

# Diversifying Hong Kong's Economy and Creating Youth Employment Opportunities

Hong Kong Young Leaders  
Programme 2020

Honest Inquiry • Asia's Worldview • Ideas to Action



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# Executive Summary (1/3)

Hong Kong has been doubly hit by social unrest and the COVID-19 pandemic in the past two years, revealing structural issues of the economy that has in part led to social inequalities and discontent among young people in the city.

With uncertainties looming in the global economic landscape, Hong Kong must not lose sight of its core strengths and positioning as a hub for financial and economic activities in Asia.

The question for Hong Kong is how it will translate future economic development into opportunities for local people to set up their own businesses, advance their careers and lead a fulfilling life.

The Hong Kong Young Leaders Programme 2020 explores this topic by investigating how the local economy could be diversified to provide more employment opportunities for youth. The report delves into four key focus areas with high growth potential: healthcare, urban and green tech, aviation and biotechnology, and comes up with relevant policy proposals under each sector that aim to create employment opportunities and facilitate growth of the industries overall.

An overarching vision for the economy is needed to provide guiding principles for future policymaking, which ultimately, determines how Hong Kong will respond to future opportunities and challenges. The report attempts to offer such a vision by creating a vision statement for the Hong Kong economy:

*Hong Kong will be a **people-centric, economically vibrant and socially cohesive** city that allows the young generation to fulfill their aspirations and **live a purposeful life.***

The vision and policy proposals in this report should serve as a reference for policymakers and industry players when considering where future economic and employment opportunities lie, and how to build a more resilient society that allows the current and future generations to realise their aspirations.



# Executive Summary (2/3)

## Summary of Policy Proposals:

**Healthcare**

**Target 1:**  
Increase the number of elderly caregivers by 30% by 2030.

**Policy Recommendations:**  
Increase youth participation in the caregiving industry through new schemes such as:

- Care Agent Scheme
- Neighborhood Service Scheme

**Target 2:**  
Mobilise one million underprivileged Hong Kong residents to spend 10 hours on wellness activities per month by 2030.

**Policy Recommendations:**  
Create a network of Community Wellness Clubhouses (CWC) requiring:

- Property developers to build one CWC per new development
- CWC should be run by young people and hire young people
- Target at least one CWC in each district by 2030

**Target 3:**  
Position Hong Kong as the premier cold storage hub of Asia.

**Policy Recommendations:**

- Set up a cross-industry study
- Invest in infrastructure, related businesses and training of talent
- Promote Hong Kong's cold storage capabilities overseas

**Urban and Green Tech**

**Target 1:**  
Create an energy efficiency market to reduce energy consumption by 30% by 2030.

**Policy Recommendations:**  
Monitor building energy consumption and improve energy efficiency by:

- Expanding the coverage of the energy audit system
- Imposing a levy on building energy consumption
- Introducing Building Retrofitting Financing Scheme

**Target 2:**  
Establish an ecosystem for green technology to bridge private and public resources.

**Policy Recommendations:**  
Transform the existing 'Green Tech Fund' into an integrated platform for a sustainable green economy by:

- Engaging the next generation in environmental protection
- Collecting energy and water consumption data to form a Smart City database
- Creating a circular green economy

**Target 3:**  
Develop the capacity of the local food industry to produce 10% of Hong Kong's food consumption by 2030.

**Policy Recommendations:**  
Grow the local food production and consumption ecosystem through:

- Increasing space and infrastructure for local agriculture
- Investing in R&D to increase productivity
- Growing the market for local produce

# Executive Summary (3/3)

## Aviation

**Target 1:**  
Develop Hong Kong into a world-class destination for aviation education by 2030.

**Policy Recommendations:**

Provide comprehensive, systematic and industry-oriented education to young people by:

- Creating the International Aviation Institute
- Providing a full spectrum of aviation education
- Fostering collaboration with industry partners

**Target 2:**  
Increase proportion of MRO jobs in the Hong Kong aviation industry to 30% by 2030.

**Policy Recommendations:**

Develop the maintenance, repair and overhaul (MRO) capacity in Hong Kong to provide holistic services to meet the growing MRO demand, such as:

- Building a new hangar
- Subsidising and expanding cutting-edge R&D institutions
- Providing tax incentives to attract foreign investment

**Target 3:**  
Increase the proportion of overnight visitors from 43% to 60% by 2030.

**Policy Recommendations:**

Provide stopover travel packages to attract more visitors and turn same-day transit visitors into overnight visitors, through:

- Introducing 72-hour visa-free travel within the GBA
- Offering attractive stopover packages
- Creating the Youth Tour Guide programme

## Biotechnology

**Target 1:**  
Shape the institutional ecosystem to consolidate resources and promote growth of the biotech industry.

**Policy Recommendations:**

Build a Regional Biotech Centre that will:

- Create a vision and strategy for the industry's development
- Coordinate existing resources and launch new programmes
- Attract private sector investment in R&D

**Target 2:**  
Build a world-class brand of "Tested in Hong Kong, Certified in Hong Kong".

**Policy Recommendations:**

Promote Hong Kong as a regional testing and certification centre by:

- Driving market demand for services through mandates and incentives
- Developing new standards for emerging trades
- Creating an applied science degree in Testing and Certification





# INTRODUCTION AND BACKGROUND

# Hong Kong Young Leaders Programme



The **Global Institute For Tomorrow (GIFT)** is an independent pan-Asian think tank that provides content-rich and intellectually challenging executive education from an Asian worldview. GIFT's methodology invites participants to build greater self-awareness and test personal resilience whilst creating robust new business models linked to contemporary challenges and opportunities.

Based on GIFT's internationally recognised experiential Global Leaders Programme, the sixth annual Hong Kong Young Leaders Programme is one of the most powerful cross-sector leadership programme that exists in Hong Kong today. It offers young professionals from the public, private and civil sectors in Hong Kong a platform to engage across sectors and create new, actionable business plans and policy proposals highly relevant to today's challenges.



# Participating Organisations and Sponsors

Twenty-one participants from local government, business and civil society organisations joined the Hong Kong Young Leaders Programme over the course of November and December 2020:

The programme would not have happened without the generosity of our sponsors. We would like to extend our heartfelt gratitude to all of these generous organisations that have supported the growth and development of young leaders in Hong Kong:



NG TENG FONG  
CHARITABLE FOUNDATION  
黃廷方慈善基金

CLP 中電

River Star  
Foundation

The  
Lanson  
Foundation

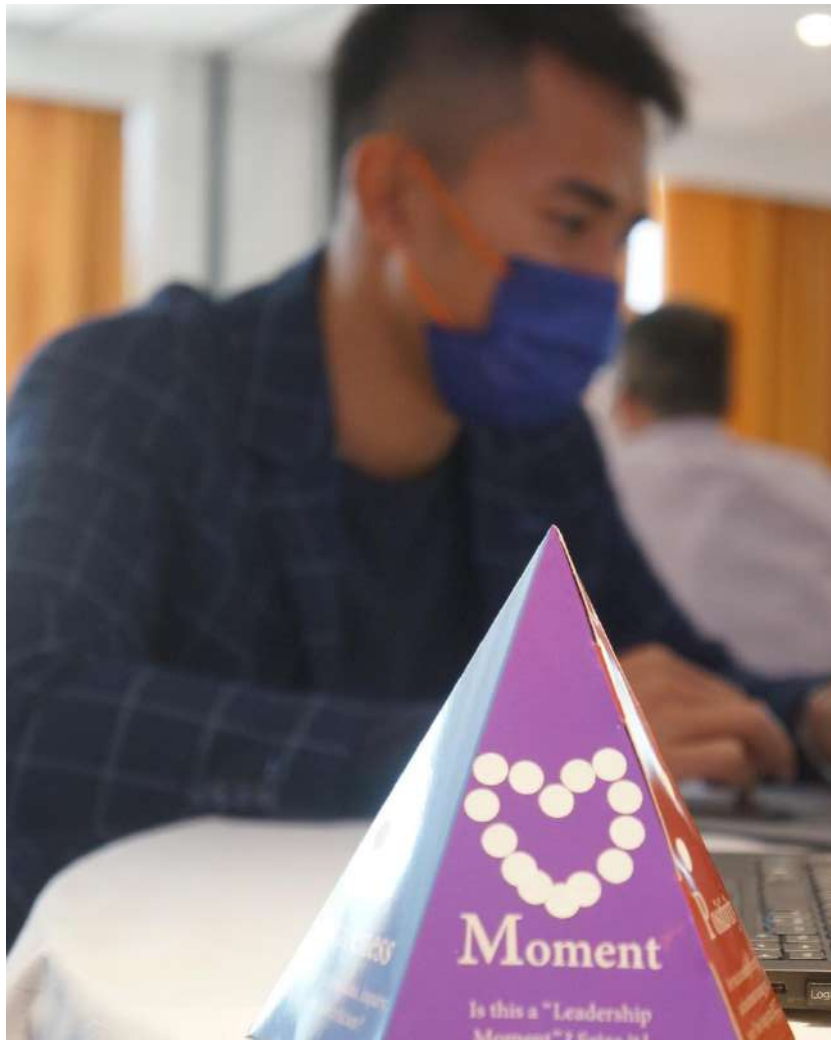


# Supporting Organisations

<b>ASTRI</b>	<b>Dr. Karen Wing Yee Yuen,</b> Associate Professor, School of Biological Sciences, HKU	<b>Mr. Kenny Lok</b> EnvirPro
<b>Aviation Services Research Centre</b>	<b>Dr. Simon Chi-Chin Shiu</b> B.Sc., M.Sc., Ph.D.- Postdoc, School of Biomedical Sciences, LKS Faculty of Medicine, HKU	<b>Mr. Kingsley Leung</b> Uni Bio-Science
<b>Green Monday</b>	<b>Dr. Wai-Lung Billy Ng</b> Assistant Professor, School of Pharmacy, CUHK	<b>Mr. Martin Fan</b> TÜV Rheinland
<b>Hong Kong Aviation Industry Association</b>	<b>Mr. Adolphus Lau</b>	<b>Mr. Nixon Chan</b> Big Bang Academy
<b>InnoAcademy, HKSTP</b>	<b>Mr. Adrian Lam</b> Genesis MedTech	<b>Mr. Trevor Ng</b> Pat Chun
<b>KoIn3D</b>	<b>Mr. Andrew Tsui</b> Rooftop Republic	<b>Ms. Chloe Lam</b>
<b>Livin Farms</b>	<b>Mr. Brian Pak</b> New World Development Group Sustainability Department	<b>Ms. Elise Payong</b>
<b>NEFIN</b>	<b>Mr. Clive Kam</b>	<b>Ms. Janice Lee</b>
<b>Dr. Edmund Tse</b> Assistant Professor, Department of Chemistry, Faculty of Science, HKU	<b>Mr. Danny Lee</b>	<b>Ms. Melody Wong</b>
<b>Dr. Eymon Wu</b> Researcher at HKU, Lecturer at Community College, CityU	<b>Mr. Ivan Ng, Finddoc</b>	<b>Ms. Wing Kwong</b> FarmacyHK
<b>Ms. Hsin Ling Tsoi</b> Silverline Global	<b>Mr. Kenneth Lee and Ms. Ally Wong</b> HKFYG	<b>Mr. Ivan Wong</b> Linkedin

Our appreciation to all the stakeholders involved

# Programme Structure



## Objectives

- To propose ways that Hong Kong can diversify its economy, with the goal of creating new job opportunities for future generations that provide gainful employment and allow them to achieve a decent quality of life.
- With a focus on four sectors: **Healthcare, Urban & Green Tech, Aviation and Biotechnology**, develop policies that will grow these industries and create a diverse set of opportunities for youth of all backgrounds.

## Process

- Participants met a diverse range of stakeholders, including but not limited to business executives, government-related officials, professors and researchers, entrepreneurs, civil society leaders and students to better understand various parts of the Hong Kong economy.
- Participants also independently reached out to experts in the field to gain greater insights into the key focus areas of healthcare, urban & green tech, aviation and biotechnology.
- Through intensive discussion, debate and planning sessions, the participants generated the content of this report.

## Outcome

- With GIFT's support, participants developed an overarching vision for the Hong Kong economy based on principles of social cohesion and supporting individuals to live a purposeful life.
- In order to achieve this goal, Hong Kong needs to diversify its economy and create employment opportunities that can fulfil the varied aspirations of young people. Participants produced multiple policy proposals that aim to achieve this goal across the four focus areas mentioned.
- Participants presented highlights from their policy proposals at a public forum on December 11<sup>th</sup> 2020, to over 280 participants from Hong Kong and the world, representing a diverse group of stakeholders including business, government, civil society and academia.



# VISION AND FOCUS AREAS



# Current Challenges in Hong Kong

Hong Kong's economy has been in recession since late 2019: first due to the anti-government protests, and then the COVID-19 pandemic. Hong Kong's overall unemployment rate doubled from 3% at the end of 2019 to 6.4% between June and August 2020. Youth have been hit especially hard: over the same period, unemployment increased from 10.2% to 23.6% among those aged 15-19, and from 5.9% to 11.4% among those aged 20-29.

The economic consequences of the social unrest and the COVID-19 pandemic have revealed the fragilities of Hong Kong's socio-economic model. Overreliance on service-focused industries for job creation has not just led to high unemployment rates in an economic downturn, but also a lack of diverse career options for young people as they consider their future.

Creating more diverse employment opportunities beyond the current service-sector-focused model is the path towards ensuring a brighter and more resilient future for the city's youth. Even as Hong Kong continues to strengthen its position as a global financial hub, diversifying the territory's economy in the long-term will not only create jobs, but also capitalise on the city's strengths in novel ways.

A new "vision" for the economy is needed to revitalise the city and offer a sense of direction for young people. While a vision may not provide immediate answers, it can serve as a guiding principle upon which future policies can align and aspire towards.



A new vision for the economy is vital for the continued development of the city

# Hong Kong's Unique Differentiators

As a global capital for business and finance, Hong Kong has many unique advantages that differentiate it from other cities in the region.

