

## I. Survey on Cooperation Indicator

- Do you think technological cooperation is necessary among China, Japan, and Korea? ( )  
 A. Very necessary  
 B. Necessary  
 C. Neutral  
 D. Unnecessary
- Do you think technological cooperation among China, Japan, and Korea would be mutually beneficial? ( )  
 A. Very beneficial  
 B. Beneficial  
 C. Somewhat unbeneficial  
 D. Completely unbeneficial
- In terms of quantity, how would you evaluate the level of technological cooperation among China, Japan, and Korea? ( )  
 A. Very high  
 B. Somewhat high  
 C. Neutral  
 D. Low
- In terms of quality, how would you evaluate the level of technological cooperation among China, Japan, and Korea? ( )  
 A. Very high  
 B. Somewhat high  
 C. Neutral  
 D. Low
- What is your opinion on the future prospects for technological cooperation among China, Japan, and Korea? ( )  
 A. Very optimistic  
 B. Optimistic  
 C. Pessimistic  
 D. Very pessimistic

## II. Fact-finding Survey

### II-1. Intelligent Economy

Intelligent economy covers areas such as cloud computing services, big data economy, smart e-commerce, smart finance, smart tourism, intelligent logistics, intelligent education, etc. This session will explore the potential opportunity and challenge in terms of intelligent economy as well as the potential cooperation between China, Japan and Korea.

- What is the most important role of the intelligent economy? ( )  
 A. Increase per capita income  
 B. Strengthen economic competitiveness  
 C. Improve sustainable economic growth  
 D. Others: \_\_\_\_\_
- What is the biggest obstacle in achieving the intelligent economy? ( )  
 A. Conflict with privacy protection  
 B. Unavailability of big data in Governments  
 C. Effective safeguard of economic information security  
 D. Others: \_\_\_\_\_

- At which stage is the “intelligent economy” in your country? ( )  
 A. Conceptual stage  
 B. Demonstration stage  
 C. Early application stage  
 D. Advanced application stage  
 E. Optimization stage
- In the wisdom policy-making of the intelligent economy, please select two priorities for the cooperation between China, Japan and Korea.  
 ( ) ( )  
 A. Intelligent allocation technology for enterprise operation investment and resources  
 B. Intelligent forecast and allocation for information resources of commodity logistics and market demand  
 C. Welfare and public resource management  
 D. Cross-regional production resource allocation and coordination
- In the risk management and control of the intelligent economy, please select two priorities for the cooperation between China, Japan and Korea.  
 ( ) ( )  
 A. Risk management techniques for personal consumption, payment and other Internet activities  
 B. Face, voice, behavior and other biometric features in user identity verification risk management technology  
 C. Build enterprise risk management technology based on public information such as raw materials, industry market, policy, and so on.  
 D. Based on multi-dimensional macro data such as capital flow, commodity flow, information flow and data flow, combined with AI risk management technology
- In the construction of the credibility system of the intelligent economy, please select two priorities for the cooperation between China, Japan and Korea.  
 ( ) ( )  
 A. Building of personal credit evaluation technology based on non-financial data such as travel, consumption and social interaction and so on.  
 B. Building of enterprise credit evaluation technology based on Internet open data information.  
 C. Central bank credit management and third party credit risk control synergy system  
 D. Laws and regulations to improve credit constraints
- In the financial supervision and development of the intelligent economy, please select two priorities for the cooperation between China, Japan and Korea.  
 ( ) ( )  
 A. Improvement of laws and regulations on financial supervision  
 B. Personal data acquisition and protection  
 C. Technological innovation and development of small and medium-sized enterprises  
 D. Convenient financial services for the public
- Which two choices are the most needed cooperation between China, Japan and Korea? ( ) ( )  
 A. Wise decision  
 B. Risk management control  
 C. Construction of credit system  
 D. Financial supervision and social development

9. What is the best technology to support the development of intelligent economy? ( )
- Artificial intelligence
  - Cloud computing
  - Internet of things
  - Block chain
  - Big data
10. What is the key in promoting the development of intelligent economy? ( )
- Innovation
  - Education
  - International cooperation
  - Intellectual property protection
11. Among the following areas of intelligent economy, which is the most important cooperation between China, Japan and Korea? ( ) ( ) ( )
- Cloud computing services
  - Big data economy
  - AI service
  - Smart E-Commerce
  - Smart Finance
  - Smart Tourism
  - Intelligent logistics
  - Intelligent education
12. What is your greatest concern in the intelligent economy based on big data? ( )
- Big data services support technology
  - Business model of big data industry
  - Privacy in big data services
  - Legal protection of big data services
13. In the field of smart e-commerce, which two directions do you care about most? ( ) ( )
- User portrait in terms of big data
  - Business to Business Intelligent E-Commerce
  - Business to Customer Intelligent E-Commerce
  - Social E-commerce
  - Unmanned shop
14. In the field of smart finance, which two directions do you care about most? ( ) ( )
- Peer to Peer Finance
  - Intelligent investment
  - Quantitative investment
  - Financial risk control technology
  - Financial supervision technology

