



Accelerating Time-To-Value In Your Big Data Mosaic

March 2017 | Author: **Reetika Joshi, Research Director, Operations & Analytics Strategies, HfS Research**

What happens *after* you say “Yes” to big data?

The increasing speed of business is demanding more responsive and informed ways of working – within the organization, with partners and suppliers, and most importantly, with end customers that expect more in every way. The rise of social networks, mobile devices and other “smart” sensor-driven devices, and real-time information are driving the creation and use of big data—lots of “bits and pieces.” Enterprises must be ready to handle these changes with greater abilities in data architecture and analysis methods. Most business leaders do realize the potential of leveraging big data, of finding a way to arrange the “right” bits and pieces to create a meaningful picture or pattern, much like a mosaic. With data as the new currency, every business stakeholder wants a share of the elusive “data-driven” competitive advantage.

Big data infrastructure and analytics has been one of the biggest areas of debate, discussion and investment for enterprises in the last five years. Every CXO has seen the presentations about the potential of advanced analytics in their departments, underpinned by robust and flexible data infrastructure. Starting the big data journey, such as committing to creating data lakes and moving to new enterprise analytics platforms, is an accomplishment in and of itself for most enterprises. Getting buy-in from stakeholders, finding the right leader and team internally to drive the initiative, aligning IT with initial use cases, making decisions on infrastructure, data architecture, underlying platforms, building internal teams and relationships with external partners, transitioning from POCs/pilots to full-scale deployments, replicating results in other departments... this is a seemingly never-ending process, and every business is somewhere on this journey today because of the potential step-change in performance.

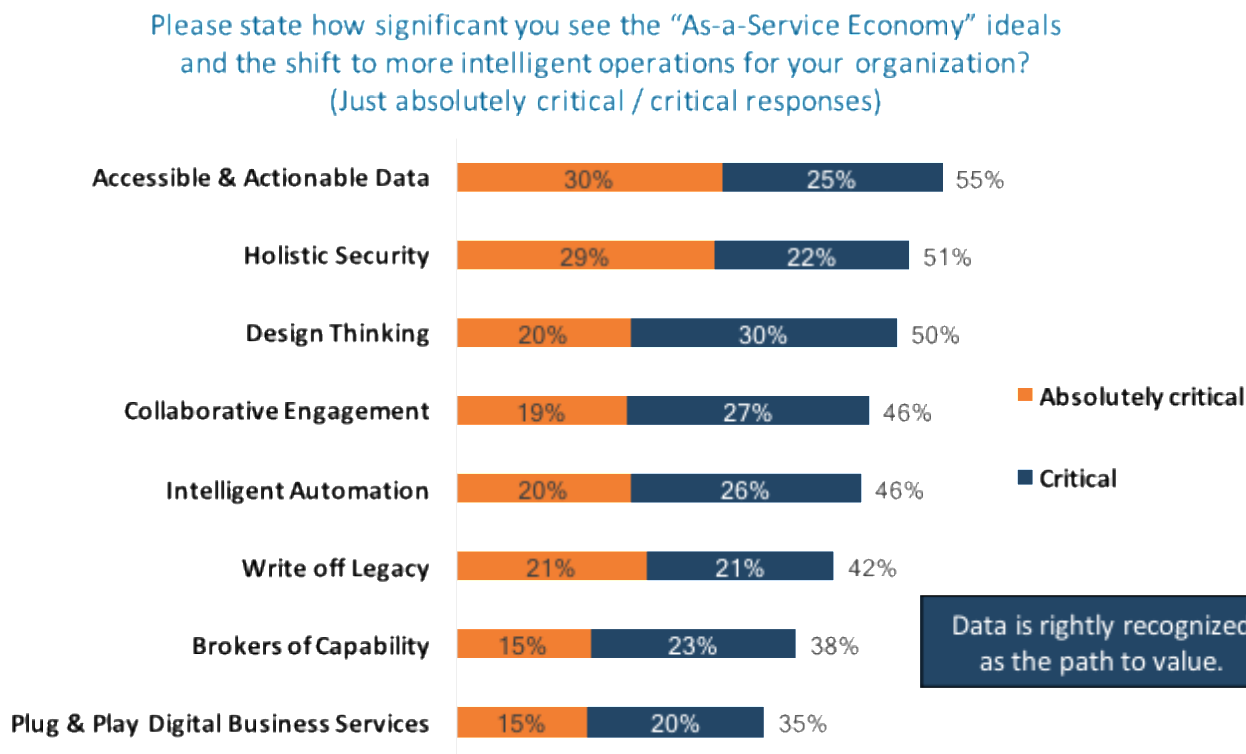
HfS Research recently interviewed executives at three enterprises that have embarked on big data projects in the last two years, with Larsen & Toubro Infotech (LTI) as a big data and analytics partner. In this paper, we highlight the clients’ critical challenges in kick-starting their analytics journeys, their evolving needs around business value and the enabling role played by LTI’s analytics platform, MOSAIC™ Decisions.



