

China

The 13th Five-Year Plan and Example of Opportunities for Swiss Companies

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1. What is a Five-Year Plan?

China's five-year plan is a blueprint containing the country's social, economic, and political goals. They encompass existing and future policies, regional plans, and strategic initiatives. A five-year plan signals the Chinese government's vision for future reforms and communicates this across the central and provincial governments as well as to local and foreign companies. It is a living document that will go through constant review and revision over the next five years.

2. The 13th Five-Year Plan

The 13th Five Year Plan ("13th FYP") was approved and issued in March, 2016 when the national legislature annual session drew to a close. This is the first Five-Year Plan drafted under the current Chinese leadership, and also the first since China's economy entered what policymakers refer to as the "new normal", a phase of moderating growth increasingly based on consumption and decreasingly on exports.

The plan's significance also lies in the fact that the Chinese economy, the world's second largest, is still facing downward pressure and undergoing structural reforms amid fragile global recovery, shown by its 2015 GDP expansion of 6.9 percent, the slowest in a quarter of a century.

President Xi Jinping has set the target of 6.5 GDP growth annually and through the 13th Five Year Plan they will seek to close the middle income economic trap, increase annual income per capita to reach 12,600 RMB, create 25 million new jobs annually, reduce the population living in rural poverty by 70 million and support policies of urbanization. The Household Registration Reforms of 2015 already demonstrate an intention to encourage greater flow of talents to secondary and tertiary cities with these developmental clusters serving as growth hubs.

Achieving such growth will not be easy. On the one hand, China is trading quantity for quality; on the other hand, problems such as industrial overcapacity, a backlog of unsold houses, mounting government debt and subdued global demand cannot be solved overnight.

3. The Five Tenets of the 13th Five-Year Plan

The 13th FYP proposal contains five main principles underpinning the policies for China's future development. None of these ideas are new, but have been put into one place for the first time. They are to work in tandem to achieve the overall goal of creating "a moderately prosperous society."



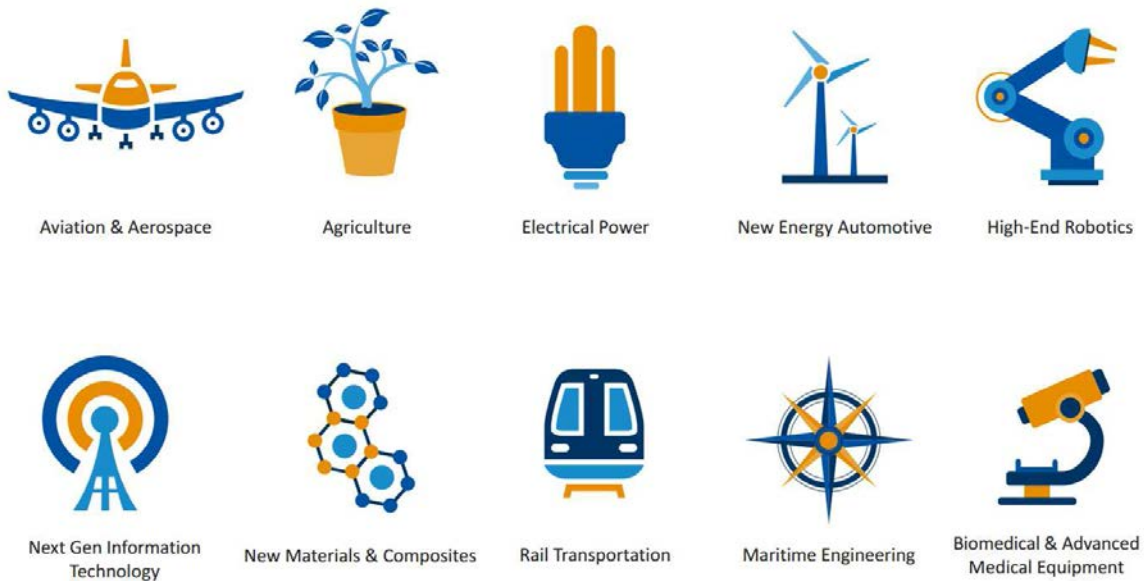
3.1. Innovative Development as the backbone of the new development paradigm

This will be the primary driver of economic development to shift China's economic structure into a higher quality growth pattern, moving away from the mass manufacturing model that has been the foundation of China's economic boom until now.

- Emerging industries: nurture environmental, biotechnology, IT, smart manufacturing, high-tech equipment, new energy industries and support upgrading of traditional industries;
- Internet+: Develop Internet of Things (IoT)¹, shared economy and big data strategy;
- "Made in China 2025": reform its manufacturing practices and take a significant step into high-end manufacturing. The negative environmental impact, rising labor costs and increasing competition from low cost competitor regions (particularly in South East Asia) are necessitating China to upgrade its manufacturing processes.

