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# TALENT RE-SKILLING IN THE DIGITAL ERA

How organizations can innovate to build a competent workforce of the future.

An Infosys Consulting Perspective  
by Jonquil Hackenberg, Nicholas Thompson and Vikram Das

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# INTRODUCTION

Few organizations today have a competitive advantage better than their own talent. Harnessing this, and continuing to develop a highly-competitive workforce of the future will become even more critical as technological advancements accelerate faster than skills available on the open market.

Therefore, “re-skilling” and continuous rapid re-development of staff may be the only option most organizations have to continue to innovate and win new market share in today’s era of constant digital disruption. We are already in a steep war for talent (not just tech talent), and the companies that embrace this reality by leveraging their home-grown resources will be best positioned for future success.

# A tech talent crunch

Several factors are adding to the growing importance of re-skilling the workforce.

- UK's productivity growth is 16% behind the G7
- Half life of skill has shrunk from 30 to 3 years
- Technology likely to replace 75 million jobs by 2022
- The gig economy has doubled in last 3 years

## Europe is falling behind competition

Europe is no longer an innovation leader and is well behind the likes of the US, China and South Korea for their investment and returns on innovation. The UK's spend on vocational training per employee was just half the EU average.

## Rapidly evolving skills base

New skills are entering the workforce at a great rate and digital disruption is permeating every organization. Continuous advances in artificial intelligence and machine learning mean that new skills are required to manage and influence its development. Moreover, half life of skills (the time taken for a skill to become half its value) has decreased tremendously.

## The impact of Industry 4.0

According to the World Economic Forum advances in technology will replace some 75 million jobs and create 133 million others by 2022. Manufacturing in particular has reinvented itself as a technology-led industry, as companies of all types re-invent their business models. The move of industrial companies into 'servitization' models is disruptive.

## A new, blended workforce

The gig economy is taking root and legislative developments have also offered more clarity on gig workers' employment status. Organizations therefore need to look at their contingent labor force closely and with a different approach than they look at their permanent labor force – by re-skilling across their portfolio.

## 1. The employee experience is changing

Employees have consumer level expectations of their working environment by digital adoption and changes in communication preferences and working norms.



### Emergence of the Total Workforce

The gig economy is redefining the workforce. Speed and agility is required in order to quickly identify work in need, (crowd)-source employees, and staff project teams with the appropriate skills to complete the work.



### Communication Preference

In the last 15 years people have moved from voice communication to interacting on social and messaging services. Mobile enablement is key for employee interaction.



### Speed & Flexibility

The working world is evolving at an exponential pace. This creates a need for agile working and employees to quickly adapt their skills and knowledge. Organizations must also adapt to enable people wherever they are.

# Modern Workforce



### Experience Disruption

Employees have new, higher consumer-grade expectations about their experience: empowering, self-directed, transparent and simple.



### Talent Disruption

The digitization of the workplace has changed the way people work and has driven a need for new types of talent with new skills.



### Digital Disruption

AI, robotics, and cognitive systems are augmenting and changing professions, and careers. HR needs to learn about the future of work to help redesign the organization faster than ever.

# A new skills mandate for the future

**With the rapid adoption of AI, it is important for the workforce to upskill in much needed technical and soft skill areas.**

In the long-term, the benefits of talent re-skilling will outweigh the cost as it will always be cheaper than hiring. This short term cost of investing will undoubtedly lead to long-term gains in productivity.

Manual, repetitive tasks are rapidly being automated by organizations of all types, but it is the human value-add that will prevail in a period of significant change. The war for talent will continue into the future and select skill sets will still be required in order for organizations to continue to be innovative and fulfill their strategic aims.

In this spirit, cutting-edge talent today – and in the foreseeable future – provides the analysis and critical thinking to allow for the realization of commercial benefits. Whether you are technically trained or not, the ability to understand challenges and ideate upon potential solutions is core to an organization being able to achieve a transient competitive advantage.

