

*Accurate, timely information is crucial for energy distribution system operators when moving toward increasingly smarter electricity networks. Aidon has gained a position as a recognized smart metering and smart grid expert among the Nordic markets by combining advanced technology with customer-driven innovations.*

# Smart grids need real-time data

Aidon was born in 2004, at a time when the Nordic market for smart meters was about to open. Based in Finland and holding a strong market position in other Nordic countries, Aidon implements solutions for low-voltage network metering that collects, refines, and utilizes the event data.

Over the decade, the development of the smart grid has increased the

importance of smart meters remarkably.

Accurate information combined with highly advanced automation has become a product with high demand in diverging electricity markets, knows **Timo Chrons**, CEO at Aidon.

“With our applications, smart meters can

deliver energy companies precise information about the operation of their low- and medium-voltage grids. Passing on information about power cuts

becomes more efficient and faults can be fixed faster and with lower costs,” Chrons explains.

Worsening weather conditions as well as the increasing vulnerability of society underline the importance of reliable electricity distribution. Power cuts can cause severe failures for the important basic functions of society.

“When receiving the information from the low-voltage network, electricity companies will immediately get an up-to-date situation report on a household level. This enables them to focus the repair work to the right areas.”

## Customers’ challenges create innovations

Finland is a forerunner in smart metering: nearly 100% of the country’s meters are remotely read smart meters. Similar changeover work is in full swing in Norway where Aidon is carrying out large-scale operations. Sweden, as well as many central and southern European countries, will follow.

*“In the case of severe storms that knock trees over onto power lines and leave 70,000 people without electricity, timely information is truly usable,” says Timo Chrons.*

“Utilities seem to have spotted the opportunities that open solutions bring about. Sweden is our next big market and, beyond that, the entire world is waiting for us,” Chrons envisions.

Aidon, as a pioneer company in smart energy metering solutions and smart grid applications, has a clear vision of its success factors.

“A thorough understanding of our customers’ business and operating environment lays the foundation for what we do. This, in combination with our strong technology expertise, provides us with an excellent springboard for using the challenges identified by our customers as sources of innovation,” Chrons concludes. ■

*Text: Johanna Lassy-Mänttyvaara*

*Photo: Petteri Kivimäki*

*Sweden is our next big market and, beyond that, the entire world is waiting for our service.*

# Leading the world in waste logistics

The world's most innovative solutions provider in waste logistics calls Finland a home. Whether it is a 17<sup>th</sup> century Italian architectural masterpiece or a modern cruise vessel carrying 8,000 passengers and crew, the technology of Evac is behind them both.

## Maritime independence, architectural wonders

Evac's advanced wastewater treatment technologies match municipal wastewater treatment systems for effluent quality, making large maritime vessels sustainable operations, giving them freedom to operate totally independently of port facilities.

On land, the compactness of Evac technology makes it ideal for the preservation of historic structures, as well as enabling maximum flexibility in the design and construction of lightweight modern architectural wonders. Evac products serve Ponte Vecchio, Italy's oldest bridge, yet they are also found in ultra-modern, energy-efficient structures like Sydney's new Cbus Property flagship office.

## Pioneers in waste treatment

Evac products are currently utilized on more than 20,000 marine projects

*Evac on land and sea: Architectural treasures and modern cruise ships alike use Evac waste disposal technologies from Finland.*

and in more than 2,000 land-based projects. Evac, a 40-year-old, Finland-based international cleantech company with a presence on four continents, is a pioneer of vacuum technology and total waste management.

"Evac is an innovative cleantech solutions provider," says **Mika Karjalainen**, Evac's COO. "We develop and provide the best technologies and engineer them to meet our customer's demands for marine vessels or special buildings."

When one of Evac's key components is employed on a maritime vessel, it enables the purification of 99 percent of all wastewater generated on a cruise ship, the rest treated by Evac's wet waste system, making a vessel truly sustainable.

## We enable sustainability

"Our mission is to have the broadest product offering and to cover all environmental needs in one single package. We offer the largest international service base with great after-sales service," says Karjalainen.

As environmental legislation to protect the oceans becomes stricter, and as the building industry seeks new possibilities in the lightweight construction, Evac expects to see even more growth.

"Order backlog is three times bigger than a year ago and the turnover is close to 100 Million euros," says Evac Group CEO **Tomi Gardemeister**.

