

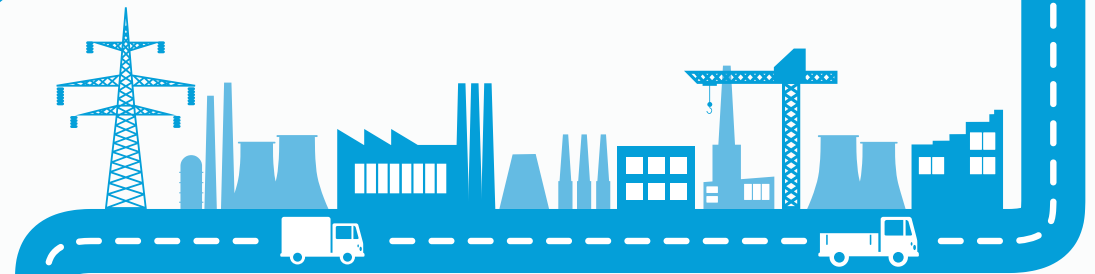
Disrupt or be disrupted

By 2020, 50 billion devices will be connected to the Internet, creating \$19 trillion of economic value. In this world of digital newcomers toppling traditional giants, it's time to disrupt or risk being disrupted.

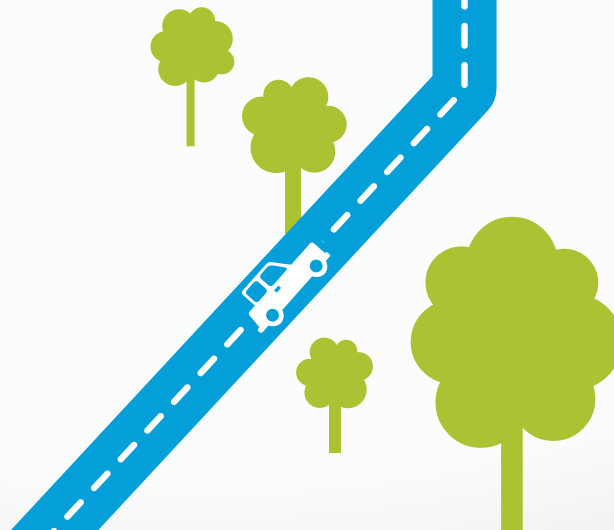
Amazon changed retail. Uber changed transport. Airbnb changed hospitality. The pattern is familiar: a digital platform challenges conventional attitudes to scale and complexity. And wins.

There's no magic source code a CIO can use to digitise their organisation. But there are four qualities that the successful disrupters all share: they've all managed to go digital while keeping the lights on in their wider business. They're all more agile than their competitors. They're using data to powerful effect. And they're extremely serious about security.

Content



Example



Keeping the lights on

By 2020, around 75% of organisations worldwide will either be digitised or on their way. To make that transition smoothly, you've got to do three things.



1. Get every part of the business on board with the digital agenda

The best way is to put IT up on a stage and let it impress people. That's how Jens Meier, CEO and Chairman of the Hamburg Port Authority, started to win people round.

“We have a huge bridge in the port called Köhlbrand Bridge and there was all this traffic,” says Meier. “Trucks were overtaking each other and slowing down the traffic behind them. But when we told people, nobody was interested. So we put in an IT system to put some numbers against what we already knew, and people listened. We were allowed to put in a sign forbidding trucks from overtaking and the traffic jams disappeared.”



