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Toni Feder



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Russia launches S&T university

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How does a university rise from nothing to become a global dynamo? Russia's Skolkovo Institute of Science and Technology (Skoltech) is approaching the task through interactions with the high-tech innovation city where the graduate-level university is located and by engaging the help of MIT and other established institutions.

Edward Crawley, who left his MIT faculty position in the department of aeronautics and astronautics to become Skoltech's president, says the endeavor "has a somewhat unique role in the cluster of new universities"—for example, in Saudi Arabia, Singapore, Korea, Japan, and New York City—in that "it's designed from the ground up not just to train talent, but also to be an engine of economic growth. It's about developing S&T [science and technology], commercializing innovations, and having other forms of social impact." Skoltech will draw on Russia's strength in science, and is intended to foster an economic shift from dependence on the extraction of oil and other natural resources to development of technical know-how and startup companies. The aim is to grow to 1200 master's and PhD students, 300 postdocs, and 200 faculty members by the end of the decade.

Skoltech gets started with more than \$500 million of the \$3 billion the government is putting into the Skolkovo Innovation Center, launched nearly three years ago in the Moscow suburb of Skolkovo. The innovation center—known as "Innograd" and as Russia's Silicon Valley—is home to more than 650 startups and has attracted global companies like Siemens, IBM, Microsoft, and EADS (the European Aeronautic Defence and Space Company) to set up laboratories. Tax and import-export rules in the innovation city are relaxed, which could help not only companies but also scientists throughout Russia, says Sergey Kiselev, a biologist at the Vavilov Institute of General Genetics in Moscow and a leader in one of the university's first international research centers. "It's very difficult to get consumables for research," he says. "It takes three to six months to have some reagent from outside Russia. It should

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An artist's rendering of the Skolkovo Institute of Science and Technology. Above, Russian Federation deputy prime minister Vladislav Surkov, chair of the university's board of trustees, is flanked by Skoltech president Edward Crawley (right) and Victor Vekselberg (left), head of the Skolkovo Foundation.

be faster and cheaper [to order through] Skolkovo."

Each international research center is a collaboration among Skoltech, an established Russian institution, and a foreign university, and involves both research and a commitment by the partners to help hire faculty and build up Skoltech. The idea is to make the new university a leader in specific fields. Of 15 planned centers, 3 were announced in October; they are in stem cell research, in RNA therapeutics and infectious diseases, and in electrochemical energy storage. The centers are funded up to \$12 million a year for five years. Partner research groups are selected competitively, although MIT is guaran-

teed a spot in five of them. Overall, Skoltech is focusing on five areas: information, biomedicine, space, energy, and civilian nuclear S&T.

Skoltech's first 20 students matriculated this past fall. Because the university's own facilities won't be ready until fall 2014, the students are starting off at MIT, ETH Zürich, Imperial College London, and Hong Kong University of Science and Technology. The first faculty hires are spending a year at MIT, which has about 70 faculty members involved in planning nearly every aspect of Skoltech, including curricula, faculty recruitment, campus design, and administrative structure.

Toni Feder

US nuclear plants getting Fukushima-inspired safety upgrades

A year and a half after the disaster at Japan's Fukushima Daiichi nuclear plant, Hurricane Sandy pounded the East Coast of the US, flooding the country's oldest operating nuclear plant, Oyster Creek, and cutting off power to it. Unlike Fukushima,

though, generators at the New Jersey plant weren't inundated and coolant continued to flow in the reactor, which was already down for maintenance. Three other reactors in the Northeast tripped offline during the storm, but power to the sites wasn't interrupted.

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