# 民航局文件

民航发 [2022] 17 号

# 关于印发《"十四五"民用航空 安全生产专项规划》的通知

民航各地区管理局,各运输(通用)航空公司、机场公司、服务保障公司、航空设计制造单位,局属各单位:

现将《"十四五"民用航空安全生产专项规划》印发你们,请 结合实际认真贯彻执行。



-1 -

#### China Civil Aviation Safety Plan in the Fourteenth Five-Year Plan Period (2021-2025)

(Excerpts)

#### **SECTION 1 Introduction**

#### 1.1. Overview

The 14<sup>th</sup> Five-Year Plan (2021-2025) launches the first five years of the new journey toward building a modern country in all respects. This Civil Aviation Safety Plan is compiled based on "Outline of the 14<sup>th</sup> Five-Year Plan (2021-2025) for National Economic and Social Development and Vision 2035", "Outline Development Plan for National Comprehensive Three-Dimensional Transport Network", and "Development Plan for Civil Aviation in the 14<sup>th</sup> Five-Year Plan Period", and describes the overall strategies and key tasks for civil aviation safety for some time to come.

As one of the key documents related to the "China Civil Aviation Safety Programme", this plan can effectively promote the full implementation of State Safety Programme (SSP), continuously improve SSP and enhance safety management.

This plan adheres to the general principle for the formulation of China Civil Aviation Plan, and takes "2020-2022 Global Aviation Safety Plan" and "APAC Regional Aviation Safety Plan 2020-2022 Edition" of ICAO as references.

The Civil Aviation Administration of China is responsible for the formulation, implementation and supervision of this plan.

#### 1.2. Structure

In view of the civil aviation safety actualities, current issues, and primary safety risks in the next five years, this plan proposes the strategic approaches to aviation safety during the 14<sup>th</sup> Five-Year Plan period, and clearly outlines the main tasks and supporting measures for China civil aviation. This excerpted version of the plan comprises seven sections.

#### **SECTION 2 Actuality**

During the 13<sup>th</sup> Five-Year Plan period (2016-2020), China's civil aviation took active steps to respond to complicated and challenging circumstances both in and outside of industry and made intensive efforts to ensure both safety and development. We steadily improved our safety governance capabilities and comprehensive support capabilities, and the efforts to deepen the reforms in the area of safety yielded notable results, safeguarding the development of civil aviation industry.

#### **SECTION 3 Risks**

During 14<sup>th</sup> Five-Year Plan period, China's civil aviation safety will face a new environment for development, and shoulder new historical missions.

The complicated external environment facing civil aviation will bring more uncertainties to civil aviation safety. Protectionism and unilateralism are on the rise, industrial chains and supply chains may be blocked, and uncertainties and unstable factors are increasing. Some key safety technologies and basic safety verification capabilities of civil aviation are facing the risk of being strangled or shortage of supply. Significant impacts will be generated by the adjustment of national laws, regulations and policies on safety oversight, so the oversight mode and means need to be further improved. Affected by domestic and foreign political and economic circumstances and the pandemic of COVID-19, in the long-term, the civil aviation transport market will be confronted by increasing uncertainties for structural changes. Airlines and their suppliers are under huge financial pressure brought by COVID-19, which impairs their motivation for making safety investment. In an operation environment with routine COVID-19 control, the staff's safety awareness may be weakened and their skills may decline. Many facilities and equipment are out of service for the purposes of maintenance. Risks may be derived from resumption of operation due to inadequate considerations. All these issues should not be overlooked.

The mismatch between safe operation demands and supporting capabilities still exists. A

large proportion of newcomers have taken up key positions in flight, such as maintenance, air traffic control, operation control and cabin service. There is still room for improvement in the competence of some senior professional and technical personnel. The qualification management and training system upgrading is still necessary, so as to fundamentally address risks arising from the lack of professional team proficiency and insufficient training. With the steady progress in resuming work and production in civil aviation, problems along with insufficient infrastructure and aging equipment in small and medium airports will accumulate and thus impede the operation support chains resilience. Comprehensive support capabilities need to be strengthened.

