

# Accelerating Energy Efficiency Enhancement through Technological Innovations

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# Hong Kong Innovation and Technology Development Blueprint

## Direction 1

To enhance the I&T ecosystem and promote “new industrialisation” in Hong Kong

## Direction 2

To enlarge the I&T talent pool and create strong impetus for growth

## Direction 3

To promote digital economy development and develop Hong Kong into a smart city

## Direction 4

To proactively integrate into the overall development of the country and consolidate our role as a bridge connecting the Mainland and the world



**Strategy 1** To enhance the I&T ecosystem and promote interactive development of the upstream, midstream and downstream sectors



**Strategy 2** To promote technology industry development and achieve “new industrialisation” in Hong Kong



**Strategy 3** To diversify venture financing channels and support the development of start-ups and industries



**Strategy 4** To promote I&T culture for all and enhance the overall I&T atmosphere in the community



**Strategy 5** To enrich I&T talent resources and develop an international talent hub



**Strategy 6** To accelerate the development of digital economy and smart city to enhance citizens’ quality of life



**Strategy 7** To deepen I&T co-operation with the Mainland for better integration into the overall national development



**Strategy 8** To leverage Hong Kong’s advantages as an international city to foster global I&T collaboration

# I&T Development Blueprint



**Strategy 3** To diversify venture financing channels and support the development of start-ups and industries



**Strategy 5** To enrich I&T talent resources and develop an international talent hub



**Strategy 8** To leverage Hong Kong's advantages as an international city to foster global I&T collaboration

# Financing channels for I&T



**Strategy 3** To diversify venture financing channels and support the development of start-ups and industries

# Government Green Bond Programme

US\$10 billion



- fund green public works projects;
- promote the development of green and sustainable finance



**Strategy 3** To diversify venture financing channels and support the development of start-ups and industries

# Green Tech Fund

US\$25M

低碳綠色  
科研基金  
GREEN TECH FUND



Catalytic hydrolysis of solid-state hydrogen storage materials;

Development of high performance and long life hydrogen fuel cell stacks

Solar hydrogen via photocatalyst panel;

Smart power conditioners using second life electric vehicle (EV) batteries

Green hydrogen production from active flow membraneless electrolyzers;

# Nurturing I&T talents

Technology Start-up Support Scheme for Universities (TSSSU Fund)