Some examples include:

- Ability to attract foreign capital (e.g. Hong Kong received USD 68 billion in foreign direct investment in 2019).
- Geographical and historical status as a regional and global hub for trades, logistics, aviation etc.
- Strong intellectual property protection and adherence to the rule of law
- Presence of highly-ranked global research universities (e.g. 111 of the University of Hong Kong's professors have been ranked among the world's top 1% scientists).
- A "trust premium" on goods and services produced in Hong Kong as a global symbol of quality and professionalism.
- Internationally-minded talent with a good command of English and high levels of education.
- Attractiveness as a place to work and live with good public infrastructure.

The city can leverage these existing advantages to create a resilient and vibrant society that provides gainful opportunities for all its citizens. The vision for Hong Kong serves as the foundation for all the policy proposals detailed in this report, which aim to create a diversified economy and new youth employment opportunities.



Hong Kong needs to leverage its strengths as a global city to create new opportunities for its young people

# The Vision for Hong Kong's Economy

Hong Kong will be a **people-centric, economically vibrant** and **socially cohesive** city that allows the next generation to fulfill their aspirations and **live a purposeful life**.

## People-centric

A society committed to building a social contract rooted in reducing inequalities based on the principles of a **community that takes care of all and provides equal opportunities**.

## Economically Vibrant

An economy backed by a **modern education system** that offers **diverse opportunities** for people of all backgrounds and builds a society that is **resilient** to potential future shocks.

## Socially Cohesive

A community with **strong social fabric** across different demographics and backgrounds, united by the **same aspirations** to create a better society together.

## Purposeful Life

A society that meets the **aspirations of the next generation** through ensuring access to meaningful work which adds value to society and improves quality of life.

A vision to serve as guiding principles for future policymaking



# Key Focus Areas

Based on the vision and goal of diversifying the economy of Hong Kong to provide more youth employment opportunities, the following industries and sectors have been selected as key focus areas for their growth potential. The challenges and opportunities in each focus area will be further detailed in the report:



## Healthcare

Healthcare refers to the provision of healthcare services including preventative community and primary care, wellness therapies, treatment in clinics and hospitals, and the trading of medical devices and equipment.



## Urban and Green Tech

Urban and green tech refers to all technological developments related to urban living. This covers areas such as construction and building management tech, climate tech, renewable energy and smart city developments etc.



## Aviation

The aviation sector refers to the entire spectrum of products and services related to the aviation industry. This includes R&D for the industry, aircraft maintenance and repair, hardware and software development, cargo management, training, airport management etc.



## Biotechnology

Biotech refers to all developments related to biochemistry, biology, biomedical engineering, etc. This includes areas such as disease prevention, drug and vaccine development, genetic engineering, development of new food products, and many others.



# HEALTHCARE



# Introduction



Hong Kong's healthcare system is globally recognised for its quality and efficiency: according to the Bloomberg Health Efficiency Index, the city has one of the most efficient healthcare systems in the world. Offering world-class affordable public health services alongside private options, Hong Kong's exceptional healthcare system is one of the core reasons the city's residents have one of the longest average life expectancies in the world.

The healthcare sector is more than just the direct provision of healthcare services. It spans the entire healthcare ecosystem, including import and export of healthcare devices/equipment, testing and certification of healthcare products, and other wellness-related services and products.

Due to global trends like the potential of future pandemics, an aging population in Hong Kong and regionally, and increasing awareness towards wellness and mental health, the demand for healthcare-related products and services is going to increase in coming decades.

Hong Kong should leverage its trust premium to develop as a hub for healthcare-related products and services. This requires an investment in infrastructure and supporting services from both public and private sectors. Cultivation of talent and increasing manpower are also needed to support the growing demand for services, such as elderly care, wellness and nutrition coaching, counselors etc.

**The healthcare sector provides a clear opportunity for Hong Kong to leverage its trust premium and create new employment opportunities**



# Challenges Facing Hong Kong's Healthcare Sector

## 1. Aging population

- 1 Shortage of healthcare professionals**
  - The city only has 1.9 doctors per 1000 residents compared to the OECD's recommendation of 3.4.
- 2 Increasing burden on non-paid family caregiving**
  - As the number of eldercare recipients is expected to more than double by 2040, the number of working adults providing care for an elderly family member will increase at only 90%, implying an increased burden on society overall.
- 3 Lack of diversified career paths for those interested in healthcare**
  - Particularly for those with disadvantaged educational backgrounds but interested in healthcare.

## 2. Decline in wellbeing across society

- 1 Recent social unrest has highlighted and exacerbated mental health issues**
  - One in five Hong Kong residents surveyed reported symptoms of depression or PTSD in 2019.
- 2 Lack of professional mental health support**
  - Only 2.8 psychiatrists per 1,000 people compared to 8.59 in high-income countries.
- 3 Physically inactive due to the lack of time and facilities in the community**
  - Almost 20% of adults surveyed in the Health Behaviour Survey 2018/19 had insufficient physical activity.
- 4 Lack of comprehensive community and primary care in local communities**
  - There is focus on "sick-care" particularly in the public health system, and less on preventative care and promoting healthy lifestyles/wellness.

## 3. Underdeveloped cold storage facilities for pharmaceutical products

- 1 Large space requirements for cold storage of pharmaceutical products, but low vacancy rates with existing capacity**
  - Currently 6 million sq ft of industrial space in Hong Kong serves as cold storage for groceries.
- 2 Vulnerabilities in the supply chain**
  - Improper handling or failure to control temperature during transport transitions leads to wastage in products.
- 3 Existing facilities and procedures will need to be updated**
  - New products like the Pfizer COVID-19 vaccine which requires deep-freeze temperatures and have a short lifespan after thawing.

# Policy Proposals Overview

**ASPIRATION** Transforming Hong Kong’s healthcare ecosystem and creating opportunities for people from all backgrounds.

**OPPORTUNITIES**

To attract talent into a growing elderly care industry.

To leverage community and cross-sector resources for preventative care.

To uncover new opportunities for Hong Kong amidst global trends.

**POLICY PROPOSALS: TARGETS FOR 2030**

**1** Increase the number of elderly caregivers by 60%.

**2** Mobilise one million underprivileged Hong Kong residents to spend 10 hours on wellness activities per month by 2030.

**3** Position Hong Kong as the premier cold storage hub of Asia.

**KEY RECOMMENDATIONS**

**Policy**

- The Care Agent Scheme
- Neighborhood Service Scheme

- Community Wellness Clubhouse

- Invest in cold storage related infrastructure
- Promote Hong Kong’s cold chain capabilities to the rest of the region

**Funding**

- Governmental Subsidy

- Public-private partnerships
- Community Wellness Clubhouses Trust

- Government and business investment

**JOB OPPORTUNITIES AND ECONOMIC DIVERSIFICATION**



# Policy Proposal 1 - Increasing Number of Elderly Caregivers



**Target 1: Increase the number of elderly caregivers by 30% by 2030.**



## RECOMMENDATION

Increase youth participation in the caregiving industry through apprenticeship and academic-related programmes

### 1. Launch a Care Agent Scheme to supply skilled caregiving workers to Registered Elderly Centres

- Devise a new apprenticeship programme to provide opportunities for young people to join the healthcare industry.
- Implement wage subsidies to support a minimum salary package for the programme.
- Professionalise caregiving by licensing Care Agents as skilled workers.

### 2. Launch a Neighborhood Service Scheme to provide ageing-at-home care services and promote inter-generational connections

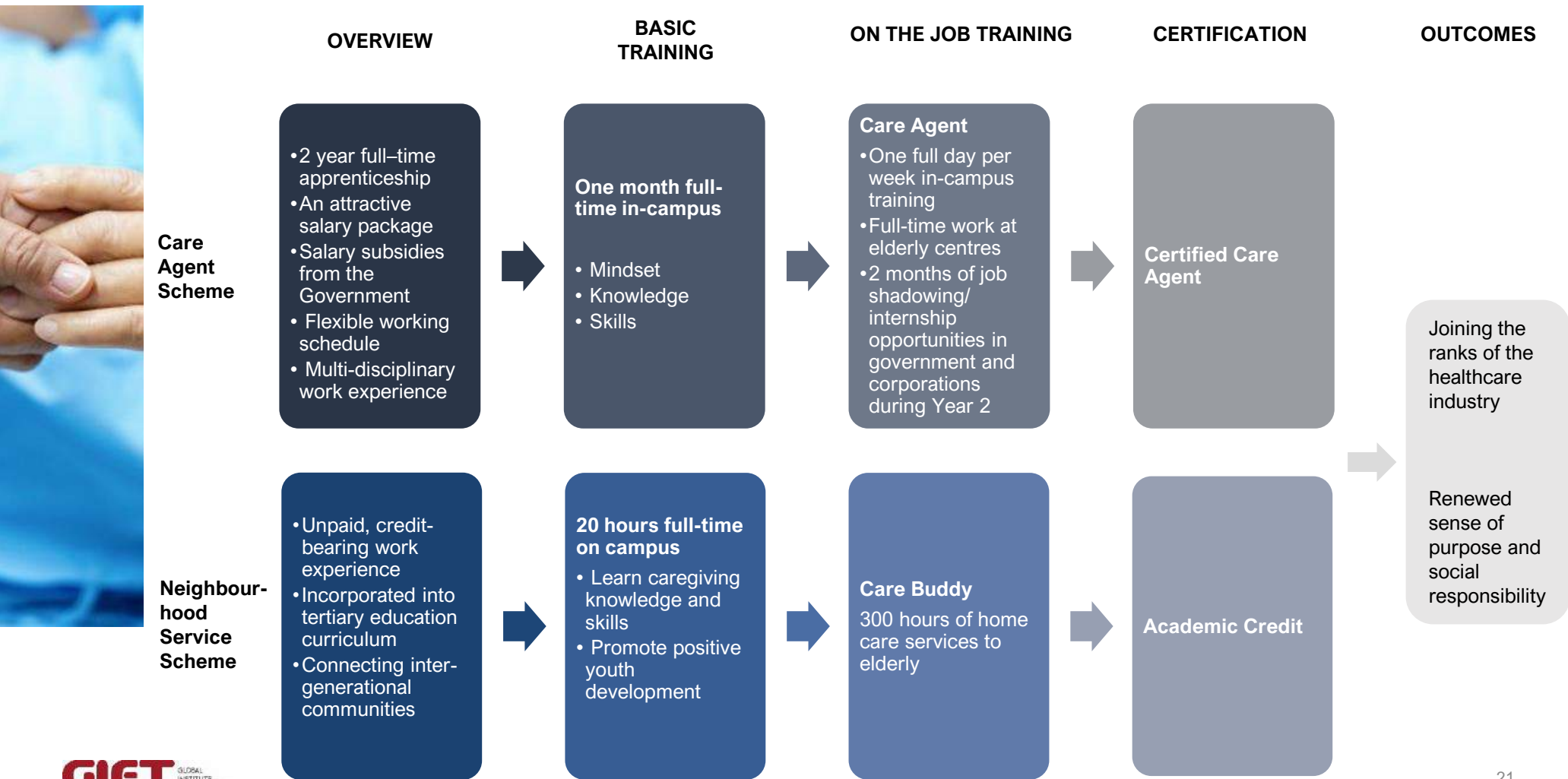
- Develop credit-bearing modules in tertiary education institutes to equip graduates with the attitude, knowledge, and skills for care services.
- Tertiary students to become “Care Buddies” under the credit-bearing modules and provide services for the elderly.
- Set up a cross-departmental division under the Social Welfare Department to coordinate, administer, and deploy “Care Buddies” to elderly homes.

Caregiving can be promoted as a meaningful career for Hong Kong’s youth



# Care Agent and Neighbourhood Service Schemes

The Care Agent Scheme and Neighbourhood Service Scheme both aim to equip young people with the skills and mindsets necessary to become caregivers for elderly people, as well as establish caregiving work as a respectable and desirable profession. The two schemes also aim to promote caregiving as a social responsibility and mission for the wider community.



# Care Agent Scheme - Key Partners and Operations

The Care Agent Scheme aims to train young people who are interested in the healthcare industry, but may not necessarily be interested or be qualified to become doctors or nurses. The certification would also help promote caregiving as a viable profession for young people.



Any Hong Kong resident aged 18 or above can join upon an application process (approximately 600 a year)

**Training Institute (1 month)**

- Go through training created by:
- Hospital Authority
  - Training institutes like VTC
  - Nursing colleges



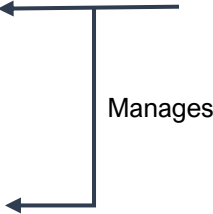
**Elderly Centre (2-year Care Agent Apprentice)**

- Paid work at the 980 registered centres under Cap 489A and Cap 613A\*
- Flexible work hours
- On-the-job training / workplace assessment



**Other job experience**

- Internship opportunities at the Government or partner corporates to provide a well-rounded work experience.



**Government**

- A new division under the Social Welfare Department would be responsible for:
  - Administration of salary subsidies at HK\$10,000/month per agent.
  - Certification of Care Agents
  - Registration of Elderly Centres
  - Working closely with Hospital Authority and other training institutes to develop and update training curriculum.
  - Coordination with local companies/ government departments to offer internship and placement opportunities.

