

5 megatrends for CIOs to watch

David Gee grabs his crystal ball and predicts the five megatrends you'll need to be aware of between now and 2020.



Five years ago, I predicted that CIOs needed to keep a close eye on the following five trends:

- The return to craft (Freelancer, Skillsapien, Expert 360)
- Crypto currency (Bitcoin, Ripple, Dogecoin, Litecoin)
- 3D printing (absolutely everywhere)
- Quantifiable self (FitBit, wearables etc)
- The impossibility of forgetting (Facebook, Pinterest, Instagram etc)

In each of these areas, we have seen significant shifts in our society and for the CIO, this represents both a threat and an opportunity.

Over the next three to five years, the pace of change will continue to accelerate and CIOs will need to be stronger leaders to take the enterprise forward.

I've looked into my crystal ball again to predict five megatrends that I believe you'll need to watch between now and 2020.

They are:

- Machine learning
- The blockchain
- Continuous monitoring
- Smart objects
- The death of e-mail

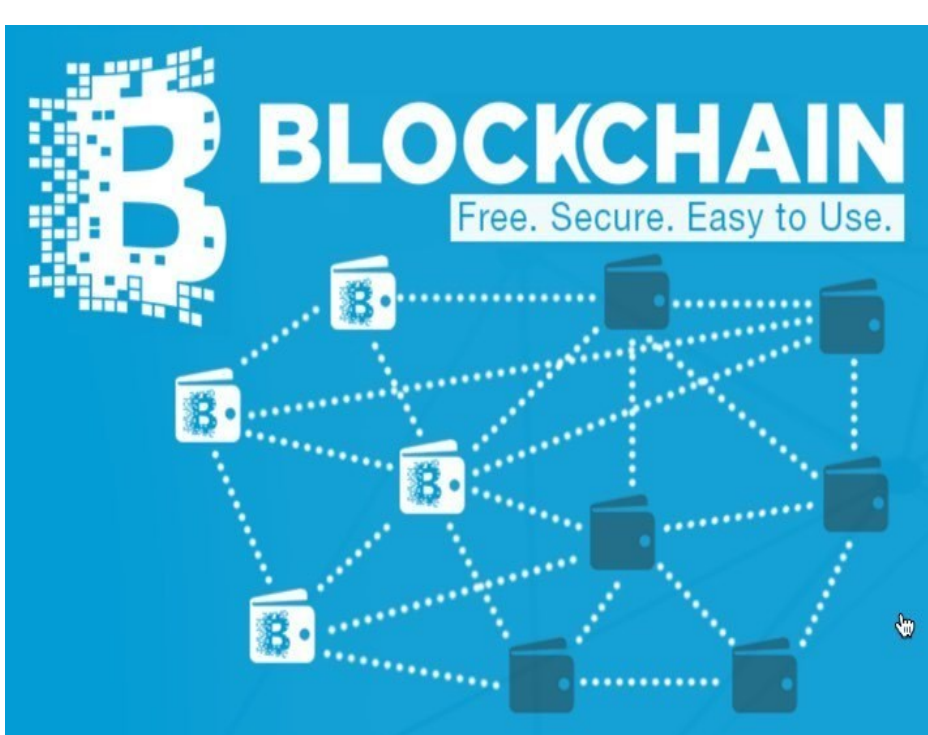
Let me explain why I think they are key megatrends to watch.

Machine learning

The rate of storage of data both 'soft' data and 'hard' data is increasing and resembles an exponential curve. We are approaching an era that humans will be unable to detect the patterns, due to data overload.

Machines don't have this issue. Machine learning is the emerging science around "the study of pattern recognition and computational learning theory in artificial intelligence," according to Wikipedia.

With vast varieties of data, we have hours of video, photos and documents. Searching through these mountains of digital files needs a digital assistant and unfortunately the analogue ones (humans), just doesn't cut the mustard.



The Blockchain

This is the ledger system that is the foundation of Bitcoin which has been willingly adopted by financial institutions and seen as a revolutionary approach. It is actually quite simple but in that simplicity, there is extreme elegance.

The idea of writing all transactions with 'rich' data into a public or private ledger, eliminates the need for intermediaries. In short, there are indeed hundreds of use cases.

The most extreme case is that the Blockchain replaces the heart of any bank, its core banking system.

There are also some compelling use cases to create a secure personal identity system using this architecture. Again this would [remove many existing middle-men](#).

Continuous monitoring

In the post Edward Snowden era, we live in times that will later be termed World War III – there is conflict underway with ISIS that is an enemy that we can't see or easily recognise.

Unfortunately, this coincides with a period that cyber security is the weapon of choice and both rogue states along with the western powers all practice this dark art.

Alas, we have to give up some of our freedoms in this environment and our lives will be increasing subject to 'continuous monitoring'. This is checking that our [behaviour in the real world and online remains consistent](#).



Smart objects

We already own many things – smartphones, tablets, fitness trackers, wireless stereos etc. The big difference is that everything starts to talk to everything and all the new items we acquire have this functionality built-in.

It becomes a security nightmare and let's not be under any illusions that it won't be restricted to the home. CIOs will also need to deal with security issues related to smart objects in the workplace.

That tablet that is sitting as a room control device on the boardroom table has great utility for the participants but it also needs to be secured otherwise it can be a fantastic spy camera for illegal market intelligence gathering.

For every business we start to be able to track every object – truck, person, asset etc in real time. If we can monitor our machines from remote locations and as smart objects talk to smart objects, then preventative and corrective maintenance will be automatically requested and fulfilled.

Just imagine the look of happiness of the CIO or CISO when servers automatically patch themselves after running regression tests to [ensure the updates are legitimate and relevant](#).

The death of email

Is email going the way that faxes and telex messages have already been? There is no doubt that there has been a rise in the use of a personal and increasingly corporate level of messaging applications.

While email has been a useful tool, it has suffered with the design allowing for too much flexibility to allow SPAM email. There is more than 50 billion SPAM messages sent every day, it is there hidden under all those filters and rules.

Clearly email is far from dead, it is just a medium that is not given that much trust – to illustrate we have seen banking services spawn from Facebook, WeChat and other social media. But I've never seen a Gmail banking service.

Rising in the place of eMail will be collaboration tools like Slack. These new class of tools [have all the advantages of messaging with integration built-in](#).



What do you think?

I felt pretty good about my last five picks and that was validated when my predictions came true. As I look forward at the next three to five years, these are the megatrends that will demand your attention.

What's your view? Have I missed any of your own favourites?



David Gee is the former CIO of CUA where he recently completed a core banking transformation. He has more than 18 years' experience as a CIO, and was also previously director at KPMG Consulting. Connect with David on [LinkedIn](#).

Contact Information

Prosys Infotech Private Limited, Survey 1/8/1, Salunke Crystal 2nd floor, Lane Opposite Bank of Maharashtra, NDA-Pashan Road, Pune 411021, INDIA.

Landline—020-65002583, 020-65002584, Sanjay-9422034643 sanjay@prosysinfotech.com

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