

EDUCATION

TECHNION AND STU

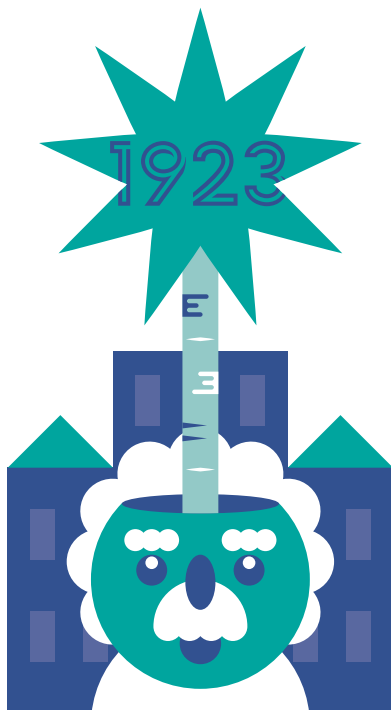
DESTINED

FOR A GREAT

FUTURE

Albert Einstein planted a tree on campus in 1923, starting a tradition continued by resident and visiting Nobel Prize winners which is still standing till this day. Einstein's tree is a Washingtonian Robusta. Strangely enough, it is the same tree featuring on the LKSF logo. Another piece of cultural genetics suggesting a mystical twinning between the new partners.

The Li Ka Shing Foundation has made one of the largest ever donations to an Israeli university to establish a Technology Institute with Shantou University in Guangdong. The USD130 million will join Israel's innovative achievements with China's massive scale of education to form a high tech power house.



In 1924, 16 young men sat in a new university in Haifa, Israel. Halfway around the world in Guangdong Province the same year, a group of students began their studies at a new school in Shantou. It would take 90 years for these twins to come together so they could begin to fulfil their destiny. Separated by continents and cultures, they have finally come together to start building a future for humanity.

Their union will serve a greater purpose in the 21st century, realised through a gift from the Li Ka Shing Foundation (LKSF), leading to exciting new possibilities for humanity in the world of technology.

On 29 September this year, a memorandum of understanding was signed by Technion President Professor Peretz Lavie and Shantou University (STU) Provost Professor Gu Peihua in Tel Aviv for the establishment of the Technion Guangdong Institute of Technology (TGIT).

It is a joint venture by the two institutions and Technion was granted USD130 million from LKSF for the development of TGIT. The grant is the largest ever to the Technion and one of the most generous in the history of Israeli higher education.

There is a mystery here. What destiny connects an Israeli technology leader and a southern Chinese centre of learning? Whose future does this coalition serve?

SHALOM! 你好! מולט!

The obvious story is the short one. The Israel-Li connection was forged after a visit to Technion-Israel Institute of Technology in 2011. Mr Li's private investment company Horizons made placements in some of the more promising ventures there. Mr Li's connection to STU as its founder and principal supporter was an obvious one and the relationship proved fruitful.

But a connection this deep and leading to such a profound commitment doesn't



Visiting the world renowned Technion – Israel Institute of Technology, LKSF Chairman Mr Li Ka-shing is welcomed by its President, Peretz Lavie and wife Dr Lena Lavie.

happen by accident. The story starts almost 100 years ago with a man named Albert Einstein.

START-UP NATION: HAIFA HI-TECH

Necessity is said to be the mother of invention. Israel, a small country in a dangerous neighbourhood, has had necessity – and invention. It has amazed the world with its advanced technological and scientific research. According to the IMD World Competitiveness Yearbook last year, Israel spent a world-topping 4.25 per cent of its GDP on research and development. The country has more high-tech start-ups per capita than any other in the world, earning it the moniker “Start-up Nation” in Dan Senor and Paul Siegel’s 2009 book of that name. In a country with a strong tradition of technological advancement, the Technion-Israel Institute of Technology is the leader in the country. Founded even before Israel, it will now have a chance to lend to the development of the world’s largest country in their drive for modernisation.

This did not happen by accident – it aligns with the strategic objectives of Israel and China. President Lavie, in an open letter to Technion supporters around the world, explained that “The Technion project in Guangdong is fully aligned with the policy of recent Israeli governments that have devoted much attention and efforts to

broaden and strengthen Israel – China relations at all levels. The Israeli Council of Higher Education has declared the development of academic collaborations with China a strategic goal and has even allocated resources for scholarships to Chinese students coming to study in Israel.”

