

# **The 13<sup>th</sup> Five-year Plan of Shanghai Ocean University**



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## Foreword

Shanghai Ocean University (hereafter SHOU), formerly known as Jiangsu Provincial Fisheries School, was founded in 1912 by Zhang Jian, Huang Yanpei and Zhang Liu. It has been renamed eleven times and has changed location five. In the long history of more than 100 years, the university has always been guided by its motto “Diligence, Sincerity, Dedication and Practicality”, which provides inspiration and support for its development and has been endowed with new meaning in different periods of its history. With its transition and development, the university has gradually deepened its understanding of its social responsibility. As a “center of creation and inheritance of knowledge”, it pursues its own sustainable development.

At present, along with the process of globalization and increasingly fierce international competition, China has entered the decisive stage in building in all respects a moderately prosperous society, implementing a “maritime power” strategy and promoting the Belt and Road Initiative. Located in Shanghai, which is promoting itself as a centre for science- and technology-driven innovation with global influence, SHOU aims to play a more significant role against such background. As a center of knowledge, the university is expected to contribute to the sustainable development of the country and the world through

cultivating talented people who can develop new technology or lead the implementation of social reform. To seek further development and enhance its social identity, the university will, on the basis of its traditional and disciplinary advantages, continue to adhere to a development strategy with a strong ocean-related feature, and create a practical institutional mechanism for education and research.

In line with the third, fourth and fifth plenary session of 18th CPC Central Committee on the strategy implementation of education reform and development, the university strives to fully implement a series of important policy statements made by Xi Jinping, the General Secretary of CPC. On the basis of the philosophy from its establishment and the long-term mission, the university has developed a future strategy oriented towards 2030 in accordance with the requirements of *the National Medium and Long-term Education Reform and Development Plan (2010-2020)*, and *the Layout and Development Plan of Higher Education in Shanghai (2015-2030)*. In keeping with the national and Shanghai education plan, as well as *the Integrated Education Reform in Shanghai (2014-2020)*, SHOU has formulated *the 13th Five-year Plan of Shanghai Ocean University* to further clarify its developmental philosophy, routes, targets and priorities, enhance a scientific, strategic and systemic development of the university, and promote a

holistic and coordinating development in such areas as talent training, scientific research, social services and cultural inheritance.

## Part One – Overall Strategy

### 1. Guideline

By thoroughly implementing the national education policies and grasping the trend of international and domestic higher education development, SHOU positions itself as a multidisciplinary applicable-research-oriented university, following the principle of synchronized deployment of “discipline-profession-academic degree”, taking morality education as fundamental task, faculty development as core competence, discipline construction as driving force and reform innovation as means, further developing our own features with the development of information and international trend, further highlighting innovation, strengthening connections, and consolidating the basis, building consensus with the goal of being a high quality ocean university, invigorating energy via comprehensive reform of the system, and making concerted efforts to build a high-level university with international influence.

### 2. Mission and Philosophy

For the sustainable development of human society, we shall carry out education and research in natural sciences focusing on areas such as marine science, aquaculture and food science, and related humanities and social sciences.

The centennial history of SHOU has proven our courage to take the challenges of the times and to constantly blaze new trails. The core of its innovation is scientific research for knowledge

creation. We have been encouraging innovative research, dedicated to cultivating more creative talents and making contributions to the sustainable development of human society.

While focusing on cultivating talents serving in areas such as marine science, aquaculture and food industry, we also exert great efforts to improve students' humanistic qualities. We advocate the spirit of self-discipline, free thought, and independent personality to develop their abilities to meet the needs of social development.

Laying emphasis on the cooperation of university and industry, we will insist on writing papers based on practice and focus on applied and practical research to address a large number of key national and local technological problems in the marine, aquaculture and food industries. Adhering to the fundamental philosophy of pragmatism, we will transform research results into practice through expanding industry-university-research cooperation and will make efforts to promote the cultivation of talents who can meet the requirements of the profession, industry and society.

With our philosophy of “development with distinct characteristics”, we try to improve education, orientation and our reputation via a variety of means, including the establishment of a quality assurance system for the cultivation of specialized talents, building a system of ocean-related disciplines, a series of high quality curricula with strong feature, conducting distinctive



campus activities, etc.

The focus on the internationalization of students and faculty is beneficial to international development. We promote the exchange of world cultures and societies through providing more overseas learning and training opportunities for teachers to improve their humanistic qualities, foreign language skills and their ability for cross-cultural communication. Meanwhile, we also actively promote the recruitment of overseas researchers and the enrollment of overseas students.

### 3. Future Strategy

- 1) Being committed to fostering extraordinary international talents with scientific literacy and professional ability, comprehensive judgment and analytical skills, multicultural understanding and communication ability that will help to promote the harmonious and sustainable development of human society.

A. Focusing on exploration, development and the full use of biological resources, the aquatic environment, and ecological protection, we will carry out education and research on marine science, aquaculture, food science etc. with the task of “understanding, protecting and making use of ocean” via developing highly specialized professionals.

We will cultivate talents with the following capabilities: scientific knowledge, professional skills and the practice

capacity to solve real problems through comprehensive systematic education, rational thinking, good judgment and sense of social responsibility, the capacity to understand general modern social problems, the vision and capacity to undertake international exchanges. Through university education, students will be endowed with the qualities of critical thinking, prudence, thrifty, self-discipline and generosity. They will follow the spirit of “seeking truth, honesty and practicality” so as to forge their noble character, progressive thoughts, helpful hands, industriousness and stamina.

