

P3 CONFERENCE 2017

THE FUTURE IS RIGHT NOW!

3 TAKE-AWAYS:

- The sixth wave of innovation is poised to revolutionise business. Robots, artificial intelligence, machine learning and the Internet of Things will become part of everyday life. And unlike previous waves, the sixth wave will affect all companies, at every level.
- If firms don't adapt to these technologies, they will die, as competitors switch to them. Although the sixth wave may look daunting, it will present huge opportunities, such as helping firms be customer-focused.
- Work will be transformed, not least thanks to the widespread use of robots and autonomous vehicles. But humans will always be required.

Robots greeting you at a hospital, selling you a mobile phone or guiding you around an airport. AI creating your t-shirt. 3D printers making trainers specially for you. These aren't sci-fi scenarios. They're happening right now. And to address the impact these technological changes will have on business and how companies can respond, P3 hosted the 2017 P3 Conference "Future Now!" in Prague on 12 October.

As speaker **Vasanth Philomin, General Manager of Machine Learning & AI at Amazon**, said about adapting to the changes, "There's just no moment to wait."

According to Philomin and the other speakers, the technological revolution is happening as part of what's known as the sixth wave of innovation, which will soon transform industries all across the business spectrum with all manner of new technologies. In other words, Industry 4.0, i.e. the fourth industrial revolution, is upon us, as are the accompanying challenges for businesses such as the rise of robots, machine learning, the Internet of Things (IoT), drones and more.

Rather than fear these changes, however, the presenters invited firms to embrace them, not least as a means of staying customer-focused.

No company is safe

Keynote speaker **Sean Culey, Executive Vicepresident at consultancy Manucore**, kicked off the conference with his stimulating and wide-ranging talk, "Thriving in the Age of Destruction – Success in the sixth wave", which summarised the underlying challenges ahead.

Future Now! invited 10 industry specialists to share their insights with an audience of approximately 200 senior and C-level leaders and managers from a range of sectors covering retail, automotive, e-commerce, manufacturing and 3PL. The talks were broken into three themes – Brands & Technology, Our People and Your Solutions – with audience members interacting with speakers.

"I've never seen so many technologies lined up at once," Culey said about the sixth wave. "But crucially, unlike previous waves, which impacted only certain industries, the sixth will affect all sectors – at every level. No company is immune." And such diffusion is only speeding up, increased exponentially by globalisation and digitalisation.

To illustrate the pace of change, Culey gave the example of 20 years ago, when we told our children, "Don't get into strangers' cars and don't meet people from this new-fangled thing called the internet. Now, in 2017, we summon strangers from the Internet and get into their cars."

Customised at mass scale

Robots are a perfect example of how much has changed in 20 years, and of the creativity being unleashed right now. "The Chinese know that machines, not labour, are the key to the country's future," explained Culey. He cited the Chinese postal service, which had replaced 90% of its workers with robots, resulting in a 250% production increase and 80% reduction in defects¹. In addition, the robot workforce was cheaper and more efficient than humans, and despatched 30 billion parcels in 2016 alone².

3D printing is another revolution Culey said is sweeping away the old way of doing things. Cutting through traditional, inflexible supply chains, Adidas has been working with technology from 3D printing company Carbon. The sportswear company is avoiding the traditional design-prototype production cycle by having customer order tailor-made trainers based on their specifications, allowing Adidas to take advantage of both customisation and mass scale.

A technological triple whammy

Culey added that a new wave is driving such behaviour and ushering in innovative technologies, in what he called the Creative Destruction Triple Whammy.

First, labour is automated. Assumptions about what machines can or cannot do are being overturned and shown to be absurd. Robots, for example, are becoming ubiquitous. Once, they were isolated,

dangerous and had limited uses. New robots had to be purchased for new tasks. Now, those same tasks can be resolved with software updates, and robots do everything from selling you mobile phones to ushering visitors around hospitals, or guiding them around airports.

