Intelligence Report - Smart Societies based on Big Data, Artificial Intelligence and Deep Learning

Description: M2M, IoT linked to data analytics (big data) developments are accelerating, and as more companies enter this sector and spend money on developing it, we will see further astonishing innovations emerge over the next few years. Applications are already being used in infrastructure, telecommunications, healthcare and gaming, just to name a few sectors.

Given the current social, economic and political developments, it becomes clear that we seem to have reached a ceiling in the current way we use our intellectual ability to address the complex issues that society is facing. Society lacks the ability to increase the capacity that is required to address the holistic nature of the current challenges. Without that analytic capacity, it will be impossible to come up with the right answers. We have arrived at times like this before in our history, and they typically led to collapses of civilisations and the arrival of serious declines in living standards. If we are to avoid similar calamities, we need to break through that ceiling and find new tools to help us to create a smarter society.

In the end, it is about people, smart people what is needed is a vision from the top (UN, countries, cities, corporations) and smart communities who work from the bottom upwards.

Our lack of ability to see all the different complex issues as they relate to each other and to make thorough analyses of the overall situation is creating increased confusion, which in turn is being (mis)used by populist politicians and dumbed-down media. This makes it very difficult for society to get a good view and to make sound judgments of the true cost incurred by the lack of a holistic approach to the complex problems.

In This intelligence report, we will explore whether the next stage of human evolution is going to depend on developing a collective human intellectual system a global brain. This process is already underway through global interconnection, facilitated by technologies such as the internet, broadband, smartphones and mobility. The latest developments are in M2M (machine-to-machine) and IoT (Internet of Things) where we also link machines and different data sets together and use so-called big data' technologies and analyses to better manage the various aspects of our society. This will lead to interaction and even integration between these two developments merging humans and machines, something that is becoming increasingly possible and is leading to the broader concept of artificial intelligence (AI). Some of the predictions and scenarios discussed might not be exactly right, as we are pushing the boundaries of our current level of knowledge; some issues could attract strong responses from those with different views, and most likely some of the predictions will lead to totally different outcomes. But what really matters is the discussion itself.

Key Developments:

Social, technological and economic developments have accelerated over the last 200 years to such an extent that they are moving faster than the normal evolutionary processes'. Technological advances in M2M, IoT and data analytics are perhaps the only developments that will be able to keep pace with these changes, creating a world more intelligent and smarter communities. We believe that we are now in a global civilisation and that global solutions are needed. Our siloed structures do not allow us to develop the knowledge and the tools needed to cross that next frontier. We need to move from the industrial civilisation to the knowledge civilisation, hopefully without first regressing into another period of Dark Ages'. The next step in human evolution needs to be the creation of a society based on what we collectively know. This becomes available to all through open networks connected to cloud computing environments. It empowers individual people to participate, and with new smart tools, these people will have access to super powers'.

Latest Developments:

In late 2016 The Partnership on AI was launched; In 2016 the ITU and IBM Watson launched a competition to inspire AI developments; In November 2015 Google launched its machine learning system called TensorFlow. Interest in deep learning continues to gain momentum, especially following Google's purchase of DeepMind Technologies, which has since been renamed Google DeepMind. Watson, developed by IBM, was the first commercially available cognitive computing offering and in 2015, it is being used to identify treatments for brain cancer. In August 2015 IBM announced it had offered $1 billion to acquire medical
imaging company, Merge Healthcare which will be used in conjunction with Watson.

Technology concepts covered in this report:
Artificial intelligence (AI); Machine-to-Machine (M2M); Big Data; Cloud computing; Data Science; Cognitive Systems, IoT (Internet of Things), data analytics, smart cities.

We advise on these issues to the UN, countries on four continents and over 50 cities.

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