↓  
**Certified Care Agent**

\***Cap. 459A:** Residential Care Homes (Elderly Persons) Regulation  
**Cap. 613A:** Residential Care Homes (Persons with Disabilities) Regulation

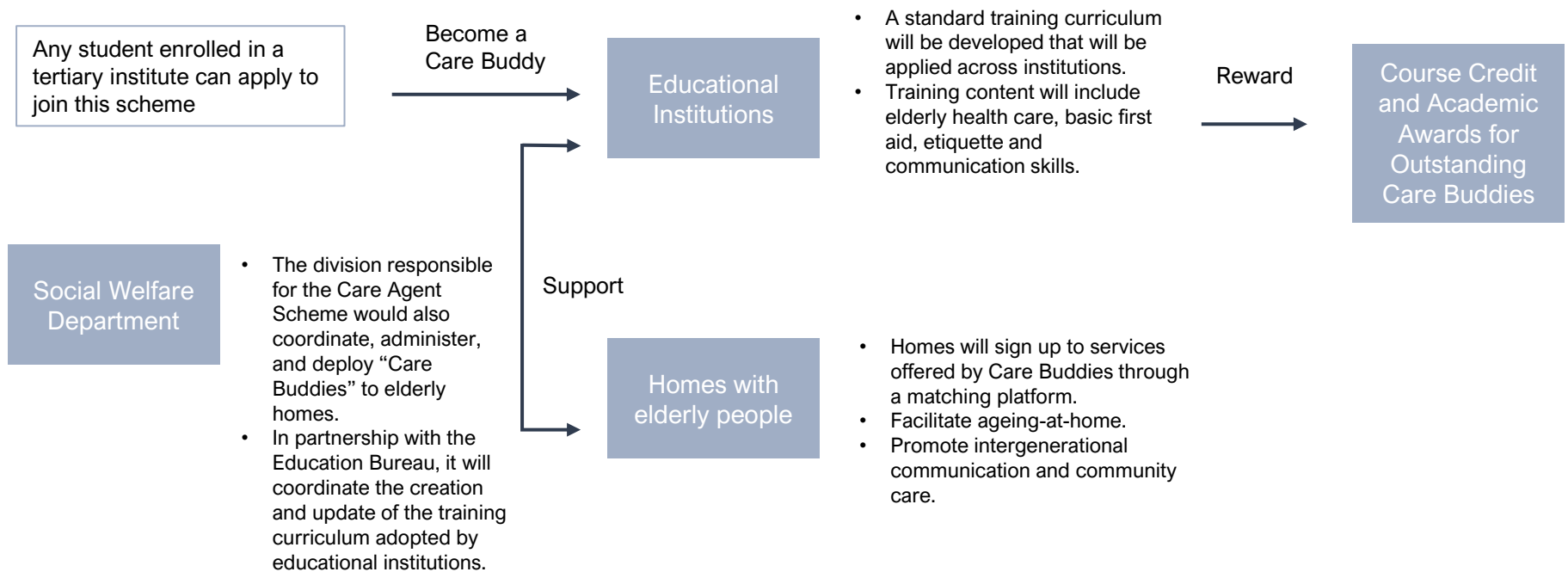
**A public-private partnership to create new career paths for young people while providing immediate help to the elderly**

# Neighbourhood Service Scheme – Key Partners and Operations



The Neighbourhood Service Scheme aims to raise awareness amongst young people of the social responsibility of taking care of the elderly in their communities. Young people will be encouraged to join the scheme as “Care Buddies” due to the offering of course credit. The range of services they provide could include accompanying elderly to the clinic, socialisation, basic household work like cooking/cleaning/grocery shopping, maintenance of the home etc.

While participation in this scheme is not mandatory, it will be strongly encouraged by post-secondary institutions as part of their graduation requirements.



**The Neighbourhood Service Scheme, by promoting intergenerational community care, will create a culture of volunteering**



# Care Agent and Neighbourhood Service Scheme – Implementation and Funding



## Implementation Timeline

### Short Term

- Establish a new division to scope the requirements for certification of Care Agents.
- The division will also begin coordination between the Education Bureau and tertiary institutes to define details of the Neighbourhood Service Scheme.
- Promote volunteering culture among young people as a method of engagement and increasing their connection with the community.

### Mid to Long Term

- Further develop different levels of Care Agent Certification to provide varying career paths.
- Offer a bridge between Neighbourhood Service Scheme and programmes such as the Care Agent Scheme to better connect those who aspire to work in the caregiving/health industry.
- Incorporate Care Agents and Care Buddies as part of the broader primary care network to lessen the burden of public health institutions.

## Funding

- The Care Agent Scheme would require a budget of HK\$80 million per year to subsidise the wages of 600 Care Agents and cover training and administrative costs.
- The Neighbourhood Service Scheme would cost around HK\$4 million per year to administer and manage, excluding initial costs for creation of the matching platform.
- The new division under the Social Welfare Department would manage both Schemes and related funding.



**Target 1: Increase the number of elderly caregivers by 30% by 2030.**

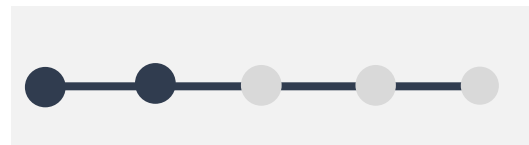


## JOB CREATION

**Estimated no. of jobs created by 2030**

19,000+

**Economic diversification**



## Assumptions

- Assuming 600 Care Agents will be trained each year.
- Assuming an average of 6.25 hours / week of service per Care Buddy and around 40% of students will join = approximately 10,000 students per year (joining one time during their 3-4 year programme).
- Approximately 1.300 full time jobs worth of care given.

### May not require an academic degree

### Require additional education/certification

## Types of jobs

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Home caregiver</li> <li>• Handyman/woman</li> <li>• Physical trainer</li> <li>• Wellness instructor</li> <li>• Administration staff</li> </ul> | <ul style="list-style-type: none"> <li>• Programme manager</li> <li>• Marketing officer</li> <li>• Facility manager</li> </ul> | <ul style="list-style-type: none"> <li>• Behavioural therapist</li> <li>• Social workers</li> <li>• Physiotherapist</li> <li>• Nutritionist &amp; Dietitian</li> </ul> |
|---|--|--|

## Training & Development

**Care Agent Scheme:** Training from Hospital Authority, Vocational Training Council and Nursing Colleges.

**Neighborhood Service Scheme:** Training from all tertiary education institutes.

# Policy Proposal 2 – Building Community Wellness Clubhouses



Target 2: Mobilise one million underprivileged Hong Kong residents to spend 10 hours on wellness activities per month by 2030.

**RECOMMENDATION** Create a network of **Community Wellness Clubhouses (CWC)** across the territory run by young people for the public through resources unlocked through public-private partnerships.

## 1. Mandate property developers to build one CWC per large-scale residential development

- Mandate that property developers develop or repurpose privately-owned spaces for community wellbeing (similar to public open space requirements in land leases).
- Incentivise property developers with tax exemption on construction costs.

## 2. Run by youth, supported by public-private trust

- Attract young people or entrepreneurs with sports clubs or wellness expertise to apply for operator rights.
- Establish a private-public trust to manage and cover operator license fees, while the operator will be responsible for their own P&L.
- Empower youth with new forms of self care, community support and greater resilience against mental stressors.

## 3. Build at least one CWC facility in each of the 18 districts by 2030

- Raise overall health of the community by increasing ease of access to wellness activities regardless of income levels.
- Reduce personal and societal burden of medical costs arising from metabolic diseases and mental illness.



Property developers as critical partners in promoting wellness in the community



# Community Wellness Clubhouse – Main Activities

The Community Wellness Hubs will have multi-purpose facilities that can offer various activities and services that contribute to the individual user and community’s health and wellbeing. From encouraging physical exercise and healthy diets, to mental health support, spaces for social gatherings and cultivating a community garden.

Each operator, while selected and managed by the Trust, would have the flexibility to develop activities that are suitable and enjoyed by the local community. They will also be responsible for hiring and managing the budget of each Hub.



## Emotional

Venue for social gatherings

## Spiritual

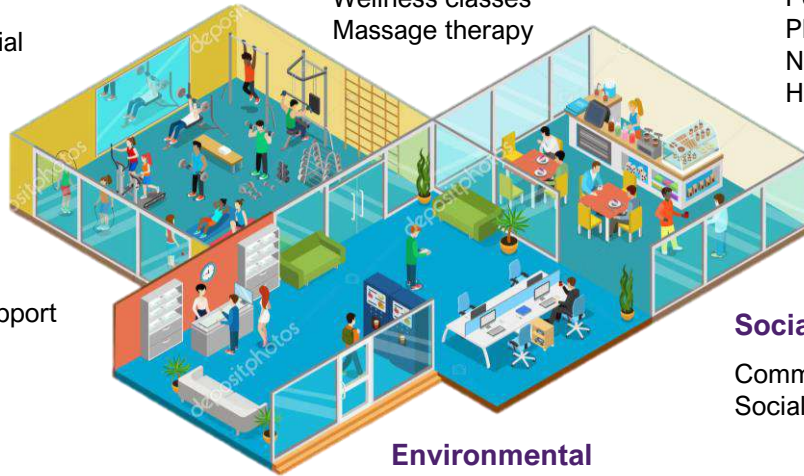
Meditation  
Faith-based support groups

## Mental

Counselling  
Mental health workshops  
Wellness classes  
Massage therapy

## Physical

Sports facilities  
Fitness classes  
Personal training  
Physiotherapy  
Nutritionist clinics  
Healthy food restaurants



## Social

Community space  
Social events

## Environmental

Community garden  
Recycling stations

### Managed by Young People

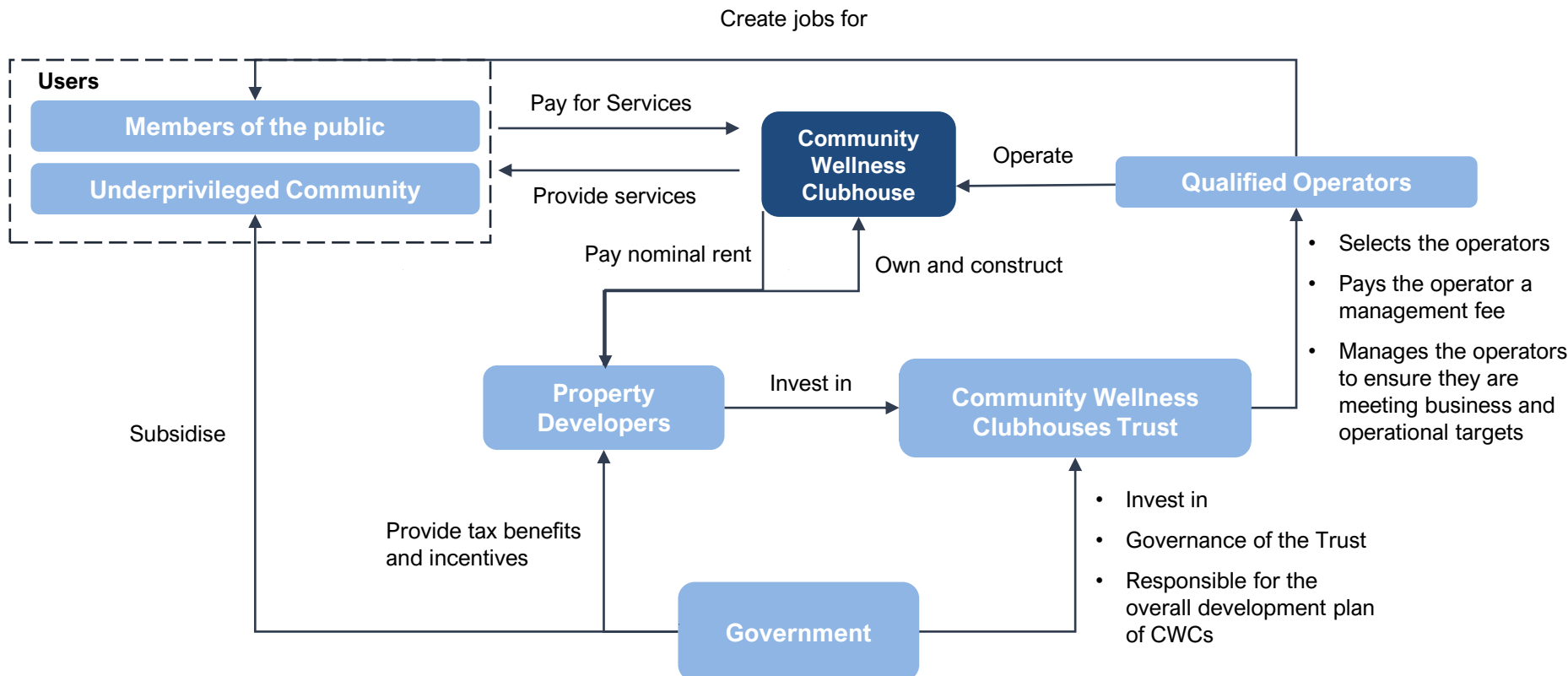
The goal of Community Wellness Hubs is “run by people, for the people”.

The Trust will aim to select young people with experience and commitment to run the Hub as a business. There will also be requirements to hire young people and provide them with the necessary training.

**Youth-led hubs will enhance community wellness and provide employment opportunities for young people**

# Community Wellness Clubhouse – Key Partners and Operations

While private property developers will be mandated to build the hub and cover construction costs (with tax benefits), they will also contribute to the Community Wellness Clubhouses Trust. The Trust will be responsible to tender for, manage and pay Operators to run the space. The Operators will be paid a fee to operate and manage the club, while members of the public will pay per use for the club (which will be subsidised for the underprivileged community).



A network of Community Wellness Clubhouses to ensure equal access to health and wellness services for Hong Kong's population

# Community Wellness Clubhouse– Implementation and Funding



## Implementation Timeline

### Short Term

- Set up a special taskforce to scope out details of the Trust and its members.
- Research sports and wellness hubs around the world to learn the best practices.
- Work out details of the private-public partnership and owner-operator model of the Clubhouses.

### Mid to Long Term

- Construct at least two clubhouses each year in order to achieve the goal of having one clubhouse in every district by 2030.
- Build additional clubhouses in areas with higher population density and lower average incomes, like Sham Shui Po and Tin Shui Wai.
- Expand Clubhouse services to serve primary care functions like children/elderly day care, vaccinations, or other routine healthcare procedures.

## Funding

- The Trust would have an endowment fund that is jointly invested by the Government and property developers based in Hong Kong.
- Services would be charged per use to the public, and the income will be collected by the Trust for further development purposes.
- The operator will receive a monthly fee for managing the operations of the Clubhouse, and will be evaluated against income targets and cost controls.





Target 2: Mobilise one million underprivileged Hong Kong residents to spend 10 hours on wellness activities per month by 2030.

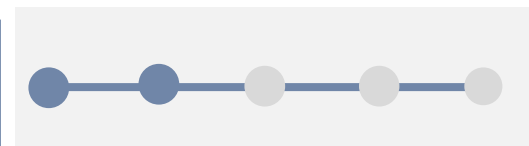


## JOB CREATION

Estimated no. of jobs created by 2030

2,000+

Economic diversification



## Assumptions

- Assuming 2 clubhouses built per year up to 2030.
- Assuming each clubhouse would hire around 100 people full-time and part-time.

## Types of jobs

### May not require an academic degree

- Physical trainer
- Wellness instructor
- Administration staff
- Restaurant and event manager
- Chef
- Marketing officer
- Urban farmer
- Facility manager

### Require additional education/certification

- Counsellor / Psychologist
- Social worker
- Physiotherapist
- Nutritionist & Dietitian

## Training & Development

Training in fitness / sports coaching / personal training, clubhouse management, building management and event operations.

