

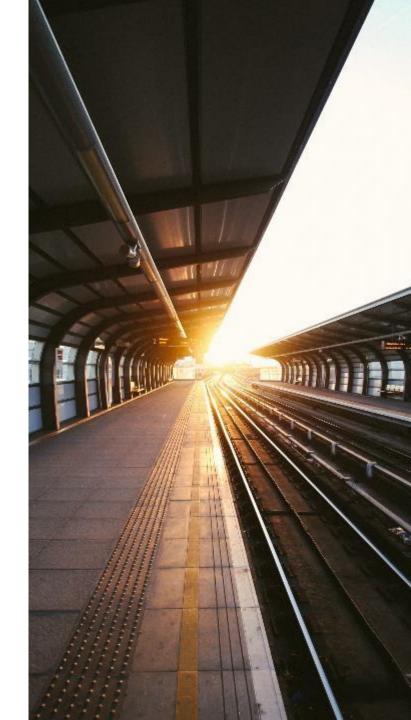
Human Capital and the Future of Jobs



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Contents





- Challenges of the Future of Work
- Talent can now work from anywhere in the world
- Industrial Revolution 4.0's impact on Malaysia
- Mapping Malaysia's talent supply and demand





Identifying challenges of the Future of Work





65%

of children entering primary school today will end up working in completely new job types that don't yet exist¹

54%

of all jobs in Malaysia could be at high risk of being displaced by technology in the next two decades²



Source:

- 1. The Future of Jobs (World Economic Forum, 2016)
- 2. The Times They Are A-Changin': Technology, Employment, and the Malaysian Economy (Khazanah Research Institute, 2017)





Five megatrends disrupting the way people work

1

Rapid urbanisation

2

Demographic shifts

3

Shifts in global economic power 4

Resource scarcity & climate change

5

Technological breakthroughs

- People & the Internet
- Computing, communications & storage everywhere
- The Internet of Things
- Artificial Intelligence (AI) and big data
- The sharing economy & distributed trust
- The digitisation of matter e.g. 3D printing

Source: The Future of Work - A Journey to 2022 (PwC, 2015)

Deep Shift – Technological Tipping Points and Societal Impact (WEF, 2015)





Comparing Skills Demand: 2018 vs 2022

What will be needed by 2022

- What employers want in 2018
- Analytical thinking and innovation
- Complex problem-solving
- Critical thinking and analysis
- Active learning and strategies
- Creativity and initiative
- Attention to detail, trustworthiness
- Emotional intelligence
- Leadership and social influence

- Analytical thinking and innovation
- Creativity, originality and initiative
- Emotional Intelligence
- Reasoning, problem-solving and ideation
- System analysis and evaluation
- Leadership and Social Influence
- Technology design and programming

What will be decreasing by 2022

- Memory, verbal, auditory and spatial abilities
- Management of financial and material resources
- Technology installation and maintenance
- Reading, writing, math and active listening
- Management of personnel
- Quality control and safety awareness
- Coordination and time management
- Visual, auditory and speech abilities

Source: The Future of Jobs Report (World Economic Forum, 2018)

Occupations on the Rise





Data	Analyst	s and 9	Scientists

Software and Applications
Developers

Ecommerce and Social Media Specialists

Customer Service Workers

Sales and Marketing Professionals

Training and Development

People and Culture

Organizational Development Specialists

Innovation Managers

AI and Machine Learning Specialists

Big Data Specialists

Process Automation Experts

Information Security Analysts

User Experience and Human-Machine Interaction Designers

Robotics Engineers

Blockchain Specialists

- Among the range of roles that are set to experience increasing demand in the period up to 2022 are established roles such as:
 - Data Analysts and Scientists
 - Software and Applications Developers
- Also expected to grow are roles that leverage distinctively 'human' skills such as Customer Service Workers and Sales and Marketing Professionals
- Accelerating demand for a variety of wholly new specialist roles related to understanding and leveraging the latest emerging technologies such as AI and Machine Learning Specialists.

Source: The Future of Jobs Report (World Economic Forum, 2018)









Source: The Future of Jobs (World Economic Forum, 2016)

Talent 4.0 Across the Globe

What other countries are doing?









