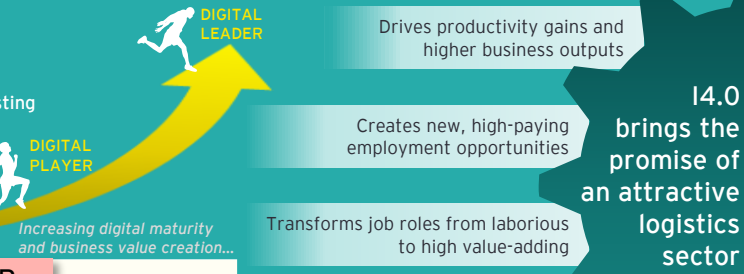
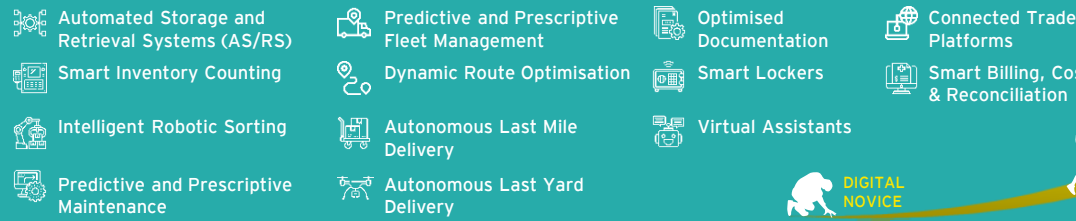


# INDUSTRY 4.0 LOGISTICS WORKFORCE

impact on the

I4.0 has the potential to create a vibrant logistics sector for Singapore. A two-fold approach to build I4.0 and workforce capabilities simultaneously will be the most effective way forward to prepare the sector for the future of work.

## I4.0 TECHNOLOGY SOLUTIONS STACK



### NEW I4.0 job roles

I4.0 adoption will create new, high-paying I4.0 job roles, typically in PME job roles, although the demand is still emerging

#### Data analysis and management roles



- Data Analyst
- Data Scientist
- Data Architect/Engineer

#### Software development roles



- Software Developer
- Mobile Developer
- Software Engineer
- Solution/Application Architect
- UI/UX Designer

#### Digitalisation and automation roles

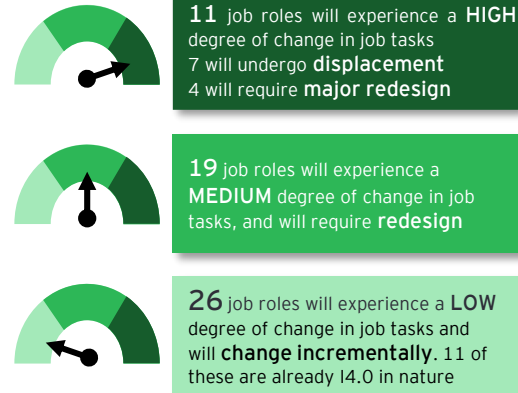


- Digital Innovation Lead
- Machine Learning Engineer
- Automation Engineer
- I4.0 Maintenance Specialist; ASRS/Drone/AGV Operator; Automation Technician

### IMPACT OF I4.0 on existing job roles

With I4.0 adoption, ALL job roles will undergo change

Within 3 to 5 years, out of the 56 job roles...



### 7 job roles that will UNDERGO DISPLACEMENT

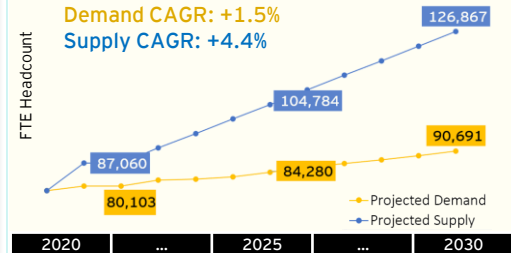
- MHE Operator / Forklift Operator / Warehouse/Inventory Assistant
- Warehouse Storekeeper / Inventory Coordinator / Logistics Coordinator
- Traffic/Dispatch Coordinator
- Import Export Administrative Assistant / Shipping Assistant
- Permit/Shipping/Custom Clearance Coordinator
- Order Fulfilment/Sales Operations/ Customer Service Assistant
- Order Fulfilment/Sales Operations/ Customer Service Coordinator

### MANPOWER study

Data trends suggest that **supply may exceed demand between 2020 to 2030**, but this does not factor in the quality of the manpower

Going forward, we need to...