Individuals will need to focus on the “blue ocean” areas that are unlikely to be fulfilled by technology, as well as areas that can enhance the value-add of these technologies. Irreplaceable soft skills will also be required in order to deliver unique and innovative experiences to customers. Interpersonal skills for some are innate but it is also a skill that can be developed over time. Being able to communicate and negotiate will remain key to success in any role and any type of business environment. The most advanced technical skills alone will not necessarily secure an individual’s role in tomorrow’s organization.

# An integrated approach to re-skilling

The most successful organizations will follow a holistic strategy with strong demand planning approach.



Explore a 'Build, Buy, Borrow, Bot' strategy.

For most organizations it's highly unlikely that all future skill requirements will be achieved through the development and re-deployment of existing resources.

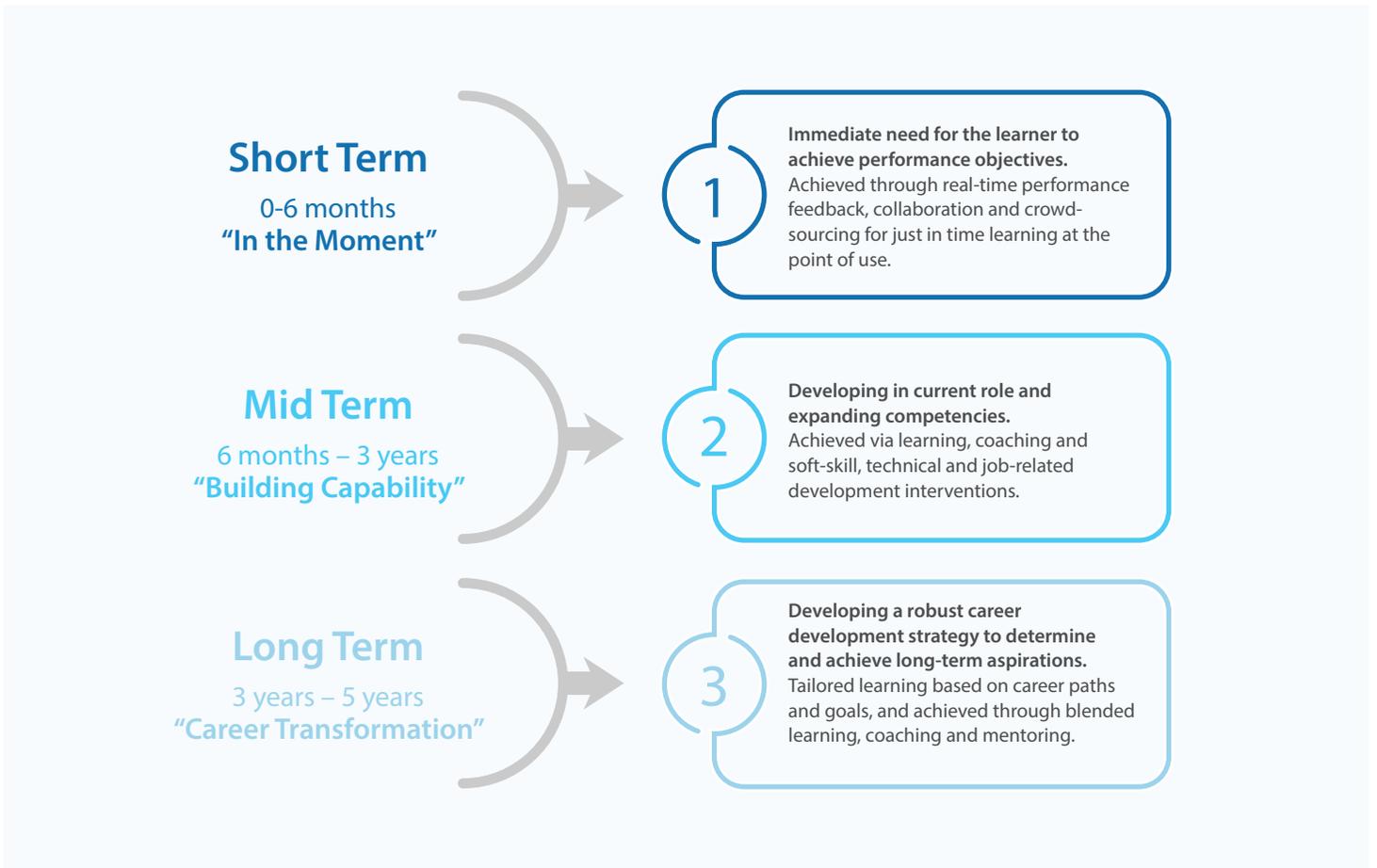
Before embarking on any initiative or the implementation of technologies, it's crucial to have an enabling target operating model (TOM) and service delivery approach for talent management. Today's most successful organizations have strong board and executive committee level representation of HR and learning to drive the strategic talent and re-skill agenda.

