

## Banking on Analytics & Machine Learning

Every day we hear about Machine Learning and Big Data Analytics...

*“United Parcel Service saves 39 million gallons of fuel after using Big Data Analytics to optimise fleet operations”<sup>1</sup>*

*“PayPal uses Machine Learning on Customer, Financial and Network data to combat fraud”<sup>2</sup>*

*“Amazon uses Machine Learning to discover ‘lowest price’ for over 20 million products”<sup>3</sup>*

### Demystifying the terms

Machine learning, a subset of Artificial Intelligence (AI) is a method of data analysis that uses algorithms to iteratively learn from data and derive insights without being explicitly programmed.

We can find examples of how Machine Learning is already a part of our daily lives – like **Google Maps**, using location data from smartphones, analyses the speed of movement of traffic at any given time. Or like **Amazon** makes recommendations for products - *“customers who bought this item also bought”*.

Behind all these lie complex algorithms that are continuously learning new data and refining outcomes.

In banking for example, using client’s financial data, risk preferences and desired target return, ‘Robo-Advisors’ provide personalised, algorithm driven portfolio management services without human supervision. At Standard Chartered, personalisation of digital web banners according to the client’s behaviour is another key use case. Personalisation enriches the customer experience manifold by building emotional equity, and is linked to long term loyalty with the service provider. Studies on the impact of personalised recommendations have shown up to a 30 per cent increase in sales.<sup>4</sup>

Other use cases for Machine Learning and Analytics in Banking include fraud detection, compliance, next best offer engine and geo-location based services to name a few. Within Standard Chartered there has been successful deployment of

Robotic Process Automation (RPA) transforming cost, efficiency and quality of execution of both back office and customer facing processes which was hitherto done manually.

**According to the latest report issued by Efma earlier this year, 58 per cent of banking providers believe Artificial Intelligence; along with several other technologies such as advanced analytics and big data will have a significant impact on the industry.**<sup>5</sup>

### **The data big bang!**

Separate studies conducted by UC Berkeley and International Data Corporation IDC, 6, 7 showed that the world produced 1.5 exabytes of data in 1999, compared to 250mb per person. The number grew to 1,200 exabytes by 2010 and to 4,400 exabytes by 2013. It is estimated to rise to 44,000 exabytes by 2020. Another study in 2013 concluded that 90 per cent of the world data was produced in the past two years.<sup>8</sup>

All this data is being generated every second by billions of smartphones, internet, sensors, payment systems, call centres, cameras and a wide array of other sources and has become a critical enterprise asset today. But harnessing its promised potential will not be an easy task, and there would be varied levels of success across industries and organisations. This massive data explosion is forcing traditional Business Intelligence and Analytics tools into becoming legacy technologies, which are incapable of handling big data. Rapid advancement of D&A technology, e.g Big Data platforms, Cloud based storage, In-memory computing, etc have now created the habitat for Artificial Intelligence and Machine Learning to thrive. An even bigger wave of change is on the anvil as Deep Learning matures, giving machines power to understand, think and solve like never before.

This change is irreversible and to embrace it is mandatory – while the pressure is building, a majority of banks are looking for ways to soon adapt, sustain and ultimately turn it into a winning advantage.

### **Doing it the right way**

It is an interesting challenge, as it is not just about making technology investments – that's just a chapter in the whole story. The right organisational changes also need to happen in order to make it successful. 2

**1. Clearly articulating the strategic vision** – There needs to be strong executive participation in shaping the vision, defining the end objectives and how to measure success.

**2. Bringing in the right talent** – Strategy needs to be defined as to building the talent pool in-house or outsourcing. At Standard Chartered, we set up the business analytics centre of excellence at Bangalore, which is a world class capability amalgamating best in class data scientists from premier institutions and experienced analytics leaders.

**3. Managing the technology transition** – Legacy systems can act as a big roadblock, contributing majorly to the overall inertia for change. meticulous planning and execution will be required for a smooth transition.

**4. Attaining the cultural shift** – Embracing advanced analytics is not just about building the capability; it is also about transforming the culture. Organisations will not become data-driven unless they decide to value data, develop confidence in its validity, and use it to make decisions. Leadership needs to be fully energised in championing this change across the levels.

**5. Redesigning processes** - Existing processes may need to be redesigned to make way for data based decisions to get executed, at the speed with which they get generated. Integration with workflows across multiple channels needs to be established. Data & Analytics needs to be installed as a core business function, product teams need be more joined up, rather than being in silos. Frontline needs to be reoriented towards having richer, need based, multi-product conversations.

Standard Chartered's goal is to make banking simpler, faster and better for our clients. backed by strong technology development capability and continued focus on Data and Analytics we are well positioned across Africa and the Middle East to lead the way with cutting edge development.

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## References

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