

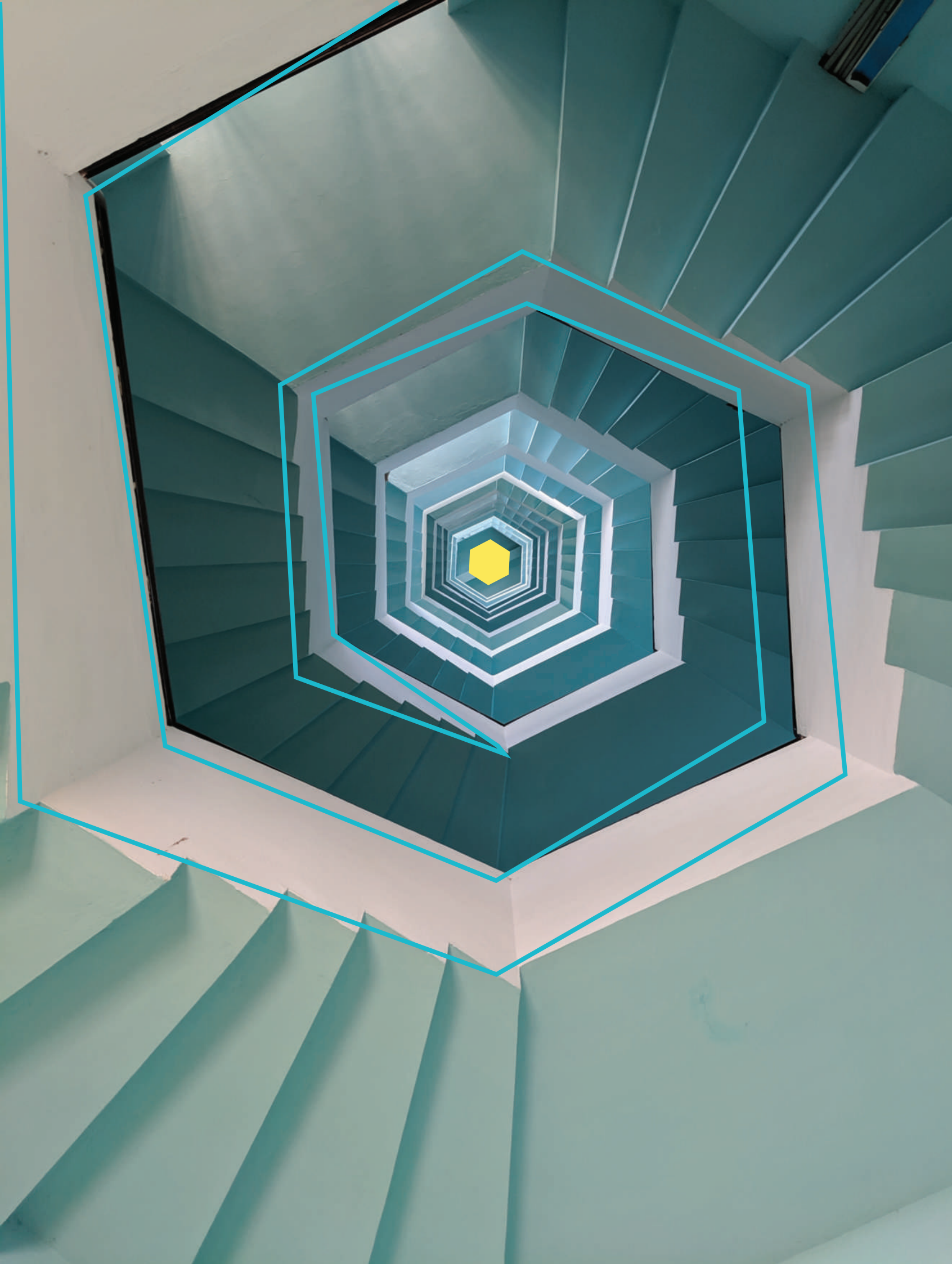
The background image is a photograph of a woman with long dark hair, wearing a white t-shirt and a dark patterned skirt, walking away from the camera on a paved path. The path is flanked by dense, lush green plants and trees. Above, a large, modern glass and steel structure, resembling a conservatory or a modern office building's atrium, is visible. Sunlight filters through the glass, creating a warm, golden glow and long shadows on the path. The overall mood is hopeful and forward-looking.

# THE FUTURE OF TALENT DEVELOPMENT

Accelerating Mindset Shifts in the  
New Normal

WORKING PAPER





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# ACCELERATING MINDSET SHIFTS IN A POST-COVID ENVIRONMENT

## Singapore stands at a critical juncture.

As businesses and governments seek opportunities in the new normal, it is imperative that we adapt to new ways of working. Through this joint report, we hope to be able to share our ideas so that policy makers will be able to help the industry and companies better.

Businesses not only need financial support, but they require support from both public and private sectors. We hope to play a part in this endeavor and worked with universities and industry players to make some assessments on our talent pipeline and how it affects sectors.

Educational institutions would need to transform their educational curriculum to meet increasing demands. Bolder policies might be required in the areas of upskilling. We expect these shifts to drive Singapore's recovery.

**Associate Professor Kevin Ow Yong**  
Singapore Institute of Technology

**Dr. Yap Kwong Weng**  
Advisor

**Professor Gary Pan**  
Singapore Management University



**We should aspire to become a digital hub with an ecosystem of world-class companies serving the world.**



**We will need the best tech talent, whether homegrown or foreign, willing to live, work and play in Singapore.**

Associate Professor Kevin Ow Yong



# Introduction

## When **COVID** first hit,

we considered how firms could tackle the pandemic using the concept of replanning and reimagination.<sup>1</sup> Since then, Singapore has tightened restrictions periodically within two years.