The second factor is the automation of the mind. Whether an employee wears a blue or a white collar is irrelevant. Humans simply can't handle the number of variables and the volume of data, requiring machine assistance. "We're just not clever enough. We need machines to do this for us," said Culey. For example, in June 2017, financial institution JP Morgan's COIN software took seconds to analyse a contract that would have taken 360,000 hours to do manually³. In medicine, leukaemia cells are being picked up in 10 minutes, while a computer can easily process all the data related to the condition.

All these issues combined lead to the third aspect of the triple whammy: convergence. And all are happening at the same time that technologies are coming together, from design to delivery, from machine to machine.

Use Sixth-Wave technologies to be customer centric

Despite this potent brew of challenges, conference speakers stressed that companies ignore them at their own risk.

"Necessity is the mother of invention. Regardless of whether you're a country or a company, whenever a competitor starts to use new technologies, ultimately, you look at them and see you'll have to," argued Culey. "Companies will need to adapt to the creation or find themselves part of the destruction."

4 key principles

Culey called for a paradigm shift to a Copernican business revolution, in which firms should revolve around the customer, not vice versa. He gave the example of **Jeff Bezos, CEO at Amazon**, who champions the customer-centric approach, arguing that businesses should treat every day as day one, because "day two is decay and death."

1 <https://www.zmescience.com/other/economics/china-factory-robots-03022017/>

2 http://mashable.com/2017/09/22/robots-china-factory-tianjin/#oZgRr_16qOqf

3 <https://www.bloomberg.com/news/articles/2017-02-28/jpmorgan-marshals-an-army-of-developers-to-auto-mate-high-finance>

Culey said that if attendees took nothing else from his speech, they should remember Bezos' four key principles: "Customer Centricity", "Long term focus", "Constant innovation and experimentation", and "Development of a Team of Entrepreneurs". He urged companies to solve customers' problems, not merely to sell them products.

One important way for firms to be customer-centric while using sixth-wave technologies, according to Culey, is to personalise, automate and localise (PAL) their supply chains.

Robots are stealing our jobs!

Following on Culey, Vasi Philomin, in his talk "Democratizing AI", said that AI, not robots, will be the job killer.

"I think it's going to be the opposite. I have a concrete example to give you and that's Amazon itself. We've been using AI for the last 10 years to make all the innovations that we've been doing." He explained that with Amazon Prime, the company can ship something within two days, and the company achieves this through its fulfilment centres. "We use machine learning to improve and be obsessed with our customers, and improve their experiences. By doing that, we have achieved tremendous growth. So much so, that we need a second headquarters to put all of our people in. So here's an example of machine learning creating jobs, not taking them away."

Countering this, **Achim Taylor, Director at Luxembourg Post**, spoke about his firm's move from postal company to e-commerce provider in his talk "Post Luxembourg: from a postal company to an e-commerce logistics provider". In contrast to Vasi Philomin, he described the problem of replacing staff with robots in a state-owned company. "You cannot simply say we kick half our workforce out. We have to navigate around that," he commented.

The human dimension

Filip Hrkal, COO at cut-e CEE recruitment consultancy, also picked up on the employment issue in his talk, "Identifying employee potential now and in the context of industry 4.0". He argued that humans would work in collaboration with robots rather than being usurped by them. "Humans will always be required. The machines are only as good as the data fed into them," observed Hrkal, adding

that they are "here to stay. Let's use them as an opportunity."

But despite his enthusiasm for new technology, Hrkal stressed human input. "I can't imagine deciding based only on questionnaires and only based on artificial intelligence." He cited a robot using analysis to erroneously only hire men because women could go on maternity leave.

Interestingly, in his poll question "Would you trust AI to select your work colleagues?" 69% of those who responded said "No".

The conference also considered the human dimension in terms of how technology can serve us, with **Martin Harris, Europe IoT Industry and Process SME at IBM**, discussing cognitive buildings and how they can make everyday life more convenient in his talk, "Value of innovation in cognitive buildings". Meanwhile, **Aneta Klímová, CMO at startup Spaceti**, described how sensors can be used in smart buildings in her talk "Workplace trends of the present and future".