JAPAN

Industrial Value Chain Initiative

- Launched by 30 Japanese companies, e.g. Nissan, Mitsubishi, Fujitsu, Panasonic
- Focus on Digital Economy and Data Analytics



UNITED KINGDOM

The Future of Work: Jobs and Skills in 2030 (February 2014)

- Set up the right institutions to bring together sectors and focus on Science, Research and Innovation
- Identifying and addressing sector-specific skills gaps



GERMANY

White Paper on Future of Work (November 2016)

- Focus on Employment Insurance and Working Time & Flexibility
- Skills forecasting and monitoring regionally for specific industries



SINGAPORE

Report of the Committee on the Future Economy (February 2017)

- Build a strong Digital Capabilities
- Invest S\$19 billion in R&D over the next five years (2016 -2020)



Made in China 2025

- · China aims to become a Manufacturing Powerhouse with high-end technology, machine tools and robotics
- Increased to 1.26% of USD11.2 trillion (\$15.8billion)





The Future of Work enables talent to leverage on technology to work from anywhere in the world





Gig Economy: Futurising the Future

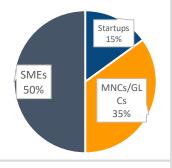
What is the gig economy?

o Ti

- Requires a high degree of autonomy
- Payment by task, assignment, or sales
- Short-term relationship between worker and client.

Who is part of the gig economy?





Why do talent opt for gig-type jobs

- ✓ Flexibility to choose jobs or projects
- ✓ Exposure to a more diverse work experience
- ✓ Control over working hours

Top skills identified by freelancers



Communication and business correspondence



Networking



Time management



Interpersonal Skills and negotiation



Problem Solving

Top 5 regions that employ online labour



- 1. United States of America
- 2. Europe
- 3. Australia
- 4. United Kingdom
- 5. Asia and Oceania

 $Source: https://assets.theedgemarkets.com/Infographic_TEM1188_71_theedgemarkets.png$





Case study: Estonia's Tallinn

Estonia, a country in Northern Europe, borders the Baltic Sea and Gulf of Finland. Formerly part of the Soviet Union, the capital, Tallinn, is known for its preserved Old Town, museums and the 314m-high Tallinn TV Tower.

Tallinn is now also known as a city of choice for digital nomads.

Talent Mobility: Evolving out of the traditional concepts of 'work'





Three Ways Estonia is building a city of the future in Tallinn

Everything Happens Online

- Internet access is a basic human right
- Coding is part of their primary education syllabus
- Citizens can vote, secure mortgages and open bank accounts via the second-fastest public Wi-fi in the world.
- Businesses can be set up online within 10 minutes



"Estonia E-Residency" Programme

- Aimed towards location-independent entrepreneurs such as software developers and writers.
- Officers access to Estonian services such as company formation, banking, payment processing, and taxation.
- E-residents get a smart card which they can use to sign documents.



Visa for Digital Nomads

- 365-day working permit
- Includes 90 days' travel in the Schengen area of the European Union (EU).
- Aimed at people from further afield: from the United States, Asia and Latin America.

By January 2019







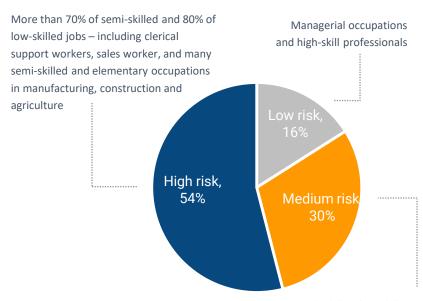
Industrial Revolution 4.0 will impact Malaysia's workforce and workplaces

Malaysian Jobs at Risk of Automation





4 out of 5 jobs at high risk of displacement by technology are semi-skilled



High-skill to low-skill occupations – including technicians and associate professionals, personal service workers, E&E and ICT mechanics and repairers, and cleaners and helpers

Source: The Times They Are A-Changin': Technology, Employment, and the Malaysian Economy; Khazanah Research Institute, Apr 2017