Massive funds and resources have been pumped into the Singapore economy. At the same time, people have become increasingly frustrated as the economy begins its slow recovery process.

The professional services sector was moderately affected compared to other industries such as aviation.<sup>2</sup> Around the world, the Big Four accounting firms have an estimated combined annual revenue of USD\$157 billion<sup>3</sup> across 1.1 million employees.<sup>4</sup> These large firms have the potential to contribute to Singapore in digitalisation and workforce planning efforts.

More could be done to narrow the potential skills mismatch in the business and built environment.

Companies and educational institutions must do better to train their people in digital competencies.

We have examined how industry needs have evolved under a professional services setting. The team has also identified gaps within the knowledge supply chain. Our data suggests the lack of digital skillsets would obstruct transfer of tacit knowledge. We also find that employee training should be scaled up to meet increasing digital demands.<sup>6</sup>

<sup>1</sup>Ong Pang Thye and Yap Kwong Weng, Agility, Resilience Needed for a Post-COVID World, The Business Times, 19 May 2020

<sup>2</sup>Christopher Saw, Jonathan Lin and Wong Yu Jie, Economic Survey of Singapore First Quarter 2020, Ministry of Trade and Industry, 19 May 2020

<sup>3</sup>Statista, Revenue of the Big Four Accounting/Audit Firms Worldwide in 2020, Statista, 27 Jan 2021

<sup>4</sup>Statista, Number of Employees of the Big Four Accounting/Audit Firms Worldwide in 2020, Statista, 16 Feb 2021

<sup>5</sup>Singapore has slipped four positions from its top spot in an annual study conducted by the Institute for Management and Development (IMD) on world competitiveness.

<sup>6</sup>Institute for Management Development, IMD World Competitiveness Ranking 2021, Institute for Management Development, 17 Jun 2021

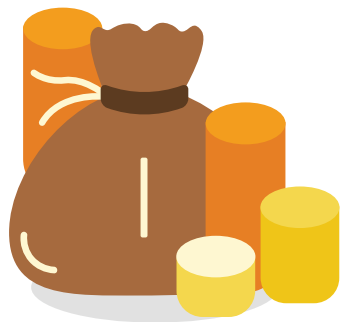
# Key Findings

Here are some of our findings:



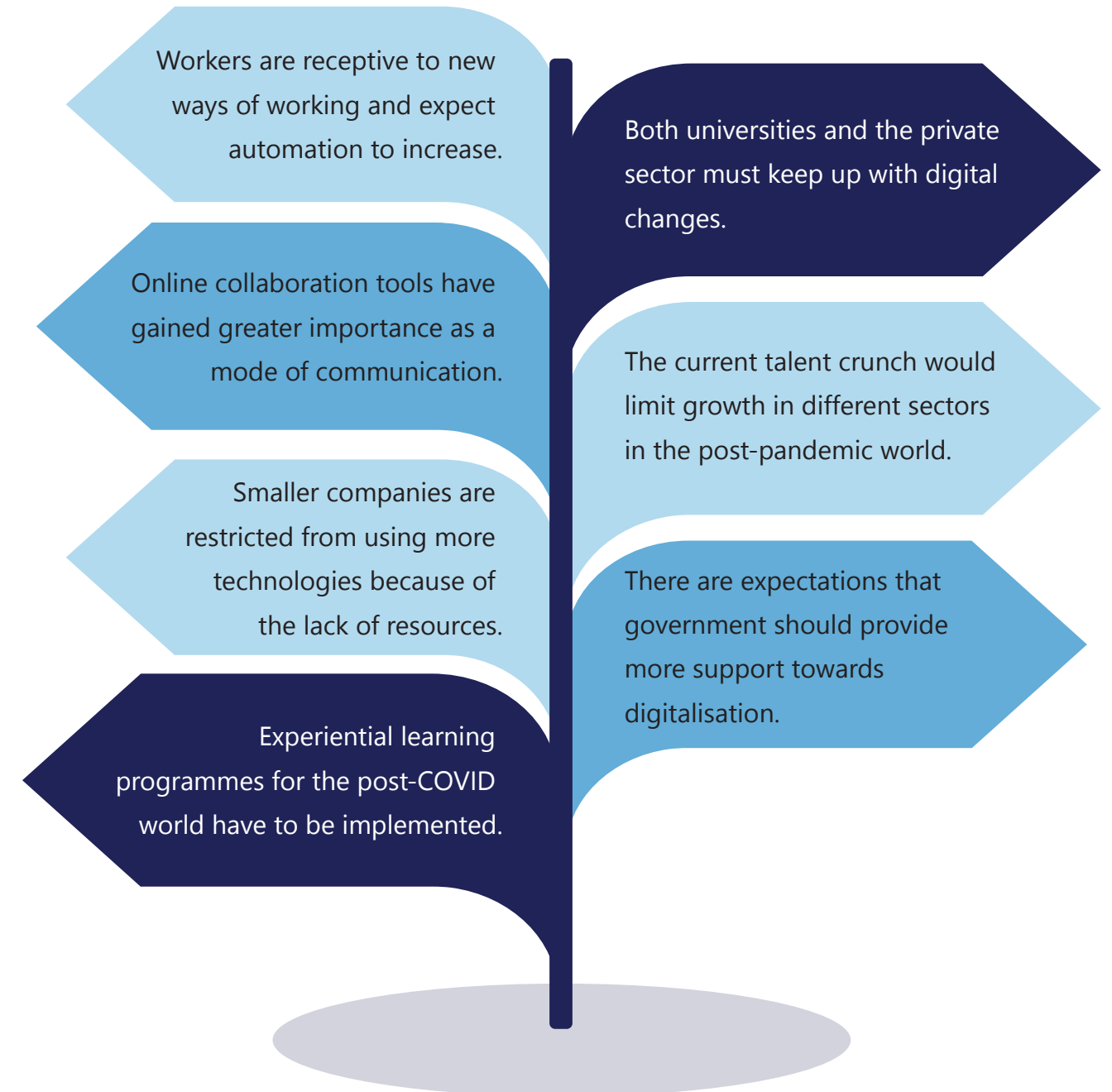
Leverage on the professional services and education sector.

