

Translation



In the following regulation, Shanghai Municipality details how it oversees state-funded “disruptive technology” projects. Qualified projects can be in any of several cutting-edge fields, notably biotechnology, and can cover different phases of the technology life cycle, from basic research to commercialization. The regulation provides detailed instructions on how to deal with projects that are behind schedule, failing, or fraudulent from the get-go, suggesting that these are common problems for Chinese government-financed technology projects.

Title

Interim Measures of Shanghai Municipality for the Administration of Disruptive Technology Innovation Projects

上海市颠覆性技术创新项目管理暂行办法

Author

Shanghai Municipal Science and Technology Commission (上海市科学技术委员会)

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Translator

Etcetera Language Group, Inc.

Editor

Ben Murphy, CSET Translation Manager

Interim Measures of Shanghai Municipality for the Administration of Disruptive Technology Innovation Projects

Chapter 1 General Provisions

Article 1 – The Shanghai Municipal Disruptive Technology Innovation Special Project (hereinafter referred to as the “Special Project”) is established in order to further promote the development of disruptive technology innovation and accelerate the construction of Shanghai into an international science and technology (S&T) innovation center, as well as to innovate the organization modes and operation

mechanisms of S&T research, and thereby accelerate the incubation of disruptive technologies. These *Measures* are formulated in accordance with the *Measures for the Administration of Shanghai Municipal Science and Technology Program Projects*, the *Administrative Measures for Special Project Expenditures of Scientific Research Projects Financed by Shanghai Municipality*, and the laws of disruptive technology development.

Article 2 – Disruptive technologies are brand-new technology tracks based on new principles, new combinations, and new applications of S&T. They are strategic innovative technologies that promote the reorganization of the value networks of traditional industries, and decisively influence the upgrading and advancement of social technology systems, thereby reconfiguring the country’s existing foundation, capabilities, and structure.

This Special Project is funded and implemented by the Shanghai Municipal Science and Technology Commission (SMSTC) with municipal government funding. It is committed to serving national strategies and the development of Shanghai, supporting national disruptive technology innovation, identifying, selecting, laying out, and implementing disruptive technology innovation projects in Shanghai and the Yangtze River Delta region, incubating and building reserves of projects with disruptive technology potential for the country, and promoting the successful conversion and relocation (落地) of disruptive technology innovation achievements in Shanghai and the Yangtze River Delta region, thereby developing new productive forces (新质生产力).

Chapter 2 Organization and Management

Article 3 – The SMSTC is the main oversight department (主管部门) for the Special Project, and its main responsibilities are to:

- (1) Research and formulate the Special Project’s management policies and systems;
- (2) Determine the institution that is to undertake the specific management work of the Special Project, and supervise and inspect its performance of duties and responsibilities;
- (3) Be in charge of decision-making on major matters such as the establishment and cancellation of projects under the Special Project, as well as the disbursement of funds;
- (4) Carry out supervision, inspection, and performance evaluation of the Special Project’s implementation.

Article 4 – The Shanghai Disruptive Technology Innovation Center (“the Center”) is entrusted by SMSTC to carry out the organization and implementation management of the Special Project. Its main duties are to:

- (1) Organize and manage a team of project coordinators to provide full-process management services for project team organization, program planning, project validation, implementation processes, project acceptance, conversion and relocation of achievements, etc., and carry out specific work;
- (2) Carry out specific process management and service work for project task implementation and fund utilization, participate in coordinating the advancement of important matters in the course of project implementation, objectively and promptly inform SMSTC of major problems found in specific management work, and archive and save project-related information;
- (3) Carry out follow-up management work after project acceptance;
- (4) Carry out project performance tracking management and promote the transfer and conversion of project achievements;
- (5) Assist in conducting research and development (R&D) strategy studies in relevant S&T fields;
- (6) Organize and carry out seminar, training, and science popularization work related to project management, technology R&D, and the conversion of S&T achievements into practical applications (成果转化);
- (7) Establish confidentiality mechanisms and do project-related confidentiality work properly;
- (8) Proactively accept the supervision and inspection of the SMSTC and relevant departments.