The “Biggest” Big Data And Analytics Challenge: Time To Value

At HfS Research, we view big data and analytics as one of the key ways in which enterprises can invest in their futures as digital organizations—ones that use a better combination of talent and technology targeted to achieve specific business outcomes through “intelligent operations.” In a recent study, we surveyed 371 enterprise services executives and found that the most critical component of Intelligent Operations is making more and better use of the information enterprises collect. It’s not about just having data but about making it usable—55% of enterprise buyers view Accessible & Actionable Data as critical or absolutely critical to their business.

Exhibit 1: Accessible & Actionable Data Most Critical Ideal For Achieving Intelligent Operations



Source: The Journey To Intelligent Operations And OneOffice, HfS Research, 2016, n = 371 enterprise decision makers

What was the theme of the biggest challenge? Time. The time it takes to get to what is of value to the end user through the use of data. The HfS POV paper, [Time to Predictive Value in HCM Solutions](#), offers a definition for this metric that is growing in importance for analytics initiatives. It states that the Time to Predictive Value (“TtPV”) is the average length of time it takes for a typical organization to consistently experience the predictive capabilities within a technology tool or system, and therefore derive meaningful and incremental business benefits from that solution.



The shorter the TtPV, the better. While the focus of the original paper is on predictive analytics, we can use the definition in a broader sense as time to value, encapsulating the overall effort that an organization needs to take when setting up big data and analytics environments. The goal is to start to derive meaningful insights from systems, processes, and users to make better decisions and see results in the form of business value.

What needs to be addressed to shorten the time to value? In a number of interviews, we heard a similar theme emerging: needing to do everything at once to get results from analytics. These enterprises faced the challenges of capability and skills, platform, and integration across silos to have a fast and flexible infrastructure for enabling actionable and accessible data for analytics:

» **Capability and Skillset:** The General Manager, Technology & CS Products at a leading global credit information services firm, shares, “In 2013, we needed to develop a big data platform that could process multi-billion rows of data and extract values for us for the Indian market. We operate independently at the global level, so needed to develop our own capabilities - and fast. We wanted to rapidly bring data and technology together to power our analytics algorithms around identity resolution.” As a growing company setting up its base in India, the client needed domain expertise and computing power to develop algorithms for credit risk analysis that would work for this market.

» **Platform:** India's largest engineering & construction organization is another LTI client that felt this time-crunch pressure. Their Chief Digital Officer set up the organization's digital practice in the last two years with investments in areas such as IoT sensors for materials and equipment, 3D engineering design, geospatial mapping, and drones. He recounts the need for big data infrastructure and analytics, “With all these digital initiatives, we are generating a ton of data. Setting up an analytics function is one of our big initiatives, from our construction business analyses to traditional functions such as procurement and finance. While we were training data scientists to run the pattern detections, we needed an analytics platform to put order into how they work, provide systematic methods with access controls to connect to our internal and external data sources and look for insights...the process of setting up something like that would've killed us with the level of time and investment it would've taken!” The client's digital practice had investments in place to collect data more effectively; they now needed to start seeing business value from these efforts.

Every business leader wants to see results and business value from their analytics investments. However, ROI is rarely immediate.