Develop a talent strategy that meets the demands of a post-COVID world.



Transform human capital and spur economic recovery.

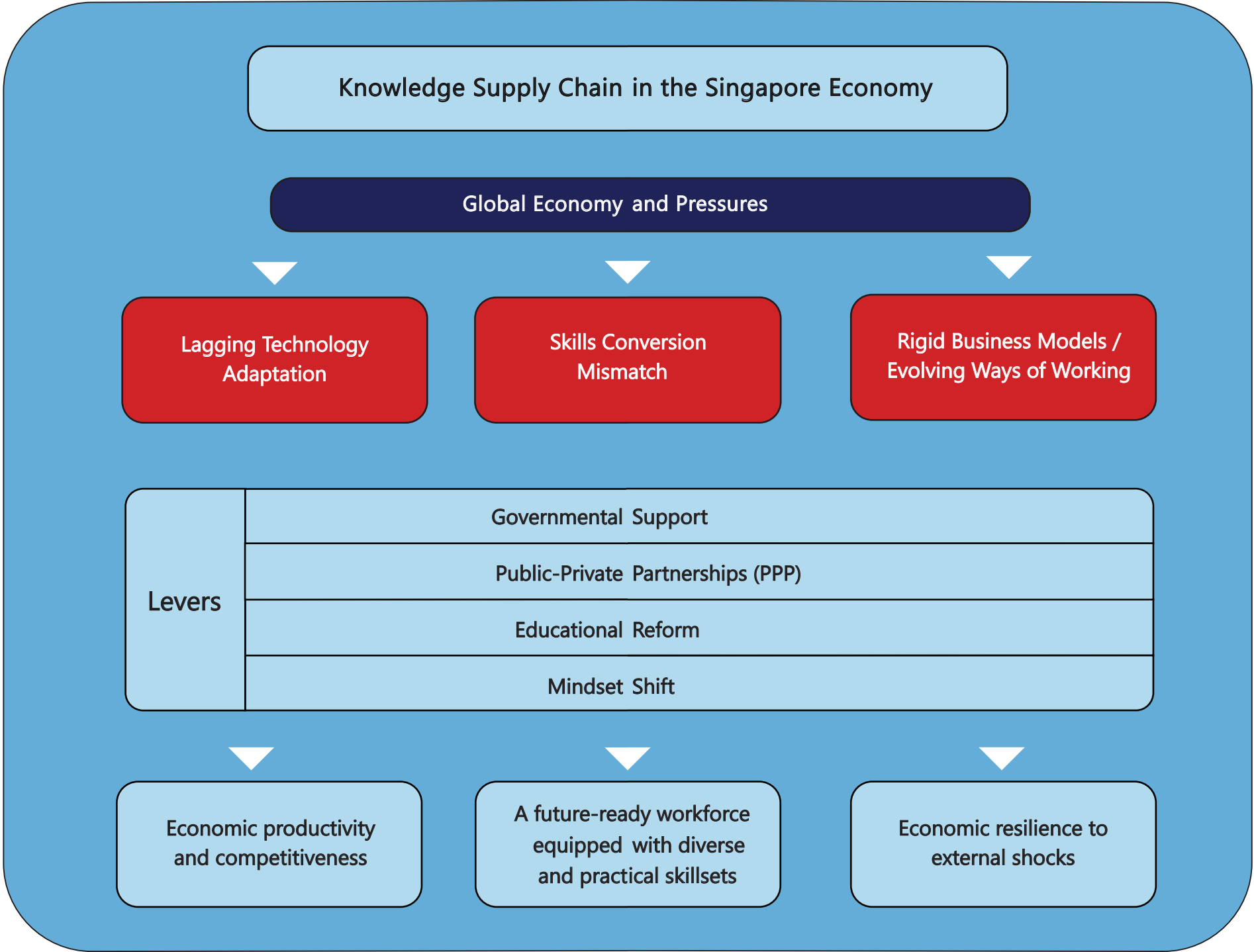
# Key Findings



# Framework

Singapore Institute of Technology (SIT) has conducted a quantitative survey of industry professionals from a variety of fields such as audit, consulting and engineering.<sup>7</sup>

Our survey found that 68% of companies have implemented digital strategies in anticipation of greater demand for technology.



Companies have been restricted in using emerging technologies due to COVID-19 and the lack of resources, especially SMEs.

Some companies are unable to fully tap into the potential of technology to drive their competitiveness.

<sup>7</sup>The survey was conducted online from 2 Nov 2020 to 31 Dec 2020 and received a total of 109 responses. The survey respondents were from 34 unique organizations in various sectors, including accounting, audit, consulting, tax, advisory and others (such as banking, HR, engineering etc.).

# Identified Gaps

We have identified 3 key gaps in our framework.



Development of a talent pipeline



Agility of business models and ways of working



Transfer of skillsets from education to the workplace

**There is room for improvement in the digital strategies of companies.**

## Automation Growth

66% of our respondents expect automation to continue accelerating in their area of work.

However, 32% of them felt that the digital strategy in their company does not cater to the future demands of the post-COVID environment.

## Government Protection

84% of respondents want the government to play a role in the protection of gig professionals.

This could be through upskilling to enable them to pivot to other industries.

