefits to other projects. How projects and what is defined as a project fit with the strategy and fast decision making is important to review if ‘Agile’ or even ‘agile’ is not to become something of low impact however fashionable.
Capitalising on diversity and Managing People

In disruptive sectors, creativity and innovation within diverse teams creates value and challenges around managing diversity. Do your leaders share the challenges of balancing unity within a team with diverse ideas and styles? Diversity does enable agility. Diverse teams are more difficult to manage as there is a fine dividing line between conflict and creativity. Given diversity is difficult to manage, capitalising on it sounds easier than it is. Get it right and a lot fits into place. Looking at inclusive behaviours and levels of progress towards diversity including value-based inclusion are important parts of being a digital leader.

Whenever we host events around digital, as much as people like to update their knowledge and have technical questions, Managing People through employee engagement, skills management and training is talked about alongside mind-set, culture, behaviours and values.

With disruption comes the need to hire new people and yet also maintain a company sense of history, culture and values. Leaders need on the one hand to manage distributed everyday HR tasks and morph teams whilst, inspiring people to take risks in ways that test resilience. Leaders must manage their own leadership identity as well as managing those of the people who report into them or collaborate with them in project teams. Leaders now need to consider things leaders have not needed to address in the past such as:

- **Judging and acting upon the likely impact of automation on the workforce**
- **Inspiring people across more generations**
- **Personalising development plans to ensure talent is attracted and retained**

Leaders need to effectively understand what inspires and motivates each of their people, where their diverse teams consists of multiple generations. For example, younger generations are typically less interested in being able to work to pay the bills but, global mobility, being able to work in a creative environment with a team ethos and work-life balance, are important. Personal development is important as is the right working environment in which to thrive. Motivation and career aspirations are individual adding to the workload of the leader.

Data driven

To return where we started, disruption creates a need for higher and higher levels of performance in turbulent environments. Therefore, data driven performance approaches become more prevalent as technology offers up more and more data. Just as diversity leads to improved performance in theory and in practise is difficult to manage, having more data is not easy to manage. Data enables managers to embrace contradictions and dilemmas as to how to access data, how to use it in ways that promote agility, diversity and inclusion, creativity and distributed decision making. Rather than helping leaders become more resilient in agile ways, data can be a source of stress as a single point of truth is fought for and over. Embracing the complexity of data allows managers, especially senior ones, to work with tensions between exploiting current opportunities and exploring future ones through managing differences in views and agreement to act.

Data analysts and leaders need to collaborate to match the type of analysis to the problem they are trying to solve. Questions and learning around dilemmas and paradoxes include why do we collect what data? Do we centralise or decentralise data availability? How portable and usable is the data for what purposes? Links to leadership and change are important, creating a full circle of leadership demands on those working in disrupted sectors.
ROLE OF LEARNING
CREATING BUSINESS IMPACT WITHIN THE 4IR

It is easy to list competences that leaders in disruptive sectors need to have as outlined above. Many such lists can be found online and in articles. Less easy, and more vital, is helping leaders understand what these mean in practise when working in the disrupted sectors, in their organisation and in their role. On the right is a table demonstrating some of the leadership skills needed and the sectoral considerations. We can move from talking about disruptive leadership to understanding how to practise it at different levels in the company. Learning needs to ensure the business impact is carried through. Employees need to know more to start with and need to be taught how to use that knowledge in their own role, in the context of their own organisation and the disruptive dynamics of the sector. Too much learning stops as either knowledge or skills without contextualising them to ensure business impact.

<table>
<thead>
<tr>
<th>Leadership competence/ skill</th>
<th>Challenge</th>
<th>Sectoral considerations to be explored in-depth during learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thriving in a digital environment</td>
<td>Resilience, failing, motivation of teams, morphing teams as demands change</td>
<td>What examples of managing and leading successful change exist in the company that can be built on? What do staff say about thriving in staff surveys?</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Virtual environments and being agnostic around geography and yet also conscious of it</td>
<td>What communities of practice cover what geographical areas? How do they interface? How to decide when the cost of F2F is worthwhile? How to trust and have accountability?</td>
</tr>
<tr>
<td>Distributed Decision making</td>
<td>Fast decision making, infrastructure to support data driven decisions increased customer involvement</td>
<td>Where do challenges lie in interfaces between data sets, use of judgement, ethical considerations, integrated decision making across levels and functions, iterative decision making</td>
</tr>
<tr>
<td>Entrepreneurial mind set</td>
<td>Management of risks, control, responsiveness and timing of choices</td>
<td>How have risks been defined and managed in the past in the sector? What are the speed and dynamics of disruption that impact risk? How does decision making happen with partners?</td>
</tr>
</tbody>
</table>

