



InnoHK

*The Hub for
Global Research Collaboration*



***Guidance Notes for Admission to
Health@InnoHK & AIR@InnoHK***



Innovation and technology is the key to modern economic development and bears significant impact on all facets of our lives. Driving innovation and technology development is thus high on the Hong Kong Special Administrative Region Government's agenda.

As a Special Administrative Region of the People's Republic of China, Hong Kong enjoys full national support under the "one country" principle, whilst preserving our own systems and practices under the rule of "two systems". Being the world's freest economy with a rich mix of cultures and ethnicities, Hong Kong is the most cosmopolitan of Chinese cities and uniquely placed to serve as the portal to the Mainland.

There are enormous opportunities in China, particularly in the development of the Guangdong-Hong Kong-Macao Greater Bay Area. Hong Kong's pivotal role in China's innovation and technology development was underlined by President Xi Jinping's recent affirmation of Hong Kong's solid scientific foundation and his support for Hong Kong's development into an international innovation and technology hub.

InnoHK

InnoHK is a major initiative of the Hong Kong Special Administrative Region Government to develop Hong Kong as the hub for global research collaboration. This involves the establishment of world-class research clusters at the Hong Kong Science Park with research laboratories set up by world renowned institutions and / or commercial entities to conduct collaborative researches.

Vision

Be the Hub for Global Research Collaboration.

Mission

Converge top-notch researchers from all over the world to conduct world-class and impactful collaborative researches.

Health@InnoHK and ***AIR@InnoHK*** will be the first two research clusters to be established in the second half of 2019. ***Health@InnoHK*** will focus on all types of healthcare-related technologies, including for instance drug discovery, personalized medicine, molecular diagnostics, bioengineering, chemical biology, bioinformatics, vaccine development, medical instrumentation, alternative medicine etc. ***AIR@InnoHK*** will focus on the development of **Artificial Intelligence** and **Robotics** technologies, as applied to areas like financial services, smart city and advanced manufacturing. Research focuses may cover big data analytics, machine learning, cognitive systems, intelligent agents, classification for diagnosis, medical robotics, mobile robots and assistive / service / construction robots etc.

By the end of September 2018, over 30 Hong Kong and non-Hong Kong institutions, all amongst the top echelon globally, have expressed interest in participating in the ***Health@InnoHK*** and ***AIR@InnoHK*** research clusters.

Admission Criteria

The emphases of *Health@InnoHK* and *AIR@InnoHK* are “world-class” and “collaboration”, meaning that research laboratories and/or the research programmes that they undertake must involve (1) top-notch institutions and (2) collaboration with local institutions. The detailed assessment criteria are as follows:

(a) Academic Standing & Research Achievements

- The parent institution(s) should be among the global top echelon of institutions in the relevant fields, such as the top 100 in the relevant subjects in the QS World University Rankings, the Times Higher Education World University Rankings, the Academic Ranking of World Universities etc.
- The parent institution(s) should demonstrate a solid track record of R&D achievements through, for instance, the Scopus Citation Database or other objective indicators.

(b) Experience in Collaboration & Partnership

- The parent institution(s) should possess good track record in research collaboration with universities / research institutions / commercial entities in the relevant field.

(c) Technological Adoption / Commercialization

- The parent institution(s) should preferably have good experience in facilitating technology transfer or promoting technological entrepreneurship. A good track record in collaboration with global corporations and/or investors in the relevant technology areas would be most desirable.

(d) Research Programmes

- The proposed research programmes to be undertaken by the research laboratory must:

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- involve novel ideas;
 - relevant to the theme of the cluster to which it belongs;
 - be of a scale that commensurate with the size and headcount of the laboratory, and if successful, would be impactful;
 - involve collaboration with Hong Kong-based universities / research institutions / commercial entities / other member laboratories in *Health@InnoHK* or *AIR@InnoHK*. Collaboration with non-Hong Kong universities / research institutions / commercial entities are also welcome;
 - have a reasonable likelihood of being adopted or commercialized, if the research is successful. Partnership with or sponsorship by commercial entities or prospective user organizations would be a good demonstration of such likelihood;
 - be for the general well-being of mankind. Development of weapons, for instance, would not be supported.

