

White paper

Hybrid Cloud and Data Analytics for Financial Services: Maturing the Model



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This paper discusses how hybrid cloud and data analytics together enable new business value to be created in financial services organisations, proposes ways in which analytics can be embedded successfully and outlines how Atos, Microsoft and Dell EMC are collaborating to help bring these advantages about.



Financial services organisations still often face both ways at once on cloud and analytics. They want analytics everywhere but, when it falls short of its promise, retreat. They don't particularly want cloud everywhere, but find themselves drawn to it like moths to the flame. Why does analytics under-deliver? And why is cloud succeeding, despite itself?

Analytics is not well organised in many organisations

Faced with the prospect of better understanding anything and everything that moves in their particular operation, market or risk area, it is perhaps understandable that line of business executives want to get going with something small, test and learn, then scale up.

As they do so, initiatives proliferate, skills are not pooled and learning is slower than it need be. The larger the organisation, the more fragmented the picture. There's good evidence that a dominant model of doing analytics has yet to emerge¹ despite the industry skirmishing with analytics for the last twenty years or so. Centralise, and business lines complain that they aren't getting the service they need. Federate, and costs go up, different packages are championed and methods remain stubbornly non-standardised.

Technical skills are at a premium

That good data scientists are like hens' teeth; that there is an acute shortage; that our universities are failing to attract and produce anything like enough of them. Again good evidence supports these claims². In the UK, the candidate pipeline is well below demand, reflected in soaring salaries for the most experienced.

Line of business executives are not natural analytics sponsors

Line of business executives are often not that good at translating a business objective on their balanced score card ('grow the aggregate margin by 10 basis points') into terms on which analytics can deliver actionable insight. Instead of developing an hypothesis which can be proved or disproved, they ask their data scientists to explore the problem and come back with ideas of how analytics could help.

So the data scientists set out on their exploration, develop ideas and, in the absence of sharper direction, steer by their best lights to produce some results which the line of business executive finds inconclusive and asks them to try again. These initiatives often fail to deliver substantive benefits, lose sponsor support and peter out.

Beware the Wow factor

To compound the difficulties, technological boundaries are dissolving making it possible to link any data with just about any other data. New computing languages abound whilst Business Intelligence software packages visualise datasets with jaw-dropping speed and ease, fuelling senior executive expectations which cannot be fulfilled.



Making sense of the vortex

How to navigate to a better place? Some recent insights from McKinsey³ throw light on the practicalities.

It is not uncommon for big data projects to deliver only incremental, as opposed to discontinuous, benefit. And this is acceptable as, when you add them up, they make a major difference. So championing lots of small analytics efforts and measuring their impact makes good sense.

Analytics is as much about long term cultural change as rare, smart skills applied to data on clever technology. It also takes leadership from the top and sustained investment to re-orientate a firm to embed the exploitation of data. So top-down sponsorship expressed in investment to re-orientate the business is critically important.

Once embedded as part of the culture, analytics starts to drive strategy and operations. Processes become more intelligent. Operations can progressively be automated. Customer franchises can be nurtured to yield higher returns. Risks are better understood, monitored and neutralised before they can do much damage. So it's a long haul.

How is this done in practice and where to start?

One authority⁴ proposes that to become an analytics-driven organisation, you need to get nine things right.

The right leadership

Without strong analytical leadership analytical efforts will not gain the direction and organisation-wide support that is required in order for analytics to be put at the heart of the organisation.

The right strategy

Organisations need to see analytics as a core value creator. Therefore they need to develop an analytics strategy with a clear, shared vision and specific business targets.

The right culture

Managers and employees need to develop a belief that by making decisions based on facts they have a valuable means of validating their intuition. Where intuition is challenged by the evidence, there is an improved basis for decision-making.

The right capability and governance

An enterprise-wide analytics operating model is required in which analytics resource allocation is governed strategically, analytical effort is governed towards business priorities and best practices are centrally collected and shared.

The right skills and competencies

Analytical skills and competencies are key sources of competitive advantage: a critical mass of such skills and competencies, well trained and educated analytics employees, and a level of 'up-skilling' of purely technical employees with business skills are needed.

The right data

Analytics driven organisations have a data strategy in place. They have extensive knowledge of all data sources that are available, know which data sources are both relevant and accessible per use case and have plans in place to incorporate value-adding data sources to their existing use cases.

The right technology

Leaders have an analytics technology strategy. They know how to choose the appropriate technology stack that supports their chosen business targets, use cases and data strategy. They are able to combine different technologies to process usable outcomes and process data insights. They have a vision for emerging technologies and their integration.

The right processes and performance management

For continuous improvement analytics driven organisations have standards and policies in place to track performance of analytics usage in all phases of the analytics lifecycle. They measure and assess accuracy and effectiveness and identify opportunities for improvement.

The right rules

Analytics security and compliance policies and standards embedded in their analytics capability and processes are called for, as security threats increase in volume and sophistication. Formalised, robust measures are required to incorporate information security at every level.

Nobody said getting Analytics right was easy. But enough water has flowed under the bridge for us to know that a thorough, measured and strategic approach is the best way to embed analytics in the people, processes and operations which make the organisation perform.

So what of cloud and in particular, hybrid cloud?

And why is cloud linked so closely to data analytics?

