



# Industrial Revolution 4.0 Sustaining Organisational Resilience Through Revolutionary Change

*The Fourth Industrial Revolution (IR 4.0) and the Internet of Things (IoT) have become major global trends, with many countries integrating them into their national development plans to stay competitive in a rapidly evolving technological landscape.*

*Today, the rapid advancement of ICT and internet technologies has accelerated the transition to IR 4.0. IR 4.0 is characterised by the integration of cyber-physical systems, artificial intelligence (AI) and big data; technologies that are not only highly advanced but also deeply interconnected and inclusive in nature.*

*This rapid advancement prompts a critical question: How can organisations remain resilient and sustainable in the face of the disruptive forces of IR 4.0? Are current business models and talent management strategies equipped to support the implementation and scaling of IR 4.0 initiatives?*

*To navigate these challenges effectively, organisations must prioritise the enhancement of knowledge ecosystems, invest in talent development, and foster creativity and innovation. Science and technology must serve as a driving force of this transformation, enabling organisations not just to adapt, but to thrive in an increasingly digital and dynamic global environment.*

## Key Findings

This White Paper aims to guide business leaders in fine-tuning their talent management strategies to navigate and sustain the IR 4.0, while emphasising the role of HR in implementing these strategies. By effectively managing the impact of Industry 4.0, business leaders play a crucial role in helping organisations adapt and thrive. They guide employees through ongoing changes in roles, knowledge, skills, and abilities, while also aligning the expectations of a multigenerational workforce to foster diverse, inclusive, and appealing workplaces.

We identify some practical insights that are able to guide business leaders.

### Upskilling and Reskilling:

Address the growing skills gap created by technology adoption and disruption.

### Revive Leadership Competencies:

Leaders will need to be agile and brave in adopting the right mindset and technologies, spearhead a new vision of organisational culture and shape innovative people's strategies for the future of work.

### Personalised Learning and Build Skills Inventory:

Personalising learning is crucial to address skill disruptions. Continuously tracking the skill inventory helps ensure that skills stay updated and relevant.

### Embrace Culture of Lifelong Learning:

Embrace a culture of lifelong learning in the emergence of a new skillset and the requirement for talent to continuously learn, unlearn and relearn.





## ***Upskilling and Reskilling***

**In 2021, a LinkedIn survey of 1,444 L&D professionals and 610 learners across Asia Pacific (including Malaysia, Thailand, Indonesia, Singapore, Philippines, India, Cambodia, Hong Kong), Europe and North America, the top three focus areas were upskilling and reskilling, leadership and management, and digital upskilling and transformation. Notably, 60% of respondents in Asia Pacific prioritised upskilling and reskilling.**

Upskilling focuses on equipping employees with new skills and preparing them for future roles within the organisation. For example, an organisation is planning on implementing machine learning and cloud computing in the next couple of months. Hence, instead of waiting for those technologies to take place, employers may upskill employees immediately so that they are ready and fully equipped to work with those technologies once they are implemented.

Employers need to clearly understand the skills their employees currently have and which new skills they will require to acquire before they can develop an effective upskilling plan.

It is crucial to identify and quickly close those skill gaps with an appropriate learning intervention. The chosen intervention must also be appropriate and effective in providing the necessary skills to employees.

Meanwhile, reskilling focuses on equipping employees with new skills relevant to their current roles. For example, if an employee's job is automated in the next few months, reskilling can help them transition into a different position within the organisation. It also involves keeping employees' skills up to date to ensure continued productivity. To implement reskilling effectively, employers need to understand the skills their employees currently possess and identify the new skills they will need to acquire. With this understanding, organisations can develop reskilling plans that meet both workforce and organisational needs.

Some of the skills that will become more important in IR 4.0 include digital skills (such as IoT, Digital Forensic/Cyber Security, FinTech, Data Science, Cloud Computing/Engineering), big data analysis, analytical/critical thinking, creative problem-solving and ideation, and emotional intelligence. These are all skills that cannot be replicated via automation or outsourcing, which means they will be in high demand in the future workforce.



## **Revive Competencies**

**Today's work environment requires business leaders to be agile, adaptable, diverse, creative, resilient, proactive, and committed to lifelong learning.** The emergence of new technologies and work trends offers businesses fresh opportunities for insights, efficiency, and capabilities. Traditional leadership, where leaders simply guide, direct, and motivate their teams, is becoming outdated, as it no longer aligns well with the complexity between people and technology.

Traditional leadership approaches are associated with controls, instructions, procedures, and restrictions, which quite contradict modern approaches that emphasise freedom of thought, multitasking, a wider knowledge base, emotional intelligence, being outcome and result-driven and a culture of ideation.

**However, traditional leadership is still required nowadays despite the new approaches and methods because it elaborates the capability to successfully lead, achieve, and motivate others.**

As technology grows incisively, it is crucial for a business leader to transform leadership practices to succeed in an innovative and digital environment. The current and future business leaders must improve appropriate knowledge, skills and abilities in order to be developed into digital leaders. In fact, new leadership approaches are essential as they change the work surroundings of the digital workplace. The digital revolution has opened a new path of working on how organisations structure themselves, as well as the arrangement of work.

**The World Economic Forum's Future of Jobs Report 2018 shows that 52% of companies observed 'leadership capability' as a major barrier for technology adoption in their organisations.** Organisations that are more effective at implementing work automation and digitalisation were more likely to see improvements in customer experience, efficiency, and competitiveness.

Nevertheless, any development of management and leadership capabilities needs to commence as early as possible and shall not wait for the talent to get into the position of needing them.