# Policy Proposal 3 – Positioning Hong Kong as a Cold Chain Hub



**Target 3: Position Hong Kong as the premier cold storage hub of Asia.**

## RECOMMENDATION

Become the trusted intermediary for physical goods like temperature sensitive vaccines, pharmaceutical products and advanced therapies between Greater Bay Area and Asia, in addition to the digital flow of data related to cold storage logistics.

### 1. Identify current gaps and opportunities

- Set up a cross-industry study to identify the opportunities and gaps in the cold storage ecosystem in anticipation of increased demand in the GBA from influx of vaccines, pharmaceutical products and advanced therapies.
- Hong Kong's professional standards in logistics secure confidence of international communities.
- Hong Kong Air Cargo Terminals (HACTL) is certified under the IATA in Pharmaceutical Logistics and the Airport Authority is certified under IATA for Perishable Logistics.

### 2. Grow local capabilities

- Invest in necessary infrastructure (e.g. warehouses, trucks, thermal dollies) and integration into existing networks.
- Create cold-chain specific training certifications to meet the increased demand in the industry.
- Establish a comprehensive standard operating procedure (SOP) and code of practice to improve the effectiveness of cold chain logistics management system.
- Encourage Hong Kong companies to get certified under the IATA, EU and WHO Good Distribution Practices for Pharmaceutical Products.

### 3. Encourage growth of ecosystem

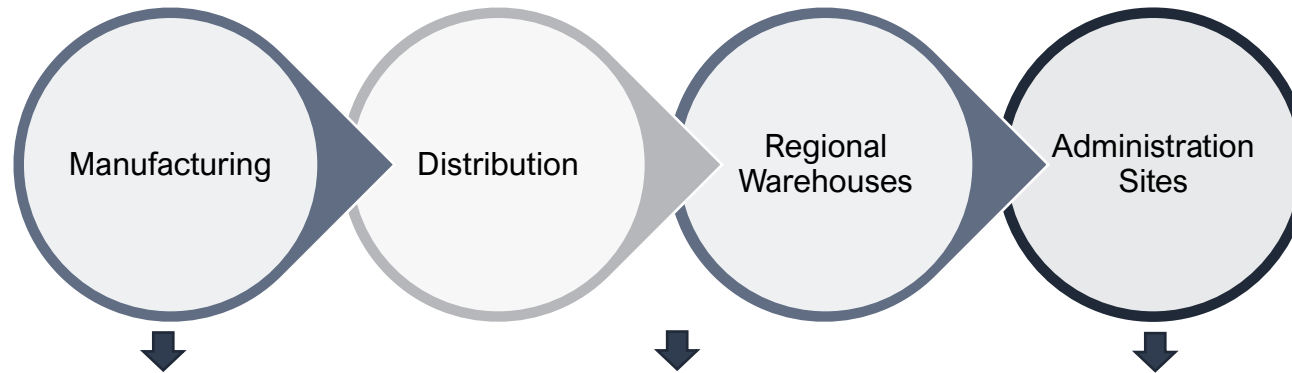
- Promote Hong Kong as a transit hub for cold storage to regional markets.
- Accelerate growth of local startups in the space related to digital infrastructure for cold chains.
- Create demand for supporting services such as real-time tracking of the products and temperature monitoring systems.
- Better infrastructure and services will further attract more foreign investment and reinforce Hong Kong's position as a cold chain hub in Asia.



**Capitalise on Hong Kong's strength to meet 21st century growing need for cold chain capabilities**

# Cold Chain Hub – Logistical Challenges and Opportunities

Hong Kong has a role to play in the various stages of cold chain logistics. The below example presents a process for vaccine distribution, which is anticipated to be in high demand for the mid-term throughout the region.



- Though vaccines may not be produced locally due to expertise and space constraints, Hong Kong's well-developed air freight infrastructure allows shipments to be made easily from around the world.

- Hong Kong is the connection point for various flights around the region.
- The Airport Authority Hong Kong already achieved the first IATA Centre for Excellence for Perishable Logistics (CEIV Fresh) certification.
- Hong Kong can serve as the regional hub for vaccines before they are again distributed across the region.
- Some vaccines either require ultra-low temperatures or need to be administered within 5 days of thawing. Hong Kong is a key connecting point for flights to meet these tight timeframes.

- Hong Kong's trust premium and digital tracking systems are key to ensure that vaccines are still fully viable upon delivery to the administration site.

- More than half of vaccines go to waste globally every year because of temperature control, logistics and shipment-related issues. Hong Kong companies can play a role in working together with players in the logistics field to develop reliable software and tracking devices that monitor shipments from manufacturing to administration site.
- There is also a need for data scientists, data analysts and related personnel to develop software and manage the logistical challenges that involve vaccinating over 4 billion people

**Hong Kong should invest in cold storage centres and related digital infrastructure to meet upcoming demands**

# Turning Hong Kong into the Premier Regional Cold Chain Hub

## Hong Kong as Premier Regional Cold Chain Hub



- As there is a lack of comprehensive policy on cold chain development, it is recommended that the Hong Kong Government and industry players such as the Hong Kong Logistics Association and the Logistics and Supply Chain MultiTech R&D Centre conduct a study on the gaps in investment and policies needed to grow the industry to meet the upcoming surge in demand.
- Expand upon Cathay Pacific's current storage capacity of 8.6 million doses a day for vaccines: the Government should invest in infrastructure and training of workers.
- Financial assistance to incentivise new logistics-related software businesses, including:
  - Cybersecurity
  - Operations and Tracking
  - Data and Artificial Intelligence
  - Strategy and Governance
- Grants could be managed and administered by Cyberport, which has a wealth of experience in helping startups at various stages grow in Hong Kong.

## Case Study: Dubai, United Arab Emirates

- Serves as the Europe, Middle East and Africa (EMEA) hub for cold chain storage and distribution for COVID-19 vaccine.
- Covers two thirds of the world's population within an eight-hour flying radius.
- Constructed one of the largest humanitarian logistics centres in the world which houses organisations such as the WHO.
- Invested heavily in cold storage infrastructure
  - Dedicated pharma storage areas
  - Temperature control ecosystem services (e.g. re-icing, re-packaging during transit)



Setting up the hardware and software for Hong Kong to serve as a hub for cold chain storage



# Cold Storage Hub – Implementation and Funding



## Implementation Timeline

### Short Term

- Set up a study with industry players to identify the existing capacity and capabilities of the cold storage supply chain, and give recommendations on where the industry is lacking for further investment and private-public partnerships.
- Invest in infrastructure and related training to expand the capacity of the local cold chain facilities in order to meet the demand for vaccines around the region.
- InvestHK to promote Hong Kong’s capabilities externally as a regional hub for vaccines to transit to other countries in the region.

### Mid to Long Term

- Set up grants to encourage development of businesses related to core strategic areas in cold chain storage, managed by Cyberport, where the Logistics and Supply Chain MultiTech R&D Centre is also situated.

## Funding

- An estimated HK\$500,000 is needed for the initial study.
- The grants for helping businesses grow may cost an estimated HK\$3-5 million a year, depending on the number of businesses supported.
  - Assumptions based on the Cyberport Incubation programmes which grants up to HK\$500,000 per incubatee.



Target 3: Position Hong Kong as the premier cold storage hub of Asia.

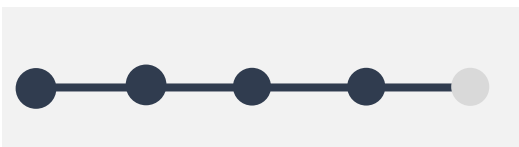


## JOB CREATION

Estimated no. of jobs created by 2030

10,000+

Economic diversification



## Assumptions

Assumptions made based on the logistics industry in Hong Kong which employs around 176,900 people in 2018.

## Types of jobs

### May not require an academic degree

- Warehouse worker
- Cargo handler
- Construction worker
- Delivery worker
- Logistics and administrative staff

### Require additional education/certification

- Cold chain logistical expert
- Warehouse operations manager
- Data engineer, analyst, scientist
- Software engineer
- Architect and engineer
- Lawyer, account, auditor and other corporate service provider

## Training & Development

Specialised knowledge and training in handling time and temperature sensitive cargo.



# URBAN & GREEN TECHNOLOGY



# Introduction



Hong Kong is one of the world's most densely populated cities. High population density can lead to overcrowding and lower quality-of-living, but also enables the development of more efficient urban features, like an expansive public transport system, comfort with smaller dwellings, and mixed-use areas that combine retail, housing, public facilities and office space.

This dense urban environment allows for more efficient use of resources, contributing to Hong Kong's relatively lower CO<sub>2</sub> emissions per capita in 2017 (5.91 tons compared to 16.2T in the United States, and 7.1T in Singapore), and consuming around 464 kwh of electricity per capita each month, compared to New York City (572 kWh a month) and Singapore (696 kWh per capita each month).

However, Hong Kong still has much room for improvement in terms of preventative strategies against the impacts of climate change. While the Government announced its goal to achieve carbon neutrality by 2050 in the 2020 Policy Address, large-scale measures and ambitious interventions needed to achieve this goal are yet to be seen.

According to the Global Renewables Outlook report by the International Renewable Energy Agency, renewable energy could power economic growth post-COVID-19 by stimulating global GDP gains of around US\$100 trillion between 2020 and 2050. It has a promising opportunity to diversify Hong Kong's economy.

Hong Kong has a lot of potential to ride the wave of decarbonisation: not only to prepare against future shocks caused by climate change, but also to create new business opportunities and career paths for young people as they join the future workforce.

**Hong Kong can seize advanced green urban tech possibilities and spur new growth opportunities for the young generation**



# Challenges Facing Hong Kong's Urban Green Economy

## 1. High urban density and carbon emissions

- 1 High urban density and energy consumption**
  - 42,000 buildings consume 90% of electricity and contribute 60% of carbon emissions.
  - Commercial activities account for over 60% of the electricity consumption.
- 2 Heavy reliance on coal for electricity generation**
  - Coal power plants have a lower electricity generation efficiency than gas plants and renewable energies.
  - Only 1% of electricity in Hong Kong is generated from renewable energy.
- 3 Low building sustainability**
  - Only 36% private buildings have a BEAM Plus rating.

## 2. Overconsumption on energy and water

- 1 Lack of a system to hold people accountable for energy overconsumption**
  - No carbon tax is in place.
  - Corporates bear no cost for producing externalities.
- 2 Outdated water pricing mechanism causing overconsumption**
  - Hong Kong's water tariff has been frozen at HK\$4.6/m<sup>3</sup> since 1995 even as water production costs have at least doubled.
  - Other densely populated cities like New York, London, Paris and Tokyo are charging 4 – 9 times Hong Kong's water tariff.

## 3. Low food self-sufficiency

- 1 High dependency on imports and vulnerable to supply shocks**
  - Over 90% of Hong Kong's food is imported and less than 2% of vegetables is grown locally.
  - Hong Kong's food system is vulnerable to food supply shocks and price volatility.
- 2 Shrinking agriculture sector and local food production**
  - Local production of vegetables fell by 67% from 42,500 tonnes to 14,200 tonnes between 2000 and 2016.
  - Traditional agriculture sector does not appeal to young people and the importance of the sector is overlooked.

Large room for development to be explored in energy production, water management and urban agriculture sector

# Policy Proposals Overview

**ASPIRATION** Pioneering an urban green metropolis that creates diversified job opportunities for youth.

**OPPORTUNITIES**

- To use market mechanisms to improve energy efficiency.
- To develop and expand the green economy.
- To develop urban agriculture and grow food locally.

**POLICY PROPOSALS: TARGETS FOR 2030**

- 1 Create an energy efficiency market to reduce energy consumption by 30% by 2030.
- 2 Establish an ecosystem for green technology.
- 3 Develop the capacity of local food industry to produce 10% of Hong Kong's food consumption by 2030.

**KEY RECOMMENDATIONS**

Policy		
• Create an energy efficiency market	• Green Tech Fund	• Grow the local food production industry
Funding		
• Electrical and Mechanical Services Department (EMSD) • CLP Power and HK Electric	• Environmental Protection Department (EPD) • Private investment	• Sustainable Agricultural Development Fund

**JOB OPPORTUNITIES AND ECONOMIC DIVERSIFICATION**



# Policy Proposal 1 – Creating an Energy Efficiency Market



**Target 1: Create an energy efficiency market to reduce energy consumption by 30% by 2030.**

## RECOMMENDATION

Establish a system to monitor building energy consumption and improve energy efficiency by imposing a levy and providing a financing scheme.

### 1. Expand the coverage of the energy audit system

- The Buildings Energy Efficiency Ordinance was implemented in 2012 to require newly constructed buildings to comply with the Building Energy Code, covering 4 types of installation services (i.e. air-conditioning, lighting, electrical, lift and escalator).
- The Ordinance also requires the owners of commercial buildings to carry out energy audit every 10 years.
- This energy audit could be carried out annually, covering all buildings and monitoring building energy consumption in daily operations.

### 2. Impose a levy on building energy consumption

- An energy audit system will create energy performance indicators to measure building energy efficiency.
- A mechanism to tax energy consumption would put a price on energy overconsumption.
- Building owners would have an incentive to improve building energy efficiency and reduce energy consumption.

### 3. Introduce the Building Retrofitting Financing Scheme

- This would be similar to Operation Building Bright 2.0, which provides funding for repairing private domestic buildings to comply with the Mandatory Building Inspection Scheme.
- Loans and subsidies would be provided to cover the costs of energy retrofits of existing buildings, through an energy performance contract arrangement.