B. Promoting education internationalization serves the cultivation of internationalized talents with good understanding and communication skills of different cultures as well as a flexible application of their expertise. Propelling scientific deployment and the configuration of disciplines and academic programs, the university is going to deepen the reform of the cultivation model of talents, to facilitate curriculum development and deepen expertise and innovative education, and to strengthen humanities education by promoting the systematic development of curricula for liberal arts. By actively improving the quantity and quality of cooperation with overseas institutions, the university is promoting diverse forms of cooperative projects with counterparts abroad and actively advancing cooperation with high-level

research institutions and first-class universities, learning from globally top disciplines to strengthen discipline development and actively advance international academic certification, carrying out overseas learning and travel projects for undergraduates to expand their international vision, and developing Doctorate programs with over one-year study abroad to cultivate more excellent PhD candidates.

C. Promoting education reforms to enhance the level of internationalization of human resources.

By upgrading education quality systems and internationalization of quality standards, the university is aiming at strengthening the internationalization of full-time faculties, hiring more personnel from abroad, advancing overseas access to learning for the faculties, hiring more personnel with overseas study experience, promoting a variety of cooperation initiatives between our faculties with counterparts from overseas universities and research institutes, and forming new research team with international vision, led by academicians and backed by excellent talents, including, Yangtze River Scholar Program professors, National Outstanding Youth Program winners.

D. Promoting education of overseas students by enrolling more high-caliber students from other countries and regions.

With national “maritime power” strategy and “the Belt and Road Initiative”, the university will actively expand overseas students education to achieve significant growth, carry out management system reform of overseas students education to strengthen public service, advance the construction of full English programs and curricula so as to provide rich resources for overseas students, improve the internationalization of the faculty for the overseas students, expand the funding sources for overseas students education and establish the incentive mechanism.

2) Being committed to advancing the international forefront of innovative scientific research, addressing applied subjects in certain areas with our characteristics, and providing service for sustainable development of the international community.

A. Gathering elite research experts around the world to create a research platform and sound environment for the international cooperative research, and to build a global base for talents exchange.

By advancing joint research across multiple disciplines around the globe by building international cooperation bases, especially in the areas of marine science and technology, aquaculture, food, etc., the university aims at establishing national, provincial and university research platforms covering land, coasts, and ocean (hadal),

improving the system and mechanism of attracting excellent talents from home and abroad to bring in well-known experts and scholars in key areas like marine science and technology, aquaculture, food, etc., in order to form new international research teams and cultivate leading international talents.

- B. Establishing international cooperation networks among universities to enhance academic influence.

By introducing well-known foreign experts and scholars, the university will build cooperation with world-class universities to enhance our international academic influence in relevant disciplines and strive to reach the world's scientific frontiers. We will establish new partnerships with universities and scientific research institutes at home and abroad, forming our advantages in marine science and technology, aquaculture, food, etc. around the world.

- C. Centering on "sustainable development and utilization of biological resources in waters, and the protection of Earth's environment and ecology", the university will explore issues of natural and social sciences including biological resources, the global environment and human society.

By exploring philosophical, scientific and engineering problems in protecting and utilizing biological resources in waters of land, coastal areas, ocean, hadal and polar areas,

we are studying the Earth's climate, water (both sea water and fresh water) and energy changes coupled with human, resources, environment and ecology, achieving a world class level, especially in the fields such as the development and utilization of water biological resources, the protection of Earth environment, the polar marine climate, and hadal science.

D. Cultivating more young researchers.

By employing excellent young researchers, the university is aiming at enhancing the cultivation of young researchers by encouraging them to participate in various training opportunities to improve their capacity, cooperating with "985" project universities, the Chinese Academy of Sciences, and top universities abroad to carry out joint training of promising young scholars.

E. Improving infrastructure and strengthening research capacity.

Improving academic information and research infrastructure, and building shared research platforms and facilities to international standards.

3) Solving new problems, creating new values and making new contributions to promoting domestic and international industry and regional development, social and human progress through extensive cooperation.

The university will be carrying out research on science and

technology related to the protection and utilization of water biological resources and training talents to meet the needs of industrial, economic and social development. We are targeted at exploring science and technology related to the protection and utilization of water biological resources to serve the region, the nation and the international community.

A. Making effective use of the campus environment and advanced knowledge to look for the ideal state of coordinative development with the region to provide information and advice for environmentally and socially sustainable development.

In line with the needs of local economic and social development, we will actively carry out talents cultivation, scientific research and community services, making a contribution to the economic development and personnel training. We will make the most of the knowledge platform to provide training services to the public and disseminate knowledge.

B. Actively promoting industry-university-research cooperation and technological innovation to make contributions to resolving social issues.

By organizing industry-university-research cooperation to promote the transformation and application of research results, the university will make use of intellectual property rights with flexibility to achieve transformation, addressing

social issues in Shanghai, China and the whole world through investigation and research at home and abroad.

C. Cooperating with other agencies, bodies of local autonomous organizations to promote the collaboration with universities of various nations and regions.

In order to further promote cooperation with good-standard elementary and secondary schools to build new model for cooperation and talent training. We will make full use of university facilities such as SHOU History Museum, Aquatic Biological Museum, other museums, and the hadal diving device, etc. to facilitate the popularity of scientific knowledge and promote exchange with the outside world, intensifying the communication and cooperation with coastal countries, especially with countries and regions along the 21st-Century Maritime Silk Road by making use of “Song Hang”, the ocean-going fisheries research vessel.

4) Carrying out system reform in organization, personnel, budget under the leadership of the Party Committee to inspire the potential and creativity of teachers and students and realizing sustainable development in the heritage and innovation of SHOU.

A. Establishing the management system of the modern university. By improving the organizational and institutional systems, the university will strengthen scientific integrity to prevent academic and administrative irregularities and



ensure that teachers and students are in strict compliance with laws, rules and regulations. The university will promote auditing and assessment of university management, collecting and analyzing education and management data to create operational reports, human resources reports, financial reports, and audit analysis reports, to further improve the efficiency of workings.