He noted Prime Minister Netanyahu’s visit to China in May 2013 when they signed commercial cooperation agreements. Both gave their enthusiastic blessing to additional collaboration agreements between the two countries – with education top of the list.

When news of the deal got out, Israeli media took note. From *Israel 21c*, Karin Kloosterman reported: “This is the first time China has invested in and completely paid for a university to open up business and start operating in China,” says [Danny] Shapiro [of Technion], noting that the Asian country is already host to satellite campuses of US, Canadian and European universities looking to attract Asian students. “The Chinese and the people we are dealing with wanted the Technion to develop a world-competitive institution of education for engineering and science. They could have chosen any university in the world, and they chose Israel.” Visionaries at the national level have seen a channel in STU and Technion.

NOBEL TREES, PROUD TRADITION

The ‘Technikum’ was founded in 1912 as a technical and vocational college. Its founding pre-dates the founding of the modern nation of Israel, but has been crucial to its development. It has defined the young nation since before it began. Indeed, in 1914 – almost 100 years ago – its first conflict was one that helped define a nation without a country as the community fought over whether to teach in Hebrew – a language with no scientific pedigree or textbooks – or German. Hebrew won the day, and helped define the community.

“Israel can win the battle for survival only by developing expert knowledge in technology.”

Professor Albert Einstein,
President of the first Technion Society

“Imagining the impossible is the necessary and game-changing condition precedent to shaping and making ‘solution revolutions’ into reality...”

“Our responsibility is to invest in reforms... unlock that genius and enable the continuing realisation of human potential... Failing to do so amounts to a crime against the future.”

Mr Li Ka-shing



Above: Mr Li was shown various innovative projects on his recent visit at Technion.

In the early 1920s, physics legend Albert Einstein was inspired to found the first Technion Society and became its Chairman after visiting a devastated Haifa after the First World War. Today this series of supportive Technion societies that span the globe seek to support Israel and humanity through supporting the Technion Institute of Technology. He felt that the establishment of a technical school was crucial to the development of then Palestine and Jewry. He visited the premises in 1923 for the first time and became an ardent supporter. He also planted a tree that still stands in the Haifa campus today. In this, he started a tradition of visiting and faculty Nobel prize winners planting trees on campus. Three Technion Institute professors, in chemistry and medicine, have won Nobel Prizes – and planted trees – in the past nine years. A year later, in 1924, the first 16 students started their classes in Israel’s first university, studying civil engineering and architecture.

It may seem strange that such a venerable institution has become a leader in high tech. But leading professors and technopreneurs have emerged from its centres of excellence in nanotechnology, life sciences, stem cells,

water management, sustainable energy, information technology, biotechnology, materials engineering, aerospace and industrial engineering. This was not by accident – many believed success in technology crucial to the young nation’s survival after the Second World War. Technion became synonymous with Israel’s modernity, success and identity.

Now, it is ready to work with a new partner: Shantou University.

Professor Lavie describes the partnership as “a major breakthrough and an opportunity to strengthen ties between Israel and China.”

“We believe in globalisation. We believe that cross-cultural dialogues are essential. Opening up Technion and STU to these cultural dialogues is very important,” Professor Lavie said.

SHANTOU TWIN

STU, the other player in this grand project, has a long history with Mr Li and the LKSF. Much like Einstein in the early 20th century, Mr Li saw the need for a leading centre of research to lend to China’s modern development. His work to establish a school bore fruit when it was established

in 1981 with its first stone laying ceremony in 1984. It caught the eye of Deng Xiaoping, who encouraged its open development as key to China’s progress.

STU is not without antecedents however. In 1924 – the same year Technion – the university – was founded, the Chaozhou Obstetrics Training School opened its doors to aspiring young medical students. This Chaozhou School was transformed into Guangdong Province Shantou Medical Vocational School in 1959, which was merged into the new Shantou University when it was founded in 1981, giving it some pedigree to complement its youthfulness.