(e) Expertise of the Research Laboratory

- The proposed research laboratory should comprise key research personnel with strong experience, expertise, network and time commitment in the proposed research work.

(f) Local Talent Development

- The proposed research laboratory should demonstrate a strong commitment to nurturing local research talent, in different research capacities and positions, through the latter's active involvement in the laboratory's research programmes.

(g) Benefits and Contributions to the Local Community

- Additional contributions to Hong Kong, say, in environmental conservation or elderly care, would be most desirable.

Financial Support Package

Financial support will be available to non-profit-making research laboratories set up by non-profit-making institutions at the clusters. Laboratories set up by commercial entities or with alternative sources of funding (e.g. donation) may also be admitted if they meet the admission criteria in pages 3-4. The financial support package for laboratories set up by non-profit-making institutions comprises –

(a) Capital Support

- Initial commissioning
- Major equipment
- Periodic renovation / upgrade

(b) Operation Support

- Rental & premises management fee
- Utilities
- Remuneration for laboratory non-research personnel
- Accommodation support for non-local personnel
- Legal & Accounting
- Publicity
- Travel
- Training
- Maintenance
- Office & Other Relevant Expenses

(c) Research Support

- Programme-based funding (with each programme area having several component research projects).
- Research funding can be committed for 4 to 5 years.
- All research programmes and the component projects will be subject to periodic scientific review. Funding will continue if the programmes meet the prescribed milestones or demonstrate good research efforts in the preceding period.
- Research funding will cover:
 - Equipment
 - Consumables
 - Cost of R&D personnel
 - With justifications, research cost incurred by collaborators outside the research laboratory, including by partner institutions outside Hong Kong, for individual research programmes, subject to a ceiling (not more than 50% of the research expenditure incurred of the concerned research programme)

(d) Reimbursement to Parent Institution(s)

- Administrative Overhead (calculated as a percentage, normally 10%, of the financial support provided to the research laboratory) for the parent institutions' management oversight of the operation of the research laboratory.
- Cost of secondment of researchers to the research laboratory

Illustrative Example of Financial Support

Assuming that a research laboratory occupies a floor space of about 10,000 sq ft, employs about 60-80 staff, and has in place five on-going research programmes (each with 4-6 component projects) at any one time, the estimated amount of financial support it would receive in its first five years of operation will likely be around HK\$460M, broken down as follows:

Support (in HKD)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Capital Setup	\$40M	N/A	N/A	N/A	N/A
Periodic Renovation / Upgrade	N/A	N/A	N/A	N/A	\$20M
Operation Support	\$40M	\$40M	\$40M	\$40M	\$40M
Research Support	\$40M	\$40M	\$40M	\$40M	\$40M
Sub-total	\$120M	\$80M	\$80M	\$80M	\$100M
Administrative Overhead for Parent Institution	\$12M	\$8M	\$8M	\$8M	\$10M
Total for 5-Yr Period	\$506M				

Note: *The above is an indicative budget only. The exact amount of funding support will depend on the scale and type of research programmes involved. Research laboratories will need to provide justifications for their proposed budget to ensure prudent use of public money.*

Non-Financial Support

Research laboratories at *Health@InnoHK* and *AIR@InnoHK* will have access to a whole range of facilities and support -

(a) Research Facilities

- Animal research facilities
- Pilot-scale batch production facilities
- Hospital Authority's clinical data
- the Genome data to be offered by the proposed Hong Kong Genome Project
- Biobanks and Bioinformatics database at the Hong Kong Science Park
- Other equipment that can be used on a shared basis
- Robotics standard testing lab
- Data studio
- Robotics catalysing centre
- AI Laboratory
- Data centres
- GMP production facilities / venues or sites at industrial estates for the construction of own GMP plants
- Trial use of technologies at the Hong Kong Science Park or other public sector organizations

(b) Talent Support

- Fast-track arrangements under the Technology Talent Admission Scheme to facilitate admission of technology talent from outside Hong Kong to undertake R&D work