## Skills And Job Matching

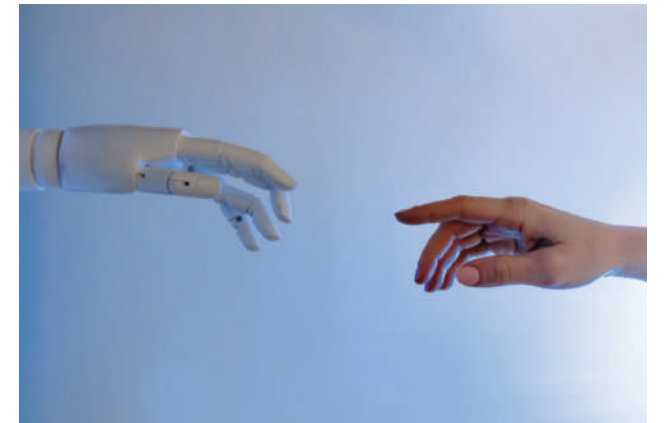
85% of respondents think that the current upskilling efforts by the government are useful in the long run.

However, 74% of respondents expect greater support from the government in the areas of skills and job matching.

# Case Study: 3E Accounting

## Who is 3E?

3E Accounting is a Singapore-based firm that provides professional incorporation, accounting, tax, immigration and compliance services for start-ups and SMEs.



## Solution

The firm collaborated with SIT to develop a robot which digitalises the book-keeping and financial statement preparation process.

The robot converts scanned purchase and sale invoice documents into editable and searchable financial data. It also transcribes financial data into accounting entries in accordance with the International Financial Reporting Standards.

## Impact

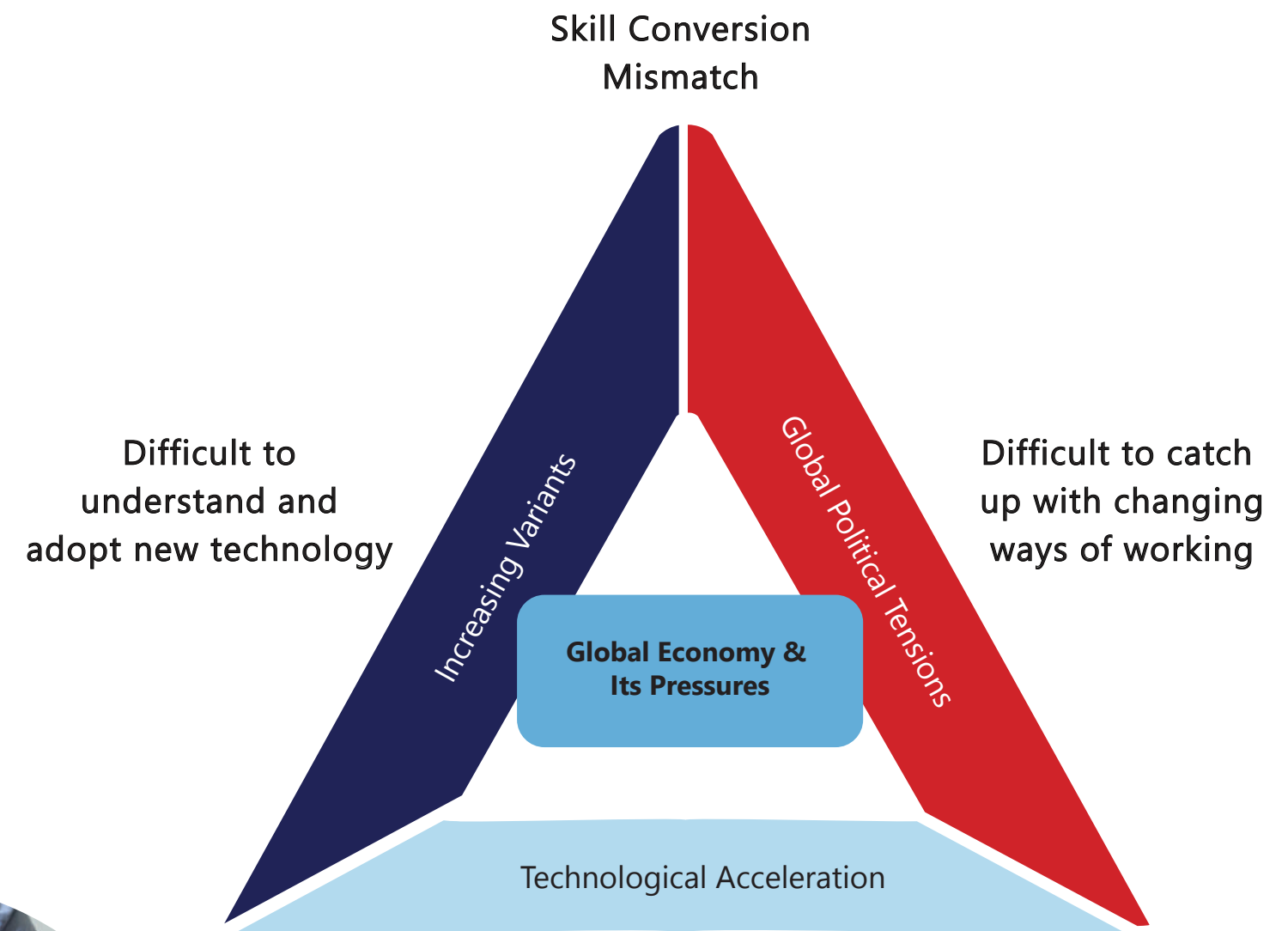
This enables 3E Accounting to improve its operational efficiency while minimizing employees' repetitive tasks and human errors





# Global Economy And Its Pressures

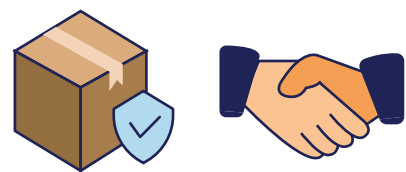
## THE POST-COVID CHALLENGE





# Regional Movements

Global political pressures have shaped how we live, work and play. One flashpoint includes the US-China tensions.