¹ The Internet of Things (IoT) is the network of physical objects—devices, vehicles, buildings and other items—embedded with electronics, software, sensors, and network connectivity that enables these objects to collect and exchange data. The IoT allows objects to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit; when IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smart grids, smart homes, intelligent transportation and smart cities. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the existing Internet infrastructure.
https://en.wikipedia.org/wiki/Internet_of_Things

The ten key focus sector areas of China 2025 have been identified as:



- Strengthen innovation in science and technology: boosting science spending which will rise 9.1% this year to 271 billion yuan (\$41 billion), reducing bureaucratic barriers for scientists, and improving environmental protection while curbing carbon emissions and other pollutants;
- Modernize agriculture: protect cultivated land; develop new-style professional farmers and ensure legal land use rights of farmers.

3.2. Coordinated Development

China will ensure balanced development among rural and urban areas and across different industries.

- Improvement in rural infrastructure and public services;
- Reform on the household registration policy;
- More equal access to public services.

3.3. Green Development

In order to combat the environmental issues resulting from China's rapid industrialization, future development means protecting the environment and pursuing environmentally friendly economic growth.

- "Energy revolution" – shift to renewable energy;
- Support recycling and low-carbon transportation systems;
- Control emission by strengthening regulation and supervision;
- Promote conservation among industries and consumers, emphasizing on water resources.

3.4. Opening Up

China should utilize both domestic and global markets and be more active in global governance.

- Release the access restrictions for some service industries, such as pre-school education, construction design companies and foreign invested accounting firms;
- Market access to financial industries will be expanded: China will allow more foreign capital being injected into financial industries such as banking, insurance, stock, aged industry etc. by ways of granting more preferential policies or probably reducing the restrictions for these industries to some extent;
- Encouraged industries and investment direction: foreign investments are encouraged to industries such as advanced manufacture, high technology, energy-saving and environment-protection, modern service industry etc.
- One Belt One Road (OBOR): create new trans-continental trade routes that will benefit different areas to general globalized trade, particularly undeveloped areas of China; enhance cooperation with international financial institutes on the Asian Infrastructure Investment Bank (“AIIB”), Silk Road Fund and New Development Bank.

3.5. Inclusive Development

China wants to ensure that China's prosperity is shared among the whole population and delivers improved social services.

- Expand middle-income group and significantly raise income for lower income group;
- Improve public health system through deepening medical reform;
- Improve social insurance system to cover all residents in China and lower insurance rates to a reasonable level.

4. Example of Opportunities for Swiss Companies

While it remains to be seen how China will balance growth and reforms, investors are excited by a new wave of opportunities brought by the country's yearning for quality growth. Supply-side reform, innovation, technological upgrades, market competition, more efficient state-owned enterprises and low fossil-fuel dependency have all been given pride of place in the latest five-year plan.

China's expenditure on research and development in the next five years will be 2.5 percent of the GDP, up from 2 percent last year. This increased investment will support sophisticated projects such as deep space exploration and robotics.

Below are three areas where Swiss companies find business opportunities among others.

4.1. Water Pollution Control

In the one hundred major projects² planned in the 13th FYP, projects related with water pollution control are listed below:

67. Completion of 3000 square km of drainage area and over 244 river management locations;

76. Comprehensive water pollution control and environmental repair in Jiaozhou Bay, Liaodong Bay, Bohai, Hangzhou Bay, Hap Mun Bay and Beibu Gulf.

In addition, wastewater treatment rates are set to increase to 95% in urban areas and 85% in non-urban counties.

By the same token, the State Council issued the 'Water Pollution Prevention and Control Action Plan' (or known as the "Water Ten Plan") on 16 April 2015, with the aim of improving the quality of the water environment around the country by 2030. The action plan requires that by 2020, China's water environment quality will gradually improve; the percentage of severely polluted water bodies will be greatly reduced and the quality of drinking water will be improved. Also by 2020, groundwater overdraft will be reduced; the aggravated pollution of groundwater will be preliminarily controlled; the environmental quality of offshore areas, and the aquatic ecosystem in areas such as the Beijing-Tianjin-Hebei Region, will be improved.

Measures will aim to continue saving and protecting water resources. A strict management system of water resources will be implemented so as to control the overall use of water, improve water-use efficiency, and protect the ecological flows of key rivers.

In Switzerland, there are about 500 engineering, planning and consulting companies working in the fields of waste water treatment, about 200 producers of technical systems or components for waste water treatment. If the producers of basic components (pumps, electrical measurement, IT-controlling systems, etc.) are included, there are several thousand Swiss companies related to waste water treatment.³

These companies will find plenty of opportunities in China if properly linked to local players who are looking for Swiss technologies.