(c) Startup Support

- Spinoffs from research laboratories can join the incubation programmes of the Science Park or the Cyberport, thus enjoying –
 - Subsidized office space and shared facilities
 - Soft landing business support
 - Financial aid packages
 - Technology support
 - Management support
 - Business development and marketing support
 - Investment matching support
 - Accommodation support

Governance

Institutions that are setting up laboratories at *Health@InnoHK* or *AIR@InnoHK* will need to sign an agreement with the Hong Kong Special Administrative Region Government and the Hong Kong Science and Technology Parks Corporation. The agreement will stipulate the respective rights and obligations of the parties. In normal cases, the agreement will last five years.

The InnoHK Steering Committee (“the SC”), appointed by the Hong Kong Special Administrative Region Government, will advise the Government on matters concerning *Health@InnoHK* and *AIR@InnoHK*, including the admission and performance of their member research laboratories. The SC will be underpinned by a number of functional committees, such as Facilities Committee, Scientific Committee(s) and Audit Committee. Other committees will be established as necessary.

Members of the SC include representatives from the Hong Kong Special Administrative Region Government and the Hong Kong Science and Technology Parks Corporation, as well as leaders from academic, research and business communities, who are invited on an ad personam basis. A Code of Conduct is in place to assist members in their work, particularly in their management of conflict of interests.

Each research laboratory will need to:

- be established as a company limited by guarantee under the Companies Ordinance (Chapter 622, Laws of Hong Kong);
- establish a Board of Directors, whose members will include, inter alia, representatives of the participating institution(s);
- submit regular reports regarding the progress of their research work, which will be reviewed by the relevant Scientific Committee; and
- submit regular operation reports and audited accounts.

Expression of Interest

Institutions interested in setting up research laboratories under *Health@InnoHK* or *AIR@InnoHK* are invited to submit a detailed proposal containing the following information:

(a) Parent Institution(s)

- Confirmation by the institution(s)' management regarding their participation in the proposed laboratory, and for the lead institution, its undertaking to oversee the research laboratory.
- Academic Standing & Achievements in relevant fields
 - Relevant information on academic standing (e.g. rankings, publication/citation impact, awards etc.)
 - Relevant information on research achievements (e.g. number of patents, awards, number of startups / unicorns spun off and jobs created, commercialisation of research results, etc.)
- Research Collaboration
 - Past research collaboration with universities / research institutes / commercial entities in the relevant field

(b) Proposed Research Laboratory

- Name (either xxx Centre / Lab or Centre / Lab for xxxxx)
- Objective(s)
- Ownership & Governance Structure
 - The organization chart of the laboratory, with a description of the duties of the key positions, including the Director of the laboratory, team leaders of research programmes and other key personnel

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- Details of individuals who would be occupying the key positions, alongside their curriculum vitae
 - Research Programmes for the first five years
 - description of the projects under each Programme
 - key milestones for each project
 - Venue Requirements
 - The proposed size of the laboratory
 - Specific requirements (such as Class 6 wet laboratories, headroom / loading requirements etc) with justifications
 - Likely Technological, Commercial or Social Impacts of the proposed researches
 - Faculty & Resources Commitment
 - Planned presence of key research personnel seconded from the institution(s) at the laboratory
 - For part-time presence, the committed man-days per year
 - Proposed Research Collaboration with other collaborators e.g. other faculty at the institutions' home campus, other Hong Kong and non-Hong Kong institutions, commercial entities, private organisations
 - Intellectual Property Rights Arrangements
 - Plans for Technology Adoption / Commercialization
 - Plans for Local Talent Development e.g. the numbers of local research personnel; the number of local post-doctoral researchers, Ph.D. students and interns etc

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- Indicative Budget for the first five years of operation
 - Covering capital, operating and research expenses (see template at Page 14-15)
 - The proposed remuneration or cost of secondment for senior personnel must be set out clearly
 - Justifications for and budgets of essential equipment for the laboratory's own use
 - Other needs (e.g. communal facilities / equipment that can be shared with other laboratories)
 - Other planned sources of funding (e.g. fundraising drives, contract researches, donation) for the research laboratory
 - Implementation plan i.e. proposed schedule for the establishment and commencement of operation of the research laboratory
 - Key Performance Indicators, including but not limited to:
 - No of new and on-going research projects
 - No of Ph.D students trained
 - No of papers published in scientific journals / citations
 - No of patents applied for / granted
 - No of licensing agreements
 - No of industry sponsors for research work and ratio of research sponsorship to total research budget
 - No of startups spun off from the laboratory's work

