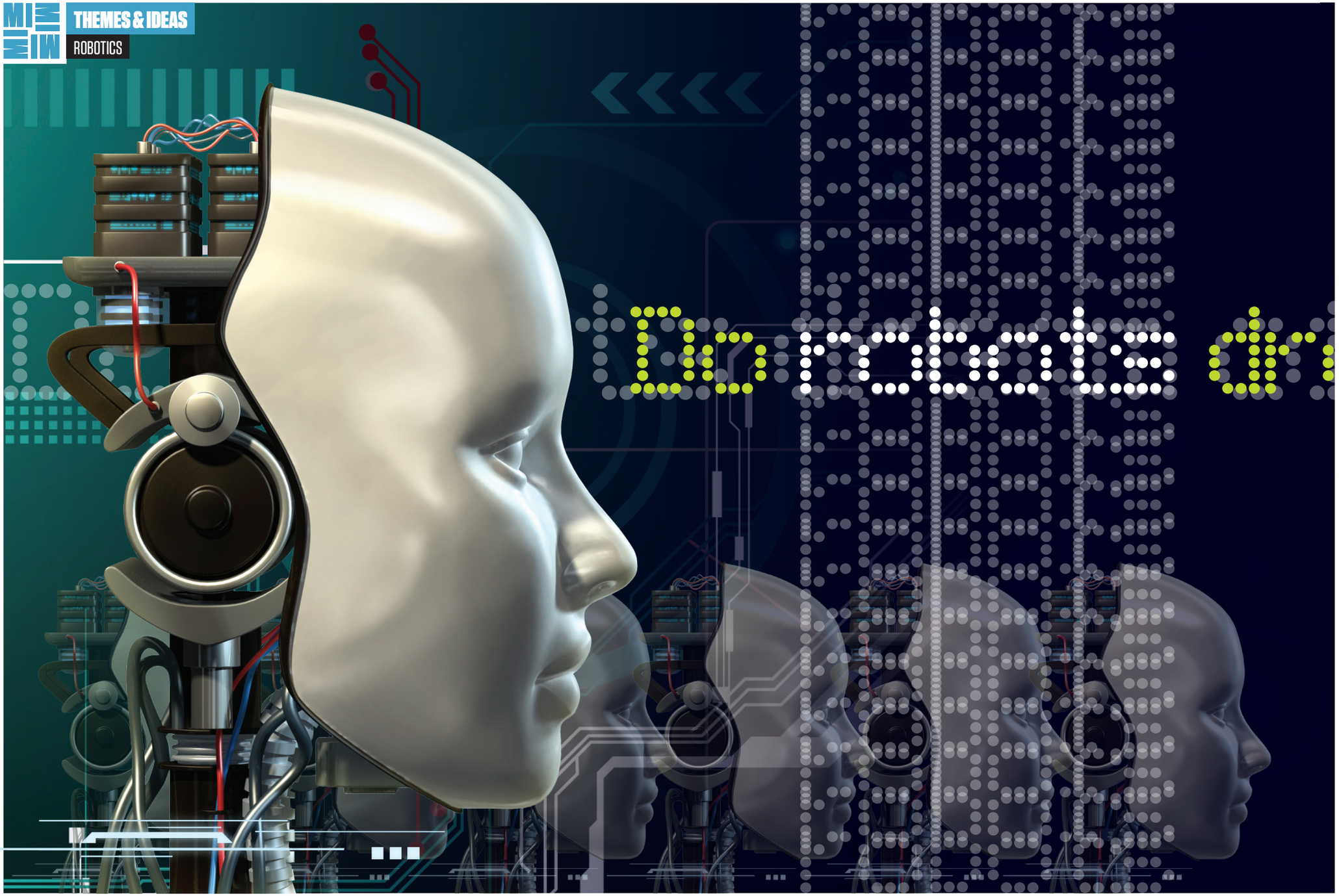

Robotics on

Drones, 3D printers, smart networks: science fiction is fast becoming reality. **Daniel Rzasa** talks to thematic investors about betting on the rise of the machines

Do androids dream of electric sheep?

In his 1968 novel *Do Androids Dream of Electric Sheep?* Philip K. Dick tells a story of an android hunter whose biggest dream is to replace his pet robotic sheep with a live one. For a person living in the post-apocalyptic world where owning a private robot servant or animals is nothing unusual, possession of a real live pet would be the ultimate status symbol.

Even though Dick was a science fiction writer, recent rapid adavancements in robotics mean that parts of his fantastical vision may materialise, with the world is set change even faster than after the internet was invented.

'Robotics is going to impact every single industry. It is not science fiction, it is already happening. If you look at the sales of 3D printers, drones, industrial robots, we speak about double-digit returns,' says Jonathan Cohen, manager of the recently launched RoboCap Ucits fund, which has been unveiled by UK-based firm Robocap.

One industry being impacted by the robotics revolution is finance. A robo-advisor is an online wealth management service that provides automated, algorithm-based portfolio management advice without the use human financial planners. While some experts believe they're untested and unaccountable, others look at them as a great way to invest in a cheaper and more efficient way.