The first component of any successful learning journey is determining what skills and capabilities will be required in the future. In this fast moving era of disruption, demand planning is more important than ever, and therefore the starting point for re-skilling talent begins with a comprehensive strategic workforce planning approach.

Organizations will also follow a continuous learning approach and will prefer 'circular learning' instead of traditional training models. Learning has to fit within a holistic strategy that also considers the talent acquisition side (buy), a strong understanding of the gig economy and where contingent workers will form part of the workforce (borrow) and, arguably most important of all, the roles in the future that will be either replaced through cognitive automation or heavily augmented by it (bot).

## 2. The needs of the modern worker

In a fast changing environment, employees have a greater need for learning and development than ever before. Organizations need to implement a holistic learning strategy that supports re-skilling across the short, medium and long term.



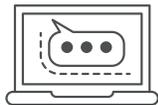
# Key technologies for a digital platform of the future

Dynamic and varied sources of learning will make a skilled work-force possible.



## Collaboration

Typified on the market by providers such as Slack, Yammer and MS Teams, collaboration is important as it will inevitably form part of a future “just-in-time” learning. With skills moving so fast, the majority of employees will be unlikely to have the time or capacity to gain subject matter expertise in all the knowledge they will require.



## Personalized learning experiences

A natural evolution from the heavily compliance-focused LMS, these are designed to provide a more intuitive and custom e-learning experience. A key benefit is that the intelligence of the learning is customized for the user and powered by AI to personalize the journey. This can be based on what it learns about them and their peers, or it can be based on a more strategic approach to employee development, if integrated with career pathing and succession planning tools or data.



## Virtual and augmented reality (VY & AR)

It's now feasible to deploy strong, immersive, VR and AR experiences on a standard mobile phone using disposable or transportable headsets. The immersive and flexible nature of consuming the content is linked with very high levels of knowledge uptake, suggesting it could be significantly better at helping people to learn at a faster pace than other mediums.



## Predictive analytics

Using AI to predict future success has particular use cases within the talent management and development domain. Predictive analytics will be used increasingly by learning functions as the volume of data increases, the technology evolves and HR refines algorithms to avoid historic-driven bias.

### 3. Overview of learning technologies and enablers

There is a broad landscape of core and emerging technologies which are dedicated to learning or have learning applications. The figure below outlines the capabilities, use cases and key benefits of current learning technology.



#### Learning Experience Platforms

Are an evolution of the traditional LMS solutions. These platforms focus on providing a consumer grade learning experience through establishing learning curriculums, personalized learning, and social or peer to peer learning.

#### Artificial Intelligence (AI)

refers to a range of techniques which mimic human decision making and learn behaviours. It is used to solve problems and provide recommendations, enhance human cognition and execute non-routine tasks.

#### Virtual Reality (VR)

provides a computer-generated 3D environment that surrounds a user and can be interacted with, usually through immersive headmounted displays.

#### Augmented Reality (AR)

is the real-time use of information in the form of text, graphics, audio and other virtual enhancements integrated with real-world objects.