Global STEM Professorship Scheme



**Strategy 5** To enrich I&T talent resources and develop an international talent hub

# Supporting I&T Startups



**STEM  
Internship  
Scheme**



**HKSTP**



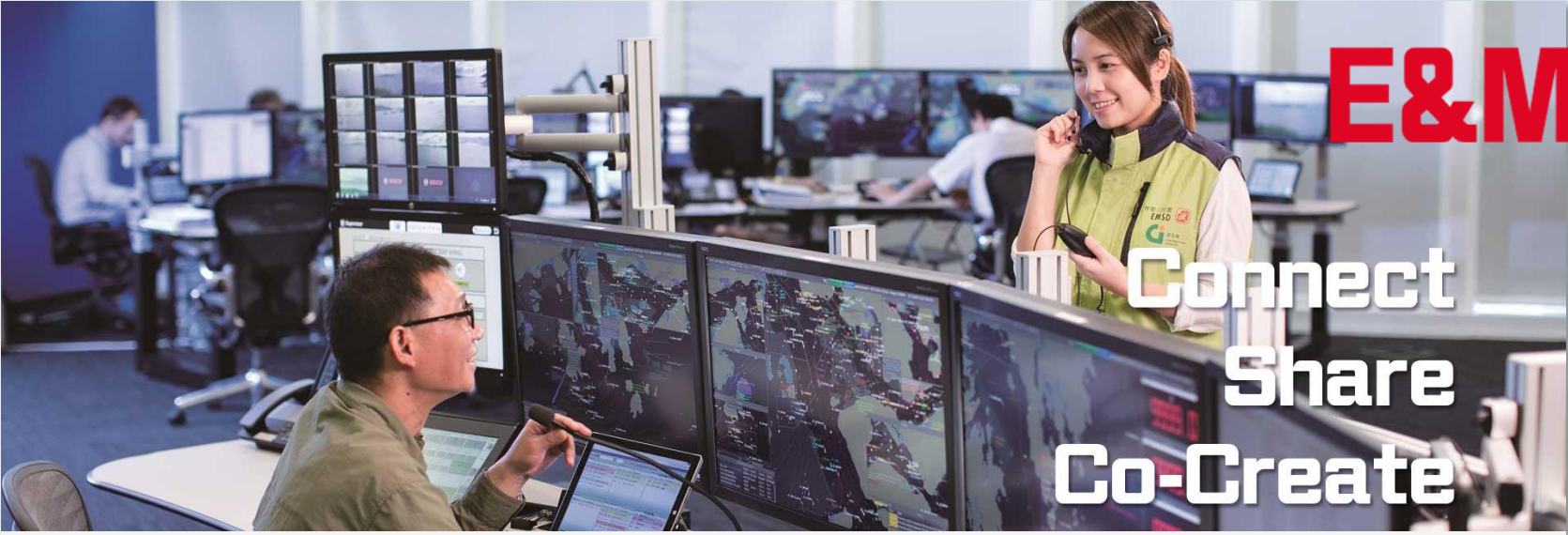
**Research  
Talent Hub**



**Strategy 5** To enrich I&T talent resources and develop an international talent hub



# Matching Technology and Market Needs

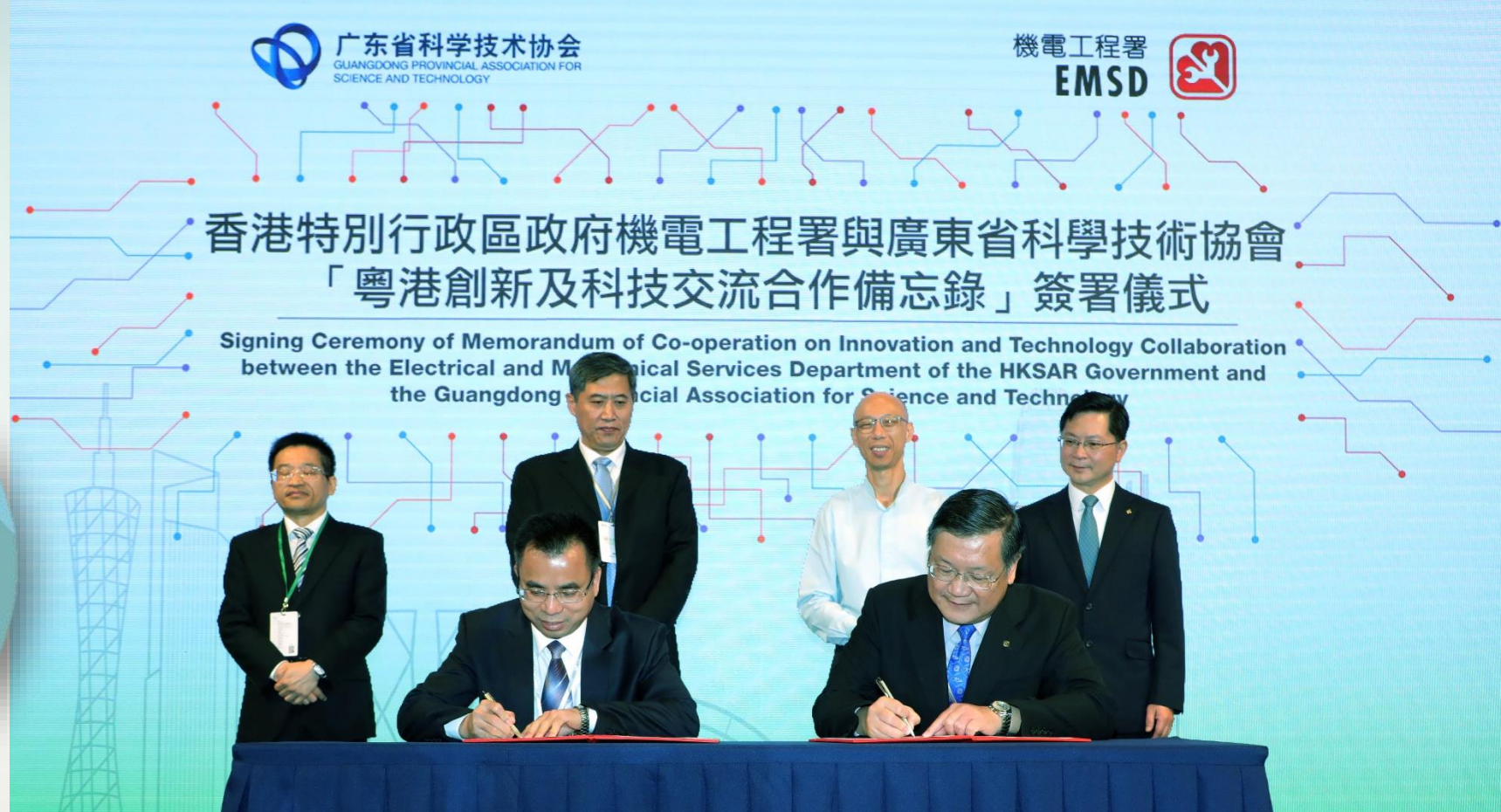


**Strategy 5** To enrich I&T talent resources and develop an international talent hub

# Green I&T Day



# MOC to enhance innovation and technology co-operation



广东省生产力促进中心

