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## Swiss Ambassador Jean-Jacques de Dardel unveils Swiss Innovation Week 2018

*The following Q&A with Swiss Ambassador to China Dr. Jean-Jacques de Dardel provides insights into the Swiss Innovation Week 2018, the Sino-Swiss Innovative Strategic Partnership, Swiss innovation and digitalization, and positions Switzerland as a leading country in innovation and technology.*

**Q: What is 'Swiss Innovation Week 2018' about? What is the main topic?**

**A:** In the past years, bilateral relations between Switzerland and China have become particularly dynamic and intense. Among the significant milestones, the Sino-Swiss Free Trade Agreement signed in 2014, the Innovative Strategic Partnership established in 2016 and Chinese President Xi Jinping's visit to Switzerland in 2017 offer unique opportunities to develop and strengthen bilateral ties. The milestones highlight Switzerland's position as one of the most innovative countries in the world. However, the leading innovative capacities of Switzerland, which have been validated by various rankings, are often overlooked in China.

Therefore, the Embassy of Switzerland in China is dedicating for the very first time a full week to highlight Swiss innovation. In brief, the Swiss Innovation Week (SIW) is a series of events and activities dedicated to Swiss innovation with digitalization as the main topic. We will highlight Swiss innovation in a variety of fields and showcase Switzerland's capacity of creation, its innovative power supported by unique mechanisms, especially the bottom-up approach, the high living standards enhanced by cutting-edge technologies. Meanwhile, the week also serves as a platform for the launch of new collaborations between Swiss and Chinese partners, for example the Sino-Swiss AI conference 2018, the ABB 2018 University Innovation Contest.

Different from a lot of other innovation weeks or fairs, **the SIW focuses on concrete projects with impact on the different spheres of bilateral relations**, be they political, education, culture, sustainability, or humanitarian efforts. It serves first and foremost the broader public in China and aims to bring Swiss creation spirit and digitalization closer to the audience and everyday life. Our ultimate goal is to facilitate collaborations and explore potentials between Swiss and Chinese governments, institutions, and the private sector.

**Q: How did you decide on the topic and why?**

**A:** The innovation week focuses on 'digitalization' in particular, which is becoming a new trend in globalization. Without doubt, Switzerland is a driving force of the trend and is assuming strong leadership in the sector of high-technologies, for example in artificial intelligence, internet of things and big data. Meanwhile, China has become one of the biggest and most

dynamic markets embracing new technologies in the fields of new-generation and advanced technologies, with initiatives such as 'Made in China 2025'. Therefore, digitalization is a topic of interest to both countries. It has a broad range of applicability in many fields, and is the focal point of important private and public initiatives.

On a personal note, digital transformation is touching all of us and our lives are being increasingly determined by digitalization. For example in China, many trivial aspects of our daily life depend on mobile APPs, like ordering food deliveries, checking flight schedules, buying concert tickets, paying fees. While we benefit from increasing digitalization in all walks of life for a high-quality life in a fast-pacing society, we also need to understand where this trend leads us, either in our private lives, or for society, the economy and the state at large.

**Q: How is the week being organized and what are the major highlights of the event?**

**A:** As I mentioned earlier, in Switzerland innovations spring up from the bottom: firms or individual research teams take the initiative and the government provides a fertile and favorable environment, for example policy framework for creation to take place. Our SIW is somehow organized in such a way: the embassy provides the platform, and our partners--companies, institutes, organizations take the initiative organizing their events.

During the SIW from 2nd (Monday) to 6th July (Friday), our partners in different industries will be united under one umbrella. They will have the opportunities and stages to organize their own events within the premises of the Swiss Embassy. The SIW incorporates a multitude of formats such as interactive showcase of technological innovations, product presentations, panel discussions, and artistic performances. A grand reception to celebrate Swiss innovation and the end of the week will be organized on 6th July in the evening with 2,000 guests expected.

The embassy is working with about 20 partners and sponsors and hosting as many as 35 events. Some of the interactive and engaging events and activities include:

- **Birdly®: the Ultimate Dream of Flying.** The development of the Birdly® virtual reality simulator is to fulfill people's ancient dream of flying. Described by tech website CNET as one of the best virtual reality experiences in the world, Birdly® generates a lively full-body experience in which mechanics and computer codes hidden behind this spectacular apparatus seem to quickly disappear.
- **Swissnex Dome.** The swissnex Dome offers a 360° panoramic visual and sound experience, taking audiences on a fully immersive journey. The giant dome will be situated at the center of the embassy's garden during Swiss Innovation Week. It will host an intense and eye-catching program with full-dome projections over four days.
- **Artificial Intelligence and Robotics.** The event features keynote speeches from leading experts and a panel discussion on innovation and R&D in Artificial Intelligence and robotics landscape in Switzerland and China. The discussions aim to spark new ideas and inspire new forms of collaboration between the two countries. It will also witness the kick-off of the Sino-Swiss AI conference 2018, to be held in Beijing in September.
- **ABB Innovation Seminar.** ABB, a world giant and pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, will exhibit its world leading technologies and recent developments. It will also hold a seminar to introduce its recent development in its cutting-edge digital solutions and applications, promoting the ABB 2018 University Innovation Contest.