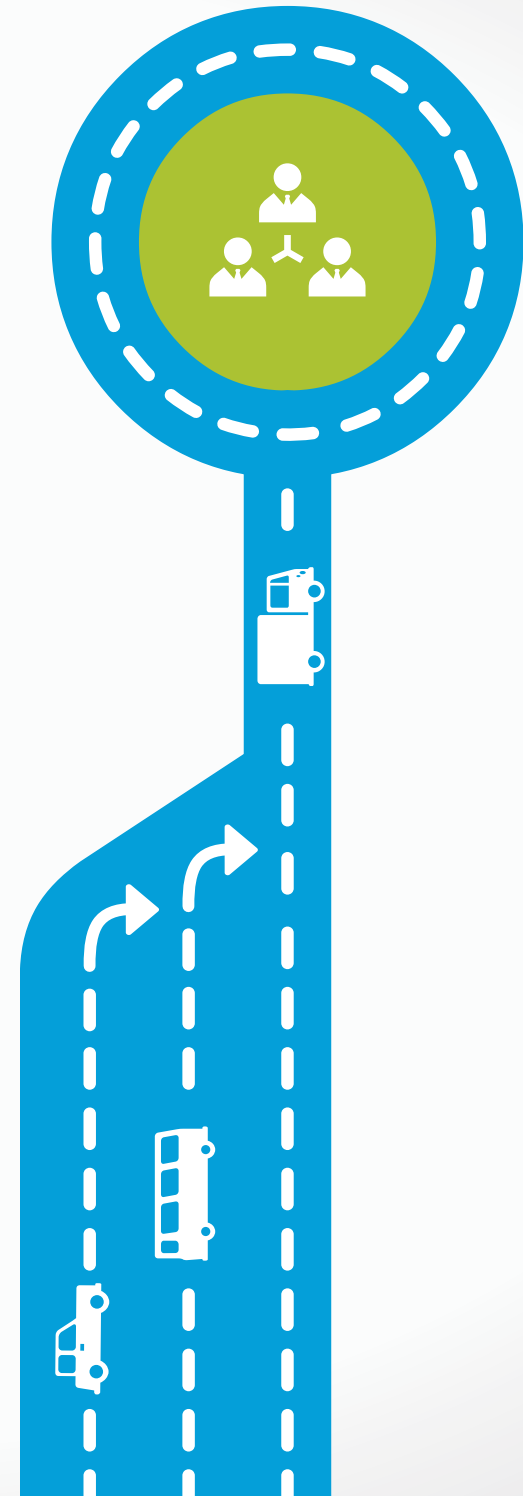
2. Call in the specialists

IT calls for specialists, particularly in security, data science and general computing. But who is most ready to make the transition? Network engineers, says Soni Jiandani, SVP Marketing at Cisco. “It took Cisco IT just four days to train our network engineers on Python. We were automating repetitive tasks by the end of the week.”



3. Tighten up your relationships

Every supplier, partner and customer needs to be on the same team, with the same goals. Tackling all three can seem a daunting prospect, but no CIO needs to go it alone. Cisco has a 'build, buy and partner' model, meaning that yes, we do build a lot of technology, but we also buy and partner with other companies, absorbing new skills all the time. Gartner recently referred to this as 'techquisition'.

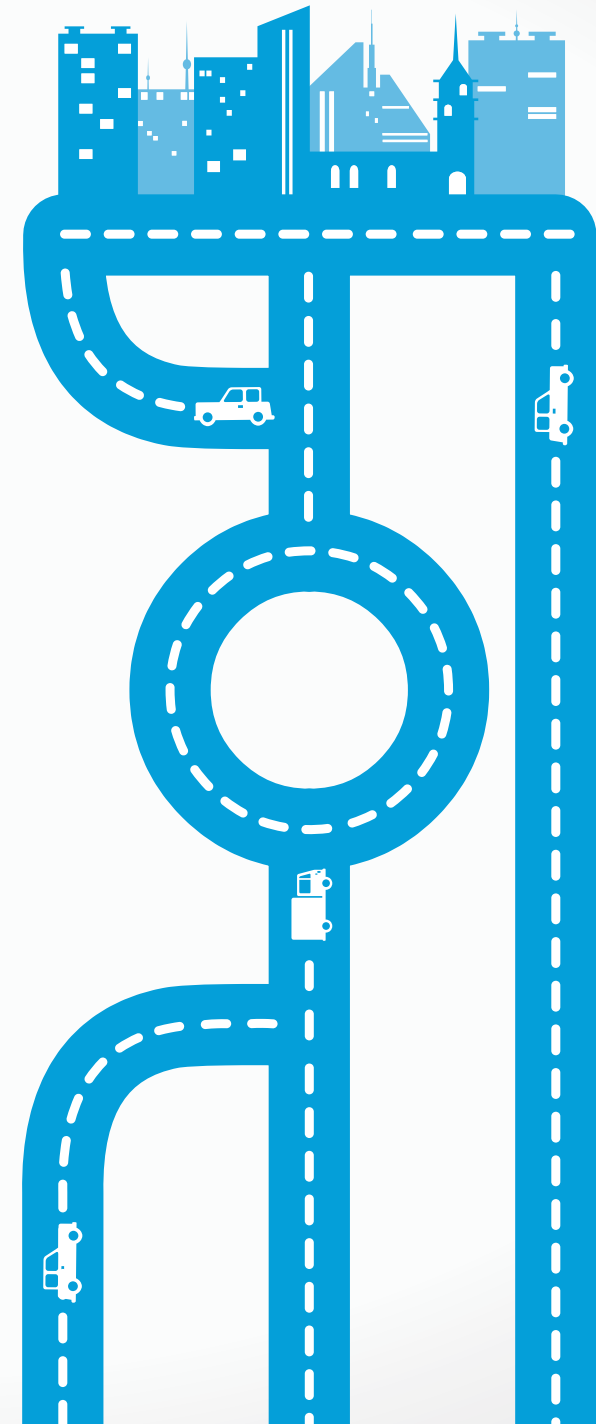


Getting more agile

But innovation can't exist in a vacuum. If you want to get a return on your fast lane investments, you've got to build the right environment.

At John Lewis, that environment is Room Y: a room behind the dustbins on the first floor of its London HQ. It's full of iMacs, laser cutters and 3D printers, and it has a single purpose: fast innovation.

If you'd wandered into John Lewis' Oxford Street store last October, you'd have seen a wall of miniature model sofas with RFID tags. Customers could pick up the model they liked along with a fabric swatch, put both onto a smart table and get an image of their custom sofa on a screen. Both the concept and the execution happened in Room Y.