The coexisting traditional risks and new risks will bring greater challenges to civil aviation safety. Controlled flight into terrain, loss of control in flight, runway safety and other key risks are still the focus of the international civil aviation, and the impact of complex weather conditions on flight safety should not be underestimated. The safety issues in the operation entities with small fleet and decentralized operations or having experienced equity alteration, change of operation base or lack of investment are on the rise. New types of safety risks in general aviation operations and flight training are emerging. The risks brought by new pattern or operating environment will continue to increase. In the era of self-media, information management and public opinion response are bringing about new pressure on the work of safety. More risks are derived due to the introduction and operation of new aircraft models and engines. The development of air freight has been accelerated but a large number of hidden hazards in dangerous goods air transportation remain. Uncertainties in aviation safety mount along with the expansion of UAV market.

In summary, the imbalance between a)people's demands for i) safe, ii) punctual and iii) convenient travel, and b) i) insufficient and ii) uneven safety assurance capabilities will remain the primary issue in the safe development of civil aviation during the 14<sup>th</sup> Five-Year Plan period. Safety work is in a period full of interwoven risks and also strategic opportunities for management development.

#### **SECTION 4 Purposes**

China's civil aviation will fully carry forward with the civil aviation holistic working philosophy in the 14<sup>th</sup> Five-Year Plan period, keep a system-thinking and bottom-line thinking, and strive to meet people's growing demands for safe air travel. With promoting the modernization of civil aviation safety governance system and governance capacities as the main task, we should harness reform and innovation as the key source of momentum, promote the extensive application of smart civil aviation in safety development, and foster a world-class civil aviation safety system. We must ensure the stable and controllable safe operations of civil aviation and lay a solid foundation for its high-quality development.

#### 4.1 Remain committed to the rule of law and deepen the reform

We must improve the regulations and standard system in a scientific way, ensure a comprehensive, standardized, coherent and steady civil aviation safety governance system, to give better play to the rule of law in facilitating safety, development and reform. We must unswervingly deepen the reform, get rid of institutional barriers and structural obstacles that impede the development of civil aviation safety, and build a new pattern to inspire the impetus and vitality of safety oversight.

#### 4.2 Being committed to the system-thinking and result-orientation measures

We must keep a holistic perspective, ensure both development and safety, and acquire a deep understanding of the essential characteristics of safety work. We must adhere to the goal-oriented and problem-oriented approaches, leverage comprehensive means to establish an accurate and efficient long-term safety oversight mechanism.

#### 4.3 Take prevention as the priority, and address both symptoms and root causes

We must acquire a clear understanding of new risks and challenges brought by changes in the external environment and industry development, enhance the forward-looking trend prediction and risk early-warning. We must continue to promote the application of SMS, improve the dual prevention mechanisms for safety risk classification management and hidden danger investigation

and management, to identify and address the risks at the source and ensure that hidden risks are effectively managed.

#### 4.4 Insist on strengthening the working conduct to build a solid foundation

We must further promote the working conduct with "reverence for life, reverence for responsibility, and reverence for regulations" as the core, and foster a distinctive civil aviation safety culture. We must continue to shore up weak links, strengthen basic organizations, fortify the foundations and optimize the allocation of safety resources, so as to build a safe and efficient production and operation support system.

#### 4.5 Maintain committed to technological support and innovation-driven development

We must strengthen the construction of smart civil aviation, leverage science and technology for safety development, accelerate the research and development of safety technologies and the application of such achievements, and give full play to the supporting role of science and technology. We must strengthen the leading role of safety technology innovation strategies, facilitate the construction of civil aviation safety think tanks, expand the safety innovation talent teams, and enhance the internal drive for safety innovation to support the high-quality development of the sector.

#### **SECTION 5 Safety Goals**

In the period covered by the 14<sup>th</sup> Five-Year Plan, the development of civil aviation will go through recovery period, accumulation period, growth period and release period, and new management level will be reached for ensuring safe development in each period. The safety theories will be more scientific and refined, the risk and hidden danger management will be more targeted and reliable, and scientific and technological innovation will provide strong support for safety. Our emergency response capabilities will be significantly enhanced, the safety culture within the sector will be further improved, and a world-class civil aviation safety system will be built. We will consolidate the foundation for comprehensive safety assurance, and achieve a set of safety index ranking top in the world.