B. Seeking to further diversify funding resources and building a stable financial basis and strengthening the operation capacity through efficient and flexible financial operations.

By reinforcing the strategic planning of financial budget, the university will be operating funds in an effective way to achieve a highly efficient and flexible use of its assets, promoting cooperation among universities and reducing office expenses through improved operations, promoting the sharing of infrastructure and facilities to reduce the financial burden on users, actively attracting other external sources of funding like competitive funds and making effective use of indirect funding.

C. Reinforcing flexible personnel and pay system beneficial to the reform of the university.

Introducing the annual salary system and mixed remuneration, we will check and review performance assessment system to further improve the pay system based on "task + performance".

D. Strengthening the training of staff to improve the professional competence of teachers and administrators.

Continuing to implement FD project to improve the ability of new faculty members, the university will promote a system of staff training abroad to enhance the faculty's international outlook and advance SD projects to improve the operational capacity of managers as well as the management quality.

5) Actively popularizing education and research results through strategic publicity to show the world the prominence of SHOU.

A. Exerting great efforts to enhance the University's overall influence and striving to build a specialist high-level university with an important influence on the international arena by 2030.

B. Strengthening the university brand to promote bi-directional activities between society and the university.

C. Strengthening alumni organizations at home and abroad to build a worldwide alumni network.

D. Improving the mechanism of international publicity by employing multiple means of communication as well as actively popularizing the latest education and research results.

#### 4. Development Objectives and Areas

Centering on "sustainable development and utilization of aquatic-biological resources, and the protection of Earth's environment and ecology", we will strive to build a high level multidisciplinary university oriented for applied research with an

important influence worldwide and a university that has a strong discourse power in the field of biological resources, global environment and human society. In order to develop multiple disciplines coordination with the highlights of marine sciences, aquaculture and food, the strong support of basic disciplines, the overlapping and integration of related areas, newly emerging research subjects, and social sciences and humanities of ocean-related features, we will enhance the integral strength with the emerging of innovative talents, high level faculty, outstanding research and innovation, increased internationalization, continuing to cultivate qualified talents for industry, academia, and administration, continuing to provide systematic solutions at the frontier of science and technology, and continuing to provide training, key technology, application popularization and intellectual support.

Biological resources: exploring the aquatic-biological resources, including population, nutrition, diseases, functions, as well as exploring the knowledge, theory and methods of other supporting disciplines such as biology, chemistry, mathematics, engineering, information technology, economics, management, philosophy and other humanities and social sciences.

The Earth's environment: exploring and understanding the Earth's environment related to the systematic utilization and protection of aquatic-biological resources, including land, coastal areas, ocean, hadal and polar areas. Exploring the philosophy, science and technology and engineering issues related to human, resources,

environment and ecology, including the macro issues of water temperature, water (seawater and freshwater) and energy changes.

Human societies: exploring and understanding the sociological issues related to the systematic utilization and protection of aquatic-biological resources, including urban development and changes in Shanghai, issues related to agriculture, rural development and farmers against the backdrop of China's urbanization, other ethnic sociological issues in the “Belt and Road Initiative”, in particular those along the Maritime Silk Road.

## 5. Main Objectives

The objectives of “*the 13th Five-year Plan*”: By 2020, we will have built a high level multidisciplinary university oriented for applied research, a world-known university competitive in marine science, aquiculture, and food science, a university with collaborative development in science, engineering, agriculture, economics, liberal arts, management and law sciences, exploring issues of biological resources, the global environment and human society. We will form an academic system with competitive disciplines, full of innovation and vigor, strong cooperation across disciplines, and an educational system for specialist talents, further promoting the overall strength, social influence, and all sorts of evaluation indices.

We will construct the specialist talent educational system with characteristics to improve all round talent quality by improving the

undergraduate discipline system, innovating on the talent educational model, constructing the undergraduate curriculum system, innovative specialist-education systems, and strengthening students' international outlook and communication ability and the undergraduate teaching quality system. By 2020, we will have increased the scale of undergraduate disciplines to over 45 to form the reasonable spread of disciplines and academic programs. We will maintain a stable number of about 16,000 full-time students, including 12,000 undergraduates and 3,500 full-time graduates, and expanding Doctorate graduate education. We will vigorously expand overseas student education, stabilize the continuing education, and implement a variety of forms of continuing education and non-degree education.

- 1) Forming the discipline pattern with coordinated development to enhance the innovation of science and technology from all aspects.

Based on the discipline map, we will have built up the academic discipline system in line with our own specialties, keeping the advantages in key disciplines and featuring coordinated development of multiple disciplines. We will enhance significantly the overall discipline strength with our outstanding characteristics, sound systems and focused direction. The core disciplines of Marine Science and Aquiculture will have reached the international advanced level, achieving the top three in Aquiculture worldwide, and making the comprehensive strength of food science and engineering a

leader in China. The basic disciplines will provide strong support, highly integrated with the key disciplines. We will continue to improve the top 1% ranking in ESI's classification of plant and animal sciences. We will seek to add one discipline in the world's top 1% ranking in the ESI classification. We will make efforts to build a key national lab and make a breakthrough in the number of ESI highly cited papers. The annual value of transforming scientific and technological into industry will take up 20%~30% of the overall funding. Striving to foster a well-structured graduate education system led by four Level 1 doctoral programs, namely, aquaculture, biology, food science and engineering and marine science, supported by twelve level 1 master degrees and six profession degree programs (15~20 fields), coordinated with three to four post-doctoral mobile stations.