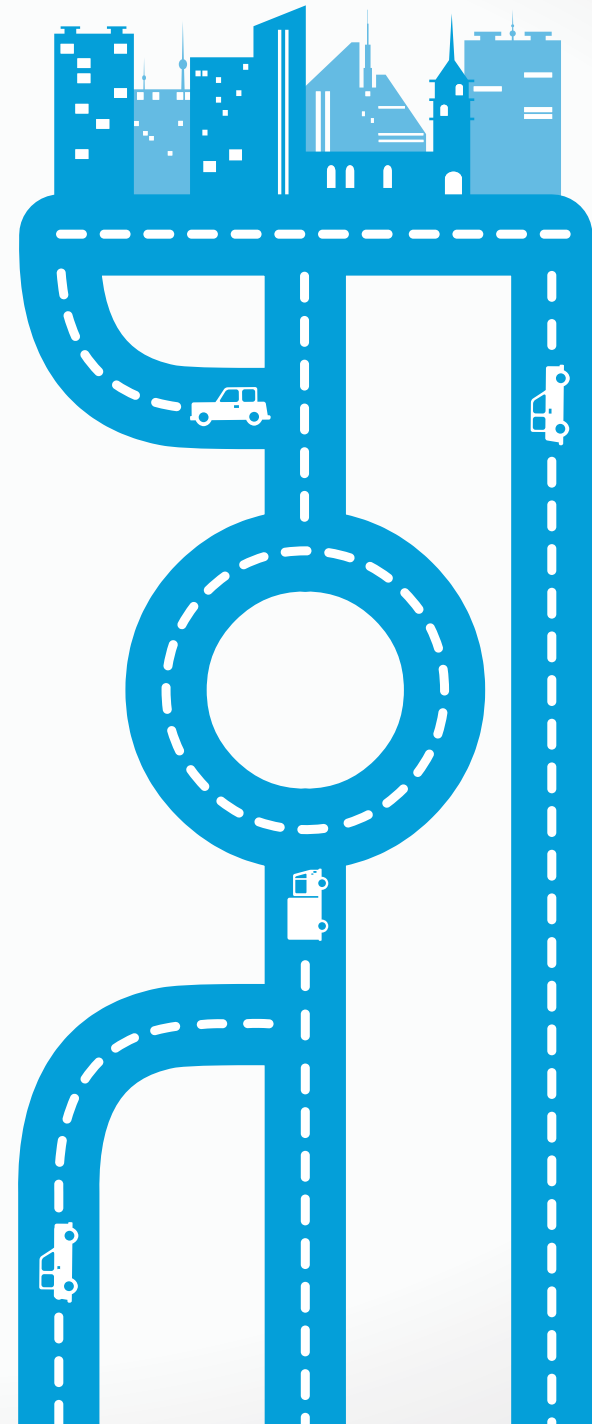


Getting more agile

But reinventing a juggernaut-sized organisation takes more than just a clever investment model. At Cisco, Rowan Trollope's Collaboration Technology Group was given the task of making the company more agile.

He believes that to do it, a company needs to flatten out its hierarchy, empower the frontline rather than micromanage them, be ready to change at all times, and stop trusting plans.

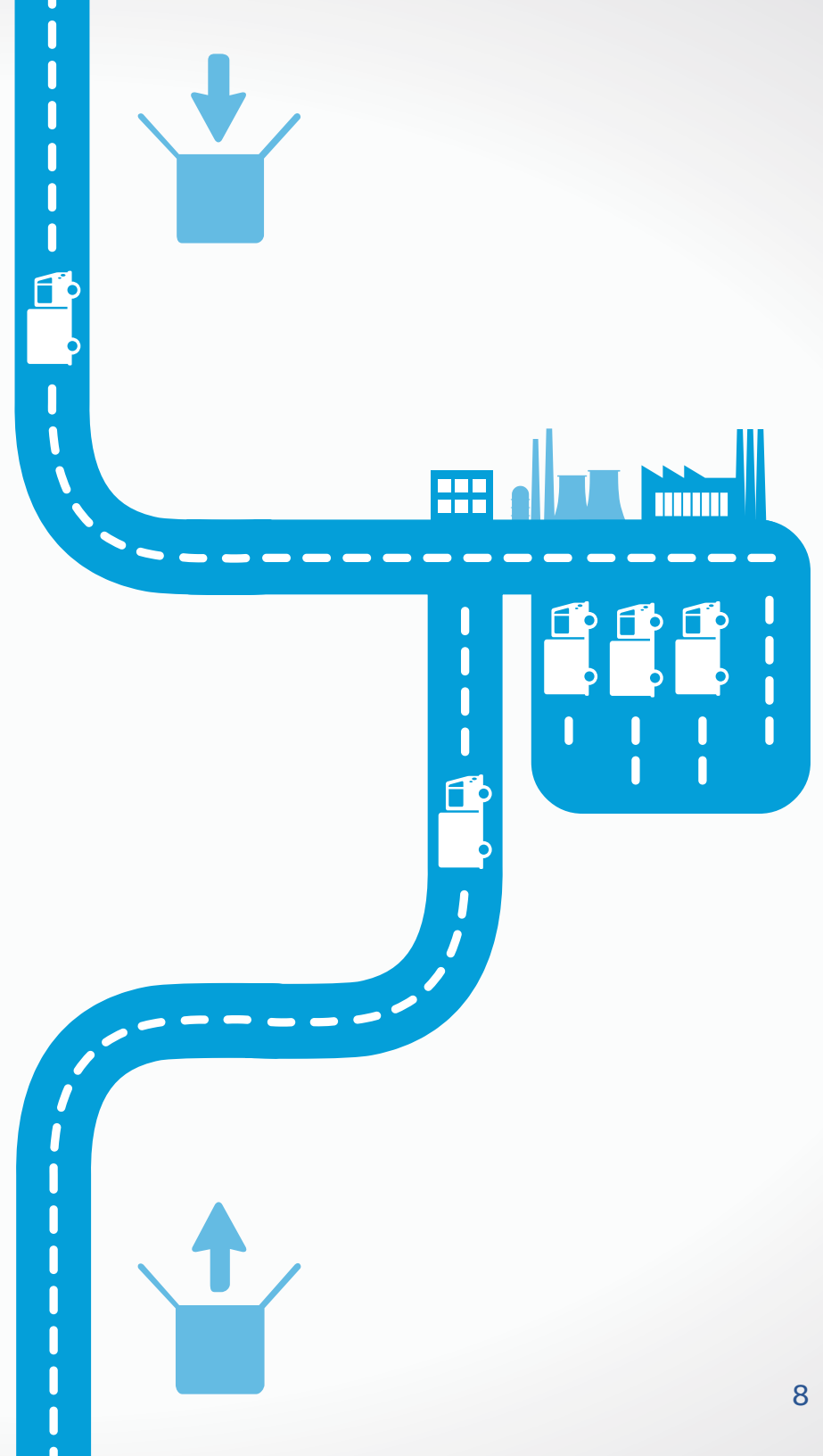
“When the world you're operating in is predictable, planning makes sense,” says Trollope. “It makes less sense when the world isn't. And that's increasingly the case.”