**An energy efficiency market provides an incentive to improve building energy efficiency**

# Creating an Energy Efficiency Market – Key Partners and Operations



## Energy auditor

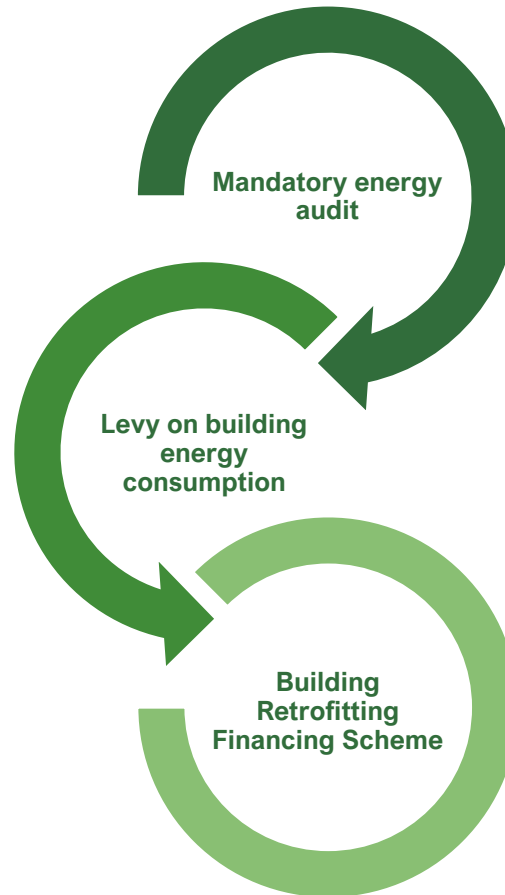
- Provide a comprehensive inspection, survey and analysis of energy consumption of a building.

## Registered Energy Assessor (REA)

- Employed by the Government to review the energy audit report submitted and calculate the levy imposed to the building owners.

## Building engineer and energy consultant

- Provide recommendations to landlords and owners' corporations and implement strategies to improve building energy efficiency.



## Owners' corporations

- Hire an energy auditor to check whether the building's energy performance comply with the standards set by the Government.
- Pay the levy and may hire an energy consultant to formulate strategies to reduce energy consumption and improve energy efficiency.
- For example, install energy efficient windows to reduce the demand for air-conditioning.
- Apply for Building Retrofitting Financing Scheme for funding to carry out eligible retrofitting.

The energy efficient market creates the demand for professional services from a full spectrum of roles



# Creating an Energy Efficiency Market – Implementation and Funding



## Implementation Timeline

### Short Term

- Set up a steering committee, managed by Electrical and Mechanical Services Department (EMSD), that includes representatives from the Environmental Protection Department (EPD), the Buildings Department (BD), the Green Building Council and industry practitioners (e.g. engineers, consultants) to set standards for energy performance and details of the levy.
- Communicate the requirements of mandatory energy audit to the Home Affairs Department (HAD), which will then educate the owners' corporations about building energy efficiency.
- Recruit more Registered Energy Assessors for the levy scheme on building energy consumption.

### Mid to Long Term

- Inject funding received from the levy on building energy consumption into the Building Retrofitting Financing Scheme to finance the owners' corporations for retrofitting.
- Provide training and education programmes to nurture young people to be industry practitioners (e.g. energy auditors, Registered Energy Assessors).

## Funding

- The budget of the Building Retrofitting Financing Scheme is estimated to be HK\$1 billion per year.
- Part of the funding will come from the energy efficiency levy.
- CLP Power and HK Electric have provided funding through CLP Eco Building Fund and HK Electric Smart Power Fund for enhancement works to improve building energy efficiency.
- Tax deduction is now offered to buildings that have a final rating at Bronze or above under the BEAM Plus Assessment System of the Green Building Council.
- EMSD can coordinate with the Government and private sector to provide funding for an overarching Building Retrofitting Financing Scheme.



**Target 1: Create an energy efficiency market to reduce energy consumption by 30% by 2030.**

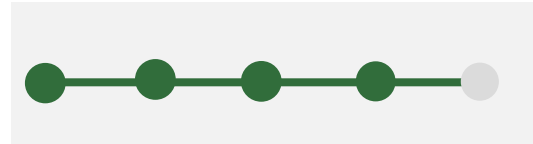


## JOB CREATION

**Estimated no. of jobs created by 2030**

**6,000+**

**Economic diversification**



## Assumptions

- Assuming one energy auditor is responsible for 4 buildings.
- Assuming the energy efficiency market will grow the sustainability industry by 40%.

## Types of jobs

### May not require an academic degree

- Engineering assistant
- Workman
- Installation worker
- Safety officer
- Building services coordinator

### Require additional education/certification

- Surveyor
- Building engineer
- System optimisation officer
- Architect
- Energy auditor
- Registered Energy Assessor

## Training & Development

Certificate and diploma programmes to be provided by education institutes (e.g. HKU SPACE, IVE, CUHK, PolyU) in various areas, such as building interiors, architecture, lighting system and carbon emissions etc. Some would be offered to young people with no experience, and others are available for industry practitioners to advance their careers.

# Policy Proposal 2 – Enhancing the Green Tech Fund



**Target 2: Establish an ecosystem for green technology.**



**RECOMMENDATION** Transform the existing ‘Green Tech Fund’ into an integrated platform bridging private and public resources for a sustainable green economy.

**1. Engage the next generation in environmental protection**

- Young people generally have a higher awareness of climate change and environmental issues.
- More venture capitalists and companies are investing into green technology (e.g. renewable energy, waste management, air & water quality).
- The Hong Kong Science and Technology Parks Corporation (HKSTP) can facilitate green knowledge exchange and accelerate the development and adoption of green technologies.

**2. Collect energy and water consumption data to form a Smart City Database**

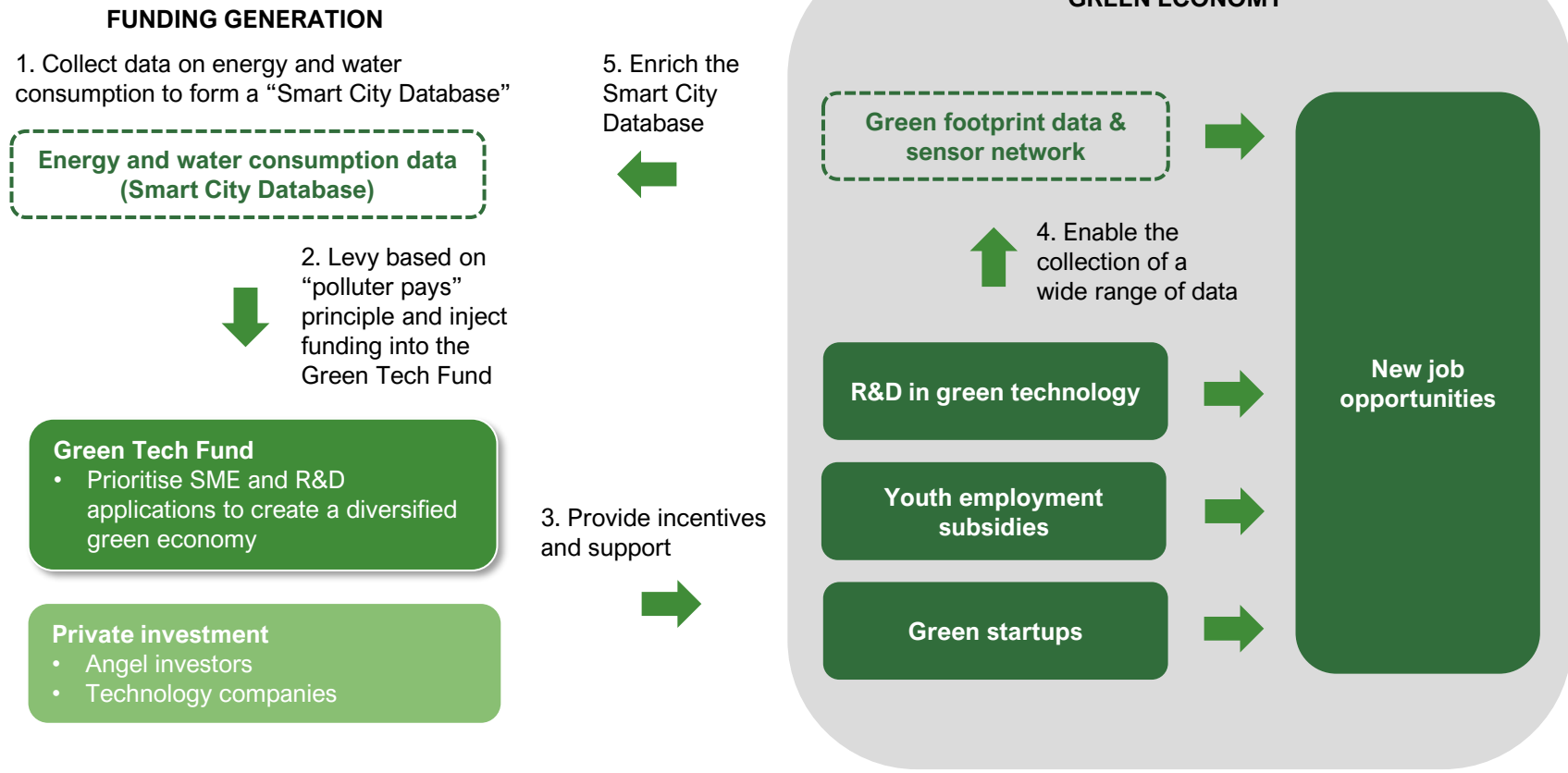
- Availability of consumption data is essential to analysis, R&D and the application of green technology.
- Energy and water consumption data could provide the basis for a levy that would serve as funds for the new Green Tech Fund.
- Build upon the existing Green Tech Fund which funds R&D projects related to decarbonization and green technologies.

**3. Create a circular green economy**

- A sustainable green economy requires sufficient funding to support the development of green technology and initiatives.
- An expanded Green Tech Fund can provide funding to subsidise youth employment, R&D initiatives and startups.
- The growth of the green economy will then attract private investment and form a sustainable circular green economy.

**Green Tech Fund can serve as an integrated platform to achieve a sustainable green economy**

# Green Tech Fund – Key Partners and Operations



A sustainable circular economy requires support from public and private sector resources



# Green Tech Fund – Implementation and Funding

## Implementation Timeline

### Short Term

- A cross-departmental division run by the Innovation and Technology Bureau (ITB) to start coordination between the Environment Bureau and the Development Bureau (overseeing the Water Supplies Department and Electrical and Mechanical Services Department) to build the Smart City database.
- EPD defines details of data that needs to be collected from electricity and water consumption for the levy scheme.
- The cross-departmental division will also decide on the management structures and mechanisms of the expanded Green Tech Fund.

### Mid to Long Term

- EPD collaborates with HKSTP to put forward a subsidy for hiring young people in the field of green technology.
- ITB expands the Smart City Database to other areas (e.g. transport, air quality).
- ITB attracts investment from the private sector to the green economy.

## Funding

- The Government to inject HK\$200 million to the Fund.
- After creating the ecosystem, the Fund is estimated to grow to HK\$1 billion by 2030 with the levy scheme.
- Private investment at HK\$5 billion will be attracted to the green economy by 2030.
- The budget for youth employment subsidy, R&D grants and support for green startups is estimated to grow gradually from HK\$500 million in the short term to HK\$5 billion in the long term.
- The funding will come from both the Green Tech Fund and private investment.





## Target 2: Establish an ecosystem for green technology.

### JOB CREATION

Estimated no. of jobs created by 2030

22,000+

Economic diversification



### Assumptions

Assuming the employment size of the green technology industry will double by 2030 and half of the new job opportunities will be offered to the youth.

### Types of jobs

#### May not require an academic degree

- Installation specialist
- Technician
- Conservation specialist
- Water quality technician
- Project officer

#### Require additional education/certification

- Green economist
- SDG impact analyst
- Environmental engineer
- Researcher in green technologies
- Fund manager
- Lawyers

### Training & Development

A full spectrum of programmes for post-secondary students and researchers will be developed to meet the growing demand for training and education in the green economy. Renewable energy, green footprint assessment and green finance are popular areas of study.



# Policy Proposal 3 – Growing the Local Food Production Industry



Target 3: Develop the capacity of the local food industry to produce 10% of Hong Kong's food consumption by 2030.

## RECOMMENDATION

Grow the local food production and consumption ecosystem through unlocking space, investing in R&D and expanding the market.

### 1. Increase land and infrastructure for local agriculture

- Reform land policy to incentivise release of fallow private agricultural land for farming or food production on favourable leasing terms of 5 – 10 years.
- Form partnerships and offer tax benefits to private property-owners to encourage leasing of unused rooftop or suitable indoor spaces for use in food production, processing and other related businesses.
- Mandate all new buildings to establish a rooftop farm so everyone has an opportunity to grow food.

### 2. Invest in R&D to increase productivity

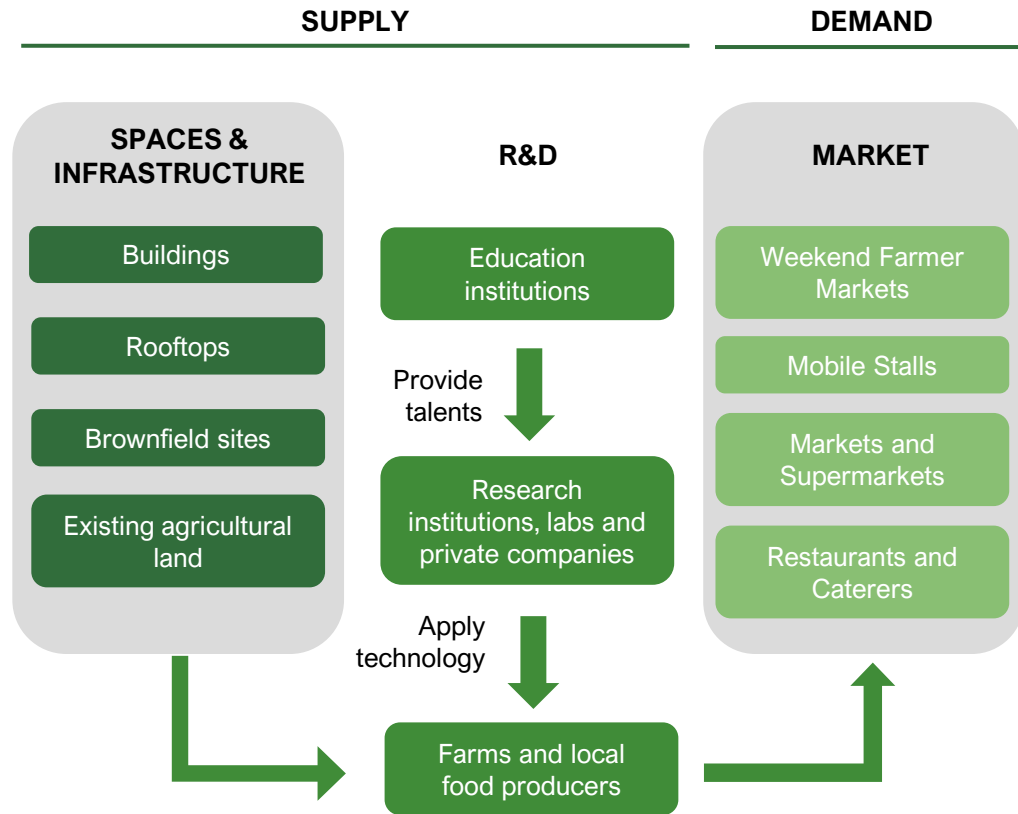
- Subsidise vocational institutions and universities to conduct research and development on modern and intensive farming techniques suitable for a city environment, as well as facilitating applied research for private companies invested in this topic.
- Invite overseas/Mainland experts to develop urban farms and provide training to local talent.