Template for the Proposed Budget (in HK\$M)

Item	One-off Cost (Quantity x Unit Cost)	Cost per year	Total Cost for 5 years	Justifications / Remarks
A. <u>Capital</u>				
Planning & Fitting-out	xx	--	xx	
Major equipment				
Equipment A	xx	--	xx	
Equipment B	xx		xx	
Total for (A)			xx	

B. <u>Annual Operating Cost (Non R & D)</u>				
Rental & management fee	--	xx	xx	
Utilities	--	xx	xx	
Administrative staff (e.g. finance, marketing)	--	xx	xx	
Accommodation support for non-local personnel	--	xx	xx	
Legal & Accounting	--	xx	xx	
Publicity	--	xx	xx	
Office & Other Expenses (e.g. Duty Travel, Training, Maintenance etc)	--	xx	xx	
Total for (B)		xx	xx	

C. <u>R & D Programmes</u>				
Programme 1				
Team Leader	--	XX	XX	
Research staff	--	XX	XX	
Equipment	XX	XX	XX	
Consumables	--	XX	XX	
Programme 2				
Team Leader	--	XX	XX	
Research staff	--	XX	XX	
Equipment	XX	XX	XX	
Consumables	--	XX	XX	
Programme 3				
Team Leader	--	XX	XX	
Research staff	--	XX	XX	
Equipment	XX	XX	XX	
Consumables	--	XX	XX	
Programme 4				
Team Leader	--	XX	XX	
Research staff	--	XX	XX	
Equipment	XX	XX	XX	
Consumables	--	XX	XX	
Total for (C)	XX	XX	XX	

D. <u>Administrative</u>				
<u>Overhead</u>	XX	XX	XX	
(10% of A, B & C)				

Total (A + B + C + D)	XXX	XXX	XXX	
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Issues for Attention

- Institutions wishing to set up research laboratories at *Health@InnoHK* or *AIR@InnoHK* should approach the Innovation and Technology Commission direct before submitting a proposal. The latter will advise whether the proposal ties in with the mission and focus of *Health@InnoHK* or *AIR@InnoHK*, and whether the information available is adequate for the SC's deliberations.
- The budget to be included in the proposal should be an indicative budget. Institutions are advised to draw on their Hong Kong partner institution's experiences and practices in putting in estimates, particularly for items where local conditions are relevant.
- More detailed estimates will be required at a later stage after the SC has approved the admission and the initial budget of the concerned research laboratory. The detailed estimates will need to follow the relevant funding / procurement / financial management requirements.
- Institution(s) whose proposals have been accepted by the SC and the budget approved will have to enter into a multipartite agreement with the Innovation and Technology Commission and the Hong Kong Science and Technology Parks Corporation, which will set out the rights and obligations of all parties concerned.
- The Innovation and Technology Commission reserves the right to impose conditions for admissions and/or financial packages approved for any institution and research laboratory.
- The Innovation and Technology Commission may negotiate with institutions details of the proposed laboratories or the terms / conditions of the multipartite agreement, even after the announcement of admission results.

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- Submission of any proposal at any stages, with or without the advice of the Innovation and Technology Commission, does not necessarily imply acceptance of the proposal by the SC or approval of the budget and the associated financial support packages. The final assessment result will be formally communicated to the institutions concerned in writing.
 - All costs incurred in the preparation and submission of proposals related to *Health@InnoHK* and *AIR@InnoHK* will be wholly borne by the concerned institution(s).
 - The InnoHK initiative has received enthusiastic responses from universities and research institutions. We are processing the first batch of proposals received and will temporarily cease to receive new proposals **after 28 February 2019 (Hong Kong Time)**, until further notice.
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