#### **SECTION 6 Main Tasks**

#### 6.1 Refine the safety responsibility system and enhance the fulfillment of responsibilities

#### 6.1.1Facilitate the fulfillment of the primary responsibilities for safety.

We will urge the enterprises to adopt all-staff responsibility system for safety in accordance with the law. The principal responsibilities of legal representatives and actual controllers for safety will be further clarified. We will stick to the system for calling into account the leaders and supervisors for accidents. Further steps will be achieved in integrating SMS with statutory self-inspection and dual prevention mechanisms for safety risk classification management and hidden danger investigation and management. Enterprises will be encouraged to conduct SMS assessments through third-party agencies, and more efforts will be made to enable SMS to be effectively applied in airlines, airports, air traffic control and other agencies. We will expand the trials of SMS establishment in aircraft design and manufacturing entities, to have the safety responsibilities effectively fulfilled in the entire life cycle of domestic civil aviation products. Stronger steps will be taken for establishing credit recording system for safety, to enhance the mechanism for punishment of dishonest behavior and incentive for honesty.

#### 6.1.2 Strengthen the fulfillment of oversight responsibilities for safety.

We will amplify the long-term mechanism for dynamic-zero hidden dangers. "China Civil Aviation State Safety Programme" will be revised to promote the overall safety management capabilities in civil aviation industry. We will be committed to fully performing our functions in accordance with the law, improve the lists of powers and responsibilities, and pursue the establishment of mechanism for civil aviation safety oversight evaluation, so as to strengthen our capacity of enforcement. The systems will be strengthened to apply checks and supervisions over the exercise of administrative power, and the government affairs related to safety oversight will be more transparent. We will step up the coordination of oversight tools and resources. Trials of

differentiated accurate safety oversight will continue to expand. The mechanism for coordination and inter-connection with other ministries and local governments will be implemented to enhance the collaborative oversight.

# 6.2Increase the spending to shore up weakness, and strengthen basic organizations and consolidate the foundations

#### **6.2.1 Strengthen the workforce.**

We will improve the safety education and training system, create innovative training methods, strengthen practical training, and highlight safety attainment to improve the quality and effectiveness for the training of professionals and front-line managers. More guidance will be provided for front-line safety management personnel allocation. The capacities of safety management institutions will be strengthened. The training for new technologies and practical skills, cultivate the sense of mission and enhance the authority of front-line management. We will improve the mix of special-purpose spending on education and training to make front-line practitioners and practical training the priority. The mechanism for safety expert selection and appointment will be established and enhanced to forge a team of experts proficient in providing comprehensive and efficient services. We will attach more importance to occupational health with the highlights on fatigue and mental health issues caused by COVID-19.

#### Column 1: Priorities in Personnel Qualification and Ability Cultivation

We will facilitate the airline companies to carry out competency-based training flight practice, and promote the establishment of Pilot Lifecycle Management (PLM). More aviation psychology talents will be trained and new medical and engineering technologies will be applied in maintaining mental health. Competency-based training in air transportation of dangerous goods will be promoted. The capacities of Civil Aviation Inspector Training Institute will be strengthened. Enhanced training plan management will be put in place to gradually develop a pattern of efficiently modularized and precisely classified trainings. We will train a team of experts specialized in the fields of SMS assessment, statutory self-examination and assessment, safety information management, safety culture, airworthiness certification, safety management of dangerous goods transportation, accident investigation, and flight standards, etc..

#### 6.2.2 Consolidate the foundation for comprehensive safety assurance.

We will improve the system for using civil aviation development funds and optimize the management of safety capacity building funds. We will increase the spending on aviation safety infrastructure, give priority to key and core areas, pioneer areas and innovations about safety technical standards and new technologies, and encourage the application of new technologies in airports, navigation and logistics. Financial assessment for safety assurance will be enhanced in an endeavor to address the risk of declined financial ability for supporting safety due to the influence of COVID-19. An index system will be built for air traffic control safety assurance capability evaluation, in an effort to facilitate the overall evaluation and strengthen the weakness. We will carry out the research for aviation maintenance and air traffic control facilities and equipment, aiming at improving supply capabilities. We will pursue the establishment of third-party service mechanism for safety of small and medium enterprises, strengthen the supply of professional safety services, alleviate the pressure on small and medium enterprises for safety spending, and effectively improve the safety assurance capabilities of small and medium airports.