Viva la robolution

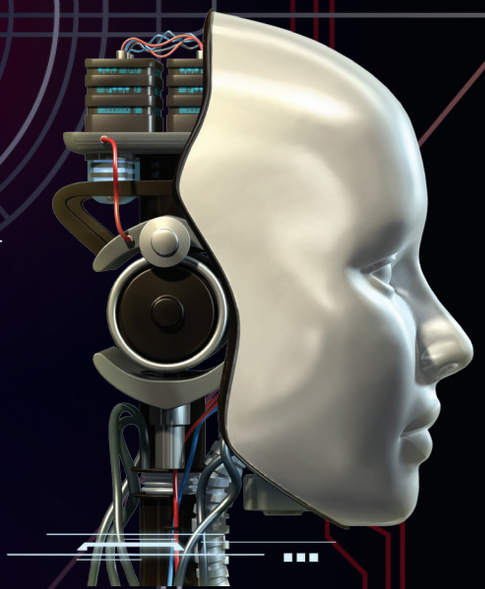
In 2015 the robotics industry grew by 15% on the year, establishing a new record in robot sales worldwide, according to the president of the International Federation of Robotics, Joe Gemma.

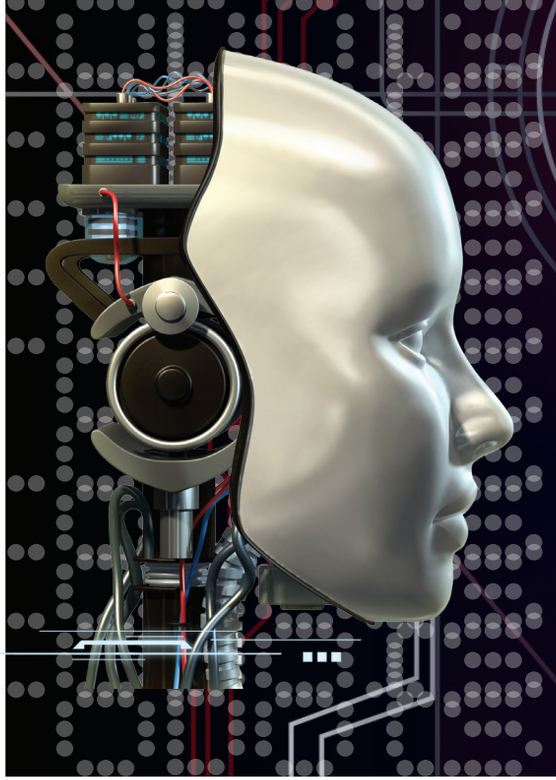
Despite the significant growth, the future of many areas of robotics still remains risky, as uncertainty over regulation of driverless cars or drone usage holds back the industry.

'Regarding drones, I'm interested to see how it will play out in terms of regulation. Some companies are looking to find their niche at the moment, but regulation is key because a government can kill a company overnight by changing the rules,' says Bruno Bonnell, partner at Robolution Capital, a private equity fund dedicated to service robotics.

He adds that similar risk applies to driverless cars. 'The days of those cars in open roads will not come soon because it would infringe upon many parties' interests.'

However, Bonnell, who wrote a book about robotics titled *Viva la Robolution* (which, unlike Dick's novel, is not science fiction), says that there are areas in robotics that have already overcome many hurdles, including regulation, and they are still growing rapidly. 'Today we see





a boom in industrial robotics and this is probably the safest bet within the sector at the moment. The companies are a decent size and most likely know what they are doing.'

Cohen from RoboCap agrees that industrial robotics is by far the most advanced sector, and the one spearheading the rise of robotics. 'Boston Consulting Group says that the rate of automation will double in the next 10 years because costs of robots are going down. At the same time robots can do things they weren't able to do a couple of years ago. A combination of these factors will bring changes we could only dream of a few years back.'

He adds that today the automotive industry is leading the way in robotics use. 'Aviation is one step behind, then comes mobile electronics, and then you have logistics. For instance, if you order something on Amazon, you have robots who find and prepare your package in the magazine.'

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>
> Jonathan Cohen, Robocap Ucits fund

Collaborative androids

Yet while robotics is heavily reliant on the automotive industry, the next stage of development — called collaborative robotics — will likely make it less dependent on business cycles in the auto industry, say Karen Kharmandarian and Peter Lingen, managers of the €225-million Sicav fund Pictet-Robotics.

'Collaborative robots, which can work alongside human workers, are the next step of industrial robotics. They are smaller, safer, smarter than previous generations, as well as cheaper, which means they can also be considered as potential purchases by SMEs.'

An example of a company well placed to benefit from this transition is Germany-based KUKA, in which the Pictet-Robotics fund has been invested since its inception in October 2015.

'KUKA has significant exposure to traditional robots. However, the new generation of collaborative robots will help to diversify their production from the automotive sector and thus its exposure to the market cycle of car manufacturers. We think that KUKA will be one of the longer-term winners in robotics.'

The upcoming robot revolution is not all roses and some investors raise concerns about the negative outcomes it might bring.

In the February edition of *Modern Investor*, the CIO of the UK's Environment Agency Pension Fund, Mark Mansley, said that in the long term he was concerned by the fact that the rise in the number of jobs robots will be able to perform will further spur wealth inequality.

'Henry Ford thought it was important to pay his workers enough to allow them to buy his cars. If the age of robotics means workers are not working anymore, who is going to buy those cars?'

Yet despite the many uncertainties, robots are on track to revolutionise production processes, as well as our day-to-day lives.

'What the internet did for services, robotics will do for products,' says Robolution's Bonnell. 'I predict a robotics boom before 2020 and it will actually be much bigger than the internet boom.' ■