Malaysian companies are already evolving

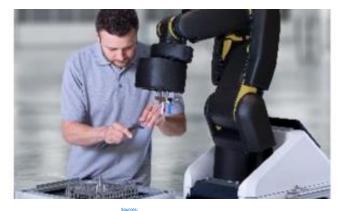




Three examples of company that is already opting for automation

(II) BOSCH

- APAS: a robot which work hand-to-hand with the human colleagues
- RFID technology: a tracking system of the product manufactured along the supply chain, for logistic optimization
- Smart glasses: technical aids for QS of the product.



http://www.digi.com.mv/sustainability/winning-team.html

https://www.aia.com.my/sustainabiiity/winning-team.ntmi https://www.aia.com.my/content/dam/my/en/docs/pressreleases/2013/AIA_press_release_20130515_v2.pdf



- Digi alt.hr, a one-stop mobile app for all human resource needs.
- Digi Maker Lab, a dedicated space to nurture innovators and embrace the innovation 360° culture among their employee
- Digi Digital Day, a one-day event dedicated to inspire their employee to learn and discover new technologies and digital services.





 AlA iPoS- It's a business solutions tool that enables policies to be underwritten and processed in less than an hour.







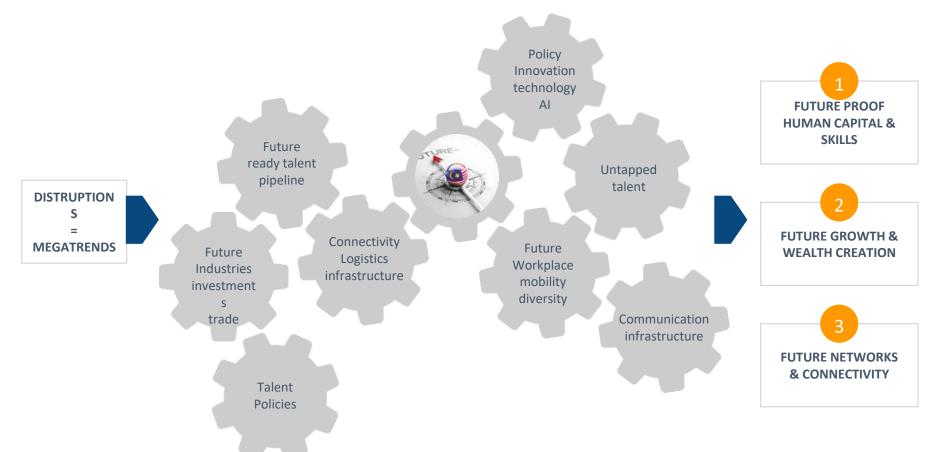
Focus will be given to create skilful, knowledgeable and innovative human capital to meet the requirements of the industry. Human capital development initiatives will provide opportunities forquality employment as well as ensure access to quality education and training towards building a more inclusive, equitable and prosperous nation.