4.2. High-end Robotics

China plans to triple its annual production of robots used in the manufacturing sector to 100,000 in five years. Chinese government subsidies are also driving up robotics demand. China is currently subsidizing robot producers and manufacturers who install robots in their factories — spending between \$31.4 million to \$78.5 million annually.

² Complete List of the One Hundred Projects is attached in Appendix

³ Data provided by Cleantech Team working at Switzerland Global Enterprise (S-GE)



Source: Financial Times

China became the world's largest market for industrial robots in 2013, surpassing Japan, according to the International Federation of Robotics. The organization estimates that the country will continue to drive demand for various types of robots due to the automation of its factories and increasing demand for service robots in an aging society. Increasing labor costs and labor shortages are pushing some manufacturers to adopt robots in product lines.

In view of the many actors active in this field in Switzerland, be the many labs working closely with our universities, EPF and the various suppliers of robotics and industrial automation solutions, there are opportunities looking at China upgrading its economic structure from a labor intensive to a more technology and automation oriented economy.

4.3. Food safety inspections and traceability

Following various food safety scandals (cadmium rice, growth hormone fed chicken) in the recent years, this has led to the development of a new food safety industry as well as the adoption of new technologies in order to tackle this problem. The Chinese food safety legislation has been improved dramatically.

Last year the testing and inspection sector in China was valued at 6 billion CHF.

Under the 13th FYP, there will be further improvement in laws and regulations, increasing onsite checks and inspections as well as the establishment of a traceability mechanism throughout the various supply chains.

This new trend will clearly promote even further the growth in the inspection, tracing and related industries. In consequence, this will create additional opportunities for our Swiss companies active in inspection and tracing solutions.

Appendix:

One Hundred Projects Planned in the 13th Five Year Plan

1	Aircraft Engines and Gas Turbines
2	Deep Oceanic Station
3	Quantum communication and quantum computers
4	Neuroscience and brain-like research
5	National Cyberspace security
6	Deep space exploration, on-orbit spacecraft servicing and maintenance
7	Agrochemical Seed Research
8	Clean and efficient use of coal
9	Ground, sky and spatial information systems integration
10	Key new materials and applications
11	Establishment of scientist research laboratory in advanced field of R&D
12	Active support & foster of outstanding youth in key disciplines
13	Cultivate 10'000 business management personnel proficient in strategic planning, capital operation, quality management, human resource management, finance & accounting and law.
14	Promote the return of 10'000 highly qualified Chinese as entrepreneurs in China, and accordingly train about 10'000 domestic Chinese
15	Train about 1 million high skill professionals every year
16	Construction of 1'200 high-skill talents training centers with an output of 1000 highly skilled personnel per center
17	8 million hectares of high quality farmland, strive for 10 million
18	Establish national Germplasm Collection, Preservation and Research System. Establish national level seed production bases in Hainan, Gansu, Sichuan and 100 other regional level high-quality seeds breeding location
19	Add 100 million mu (1 mu = 1/15 hectare) of water-saving irrigation areas
20	Establishment of 500 fully mechanized pilot counties: mechanization of main crops farming has to reach about 70%
21	Implementation of 'Internet+Modern Agriculture' concept
22	Establishment of a quality and safety tracking system for the traceability of agricultural products
23	Pilot Projects of "Hundred Counties Ten Thousand Villages" - Primary secondary and tertiary industries integration in rural counties
24	Acceleration of the development of large aircrafts
25	Development of space platforms and effective payload such as new generation and heavy launch vehicles, new type of satellites
26	Development of deep-sea exploration, ocean drilling, exploitation of seabed resources, maritime operations security and other equipment. Promotion of deep water station and other large floating structures.
27	Research and Development of new generation of high-speed, heavy-duty transportation equipment system
28	Development of high-end Computer Numeric Control (CNC) machine tools
29	Development of industrial, service, surgical, military robots. Promotion of artificial intelligence technology in various fields.
30	Development of advanced agricultural machinery products which can adapt to various farming conditions
31	Development of nuclear medicine imaging equipment, superconducting magnetic resonance imaging system, non-invasive ventilation and other high-performance medical devices
32	Development of medical instruments with traditional Chinese medicine features
33	Development of advanced chemical equipment