Hybrid Cloud: asking the right question

Firms in many different parts of the financial services sector have now moved well beyond a flat rejection of cloud by IT on principle, through productive - if fragmented - use of private cloud, to experimentation and selective adoption of public cloud.

Shifts in perception have steadily followed these phases to the point where reasoned use of hybrid cloud for an ever-widening range of workloads is becoming more commonplace. Given the sheer volume of data held on customers and counterparties by Financial Services firms, much of it Sensitive Personal Data, and the evolution of information security on the cloud, this evidence-based approach is wholly understandable.

Analytics as a Service in hybrid cloud configurations is not new. Early adoption by Marketing and Product champions demonstrated how insight could be produced and applied to improve revenue yields and cut out wasted cost. Finance, HR, Compliance then followed suit. Then it all started to get really interesting as business unit leaders started to grasp the possibilities.

Which brings us back to the vortex. Business and IT are not yet quite in synch with each other. What the business now wants done safely, cheaply and securely on a hybrid cloud, IT still struggles to deliver. There would otherwise be no 'business-defined IT' phenomenon.

To illustrate the lag, consider Information Week's Hybrid Cloud survey 2014 which measured attitudes in the technical community to Cloud suitability for specific workloads, including Big Data and Analytics workloads.

Only 30% of the sample (cross-industry but with a hefty Financial Services component) claimed that it 'could deploy on either public or private cloud, whichever makes the most sense for a particular workload'. The other 70% claimed at least to be thinking about it.

Of those using, piloting or developing a hybrid cloud, 58% had deployed or planned to deploy more than half of workloads to private cloud. Only 6% had gone or planned to go almost all public.

On the question of Big Data (Hadoop etc.), 40% declared it best suited for private cloud, 35% equally suited for public and private cloud, and 25% best suited for public or not cloud ready.

On Business Intelligence and Analytics, 46% declared it best suited for private cloud 32% equally suited for public and private cloud, and 20% best suited for public or not cloud ready.

By way of comparison, for ERP and CRM workloads, 31% and 22% respectively declared it best suited for private cloud, 47% and 44% respectively equally suited for public and private cloud, and 22% and 32% respectively best suited for public or not cloud ready.

So some common wisdom had already started to emerge by that point at least amongst those engaged on the question.

Hybrid Cloud was then clearly viewed as an appropriate model by the technical community to carry many different workloads, not least Big Data and Analytics workloads. But the argument was far from over. Perceptions of the right balance between private and public cloud were coloured by perceptions of risk.

Since then, great strides in the global supply, reach, security and richness of public cloud have been made. Microsoft and others offer boundless capacity. Some have created partner-led ecosystems of platforms and applications offered as a service. This has led to enormous choice at every level for business users and technologists alike, which is enabling them to converge on a shared view of the art of the possible.



Choices, choices

The challenge has shifted, as the questions of 'what kind of cloud' and 'what kind of analytics' have become so closely intertwined.

The breadth of cloud options now available mean that it has become a variable for each kind of workload. The economics of cloud are changing in parallel, accelerating the direction of travel towards greater adoption of public cloud.

Equally, data proliferation and access make the challenge for business people how best to master what is newly possible; how to test and prove value thoroughly on a bounded scope, then how scale up to reap business rewards.

The relationship between Integrators and Financial Services firms in this connection has therefore evolved into a composite of strategic business advice, solution architecture and development, commercial engineering and service and support delivery partner. Each of these contributes to the development of the analytics-driven organisation whose hallmarks we touched on earlier.

As these are seldom encountered in a single organisational structure in a Financial Services firm, the Integrator also plays a unique boundary-spanning role which has

proved to be the decisive factor in getting cloud-enabled analytics investments to full scale production and generate the business outcomes which led to the investment being made in the first place.

Financial Services firms have never been so outward-looking, so ready to embrace the new in order to stay at the forefront of their markets or so open to working with partners of all kinds. And this is why the next phase of hybrid cloud analytics is going to be exciting.

Grasping the opportunity

Business analytics and cloud are strategic assets in the drive to modernise the way in which financial organisations think, act and respond to the market. Yet very few have a value-driven analytics strategy in place or access to the skills internally to deliver it.

Atos, Microsoft and Dell EMC bring the benefits of data analytics delivered on the hybrid cloud to financial services organisations through Atos's **Hybrid Cloud for Financial Services - Data Analytics** solution.

This delivers end-to-end services, from helping to formulate an effective hybrid cloud analytics strategy and defining the highest

leverage areas for performance improvement through analytics, to proving value from each use case through rigorous testing and transitioning to enterprise-scale workloads.

Services are fully managed by Atos and incorporate private and public cloud services from Dell EMC and Microsoft.

Atos Codex, Microsoft Azure and Dell EMC Microsoft Enterprise Private Cloud

Atos Codex is the family of Atos analytics assets, capabilities and skills and includes the Atos Codex high performance analytics platform together with Atos's Advanced Analytics consulting and its technology development and delivery methodologies and services.

Through the combined power of Atos Codex, and our partners Microsoft and Dell EMC we create the capability to deliver high-impact analytics across the hybrid cloud running your workloads on Dell EMC's Microsoft Enterprise Private Cloud and Microsoft Azure Public Cloud, connected by Microsoft Stack.

To find out more about Atos Codex and Hybrid Cloud for Financial Services – Data Analytics, please email us at financialservices@atos.net or visit uk.atos.net.

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