- Sustain efforts to raise sector appeal and attract talent
- Examine actual supply in 1-2 years to decide specific policy interventions



### RECOMMENDATIONS for way forward

#### Encourage I4.0 adoption for sector transformation

Collaborative efforts to drive innovation and enhance I4.0 capabilities alongside manpower transformation

#### Enhance labour market dynamism

Enhance workforce fluidity, diversity and talent management to maintain a healthy balance in manpower demand and supply

#### Strengthen the manpower capability-building ecosystem

Create a vibrant ecosystem to prepare individuals and companies to adapt and thrive in an evolving sector

*Companies, ecosystem stakeholders and individuals will need to collaborate to prepare the logistics sector for the future*

### IMPACT OF I4.0 on job tasks

Job roles will evolve to focus on high value-adding tasks



#### I4.0 will **AUTOMATE** transactional tasks

- Manual, labour-intensive, repetitive, routine
- Administrative, scheduling, coordinating
- Inventory and order tracking, basic customer support, progress-tracking



#### I4.0 will **AUGMENT** job roles with new value-adding tasks

- Overseeing and managing I4.0 solutions
- Except handling and troubleshooting
- Data analytics, stakeholder management

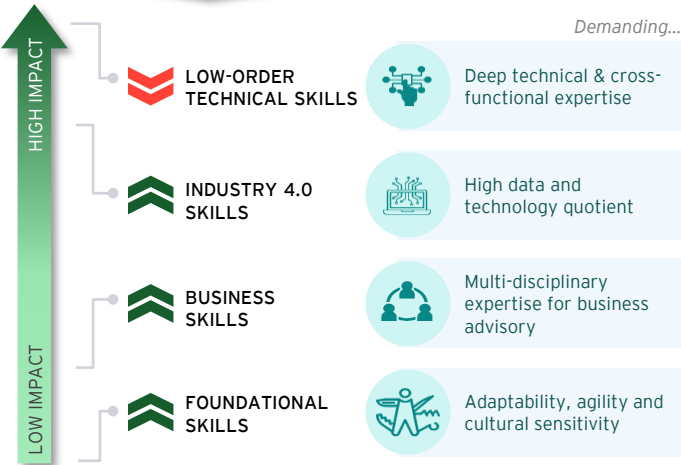


#### I4.0 will **SUPPLEMENT** the performance of strategic or 'human' tasks

- Strategic planning and business advisory
- Logistics solutioning and innovation
- Risk, safety and compliance management

### IMPACT OF I4.0 on skills

There will be a shift in the mix of technical, I4.0, business, and foundational skills



### SAFEGUARDING workers

Strategies to safeguard employment and employability

- Job Redesign**: to alter job tasks or the way work is performed
- Redeployment**: to different jobs in the same or different function
- Relocation**: to similar jobs at different locations or work sites
- Upskilling and reskilling**: to mitigate the shortened shelf-life of skills

### ECOSYSTEM analysis

The current ecosystem sufficiently addresses sector needs

Going forward, it may be further enhanced...



**Strengthening government interventions and grants**

- Streamline and package similar government interventions
- Enrich end-user experience
- Leverage partnerships across stakeholders



**Strengthening training programmes**

- Enhance marketing efforts for training programmes
- Prioritise future-focused and bespoke trainings
- Leverage agile, innovative training delivery methods