Making the most of data

Rebecca Jacoby, SVP of Operations at Cisco, calls data the 'holy grail of disruption.' The savviest organisations understand that data is their most strategic asset, so they're more than happy to offer gadgets and software for free.

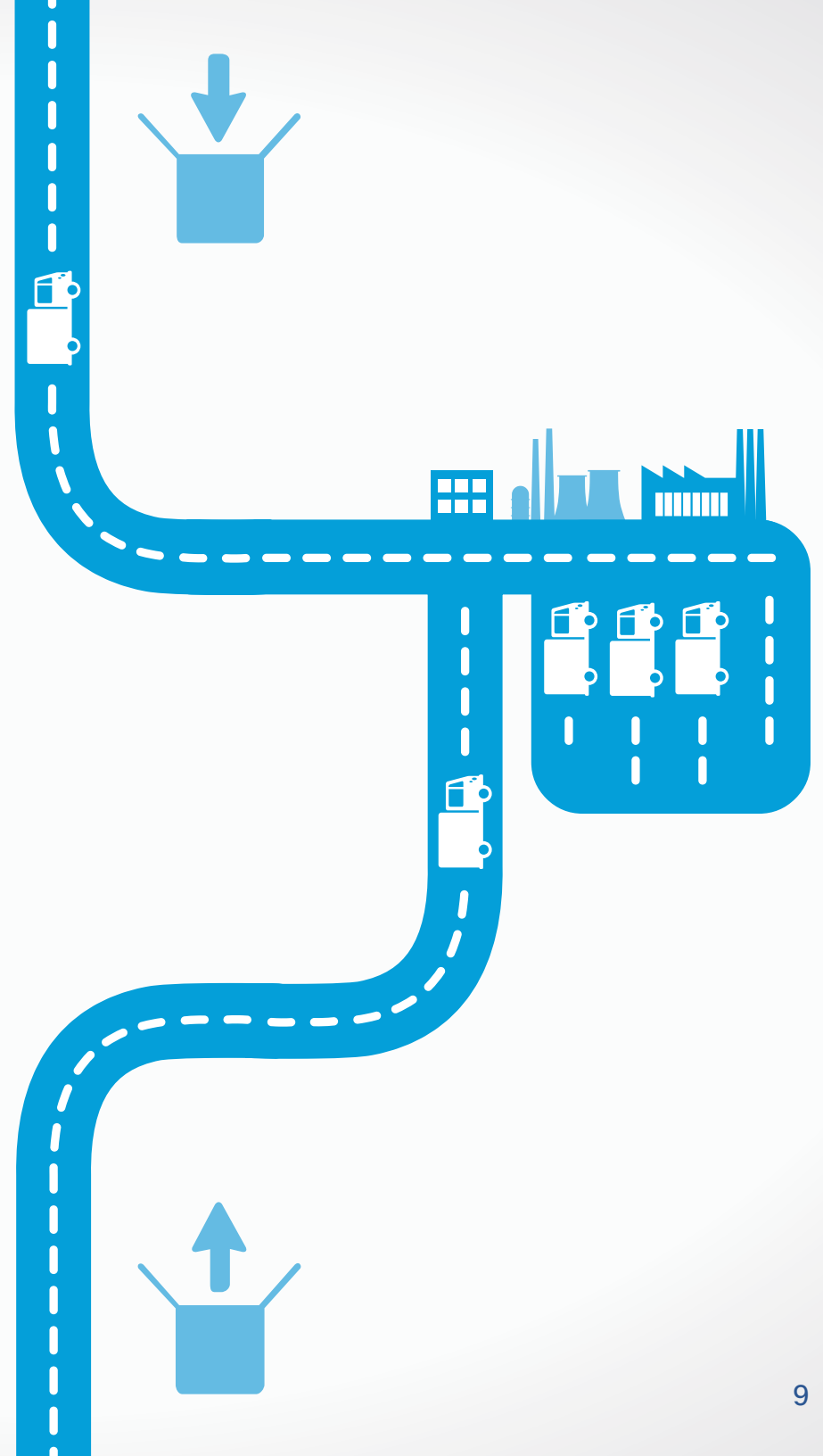
For example, Google Flu Trends predicts the spread of flu more accurately than the Centres for Disease Control, and it's free. Google Search itself is free. And as of the second quarter of 2015, Facebook had 1.49 billion regular users worldwide: the same as the populations of Africa and South America combined. If Mark Zuckerberg had asked for \$20 a year for membership since the company launched, he'd have made well over \$140 billion by now. But instead, all he wants is your data. To Facebook, it's priceless.