Effect of US-China decoupling would likely have an impact to the global economy.<sup>8</sup>

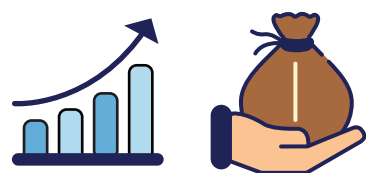
## US-China Relations



## BRI Investments

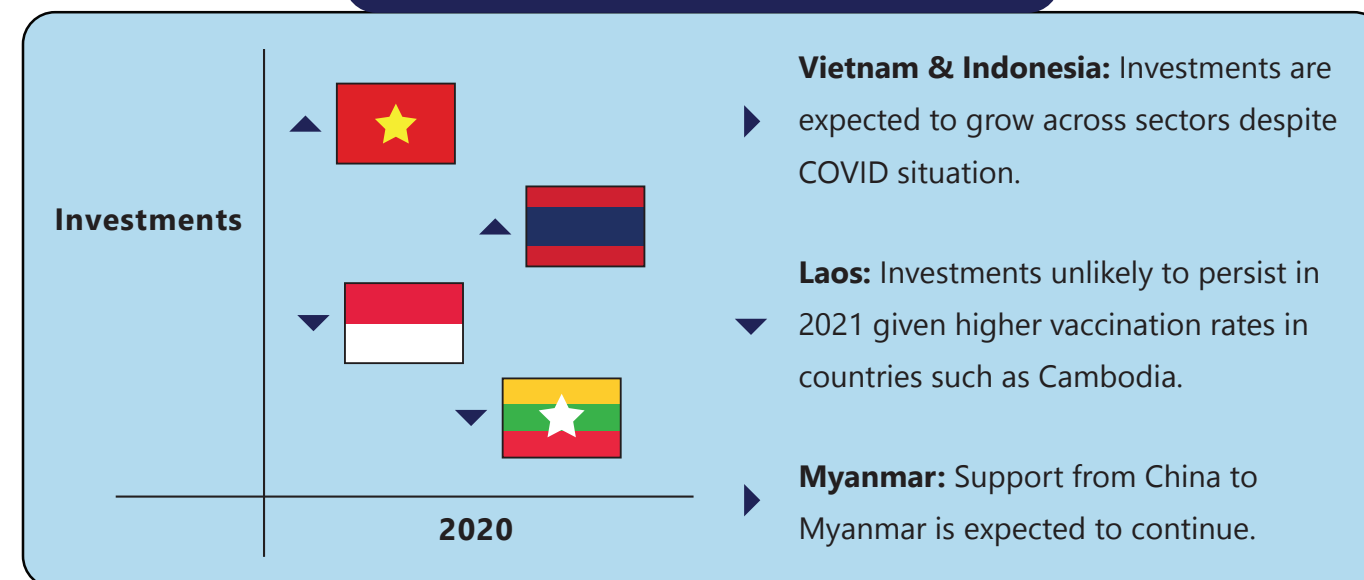
Belt and Road Initiative (BRI) investment in Southeast Asia (SEA) declined from USD\$25.8 billion in 2019 to USD\$16.67 billion in 2020.<sup>9</sup>

## Investments in Infrastructure



Share of BRI investment in SEA increased from 25% to 36%.<sup>10</sup> Investment from China to SEA focuses on supply chain infrastructure, with the largest investments in 2020, anchored in transport infrastructure and energy.

## ASEAN's Expected Progress

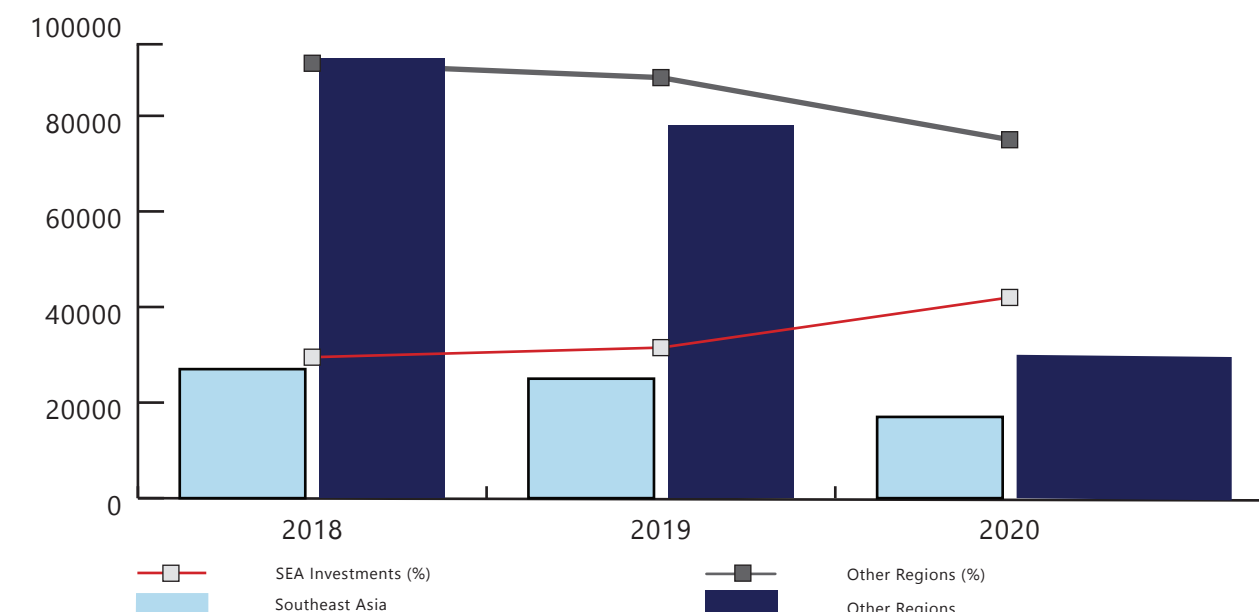


While China is unlikely to lower its investment portfolio over parts of SEA, China may re-allocate investments according to the COVID-19 situation based on external factors. In 2021, the Group of Seven (G7) has also launched the Build Back Better World (B3W) initiative.<sup>11</sup> There is a likelihood that tensions could be reflected in investment allocation.