#### Column 2: Projects for Improving Safety Assurance Capabilities in Small and Medium Airports

We will enhance the training of air traffic controllers at small and medium airports to cover the shortage of human resources. ADS-B surveillance coverage will be carried forward in small and medium airports, and the operation specifications for such airports will be advanced based on ADS-B and other surveillance methods. We will classify and analyze the air traffic control capabilities in small and medium airports, and pursue the establishment of classification management standards for air traffic control in such airports. We will carry out surveys on the management of small and medium airports construction and revise the "Civil Airport Engineering Project Construction Standards" to establish scientific standards for the airport planning and construction, and meet the construction and development needs of small and medium airports. The comprehensive support capabilities of small and medium airports will be integrated into the comprehensive capability support and assessment system for transport airports, and such assessment and its result will be carried out and released regularly, so as to intensify the guidance on the safety management of small and medium airports. We will improve the firefighting, medical rescue and emergency transportation mechanisms for small and medium airports will be endowed with practical safety management concepts, knowledges, methods and tools that match up their needs and actualities to improve their risk prevention and control capabilities.

#### 6.2.3 Continuously improve airworthiness certification capabilities.

We will set up standardized system for airworthiness certification, optimize the documentation system for legislation and standard establishment, and promote standardization in the work of certification. Innovative airworthiness certification methods and risk-based certification modes will be developed, and the risk management procedures for certification projects will be formulated. We will promote the approval of key projects, and comprehensively strengthen the process control, supervision and inspection. Refined pattern will be implemented for airworthiness certification of UAV systems. The flight test capacities will be further expanded. We will conduct research on new technologies for airworthiness certification to improve the technical and research capabilities for airworthiness certification. Further development will be made in airworthiness certification capacities of the civil aviation industrial departments. Resources sharing and positive interaction with industrial departments will be pressed ahead to jointly improve the airworthiness certification and approval capacities. Existing favorable bilateral and multilateral policies and international cooperation will be leveraged to support project certification. Extensive technical exchanges with international organizations on airworthiness certification and active participation in standard revision of international organizations and associations will be pursued.

#### 6.2.4Enhance the safety culture in civil aviation sector.

The safety culture system of China's civil aviation will be improved, and we will seek to establish a long-term mechanism for safety culture construction. The ideological basis, working conduct, public opinion environment and the support abilities will be enhanced. Safety education and training will be carried out continuously, and the publicity and public opinion guidance with distinctive features of civil aviation safety will be expanded. We will refine the "Guiding Opinions on Improving Working Conduct of Civil Aviation Safety Practitioners", to build a long-term mechanism for cultivating safety working conduct with "reverence for life, reverence for responsibility, and reverence for regulations" as the core. We will give full play to the role of industry associations and strengthen the consciousness of self-discipline within the civil aviation sector.

# 6.3 Strength prevention, highlight the key areas and effectively manage and control risks

#### 6.3.1Reinforce the risk management and control in key areas of safety operations.

The three-year drive to promote safety will be deepened, and we will intensify the efforts on tackling key problems and attaining dynamic-zero hidden dangers based on the actualities of civil aviation sector and the characteristics of systematic safety management. With a focus on the core risks including controlled flight into terrain, runway safety, loss of control in flight, engine shutdown in the air, mid-air collision, and dangerous goods transportation, we will strengthen data monitoring, analysis and early-warning, and take measures to reduce the risks in transport aviation operations. Oversight will be intensified on airlines featured with small fleet and decentralized operations or having experienced equity alteration, change of operation base or lack of investment.

We will strengthen the safety oversight on the designated foreign carriers operating within the territory of China, to prevent and address major imported safety risks. Intensified efforts will be made in the conventional risk assessment and control for very-high-elevation airport operations and conflicts between civil aircraft and other aircraft. The impact of COVID-19 on aviation safety will be scientifically evaluated to accurately identify and control the derived risks.