A key challenge for leaders is the different speeds at which digital transformation takes place across the organisation. It is easy to talk of digital transformation as if it is one event and then – with a wave of a wand – it is done. The reality is digital transformation is likely to be ongoing for the near and medium term future. It creates challenges for leaders around constantly iterating around transformation that causes interface challenges that change again when new technology is integrated. Time to learn about how to use that technology needs to be factored as well as changes roles, processes, ways of working and customer involvement and offerings.

Linear ‘5 step models’ of change in digital transformation become inadequate as much as they might reassure (perhaps falsely) because of their simplicity. Change needs to become part of a leader’s mindset alongside creativity and innovation seen in terms of the dynamics of the disrupted sector.

For many leaders in middle management, the complexity of their working lives increases as they act as leaders within digital transformations agendas. They are often following technical experts and diverse generational groups. This means they need to have flexible leadership styles and techniques to manage and motivate people in both traditional and modern ways, while at the same time employing innovation and creativity to drive the strategic change agenda.
POWERING POTENTIAL WITH LEARNING

Knowing what to learn about is only one part of the picture. We are increasingly working with clients on how to make learning attractive (why bother) and sticky (go through with learning that is comprehensive enough to have an impact) and fast/on demand (when people want it).

**Learner segmentation**

Understanding in depth the nature of the learner is ever more important as

- There is much competition for their time
- Their motivations need to be understood to ensure the learning engages them
- Values mean more to employees (especially younger ones) so learning must embed values
- With complexity comes resilience and mental health challenges, which can be sector specific

**Memetic strategies within learning engagement**

Working lives are busy, values matter more creating a need to make learning stickier

How to associate learning with what is already attractive about working in the company/sector to make learning more engaging and sticky. This might include integrating the brand into the learning or some company value employees are known to particularly value at a personal level. It might involve being upfront as in – this is boring sorry but please do it because this is why it is vital to the business. People have too many demands on their time so learning must consider memetic strategies. We intend to develop design thinking personas of the learners to potentially match memetic strategies associated with learners to their personas.

**Different types of learning at different pace and emotional headspace**

Outside of work, people expect experiences at different paces. Learning needs to consider pace too

How different learning approaches manage the emotions and pace of learning. A learner can delight in an experience that is high energy which then needs to be balanced by impact in the more complex world of real work. Staff invest more and more of their personal identity in to work, making considering emotions in learning design more vital to pace that learning.

**Ensure learning at one level works at another**

Learning is now more connected to change and disruption so must work synergistically at different levels

How learning needs to be individual (e.g. individual knowing more or being more self-aware) with group experiences (work is done in collaboration ultimately) with working on better alignment to the organisation and the sector dynamics of that organisation. Hence designing learning that works at an individual-group-organisational level is key to higher ROI.

**Position in time**

Resistance to changing management style can be an obstacle to learning, especially in more experienced managers

How, what it means to be a better manager or leader, has changed over time and why it is what it is now. Understanding this role of change in managing and leading can help learners to realise old recipes do not work, that the speed of change in what it means to manage and lead well has changed, which helps people come to terms with, and embrace, new ways of working.

**Inefficient learning transfer**

Where is learning being lost between interfaces?

Thinking about landscapes of practice rather than communities of practices. You might have agile somewhere in the organisation. Where else might you need to transfer it to? How might agile break down when it must interface with less agile parts of the business? How do leaders ensure that communities the work within do not become echo chambers? Working at the edge of communities enhances learning and innovation. Such an approach involves facilitating learning at the edge.
Theory is not a dirty word

Often theory and being theoretical is deemed as bad

All ideas about management and leadership come from theory. The trick is being able to take the latest theory and make it usable. The skill is empowering learners to use theory in ways that are unique to them.

