



# FOURTH INDUSTRIAL REVOLUTION: NEW PARADIGM FOR EDUCATION AND TRAINING

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# The Fourth Industrial Revolution



## 1st Industrial Revolution WATER & STEAM

Steam and water power  
replace human and animal power  
with machines.



## 2nd Industrial Revolution ELECTRICITY

Electricity, internal combustion  
engines, airplanes, telephones,  
cars, radio, and mass production.



## 3rd Industrial Revolution AUTOMATION

Electronics, the Internet and IT  
used to further the automation  
of mass production.



## 4th Industrial Revolution CYBER-PHYSICAL SYSTEMS

Driverless cars, smart robotics,  
materials that are lighter and  
tougher, and a manufacturing  
process built around 3D printing.

Image credit: TECA

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# Impact on Skills

**14%** of global workforce, as many as 375 million people may need to switch occupational categories.



**1/3** and more of the desired skill sets of most jobs will be comprised of skills not yet considered crucial today, by 2020



Half-life of skills in the future of work will decrease to

**5** years



Individuals on a 30 year career have to refresh their skills throughout their careers

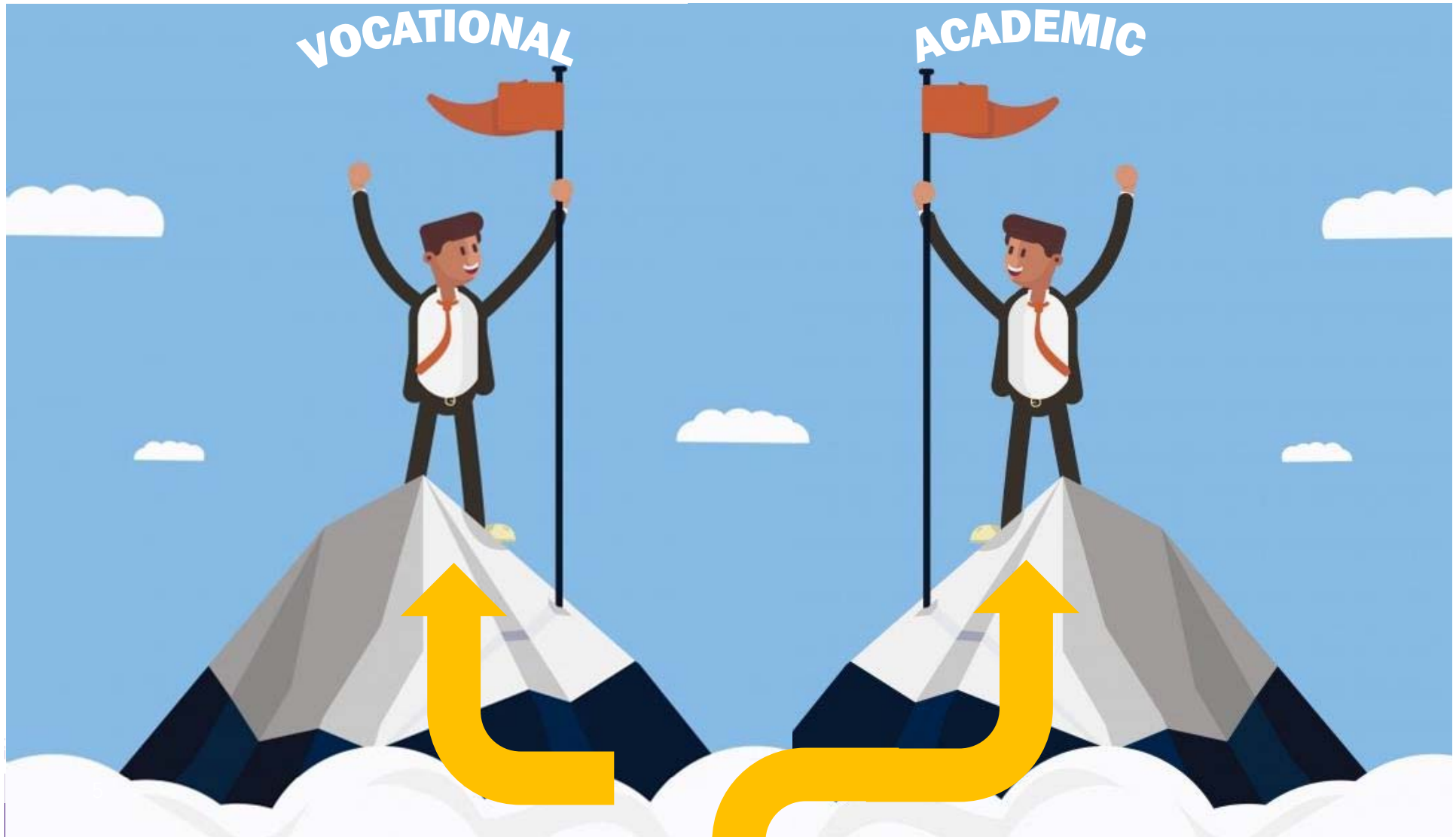
**6** times



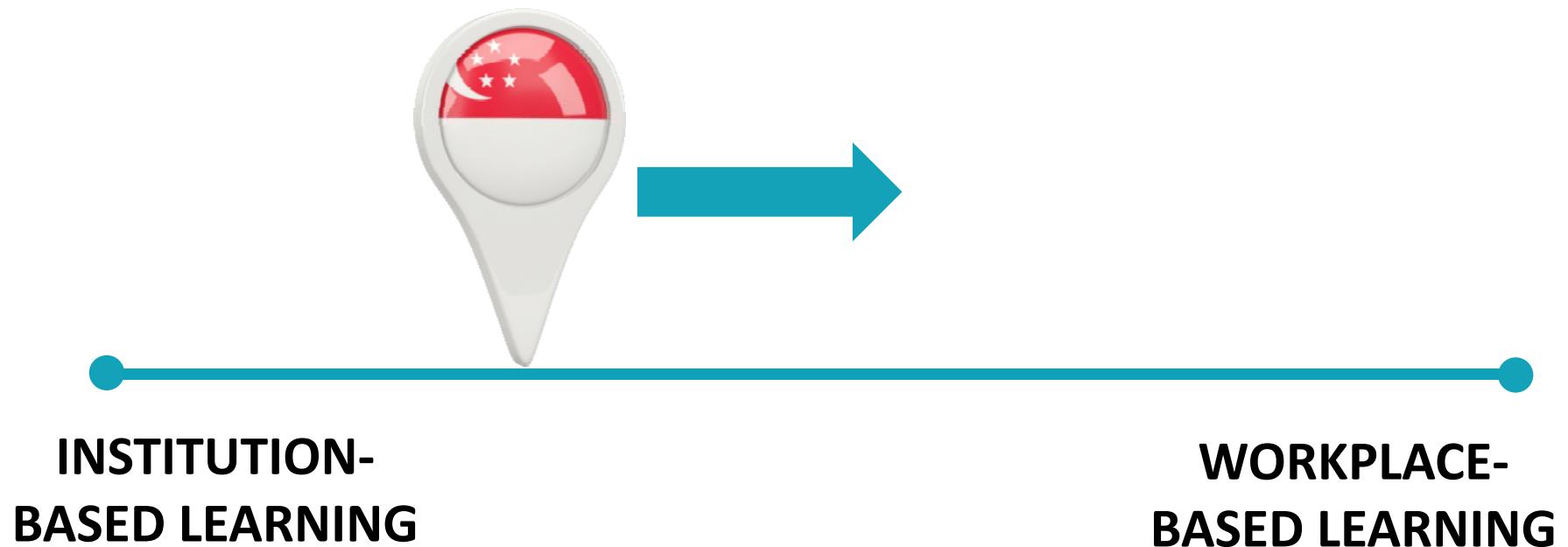
*Image credit: RyanClements*

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# Rebalance Academic & Vocational Pathways