## 2) Optimizing the systematic allocation of human resources to enhance the level of teaching faculty

In accordance with the positioning of disciplines and type of schools, we will establish new principles and standards of human resources allocation. We will construct a pattern for developing talent with unified "scale, structure, quality", compatible with the international high level ocean universities. We will train a high-level faculty consistent with national strategic needs, requirements of the industry, capable of guiding students' growth and development. By 2020, the total number of staff will amount to 1,334, with 45~50% percent of senior technical staff. Among

900 full-time teachers, no less than 70% per cent with a PhD degree and no less than 40% with experience of more than one year overseas. Focusing on introducing and cultivating academic team and academic leaders with great influence at home and abroad, making breakthroughs in the number of academicians, increasing the number of "Changjiang scholars", "winners of the National Science Fund for distinguished young scholars" and other State-level talents, building 1~2 innovation teams at the Ministerial level, and recruiting over 40 international teachers.

3) Improving managing university by lawful and democratic management to reinforce the overall management capacity.

In accordance to the system of presidential accountability under the leadership of the CPC Committee, we will strengthen the CPC's leadership, improving the administrative ability of leadership at all levels. We will make efforts to improve the scientific level of the party building, and provide a strong political, ideological and organizational support for the development of the university. Taking *SHOU Constitution* as the guiding principles, we will improve the systems of managing university by law and democratic management to form a systematic and comprehensive system, standardize rules, procedures and decision-making process, to improve the administration mechanisms and process to advance the systematic reform of administrative, university and other affairs; we will facilitate the information publication to improve the mechanism for democratic supervision, standardize the

administration to show respect to the principal status of teachers and students, clarify functions to improve the scientific arrangements, organization system and thus promote the efficiency of workings; we will gradually perfect the two-level academic administrative schema of university and school to play the key role of grass-root organizations in the academic area, promote the campus planning and construction to improve function and layout of campus and further meet the spatial needs of the university development; we will strengthen the construction of campus culture imbued with the SHOU ethos to show the educational and demonstrative function of the university culture.



## Part Two Priorities and Initiatives

### **1. Taking ethical education as the core to promote a higher level of education**

In order to improve ethical education and the collaborative education system, the university is going to conduct comprehensive reform of morality education through "three focuses and three systems", by focusing on a collaborative education system between mentors and teachers, focusing on professional teams to reinforce the professionalism of ethical teachers, focusing on online ethical education to promote a supporting information platform, and deepening the systematic innovation of ethical courses, and strengthening the education of socialist core values, psychological-health education, career planning and employment guidance, and standardizing the working process.

### **2 Deepening educational reform to improve the quality of talent cultivation**

#### 1) Advancing the reform of undergraduate education

##### A. Optimizing and adjusting the structure of undergraduate disciplines

In accordance with the two-dimensional axes of learning existing knowledge while exploring the unknown, conducting the foundational research while promoting applications of research, we will evaluate and classify different academic

programs and promote them accordingly. By adjusting the discipline structure, optimizing the scale and type of specialty, and developing new specialties to transform and improve traditional specialties, we will improve the setting of standards for the deployment of academic programs and build a dynamic mechanism of the programs. We will strengthen the development and construction of new programs such as marine science where there is a deficiency, creative arts, and continuously build 3~5 national leading programs in agriculture, science and engineering.

#### B. Improving talent cultivation model

In order to establish and develop diversified recruitment and selection mechanisms based on cultivation objectives, we will improve multi-level undergraduate programs and teaching systems based on the principle of recruiting and classifying students by academic grouping, forming a social evaluation feedback mechanism for graduates' quality. Further the implementation of the second degree and double degrees' education and the trial reform of enrolling on courses from different departments, reforming academic assessment methods and improving the undergraduate tutorial system.

With strengthening innovation and entrepreneurship education, exploring new mechanism of cultivating innovative talents and entrepreneurs across schools, departments and disciplines, facilitating the construction of courses systems and training innovation and entrepreneurship education, the

university will form supervisory teams, strengthen its innovation training capacity for full-time students, improve career planning and employment guidance, and establish innovation activities and the contest system covering all disciplines. Taking the pilot project on education reform of agriculture and forestry talents as the starting point, we will build a system to cultivate and bring in talents in line with the specialties of SHOU. We will create a number of different styles of demonstration teaching teams to advance the reform of education and teaching, continue to give impetus to systems of tutor office hours, effective implementation of TAs (teaching assistants), SAs (Student Assistants) and RAs (Research Assistants). We will establish learning communities across different grades to implement learning support systems via “pair learning”, and carry out study projects or courses in the library.

### C. Reforming the curriculum system

We will improve training programs, establishing the integrated curriculum system in line with various classification and characteristics, and strengthening the development of curriculum groups within the general subjects of marine science, aquaculture, food, as well as curricula for traditional Chinese language and culture and physical education with our own characteristics in particular. We will improve the curriculum for liberal arts subjects and specialist course, and focus on fostering a number of high-quality course groups in

general disciplines and course group of the core curriculum of different subjects. By exploring the ideological and political education resources from specialized courses and practical teaching, compiling key elements and cases of the curriculum, implementing ethical education, we will build and improve the multi-level and multi-module education system with the integration of specialty education, ideological and political education, innovative education and career education. We will strengthen the construction of course groups in innovation and entrepreneurship, establishing four-year integrated teaching systems for practice teaching and foreign language education.

We will strengthen the standardization of teaching, improve course construction and management system, improve the logical arrangement of curricula, focusing on the development of new curricula and the analysis of implementation of learning objectives. We will improve the curriculum quality system and the development of a digital teaching resources platform and establish mobile learning campus to enhance the construction of the digitalized quality courses and create high level international online courses with in line with our specialties.