Contextualisation

Learning is not for fun; it is for the business

If learning is easy to transfer from organisation to organisation then it will not make that much of a difference to an organisation. Learning needs to allow organisations to catch up and go beyond the competition. It therefore needs contextualising, which involves partnerships between learner and trainer/facilitator/coach.

Absorptive capacity

Disruption means you cannot predict how learning content will be used and that should be fine sometimes

Much learning has become instrumental; it must be valid in the workplace tomorrow for it to be deemed effective. Whilst a valid stance/approach in many cases, because of the importance of context, there is room for learning that increases the capacity of employees to embrace new opportunities as yet unclear to the company or sector. Absorptive capacity can help open the future before an organisation sees that future clearly and yet, without that capacity, the future will be in the past before they are aware of it. Increasing absorptive capacity involves learning that is associated with using creativity, once knowledge and openness around what might be possible, is introduced. It involves being clear to learners that the intention of the learning is to build absorptive capacity.

Be careful of too fancy

Wanting to sell learning to the organisation can mean we forget the basics which in turn means we cause stress amongst managers in crucial areas

As much as digital leadership is on trend and rightly so, and as much as decisions are being made faster in more agile ways, hence the demand for leadership training, some areas of management stay more constant. People management is still tricky whether in an agile team or traditional one. How people interface with technology will forever matter. Resistance to change will always feature. An understanding of finance is key to everyone. Not becoming too fancy matters.
We are currently delivering a programme where learners are introduced to some new knowledge and thinking about how that knowledge could be used to improve their performance to reach the next level. This new individual new knowledge is worked on in group sessions with refined action plans about how to work at the next level. The L&D manager works constantly in partnership with us, helping build internal networks to support the learners, help the facilitators deliver well-paced learning and to maximise contextualisation, whilst giving learners a safe place to talk openly. Political and emotional barriers to learning are removed; important for this client as a lot of business is done online. We balance learning about leadership with how to make managing more efficient, so they have more time to lead.

For a global retail company where, if we are not careful, travel will add enormously to the costs, we are looking at clever timings, so successive cohorts can meet up without more travel to share learning about learning; share where they are in the journey. Our aim is to make the learning more effective, as we can adjust the programme in agile ways and the learning community will be more self-managed. We will then look, using data from who books what elements of these meet-ups, how communities of practice are being created and how they fit in with the broader landscape of practice.

Within QA, we combine this advanced thinking, that we also are developing, with subject matter leadership with key areas of challenge within organisations facing disruption. We work in partnership with the client as we design the solution, as we develop it and importantly as we deliver it to adjust learn and adjust again. Business impact matters. The deep profiles of the learners matter. We must match the business needs with the personas of the learners to create engaging learning that has business impact.
SUGGESTIONS FOR ORGANISATIONS FACING DISRUPTION

We suggest the following are considered as part of a leadership training agenda:

- Absorptive capacity through building technology literacy of different forms for non-techs and techs
- Aligning strategy to everyday leadership including more complex and distributed decision making with innovative partners
- Ideas Management across big landscapes within the Business
- Project Management including agile, with agile having limitations and interfaces that need attending to
- Every-day people management
- Diversity within people management
- Generational gap coaching, mentoring and reverse mentoring
- Using memetic strategies to make learning easier
- Systemic forms of learning that join up levels of the company

Micro approaches to learning are being introduced; not because they all apply to every situation. Instead, they exemplify how any learning design needs to delve deeply into the personas of the learners and match a bespoke mix of several micro-approaches to those personas. Equally, when we talk of design, we talk of continual design through refinement of approaches using feedback from learners, business stakeholders and data.

Given the complexity of the 4IR you cannot expect your organisation to rise to the challenge without change. Here we propose some ways to change leadership which balance and complement the upskilling in technical areas that you will need to do. We also propose some of the ways in which learning is being better aligned to the everyday working patterns of learners and strategic needs. We love learning and would welcome any inquiries to work with you to ensure your learning has more impact through being aligned to your business needs.

Contact your QA Account Manager or email QA.LearningSolutions@qa.com

Articles used in the development of this thinking

Sources


CREATE THE WORKFORCE OF THE FUTURE, NOW.

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