Article 5 – The responsibilities of the work unit (单位) that undertakes a project (“project undertaking unit”) are to:

- (1) Establish and improve systems for the internal management of scientific research, finances, and integrity;
- (2) Organize the submission of the project proposal and project application, organize implementation of the project in accordance with the project contract, implement the supporting conditions for the implementation of the project, fulfill the terms and conditions of the contract, and complete the main objectives and tasks;

- (3) Report as needed, in a timely fashion, on the progress of the project and major matters arising from its implementation, submit acceptance materials, etc.;
- (4) In accordance with procedures, submit for approval any matters that require adjustment;
- (5) Cooperate with the Center in properly doing supervision, evaluation, acceptance, and other work.

Chapter 3 Project Application

Article 6 – Projects are the basic units for the organization and implementation of the Special Project. While the Special Project is centered on the requirements of economic and social development, the focus of its layout will be dynamically adjusted, giving emphasis to collaboration across fields, tolerance for non-consensus projects (非共识项目) and open layout projects (开放式布局项目) or technology project groups, and will mainly include the following three aspects:

- (1) Breakthroughs in key technologies. Open discovery (开放式发现), normalized selection (常态化选拔), and gradient-based incubation (梯度式培育) of various disruptive technologies, centered on fields such as integrated circuits, intelligent technology, life and health, energy and low-carbon, high-end equipment, advanced manufacturing, and marine S&T, so as to make new technology breakthroughs in specific areas, seize critical opportunities, and create new opportunities for breakthroughs on “chokepoint” (“卡脖子”) dilemmas;
- (2) Incubation of cutting-edge technologies. Open discovery and systematic laying out of whole-production-chain technologies, centered on fields such as micro-nano photonics and sensing, gene and cell regulation, biosynthetic materials, high-end medical devices, advanced robotics, the metaverse, blockchain, and autonomous driving, so as to pioneer innovative technology routes and establish race tracks, and achieve leadership;
- (3) Exploration of future technologies. Open discovery and systematic laying out of diversified technologies, centered on fields such as cross-scale life analysis (跨尺度生命解析), brain science, human-like and bionic systems, organ medicine, biomanufacturing, quantum computing and communication, and future energy technologies, so as to create brand-new technology communities, and grasp the initiative in innovation.

Article 7 – Projects under the Special Project will be laid out on a gradient according to whether they expand the “planting of seeds” (育种), strengthen the “nurturing of seedlings” (育苗), or accelerate the “growing of timber” (育才), with survival of the fittest and gradual convergence. They mainly include three gradient levels:

(1) Early “planting of seeds” technology. That is, early-stage projects in which the basic research has basically been completed, but the technology cannot yet be stably reproduced in the laboratory; the main tasks are to achieve stable reproduction in the laboratory and determine the key thresholds that will determine the success or failure of the technology, in order to create the conditions for scaling-up pilots. Each project will be funded with RMB 1 million or RMB 2 million;

(2) Mid-term “nurturing seedlings” technology. That is, medium-term projects in which the basic research has been completed, and the technology can be stably reproduced in the laboratory, but it has not yet crossed the key thresholds that determine the success or failure of the technology; the main tasks are to carry out pilot scale-up, make breakthroughs in the key nodes that determine the success or failure of the technology, and further improve performance, optimize conditions for its realization, or reduce costs, so as to lay the foundation for pilot production and extension. Each project will be funded with RMB 5 million or RMB 10 million;

(3) Near-term “growing of timber” technology. That is, near-term projects in which the technology has initially completed pilot scale-up, the key nodes that determine the success or failure of the technology have basically been overcome, usually with social capital¹ participation already. The main tasks are to further optimize performance or production conditions, or improve conditions that smooth its application, taking into consideration the main requirements of the target market, and basically meet the requirements of large-scale production and wide-scale application, in order to prepare well for marketization. Each project will be funded with RMB 5 million yuan or RMB 10 million.

