

Water technology

Striking the stone

Israeli firms offer technology to slake the world's thirst

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MOSES parted the waters. Strauss aims merely to separate the waters from their yucky impurities. On May 18th in Shanghai Israel's second-largest food and drinks firm will launch a high-tech purifier that not only filters water but also heats it to exactly the right temperature for making tea. Strauss has forged a joint venture with China's Haier Group, the world's biggest maker of white goods, to distribute it.

China is the perfect first market for such an appliance, says Rami Ronen, the boss of Strauss's water arm. Chinese people drink a lot of tea, and their taps emit a lot of undrinkable gunge. At 4,490 yuan (\$692) a pop the device is not cheap, but Chinese wallets are increasingly capacious.

Israel wants to become the Silicon Valley of water technology. The conditions are ripe: the country has plenty of scientists, an entrepreneurial culture and a desperate shortage of fresh water. Netafim, one of the world's biggest "blue-tech" firms, got its start on a kibbutz in the Negev desert. Intrigued by an unusually large tree, an agronomist discovered that a cracked pipe fed droplets directly to its roots. After much experimentation the firm was founded in 1965 to sell what has become known as drip irrigation. Today it boasts annual sales of over \$600m and a global workforce of 2,800.

In 2006 the Israeli government launched a programme to support water companies, for instance by helping them to market their products abroad. It also created (and later privatised) Kinrot Ventures, the world's only start-up incubator specialising in water technologies.

A new crop of water-tech firms is emerging, many of them started by computer-industry veterans. "I wanted to invent more than just a new ringtone," says Elad Frenkel, the boss of Aqwise, a firm that provides gear and expertise to build wastewater treatment plants. Facilities based on the firm's technologies feature what it calls "biomass carriers", thimble-sized plastic structures with a large surface area. In wastewater pools they give bacteria more space to grow and thus allow biological contaminants to be consumed more quickly.

Emefcy, a start-up, is also in the wastewater business. It aims to reduce the energy required to clean water, which currently gobbles up 2% of the world's power-generating capacity. One of its products uses special "electrogenic" bacteria to turn wastewater pools into batteries of sorts. If they work as planned, they could generate more electricity than is needed to treat the wastewater.

The mission of TaKaDu, another start-up, is to discover leaks in a water-supply network, sometimes before they happen. It does this by sifting through the data generated by the network's sensors to look for anomalies. Even a 1% change in flow

rate, if persistent, can point to a leak. TaKaDu's detection engine is now monitoring water-supply systems in a dozen places, including London and Jerusalem.

Israel still has far to go, however, before it can truly call itself the Silicon Valley for water. Its domestic market is small. Its neighbours, though also desperate for water, are for some reason reluctant to seek help from Israelis. Elsewhere in the world, competition is stiff. Singapore also wants to be a water-tech hub. In developing economies, local players are strong and margins thin. And in America, water is often underpriced and sometimes not even metered.

The Silicon Valley model may not fit the water industry. Venture capitalists are always in a hurry, but water markets are cautious. "You can have bugs in a piece of software, but no bacteria in a water system," says Jonathan Kolodny of McKinsey, a consultancy. Yet the environment is growing more favourable, says Ori Yogev, the chairman of White Water, whose products monitor water quality. Thanks to new rules as well as privatisation, water utilities are more open to new ideas. This is good news, says Amir Peleg, the chief executive of TaKaDu. "It's not the water that is scarce, but innovation."

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