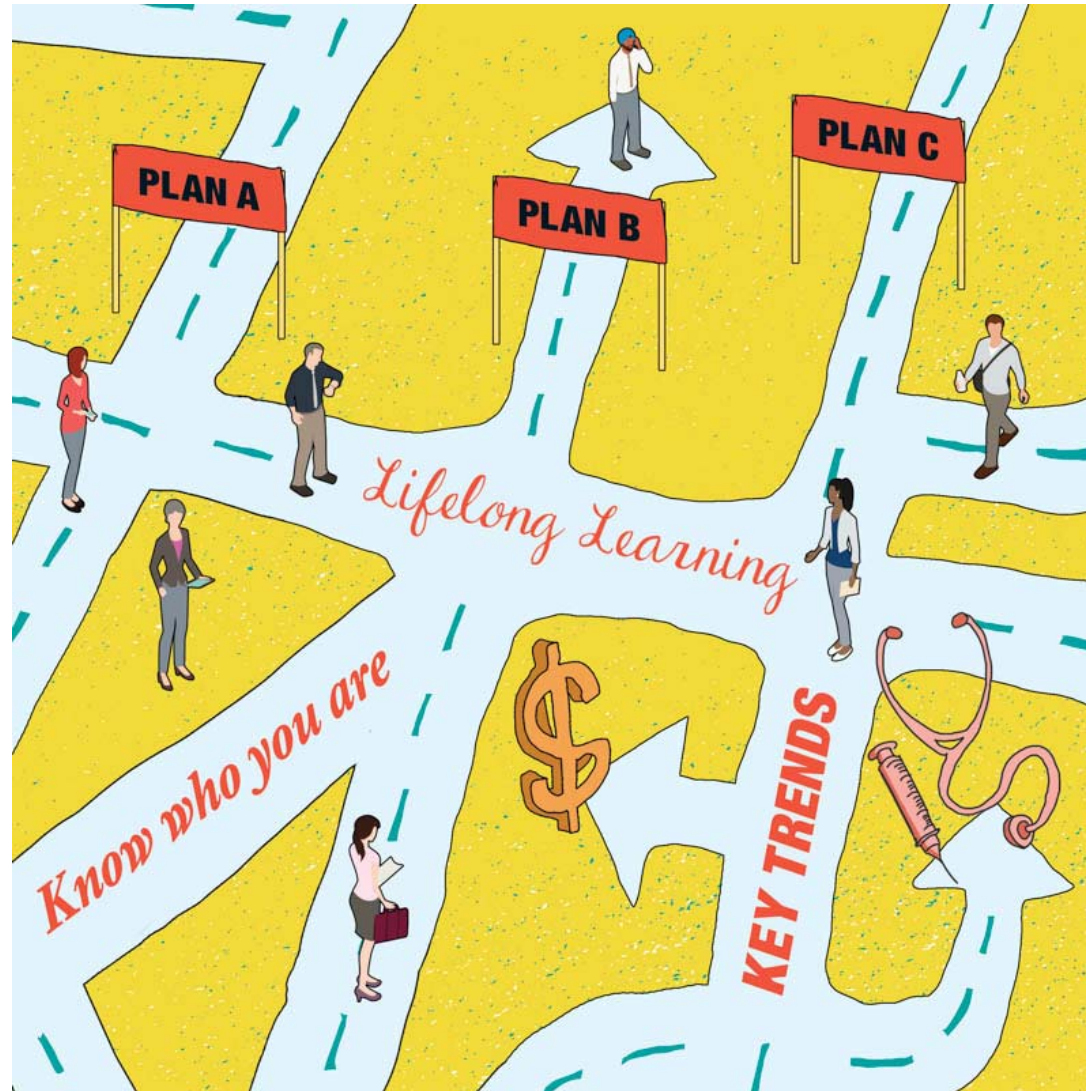


# Rebalance Learning in School & Learning at the Workplace

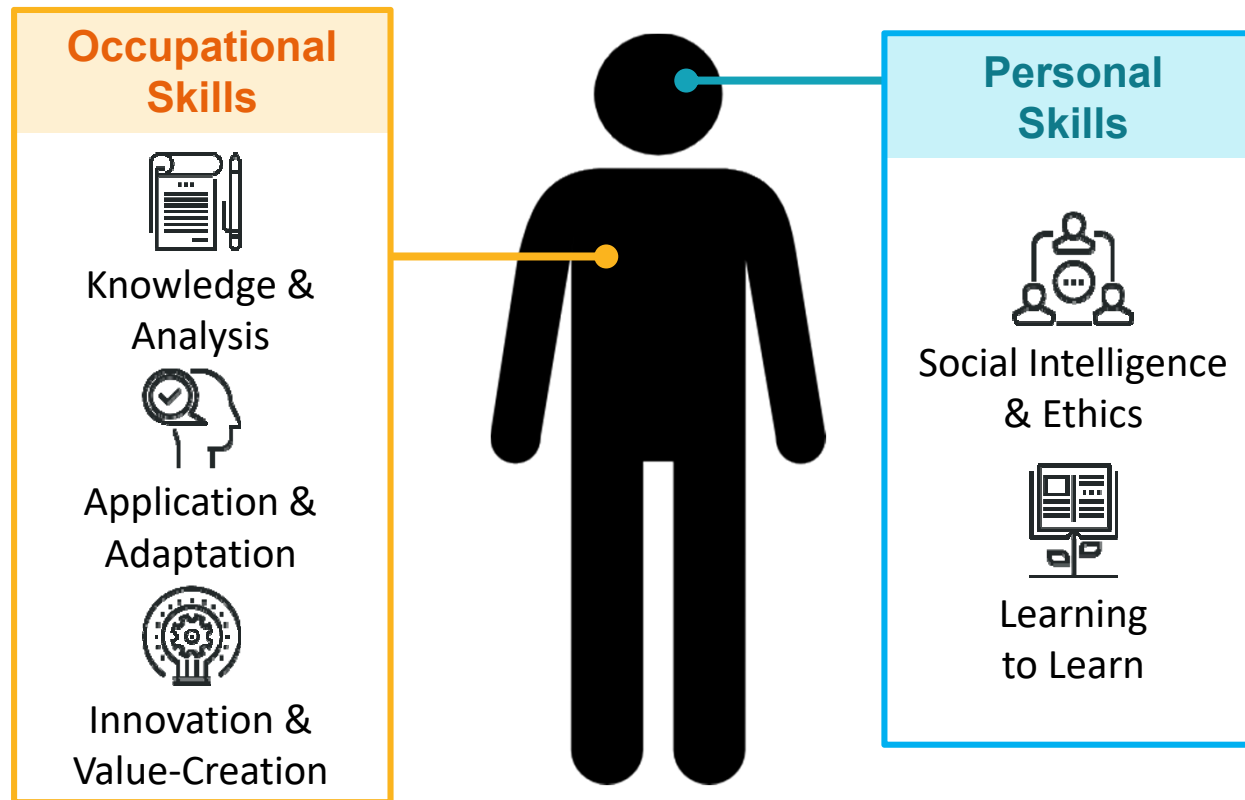




# Rebalance Front-Loaded Learning & Learning for Life



# Rebalance Learning Technical & Transversal Skills





# The SKILLS*future* Movement



1. Enable individuals to make informed learning & career choices



2. Develop an integrated, high-quality education & training system



3. Promote employer recognition & career development based on skills & mastery



4. Foster a culture that supports & celebrates lifelong learning



# Individuals

MySKILLSfuture

[Home](#) [Training Exchange](#) [Self-Assessment Tool](#) [Industry Insights](#) [Career Resources](#) [Find Jobs](#) [Post J](#)

## SHAPE YOUR OWN *future*

Make informed choices in career development and lifelong learning through the use of career-related tools and information.