34	Integrated industrial systems, artificial intelligence and intelligent hardware, new display, mobile terminals, 5G, advanced sensors and wearable devices
35	Accelerate large-scale application of biotechnology such as Genomics
36	Accelerate Commercial applications of Beidou, Remote Sensing Satellite
37	Development of energy storage and distributed energy
38	Development of shape memory alloy, self-healing materials, intelligent materials, graphene, super materials and other high-end nanomaterials
39	Sale of 5 million New Energy Vehicles
40	Construction of high-speed large-capacity optical communication transmission systems
41	IoT application, infrastructure and service platforms
42	Support public cloud services platforms, cloud computing and big data centers. Push for Guizhou and other locations' comprehensive big data experimental zone constructions.
43	Acceleration of a unified e-Government network
44	Internationalization of e-commerce supply chain channels
45	Construction of a national cybersecurity and information security systems
46	Extension of the high-speed railway network to 30'000km, covering 80% of all cities
47	Add 30'000km new highways
48	Construction of Sichuan-Tibet Railway and other border railways
49	New Beijing Airport and 50 other new airports around the country
50	Intense promotion of Shanghai, Tianjin, Dalian, Xiamen and other international shipping centers and increase of port efficiency
51	Construction of urban agglomeration ring roads
52	Construction of 3'000km urban rail transit
53	Direct access to postal services in all villages
54	Acceleration of 'Internet+Vehicle' and 'Internet+Boat' concepts
55	Promotion of self-driving vehicles
56	Construction of smart and efficient grid
57	Ultra-low emissions and highly efficient coal-powered plants
58	Attain 60 Gigawatts using hydropower
59	58 Gigawatts using existing nuclear power plants, add 30 Gigawatts with new nuclear power plants
60	Exploration of tight oil, oil sands, and deep-water oil
61	Construction of hydropower bases and large coal power plants outside existing grids
62	Completion of the second phase of the National Petroleum Reserve, and expansion of natural uranium reserves.
63	Effective irrigation area of more than 10 million mu (1 mu = 1/15 hectare)
64	Construction of several large water diversion projects. Carry forward the construction of the middle part of South-to-North Water Diversion Project
65	Construction of water reservoirs in Tibet, Zhu Xi, Zhejiang, Fujian, Heilongjiang, Hunan Mangshan, Yunnan and other locations
66	Water conservancy engineering projects in Xijiang Datengxia, Huaihe mountains, Xinjiang and Al Tash Basin
67	Completion of 3000 square km of drainage area and over 244 river management locations
68	Grant urban residency to 100 million rural people who have moved to cities. Accelerate the rebuilding of rundown city areas and villages inside cities accordingly. Guide the urbanization of around 100 million rural residents of in the central and western regions.
69	Cultivate a batch of small and medium-sized cities
70	Development of small towns with distinctive resources, location advantages and cultural heritage
71	Construction of pilot smart cities, pilot green cities, ecological garden cities and forest cities
72	Construction of sponge cities
73	Construction of a network of pipe galleries
74	Increase of water supply coverage in rural areas to 80%

75	Implementation of major projects in various areas
76	Comprehensive water pollution control and environmental repair in Jiaozhou Bay, Liaodong Bay, Bohai, Hangzhou Bay, Hap Mun Bay and Beibu Gulf.
77	Achievement of technological breakthrough of "Longgong 1" deep ocean laboratory project
78	New shore observation station in the Arctic, new research station in Antarctica, new advanced icebreaker for better Antarctic exploration
79	3D global ocean monitoring and measurement system
80	Water usage monitoring project in key government units
81	Construction of 50 industrial waste recycling centers
82	Control of industrial pollution emissions
83	Replacement of 189'000 tons of coals with 45 billion cubic meters of gas
84	Improvement of 378 rivers water quality to reach Class III water quality standard
85	Reversal of 10 million mu of arable land contamination and establish risk control on 40 million mu
86	Construction of 5 low-level radioactive waste disposal sites and 1 high-level radioactive waste laboratory
87	Promotion of ecological restoration of national Plateau, Loess Plateau, and other core areas
88	Construction of green spaces and green corridors connecting existing ecological areas
89	Development of comprehensive land development, protection and remediation in border areas
90	Soil erosion control area of additional 270'000 km ² . National wetland area should be no less than 8 million mu.
91	Development of special industries to lift over 30 million people out of poverty, transfer of 10 million to other types of employment and relocate 10 million people from their poverty-stricken homeland to other areas.
92	Reconstruction/Renovation of 1 million km of rural roads
93	Access to vocational education for high school graduates from poor families and inclusion of all qualified poor families into the minimum income security scheme
94	Standardization of mandatory education, improvement of accessibility to high school education and construction of government-subsidized kindergartens
95	Focus on a number of universities and a number of disciplines in order to reach world-class level
96	Promotion and education on OBOR initiative
97	Lower major chronic premature mortality rate by 10%. Construction of 1 to 2 public hospitals per county and creation of 30-minute basic healthcare services.
98	Increase of youth physical fitness standard compliance to 95%
99	Implementation of ancient Chinese culture protection program
100	Form a good Chinese story building team.

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