## ***Embrace Personalised Learning and Build Skills Inventory***

**Most organisations take a ‘one size fits all’ approach to learning and development that fails to bridge the skill gap. It is crucial to personalise learning to address the skill disruption. One of the best ways to motivate employee learning is by embracing personalisation.**

A personalised learning approach is about customising training to an individual's job role, needs and interests. This smart learning and development strategy aligns skilling with a learner's skill gap and career path. Making personalised learning a part of your learning and development strategy can be very beneficial for your organisation. Those potential benefits include boosting career development and employee engagement, increasing employee retention, and improving knowledge retention.

Some of the most important tasks in embracing personalised learning and development are to know what individual skill gaps to bridge, when to bridge those gaps, what learning interventions are needed, which approach to use and how to sustain employee performance.

Therefore, it is crucial to have a skills inventory that defines the skills needed for each role in your organisation.

This can give you a bigger view of what skills matter for different roles in your organisation.

Skill inventory can be created based on industry standards by listing the skills for each role. While creating the list, consider your business objectives, variety of projects, key areas of the specific role and categorise them into functional and leadership skills. Each skill can be measured using a proficiency level from beginner to expert. Companies can consider leveraging on learning technology to simplify the learning process and make it more accessible and engaging.





## ***Embrace Culture of Lifelong Learning***

Technological advances and the personalisation of work have given employees many different tools at their fingertips. Ranging from micro-learning, data-driven learning, extended reality, on-demand learning to more traditional models of training, employers can easily target learning initiatives or have a full range of courses for their employees. There are even initiatives to gamify learning objectives, and there is no short supply of tools that organisations can use.

**However, the biggest challenge for organisations is to convince and inspire the employees on when and how to use the tools effectively.**

An increasingly popular solution among leading organisations is to show employees how work and the skills required to perform it are shifting, highlighting the gaps related to their own skills. Concrete learning opportunities can then be presented to close those gaps, firmly placing the control and accountability in the hands of the individual.

The employers must also be empowered to prioritise learning among the competing responsibilities they have in a workday. Business leaders should display behaviours that highlight the importance of learning, intellectual curiosity, and taking responsibility for one's own learning journey. Otherwise, forcing the learning agenda and tools on the employees could backfire, especially when continuous learning is required to keep up with the fast pace of emerging skill demands.



## Other Aspects

There are several other aspects that business leaders can take into consideration when fine-tuning and implementing their talent management strategies. Here are some of the important aspects to consider.

### Talent Acquisition

- The scholar and practitioner believed that instilling technology into the talent acquisition process could assist business leaders to avoid cost and time wasting in identifying potential candidates, such as practising an automated process of screening applicants' resumes through AI, Big Data and IoT, where the technology helps to filter out disqualified applicants and to reduce the time-consuming process.
- IoT could assist recruitment teams by connecting humans, systems, and machines. IoT consolidates and distributes recruitment-related information through the system, hence speeding up the process of decision-making and efficiency of recruitment. The information is accessible anytime and anywhere. It will save on the cost of paper printing and physical storage of the documentation as well.

### Knowledge Management

- Effective knowledge management is essential for organisations, as it enhances employee innovation and fosters a culture of creative learning. It involves acquiring, processing, organising, and sharing knowledge, ensuring it is accessible to everyone within the organisation.

- It is important for any organisation to improve the process of knowledge management. Business leaders could adopt knowledge management, where it should emphasise on precision of facts, applicability and the value of content as well as availability of the information in real time without any hiccups. With it, the higher the sustainability of knowledge management in the organisation's practices, the stronger the ability of organisations to adapt to the changes of IR 4.0.



## Job Development

- The emergence of advanced technologies could bring challenges to organisations, especially to the HR department, which includes job development. **The principles of IR 4.0 have significantly impacted job development and organisational processes.** Scholars and practitioners suggest that, in response to ongoing change, job development in the IR 4.0 era should emphasise flexibility and openness. Effective job development in IR 4.0 practices could be seen when organisations successfully transformed their operations into automation or digitalisation with new procedures, processes and systems.
- However, job development issues in the organisation are known as one of the factors that could become a stumbling block for the development of IR 4.0, where empowerment is not provided to employees. Therefore, it is suggested that job development approaches such as job enrichment, rotation, secondment, and other similar approaches should be taken into consideration as effective job development could accelerate in meeting the objective of maximising talent in IR 4.0.

## Total Rewards Management

- Due to the limited skilled workforce in IR 4.0, it is important for business leaders to develop an effective total reward management system to reward, motivate and retain the existing employees as well as to attract talented new employees. It is believed that creativity, innovativeness, and willingness of learning could be accelerated through a good reward system in the organisation.
- In addition, HR should proactively evaluate the reward system, rather than responding only when employees signal an intention to leave. To maintain motivation and engagement, it is essential to effectively recognise and reward skilled employees through both tangible and intangible means.



By  
**Azrul Nizam Mohmd Razi**  
Senior Consulting Manager  
PERSOL Consulting





## References

1. Revolusi Industri Keempat (IR 4.0) - Official Portal of the Ministry of Science, Technology and Innovation, Malaysia (mosti.gov.my) <https://www.mosti.gov.my/>
2. Shaping People Strategies in the Fourth Industrial Revolution (weforum.org) <https://www3.weforum.org/>
3. WEF Future\_of\_Jobs\_2020 & 2018 (weforum.org) <https://www3.weforum.org/>
4. Reskilling, Upskilling, and Retraining in Industry 4.0 - What You Need to Know (linkedin.com) <https://www.linkedin.com/>
5. A Review of Leadership Approaches in the Industrial Revolution of 4.0 Era
6. (UTHM's Online Journal)
7. How To Develop a Personalized Learning Strategy For Your Workforce (forbes.com) <https://www.forbes.com/>
8. Industrial Revolution 4.0: the Human Resource Practices - International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8, Issue-3S2 (2019)



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