**Q: What is Switzerland's position in the world regarding innovation?**

**A:** Switzerland leads the world with the highest rate of patent certificates by inhabitant and boasts the largest number of Nobel Prize winners per capita. It is the most innovative country in the world, according to various rankings, such as the European Innovation Scoreboard and the Global Innovation Index. It ranks:

- No. 1 in the World Economic Forum (WEF)'s Global Competitiveness Index 2017, for nine consecutive editions since 2009
- No. 1 in the Global Innovation Index in 2017, for the seventh consecutive year
- No. 1 in the Innovation Union Scoreboard 2017
- No. 1 in Change Readiness Index 2017

**Q: What is unique about 'Swiss innovation'?**

**A:** Swiss people have their own perception of innovation. It is not only a spark of the mind or creativity, but also about products. It has to be translated into new products that have a market. This we call '**practical innovation.**'"

We can see in Switzerland that our innovation process is linked to high-level education at our different schools of training including vocational training, professional schools, universities, or research institutes. However, these educated minds must produce practical imagination. This is where our genuine pool of start-ups, very often linked to top-notch universities like our Federal Institutes of Technology of Lausanne and Zurich, intervene. What we see in different sectors is the same: Swiss companies are extremely creative. The service, agriculture, and heavy machinery industries are excellent examples. "Swiss innovation" can be hard to see through the eyes of a consumer, but it's there wherever you look: cars, machinery, IT equipment, buildings, construction materials – all are rich with "Swiss innovation." These products drive the economy forward. Our ways to think out of the box are about attitudes, a way of working innovation across the board.

**Q: What is behind Switzerland's success as an innovation-driven nation?**

**A:** The fact that the public sector does not forcefully steer innovation or industry politics in the narrower sense is probably the real secret of Switzerland's success. Innovation springs up and blooms in the private sector where creative minds understand how to transform ideas and discoveries into products and services. This we call the 'bottom-up' approach. Innovative firms identify market potential, develop markets and create jobs and prospects for people. To summarize, the reasons behind the success of Swiss innovation are the following:

**Switzerland's first-class education system.** With its strong dual-track vocational model and excellent, internationally renowned universities, such as the Federal Institute of Technology in Zurich (ETH Zurich), Switzerland offers an education with one of the highest standards in the world.

**Top-notch research facilities and strong research community.** In Switzerland, basic research is primarily carried out by universities and ETH Zurich (always Top 10 University in the world) and the Federal Institute of Technology in Lausanne (EPFL) (No. 1 young university). Universities of Applied Sciences concentrate on applied research and development, with a view to forging closer links between industry and the world of academia.

**Involvement of international and private institutions.** Leading international laboratories and centers of excellence have been established in Switzerland. For instance, the American high-tech company IBM set up its European laboratory in Rüschlikon, near Zurich, and the European Organization for Nuclear Research (CERN), the world's most advanced research institute on nuclear science, established its headquarters on the outskirts of Geneva, 64 years ago.

**Funding from federal and private organizations.** To make sure that the country maintains its competitive edge, generous federal and private funds are made available to research projects and programs. Switzerland is the country with the highest spending on R&D in relation to GDP. Two-thirds of the research conducted in Switzerland is privately funded, with most financial backing provided by the chemical, pharmaceuticals, electronics and metal industries.

**High numbers of foreign population.** In addition, the country also benefits from the large number of high-talented foreign residents, about 25 percent of the total population, who greatly contribute to the country's advancement in science, research and technology.

**Q: Since 2009, Switzerland has been listed at the No. 1 in the World Economic Forum (WEF)'s Global Competitiveness Index, for nine consecutive editions. It also outranks EU in innovation. Can you please introduce how the Swiss Confederation helps with the innovation industry at government level?**

**A:** The Swiss government is reluctant to dictate the areas and programs for innovation from top down. Only 1/3 of the funds for R&D activities in Switzerland (3% of GDP) are provided by the public sector and 2/3 from the private sector. Therefore, the government provides its capable support to initiatives from the private sector. For example, the government has long-term commitment to facilitate innovation and research. It supports the dual education system and vocational training, higher education and research, encouraging collaborations between universities, institutes and enterprises, especially small and medium-sized enterprises to carry out science-based innovation activities.

The Commission for Technology and Innovation (CTI) is the federal innovation promotion agency responsible for encouraging science-based innovation in Switzerland by providing financing, professional advice and networks. By helping to transfer research results into concrete marketable products, the CTI helps to improve the competitiveness of Swiss businesses.

Meanwhile, Switzerland plays a major role in multiple current large-scale projects, such as the [Human Brain Project](#), [Solar Impulse](#), and the [Large Hadron Collider](#) at the [CERN](#).

A concrete example of how the government supports initiatives from the private sector is the Venture Leaders project. An initiative from the Venturelab, each year a group of 10 high-tech Swiss startups is selected by the company, and goes on a 10-day market exploration and business development journey in rising entrepreneurial and economical metropolis in China. Their tour is highly supported by the Swiss Embassy in China, its Consulates General, swissnex China, in which the government organizations apply their resources to help the startups to make the best use of their China tour to either meet potential business partners or expand markets.

