Oaklins

The transformative power of
the Internet of Things

SPOT ON | IOT | JULY 2023

AN OAKLINS REVIEW OF IOT APPLICATIONS AND INVESTMENT TRENDS

Over the past few years, the Internet of Things (IoT) has become one of the most important technologies of the 21st century. By allowing millions of everyday objects to connect to the internet, a vast complex of people, devices and processes has been created.

One of the most profound results of this development has been its impact on workplace productivity. "The Internet of Things has transitioned

from an emerging technology to an integral component of our daily lives, and is having a profound effect on all industries," declared Oaklins, IoT specialist **Jan P. Hatje**, in his opening remarks during a recent webinar on the transformative power of IoT. "To connect machines, sensors and assets with each other not only enables greater automation," Hatje observed, "it also enables much more extensive data collection. This data can then be

analyzed and used to improve industrial processes."

By connecting machines and sensors with one another, **the Internet of Things is transforming virtually every industry.**

Our IoT webinar panel
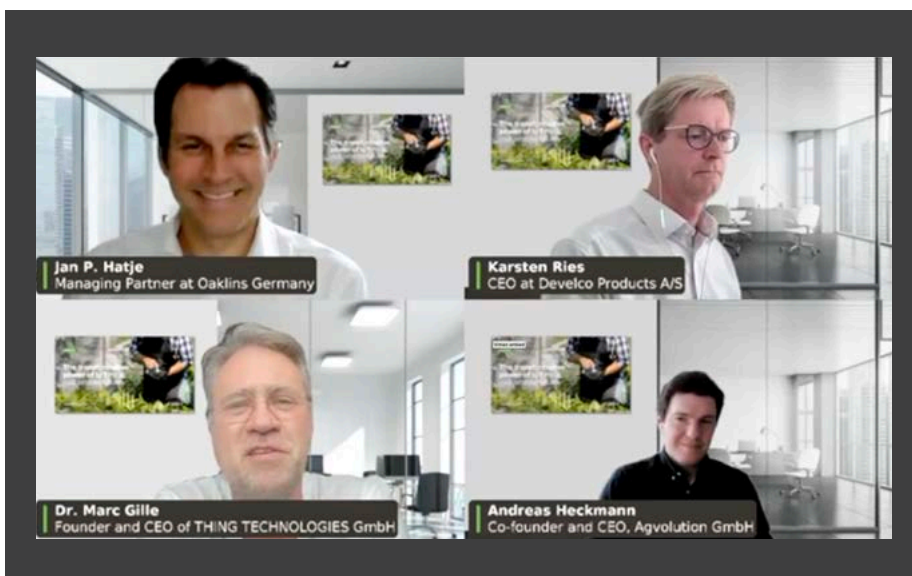
Clockwise from top left:
Jan P. Hatje (Oaklins Managing Partner and IoT team lead, based in Hamburg), **Karsten Ries** (CEO of Develco Products A/S, based in Aarhus, Denmark), **Andreas Heckmann** (Co-founder and CEO of Agvolution GmbH, based in Gottingen, Germany), and **Dr. Marc Gille** (Founder and CEO of Thing Technologies GmbH, based in Schwalbach im Taunus, Germany).

IOT AND FARMING

To help highlight this, Hatje then introduced **Andreas Heckmann**, the co-founder and CEO of Agvolution. Heckmann's company uses IoT sensors to collect weather data and provide farmers with precise and reliable forecasts. The three-year-old Gottingen, Germany-based firm has developed an artificial intelligence system for predicting the microclimate for each field and growing site on a farm. This allows farmers to maximize yields by adapting their production methods to local weather conditions.

JAN P. HATJE
Managing Partner
Oaklins Germany

The IoT sensors and AI predictive software are complemented by other technologies, such as augmented reality. This software, used in conjunction with smartphones, can locate the sensors that are otherwise hard to find once they are placed in the ground and covered with vegetation.

Heckmann noted that the Agvolution solution also utilizes solar power, which helps keep the size of the IoT device batteries small. "We aim to make the technology easy to use and understand," he told the webinar attendees. "The three key aspects we focus on are: choosing the right technology standards, making the devices user-friendly and ensuring energy efficiency."

Guided by IoT-gathered data and AI predictive software, **robots are being adapted for farming work.**

In terms of the IoT market, Heckmann characterized it as "quite intense." But while the market for IoT agricultural and weather monitoring applications has seen rapid growth, he said, "there are

ANDREAS HECKMANN
Co-founder and CEO of
Agvolution GmbH

only a few vendors that can measure energy self-sufficiency and soil moisture at different depths, which is crucial for agricultural predictions."