Making the most of data

One small bit of data-driven technology can give a company an insurmountable advantage over its competitors. Take Amazon. Because they know not only what you've bought but what you've browsed, they can see which products are potentially popular and make sure they've got enough stock. It's a trick their competitors, who use the same sort of supply chain logistics and have the same sort of products, can't keep up with.

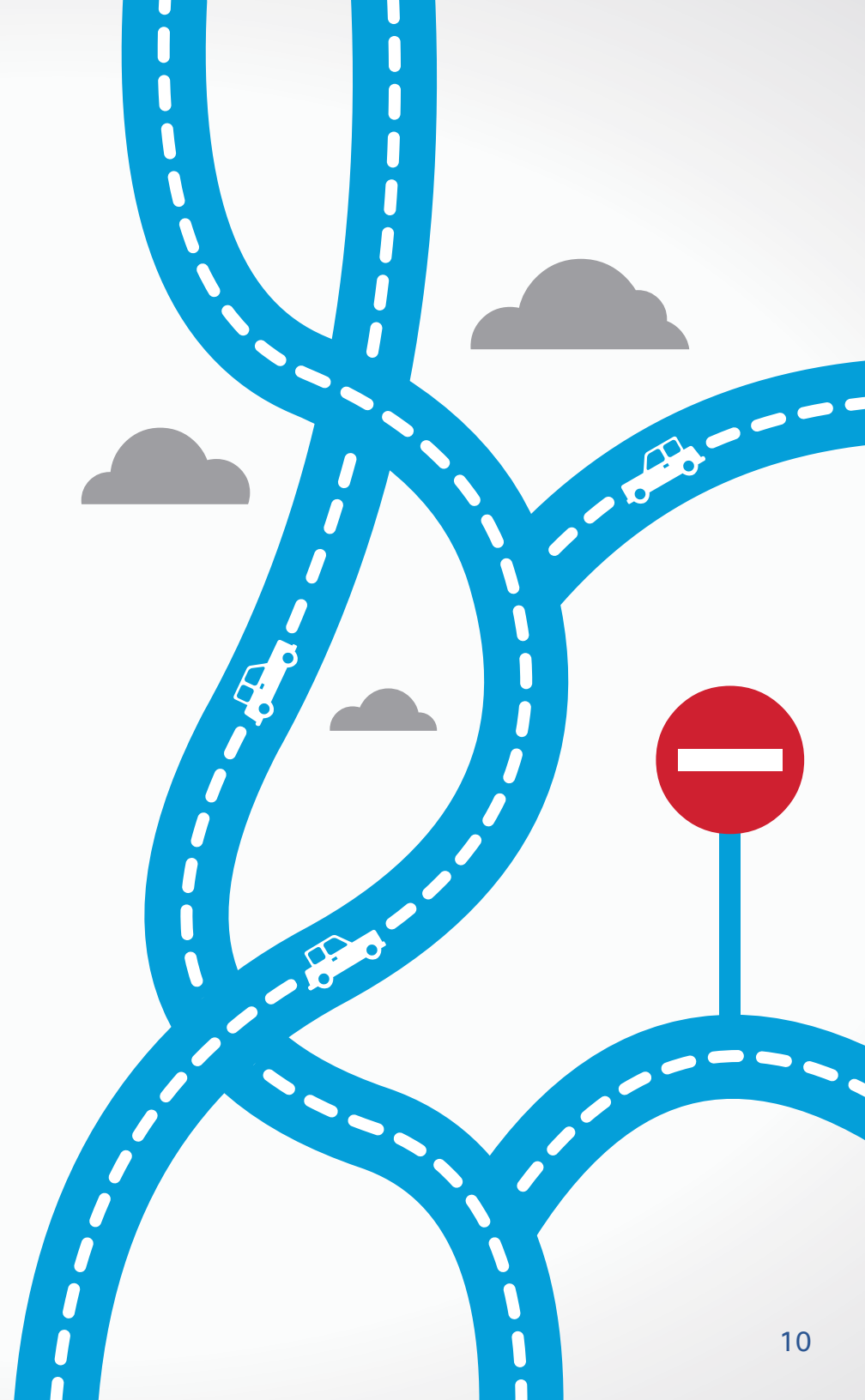
But data is a blessing that can quickly become a curse. On average, 70% of it sits in a warehouse, uncrunched, because there's just too much of it to handle. The good news is some entrepreneurial types are creating new tools to help organisations survive the tidal wave. Hadoop, from Apache, is one example, offering organisations a way to store their data and use it for insights at the same time.