#### 6.3.2Strengthen accident prevention in general aviation.

Safety management will be strengthened in the fields of low-altitude flight services, general aviation airport operations, and general aviation aircraft maintenance. The low-altitude flight control and aviation information service system will be refined and the support capacities will be improved in the areas of meteorological services and emergency rescue, etc. We will establish a risk-based, classified management mechanism for general navigation. The oversight on general aviation activities involving passenger-carrying commercial operations and emergency rescues will be strengthened. The mechanism for joint oversight by different regional administrations on operations involving multiple regions will be established, in an effort to effectively delegate powers and improve regulation. We will intensify the management, control and governance of typical risks including dangerous weather, collision with high-voltage lines, and loss of control in flight, and improve risk prevention and control methods. The communication and sharing mechanism for standard operating procedures will be built using the operation practices of benchmarking companies as the basis. We will seek to develop the recommended list of basic technical equipment suitable for general aviation, and gradually promote the use of practical and low-cost technical equipment. Special safety education will be carried out in response to accident cases and specific operational risks, and aviation safety publicity materials will be distributed free of charge. We will enhance the communication and coordination with relevant departments to further improve the general aviation flight plan application and approval mechanism.

#### Column 3: Priorities in General Aviation Safety Operation Capabilities Building

Centered on risk pre-control, a special helicopter safety group of the Civil Aviation Administration will be established to effectively strengthen the essential safety management of general aviation from the aspects of qualification inspection, theoretical improvement, maintenance support, operation support, and initial airworthiness, etc. We will promote the construction of a low-altitude surveillance information platform integrating multiple sources of data to achieve the real-time monitoring of low-altitude general aviation flights. We will step up the research and development of terrain warning and flight safety surveillance systems for general aviation to improve the abilities to deal with risks.

#### 6.3.3 Strengthen the safety management of UAV operations.

UAV management rules and standards will be improved and the multi-party coordination mechanism will be refined for UAV flight management, to set up an oversight pattern with comprehensive measures and joint efforts. We will strengthen the safety oversight in all links including product quality, registration and identification, personnel qualifications, operation intervals, plan applications and operation process. We will explore the mechanism of low-altitude airspace integration for UAV and manned aircraft operations, establish the roadmap for UAV's safe integration into the airspace in China, and promote the construction of supporting infrastructure and information platforms for integrated airspace operations. Operational-risk-based classification methods will be adopted for the management of UAVs, and continuous research on UAV-related regulations and technical standards will be carried out. We will guide the continuous improvement of UAV technologies and enhance UAV operation monitoring capabilities to ensure the safe operation of UAVs. UAV operation specification system will be improved, with priorities in preventing safety risks derived from UAV airworthiness management, air traffic control services, and personnel technical proficiencies. The UAV emergency response mechanism will be refined.

#### **Column 4: Priorities in UAV Safety Operation Capacities Building**

We will speed up developing UAV operation management platform and air traffic management service system, to allow statistics recording of UAV flight hours, real-time collection of UAV operation data, shared UAV airspace operation tendency data and the visualized oversight on UAV operations. The digital management capabilities based on Specific Operational Risk Assessment (SORA) will be developed preliminarily. We will extensively carry out operation and management tests in the UAV pilot areas, and establish and promote the technical system and management system for UAV operations.

### 6.4Deepen the reform, conduct governance according to law, and improve oversight efficiency

#### 6.4.1 Improve the construction of regulations and standards system.

We will make progress in the rule of law in the field of civil aviation safety, take problem-oriented and target-oriented approaches, strengthen top-level design, make continuous efforts to improve the civil aviation safety regulatory system, and strengthen the formulation and revision of safety regulations in key areas. A channel will be set up for communication and feedback on safety regulations between the front-line practitioners and top-level decision-makers, to enhance the timeliness and suitability of regulations. The systematic coordination between various professional regulations and standards will be strengthened and the consistency of safety requirements will be improved. We will establish standardized and innovative management system and institutional system featured with unified management, scientific planning, and clear rights and responsibilities, and we will give full play to the role of entities at all levels to achieve standardization. A new and comprehensive civil aviation standard system will be created which will include elaborate and internationalized standards. The institutional standards will be refined. We will facilitate the coordinated development and mutual promotion of institutional standards, national standards and industry standards in civil aviation sector.