» **Integration:** An India-based banking major faced the challenge of scale with its retail banking business – it needed to interact more effectively and profitably with millions of customers across India. This banking major is one of India's largest retail banks and the country's second-largest private sector lender by assets. The client's lead for Credit Risk & Analytics brings forward the bank's key analytics challenge, “Our marketing campaigns had ongoing cross-sell/up-sell



opportunities that could take up to a month to put together. We needed help with the entire execution of our marketing operations, from data extraction from our core systems, data manipulation and analysis, to the final output for our campaign managers.” The bank had experience with structured databases in the credit analytics team but like a lot of its peers today, it was new to managing unstructured data and getting insights from across different systems in silos. She had “ambitious plans of using new machine learning algorithms, which need intensive computational architecture. We started with Hadoop but sought out solutions/platforms that could support these efforts and help us progress on meaningful big data analytics as a bank.”

Every business leader wants to see results and business value from their analytics investments. However, ROI on big data projects is rarely immediate, with the level of effort typically taken in initially developing data infrastructures, talent, and analytical tools and capabilities. Moreover, business stakeholders want these results in a much more compressed timeframe, making time to value the biggest ask. How did these three companies find a way to address these challenges and reduce the time to value?

Why LTI’s MOSAIC™ Decisions Has Been A Catalyst For Success

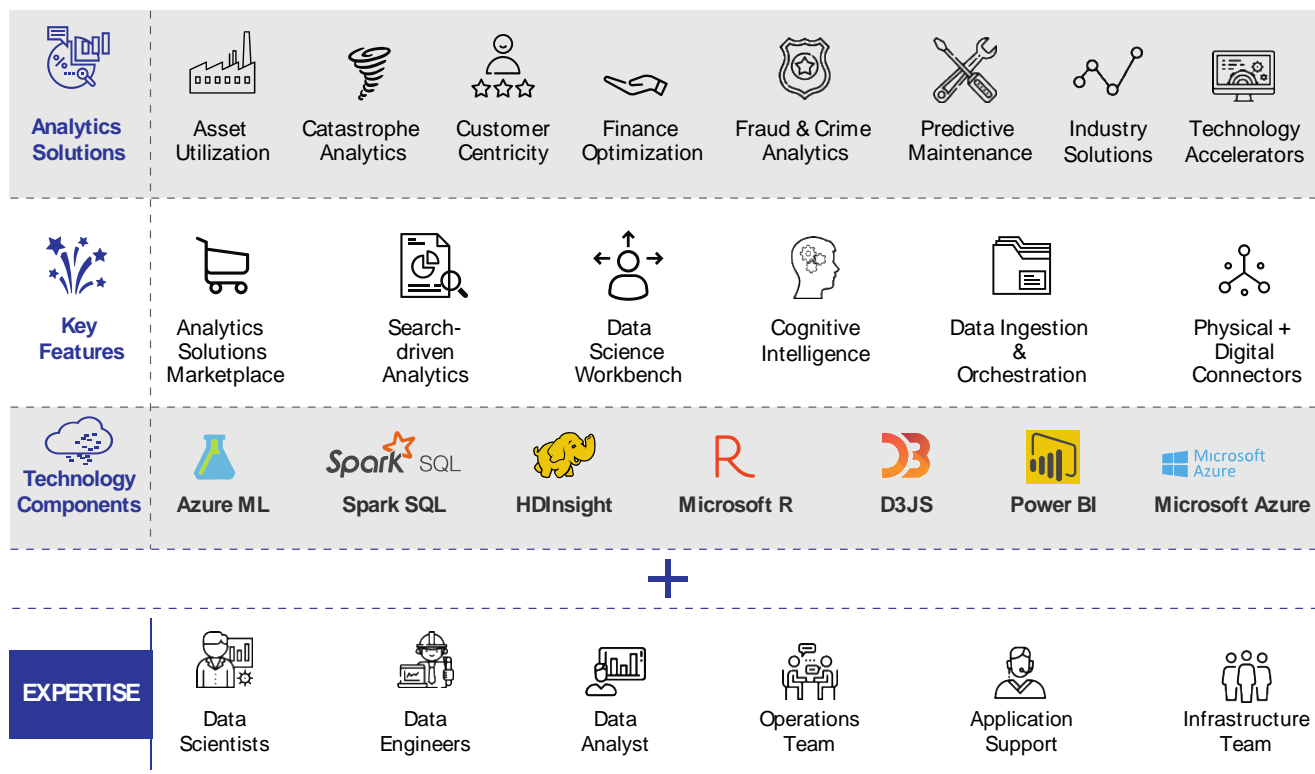
In the last few years, LTI¹, sensed the need for broad data and analytics capabilities from these and other IT clients. While it had analytics and data management services, LTI invested in a platform solution that would bring together the different elements needed by enterprise clients from data infrastructure and orchestration to continuously generate business insights.