機電工程署  
EMSD





## Fostering global I&T collaboration

**40+** organisations

**2000+** specialists

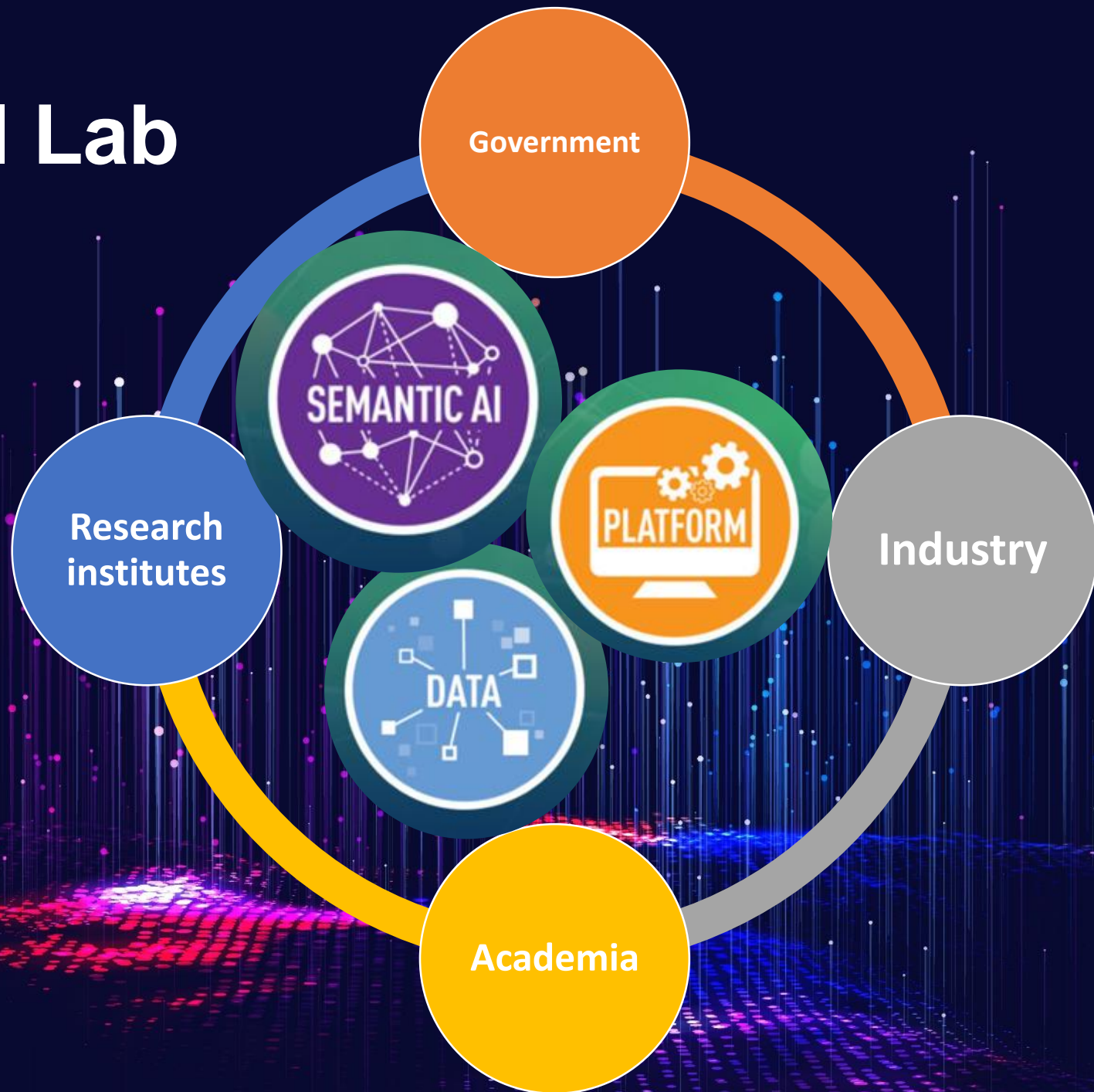
**120+** teams from

**10** regions



**Strategy 8** To leverage Hong Kong's advantages as an international city to foster global I&T collaboration

# E&M AI Lab





**Accelerating the Energy Transition in HKC**

# Semantic AI on the Building Operation and System Optimisation

- To collect and analyse operating data of air-conditioning equipment.
- **99%** accuracy in predicting the cooling demand
- Up to **15 %** improvement in plant energy performance.