#### Column 5: Priorities in Revision and Compilation of Civil Aviation Safety Regulations and Standards

We will press ahead with the formulation of "Civil Aircraft Accidents Investigation Rules" and collaborate with relevant government departments to promulgate the "Interim Rules on Unmanned Aerial Vehicle Flight Management". "Civil UAV Operation Safety Management Rules" and "General Airport Management Rules" will be developed. "Civil Aviation Safety Management Rules", "Transport Airport Operation Safety Management Rules", "Transport Airport Licensing Rules" and "Safety Management Rules for Civil Aviation Air Traffic Control Operation Institutions" will be revised, and relevant supporting documents will be amplified. We will promote the establishment and revision of flight operation regulations in the field of general aviation. The revision of the "Administrative Rules for Emergency Rescue in Civil Transport Airport" will be started in due course. Flight Operation Quality Assurance (FOQA) technical and administrative standard system will be established gradually. The successful experience for COVID-19 responses will be summarized to formulate civil aviation safety standards.

#### 6.4.2Optimize the safety oversight mechanism.

The administrative inspection system based on comprehensive safety evaluation will be built, which will be featured with integrated off-site and on-site oversight, coordinated overall and differentiated oversight, and mutually promoted statutory self-inspection and industry inspection. We will facilitate the systemic safety management with focus on organization and system, make coordination between safety and efficiency to assist in the transformation of the safety oversight pattern. Stronger efforts will be made to carry out the operation certificate management in integrated operation pattern. Innovative safety oversight mechanism will be created regarding general aviation and UAV plan approval, small and medium airport facilities and equipment, and dangerous goods transportation, to meet the development needs of the industry. Under the

principle of risk-based certification, we will exploit new certification mechanism and strengthen the certification supervision and management in accordance with the laws and regulations. The achievements in the trials of refined airspace management reform will be consolidated, and operation safety margin and airspace efficiency will be improved. We will continue to implement the mechanism of "rewarding the superior and punishing the inferior" for fleet planning quota, and actively guide airlines to correctly coordinate between safety and development, safety and efficiency, safety and normality, and safety and service, and to scientifically adjust their transportation capacity.

#### Column 6: Priorities in Safety Oversight Mechanism Adjustment

We will establish a certificate management mode that meets the unified operation needs of group airlines. The approval and certification system will be optimized, the approval procedures will be refined, and the approval and certification procedures will be simplified. The mechanism of "one certificate fits all" will be implemented for project management. We will set up the dangerous goods air transportation certification system.

#### 6.4.3 Take initiatives to promote the construction of smart civil aviation.

To match up with smart travel, smart air traffic control and smart airports, the industrial reform of digital transformation and large-scale application of intelligent equipment will be sped up, and progress will be made in smart safety oversight, with a view to a more efficient, accurate and forward-looking safety oversight capability system. We will promote the collaborative construction of industry oversight systems, and the integration and optimization of safety regulations and standards. The sharing mechanisms for safety big data including industry safety information, CAAC base stations, voluntary reports, and operation data will be constructed to form the industry safety big data middle platform, set up a bridge between safety data and operation data, and further underpin the foundation for digital and intelligent oversight. The functions of the industry safety information system will be strengthened to meet diverse information analysis needs. We will give full play to industry business data and information resources, and improve safety oversight quality and efficiency through exploiting all types of oversight data and optimizing oversight strategies. We will mine the potential of the industry safety big data, strengthen the research, diagnosis, prediction and early-warning of and timely response to major risks, and support the targeted oversight in the industry.

#### **Column 7: Civil Aviation Smart Safety Oversight Project**

We will improve the civil aviation safety oversight information system, and speed up the projects for smart oversight services in China's civil aviation. The modular functions of industry oversight law enforcement, flight standard supervision and airport safety oversight will be enhanced, and we will discuss and promote the construction of off-site oversight centers. The core technologies and functions of the existing air traffic control safety information management system will be further upgraded. We will carry forward with the establishment of safety performance analysis system, and performance-based safety oversight will be gradually implemented. The aircraft tracking and monitoring mechanism will be further enhanced, and a global aircraft tracking system will be developed, which will be equipped with the abilities to track and monitor abnormal operations and locate the aircraft in distress. We will get connected to the surveillance video of airports with passenger throughput capacities of more than 10 million people to enhance ground surveillance capabilities. The second phase of the China civil aviation flight operation quality assurance base station will be advanced to improve the safety risk analysis and early-warning abilities. Safety big data comprehensive analysis and early-warning platform will be built, and the functions of multi-point information monitoring, comprehensive trend evaluation, risk assessment and early-warning and intelligent decision-making assistance will be given full play.