Article 8 – The Special Project shall focus on multi-channel, normalized discovery of projects, and organize projects by means of active planning, focused discovery, and

¹ Translator's note: The Chinese term 社会资本, translated literally as "social capital," refers to any source of funding outside of government budget outlays. This term encompasses investment by private individuals and private institutions. However, investment from state-funded entities such as state-owned enterprises (SOEs), including state-run banks, also falls under the umbrella of "social capital."

extensive solicitation. Through one-on-one communication, organizing exchanges, and other means, outstanding talents and potential disruptive technologies will be discovered, well-positioned (优势) teams will be formed, and projects will be planned and organized, centered on important strategic fields and major application scenarios, and taking into consideration the project coordinators' areas of interest and professional expertise. Top scientists and key R&D work units will be relied upon to recommend potential high-value projects, or put forward key technology requirements and calls for R&D projects. Projects will be widely solicited from the whole society through open calls and competition-based selection. This Special Project does not implement restricted project management with other S&T program projects.

Article 9 – The applying work unit shall generally be a legal person, or an organization without legal person status, registered in Shanghai. The project leader shall be the one who proposed the project's main research idea and the actual research leader, and possess the ability and energy to meet the requirements of project tasks.

Chapter 4 Project Selection

Article 10 – The Center shall put in place project coordinators to follow up the whole process of project selection and implementation, and jointly promote projects together with project leaders. Project coordinators shall be deeply involved in project implementation, have a comprehensive understanding of the research progress and organizational management circumstances of their project, promptly follow up and coordinate to solve difficulties and problems during implementation, make timely suggestions on project organization and implementation, and recruit and link up with relevant resources. The Center shall take a project's organization and implementation, achievement output, and conversion and relocation of achievements as the main assessment indicators for project coordinators.

Article 11 – Projects shall be selected based on initial screening by project coordinators, expert verification, and evaluation by the Center. The Center shall organize the project coordinators to carry out the initial screening of the collected projects and checking for duplication. The project coordinators shall provide guidance to the work units applying for projects on forming project proposals. The Center organizes experts to carry out in-depth demonstration of project proposals, and for high-value projects the method of “proof of feasibility and improvement at the same time” (“边论证、边完善”) shall be followed. The project coordinator and project leader will continue to optimize the formation of the project proposal and fill out the project application. After the project coordinator has organized a professionalized team for project consultation and improvement, the project will be submitted to the Center, and

the Center will organize project evaluation. After a project passes the evaluation, the Center will include the applied-for project as a candidate project in the candidate project pool.

The Center may select candidate projects for inclusion in the candidate project pool through disruptive technology innovation competitions and other means, using competition instead of evaluation.

Article 12 – In accordance with the principle of “being strategy-oriented and scenario-driven, and making innovation breakthroughs,” the Center will comprehensively evaluate the candidate projects from the dimensions of comprehensive investigation, demonstration and consultation opinions, and industry empowerment role, routinely form projects it intends to have established, and submit them to SMSTC for decision-making and project establishment. The project coordinator organizes the project undertaking unit to fill out and submit a mission statement, formulate the project implementation plan, and set “milestone” assessment points; SMSTC, the Center, and the project undertaking unit will sign a tripartite contract, project establishment will be completed, and the project funds will be dispersed.

For high-quality projects identified in the selection or incubation process, the Center will recommend further support under the “Disruptive Technology Innovation” Key Special Project of the National Key Research and Development Program (国家重点研发计划).

Chapter 5 Implementation Management

Article 13 – Projects shall implement “milestone”-style management, with inspection at milestone points in the project, and dynamic optimization. Based on the project milestone points, the project coordinator shall form stage-by-stage inspection and evaluation conclusions, as well as a follow-on funding disbursement plan, and report them to the Center. During project implementation, the support team will continue to optimize the implementation plan in terms of higher goals, faster speed, earlier conversion of achievements, and better application thereof.