### 3. Grow the market for local produce

- Legislate all wet markets, supermarkets and catering services to gradually increase sourcing of locally grown produce to at least 10% and offer rebates to those who exceed the target.
- Raise awareness on local food production through public education, eco-tourism and weekend markets.
- Expand existing sales and distribution channels (e.g. organising weekend markets in public housing estates, mobile retail etc.)

Space and infrastructure, R&D, and market are essential to the local food production ecosystem

# Growing the Local Food Production Industry – Key Partners and Operations



In order to grow the local food ecosystem, both the demand and supply issue needs to be addressed with policy measures.

As currently 70% of agricultural land is owned privately and much land is left fallow due to lack of incentives for development, the Government can subsidise enhancements or provide funding support to agricultural businesses to encourage existing fallow land owners to lease their land to those who want to farm. A mandate should also be established for all new buildings in Hong Kong to convert their rooftops into a rooftop farms. This would unlock existing land and allow local agricultural businesses to flourish.

On the other hand, funding needs to be given to academic institutions to encourage food-related applied research in partnership with food companies. Priority would be given to urban farming technology that would enhance efficiencies, or novel food products like plant-based meat.

The demand for locally grown food can also be increased through measures such as mandating 10% of vegetables in wet markets, supermarkets and catering services be sourced locally. The Government should also incentivise or organise weekly farmer's markets, mobile stalls and online platforms for local farmers to sell produce directly to consumers.

A comprehensive strategy is needed to grow the entire ecosystem around domestic food production and consumption.

**Policy measures can pull resources together and organise them effectively to grow the local food ecosystem**



# Growing the Local Food Production Industry – Implementation Timeline and Funding



## Implementation Timeline

### Short Term

- Set up a special committee to discuss with industry representatives from the retail and catering industry to understand their challenges and opportunities to increase local sourcing.
- Meet with agricultural land owners to discuss incentives for them to lease land for agricultural use.
- Develop incentives for young people and companies to invest in starting an agricultural business.

### Mid to Long Term

- Develop details of the mandate and tax incentives related to rooftop farms in new buildings.
- Further invest in research and technologies related to increasing the productivity of urban farms.

## Funding

- The estimated budget for growing the local food production industry is HK\$300 million.
- Funding can come from the Sustainable Agricultural Development Fund.
- Extra funding, if necessary, should come from the Food and Health Bureau which oversees departments such as the Agriculture, Fisheries and Conservation Department and the Food and Environmental Hygiene Department.

# Impact on Youth Employment



**Target 3: Develop the capacity of the local food industry to produce 10% of Hong Kong's food consumption by 2030.**

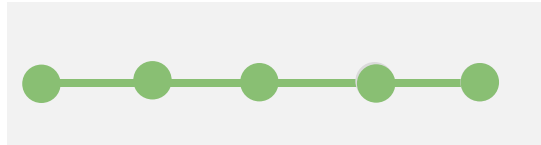


## JOB CREATION

**Estimated no. of jobs created by 2030**

**5,000+**

**Economic diversification**



## Assumptions

- Currently the farms in Hong Kong employ around 4,300 people.
- Assuming that the demand for local produce more than doubles, which will not only increase the number of farms, but also related businesses and support services.

## Types of jobs

**May not require an academic degree**

**Require additional education/certification**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Farmer</li> <li>• Food production specialist</li> <li>• Machine technician</li> <li>• Sales and marketing executive</li> <li>• Small business owner</li> <li>• Laboratory assistant</li> </ul> | <ul style="list-style-type: none"> <li>• Food and agriculture technologist</li> <li>• Crop specialist</li> <li>• Engineer</li> <li>• Laboratory technician</li> <li>• Food scientist</li> <li>• Nutritionist</li> </ul> |
|---|---|

## Training & Development

Vocational and professional education and training (VPET) institutions and universities to offer pre-employment and in-service training, as well as life-long learning programmes covering the areas of agriculture, applied food science, food biotechnology, agriculture technology, breeding technology and new product development.



# AVIATION



# Introduction



The aviation industry is an essential driver of the global economy. The industry plays a significant role in Hong Kong's economy, as much of it is extremely oriented and interconnected with the global economy.

Hong Kong is an international aviation hub that can accommodate 120 airlines operating over 1,100 passenger and cargo flights each day. The Hong Kong International Airport (HKIA) can handle 68 aircraft movements an hour and moved 4.8 million tonnes of cargo in 2019.

Hong Kong's aviation industry includes local airlines, local representative offices of overseas airlines, air cargo forwarding companies and companies providing supporting services to air transport. Prior to the outbreak of COVID-19, there were 1,590 establishments employing 88,000 people in Hong Kong. The industry contributed HK\$156 billion to Hong Kong's economy, amounting to 5.5% of Hong Kong's GDP in 2018.

While the COVID-19 pandemic has significantly impacted the global aviation industry, it has also presented an opportunity for Hong Kong to enhance the sector and maintain its competitiveness in the long-run.

The 2020 Policy Address includes investments by the Hong Kong Airport Authority to airports in the GBA and optimisation of the land adjacent to the airport to create an "Airport City", showing that despite current setbacks, the Hong Kong Government sees long-term potential in further developing the city as an international aviation hub.

**Hong Kong should leverage its strengths to diversify the aviation industry and create new career opportunities for the next generation**





## 1. Narrow interpretation of industry scope

- 1 Attention and investment focused on a few popular roles**
  - When it comes to promoting job opportunities in the sector, the focus tends to be on flight and airport operations, and less emphasis is placed on roles in the supply chain like maintenance, repair and overhaul (MRO) and R&D.
  - Lack of awareness of different jobs in the industry.
- 2 There are insufficient talents for high value-added roles**
  - More talents are required to grow the industry in R&D, consultancy and regulatory work.

## 2. Uncoordinated aviation education

- 1 Aviation programmes do not provide a pathway in the industry**
  - Programmes offered by different institutes are specific to certain jobs in the industry but do not provide a clear career pathway that shows opportunities across the industry.
  - Young people find it difficult to locate the right programme that matches their career aspirations.
- 2 Limited upward occupational mobility**
  - Lack of a diversified career path for an individual who gains specialised experience in the aviation industry.

## 3. Immature aviation R&D

- 1 Growing need for innovation and R&D has not been realised**
  - Companies in the aviation industry innovate to reduce costs and improve efficiency. Yet despite a growing demand for cost-saving technologies, the R&D capacity in Hong Kong is underdeveloped.
- 2 Gap between R&D and business applications**
  - R&D can bring new technology and ideas to the industry but it requires business application to realise its value. The current synergies and cooperation between companies and R&D institutes is weak.

The aviation industry does not appeal to young people and there is a need for development in R&D and education



# Policy Proposals Overview

**ASPIRATION**      Develop and Hong Kong's aviation industry in order to attract young people

**OPPORTUNITIES**

To provide quality human capital with industry-oriented education.

To meet the growing MRO demand.

To engage young people in attracting more overnight visitors.

**POLICY PROPOSALS: TARGETS FOR 2030**

**1** Develop Hong Kong into a world-class destination for aviation education by 2030.

**2** Increase proportion of MRO jobs in the Hong Kong aviation industry to 30% by 2030.

**3** Increase the proportion of overnight visitors (compared to same-day arrivals) from 43% to 60%.

**KEY RECOMMENDATIONS**

**Policy**

- International Aviation Institute

- Growing the MRO Sector

- Stop-over Hong Kong Initiative

**Funding**

- Airport Authority
- Innovation and Technology Fund

- Airport Authority and MRO companies
- Innovation and Technology Fund

- Airport Authority
- Tourism Board

**JOB OPPORTUNITIES AND ECONOMIC DIVERSIFICATION**

No. of Jobs by 2030

17,000+

13,500+

8,000+

Economic diversification



# Policy Proposal 1 – Creating the International Aviation Institute



Target 1: Develop Hong Kong into a world-class destination for aviation education by 2030

## RECOMMENDATION

Provide comprehensive, systematic and industry-oriented education to young people by transforming the International Aviation Academy into the International Aviation Institute

### 1. Develop the International Aviation Academy into the International Aviation Institute

- Expand the programme offerings to provide comprehensive, systematic and industry-oriented education to young people.
- Provide space for researchers to facilitate R&D in the industry.
- Nurture young talents to fuel the growth of the aviation industry.
- Create a professional image for the aviation industry to attract young people.

### 2. Provide a full spectrum of aviation education

- Coordinate different aviation programmes from various providers.
- Provide education to young people across all levels of educational attainment ranging from post-secondary school to PhD.
- Offer programmes suitable for different career stages covering entrance level, through to professional and management levels.

### 3. Foster collaboration with industry partners

- Collaborate with industry partners to provide on-the-job training and mentorship to young people.
- Connect industry partners with researchers for applied R&D.
- Improve the accuracy and productivity of MRO through R&D in robotics, 3D printing, non-destructive testing methods etc.
- Enhance airport management efficiency through cloud computing, big data and biometrics.

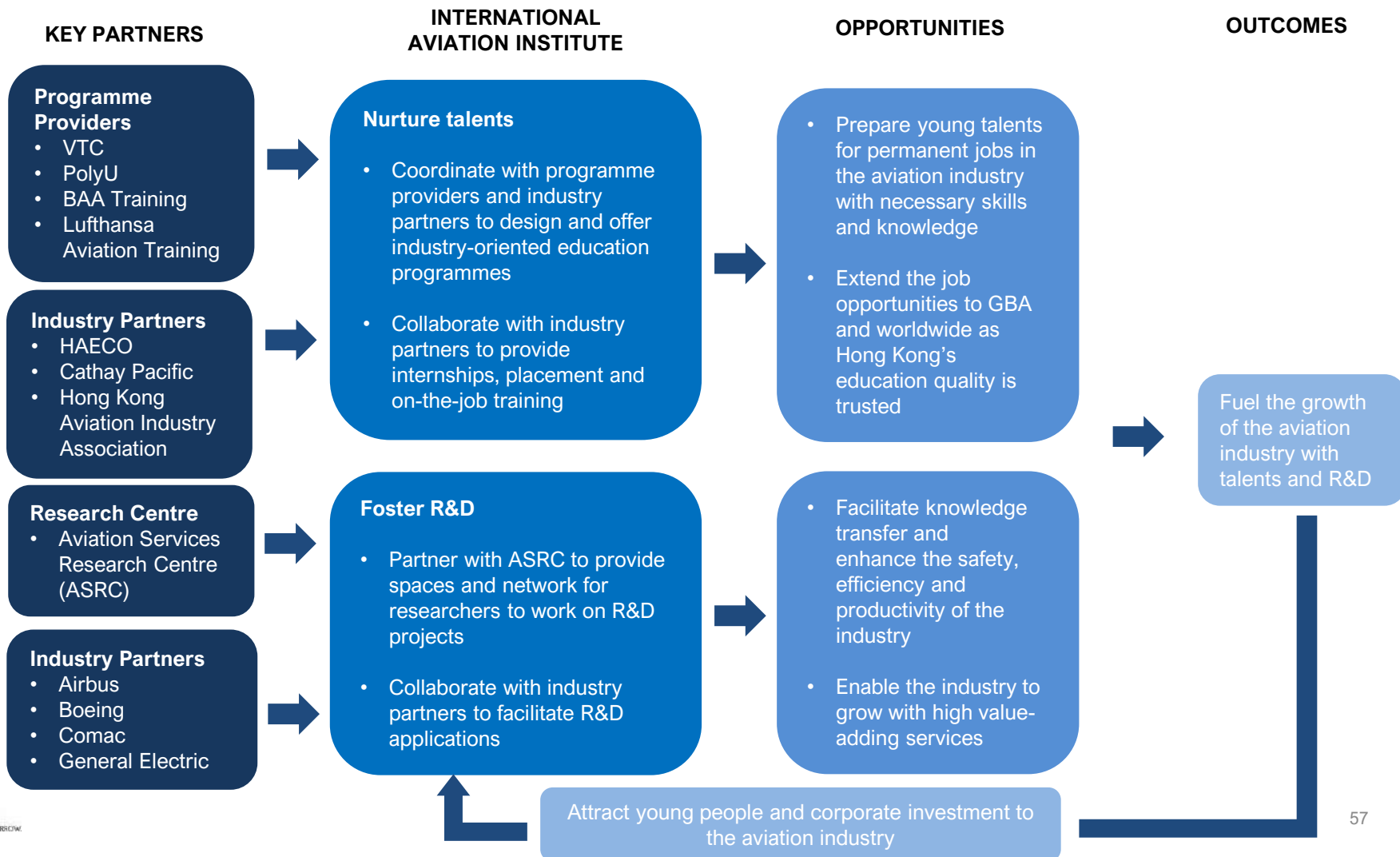


International Aviation Institute attracts young people and boosts R&D to develop Hong Kong into a world-class education provider

# International Aviation Institute – Key Partners and Operations



The International Aviation Institute aims to equip young people with the skills and knowledge to enter the aviation industry and advance their careers, as well as foster R&D in aviation by collaborating with industry partners. The Institute would both increase public understanding of the aviation industry and grow the industry through value-added services.





# International Aviation Institute – Implementation and Funding



## Implementation Timeline

### Short Term

- Set up a taskforce between the Airport Authority, aviation programme providers, research centre and industry partners to develop the framework and structure of the International Aviation Institute.
- Develop more programmes for young people from differing educational backgrounds.