Pillar IV: Human Capital Development Mid-Term Review of the 11th Malaysia Plan





We require a new talent ecosystem for the future

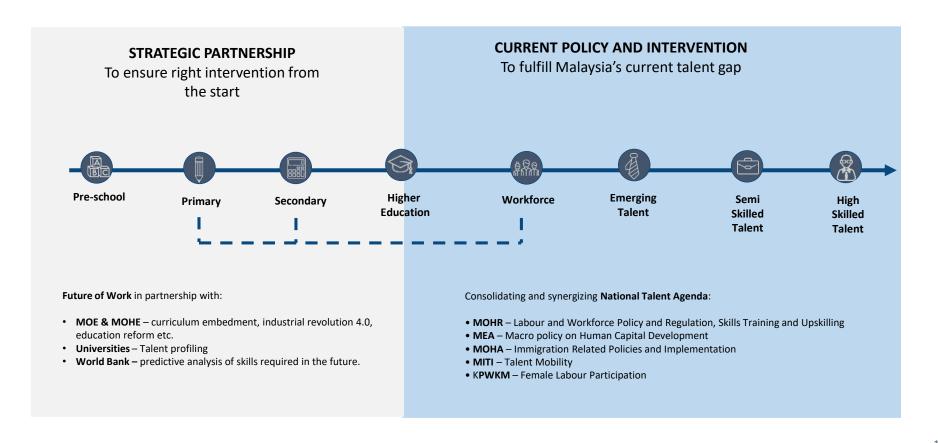


Closing the Talent Ecosystem Loop

Synergised and proactive policy intervention across Ministries and Agencies











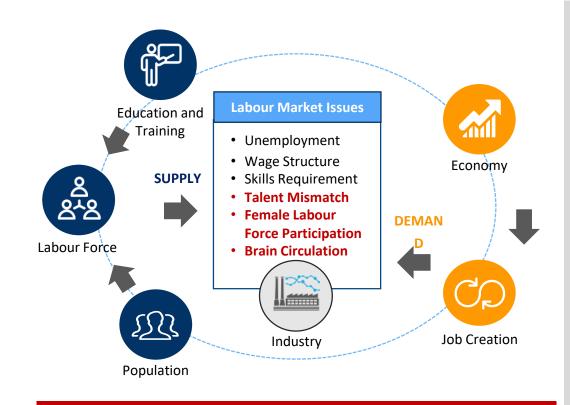
Mapping the demand and supply of talent based on our national ecosystem





National Talent Ecosystem

Getting the right balance of talent supply and demand for present and future



FUTURE OF WORK | WORK, WORKFORCE, WORKPLACE

PRESENT TALENT SOLUTIONS

Thrust 1: Attract and Optimise Malaysian

- ent Returning Expert Programme (REP)
- 2 Scholarship Talent Attraction and Retention (STAR)
- 3 Career Comeback Programme (CCP)
- 4 Work Life Practices (WLPs)
- 5 Critical Occupations List (COL)
- 6 Nurturing Expert Talent (NEXT)

Thrust 2: Facilitate Global Talent

7 Expatriates

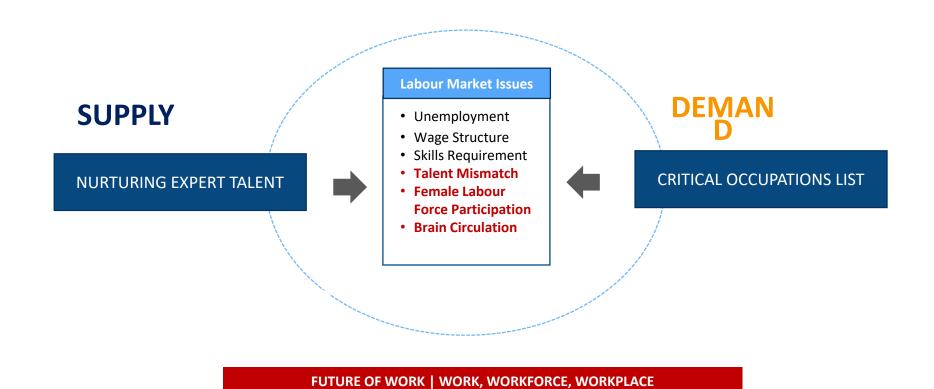
Thrust 3: Build Networks of Top Talent

- 8 Knowledge Malaysia Diaspora (KNOWMADS)
- 9 Partnership with Industries





Using data to identify talent supply and demand



Mapping our talent supply through Nurturing Expert Talent (NEXT)





Realigning education and skills for the future

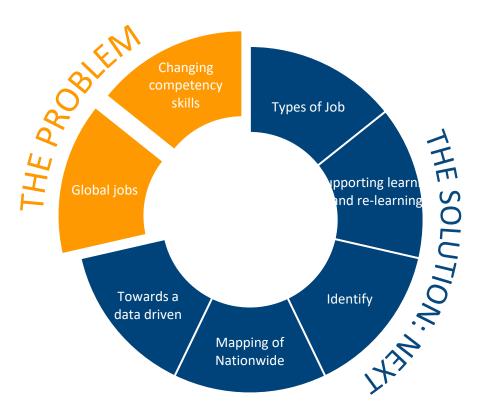
OBJECTIVES

- To profile and map current and future talent at national and regional level
- To identify and forecast talent and market needs

WHY

In preparation of Future of Work

- Understand talent needs
- 2 Understand market needs
- 3 Map nation's needs



NEXT Profiling





to Map Talent Supply



TALENT

- Understanding and self awareness of strength and potential
- Credible assessment
- A variety of developmental programmes and opportunities including initiatives and interventions by TalentCorp
- Career opportunities



EMPLOYERS

- Credible and untapped talent pool (e.g. JPA and MARA graduates, women)
- Talents that match industry needs
- Pre-defined talent with various skills (e.g. leadership, technical and management)