The growth speaks to the fact that Evac is serving a critical market need. "But more than that, I'm pleased that our technology serves the environment and contributes to a truly sustainable future", Gardemeister adds. ■

*Text: Scott Diel*

*Photos: Evac*



*Evac CEO Tomi Gardemeister and Oasis of the Seas. Evac's total waste management system can be found aboard the world's largest cruise vessels like the Oasis. The systems include vacuum systems, wastewater treatment, dry- and wet waste treatment, fresh water production, and automation systems.*





# Building the wireless world with 5G

With 40 years' experience in developing market-ready products, the city of Oulu Finland possesses an indisputably leading knowledge base in information and communication technologies and related operations. With 12,500 professionals working in companies of various sizes and backgrounds, the city is one of the true hotspots when it comes to wirelessly connecting people and businesses.

Oulu is one of the few cities in the world where the ecosystem covers all the steps that are necessary in developing innovative wireless products—all the way from product idea to production.

The new 5G network technologies are currently being created while service and business model innovations that utilize them are being tested in collaboration with local companies, research institutions and city services. The ecosystem in Oulu is able to cover the design, testing, production and launch stages of any ICT project.

Let us take care of your next innovative idea—we turn visions into reality!

## Changing innovations for health

The bases of ICT Oulu is connecting digitalization with the other industries. Oulu offers a world-class ecosystem in Life science sector. Value arises



*"I love visiting Oulu. Over the years I have seen the vision, the strategy and above all the actual creation of the infrastructure necessary to create a very attractive destination in the world of health, social care and wellness innovation in action!"*

—Brian O'Connor, Chair of the European Connected Health Alliance

from co-operation with research, public operators and private companies. OuluHealth Labs provides your product a unique, integrated health test and development environment—including professionals' feedback—for every phase of your R&D process. OuluHealth Labs services are provided by regions top organisations, such as Oulu

University Hospital, Oulu University of Applied Sciences, and City of Oulu's Health and Social Care Services.

Oulu sets the perfect stage for companies wanting to lead the technological development. ■

*Text: Alpo Merilä, BusinessOulu*

*Photo: Tero Suutari, BusinessOulu*

*"Finland has long been recognized as the home of many experienced engineers well-versed in cellular technologies. By opening our new office in Oulu, we hope to be an attractive employer to some of most seasoned engineers and the brightest graduating engineers from local universities."*

—JS Pan, Deputy General Manager

MediaTek's Wireless Communications Technology business unit

## MEET US IN

- MWC Barcelona 22.–25. FEB 2016 Hall 1 E04
- Medtech Europe Stuttgart 12.–14. APR 2016 Hall 5 F70
- eHealth week Amsterdam 8.–10. JUN 2016

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# Tolotech brought the door into the cloud

*If you lost your keys in the last millennium, the only option was to call the janitor. Now, thanks to the internet breakthrough, access control has gradually moved towards web-based access passes.*

More and more physical products are becoming part of a collective network protected by passwords and many other measures.

"A door is a great example of this development. We started the development work back in the early 2000s, starting from the principles of effectiveness, security and remote controllability", says Tolotech's owner **Petteri Tolonen**, also responsible for the company's product development.

Tolotech designs and manufactures innovative access control products and systems for companies.

According to Tolonen, the offering is suitable for multiple industries as well as various fields of travel, well-being services and commerce. The basic idea is to remotely manage the access to a property so that the access control is seamlessly integrated for example into a booking system. For instance, a hotel guest can be given a PIN code in advance, so that the customer can enter the premises. Invoicing can also be automated with an integrated system.

"As a new company starts operating, it has to choose the service providers for e-commerce, financial administration and access control. In order to

*"Nowadays every door can be part of a network, internet of doors."*

the business and cash flow to start working effectively, it is worth choosing a service provider which ensures the communication between the systems.

There is a growing need for unmanned services in all businesses. When access control has

been moved to the cloud and integrated into the other systems of the company, this becomes possible in a meaningful way. Both from the company's and the customer's viewpoint", Tolonen says.

With seamlessly connected systems, companies are able to work effectively and automate basic functions that do not always require human labour.

"We are a forerunner in integrated access control systems. Now we want to take access control to a whole new level through complex system management", Petteri Tolonen concludes. ■

● [www.tolotech.fi](http://www.tolotech.fi)

*Text: Tolotech & Jasmine Plavsic*

*Photo: Tommi Karjalainen*



*Petteri Tolonen,  
founder and  
owner of  
Tolotech.*