### Mid to Long Term

- Incorporate MRO and R&D programmes into the International Aviation Institute.
- Apply for certifications by international organisations like the International Civil Aviation Organisation to increase professional standards of educational programmes.
- Collaborate with GBA and overseas industry partners to offer internships and placement for young people.
- Attract industry leaders to work with the International Aviation Institute for its R&D needs.

## Funding

- The operating cost of the International Aviation Institute will be similar to the International Aviation Academy and covered by the Airport Authority.
- The Government set up the Innovation and Technology Fund in 1999 and has injected HK\$24 billion into it over the years
- R&D cost is estimated to be HK\$150 million and could be covered by the Innovation and Technology Fund.



## Target 1: Develop Hong Kong into a world-class destination for aviation education by 2030



### JOB CREATION

Estimated no. of jobs created by 2030

17,000+

Economic diversification



### Assumptions

- Assuming 1,000 young people will be trained each year and 60% will enter the aviation industry.
- Assuming R&D sector will account for 5% of the total employees in the industry.

### Types of jobs

#### May not require an academic degree

- Ramp service officer
- Cargo handler
- Ground services
- Safety officer
- MRO technician

#### Require additional education/certification

- Consultant
- Airport management
- Researcher
- Aircraft engineer
- Ramp service supervisor
- Regulatory officer

### Training & Development

The International Aviation Institute will nurture talents to provide quality human capital for the industry. The education programmes provided by the Institute will equip them with practical knowledge and on-the-job-training experiences to improve their employability.



# Policy Proposal 2 – Growing the MRO Sector



**Target 2: Increase proportion of MRO jobs in the Hong Kong aviation industry to 30% by 2030**

## RECOMMENDATION

Develop the maintenance, repair and overhaul (MRO) capacity in Hong Kong to provide holistic services to meet the growing MRO demand.

### 1. Build a new hangar

- The Three-runway System will increase the capacity of air traffic movements by more than 40% to accommodate more flights at the Hong Kong International Airport.
- The expansion of GBA airports will also increase air traffic in the region.
- MRO demand will grow with air traffic increase.
- Building a new hangar can enhance aircraft-handling capacities to provide high quality MRO service.

### 2. Subsidise and expand cutting-edge R&D institutions

- The nature of traditional MRO services does not appeal to young people.
- The future of MRO lies in technology and automation that can improve efficiency and quality of MRO services.
- Subsidising and expanding R&D institutions allows Hong Kong to provide high value-adding and best-in-class MRO services.

### 3. Provide tax incentives to attract foreign investment

- Hong Kong's MRO services are trusted by the aviation industry leaders (e.g. Boeing and Airbus) but the R&D in MRO services is in its infant stage.
- Attracting foreign investment to Hong Kong to set up research centres and conduct R&D projects will help to grow the R&D sector.
- Providing tax incentives will lower the hurdle for foreign R&D leaders to come to Hong Kong.

**Expand the scope of MRO services to provide innovative solutions supported by R&D**



# Growing the MRO Sector – Key Partners and Operations

Growing the MRO sector within the aviation industry means developing Hong Kong's capacity to provide all-rounded services, which would require support from the Government to attract private investment.



**Incentivising industry players to grow the MRO sector**



# Growing the MRO Sector – Implementation and Funding



## Implementation Timeline

### Short Term

- Coordinate with MRO service providers and the Airport Authority about the details of building a new hangar.
- Connect with local R&D institutes to look for innovative technology to expand their scope of services.
- Introduce a designated programme, managed by the Innovation and Technology Bureau, to subsidise R&D in aviation.
- Provide a government subsidy to local R&D institutes and MRO service providers to hire young people to support the growth of the MRO sector.

### Mid to Long Term

- Attract foreign MRO R&D leaders with tax incentives, facilitated by InvestHK, to set up research centres and collaborate with local R&D institutes to work on R&D projects.
- Offer internships and placements in the MRO sector to young people as the MRO R&D sector grows and the International Aviation Institute is established.

## Funding

- The cost of building a new hangar is estimated to be HK\$700 million and will be shared between the MRO service providers and the Airport Authority.
- Subsidies to local R&D institutes for hiring and research projects are estimated to be HK\$100 million per year, which can come from the Innovation and Technology Fund.



## Target 2: Increase proportion of MRO jobs in the Hong Kong aviation industry to 30% by 2030

### JOB CREATION

Estimated no. of jobs created by 2030

13,500+

Economic diversification



### Assumptions

- Assuming 400 job opportunities for young people will be created for building a new hangar.
- Assuming MRO sector will account for 30% of the total no. of employees in the aviation industry.

### Types of jobs

#### May not require an academic degree

- Technician
- Aircraft operations inspector
- Maintenance assistant
- Fleet analyst

#### Require additional education/certification

- Licensed aircraft MRO engineer
- Material engineer
- Maintenance software engineer
- Mechanical engineer
- Aviation data analyst
- Researcher

### Training & Development

The local R&D institutes and MRO service providers will provide on-the-job training to young people. The International Aviation Institute will offer education programmes for MRO services, including R&D and technical operations.





# Policy Proposal 3 - Stopover Hong Kong Initiative



Target 3: Increase the proportion of overnight visitors (compared to same-day arrivals) from 43% to 60% .

## RECOMMENDATION

Provide stopover travel packages that include customised itinerary organised by youth tour guides to attract more visitors and turn same-day transit visitors into overnight visitors.

### 1. Introduce 72-hour visa-free travel within the GBA

- Similar to the 72-hour visa-free transit policy in China covering 18 cities including Beijing, Shanghai and Guangzhou.
- Collaborate with the GBA governments to allow visitors to travel to the GBA without visa if they layover in Hong Kong.
- Promote tourism in the GBA as a whole where visitors can explore different cities in just one trip.

### 2. Offer attractive stopover packages

- Packages can be modelled after the tourism promotion efforts in Singapore, Qatar and Bahrain.
- Partner with tourism and hospitality providers to provide attractive stopover packages.
- Include eco-tourism, arts and culture, and sports event packages in addition to conventional tourism packages.

### 3. Create Youth Tour Guide programme

- Recruit young people to be Youth Tour Guides to design itineraries and guide tours for the stopover packages.
- Provide training to the Youth Tour Guides to equip them with communication skills and deepen their understanding of Hong Kong.



Leverage on the creativity of young people to attract short-term visitors

# Stopover Hong Kong Initiative – Key Partners and Operations

The Stopover Hong Kong Initiative provides travel packages to attract visitors to stay longer during a layover or other short trips. This benefits visitors, aviation and related industries (e.g. tourism and hospitality), and young people.



## KEY PARTNERS

### GBA governments

- Departments and authorities (e.g. immigration, tourism, airport)

### Tourism and Hospitality Providers

- Hotels
- Tourist attractions
- Transport
- Travel agents
- F&B

### Education Institutes

- VTC
- PolyU
- HKU Space



## STOPOVER PACKAGES

### Visa arrangement

- Visa-free travel to the GBA provided that the visitor does their layover in Hong Kong

### Itinerary

- Customised with unique elements (e.g. eco-tourism, art and culture, sports events)

### Youth Tour Guide

- Design itinerary and lead tours

### Hospitality providers

- Provide special discounts as part of the overall package



## BENEFITS

### Visitors

- Enjoy the convenience of the visa-free arrangement
- Explore multiple cities in one trip

### Aviation and related industries

- Grow the market of short-term visitors
- Diversify their customer base

### Youth Tour Guide

- Learn communication skills
- Benefit from real-life experiences of designing itineraries and guiding visitors
- Understand tourism, aviation, and related industries

Stopover packages bring more short-term visitors to Hong Kong with the support from young people and key partners





# Stopover Hong Kong Initiative – Implementation and Funding

## Implementation Timeline

### Short Term

- Promote GBA travel packages to enrich visitors' travel experience as they can include multiple destinations when planning a trip.
- Partner with educational institutes (e.g. VTC) and the Hong Kong Tourism Board to create a Youth Tour Guide programme to provide training to Youth Tour Guides.
- Coordinate with aviation, tourism and related industries to design stop-over travel packages.

### Mid to Long Term

- Coordinate with governments in the GBA to agree on visa-free travel.
- Explore synergies with neighboring countries on stopover travel packages.

## Funding

- The estimated budget for the Initiative is HK\$300 million.
- The Youth Tour Guide programme is estimated to cost HK\$50 million per year.
- The funding can come from the Hong Kong Airport Authority and Tourism Board.



# Impact on Youth Employment



Target 3: Increase the proportion of overnight visitors (compared to same-day arrivals) from 43% to 60%.

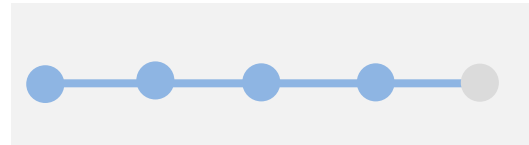


## JOB CREATION

Estimated no. of jobs created by 2030

8,000+

Economic diversification



## Assumptions

- Assuming 200 Youth Tour Guides will be recruited per year
- Assuming the increase in overnight visitors will grow the aviation and related industries by 5% and create job opportunities for young people

## Types of jobs

### May not require an academic degree

- Tour guides
- Event manager
- Travel coordinator
- Customer service officer
- Website developer

### Require additional education/certification

- Data analyst

## Training & Development

The Youth Tour Guide programme will nurture young talent to provide professional services. The transferable skills will enhance the employability of the Youth Tour Guides. Currently, there are also certificates and higher diploma in hospitality and event management offered to young people.



# BIOTECHNOLOGY



Biotechnology (biotech) is a broad area of biology which uses living organisms (or their derivatives) to create and modify products or processes for a desired outcome.

The industry broadly relates to all developments related to biochemistry, biology, biomedical engineering etc., which includes areas such as disease prevention, drug and vaccine development, genetic engineering, agricultural-related research and many others.

Hong Kong has the potential to be an R&D hub for science, technology and engineering, supported by world-class higher education that nurtures research talents. Collaboration with leading companies and institutes in Mainland China could further enhance Hong Kong's competitiveness in the industry compared to other cities in Asia.

Biotech is an important area to develop in order to diversify Hong Kong's economy. In the 2019-20 Budget, the Government identified biotech as one of the four areas in developing innovation and technology. Currently, there are 250-300 biotech-related companies in Hong Kong, and HK is the second largest IPO market for biotech companies in the world.

The development of biotech will create opportunities not only for economic growth but also for employment. It requires highly educated talents from different fields, such as academic research, clinical testing, legal services, commercialisation of technology and supply chain management, not to mention conventional roles in marketing and operations, administrative officers and laboratory assistants.

Considering Hong Kong's unique strengths and advantages including a well-educated talent pool, internationally recognised standards, market for investments and many more, there is great potential to create an ecosystem for the development and commercialisation of biotechnologies.

**Hong Kong can be a hub for biotech development, leveraging its talent, high standards and world-class education.**



## 1. Lack of local talent in the biotech space

- 1 Lack of emphasis on STEM education**
  - Many youth and parents do not see a STEM-related career as desirable, and there is not enough focus on science in primary education.
- 2 Unattractive career prospects and lack of suitably trained workforce in Hong Kong**
  - Research and testing and certification are seen as less desirable career paths due to limited options and lower salary compared to finance or property industry.

## 2. Fragmented ecosystem

- 1 Lack of overall strategy to drive the growth and development of the biotechnology industry**
  - Though the Government is committed to increasing its R&D spending to 1.5% of GDP, coordination between the Government and public authorities (e.g. HKSTP and Cyberport) is required to deploy resources effectively.
- 2 Weak connection between academia and industry**
  - In the Global Innovation Index 2019, Hong Kong scored 13<sup>th</sup> among the 129 economies surveyed, but the city's ability to effectively translate R&D investment into innovative findings and products was relatively low compared to similar economies.

## 3. Inadequate Private Sector Investment

- 1 Biotech investments have a higher barrier of entry (require technical expertise, and a longer ROI horizon)**
  - Investments related to biotech in Hong Kong is mainly concentrated in the IPO market (2<sup>nd</sup> largest market for biotech IPO in the world), which are for more mature, already successful companies.
- 2 Low levels of applied research in Hong Kong**
  - Lack of government / institutional incentives or coordination to encourage private investment in applied research.

# Policy Proposals Overview

**ASPIRATION** Position biotechnology as a new economic engine to diversify Hong Kong's economy and create gainful job opportunities for young people.

**OPPORTUNITIES**

Fragmented biotech ecosystem.

Building up the brand premium of "Tested in Hong Kong".

**POLICY PROPOSALS: TARGETS FOR 2030**

**1** Establish a Regional Biotechnology Centre.

**2** Build a world-class brand of "Tested in Hong Kong, Certified in Hong Kong".

**KEY RECOMMENDATIONS**

- Policy**
- Set up the centre to coordinate existing funding schemes, set up new programmes and promote STEM education.

- Testing mandates and standardisation across the region for certain products
- Incentivise development of new standards and talent in the industry

- Funding**
- Governmental funding
  - Public-private partnerships

- Governmental subsidies
- Private company funding

**JOB OPPORTUNITIES AND ECONOMIC DIVERSIFICATION**

No. of Jobs by 2030 10,000+

2,000+



# Policy Proposal 1 – Establishing a Regional Biotech Centre



Target 1: Shape the institutional ecosystem to consolidate resources and promote growth of the biotech industry

## RECOMMENDATION

Build a Regional Biotechnology Centre to bring together key stakeholders, investment, resources, talent and establish Hong Kong's role as a hub for biotech development.

### 1. Drive the overall vision of development of the industry

- Develop policies, strategies and plans to attract investment, streamline processes, avoid duplication of efforts, and forge long-term cross-disciplinary public-private partnerships.
- Identify strategic research areas based on Hong Kong's strengths and core competences to develop more applied research.

