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## MOST (Ministry of Science and Technology of China) and Business Finland Joint Innovation Funding Call

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### 1. AGREEMENT

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*Memorandum of Understanding for China-Finland Science & Technology Innovation Cooperation between the Department of International Cooperation of the Ministry of Science and Technology of the People's Republic of China, and Innovation Funding Agency Business Finland of the Republic of Finland.*

### 2. PRIORITIES

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#### Smart and Green Energy

For example, including but not limited to cooperation areas such as:

1. *Smart Grid technologies, including e.g.*
  - *flexible power systems including flexible generation and energy storage to increase the share of renewable energy integration in the power system,*
  - *Power-to-X technologies and energy storages for distributed power generation,*
  - *CHP (Combined Heat and Power) technologies,*
  - *advanced DHC hybrid networks (including sources like wastewater, other water resources, data center excess heat, renewables) and technologies to optimize heating and cooling energy generation, storage and distribution in cities (residential, commercial, offices), and*
  - *digitalization of energy sector allowing increased optimization and flexibility of energy systems and implementation of enabling country-level policies.*
2. *Clean technologies for energy production, including e.g.*
  - *industrial renewal in paper and pulp industry, steel industry, food industry incl. poultry production for utilizing side and waste streams and renewable energy; improving energy efficiency,*
  - *more environmentally friendly coal-fired powerplants: multifuel boilers, emission reduction, flue gas cleaning and utilization, process efficiency,*
  - *Bio Energy Carbon Capture and Storage (BECCS): to develop biomass or co-firing energy*

*system with negative emission through capturing CO<sub>2</sub> from flue gas of biomass combustion.; the aim is to build the first BECCS demonstration project of China on basis of technology research and development.*

3. *Resource and energy efficient production processes, including e.g.*
  - *waste to energy and waste to value (W2fuel, W2electricity, etc.), especially W2liquid fuels (methanol, ethanol), and*
  - *improved usage of energy, water, and other resources in a sustainable manner, while minimizing environmental impact, e.g., in DHC networks digitalization.*

### **Smart and Green Mobility**

For example, including but not limited to cooperation areas such as:

1. *Mobility as a Service (MaaS), including e.g.*
  - *exploration of the multi-party service solutions (interfaces/APIs and applications),*
  - *research on the solution integration platforms, and*
  - *commercialization of the MaaS concept.*
2. *Smart urban traffic solutions, including e.g.*
  - *research on large-scale, real-time, intelligent and high-reliability traffic monitoring and control optimization technologies,*
  - *research on road-side connection technologies, and*
  - *developing intelligent gateways for smart city system integration.*
3. *Smart urban traffic system integration, including e.g.*
  - *systemic analysis of the smart urban traffic needs and opportunities,*
  - *simulation methods for enhanced city traffic solutions taking into account the people's travel needs, and*
  - *utilization of the MaaS and smart urban traffic solutions.*
4. *Intelligent vehicle and mobility, including e.g.*
  - *connected vehicle, autonomous driving, and V2X,*
  - *electrification of vehicles and mobile machines, and*
  - *smart transportation and mobility service.*
5. *Smart and green ships and shipping, including e.g.*
  - *big data and artificial intelligence applied for ship management in life cycle,*
  - *intelligent navigation and autonomous ships,*
  - *intelligent management of marine equipment,*
  - *air pollutant emission in arctic waters,*
  - *ship greenhouse gas emission reduction, and*
  - *carbon neutralization technology during ship construction.*

6. *Smart and green ports, including e.g.*
  - *fully automated ports, and*
  - *underwater cleaning technology of ship fouling.*

### **Smart and Green Industries**

For example, including but not limited to cooperation areas such as:

1. *Sustainable construction, including e.g.*
  - *carbon neutral solutions for the building and construction sector, including but not limited to wood construction, green and smart building, healthy building technologies, technologies and equipment for low-carbon heating and cooling, and sustainable building materials.*
2. *Sustainable manufacturing, including e.g.*
  - *research on process optimization methods and production technologies,*
  - *research on energy efficiency measurement and evaluation methods,*
  - *research on energy efficiency information management system, and improve energy control throughout the manufacturing process, and*
  - *develop new service-oriented business models and build a sustainable manufacturing ecology for product life cycle.*
3. *Bioeconomy, including e.g.*
  - *sustainable packaging with bio-based materials,*
  - *plastics and textile recycling, and*
  - *waste treatment and recycling.*
4. *Green industry parks, including e.g.*
  - *solutions of carbon emission reduction, including, e.g., systemic planning, digital solutions for clean energy, digital and sensor technologies for measurement and monitoring, distributed energy production, energy efficiency, renewable energy, waste handling, and waste to energy.*
5. *Utilization of digital technologies in order to create smart and efficient solutions, systems and processes, including e.g.*
  - *digital backbone and platform (e.g., 5G, industrial IoT and edge cloud),*
  - *digital technologies and solution for processing and production optimization, such as AI, AR/VR, digital twins, and sensor technologies,*
  - *AI/data driven flexible automation software and system, and*
  - *digital technologies for measurement and monitoring.*
6. *Apply similar topics as above in different industries to drive carbon neutrality, sustainable development, and industrial renewal.*