#### D. Strengthening experimentation and practice

Strengthening practice education, we will establish an integrated system of comprehensive practice education, including three levels of basic practice, specialty practice and

comprehensive practice. In order to further improve the basic and specialty platforms of public laboratory teaching as well as teaching base for practice, we will promote the standardization of quality control of experiment teaching platforms for different disciplines, speeding up the construction of laboratories urgently needed by new specialties like aquatic animal medicine, creating a open laboratories for college students' scientific and technological innovation. We will strengthen the construction of field bases for ocean science and education, expanding practice education, and enhancing their function.

#### E.Improving quality assurance system

In order to improve various quality standards including recruiting, training, employment, publicity etc., the university will be implementing a strengthened University-School level teaching assessment system and the teaching quality assurance system, establishing standards for teaching and management, and improving the normalized quality monitoring system of teaching information to form normalized mechanism for quality control. By carrying out professional assessment and certification to improve the evaluation system, we will conduct peer evaluation among teachers, student evaluation and performance evaluation and recognition.

#### 2) Strengthening graduate education

By intensifying the construction of academic programs, optimizing the degree structure and layout, and promoting the first-level doctoral programs in aquaculture, food science and engineering, and biology, we will strengthen the construction of first-level doctoral program in marine science, relying on the existing doctoral programs to realize the recruitment and education of PhD students in marine sciences. We will actively seek to obtain the authorization of first-level doctoral program in marine science, and realize the construction of post-doctoral research stations in disciplines such as biology. We will continue to expand and optimize the layout of doctoral degrees by carrying out the dynamic adjustment of master programs in accordance with discipline demands, and actively striving for more professional degree programs.

By steadily advancing the education reform of graduates to improve the integration of the master and doctorate cultivation system, the university is going to improve the cultivation systems for both the academic graduates and professional graduates, by reforming the selection, assessment and access mechanisms of graduate mentors. Further cultivating cooperation with the fishing industry, and expanding the joint programs with the SOA system, international universities and research institutions. We will improve graduates' capacity for scientific research and innovation via graduate cultivation plan for creative talents. We will actively promote the internationalization of postgraduate education and carry out qualified assessment of academic

degrees.

3) Promoting the education of overseas students.

We will strengthen the strategic layout of overseas student education, scientific development planning and its systematic implementation, developing new ideas, approaches and methods of overseas student education. We will increase the number of overseas students, especially graduate students and strengthen the establishment of system, carrying out reform of administrative organizations, establishing incentive mechanisms, and increasing publicity.

We will build internationalized education system with the close cooperation between university- and school- leadership. We will improve the faculty for the education of overseas students to promote the internationalization of the faculty. We will promote the construction of programs and curricula delivered in English to provide a wealth of teaching resources for overseas students. We will establish a special fund for overseas students' education and expand funding sources. We will strengthen our capacity to enhance the service and administration of overseas students' education.

4) Promoting the transition and development of continuing education

We will make innovation in the organization of student resources and talents training model, and explore non-diploma education mechanisms based on project management with the integration

of various resources and the continuing use of existing platforms.

### **3. Strengthening technological innovation to promote overall discipline strength**

#### 1) Strengthening the top-layer design of academic discipline construction

Focusing on the objective of building our university into a high quality university with our own specialties, we have to follow the laws of academic discipline development, insisting on the idea of “sustainable development and utilization of aquatic-biological resources, environment and ecological protection, sticking to the principles of “focus, differentiation, cooperation, and win-win”, strengthening the integration of specialty-academic degrees, taking people as our priority, strengthening specialty -oriented development and precise implementation of disciplines, improving the cooperation, exchange and collaborative innovation among disciplines, and advancing the amelioration of intrinsic quality and strength. With improvement to the integrated strength by enhancing features and stimulation of the self-motivation of disciplines via people-oriented methods, the university has been further promoting the development of other disciplines through the construction of key disciplines like marine science, aquaculture and food, realizing the coordinated development of multiple disciplines including science, engineering, agriculture,



economics, liberal arts, management, and law.

2) Promoting coordinated and scientific development of multiple disciplines

We will strengthen core disciplines (marine science, aquaculture and food science), related disciplines and the supporting subjects to form a layout disciplines---“where there are key disciplines of the university with its supporting subjects and every school has its own focuses”. We will focus on the construction of the three main disciplines and frontier interdisciplinary research with distinctive feature to move on to a new phase where different disciplines and fields produce first-class academic achievements and the key breakthroughs motivate the development of the disciplines of the whole university.

3) Promoting the interdisciplinary academic fields

We will promote the deep integration of science, agriculture, engineering, humanities and other social science. We will strengthen interdisciplinary fields such as management of fishery economy, management of oceanic economy, food logistics management and engineering, oceanic food, marine pharmacy, digital ocean etc. to gradually form our own disciplines' specialties.

4) Highlighting the features of humanities and social sciences

Focusing on the development of Humanities and Social Sciences relevant to oceanography, we are gradually forming

research fields in humanities and social science with the distinct features of ocean such as marine policies and regulations, marine history, marine culture, marine sociology and marine politics, and a humanistic environment and culture featuring the integration of scientific and social sciences, which is beneficial to the development of students. During the formulation of "*the 13th Five-year Plan*", the Schools of Humanities, Foreign Languages and Social Sciences will form 1 or 2 influential disciplines with SHOU characteristics.

#### 5) Promoting scientific and technological innovation

Closely working for national strategies, industry needs and local economic and social development priorities, we are adhering to the combination of service demand and free exploration, strengthening the basic research of the main disciplines, conducting prospective studies on interdisciplinary fields, and deepening application research to address the urgent needs of the service industry. We will produce a wealth of scientific results with original, integrated and trans-formative innovation which will have a significant impact on the development of economy, society, technology and culture as well as on the production and life style of human beings. We will deepen the reform of research management to form an effective mechanism of encouraging collaborative innovation and concentrated scientific research. We will improve the management system of the operation of scientific research and explore the establishment of a macro research management

system. We will build new scientific research organizations to explore and establish a target- and task-driven PI management system, encouraging to focus on the exploration at the forefront of international science and the needs of the nation or region for key technologies and thus fostering key research fields and research teams. We will explore a grand overarching platform for disciplines. We will organize key research teams and assemble researchers and research teams to facilitate significant research collaboration at home and abroad.