For projects that progress too slowly and are obviously unable to accomplish the expected goals, the project coordinator will suspend project implementation and report the matter to the Center, which will reassess the feasibility of the project. Based on the reassessment results, project implementation will be continued, the assessment objectives will be adjusted, or the project will be terminated.

Article 14 – In the course of project implementation, matters that need to be adjusted or changed shall be changed by the project coordinator and the project

undertaking unit after joint study, or an application for change shall be submitted to the Center. The Center shall regularly report to the SMSTC on project adjustments and changes. These include but are not limited to the following four situations:

- (1) General adjustments involving only cooperating work units and participating personnel, etc. shall be reported to the Center by the project coordinator;
- (2) Adjustments involving major matters that may affect project implementation, such as a change of the project undertaking unit, change of project leader, technical route disruption, etc., shall be reported to the Center by the project coordinator, and the changes shall be made after the Center's examination and approval;
- (3) If a project cannot be completed on schedule for any reason and needs to be extended, an application for extension shall be submitted by the project coordinator to the Center no later than 3 months before the end of the project implementation period, and the extension shall be carried out after the Center's examination and approval;
- (4) If a project undertaking unit has any objection to the project coordinator's performance of duties, it can raise the matter with the Center directly; the Center will supervise or replace the project coordinator according to the results of its investigation.

Article 15 – Where one of the following circumstances pertains to a project, the project coordinator shall submit a project termination application to the Center, the project will be terminated after review by the Center, and the matter shall be reported promptly to SMSTC:

- (1) The technical route of the project is proved to be infeasible, or the project fails to achieve the progress agreed upon in the contract and there is no way to make improvements;
- (2) A milestone assessment check (节点检查) is not passed and there are no follow-up remedial measures, or the disruption value is clearly reduced at the time of the mid-term evaluation;
- (3) The funds, raw materials, personnel, or support conditions required to fulfill the project tasks either fail to materialize or change, resulting in the project not being able to proceed normally;

- (4) During project implementation, serious violations of rules and regulations by the project undertaking unit come to light, and it fails to rectify them in accordance with regulations or refuses to rectify them;
- (5) The project undertaking unit fails to make the progress on project implementation agreed upon in the project contract, and its implementation remains behind schedule in the specified period after being reminded;
- (6) The project undertaking unit does not accept project supervision and inspection by the Center or SMSTC, or does not cooperate with the project coordinator's follow-up management, and still fails to do so after being reminded;
- (7) Other circumstances as agreed upon in the project contract.

Article 16 – If any of the following circumstances pertain to a project, the Center shall report the matter to SMSTC for examination and cancellation of project establishment:

- (1) The project undertaking unit forged or fabricated the application materials during the project application stage to fraudulently obtain the project;
- (2) The project undertaking unit forged or fabricated materials during the project implementation stage to interfere with inspection or acceptance;
- (3) Other circumstances stipulated by the state or the municipality.

Article 17 – Project funds shall be separately accounted for, and shall be managed in accordance with the relevant regulations of Shanghai Municipality on special funds for scientific research projects.

If a project is terminated, the project undertaking unit shall make a written report on the work carried out in the project, the use of funds, the equipment and instruments purchased, stage-by-stage achievements, intellectual property rights, etc., and after verification by the Center, it shall complete the follow-up work such as returning of project funds.

If a project is canceled, the project undertaking unit shall return all the project funds that have been disbursed.

Project funds shall cease to be disbursed for canceled or terminated projects. If a project is canceled or terminated due to the subjective fault of the project undertaking unit or project leader, the Center shall report to the SMSTC and record the matter on

the Shanghai Municipal Science and Technology Credit Information Platform (上海市科技信用信息平台).

Chapter 6 Acceptance and Achievement Management

Article 18 – Upon the expiration of the project implementation period, the project undertaking unit shall submit acceptance materials in a timely fashion. If the acceptance materials have not been submitted to the Center six months after the project execution period, the project shall be treated as having failed to pass acceptance.