## II-2. Intelligent Healthcare

Intelligent healthcare covers areas such as big data healthcare, health management, imaging medicine, intelligent treatment, disease risk prediction, pharmaceutical R&D, and precision medicine. This session will explore the potential opportunity and challenge in terms of intelligent healthcare as well as the potential cooperation between China, Japan and Korea.

15. How well do you know the application of AI in medical field? ( )
- Don't know it at all
  - Not very well
  - Well
  - Well, and involved in related work
  - Very well, and deeply involved in related work
16. How do you learn about intelligent healthcare? ( )
- Social media
  - Television work
  - Popular science articles
  - Professional information
  - Professionals Forum
  - Salon
17. How do you think the impact of AI on medical field will be? ( )
- Very significant
  - Significant
  - Somewhat insignificant
  - Completely insignificant
18. At which stage is the "intelligent healthcare" in your country? ( )
- Conceptual stage
  - Demonstration stage
  - Early application stage
  - Advanced application stage
  - Optimization stage
19. What is your attitude towards the application of AI in medical field? ( )
- Support. It can improve the medical level, efficiency and save costs
  - Do not support. I am not trusting AI
  - Neutral. It remains to be seen
20. In the applications of the intelligent healthcare, please select two priorities for the cooperation between China, Japan and Korea. ( ) ( )
- Auxiliary diagnosis (such as imaging diagnosis)
  - Pharmaceutical R&D
  - "AI+ Health Management"
  - Face recognition and verification identity during diagnosis and treatment
  - Precision medicine
21. Which two choices are the most needed cooperation between China, Japan and Korea? ( ) ( )
- Health Management (before illness)
  - Disease risk prediction
  - Diagnosis
  - Treatment
  - Rehabilitation / Chronic Disease Management
22. What benefits do you think AI can bring in medical fields? ( )
- Providing more scientific and accurate diagnosis and treatment
  - Improving medical efficiency and the status of medical resource supply
  - Reducing medical bills
  - Narrowing the gap in medical levels between regions and hospitals, and addressing the imbalance in the distribution of medical resources

23. What defects do you think AI might have in medical field? ( )
- Personal privacy disclosure
  - Possible risks, such as power cuts or virus invasion
  - Leading to the job loss of healthcare worker
  - Purely not trusting AI and believing more in traditional medical mode
  - Others
24. What do you know about the application of intelligent healthcare given below? ( ) ( ) ( )
- AI assists doctors in diagnosis
  - AI assists doctors in treatment
  - AI assists individuals in self-health management
  - AI assists medical institutions in group-health management
  - AI assists scientists in discovering new drugs
  - AI assists government in regulation of the healthcare sector
25. What aspects do you think AI will apply to clinical medical service? ( )
- Medical image
  - Medical examination
  - Therapeutic schemes
  - Robotic surgery
  - Nursing services
  - Managed care
26. Do you think AI will replace doctors? ( )
- No. Medicine is a fusion of science and art, and also requires high EQ (Emotional Quotient) to communicate well with patients.
  - Yes. After a lot of data training, AI has high accuracy and will learn how to communicate
27. What kind of medical model do you support, AI or humanistic care? ( )
- Humanistic care. Because doctors will observe patient's expression and demeanor during the diagnosis and treatment, giving them psychological comfort. Humanistic can achieve the effect that machine can't match.
  - AI. Because AI can provide accurate diagnosis and reasonable treatment which is more important in medical care. And as technology advances, AI may also have humanistic qualities.
28. How do you think the application prospects of AI in medical field? ( )
- Very wide, and AI will change the current medical status in the near future.
  - Not bad, but there is still a long way to go to make a substantial impact on medical industry.
  - Very limited
  - Unable to judge right now
29. What is the biggest obstacle to achieving the intelligent healthcare? ( )
- Technical problem
  - Lack of a lot of high-quality labeling data
  - Lack of mature business models
  - Lack of professionals in intelligent healthcare
  - Regulation policies
  - Others

## II-3. Intelligent Manufacturing

Driven by the next new generation of AI technology, new manufacturing science and technology, new information science and technology, new intelligent science and technology, and manufacturing and application technologies are deeply integrated, which is innovating the models, tools and formats of intelligent manufacturing. This questionnaire mainly discusses the development opportunities and challenges faced by intelligent manufacturing, and the possible cooperation prospects among China, Japan and Korea in this field.