**The greater demand for sustainable advice and services is likely to spur an increase in sustainability related jobs in the sector.**

## BRI Investment in SEA against other regions:

Source: China Global Investment Tracker, American Enterprise Institute (AEI)  
Other regions are: North America, Arab Middle East, North Africa, Sub-Saharan Africa, Northeast Asia, West Asia



<sup>8</sup>Tee Zhuo, COVID-19 has raised US-China tensions, creating a more dangerous world for small countries like Singapore: PM Lee, The Straits Times, 7 Jun 2020

<sup>9</sup>American Enterprise Institute, China Global Investment Tracker, American Enterprise Institute, Accessed 21 Jun 2021

<sup>10</sup>Ibid.

<sup>11</sup>Steve Holland and Guy Faulconbridge, G7 Rivals China with Grand Infrastructure Plan, Reuters, 13 Jun 2021

# Scenarios

## Least Disruptive

## Most Disruptive

### Scenario 1:

Singapore experiences high yearly GDP growth of 6% for the next few years.

Our graduates increasingly possess interdisciplinary skillsets.

### Scenario 2:

Singapore experiences modest yearly GDP growth of 2-3% for the next few years.

Our graduates may seek opportunities overseas due to impatience and frustration.

### Scenario 3:

Singapore experiences economic contraction and there is a financial crisis.

Our graduates feel stifled by the lack of work opportunities and seek further work and educational opportunities overseas.

## Key Assessments

Tertiary education curriculum should cultivate interdisciplinary skills.

The workforce could better leverage on T-shaped individuals possessing deep domain knowledge and a broad-based interdisciplinary mindset.<sup>12</sup>

Government can support a talent management scheme for students to pursue tertiary education, both locally and globally.

This develops the skills of our talent pipeline and boosts the competitiveness of our workforce.

Students are more likely to pursue post-graduate studies rather than join the workforce.

Government and private sector can grow tech talent by training more analytics personnel.

**The development of a talent pipeline is a common denominator across all three scenarios.**

LKYSPP has surveyed 100 employees within the professional services sector to examine the feasibility of an alternative career pathway.

Our study found that firms in the professional services sector struggle to find local talent with the 'right' set of skills required for the future of work.

# RECOMMENDATIONS AND INSIGHTS

## Lack of a Talent Pipeline

The government could develop a stronger local talent pipeline that would narrow the skills mismatch in technology and prepare companies for digital acceleration.

Institutes of Higher Learning should quickly adapt to changing industry demands by developing modules to better meet industry needs.

## Lack of Attractiveness of Certain Industries

The effectiveness of a more robust curriculum cannot be fully realised without graduates joining the industry.

For the Built Environment, better opportunities for career progression, better branding and digitalisation would serve to attract fresh graduates to the industry.

This requires the buy-in of the private sector in conjunction with governmental policies and educational transformation.

The Ministry of Manpower has studied the proportion of young people who are not in employment, education or training.

The prevalence of youth in such a situation rose to 5.3% last year, compared with 4.5% in 2019. This reflects the difficulty among youth in finding a job, and their likelihood of being idle economically.

*Labour Market Report First Quarter 2020,  
Ministry of Manpower*

**“Educational institutions should continue to experiment new models of teaching and learning, perhaps evolving even at a quicker pace, in the post-COVID environment.**

**These new teaching and learning models should be student-centered, inquiry-based and focused on student-initiated explorations of solutions to address important societal issues.**

Professor Gary Pan

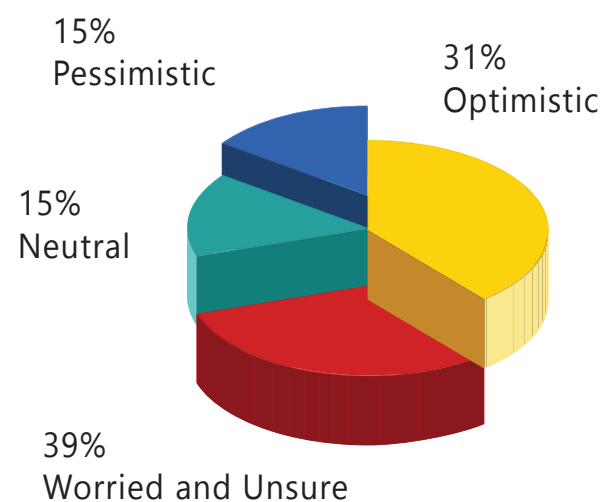
<sup>12</sup> T-shaped person was coined in the aughts by Tim Brown, CEO of IDEO Design Consultancy, or by McKinsey & Company in the 80s. Either way, the vertical bar on the letter T represents the depth of your skills and expertise in a single field, whereas the horizontal bar is your breadth or ability to collaborate across disciplines with experts in other areas and apply knowledge to areas beyond your primary field.



# Design Thinking Study

We conducted a design thinking study with 26 mid-career professionals and undergraduates to better understand the concerns of Singaporeans toward the post-COVID environment.<sup>13</sup> Individuals shared their narratives and developed the following insights.