**Q: Switzerland is known as an innovation, science and technology nation. What are the latest Swiss innovations and discoveries?**

**A:** When it comes to innovation, science and technology, Switzerland has long enjoyed international renown. Swiss scientists are involved in ground-breaking research, in part with foreign colleagues, in sciences ranging from nanotechnology to space research. Thanks to the long and lasting commitment to invest in education and research, Switzerland has been home to a number of the world's most innovative projects and discoveries, such as:

**Developing of electron cryo-microscopy by Swiss biophysicist Jacques Dubochet.**

Professor Dubochet was awarded the Nobel Prize for Chemistry jointly with his American colleague Joachim Frank and his British colleague Richard Henderson for their work on developing electron cryo-microscopy in 2017. The technology allows scientists to examine biomolecular samples under a microscope without having them dry out or lose their natural structure.

**Solar-powered aircraft Solar Impulse.** The Swiss solar airplane is a pioneering project led by Swiss engineers, explorers and adventurers Bertrand Piccard and André Borschberg. Powered by solar power only, Solar Impulse 2 circumnavigated the world from 2015 to 2016, with a total of 23 days of flight and 43,041 km, becoming the world's first plane powered by renewable energy source to tour the globe.

**The Gotthard Base Tunnel.** The Gotthard Tunnel is a railway tunnel through the Alps in Switzerland. After 10 years of construction, it opened on 1<sup>st</sup> of June 2016 with full service began in December that year. At 57 kilometers, it is the world's longest and deepest traffic tunnel. As the first flat, low-level route through the Alps, the tunnel itself is breaking records: trains run at high speed (up to 275 km/h) through the tunnel located up to 2,300 meters below the surface.

**Swissloop.** A team of 40 students of physics, mathematics, electricity, mechanics and civil engineering from the Federal Institute of Technology Zurich (ETH Zurich) is developing the prototype of the 'carriages' for a new mode of land transport: the Hyperloop. This train, which is powered by solar-generated electricity, is in fact made up of small capsules, in which the passengers sit, and is said to be capable of speeds of almost 1,200 km/hour – even more than an airliner.

**SwissFEL** is the new highlight in Switzerland's research Infrastructures. It is Switzerland's X-ray free-electron laser at the Paul Scherrer Institute and was inaugurated in December 2016. The project is based on a novel technology holding exceptional promises for diverse areas of scientific research. SwissFEL will provide unprecedented insights into structures as small as an atom and into phenomena as fast as the vibrations of molecular bonds. It will also reveal the secrets behind the inner complexity of technologically relevant materials.

**Q: Switzerland and China established the Innovative Strategic Partnership in April, 2016, following the state visit of Swiss President Johann N. Schneider-Ammann. What does this new partnership hold for the two countries?**

**A:** Innovation has many meanings, representing different ideas to different people. In the context of our new partnership, there are two main chapters to be looked at. On one hand, it is beyond doubt that our longstanding relationship has always benefited from its pioneering spirit. Throughout the history of our diplomatic relations, we have lots of "firsts" on both sides.

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With this notion, China and Switzerland are creative partners looking for new ways to develop a relationship that benefits each other.

On the other hand, we all know that innovation is a top priority for China. For the past years, Switzerland has been ranked the No. 1 country in the World Economic Forum (WEF)'s Global Competitiveness Index. Obviously, this brings us to consider further possibilities and ask ourselves how we can match this great innovation capacity on the Swiss side with the demand for innovation on the Chinese side. In the end, for our two countries the partnership is a promise for better actions in the field of innovation to deliver economic benefits.

**Q: What are the major follow-ups or achievements after the establishment of the partnership?**

**A:** Switzerland and China benefit from excellent bilateral relations, and the establishment of the Innovative Strategic Partnership offered an outstanding opportunity to intensify them. At the government level, the two countries have been working together to look into ways of developing platforms and institutionalizing frameworks. The State visit of President Xi Jinping last year - his first trip abroad in 2017 - underlined the growing importance China confers to Switzerland. To build upon this momentum, the then President of the Swiss Confederation Doris Leuthard visited China later the same year and, at this occasion, took part in the Belt & Road Forum, reaffirming Switzerland's positive posture towards the initiative.

The first Strategic Dialogue, operating as a new helm for the bilateral relation, took place earlier this year, during the first visit outside of Europe of our new Federal Councilor in charge of Foreign Affairs, Mr. Ignazio Cassis. A frank success, it established new perspectives of platforms for exchanges on innovation and development, which will take form in the coming months. The Strategic Innovative Partnership further brought the Switzerland - China bilateral relationship to a new level, broadening and deepening the scope of the two countries' institutional dialogues and consultations, from around 20 to above 30.

The Innovative Strategic Partnership, based on people to people relations, fostered a very successful Switzerland – China Year of Tourism in 2017. In 2018, its constructive attitude will be shown once more by an exciting presence of Switzerland to the China International Import Exposition (CIIE).

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