30. How well do you know about the application of AI in manufacturing? ( )
- Don't know it at all
  - Not very well
  - Well
  - Well, and involved in related work
  - Very well, and deeply involved in related work
31. What is the biggest effect of AI on manufacturing ( )
- Change of manufacturing methods
  - Change of manufacturing models
  - Creation of a new eco-environment in manufacturing
  - Others: \_\_\_\_\_
32. At which stage is the "intelligent manufacturing" in your country? ( )
- Conceptual stage
  - Demonstration stage
  - Early application stage
  - Advanced application stage
  - Optimization stage
33. How do you see the future of AI application in manufacturing? ( )
- Promising AI application which will change the current status of the manufacturing industry in the near future
  - Likely to be bright AI application which, however, will hardly have a substantial impact on the manufacturing industry
  - Limited AI application
  - Can't judge right now
34. What are the current obstacles in the development of intelligent manufacturing? ( )
- Technical issues
  - Lack of large quantities of high-quality standard data
  - Lack of mature business models
  - Lack of intelligent manufacturing talents
  - Others: \_\_\_\_\_
35. In the intelligent manufacturing industry, what is most needed to accelerate development? ( )
- Smart products and smart connected products
  - Intelligent manufacturing platform and enablement tools
  - R&D and implementation of intelligent manufacturing system
  - Operation of intelligent manufacturing platform
  - Others: \_\_\_\_\_

36. How are intelligent manufacturing platforms (industrial Internet platforms) applied in your country's manufacturing sector? ( )
- Very widely
  - Not wide enough. It requires vigorous promotion
  - Not wide enough. Application prospects are limited.
  - Unable to judge right now
37. In the intelligent manufacturing industry, please select two options on which China, Japan and Korea can cooperate in order of priority.  
Primary ( ), secondary ( )
- Smart products and smart connected products
  - Intelligent manufacturing platform and enablement tools
  - R&D and implementation of intelligent manufacturing system
  - Operation of intelligent manufacturing platform
  - Others: \_\_\_\_\_
38. In the following fields of intelligent manufacturing technology, which three fields do you think China, Japan, and-Korea should strengthen cooperation on in turn? ( )( )( )
- Overall architecture technology of intelligent manufacturing
  - Intelligent manufacturing platform technology
  - Smart R&D technology
  - Smart production technology
  - Smart service technology
  - Smart management and control technology
  - Others: \_\_\_\_\_
39. Which field of technology will best support the development of intelligent manufacturing? ( )
- AI
  - Cloud computing
  - Internet of Things
  - Block chain
  - Big data
  - Others: \_\_\_\_\_
40. How do you think of the challenges for intelligent manufacturing in industrial control networks and information security? ( )
- Very big
  - Big
  - Neutral
  - Small
41. What is the key factor that promotes the development of intelligent manufacturing? ( )
- Laws, regulations and standards
  - Institutions and systems
  - Policy environment
  - Talent training
  - Platform and base
  - Others: \_\_\_\_\_
42. How will intelligent manufacturing affect the future world economy? ( )
- Very important
  - Important
  - General
  - No influence

### III. Personal Information

1. Have you participated in some form of technological cooperation with Korea, China, or Japan during the last five years? If yes, how many times?
- China: ( ) case(s)
  - Korea: ( ) case(s)
  - China-Japan-Korea: ( ) case(s)
2. Your profession ( )
- Professor
  - Researcher
  - Business employer or employee
  - Government official or public sector employee
  - Other : \_\_\_\_\_
3. Your area of specialty ( )
- Civil and environmental engineering
  - Mechanical engineering
  - Technology management
  - Material and energy resource engineering
  - Electric/electronic engineering & ICT
  - Chemical and biomedical engineering
  - Other: \_\_\_\_\_
4. How long have you been engaged in your research field? ( )
- Less than 5 years
  - 5-10 years
  - 10-20 years
  - More than 20 years
5. Your age ( )
- 35-49
  - 50-59
  - 60-69
  - 70-79
  - 80 and older

\*\*If you have any suggestions or feedback on this survey, please comment below.

Thank you very much for your input. Your information will not be used for any purpose apart from this survey.