We will establish an evaluation system for scientific research, including a classified evaluation system for research to safeguard foundational research, encourage applied research and the commercialization of research findings, and reinforce the assessment of teachers' practical ability. By introducing third-party evaluation for scientific research, we will establish the evaluation system and performance management guidance in line with the ethos of our university. We will reform the management system of scientific and technological achievements and improve the rewarding policy for scientific and technological achievements to promote the efficiency of the commercialization of scientific and technological achievements.

#### 6) Strengthening the construction of scientific research platforms

To meet the requirements of academic discipline construction and high-level innovative talent cultivation, we will take the

construction of a macro discipline platform as our target to establish a three-linking-ring base interconnecting land-, coast-, ocean- (hadal and polar areas) related disciplines. We will focus on the layout and adjustment of multi-functional research laboratories for disciplinary groups. We will establish the rational layout of field science stations, research vessels and industry-university-research bases, actively seeking international and national cooperation in building joint laboratories and improving the management system for the research platforms and bases. We hope all the measures will lead to the establishment of a high-level disciplinary platform system for the coordinated development of the three key disciplines and other ones.

#### **4. Enhancing the society-serving ability to expand the influence of the university**

- 1) Reinforce the advisory capacity to serve state strategic-decision making

We will strengthen the construction of interdisciplinary think tanks to set up several teams of experts and scholars with solid theoretical competence, rich practical experience and international strategic vision in areas such as international negotiations on ocean affairs, management of marine fishery resources, international compliance, food safety and risk control. It is targeted at conducting prospective studies and provide strategic consulting for national and local governments.

in strategic layout, institutional reform, policy implementation.

## 2) Constructing a new model of industry-university-research

We will build technology innovation bases such as the utilization of marine resources, hadal science and technology, top-quality food supplies in urban areas to explore and establish a new model of industry-university-research with the collaborative development of disciplines and industry.

## 3) Establishing an alumni network

We will actively foster the cultural atmosphere of “making joint effort to create a better future of SHOU” for alumni, improving the alumni network to establish a database of alumni information, strengthening the exchanges and cooperation between the university and the alumni as well as their working institutes to smoothen the pathway for alumni to take part in the construction and development of the university and make the full play of our alumni in the cultivation of talented people, scientific research and technological services.

## 4) Developing education and training services

We will continue to develop the current training projects with our brand. We will strengthen the cooperation with governments at all levels, industry (enterprises) and other institutions to expand the training market. We will develop training programs with our brand based on the three key disciplines of marine science, aquaculture and food science to gain the training base project of the State Oceanic

Administration in colleges and universities. We will strengthen the cooperation with world-class universities and renowned training institutions to introduce high-end training projects and actively promote training programs with nations and regions involved in “the Belt and Road Initiative”.

#### 5. Deepening the reform of personnel system to strengthen talent development

##### 1) Focusing on the introduction of high-level talents and the cultivation of young teachers

Centering on the development targets for disciplines and specialties, we adhere to the principle of the combination of recruitment and cultivation to execute the in-depth implementation of the talents developing strategy, gathering a group of leading talents either in academic fields with international frontier vision or in industry with strong capacity of the industrialization of technology, forming several high-level teaching teams led by distinguished teachers, leading academic-innovation teams and major technology-innovation teams led by leading scholars at home and abroad. We will strengthen the recruitment and cultivation of high-level talents and young scholars with excellent academic potential and we will also highlight the recruitment of foreign teachers, providing support for the cultivation of high-level groups and innovative teams, establishing innovation bases to attract more talents, and bringing together academic masters to create a brand

name for international academic conferences and foster an “academic circle of friends”. In order to strengthen personnel training in interdisciplinary areas, we will provide support for the introduction of elite talents in related disciplines and fundamental disciplines, by the way of intensifying the construction of badly-needed talent teams, strengthening the cultivation of distinguished teachers, encouraging teachers to conduct international-academic exchange and industry-university-research practice to explore the talents exchange mechanism between the university and the ocean-related institutes.

## 2) Optimizing the systematic allocation of human resources

We will innovate on the arrangement and resource allocation of the school-level organizations to continuously improve human resources management and utilization, and optimize the recruitment system for the number and structure of human resources. We will innovate the ways of short-term work for eminent experts or retired scholars at home and abroad, improving the flexible-employment system including non-permanent positions, short-term program-funded positions, etc. We will explore multiple ways to recruit high-level scientific and technological talents, such as higher annual salary, negotiated wages, project wages. We will inspire the vigor of the schools by building an adjustment mechanism with the combination of the overarching coordination of the university and the autonomous operation of departments and

schools.

3) Improving the employment assessment and incentive mechanism

In order to deepen the institutional reform of position appointment including professional and technical post appointment, we have been improving the classified evaluation of the whole process of faculty management from their entry to appointment, from promotion to reward and punishment, establishing different assessment systems including the initial period of employment assessment, assessment in contract term, team assessment, non-assessment for tenure-track positions. We will strengthen the use of the assessment results and establish hiring and firing mechanisms. By encouraging researchers to conduct the commercialization of the science and technology achievements, we will provide part-time positions or keep the positions for them to expand two-way flowing mechanism for research staff. We will reform the system of the fund-allocation to the schools on the basis of "task plus performance" and the fund-allocation of university administrative departments on the basis of "post plus performance". We will attract external resources and stimulate internal energy, gradually establishing and improving the incentive system and mechanism to ensure stable growth of income for the faculty. We will strengthen the improvement of the faculty's ethics to establish the personnel with a moral and international outlook, who will be in step with national needs,



promote the development of industries and help students to develop themselves in innovation and entrepreneurship.

