

# Suggestions on Building Shanghai as an International Center for Scientific Innovation

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There's still a relatively big gap between Shanghai and an international leading innovation city though it owns the potential, core resources and innovative environment to be an influential center for scientific innovation. The undeveloped chains of industry, capital, talents, policies, ecology and profits for making Shanghai a center for scientific innovation have become the source of some negative paradoxes like 'With enough resources for innovation development, Shanghai still lacks the innovation motive' or 'Innovation vigor is insufficient although innovative talents are quite available in Shanghai'. All kinds of official systems serve as an obstruction for the innovative development of Shanghai. Therefore, to be the core of global scientific innovation center, Shanghai has to overcome this bottleneck problem in its course of innovation building from two aspects: on the one hand, local government should put its focus on interior problems such as conflicts related to innovation development between the government and the market; on the other hand, it's supposed to offer a good ecological environment on administrative level for innovative talents to strengthen their innovation energy.

1. The local government is suggested to improve top-level design, enhance collaborative innovation as well as try to initiate projects on national level in order to gain more financial support. The key move is to explore the way of establishing a system of cross-department management and integrating the innovation chain. The executive group in Shanghai Scientific Innovation Center is suggested to be in charge of the coordination of innovation-oriented policies made by all ministries and commissions. Also, the group is responsible for the real-time tracking and assessment of the building work as well as the summary of related experiences. In the meantime, some tasks as the key part of building the innovation center such as 'National Science Center' and 'Functional Supporting City' should be included in the Chinese thirteenth 'five-year-plan' so as to achieve more funding from the central government and receive more local support.

2. The government needs to focus on the policies inspiring employee from the industry of Science and Technology. It is suggested that local government make the sci-tech innovation an energetic campaign by advancing the reform of systems of scientific research funds and personnel

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management. A gradual and incremental reform should be adopted. And I advise the government to introduce normative ideas of contract management and to shift the focus of scientific research from the reimbursement of financial funds to the evaluation on the achievements of scientific researches. Meanwhile, researches on natural sciences and social sciences should be managed separately. Under the instruction of National High-end Think-tank and the decisions on promoting the transformation of scientific and technological achievements made by the Standing Committee of the National People's Congress on August 2015, the percentage of personnel costs of innovative group in subject funds and in the shares of sci-tech achievements should be much increased. More trail projects where sci-tech rewards are used to improve working performance are also suggested. The government needs to explore a new approach to flexible management with the awareness of possible uncertainties of sci-tech innovation; to motivate the transformation of sci-tech achievements and to add social assessment into the standard of professional title appraisal.

3. The government is advised to pay more attention to the development of small and mid-sized sci-tech enterprises. It needs to get policies pertaining to enterprise withdrawal prepared while improving financial support and the administration of registration and shareholding transfer for enterprises. In my opinion, the establishment of sci-tech banks should be accelerated. The government need to recognize financing demands for the asset-light strategy including mortgage-free, security-free, small allowance and short cycle of repayment, especially in fields like R&D (Research and Development) , design, information service and creative culture. The government needs to seek supporting policies from The People's Bank of China, The Banking Regulatory Commission of China, The Securities Regulatory Commission of China and The Insurance Regulatory Commission of China, to explore an approach to the building of sci-tech market and board transfer mechanism so as to promote Shanghai to achieve its interactive development of both a global sci-tech center and an international financial center. Moreover, new models of financial supporting are necessary. Institutions like venture capital companies, private funds, and Angel Funds should be expanded in order to provide useful financial supporting for the achievement of 'Massive Innovation, Popular Entrepreneurship'.

4. The government is suggested to put its focus on the mechanism of sci-tech achievements transfer, play its role as an intermediary in technology trade and explore a mechanism for technological investment & financing. It needs to actively guide and encourage some platforms of state-owned capital to invest on or hold share of centers for technology trade

where functions including incubation, shows, appraisal, trade, transfer and patent matching related to technology are available. 'Big Data' is recommended to be applied to realize a more efficient transfer of sci-tech achievements. Local government needs to learn from America about its 'Boston experiences' so as to set up its technology bank, put efforts to the combination of different technological assets and add their appreciation. A management system of technological assets is also suggested.

5. The government needs to strengthen the authority of policies on the protection of intellectual property, establish or improve systems of sci-tech achievements transfer. It is advised to build the credit system of intellectual property and develop some intermediate institutions where services like consultation, agency, appraisal, training and law affair related to intellectual property are offered. The government needs to actively push forward the trails of trust transactions and securitization transaction concerning intellectual property based on experiences of intangible assets management as well as intellectual property operation form UK and Taiwan. Meanwhile, it should reform its current way of purchasing management, making new plans and management methods which supports the appliance of independent local innovations.

6. The government is supposed to simplify the approval procedures and shorten the required time for innovation-oriented products. It's better to apply the principle that the government should simplify politics and transfer power to a lower level to the mechanism for encouraging sci-tech innovations. Local government needs to employ 'negative list' to motivate the market while using 'positive list' to control the intervention from the government. It also needs to make different policies for enterprises in various industries and in different development stages while considering demands from the market. Then further simplification of approval procedures and a shorter approval term are required to promote the industrialization of innovative products.

*Translator/ Li Ziyang*