

PROFILE

NATE KUBE | Founder, Wurldtech



ROBKRUYT

VANCOUVER CYBERSECURITY PIONEER HAS A NEED FOR SPEED

BY GLEN EDWARDS  
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Whether it's downhill mountain biking, motocross or snowmobiling, **Nate Kube** is passionate about "anything aggressive" to do with speed.

But for Kube, what gives the cybersecurity pioneer the licence to push the forces of fast are his brakes. He uses this analogy to underline the importance of cybersecurity in expanding and improving connectivity among not only humans in the digital age, but also the operating devices of major industrial facilities that we depend on.

"They say you have brakes on your car so you can stop. No - it's so you can go fast. If you didn't have brakes you'd have to drive pretty slow. Cybersecurity is the

same thing for connectivity. In order to have fast connectivity and [for] everything to talk to each other it's got to be secure," said Kube, founder and chief technology officer of Vancouver-based **Wurldtech**. "We're an enabler of connectivity and going fast."

Fast is also the pace of growth at Wurldtech as oil refineries, water utilities, power plants and other large industrial sites increasingly embrace automation - otherwise known in tech-sector jargon as "operations technology," "industrial Internet" or the "Internet of Things."

More and more, operating devices and hardware are talking to each other in centralized networks used by companies to streamline operations.

However, each talking device is a potential weak link in a chain of defence against

cyberattacks.

Strengthening those links is the business of Wurldtech. Founded in 2006, the company has built a niche operation working with device manufacturers, like **General Electric**, and system operators to protect critical infrastructure.

The company's services and products include assessment, protection and certification programs for its customers' network systems. In May 2014, Wurldtech was acquired by GE and is now formally integrated as a wholly owned subsidiary of the conglomerate.

**Vanedge Capital Partners Ltd.** bought into Kube and Wurldtech as lead investors in the company's Series A funding two years prior to the transaction. **Moe Kermani**, Vanedge managing partner, said cybersecurity was a nascent,

underexploited market and Wurldtech was "ahead of its time."

"I think the acquisition of Wurldtech by GE accentuates how forward-looking Nate was with respect to recognizing cybersecurity for industrial controls and for what today is known as the 'Internet of Things' was going to become a problem," Kermani said. "Those are the kind of forward-thinking entrepreneurs who create great companies and make a big difference."

Kube said Wurldtech has experienced 100% growth since its acquisition.

The company is increasing its Vancouver headquarters fivefold with a move to Bentall Centre in October and now counts offices in California, Georgia and Abu Dhabi, United Arab Emirates.

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In the beginning, Kube's undergraduate and PhD studies at **University of Victoria**, where he was an award-winning student, focused on math and computer science – a solid foundation for building algorithms to underpin computer security. In particular, as part of a project for a U.S. government agency, he developed a number of algorithms that proved very effective at revealing security flaws in critical equipment used by the oil and gas sector.

So, he decided to wrap a business around the algorithms.

Kube went to an energy conference and invited the top tight-lipped security executives from several big oil companies into a room. Kube then showed them all the ways he could remotely cause massive destruction to their facilities. It took a while for his guests to un-pucker.

"They'd never heard of me before, and they asked me if I was there to extort them," Kube said, laughing. "What I was there to do was to ensure this type of critical risk doesn't enter their facilities going forward. I was going to build a certification program. These big oil companies would mandate testing by my new company as part of their procurement requirements so they ensure this type of cyber-risk is fixed."

Kube's timing, coinciding with the rise of industrial connectivity, was a windfall. So, too, have been a number of cyberattacks that have occurred since then. Last December, a German government agency reported a steel mill suffered "massive damage" following a cyberattack on the plant's network. Attackers used booby-trapped emails to steal logs that gave them access to the mill's control systems. According to **Ponemon Institute**, which conducts independent research on privacy and data protection, 67% of critical infrastructure companies suffered an attack last year.

"I can't go into too many specifics, but we get called in when something goes awry, and we see more of that today than we did three years ago," Kube said.

**Strategic acquisition**

GE may as well stand for God of Everything – the company is one of the largest and most diversified infrastructure and financial services corporations in the world. It posted \$148.6 billion in revenues in 2014. Yet Wurldtech was not an afterthought acquisition, but rather a very strategic purchase. In GE's last annual report, cybersecurity is spotlighted as one of the company's main focuses. In September, the company announced the creation of GE Digital, an integration of all their digital offerings backed by

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"the industrial security strength of Wurldtech."

**Paul Rogers**, GE's general manager of industrial cybersecurity, said his field is one of the company's "top priorities" in terms of both protecting their business and expanding it. First is having Wurldtech ensure all of the industrial equipment GE builds and markets is cyber-secure. Second is creating new opportunities.

The future remains fast-forward for Kube. He sees new growth in health care and transportation, big sectors that have built up connectivity on a large scale. There is also "huge opportunity" for Wurldtech to raise its profile and be seen as the de facto trusted brand to help

**CYBERSECURITY BOSS IN WORLDWIDE CIRCUIT**

**The only constant in Nate Kube's work is travel – lots of it**

Nate Kube's travel schedule makes Frommer and Fodor look like homebodies.

Kube's cybersecurity circuit spans the globe and has him travelling every week, either visiting Wurldtech offices or marketing the company. Kube estimates he logs 150,000 to 175,000 miles annually. It's been two years since he's had an uninterrupted week in Vancouver.

His well-travelled advice: "Travel light, never check bags, don't let your bags out of your sight and use hotel laundry service."

At the time of interview, his five-week itinerary comprised Banff, San Francisco, New York, Albany, Chicago, back to New York, San Francisco again, London,

Vancouver for a blink and then Abu Dhabi, United Arab Emirates.

It hasn't been all hot towels and first-class lounging for Kube. Translating Wurldtech from startup to global cybersecurity brand made for a rough ride initially when the work largely focused on on-site assessment of customers' facilities in some less-than-desirable locales.

"I've been robbed on three different continents, I've been beat down, [had my] passports stolen and had to come back to send out for emergency passports. You name it, it's happened," Kube said. "We've been to a lot of rough areas, but done a lot of good things."

Kube loves outdoor recreation close to home in his spare time. Good thing, because travel plan points are like tick marks of passed time on a prison cell wall for Kube.

"Points just seem to accumulate for me because the last thing I want to do when I'm not working is travel. I've got a ridiculous number of points," he said.

make companies more insurable. Last year, **Lloyd's of London** was reportedly refusing to insure power companies against cyberattack because their defences were perceived as weak. Other insurers conservatively cap coverage amounts to only a margin of the potential costs owing to high-risk profiles.

Wurldtech could also provide

"complete and total management security service" to industrial customers.

"Big refineries can outsource the same way big companies outsource some of their IT," Kube said. "We want to allow the big operational facilities – the gas plants, the hydro facilities – to outsource effectively their cybersecurity to a company like GE." ■



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