## **6. Enhancing foreign exchanges and cooperation to promote the international fame of the university**

### **1) Systematically deepening the joint support by the ministry and the municipal government**

We will explore the new mechanism of building a high-level university with the joint support by Ministry and Shanghai government by striving for more support from the State Oceanic Administration, the Ministry of Agriculture and Shanghai Government. We will continue to improve the quality of the joint graduate programs with the State Oceanic Administration and the Ministry of Agriculture, expanding the scope of cooperation, and exploring the responsibility-sharing mechanisms for undertaking major research projects with the State Oceanic Administration and the Ministry of Agriculture. We will make efforts to improve our capacities of serving national strategies and regional economic and social development. We will actively expand the cooperation with the Ministry of Environmental Protection, Shanghai Department of Environmental Protection to facilitate the research and talent cultivation in the field of water environment governance, the utilization of water resources etc.

### **2) Comprehensive implementation of internationalization strategy** In order to make full use of the advantageous location in

Shanghai to vigorously promote the internationalization of the university, we will strengthen systematic planning to promote a strategy for internationalization. By expanding the layout of international cooperation to create new models, we will deepen the substantive cooperation with those who have signed partnership, make full use of the existing platforms of international cooperation, and strengthen the cooperation in major scientific research projects, teacher training, student development, integrating high quality educational resources abroad into the whole process of teaching and research to achieve a synchronous increase in the level of teaching, scientific research and academic reputation. We will study the quality guarantee system of international education and actively promote the international professional certification, mutual recognition of curriculum credits and international joint cultivation. We will expand the scale of exchange students and improve overseas study and study tour programs to advance the academic abilities of the students and integrate these into the academic discipline construction. We will intensify the opening up of education in our major disciplines to promote international cooperation with counterparts abroad and engage in various forms of cooperation in personnel training and joint programs. We will strengthen the improvement of academic disciplines and curricula delivered solely in English to promote the conditions and level of internationalization.

### 3) Providing strategic services for “the Maritime Silk Road”

We will expand the university's function of serving the national "*the Belt and Road Initiative*", promoting exchanges and cooperation with countries and regions along "the Belt and Road" and "21st Century Maritime Silk Road" in particular, strengthening the studies focused on the countries and regions and vigorously promoting overseas students' education and joint programs with those countries and regions.

## **7.Improving the function of the campus to provide support and service for the development of the university**

### 1) Improving campus infrastructure

We will further strengthen the infrastructure construction and renovation of facilities to integrate the internal resources and optimize the allocation of space, continuing to advance the construction of buildings for teaching, research, management and coastal bases.

### 2) Strengthening the implementation of public service system

We will build public resources platform and system of service at the university and school level. We will bulid shared experiment platforms with the rational allocation of new lab resources, focusing on the construction of scientific research innovation platforms at national, provincial and ministerial levels and other major innovation experiment platforms. We will promote and strengthen the environment, culture, informatization and safety of the labs.

We will improve the construction of library information service

platforms, promoting library in service, technology and management, strengthening printing and electronic resources and the construction of an intelligent library to enhance the quality of information services, cultural exchange and research services.

In order to promote the construction of a smart campus, we will establish a sound information technology system and speed up infrastructure construction. We will deepen the building of the systematic platforms by sharing application system and strengthening information-security-management systems to actively build a reliable secure network and information environment with an aim for fully interconnection, exchange and sharing of the information, and big data analysis service. We will promote the profound integration of the information technology with teaching, research, management and service of the university and build efficient and convenient electronic university affairs system.

In order to improve the service of the Department of Facilities and Supporting Services, we have been building a company employment mechanism for supporting services. We will strengthen the resource management and improve the allocation mechanism by promoting the reform of paid use of resources and bidding mechanism. We will establish and implement the operational mechanism of university self-service in combination with the purchase of social services to improve service quality and lower operating costs.

### 3) Promoting the construction of campus culture

By strengthening the construction of a university culture, fostering and carrying forward the university spirit, we have been establishing and improving the system of culture inheritance and the education of university ethos to create a campus culture impregnated with marine culture. In order to strengthen the research into and the publicity about outstanding traditional Chinese culture and socialist core values to give full play to its enlightenment and education, we are sticking to the principle of guiding scholarly education with value education to integrate the whole process of teaching and education with socialist core values. We will forge a sound culture of teaching to guide teachers to devote themselves to education and research and guide students to learn with passion, method and diligence, forming a splendid atmosphere of teaching and learning in line with the university spirit. We will intensify the study of the university's history and ethos. By exploring the establishment of sound mechanisms for cultural education to cultivate faculty and students imbued with the SHOU ethos as well as the spirit of "Diligence, Sincerity, Dedication and Practicality", we will strengthen the construction of marine culture, investigate and establish a marine culture with our unique characteristic.

### 4) Actively managing mass work

We will improve the income distribution system to increase staff income in a steady manner. We will improve the welfare

system and reward system. We will take care of the physical and psychological well-being of the staff by enriching activities for their spare time. We will pay attention to the growth of young teachers and provide aid to those from poor families. We will continuously provide services for the retired, especially those experiencing hardship and those students, especially those from poor families. We will give full play to the role of organizations such as the Workers' Union, the Communist Youth League, and Women's Committee in the communal work.

5) Strengthening the construction of an environmentally-friendly campus

We will deepen the construction of an energy-saving campus by continuing to make efforts in energy saving and emission reduction. We will increase publicity and education aimed at staff and student advocating a healthy lifestyle and a good habit of frugality. We will actively carry out energy-saving innovation on campus to explore new ways of cutting expenditure, planning campus construction as a whole to prioritize efficiency and sustainable development.