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# Skills for Today and Tomorrow



2-day programme to develop foundational digital skills in your employees.

At the end of the programme, learners will:

- Develop an awareness on the future of work
- Able to work in a technologically rich environment confidently
- Able to use frequently-used mobile apps
- Develop an appreciation of cyber security, use of data



Source: [skillsfuture.sg/digitalworkplace](https://skillsfuture.sg/digitalworkplace)

# Skills for Today and Tomorrow

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Series



Advanced Manufacturing



Cyber Security



Data Analytics



Digital Media



Entrepreneurship



Finance



Tech Enabled Services



Urban Solutions

Source: [skillsfuture.sg/emergingskills](https://skillsfuture.sg/emergingskills)





# Employers

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Employer Awards **Be recognised!**

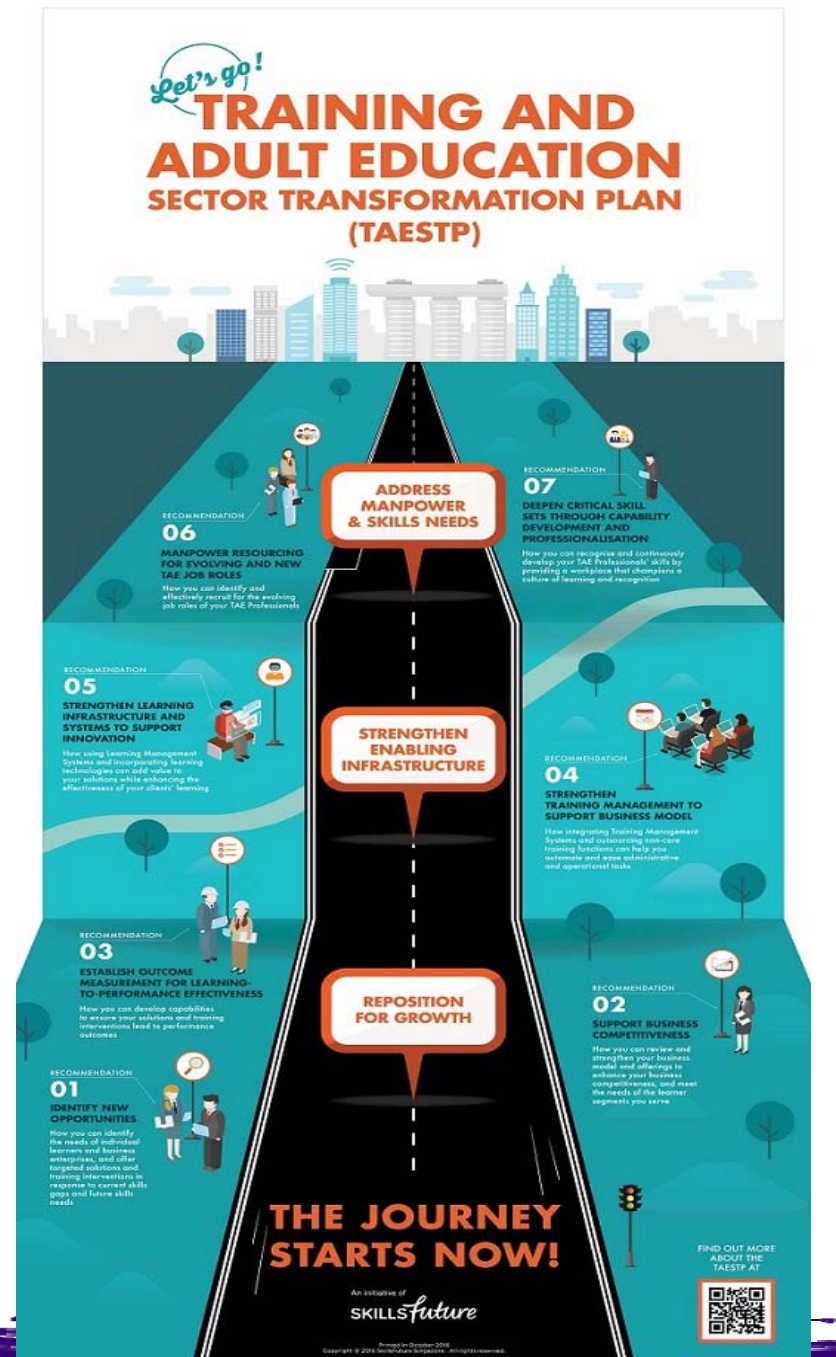


Source: [skillsfuture.sg/skills-framework](https://skillsfuture.sg/skills-framework)

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# Education and training institutions