**In relation to the post-pandemic environment, how is your outlook on your future career path in Singapore? Why?**



Worried about stifler competition in the labour market

Frustrated at slow career progression

Uncertainty in job stability and future way of work

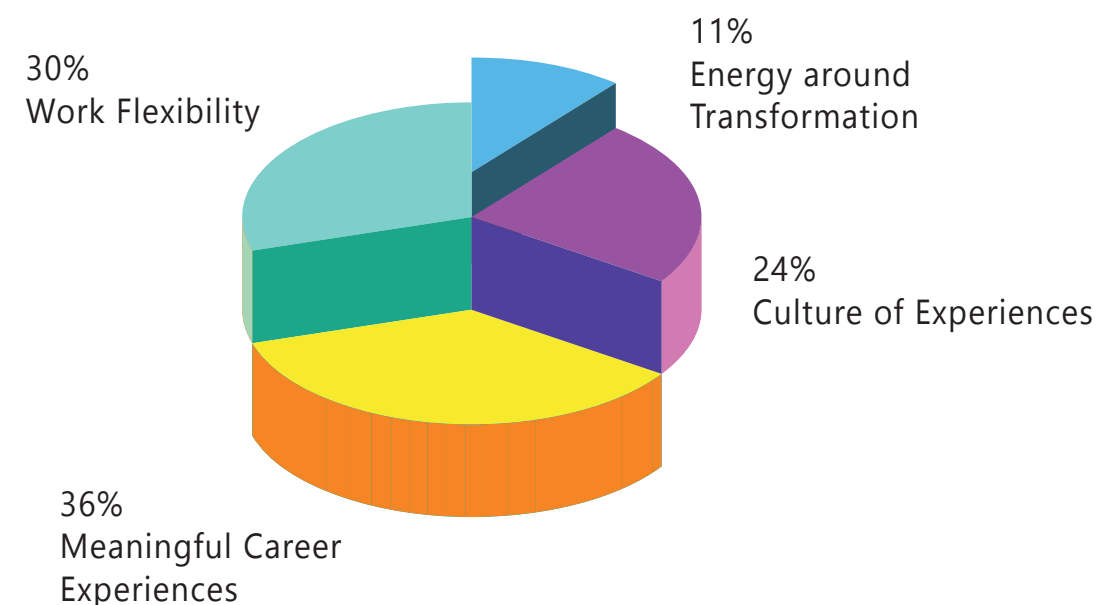
**How do we ensure Singaporeans have proper skills match and enjoy greater career agility?**

Findings suggest that Singaporeans are generally worried and unsure about the future of their careers. They expressed that their career paths are increasingly non-linear. In general, younger Singaporeans have become more anxious about their future.

## RECOMMENDATIONS AND INSIGHTS

A recent poll by Johnson & Johnson has found that meaningful career experiences and work flexibility are important factors when making career choices.<sup>14</sup>

**As an eCommerce and digital leader, what is most important to you when pursuing your next career move?**



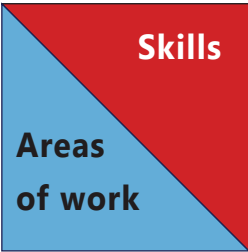
**A future-ready workforce demands both digital and transferable skills.**

**Businesses and Governments should be looking to change the way they hire, with far less emphasis on traditional education to more of skills and aptitude. This will open sectors up to a wider and more diverse talent pool, enabling companies to develop a more productive workforce.**