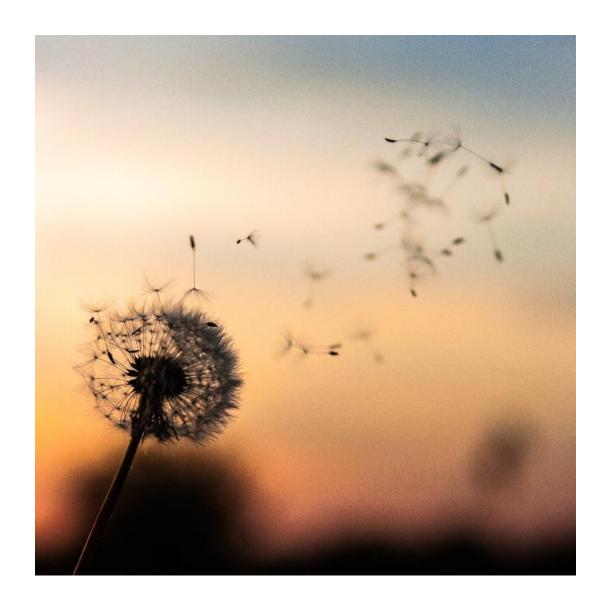


NATION

- Data that identifies talent
- Data that maps current trend
- Data that forecasts future trends
- ..to spur economic growth and embrace Future of Work







KNOWMADS

Knowledge Malaysia Diaspora

A collaborative **Global Malaysian** community to **connect** and **contribute** to Malaysia.

VISION

Create a sustainable and catalytic environment for the exchange of knowledge, ideas, exploration and fulfilment of partnership opportunities.

KNOWMADS: Framework









SHORT-TERM

- Be part of the Malaysian diaspora database
- Participate in TalentCorp & Partners' outreach events
- Join focus groups, surveys to improve data
- Provide information, networks & contacts for collaboration & business opportunities
- Share knowledge: be a visiting lecturer, panel sessions.

MEDIUM-TERM

- Be a KNOWMADS mentor for Malaysian students abroad
- Assist to build communities for the Malaysian diaspora through events, engagements
- Participate in nation-building projects lasting not more than one year (advisory, consultancy, training)

LONG-TERM

- Facilitate increased trade investment and cultural linkages between original and second countries
- Contribute in form of partnerships, joint ventures, investment opportunities
- Actual return of skilled diaspora on shortterm or long-term basis

Identifying talent demand challenge through the Critical Occupations List





The Critical Occupations List (COL) is an evidence-based list of occupations in Malaysia that reflects the most sought-after and hard-to-fill occupations by industry in order to identify skills imbalances across the Malaysian economy.

EMPLOYERS

- Higher Costs
- Lower Output
- ReducedCompetitiveness
- Below capacity longterm performance
- Constrained Investment



EMPLOYEES

- Lower wages
- Lower Job satisfaction
- Lower job security
- Limited career prospects



THE ECONOMY

- Lower returns to human capital Investment
- Lower productivity
- Slower economic performance

USES OF COL

University Course Review

National reference point

Immigration (Expatriates)

Scholarship allocation

Talent Profiling

Residence Pass-Talent

Returning Expert Programme





The list can be used to coordinate policy interventions related to higher education and TVET, upskilling, scholarship, and immigration.

Source: Critical Skills Monitoring Committee (2017)





Key Achievements for the COL so far:

We Worked Together With:

68 Industry







28

Bodies/Regulator

Government Ministries/Agencies engaged



~700

Companies in

18











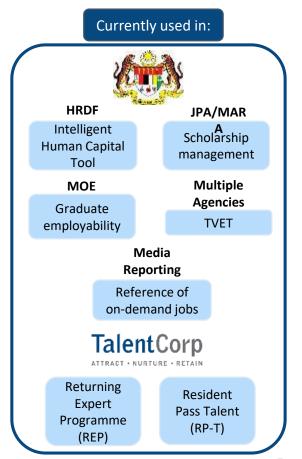
IBM.



Source: Critical Skills Committee NOTE: Listed examples here are not exhaustive Sectors

Consulted and Obtained Valuable Inputs from:













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