Agvolution is also working to adapt robots for farming work. Autonomous tractors and other robots are already used by some growers, and Heckmann's company is collaborating with robot companies and agricultural machinery providers to facilitate their adoption, by providing the predictive input and decision support required for robotic farming operations.

IOT AND REAL ESTATE

Another industry where IoT and AI technology are having a huge impact is real estate and construction. Founder and CEO of Thing Technologies **Dr. Marc Gille** described how his company has developed an office building management platform that is similar in scope to the enterprise resource planning and customer relationship management systems that many companies employ.

DR. MARC GILLE
Founder and CEO of Thing Technologies GmbH

By making use of IoT data collection and AI applications, the Thing platform provides comprehensive support for building digitalization. This includes creating computer models of a building and all its spaces, and collecting sensor data, then using it to manage the building's assets and control systems.

"Our goal," Gille said, "is to optimize office building usage." Digital modeling and sensor data, he explained, can be used to reduce heating, lighting and cooling costs, while creating a more comfortable environment for the building's occupants, which improves office worker productivity. Meeting rooms can be used more efficiently, so fewer rooms are needed. This can lead to substantial savings on leases of up to 20 or 30%. Moreover, greater efficiencies help to reduce a building's CO_2 emissions — a key environmental, social and governance (ESG) goal for many companies and investors.

Over the past three years, Gille said, the spread of IoT and digital applications, together with the popularization of ESG objectives, has made it much easier to explain Thing Technologies' value proposition to investors. This has led to a surge in investor interest in the Schwalbach im Taunus, Germany-based company, which has recently been approached by numerous investment firms that specialize in early growth opportunities.

IOT AND BUILDING INFRASTRUCTURE

Like Thing Technologies, Develco Products also specializes in IoT applications for more efficient building management, but from a different angle. The company has developed an IoT platform that connects buildings, houses and apartments to the cloud. The platform consists of edge computing devices that seamlessly connect office buildings and homes to the internet.

Based in Aarhus, Denmark, Develco is a relatively small company with around 40 to 45 employees. But the company also employs local staff in different parts of the world, which allows it to provide solutions that are better tailored to local conditions.

—

IoT marketing is shifting from early adopters to an early majority. **This is challenging for some players, but offers opportunities for others.**

The primary applications for the company's platform are security, home care for the elderly, and energy optimization for both residential and commercial structures. "By using our platform," explained Develco CEO, **Karsten Ries**, "customers can offload the complexities of infrastructure development and concentrate on creating value for their end users.

KARSTEN RIES
CEO of Develco Products A/S

We have a diverse customer base, and our platform allows for fast market entry with low risk." To date, he said, Develco has already deployed over 3.5 million of its devices.

The IoT market, Ries observed, is in the midst of a shift from early adopters to an early majority. This transition presents challenges for some players, but offers investment opportunities for companies with strong traction.

"Day to day," Ries added, "we see that the volume for this business is increasing. We have a good trajectory and are seeing growth of 30 to 50% per year. Business volume is at a very different level than it was just a few years ago, so I believe the next several years will be very interesting for the IoT space.

WHICH SECTORS ARE BENEFITING THE MOST FROM IOT?

To get a better read on the market, but also as a fun exercise, Hatje and the Oaklins IoT team asked ChatGPT to identify those sectors that are currently benefiting the most from IoT applications. The AI chatbot came up with a list that included manufacturing, healthcare, transportation, energy, agriculture and retail. To this, Gille objected: Where was real estate?

How could ChatGPT overlook such an important sector? Clearly the chatbot technology, while good and getting better, was still imperfect.

Heckmann responded to this good humor by acknowledging that there were indeed some significant challenges still facing AI predictive systems. These, he said, mainly concerned the complexity of predicting the behavior of something like an ecosystem, which is significantly influenced by so many different variables.

Elaborating on some of the benefits that an IoT platform can offer, Gille cited real estate's 3-30-300 rule, which provides a breakdown for what a business tenant pays per square foot, in terms of total occupancy costs: 3 euros for utilities, 30 euros for rent, and 300 euros for employee salaries and benefits. Using this as a guideline, Gille said that lowering heating costs or the like would save a tenant euros per square foot, while more efficient space utilization

would save tens of euros per square foot. But using IoT data gathering and AI-driven environmental balancing to make employees more comfortable and more productive has the potential to save a company hundreds of euros per square foot on its lease. That is why, he said, most large corporations are seeking to leverage the technology, while many landlords and asset managers are still struggling to make a business case for it.