# Moving with the Times

## SkillsFuture Initiatives Adopted:

- SkillsFuture Earn and Learn Programme (Supply Chain Management)
- Skills Framework for Logistics
- SkillsFuture for Digital Workplace
- SkillsFuture Advice Workshop
- Enhanced Training Support for SMEs



Source: Lian He Zao Bao, 10/05/2018



## **Lifelong Learning Culture @ Workplace**

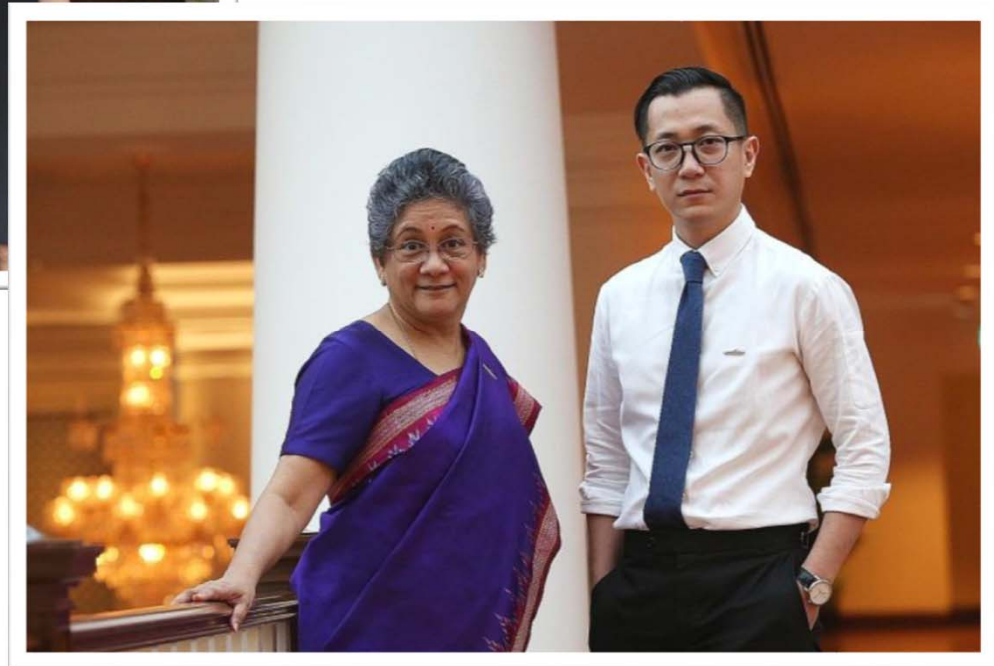


- Invested \$2 million on the SkillsFuture@sc initiative which offers courses for employees to take ownership of their learning
- Developed 50 courses across varying skillsets in the financial industry
- Introduced a structured re-skilling plan to prepare their staff for future job roles in the changing financial industry
- Provided staff with 3 paid days of training leave per year

# Lifelong Learners



Mr Chan Kim Yong (68) - managing director of Thye Shan Medical Hall



Ms Narayanasamy Pushpavalli (63) – kindergarten principal; and Mr Edwin Neo (36) – shoemaker



**Mobilise all stakeholders to build up responsive and effective skills eco-system**

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**Thank You.**