#### 6.5 Strengthen the research on the basic theories about safety.

Innovative safety management mechanism will be implemented to form a more mature safety management theoretical system with Chinese civil aviation characteristics. We will drive the development of safety management tools, and put in place more scientific and systematic safety management of the industry. We will improve the safety scientific research capabilities, and expedite the construction of civil aviation science and technology innovation demonstration zones, civil aviation science and technology industrial parks, and aviation safety experimental base projects. We will encourage industry operation entities to carry out innovative safety management practices, acting as the basis for developing safety theories. We will stimulate the diversified development of safety consultation service market entities, to improve the supply of professional services for safety operation management.

#### 6.6 Make coordination for efficient responses, and refine emergency response system

#### 6.6.1Strive for an overall improvement in capabilities for emergency response.

We will improve the civil aviation emergency response management system, enhance the strength of emergency response organizations and amplify the civil aviation emergency response regulations. Our coordination with emergency management institutions and local governments will be strengthened. Actions will be taken to rationalize emergency response coordination mechanism and step up integrating the airport emergency response into the local emergency rescue system. We will take further steps to standardize the emergency response plan system, establish a long-term mechanism for risk analysis and evaluation to make the plan more targeted and operable. Comprehensive drills and the construction of airport emergency rescue simulation training bases will be encouraged. We will actively improve the national aviation emergency rescue system and boost our capacities for plateaus(high plateaus) aviation emergency rescue. The civil aviation emergency response equipment and material reserve mechanism and the overseas emergency response mechanism will be set up, and we will launch initiatives for equipment and resources sharing. Spending on key emergency response equipment will be increased to improve the capabilities for rapid recovery from emergency response during civil aviation operations. Optimized backup and disaster recovery practices of regional and terminal large-scale air traffic control centers will be put in place. We will move faster to establish the civil aviation transportation safety and emergency response support technology system, and create the civil aviation rapid response platform for the transportation of dangerous goods in major emergencies. Civil aviation emergency response and support system for major public health emergencies will be built. Sustained information exchange and search and rescue coordination with neighboring countries and regions will be conducted.

#### 6.6.2 Continuously enhance our incident investigation capabilities.

We will refine the accident investigation system and promote the construction of the incident investigation system of civil aviation production and operation entities. The investigators' qualifications and capacities will be strengthened and the investigators will be managed in a standardized way. We will establish a routine mechanism for investigation equipment supplementation. International exchanges and cooperation in investigation will be strengthened and a team of international investigation talents will be trained. Accident investigation experts exchanges with ICAO will be carried out and we will be actively involved in the formulation of international regulations and documents on aircraft accident investigation. We will seek to build the civil aviation investigation engineering technology analysis and cooperation mechanism and the routine working procedures involving government, manufacturers, scientific research institutes, and civil aviation production and operation entities, to form a fully specialized investigation engineering analysis capability system that enables mutual support inside and outside the civil aviation industry.

#### **SECTION 7 Continuous Support and Implementation**

#### 7.1 Strengthen the arrangement and leadership for implementing the plan

Refining the mechanism for implementing the plan. The plan will be incorporated into the

annual work plan and reform programme, and clear division of responsibilities and overall coordination will be made to have the key safety tasks implemented year by year. We will create comprehensive inter-departmental communication and coordination mechanism and resource allocation mechanism, to form a synthetic drive for solving the major problems in plan implementation.

#### 7.2 Improve the supervision and evaluation mechanism for implementing the plan

Enhancing the supervision and management, enhance the dynamic tracking and monitoring, and carry out mid-term evaluation and summary evaluation of the implementation of the plan. The evaluation results of plan implementation will be scientifically harnessed and mid-term adjustments will be made as appropriate. We will enhance the timeliness and guidance of the plan, and promote the smooth implementation of the plan.

#### 7.3 Enhance the supporting resources for implementing the plan

Providing necessary resources for safety plan implementation, and meet the safety goal of the 14<sup>th</sup> Five-Year Plan. We will improve the mix of financial spending, and ensure that the projects stay with the plan, and the investment funds and other factors stay with projects they are allocated to. We will make appropriate personnel arrangement based on the plan and equip them with necessary knowledge, skills and tools.