Also on this theme, **Tom Self, of Partnerships at what3words** startup, spoke about how his company addresses the global problem of incomplete or inaccurate addresses by offering a unique three-word-address. To make his point, he noted that a 0.5 failure rate in UK deliveries cost GBP 831 million.

Farewell to weekly shopping

On the theme of Our People, **Michael Bourlakis, Head of Logistics and Supply Chain Management Group of the Cranfield School of Management**, looked at the effect of demographic trends in his talk, "Future Trends in Logistics: Impact on People, Technology, Society".

When an audience member asked him how he saw the future of supermarkets, Bourlakis replied that an aging European population will pose a major risk for them. "We're becoming more and more online shoppers," he said. "The big supermarkets have a big challenge to survive." In addition, major retailers are holding large land banks for future development, but such investments may become redundant. Bourlakis suggested that for hypermarkets to remain viable in the online shopping age, they must become collection points for consumers."

Bourlakis concluded by considering future trends in logistics, and noted automation concerns like job losses and safety issues. "Personally, I'm quite optimistic about automation. Yes, there will be job losses at the beginning. We will have another set of skills, other requirements, and other aspects in the supply chain for automation, which is going to make a difference. But it will improve productivity. There is no question about that."

He welcomed such trends, given the new skills that will be required and the current lack of managers with the right skills. Bourlakis also embraced the move to self-driving vehicles, adding that when it comes to automation "people are increasingly accepting technology".

The Uber Revolution

Changing attitudes to vehicles are evidenced by the rise of Uber, and **Roland Werner, Head of Government Affairs and Public Policy at Uber**, discussed the use of vehicles in his talk "Shared transportation: The future of urban mobility".

"We have 1.2 billion cars in the world," he noted. "They are not used most efficiently because 95% of the time they are just parked. The vehicles take up space that could be used for other purposes. And usually there are one or two persons in the car."

In contrast, he described the shared trip scheme when an Uber vehicle is used. During the journey, other passengers get on and off at various points. "It means a small extension of the trip, but it's good for the environment, and reduces costs and idle time. And the car is not empty."

He also discussed the move towards autonomous vehicles, noting that autonomous Uber cars with passengers have covered over 1 million miles and that both cars and trucks will be safer, because accidents are caused by human error in 90% of cases. He also argued the experience of being driven in an autonomous vehicle is more fun."

Further ahead, Werner sees the future as "shared, automated and electric". Flying cars are planned, with small vertical take-off and landing machines already operating in European countries in test mode. "It's not science fiction," he stressed. "Dozens of startups are already investing in this and working on prototypes. Big companies like Airbus are investing too."

Known as Uber Elevate, the service starts with a shared ride in a car, after which the passenger boards the flying machine at a port on the roof of a building. Werner stated that the plane improves mobility because it avoids traffic jams. "Electrically-propelled, it's environmentally-friendly too, with no emissions and much less noise."

In his audience poll question, Werner asked whether the Uber model would work for logistics deliveries, and the response was encouraging at 70% – a point that **André Dravecký, CEO of logistics firm ShipVio**, echoed in his talk "How digitalisation and startups will change logistics".

"With autonomous vehicles," noted Dravecký, "the truck is working 24/7," unlike with human labour, resulting in efficiency and cost savings.

A new consumer mind-set

In terms of future developments, the Uber revolution reflects changing consumer attitudes. Another change is the increasing popularity of sharing, with more people, especially millennials, having less interest in material things. For example, they don't want to buy a car; they simply want to travel from A to B. This reduced consumption is already affecting firms, another issue that must be addressed.

Wrapping up, **Ian Worboys, CEO at P3**, observed the revolution ahead is frightening, but challenged attendees to face the future and take advantage of the sixth wave. He concluded by echoing Vasi Philomin, that such changes are arriving much faster than we think.