

## AI is Crucial for Digital Transformation

By: Tim Young

Let's start with two things you already know:

(One) The digital business model has exploded in recent years, and (Two) the spoils of that massive growth has largely eluded the communications service providers that enabled the revolution to take place.

We know that OTT offerings have soaked up most of the profit, and have undercut content offerings from CSPs. According to a [report released](#) earlier this year by Accenture and the World Economic Forum, communications ARPU has declined by between 13 and 36 percent since 2012, across all regions.



Simultaneously, changing subscriber behavior and surging demand means that CSPs still need to build like crazy if their networks are to keep up with user demand. The same report estimates that CSPs, globally, will need to spend \$2 trillion on network investments over the next decade just to keep pace with demand. The report cites an IDC prediction that by 2020—three short years away—the “digital universe”—the amount of data we create or copy — will reach 44 zettabytes, a tenfold increase over 2013. [In a later prediction](#), IDC projected that number to reach 180 zettabytes by 2015, with that huge increase driven in large part by the Internet of Things.

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[Michael Kanellos at Forbes](#) cites, for instance, that the new Ford GT supercar contains 50 sensors and 28 microprocessors capable of generating a staggering 100GB of data per hour. Granted, not everyone drives a supercar; but considering the fact that cars like the new GT and the BMW i8 are often showpieces that serve as a proof of concept for technology that trickles down into other vehicles in a carmakers' fleet, there's every reason to expect that the bulk of data generated by our cars and every other device we own will grow and grow.

CSPs will be responsible for shouldering the load of that data while also seeing a decreasing share of the industry profit pool. Whereas CSPs claimed 58 percent of profits generated by the telecom industry in 2010 (with the rest shared by device manufacturers, network equipment vendors, content creators, content distributors, and semiconductor companies), by next year, that share is forecast to drop to 45 percent. And that trend is expected to continue.

But as I said before, if you're reading this, you were probably at least somewhat aware of

everything I've written so far.

So what do we do about it?

At least one strategy is to get genuinely smarter about artificial intelligence.

AI (or machine learning or cognitive computing or any number of other technologies and strategies that can be covered by the AI umbrella) is offering CSPs a way forward on a variety of different fronts by reducing costs, increasing network security and resilience, analyzing data, and improving customer interactions.

Because smarter machines can help give subscribers exactly what they want.

## Seamless customer experience and contextualized interactions

[I wrote about this last month](#), but I am happy to say it again: Lots of CSPs are missing the boat when it comes to seamless customer experience. Big time.

But the good news is that AI is getting pretty good at interacting with customers. Chatbots like My Starbucks Barista and KLM Airline's Facebook Messenger chatbot are meeting and exceeding customer expectations with easy, personalized, and lightning fast interactions.

And this is the wave of the future. [Gartner predicts that by 2020](#), autonomous software agents (with no outside human control) will participate in 5 percent of all economic transactions.

Fortunately for CSPs, there are vendors out there putting together digital assistants specifically tailored to telecom. For example, [CrowdCare](#) announced just a few weeks ago that it has partnered with IBM Watson to make their Wysdom self-care solution more intuitive.

Watson also underpins Amdocs' recently announced aia, which the company describes as a "self-driving telco." The aia platform uses data in real-time to make predictions, automate decisions, manage conversations with customers dynamically.

And the potential for AI assistance isn't limited to the customer side. Just a few months back, for instance, Nokia announced the launch of MIKA (multi-purpose intuitive knowledge assistant), which is built on the company's AVA cognitive services platform and is designed to help engineers gain access to knowledge quickly and efficiently.

"Finding the right information is a daily challenge for telco engineers tasked with boosting network quality," said Igor Leprince, head of Global Services at Nokia, in a statement. "MIKA taps into the power of the Nokia AVA platform to provide quick and accurate answers, avoiding time wasted on fruitless searches." Nokia estimates that MIKA can "give back" more than an hour of productive time to highly-trained engineers.

This is all crucial when attempting to move at the speed of customer expectation.

## Cyber security and resilience

How many security breaches come down to human error? A door left open or an errant line of code. Suspicious activity missed or ignored. It happens. And it happens more when you've got the vast and varied digital landscape to cover.

AI can help close that gap. [Just a few months ago](#), Rahul Sasi and his team at CloudSek used a human-bot hacking hybrid to discover several massive flaws in LinkedIn, which would have allowed access to private contact information, enabled hackers to delete connection requests and more.

The security potential of AI has caused an inevitable backlash from those who point out that AI

alone cannot be trusted to root out security flaws. But as Sasi and team's model suggests, intelligent machines working in concert with trained professionals are capable of tremendous feats.

## Big Data

That same edge that AI brings to cyber-security—the ability to identify and track anomalies that a human might miss—is valuable for every aspect of data analysis that a CSP might encounter. [Ovum calls machine learning](#) the biggest disruptor in Big Data trends over the coming year. IBM is obviously heavily involved, as are Amazon, Microsoft, Google, HPE, Oracle, SAP, Informatica, and many others.

## The Future

Gartner predicts that, by next year, 45 percent of the fastest-growing companies will have fewer employees than instances of smart machines. It also predicts that by next year, 3 million workers, worldwide, will be supervised by a “robo-boss.”

Heck, I'm even a little nervous about my own future job security, based on the prediction that 20 percent of business content will be authored by machines next year.

But machines can't do it all, and they need help. By 2018, 6 billion connected things will be requesting support. Who'll be there to fulfill that request? Will machines be helping machines? Or will a human hand be necessary?

It's a complex landscape, but that's nothing new. A smart approach to AI could be the path to an efficient and profitable future for CSPs.