#### Machine Learning

is a form of AI that enables systems to learn from data rather than through explicit programming. Machine-learning systems can be classified by their training into 4 categories; supervised, semi-supervised, and reinforcement learning.

#### Collaboration

is a suite of digital technologies and working practices where users share knowledge, experience, and guidance to support social and just in time learning.

#### Automation

is computer software which operates applications to execute transactions and follow business rules.

#### Robotic Process Automation (RPA)

is typically used to automate routine, repeatable tasks.

Applications in learning are typically aggregators to collate 3rd party content into a single experience.

Applications in learning include supporting the learner journey by acting as an interactive learning advisor.

Applications in learning include deploying immersive learning content through VR or providing point of use augmented learning through AR.

Applications in learning include understanding the learner to recommend a personal learning path of relevant content.

Applications in learning include social collaboration tools like Slack and Yammer where users can co-create and develop knowledge and skills.

Applications in learning include automating transactional learning tasks and activities such as course scheduling/enrolment, course logistics and training reporting.

These platforms deliver a much better learning experience and enable users to find personalized, relevant content on-demand.

AI provides users with more support and guidance in learning curriculums relevant to their future career paths and aspirations.

Research has begun to show that virtual reality environments are very effective for the uptake of information. AR has many use cases for areas of rapid skill change.

Primary benefits are through understanding the learner and applying that in an on-going development of capabilities.

Collaboration builds engagement, teamwork and a sense of joint purpose, closing a gap where formal learning interventions aren't suitable.

Automation of learning activity enables learning professionals to move up the value chain from transactional to more strategic work.

# Conclusion

Now is the time to act. Re-skilling in the digital era is forcing organizations to revisit their organizational and HR strategy – and perhaps their entire business models – as many are quickly realizing their talent pipeline of the future may soon be gone altogether. Competitive advantage and market leadership are at stake for many, as the rapid infiltration of digital transformation has flipped the make-up of today's workforce on its head.

Therefore, "re-skilling" and continuous rapid re-development of staff will be the only option to continue to innovate and win new market share in today's era of constant digital disruption. We are already in a steep war for talent, and the companies that embrace this reality by leveraging their home-grown talent and developing their future organization from within will be best positioned for success.

Want to learn more? Our experts are on the front lines of this discussion every day with our clients, and can share some rich perspectives with you on how to approach your digital future.

# MEET THE EXPERTS



## JONQUIL HACKENBERG

Partner, C-Suite Advisory

Jonquil has a wealth of 20+ years of experience leading complex transformation change programs and providing strategic advice for large change initiatives for the CPG and manufacturing industries. As UK advisory practice head, Jonquil defines the go-to-market strategy for digitally strategic market offerings. She is passionate about people, ardent about leadership and about developing high-performing teams, internally leading all coaching initiatives for Infosys Consulting in the UK. Jonquil lectures MBA students at her alma-matter, Beuth University, Berlin. She speaks four languages – English, German, Italian and Spanish, and is a Forbes contributor.



## NICHOLAS THOMPSON

Sr. Principal, C-Suite Advisory

Nick has 16 years experience in human resources spanning a broad spectrum of in-house and human capital management consulting roles. He has extensive expertise in HR transformation, L&D, employee experience design and specializes in implementation of technology and improving delivery. Previously he has been the head of HR at IBM and he is a regular speaker at HR transformation and technology events. He is the lead author of the paper 'Chatbots worth talking to'.



## VIKRAM DAS

Sr. Principal, C-Suite Advisory

Vikram leads the HR transformation team for the C-Suite Advisory practice in the UK, helping clients with their digital needs. He has advised some of our biggest clients on achieving back-office productivity through RPA, AI led insights and employee experience-led service mapping. Vikram has over 20 years of experience and prior to joining Infosys Consulting, he has worked in several consulting and delivery roles in firms like PriceWaterhouseCoopers, LogicaCMG (CGI) and Atos. He specializes in transformation of the HCM market from back office productivity to employee experience led focus.

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