6) Improving the construction of a safe campus

We will establish and improve the long-term mechanism to enhance the safety and security management of the university. We will strengthen campaigns to improve the awareness of safety precaution and maintain security and stability. We will

improve campus security management, campus security prevention and control system to promote the capacity to respond to emergencies. We will improve the awareness of secrecy and attach importance to secrecy-related work.

## **8.Improving the management system to accelerate the construction of modern university system**

### 1) Improving the decision-making mechanism

By adhering to the system of presidential accountability under the leadership of the Party Committee, we have been managing the university in accordance to the law and the democratic management to form a scientific and rational decision-making mechanism. We will constantly improve the rules of procedure and the decision-making process of the Party Committee and administration to establish a scientific decision-making mechanism. We will improve the decision-making mechanism by incorporating the teachers' and the students' participation and expert advice. We will give the full play of organizations such as academic committees, Teacher's Representative Committee, Student's Representative Committee in democratic decision-making.

### 2) Standardizing operation system

We will improve the regulation system with *The Constitution of SHOU* to form a dynamic work mechanism for “repealing, modifying, and establishing”, the work mechanism and process to advance the reform of the operation of the administration

system and other university affairs, and coordinated operation mechanism led by Party Committee, establishing the effective mechanism of party power, administrative power, academic power and democratic power to explore the system and operation mechanism of "Professors' Academic Governance", reconstituting organization system to establish and improve the classified assessment method. We will establish integrated management system.

### 3) Strengthening supervision and management

We will improve the democratic management and supervision mechanism. By improving the management system of internal supervision of the leadership, we will improve the quality of its democratic life and strengthen the self-monitoring within the leadership. We will advance campus-affair publicity to facilitate the supervising system. We will establish and improve the decision-making mechanism to value and improve the studies on legality and feasibility of major policies, rules and decisions. We will establish and improve the evaluation mechanism with the combination of studies by functional departments, consultation from experts, discussion by teachers and students and external evaluation.

### 4) Deepening the two-level management

We will promote a two-level administration to clarify the responsibilities, rights and interests between the university and schools by transforming the functions of the university



administrative departments and strengthening the functions of the schools as major educational and administrative institutes. We will rationalize the system to optimize the organization system based on the orientation of schools and improve school governance structures to guide them to establish mechanisms for academic organizations' participation in the decision-making. We will strengthen differentiated guidance and administration to establish a classified performance evaluation system for the school. We will promote the two-level allocation and assessment to experiment the administration model where the university transfers power to the schools in personnel, finance, etc.

## Part Three Supporting Measures

### 1. Strengthening the Party's leadership to provide political guarantee

In order to improve the ability of the leadership at all levels of operation and governance and to give full play to the enthusiasm and initiative of the masses of party members and cadres, we will enhance cadres' sense of responsibility, opportunity and innovation by making efforts to improve the scientific level of party building and promoting sound and rapid development of the university. We will promote the comprehensive construction of Party ideology, organization, style of work, corruption fighting and systems, facilitating their abilities in self-purification, self-improvement, self-innovation and self-upgrade and building learning-oriented, service-oriented, innovation-oriented party organization to provide a strong political, ideological and organizational guarantee for the development of the university.

### 2. Providing institutional mechanisms via in-depth implementation of the comprehensive reform program

By carrying out in-depth implementation of the comprehensive reform program to deepen the reform of talent cultivation model, personnel system and scientific research system, we will provide institutional mechanisms for the effective promotion and implementation of “*13th Five-year Plan*” by accelerating the pace of reforms in key areas and crucial links.

### 3. Advancing the implementation of rules to provide system guarantee

We will advance the implementation of *the Constitution of SHOU* to accelerate the construction of a modern university system. We will adhere to the democratic administration principle of the party leadership, presidential accountability, and professors' academic governance to improve the administration system and operation mechanism of the university. We will build the University Advisory Committee with the participation of various bodies in decision-making, the reporting system of the university operation and administration to mainly form reports on business operation, human resources, financial operation and audit analysis.

We will optimize the allocation of resources to give priority to issues in key areas and key links affecting the development of the university. We will establish and improve the allocation management and cost-sharing system of public resources.

### 4. Raising funds via diversified channels to provide more support

By actively expanding the sources of funds and improving the mechanism for raising funds through various channels, we will stimulate the independent financing ability of the schools. We will actively obtain other external sources of funding like competitive funding while making effective use of indirect funding.

By centering on development strategies of the university, we will optimize the financial expenditure structure, by making the effective use of assets to improve the efficiency of fund,

strengthening budgetary financial management and internal control to intensify the capacity of production, learning and research at the university, adhering to the principle of budget openness and establishing a financial reporting system.

5. Conducting widespread publicity and mobilization to increase the degree of consensus

While strengthening publicity on *The Plan* to the faculty and the students via a variety of media forms to enhance the sense of consensus, responsibility and mission over the developmental ideas, goals, and strategic tasks during the next five years, we will improve the implementation of *The Plan* and effectively guide them to become involved and participate in oversight. We will make our grand achievements with the support and wisdom of all.

6 Revision and adjustment to *The Plan*

In order to strengthen the organization and implementation of *The Plan*, we will set up a committee for the planning and implementation to enhance the macro guidance, strategic management and implementation capacity. By strengthening the assessment and monitoring the implementation of the plan, we will explore and improve the tracking evaluation system by third-party evaluator, improving the assessment mechanism and system of accountability.

We will make necessary adjustments and revisions on corresponding contents and measures in accordance with the assessment and examination of the implementation of *The Plan*.

Such adjustments and revisions can be made only on the basis of wide hearings and the approval of the decision-making bodies such as the Standing Committee of the CPC Committee of SHOU.