Big Data, Advanced Analytics & Automation
Dell Technologies provides significant big data, advanced analytics and automation capabilities across every part of the value chain, to create insights and deliver value – helping financial institutions implement resilient end-to-end architecture and transformational services to support the business’ end goals.

Big data, advanced analytics and automation can provide cost savings for financial institutions by driving optimised decision-making, more effective operations that support topline growth, with increased level of accuracy and control.

Financial institutions are using big data and advanced analytics to improve their business in the following ways:

→ Enhance their understanding of the their business and improve ‘Know Your Customer’ (KYC) abilities to adhere to regulatory and security requirements while driving down operating costs

→ Proactively identify and predict trends and evaluate capital flows using predictive and prescriptive analytics, and model the financial impacts of potential business decisions

→ Provide personalised services, increase repeat business, and increased margins

The following sections will provide an overview of the Dell Technologies solutions in:

**Big Data** is the concept of gathering, hosting and processing high volume and wide variety of data, at high-speed with the purpose to analyse and derive insight to inform decisions.

**Advanced analytics** encompasses a range of data-driven technology concepts including artificial intelligence (AI), machine learning (ML), deep learning (DL), and natural language processing (NLP) (among others). Autonomous or semi-autonomous examination of data can be used discover deeper insights and influence financial institutions’ key strategic initiatives.

**Automation** is the autonomous or semi-autonomous completion of complex tasks.
Intelligent Automation Can Add:

$512\text{bn}$

to the global revenues of financial services firms by 2020 (Capgemini)

$64\%$

of organisations have improved customer satisfaction through intelligent automation (Capgemini)
1. Big Data Solutions

Dell Technologies big data solutions help financial institutions understand their customers and organisation to drive higher accuracy in decision-making and process efficiency. Our flexible, customer-centric approach to big data lets financial institutions start anyway they want, from small test projects to large, transformational initiatives. Our solutions help support financial institutions map the current and desired future state of an enterprise data strategy help your business transform and achieve 1.8 times better predictions to understand customer behaviour, optimise operations, manage risk, and enable innovation.

By developing a proof of concept around a use case, financial institutions can validate the value of a new customer proposition before investing in a full solution. Validating the use case prior to putting it into production helps inform the solution specific to the end-user, and identifies a process and skills roadmap for implementation. Financial institutions can then choose to implement the full analytics solution, to support continuous development of valuable propositions for consumers and strengthen their marketing strategy. Data analytics enables a true actionable understanding of the organisation and customer behaviour, delivering real benefits.

Dell Technologies consulting services and big data platforms:

**Big Data & Advanced Analytics Advisory**
Create a business case and roadmap for big data and advanced analytics. Evaluate the most cost-effective solution for the business.

**Platform Implementation**
Dell Technologies Data Platforms are a powerful and flexible approach to help financial institutions get the most out of their new and existing big data investments. Using container technology; along with other analytics and data science tools, financial institutions can ‘spin up’ environments within minutes realising faster time-to-value, improve service delivery and quality.

**Master Data Management (MDM)**
MDM provides a centralised hub among applications to ensure data is synchronised, accurate and up-to-date. The solution ensures data accuracy and consistency, accelerates time-to-insight with improved analytics, and supports comprehensive data governance controls.

For more information:
2. Advanced Analytics Solutions

Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning (DL) allow financial institutions to automate data analysis to understand their data at scale. The ultimate goal of these capabilities is to drive revenue growth in a more efficient way through predictive and prescriptive analytics to help financial institutions deliver smarter insights, from price optimisation to margin analysis, to new product forecasting - all at a fraction of the cost.

In particular, financial institutions are using advanced analytics to explore opportunities in fraud prevention, risk management, investment predictions, customer service, and network security. The use of digital assistant, image recognition, and predictive decision making are just some of the use cases that are revolutionising the industry.

Dell Technologies have skilled machine learning specialists who can deliver services to support financial institutions develop ML strategies at an executive level, down to the operational level of delivering and running a ML environment.

Our professional services focus on ensuring any business-led machine learning initiatives deliver business value.

Dell EMC machine and deep learning solutions empower you to identify patterns, analyse vast amounts of data and automate tasks so you can get insights faster, better and deeper.

Artificial Intelligence
Broad category of machine intelligence.

Machine Learning
Training with large amounts of data with algorithms that gives the machine ability to learn how to perform a task.

Deep Learning
Domain of discovering and modelling complex data (e.g. video & images) using Neural Networks. Domain of perception & cognition.
2. Advanced Analytics Solutions

Benefits:

→ Increase business agility through the modernisation of legacy infrastructure and software tooling
→ Eliminating data silos in a bid to adhere to regulatory and compliance acts such as GDPR
→ Maintain security and control in a multi-tenant environment when adapting to change such as PSDII where data is shared with 3rd parties
→ Accelerate time to business value and reduce TCO for big data infrastructure
→ Simplify deployments with an elastic and scalable solution for Big-Data-as-a-Service

1. Ready Bundles
Validated, hardware and software stacks optimised to accelerate AI initiatives, shortening the time to architect a new solution by 6-12 months

2. Software
Ready to go data management and data science tools

3. Libraries and Frameworks
Optimised for fast application development, easy to use for modelling data

4. Dell EMC Services
Bridge the gap between the data science, IT, and lines of business
Automation is revolutionising the financial services industry. Benefits such as faster time-to-market, improved cross-selling efforts, improved targeting of new customers, and competitive advantage over peers are proving high returns for financial institutions who have already started to invest in automation technology. Machine learning, Robotic Process Automation (RPA) and Natural Language Processing (NLP) capabilities pose great opportunities for financial institutions to capitalise on automation whether it is for cost savings initiatives or to drive revenue growth.

Financial institutions around the world are at the beginning of a workforce revolution. With intelligent automation capabilities cropping up every day, the industry must equip their existing workforce with the necessary tools and skills to integrate with machine intelligence, prepare hiring managers to recruit the next generation of talent, and ultimately modernise their IT landscape to deal with new high-power technologies.

In order to succeed, financial institutions must strike a fine balance between the efficient interactions of their people, processes and technology – whether handling back-office operations, working with business partners, or serving customers. Financial institutions must transform processes and improve ability to meet the needs of increasingly more demanding customers. This is enabled by removing manual complexity from business processes, whilst still involving people wherever they are needed.

Enabling integration and workflow automation can speed up multi-step approval processes for loans, mortgages, credit cards and insurance. Financial institutions can build in robust controls and visibility across all stakeholders to reduce costs and mitigate risk.

Dell Technologies Boomi Flow provides a low-code development platform to create customer journeys and automate simple and sophisticated workflows to efficiently drive your business.

The advantages of an automated business process:

→ Error-free transactions and streamlined processes
→ Process scalability and fail-over
→ Share integration processes and components with team members
→ Ensure non-stop operations by configuring automatic retries
→ Stay informed through alerts and notifications
→ Manage integration and workflows from any mobile device
Automation Expected to Drive

10-25% increase in cost savings for financial institutions.
(Capgemini)³

35% of financial services players have seen a 2%-5% increase in topline growth thanks to intelligent automation.
(Capgemini)³
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