The Center shall carry out acceptance work, based on the agreed project objectives and tasks, by means of peer appraisal, third-party assessment and testing, and user evaluation, and shall report the acceptance results to SMSTC. The acceptance procedures can be simplified in cases where significant and substantive progress has been made in achievement conversion and application.

Article 19 – Based on the specific achievements made by the project, the Center, relying on the project coordinator, shall provide the project team with guidance on the conversion of S&T achievements into practical applications and resource linking services, including but not limited to in-depth incubation in high-quality incubators, and early involvement with future industry funds, and shall report to SMSTC on a regular basis on the conversion and relocation of project achievements.

For projects that have passed acceptance with a good completion rate and have high-value achievements, rolling support can be provided for subsequent research; rolling support can be initiated earlier if greater progress is made earlier.

Projects should agree to give priority to Shanghai or the Yangtze River Delta region for the conversion and relocation of achievements, and a certain percentage of funding support will be given by the district where the project undertaking unit or entity undertaking achievement conversion and relocation is located, based on the actual investment.

For established projects included in the “Disruptive Technology Innovation” Key Special Project of the National Key Research and Development Program, if they are still in the execution period and in the previous period had not been established in the city or newly moved into the city after the establishment of the project, the district where the project undertaking unit is located shall give a certain percentage of financial support based on the project execution progress and the amount of project establishment funding; if acceptance has been completed and the achievements are being converted and landed in the city, the district where the entity undertaking

conversion and landing is located shall give a certain percentage of funding support based on the actual investment.

Chapter 7 Supervision and Administration

Article 20 – The SMSTC shall supervise the implementation and management of the Special Project. The Center shall supervise the organization and implementation of projects, and shall engage third-party institutions to audit or evaluate projects as needed. The main contents of supervision include but are not limited to the following four aspects:

- (1) The scientific and standardized management work of the Center and its staff, and their performance of duties and responsibilities in the process of project management;
- (2) The implementation of the main responsibility system (主体责任制) of the project undertaking unit, the project execution circumstances, and the management and utilization of funding;
- (3) The scientific integrity and devotion to duty of researchers in project application and implementation, and in the management and utilization of funding;
- (4) The performance of duties and responsibilities by third-party institutions and their staff in the process of providing auditing and consulting services.

Article 21 – Violations found in the course of supervision shall be handled in the following manner:

- (1) Where there are violations on the part of the Center and its staff, scheduled conversations² shall be conducted and rectifications made within a prescribed period;
- (2) Where there are violations on the part of the project undertaking unit and scientific research personnel, they shall be dealt with by scheduled conversations, rectification within a prescribed period, suspension of project funding, recovery of disbursed project funds, termination of the project, and phased (阶段性) or permanent disqualification from applying for and participating in projects;

² Translator's note: A "scheduled conversation" (约谈) is a disciplinary measure that a Chinese government or Party organization takes when a subordinate organization or individual is suspected of misconduct. The higher-level organization meets with the subject of investigation face-to-face and stresses to them the importance of following regulations.

- (3) Where there are violations on the part of third-party institutions and personnel, the relevant issues and evidence can be transferred to the main oversight departments or industry associations with the authority to impose penalties or handle such matters.

Where acts of scientific research dishonesty are involved, they shall be entered on the Shanghai Municipal Science and Technology Credit Information Platform in accordance with the *Measures of Shanghai Municipality for the Investigation and Handling of Scientific Research Dishonesty*. Violations of relevant laws and regulations shall be handled in accordance with the relevant provisions.

Article 22 – An exemption mechanism is established that is aimed at encouraging innovation, tolerating failure, and managing risks to the greatest possible extent. If researchers have fulfilled their obligations of due diligence and have not violated any laws or regulations, but have been unable to achieve the expected goals due to the strongly exploratory nature of the technology, the relevant main responsible party may be exempted from responsibility.

Chapter 8 Supplementary Provisions

Article 23 – Projects involving classified material or national security and major national interests shall be implemented in accordance with relevant national secrecy protection regulations.

Article 24 – These Measures shall come into force on July 1, 2024, and shall be valid until June 30, 2026.