### 2. Coordinate existing funding and resources

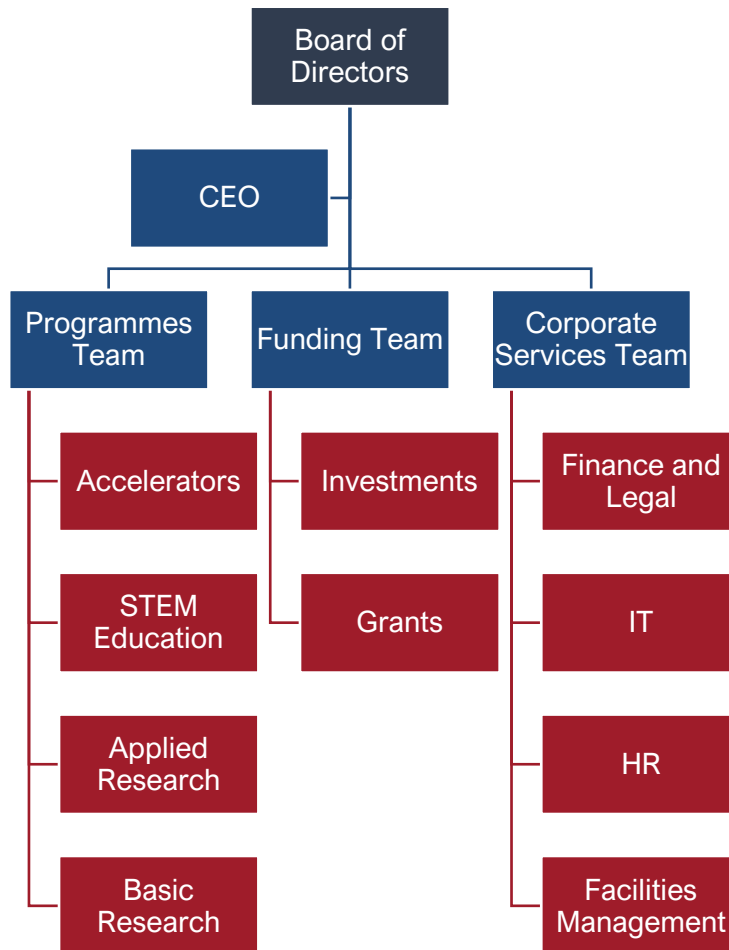
- Deploy resources more effectively by coordinating all existing funding schemes across government agencies to make navigation easy for researchers and entrepreneurs.
- Promote STEM education through strengthening incentives and extending the coverage of existing schemes to cultivate a broader spectrum of local talents.

### 3. Attract private sector investment

- Attract local and overseas investment in biotech R&D by providing investors with land in the Lok Ma Chau Loop for setting up regional R&D centres in Hong Kong.
- Foster local and international public private partnerships through the creation of accelerator programmes and help create diverse market-oriented solutions.

A Regional Biotech Centre would establish Hong Kong as a hub for biotechnology

# Regional Biotech Centre – Key Partners and Operations



The Regional Biotech Centre is a non-departmental public body that has a **Board of Directors (appointed by the Government) and CEO** who will be in charge of driving the vision, strategies and policies related to development of the biotech industry in Hong Kong.

The Centre will have three main teams:

**The Programmes Team** is mainly in charge of planning and managing all programmes hosted by the Centre. This includes facilitating accelerator programmes in partnership with industry to create applied solutions, to promote STEM education among students, and other programmes related to basic and applied research.

Talent subsidy schemes that support students to work on applied research and gain industry experience while pursuing their PhD are also potential programmes managed by this team.

**The Funding Team** focuses on two major areas: the first is attracting investment from local and overseas companies to invest in developing their biotech R&D capabilities in Hong Kong. This includes promoting sites on the Lok Ma Chau Loop and helping overseas companies set up in Hong Kong. The second focus area is on consolidating existing governmental funding for biotech-related research, identifying synergies, and guiding researchers to the appropriate funding sources.

**The Corporate Services Team** handles all administrative activities like finance, legal, HR, IT and facilities management.

Key functions of the Centre include attracting investment, coordinating funding sources and other growth programmes



# Regional Biotech Centre – Implementation Timeline and Funding



## Implementation Timeline

### Short Term

- Set up a taskforce involving public and private key players to outline the plan for the Biotech Centre.
  - Identify the existing challenges related to funding, talent and finding research opportunities in Hong Kong.
  - Collate existing resources and funding available to researchers in biotech.
  - Collaborate with the Education Bureau to identify opportunities for further developing the STEM curriculum in schools.

### Mid to Long Term

- Consolidate existing governmental funding schemes that may be overlapping in terms of goals, and propose setting up a targeted Biotech Fund that aligns with the overall vision.
- Collaborate with regional biotech-related governmental bodies or research institutes to unlock collaborative research opportunities on issues affecting the region / world.

## Funding

- The funding for this non-departmental body would come directly from the Government for set-up and operations.
- Estimated funding to set up the biotech centre would be approximately HK\$200 million, including staffing, operational costs and funding grants.
- Private-public partnerships like accelerator programmes and applied research programmes would be funded by companies/industry players in addition to matching grants.
  - As a point of comparison, the Logistics and Supply Chain MultiTech R&D Centre receives approximately 40-45% of its research projects every year from industry.

# Impact on Youth Employment



Target 1: Shape the institutional ecosystem to consolidate resources and promote growth of the biotech industry



## JOB CREATION

Estimated no. of jobs created by 2030

10,000+

Economic diversification



## Assumptions

Assumptions based on the ecosystem created by HKSTP, which has over 13,000 people in their community including 9,000 R&D practitioners.

## Types of jobs

### May not require an academic degree

- Laboratory assistant
- Logistics and delivery worker
- Administrative staff
- Sales staff
- Project manager
- Property and building manager

### Require additional education/certification

- Researcher
- Laboratory technician
- Software developer and data scientist
- Investor
- Legal and IP professional
- Corporate service provider

## Training & Development

The Regional Biotech Centre will cultivate and upskill talent across all levels, from promoting STEM education in primary and secondary schools, to facilitating further learning and development for researchers at all levels, from high diploma to post-doc levels.

# Policy Proposal 2 – Developing the Testing and Certification Industry



Target 2: Build a world-class brand of "Tested in Hong Kong, Certified in Hong Kong".

**RECOMMENDATION** Promote Hong Kong as a regional testing and certification centre.

## 1. Drive market demand

- Mandate safety tests for all novel foods like genetic engineering food or plant-based meat before they can be on sale in Hong Kong and/or exported to the GBA.
- Subsidise new trades and markets that have potential demand to conduct testing and certification for their products
  - e.g. carbon emissions and energy audits, advanced therapy medicinal products (ATMP), traditional Chinese medicine, etc.

## 2. Develop new standards

- Develop unified standards in the GBA so novel foods and ATMP certified in Hong Kong could be readily used in GBA without additional testing/certification.
- Invite testing and certification experts from overseas and Mainland to train local talent and develop new standards for emerging fields such as microplastics.

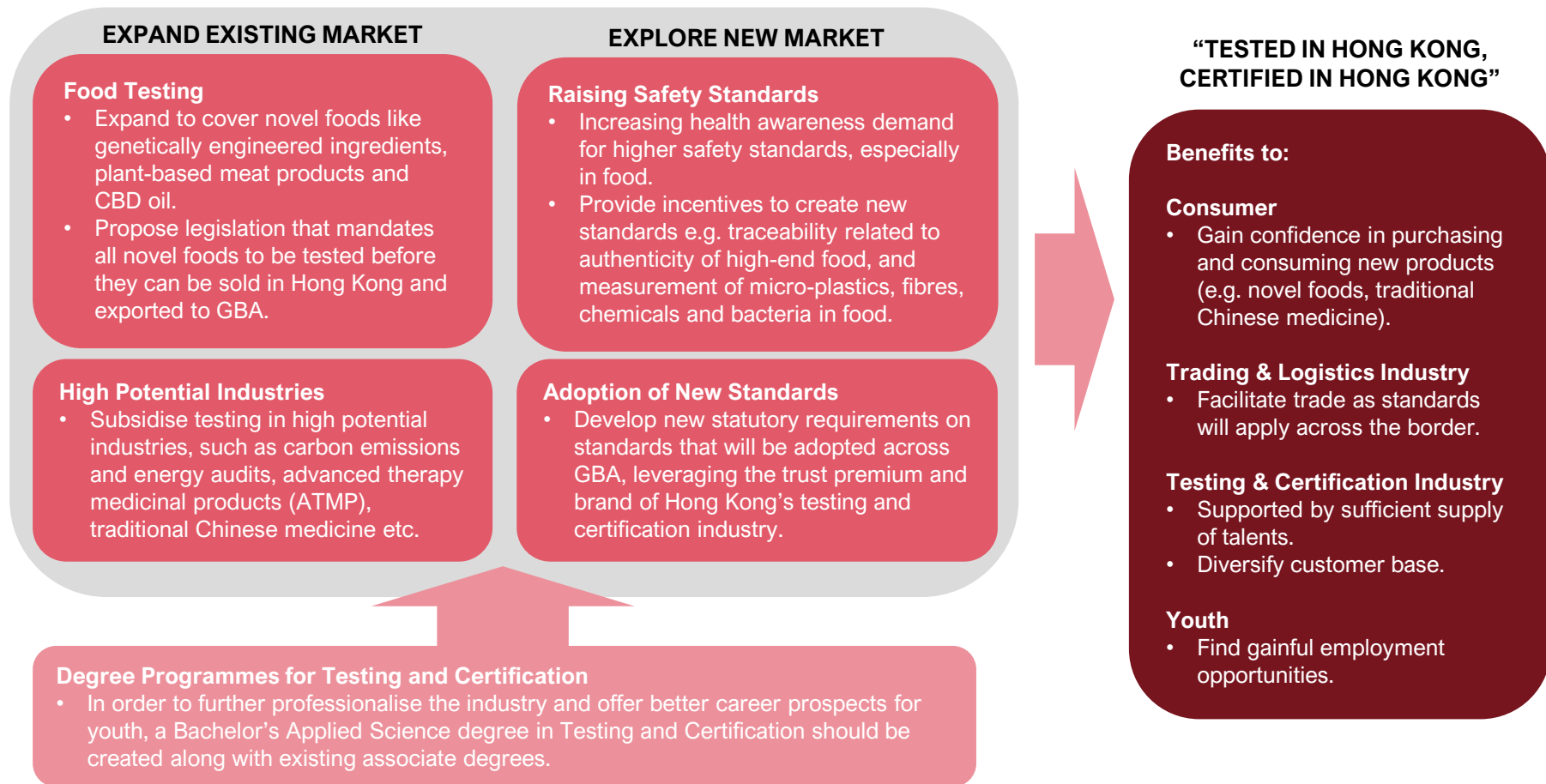
## 3. Improve career path

- Create an applied science degree for testing and certification practitioners to create better prospects for those who wish to specialise in the field and develop new standards for the industry.
- Build a professional image for practitioners in the testing and certification industry by highlighting its impact on protecting people's safety and health, and upholding a premium standard of products.

Promoting the "Tested in Hong Kong" brand through developing new standards and services

# Growing the Market for Testing and Certification

To grow the brand of “Tested in Hong Kong, Certified in Hong Kong”, Hong Kong should first spur demand for the services, which could be driven in two ways: expanding the existing market by increasing the number of goods that need to be tested/certified, and building a new market by creating new standards. Below are some policy incentives and suggestions which could help grow the entire industry:



Using the latest biotechnologies to enhance development of the Testing and Certification sector



# Developing the Testing and Certification Industry– Implementation Timeline and Funding

## Implementation Timeline

### Short Term

- Set up a consultation committee to explore opportunities and challenges related to legislating mandatory testing of all novel foods.
- Work with the Hong Kong Council for Testing and Certification to develop specific policies for growing new areas in testing and certification.

### Mid to Long Term

- Develop the curriculum and development programme for an Applied Science Degree in Testing and Certification in cooperation with University institutions in Hong Kong and the Hong Kong Council for Testing and Certification to
- Develop funding schemes to incentivise research to develop testing standards for new fields.

## Funding

- The Hong Kong Council for Testing and Certification would receive increased funding from the Government, and be responsible for coordination of the funding.
- They would also be responsible for coordinating with various partners like private companies and universities to develop new standards and explore new areas for growth.

# Impact on Youth Employment



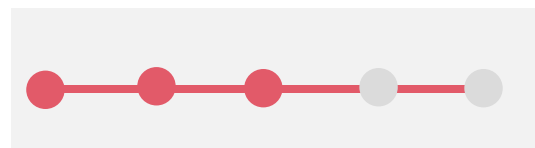
Target 2: Build a world-class brand of "Tested in Hong Kong, Certified in Hong Kong".

## JOB CREATION

Estimated no. of jobs created by 2030

2,000+

Economic diversification



### Assumptions

Assumptions based on manpower data in 2018, which was 18,690 people employed in the industry, mostly in private laboratories in Hong Kong.

### Types of jobs

**May not require an academic degree**

- Project Assistant
- Machinery technician
- Inspection officer
- Auditor
- Quality Management officer

**Require additional education/certification**

- Chemist
- Researcher
- Engineer
- Lab technician
- Food scientist

### Training & Development

More practitioners will be equipped with an applied science degree qualification for better career prospects and ability to further develop the industry.





# CONCLUSION



# Conclusion

The impacts of the recent political unrests followed by the COVID-19 pandemic on Hong Kong's economy and society have left many thinking: what is next for the city?

It is imperative to create an economy that provides opportunities for all, regardless of socioeconomic backgrounds, by leveraging Hong Kong's structural advantages and history of robust economic development.

The vision outlined in the report provides guiding principles which should guide creation of policies aimed at growing the local economy. Hong Kong's mature economy should not only grow for the sake of pursuing GDP growth, but instead, provide ample and fair opportunities for all to pursue gainful employment.

To offer a breadth of career options for young people, the Hong Kong economy must be diversified. People and businesses should also look beyond Hong Kong's borders to the GBA and broader Asian region for opportunities. Industries such as biotech, healthcare, aviation and urban & green tech have great potential to further develop and offer long-term career opportunities for young people in Hong Kong.

Economic diversification efforts should also focus on addressing broader "drivers of change" such as climate change, resource constraints and an ageing society, all of which will shape the future economy.

While government funding and support is key to growing strategic sectors, collaboration from the private sector, education institutions and individuals is also important to address the challenges of cultivating talent and the economy of the future.

Leading up to 2030, Hong Kong must look beyond its current woes, and work towards a future society that is equal, diverse and cohesive.







For more information about the Hong Kong Young Leaders Programme 2020, please contact [enquiry@global-inst.com](mailto:enquiry@global-inst.com)