Co-developed by LKSF, the Ministry of Education and the People’s Government of the Guangdong Province, STU flourished. The LKSF has contributed HKD6 billion (about USD770 million) to date, of which 71 per cent was for academic development and 29 per cent for infrastructure.

The LKSF donation continues the tradition of advancing China’s development. In this, they have partners in government. For example, in mid-2012, the Ministry of Education, the Guangdong Provincial Government and the LKSF signed a

“We hope that by combining our research methodologies with the scale and resources of China, we will create a major research institute that will help not only China and Israel, but also mankind in general.”

Technion President Professor Peretz Lavie



Above: On his first visit to Israel, Mr Li meets the country's President Shimon Peres.

“If many universities in Guangdong and China do the same as Technion has been doing in Israel, an innovation-based economy will emerge.”

STU Provost Professor Gu Peihua

tripartite agreement to co-develop STU. The agreement outlines strong financial and policy support from the Ministry and the Provincial Government, and will also grant STU a unique status as a national model for education reforms in China. As for this TGIT project, Guangdong Province and Shantou Municipal Governments will set aside RMB900 million (about USD147 million) to fund the initial operations and the construction of the massive 330,000-square-metre TGIT campus next to STU. And it is going to happen fast.

TECHNION-GUANGDONG INSTITUTE OF TECHNOLOGY

While other institutions may have spent years on deliberating how to proceed, Technion moves as nimbly as the start-ups they have spawned. In August 2012, Technion was already building links by sending professors to China. From 16 to 19 August, the Technion delegation, including Senior Executive Vice President Professor Paul D Feigin, Deputy Senior Vice President of International Academic Relations Professor Anat Rafaeli, Academic Director of the International School of Engineering Professor Amnon Katz, Head of the Center for Systems Engineering Professor Aviv Rosen and Dean of Faculty of Medicine Professor Eliezer Shalev, visited STU.

They were met by Provost Gu Peihua, Vice President Lin Danming, and other representatives from College of Engineering, Teaching Affairs Department, Admissions Office, English Language Centre, and Foreign Affairs Department. They wasted no time in getting down to the technical details that will make the partnership work, such as details about course work, teaching methodology and how students are evaluated and accredited.

The first cohort of TGIT students will commence their studies in the 2015 academic year at Technion in Israel, according to the proposed development plan of TGIT, while the campus is under construction. Undergraduate courses in civil and environmental engineering, and computer sciences, will launch at the Institute. After one year in Israel, the students will return home in the second year to sow the seeds of innovation borrowed from abroad. Research will begin in 2014-15 to improve inadequate health care systems and clinical diagnostic procedures. Joining force with STU, TGIT

will conduct life sciences research based on Big Data, the analysis of huge, and sometimes real time, data collections.

More courses will be offered as TGIT moves forward. By 2020, students will be able to choose to study in other engineering-related fields, such as mechanical engineering. The language of instruction will be English and faculty members will be recruited worldwide. Efforts will be made to channel Israel's technology and technological creativity to China and achieve higher synergy with the local industries in Guangdong.

All this will happen in the time it takes for most academics to consider launching a tutorial. Technion and STU are well matched in their ability to take resources and deploy them quickly and effectively to good ends.

NEVER TOO BIG A DREAM

Provost Gu envisions a bright future for TGIT. The short-term goal is becoming one of the best technological schools in Guangdong Province and then one of the best universities in China, devising new technologies and launching associated start-up companies.

“What Technion has done to advance the Israeli economy through student and staff research and innovation is an example for Chinese universities to follow... If many universities in Guangdong and China do the same as Technion has been doing in Israel, an innovation-based economy will emerge,” says Professor Gu. The joint venture could go beyond transforming China.

Professor Lavie predicts ties between Israel and China will be strengthened and the technology and scientific advancement will progress. “We hope that by combining our research methodologies with the scale and resources of China, we will create a major research institute that will help not only China and Israel, but also mankind in general.”

The joining of Technion and STU sees the unlikely continuation of a dream shared by Albert Einstein almost 100 years ago and Mr Li today. In 1924, 16 students started their studies in Haifa and young Chinese students picked up their medical books. In 1981, STU was born. In 2015, the twins of destiny will be joined in Guangdong to build a greater future for China, Israel and the world. □