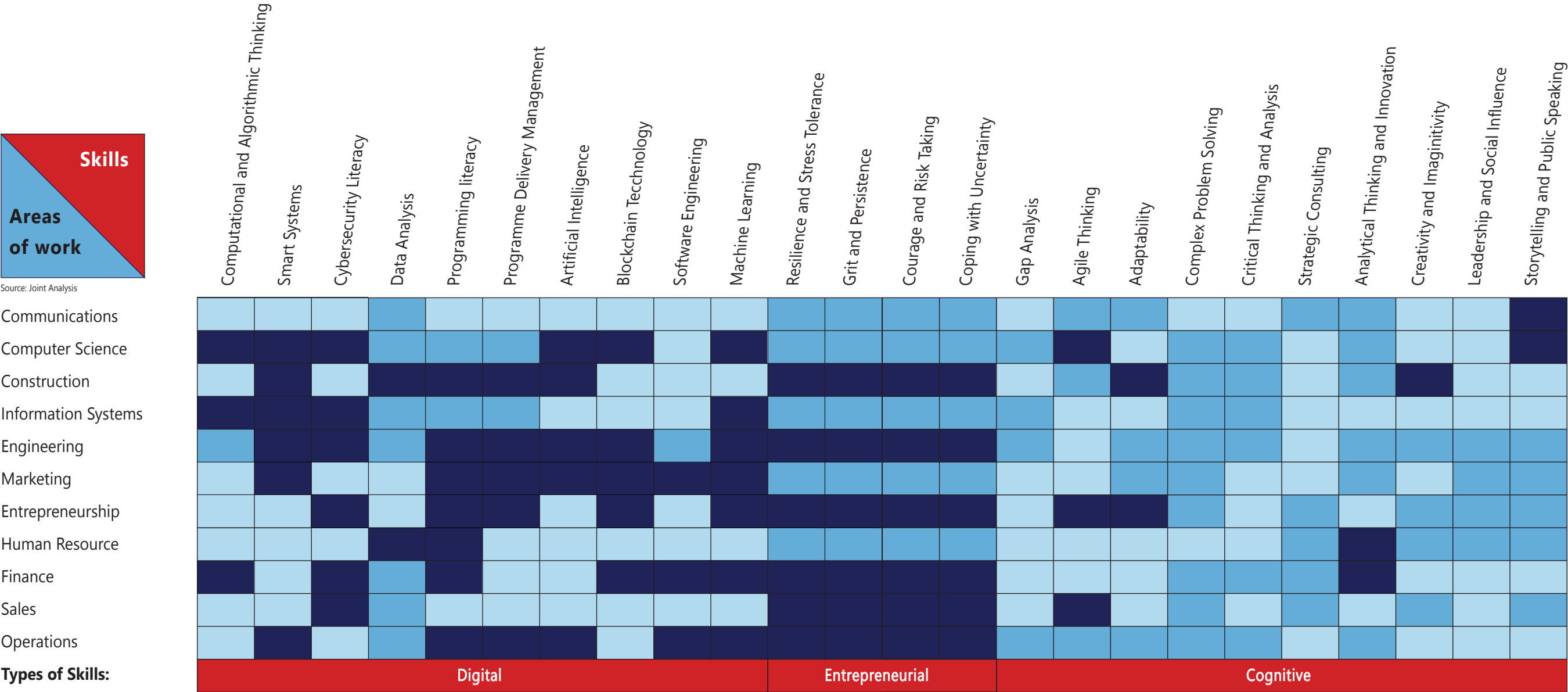
Dr. Yap Kwong Weng

<sup>13</sup>The study involved 25 Singaporeans and 1 permanent resident. Design thinking is a problem-solving process where one seeks to understand the stakeholders' problems before forming a solution. This involves diverging from the problem through research and stakeholder interviews before converging on the problem statement.

# SKILL STATUS IN AREAS OF WORK



Source: Joint Analysis



Absent

Present

High Importance

Digital and entrepreneurial skills are key levers when converting uncertainty into opportunities.

Data gathering and cleaning are issues that companies will need to deal with as these form building blocks of algorithms used in data development .

Audrey Dong

\* Disclaimer: Skills listed are not exhaustive. It does not represent the full development of a character and only represents our research.



# Conclusion

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As Singapore recovers from the pandemic, global pressures have uncovered both gaps and opportunities. This creates an opportunity for change in our education and the way we work.

Building career agility would require the development of both digital and transferable skills. Firms in professional services and the built environment sector can reimagine their talent strategy to narrow the gap between educational institutions and industry. The government could support them in various ways with private sector expertise.

**Built Environment (BE) Professionals should be multi-skilled with a strong foundation in technical skills and perhaps some elements of management and entrepreneurship.**

Er. Emily Tan

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# Recommendations

## Bridge The Potential Skills Gap in an Accelerated Digital World

We recommend implementing Experiential Learning Programmes (ELPs) as part of a talent management scheme to complement current skills development efforts.

The scheme could involve a global exposure programme, where companies send promising employees to overseas regional offices for a minimum period of a year, which allows firms to develop better skillsets and capabilities.

## Actively Pursue Growth Opportunities in the Region

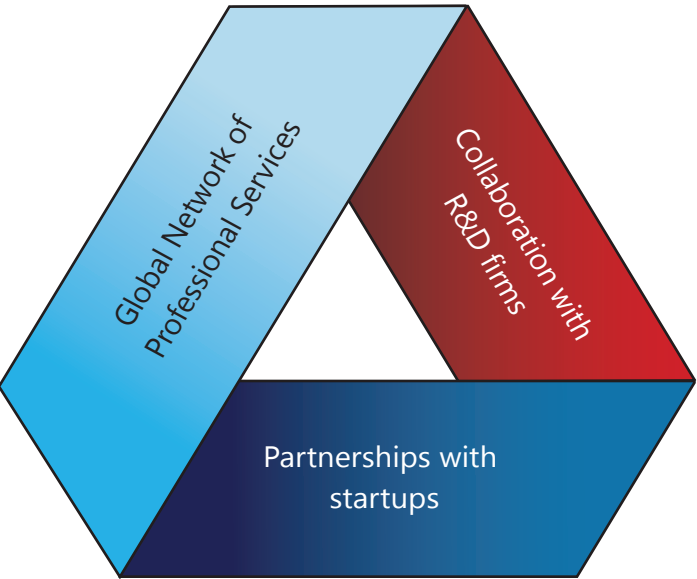
Leverage on high-growth areas which creates greater development opportunities and draws graduates into the built environment sector. Businesses should relook their talent strategies and align it with future-ready skillsets.

A pilot study can be conducted by a developer firm with government and professional services to explore these areas. The built environment can ride on the growth of smart, resilient and sustainable infrastructure. By utilising manufacturing and assembly technology and sourcing components locally, the impact of shortages in manpower and materials can be mitigated.

We found that the management of human capital in companies could be improved through technology. Industry perspective is lacking in areas such as sustainable cost management and an integrated lifecycle management.

## Reimagine Business Models and Teams

The government should implement a Global Network, Collaboration and Partnership (GCP) framework to better understand the SME ecosystem.



The government can leverage on the **global network of firms in the professional services sector** to develop better digital solutions.

The government can create a **pathway to encourage, develop and monitor firms**. Partnerships with R&D firms such as A\*STAR could facilitate greater knowledge transfer from R&D firms to SMEs.

Professional services firms can be leveraged upon to facilitate partnerships within the public and private sector. The government could also conduct an industry study to better understand the state of digitalisation in industries.

## Maintain High Productivity for the Long Run

The government could conduct a productivity study to better understand the relationship between wages and sustained productivity.

While wages are expected to rise in 2021 compared to the previous year, pay increment is still expected to be lower than pre-pandemic levels.<sup>15</sup>

The government should develop more stringent labour laws to protect the wages of workers and ensure that workers are paid proportionately to their output.

Companies will need to incorporate analytics translators into teams, who are equipped with both digital skills and business domain expertise. Educational institutions should also transform their curriculum to develop practical skillsets required by the industry in the short to medium term.



<sup>15</sup>Millet Enriquez, Hiring and Wage outlook Improves after Pandemic-hit Year , Channel News Asia, 9 Apr 2021





**Is Singapore's talent pipeline ready  
for the post-COVID environment?**





# Acknowledgements

## Project Leads

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