Serious about security

The final piece of the puzzle is security. Cloud, mobility, data and connectivity offer a critical competitive advantage, but when everything has an IP address, how do you guard against attacks? Today, 60% of data is stolen in hours but 54% of breaches go undetected for months.

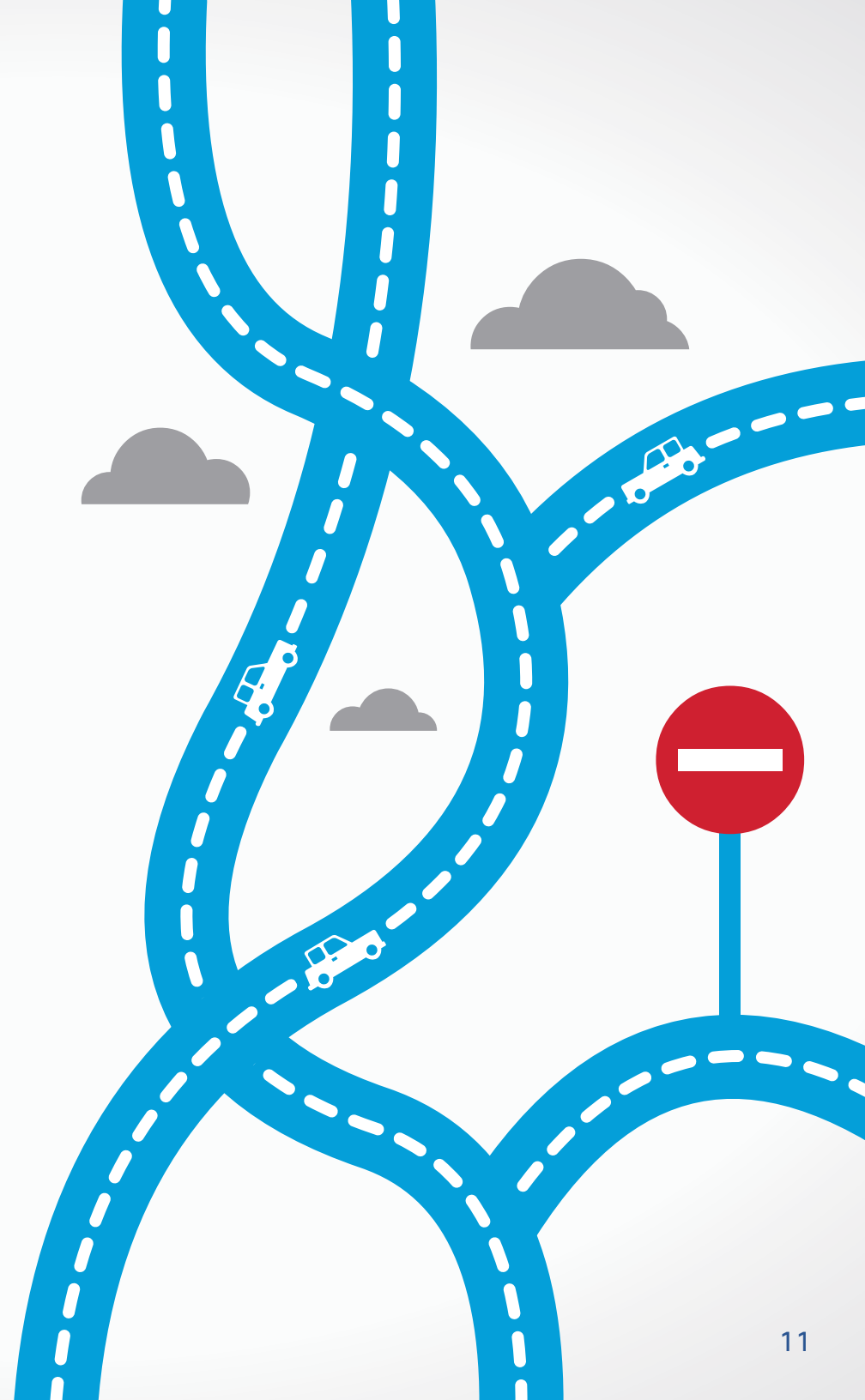
And despite this everpresent danger, many organisations have been naïve, protecting entire databases with a single username and password. It's a hacker's dream and a PR disaster waiting to happen.