# District Cooling System – Kai Tak Development

DCS Operation  
Commenced

**2013**



**20 million kWh**



**14,000 tonnes**

**2020**

**2019**

Recognised by the  
C40 Cities Climate  
Leadership Group



**138 million  
kWh / year**

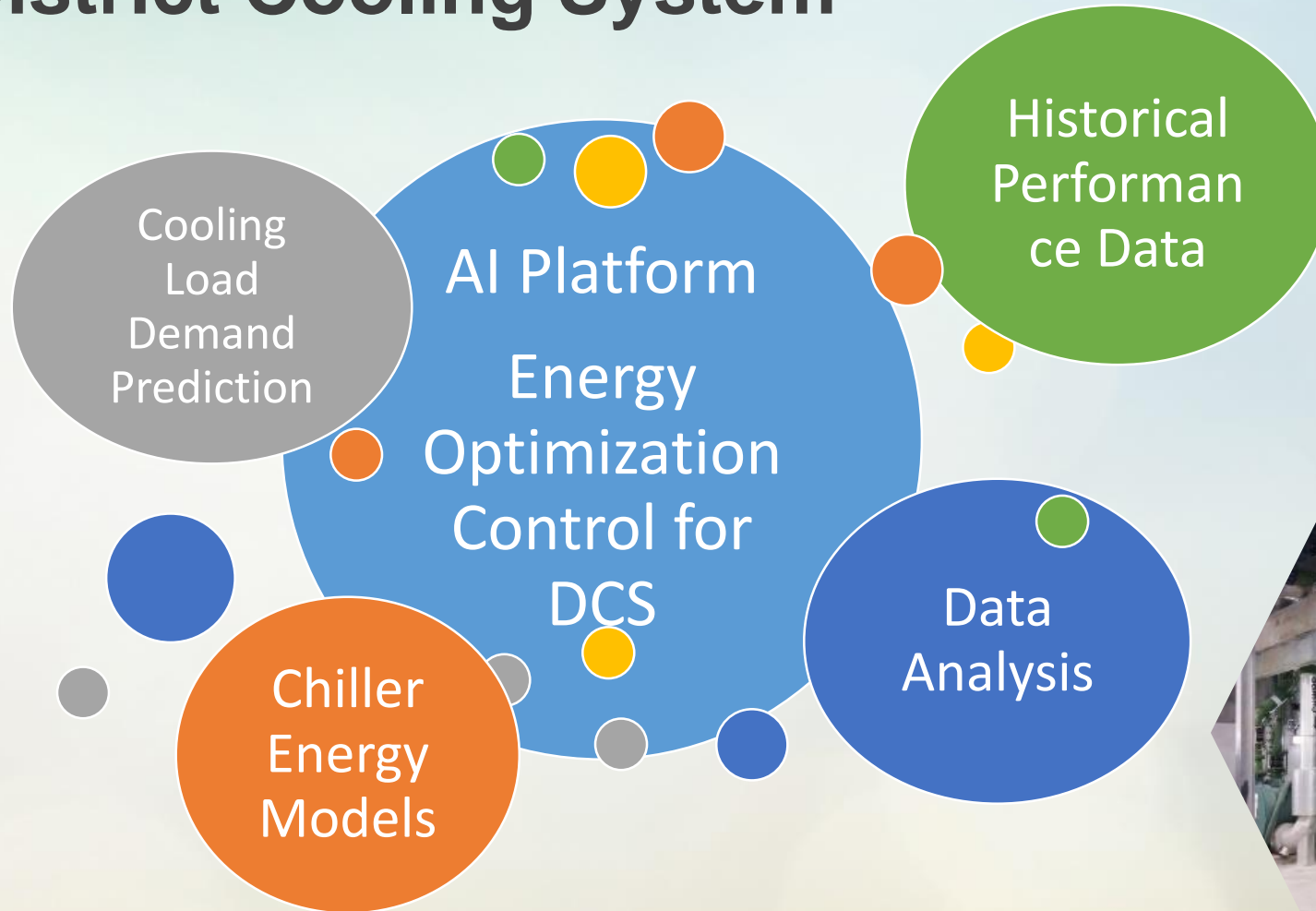


**96,500 tonnes  
/ year**





# District Cooling System



DCS plant produced about 20% more cooling capacity

# Regional Digital Control Centre (RDCC)





碳中  
Carbon Neutrality

唯一出路 THE ONLY WAY OUT



# Thank you.



**Asia-Pacific  
Economic Cooperation**



**Environment and Ecology Bureau**  
The Government of the Hong Kong Special Administrative Region

機電工程署  
**EMSD**



**EGEEC 6**  
Hong Kong, China