### Health and Agetech

For example, including but not limited to cooperation areas such as:

1. *Digital health, including e.g.*
  - *AI assisted imaging, AI for drug discovery and development, AI in pathology, and AI in precision medicine, and*
  - *DTx (Digital therapeutics).*
2. *Data and analysis, including e.g.*
  - *AI for prediction, diagnosis, algorithm development to use data (coronavirus data, cancer data) to solve the problem.*
3. *Agetech, including e.g.*
  - *rehabilitation equipment, and*
  - *medicine adherence hardware and software solutions.*
4. *Epidemiology/pandemic related research, including e.g.*
  - *how to use people movement information into prediction for the virus spread and development, and in children's allergic diseases, what's the mechanism of molecular immune response to environmental exposures.*
5. *IVDs (In Vitro Diagnostics), including e.g.*
  - *molecular diagnosis,*
  - *immunologic diagnosis, and*
  - *POCT (Point of Care Testing).*

## 3. NUMBER OF PROJECTS TO BE FUNDED

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Max 15 projects

## 4. FUNDING AVAILABLE

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### Funding for Finnish partners:

Business Finland funding is intended for Finnish

- **companies** (individual) or
  - **co-innovation projects** including (a) two or more Finnish companies or (b) at least three Finnish companies (at least two applying Business Finland funding) and one or more research organizations.
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Business Finland **funding is not fixed** and depends on the number of qualified applications.

**Normal Business Finland funding principles are applied.** For more information, see

- <https://www.businessfinland.fi/en/for-finnish-customers/services/funding/>.

Applicants are strongly advised to **consult Business Finland in advance**.

**Funding for Chinese partners:**

MoST funding is intended for Chinese

- **companies,**
- **universities** and
- **institutes.**

MoST is to provide the **following funding** for Chinese consortium partners:

- Max 4M RMB per project for 3 years (altogether max 60M RMB)

Partners in a project are required to provide **at least the same amount of funding to that of MoST's grant**.

Applicants are advised to **consult MoST call announcement for further information**:

- [https://service.most.gov.cn/kjih\\_tztg\\_all/20221109/5137.html](https://service.most.gov.cn/kjih_tztg_all/20221109/5137.html).

## **5. ELIGIBILITY, SUBMISSIONS AND DEADLINES**

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**Eligibility:**

1. Project consortia must include at least **one Finnish company** and **one Chinese partner**.
2. The proposals should **demonstrate applicant's resources for international collaboration**, in case of the Finnish applicants especially for **entering the Chinese markets**.
3. This call encourages both **enterprise participation** and **academia-industry cooperation**.
4. Chinese/Finnish partners are asked to collaborate based on **complementarity, equality** and **mutual benefit**. Both sides should have balanced inputs and work packages in the projects.
5. China/Finland partners need to have a clear **IPR agreement** ready before applying (either as part of the Consortium Agreement or separately).
6. The proposal must include a **Bilateral Cooperation Form** with a joint Finland-China project plan, clearly describing the main contents and objectives of the project as well as the roles of each

partner.

7. In principle, the **implementation period of the project shall not exceed 3 years**. Personnel exchanges are encouraged within a project.

#### **Submissions and deadlines:**

Finnish partners need to submit their applications to Business Finland and Chinese ones to MoST. Applications submitted only to one side are not regarded. Applications **must include** a joint project plan using a **Bilateral Cooperation Form** where the work of each consortium partner is clearly described.

**Finnish side** implements a **two-phase application process**:

**Phase 1:** Idea Phase Project Plan submissions are due **20 December 2022**.

- Submissions (from **co-innovation projects** only by the **coordinator**) should include:
  - **Idea Phase Project Plan** (“BF-MOST Finland-China Idea Phase Project Plan Form 2022” template must be used)
  - **Bilateral Cooperation Form** (“BF-MOST Finland-China Bilateral Cooperation Form 2022” template must be used)
  - **Consortium Agreement** including IPR remarks (or a separate IPR agreement)
- Idea Phase applications must be sent to Business Finland’s registry office via secure email. The name of the applicant and the identifier “BF-MOST Innovation Call 2022, Idea Phase, BFRK/1/35/2022” must be entered in the email subject.
- Secure email is available at <https://secure.businessfinland.fi/suojaposti>.

**Phase 2:** Final Project Plan submissions (**individually** by all Finnish project partners) are initially due **February 2023** (applicants will be informed about the actual deadline) through the Business Finland’s digital submission system.

**Chinese partners** should submit their applications **together with the Bilateral Cooperation Form** and other required attachments via <https://service.most.gov.cn/>. More information about the call practicalities are available at [https://service.most.gov.cn/kjjh\\_tztg\\_all/20221109/5137.html](https://service.most.gov.cn/kjjh_tztg_all/20221109/5137.html). **Deadline for applications on the China side is 30 December 2022.**

The bilateral **funding decisions** are expected to be made **by summer 2023**.

## 6. CONTACTS

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