Serious about security

According to Niall Murphy, Founder and CEO of EVERYTHING, we all need to start taking our data more seriously. “Sharing data is a central part of the IoT world we now live in. So you’ve got to think about control and permission right down at the individual data attribute level. You’ve got to compartmentalise the way you manage object data inside your systems.”

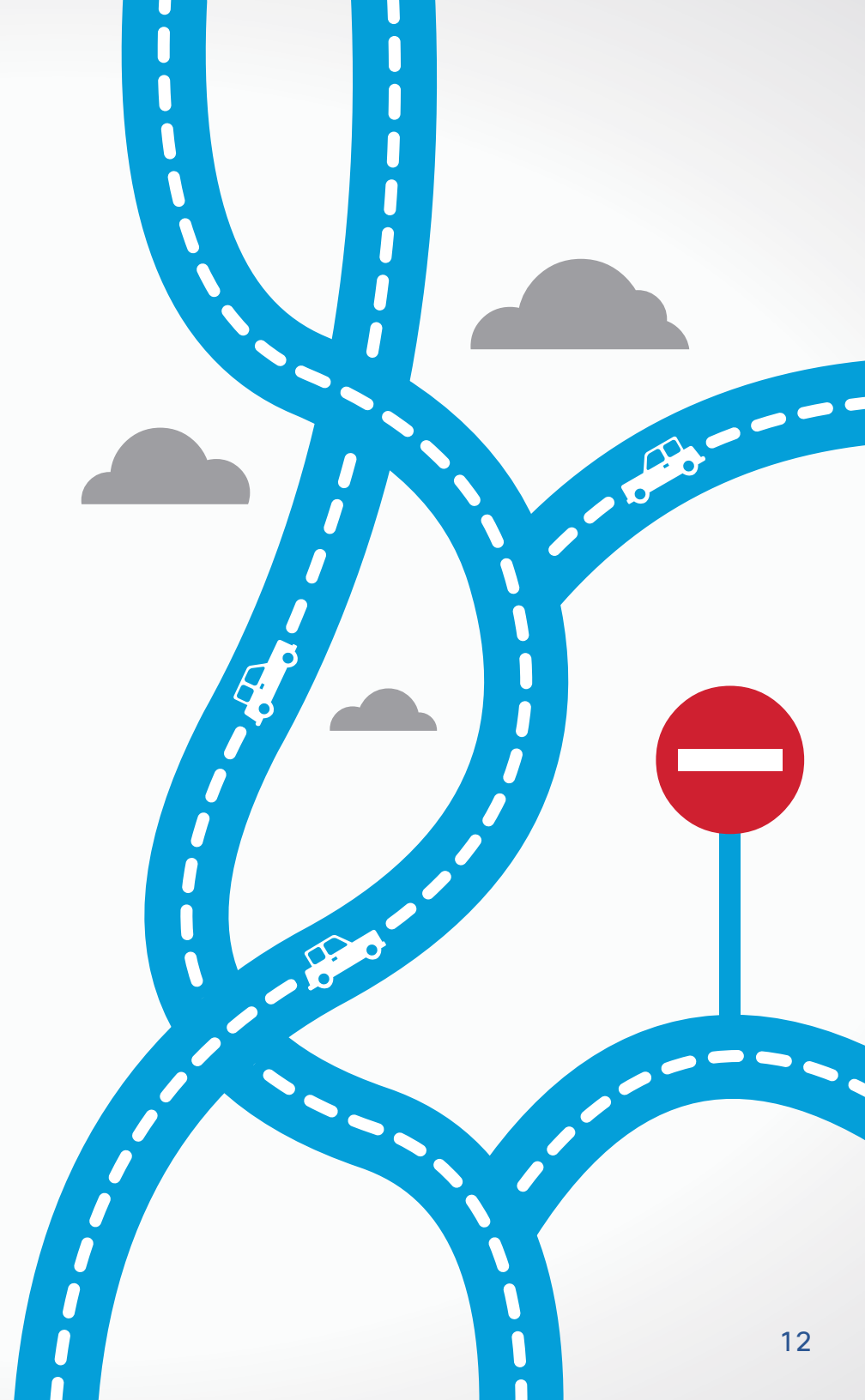
Traditional security measures just don’t cut it in this brave new digital world. It’s no longer enough to have security systems that wake up when an attack happens and fall asleep the moment the threat’s over.



Serious about security

“Security needs to be pervasive – from the network to the mobile user and from the cloud to every corner of operations – wherever employees are and data is.” says David Goeckeler, SVP/GM of the Cisco Security Business Group. “Done right, security will enable business models like mobility or the cloud. It will also reduce risk by stopping more threats and keep IT teams more productive so organisations stay focused on what they do best.” Cisco’s Security Business Group knows the nature of the new threat better than many. Goeckeler and his team are constantly having to update the tools they’ve got because attacks are getting more and more advanced.

“We’re seeing a lot more sophistication,” he says. “The attackers have figured out what the defence mechanisms are and they’re figuring out ways around them. There’s been a 250% increase in spam over the last year and it’s a lot more targeted.”