Not every customer has succeeded with IoT. **The biggest challenge for the industry is to identify and invest in the right customers who will drive success.**

Ries then closed out the session with some additional comments about the challenges facing the industry. The most important issues weren't technical, he acknowledged, but had to do with

ensuring that customers are succeeding with the technology.

"From a technical perspective, we have been able to cope with the challenges related to standards and connectivity," he said. "We have kept ourselves updated and are doing well on the technical side."

However, Ries admitted, "over the years, our biggest challenge has been ensuring the success of our customers." In the past, there were many instances where companies deployed IoT but failed to achieve significant value. The most common reason, he said, was that they were overly focused on the technology itself and not on how it could be deployed and used to add value. "Today," he went on, "we are working with around 50 serious customers on our platform, and about 10 of them are gaining traction and moving significant volume. Our challenge lies in identifying and investing in the right customers who will drive the success of our platform."

"And just like any company that blissfully ignored the internet at the turn of the century, the ones that dismiss the Internet of Things risk getting left behind."

JARED NEWMAN, *NEW YORK TIMES* TECHNOLOGY JOURNALIST

Our track record

Our clients rely on us to help them prepare for their next challenge, whatever it may be. With deep-rooted sector expertise in IoT, we are able to support you and provide the professional advice required to achieve a successful outcome.

Some of our recent deals completed in the IoT sector include:

ARCHISEN

has completed a fundraising

FUNDING, DEBT ADVISORY & ECM

Agriculture/TMT

CIM.AS

has been acquired by

*XANO

M&A SELL-SIDE

Private Equity/TMT

EquipCapital

has acquired

CAUTUS GEO
surveying for safety

M&A BUY-SIDE

Business Support Services/Construction &
Engineering Services/Private Equity/TMT

GARZ FRICKE

has been acquired by

AFINUM

M&A SELL-SIDE

Private Equity/TMT

GARZ FRICKE

has been acquired by

SECO

M&A SELL-SIDE

Private Equity/TMT

---

gA
Grupo ASSA

has been acquired by

Globant>

M&A SELL-SIDE

TMT

S3K
SECURITY OF THE THIRD MILLENNIUM

has sold a 60% stake to

HLD

M&A SELL-SIDE

Private Equity/TMT

---

tapkey

has been acquired by

DOM

M&A SELL-SIDE

TMT

---

unica
samen maken we de toekomst

has acquired

GERCO
Brandpreventie

applicom
BRANDPREVENTIE   RED

M&A BUY-SIDE

Business Support Services/Construction &
Engineering Services/Private Equity/TMT

Deep local roots, global commitment

Oaklins brings you opportunities from across the world and we meet you with our expertise wherever you are

OAKLINS OFFERS A COMPREHENSIVE RANGE OF SERVICES

– M&A advisory (buy- and sell-side)

– Growth equity and equity capital markets advisory

– Debt advisory

– Corporate finance services

IoT is one of our focus areas. Combining comprehensive sector knowledge with global execution has led Oaklins to become one of the most experienced M&A advisors in the IoT sector, with a large network of relevant market players worldwide. This results in the best possible merger, acquisition and divestment opportunities for IoT companies.

If mergers, acquisitions, or divestitures of businesses or business units are part of your strategy, we would welcome the opportunity to exchange ideas with you.

✉ **JAN P. HATJE**

Managing Partner
Hamburg, Germany
T: +49 40 34914175

Jan leads Oaklins' IoT team. He is also a managing partner at Oaklins Germany. Jan has a strong network in the IoT industry and is in regular contact with its key players. As part of his sector focus, he continuously follows developments, publishes newsletters and attends the major events. He has advised a number of clients either on M&A or on strategic development. He has a deep understanding of the market dynamics and value drivers regarding smart devices, connectivity, big data and intelligent solutions. Notable transactions Jan has completed include Garz & Fricke, vyzVoice and Höft & Wessel (now Almex).

United by a strong belief that we can achieve the extraordinary. Oaklins is a global team of 850+ financial advisory professionals in 45 countries providing M&A, growth equity, ECM, debt advisory and corporate finance services to support entrepreneurs, corporates and investors in reaching their goals.

Oaklins