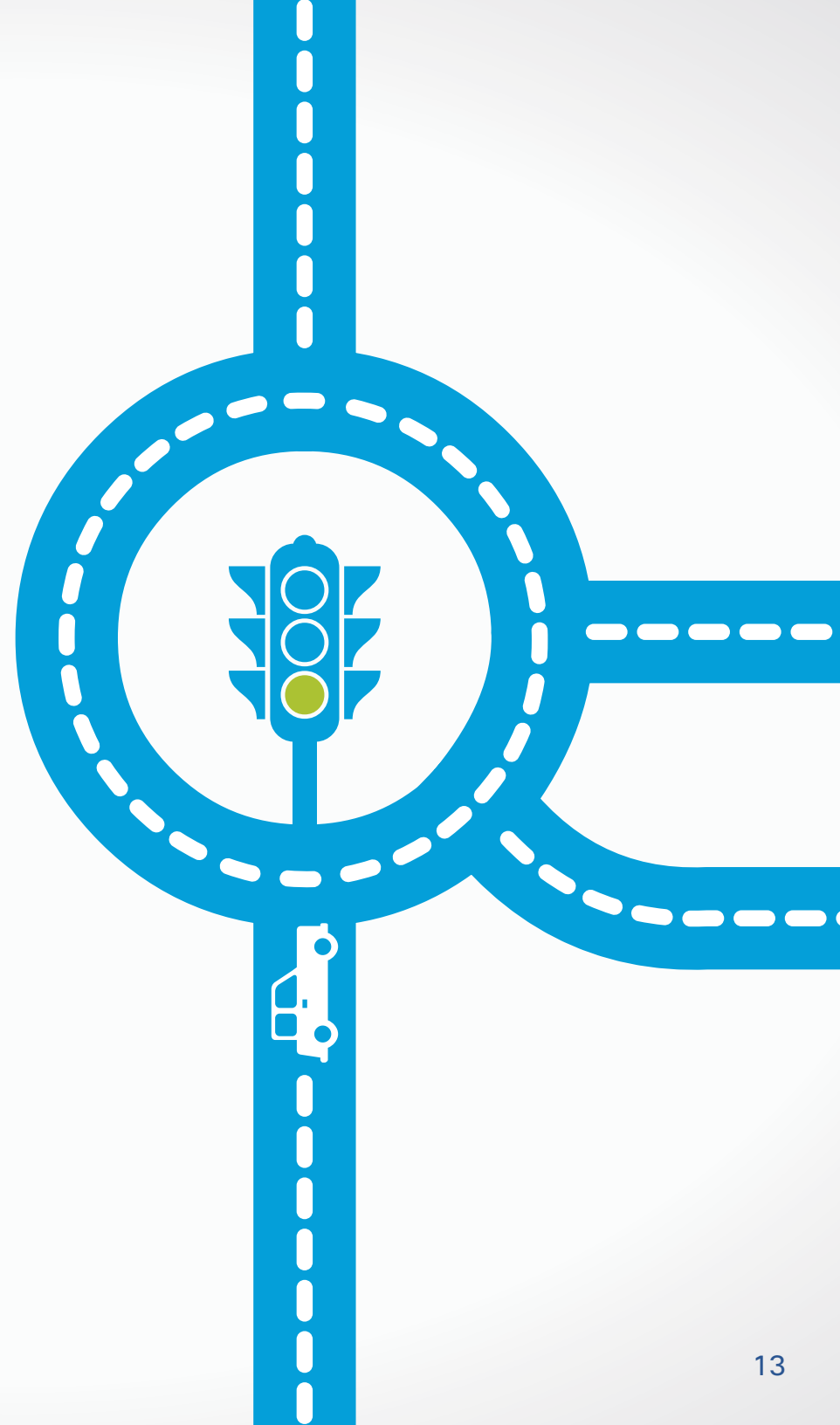
Where do we go from here?

Tomorrow's digitised world has no respect for the size or age of an organisation. To win, businesses will need to reinvent themselves and find a way to bring their people with them.

The key is to start small, with innovation labs like John Lewis' Room Y, and tiered investments like its three-lane motorway. And as IT becomes more and more central, CIOs will need to start asking for help from other innovators like universities, researchers and cities.

Traditions will die. Leaders will fall. And only the bravest of the disrupters will survive.

Take the change seriously, and you'll be one of the lucky ones.





Living products

Each year about 3.5 trillion consumer products are manufactured and sold around the world. Cans of Coke. Tubs of washing powder. Shampoo bottles. Until quite recently, those products have been analogue, but now they're being turned into living, reporting, intelligence-gathering units. Or, in the words of Niall Murphy, founder and CEO of EVRYTHNG, 'service nodes on the network'.

Now, once you've put the last spoon of washing powder in the machine, you can use the empty tub to order the next one. Essentially you've brought home a device through which a brand like Unilever or P&G can communicate with you.

Murphy thinks the change will keep organisations on their toes. "When a customer hits the switch to turn on a lightbulb you've manufactured, that light better come on. If it doesn't, you'll know about it right there and then, and you'd better be able to do something about it."