Under the new leadership of Soumendra Mohanty, EVP and Head – Analytics, LTI made a strategic investment to acquire AugmentIQ Data Sciences, an analytics start-up with a unified big data engineering and analytics platform (MaxIQ), entity resolution solution (IdentIQ) and consumer analytics focus, which led to the design of MOSAIC™ Decisions.

¹ An IT service provider with presence in 27 countries



Exhibit 2: MOSAIC Decisions - A Snapshot



Source: Larsen & Toubro Infotech, 2017

From our conversations with LTI's clients and partners in our research, HfS sees the following features of MOSAIC Decisions as critical success factors that were common to all enterprise implementations and addressed the key issues raised previously around capability, platform, and integration.

- » **Shrinking The Time To Deploy Big Data Infrastructure:** The MOSAIC Decisions platform offers an analytics ecosystem with its broad-based "Analytics Marketplace" approach. It features pre-built solutions and accelerators, positioned as "Solutions Marketplace" and "Algorithms Marketplace," to accelerate the implementation of big data infrastructure at the outset. This is valuable for enterprises that are just starting out with selecting open-source components and need "shortcuts" to ease initial implementation. However, the platform's key differentiator that emerged from our primary research is its ability to significantly speed up data ingestion and orchestration. This data engineering capability is due to MOSAIC Decisions' abstraction of complexity in the data layer. The Chief Digital Officer of the E&C major was "relieved that somebody's already set up the entire solution that we would need. They asked me for data sources, promised to create connectors to our physical and digital data, and immediately got to work."



This “plug-and-play service” is what the banking major needed as well. The bank’s AVP noted, “Our strategy was to learn how the market was using big data, and [MOSAIC Decisions] was a great bet—a steady tool to start leveraging big data architecture from Day One.” The team also appreciated that instead of spending time reviewing features and functions or showing the art of the possible, “they did a POC, quick projections, and got into tooling. We needed specific customizations to manage the tool flexibly and with the account attention we got, it was a win-win situation for us.”

- » **Simplifying The Data Science Experience:** The scarcity of analytics and data science talent is well documented and is one of the biggest challenges facing enterprises that want to scale up analytics functions in-house. While creative recruiting, training and retention programs are part of the long-term solution, the nature of work that analysts and data scientists end up doing is also problematic. Analysts spend a significant part of their work lives simply collating and preparing data. Apart from being an expensive waste of precious analyst time, the work is not intellectually challenging and creates dissatisfied workers (Cue a vicious talent retention cycle).

With MOSAIC Decisions, LTI has tried to simplify each step in the analytics workflow such as connecting and ingesting different types of data, data orchestration and engineering processes, data sciences, statistical analysis and modeling experience with drag-and-drop tools and workbenches. It leverages the power but abstracts the complexities of big data technologies including the Hadoop ecosystem, Spark cluster computing, and NoSQL Database. This helps reduce the dependency on IT. The Chief Digital Officer of the E&C major finds this to be a key driver for his company, “Where do I recruit data scientists, and how do I keep them in the office? The construction business is challenging from a talent perspective, and so we picked a few people from within that had field experience, knew our domain, had MBAs or engineering degrees, and we essentially converted them into data scientists.” Using MOSAIC Decisions’ analytics solution marketplace, these engineers and MBAs can pick up models that are already pre-built, and use simple drag-and-drop methods to build models.

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Similarly, the banking major found the convenience of non-technical workbenches to be extremely valuable. Team members were a mix of developers and non-technical analysts, and MOSAIC Decisions features modes that enables different levels of coding ability. Their AVP recounts, “The entire adoption of big data architecture was made much easier for us, and it was one of the key reasons we invested more in LTI’s platform.”



- » **Delivering On TCO Reduction:** By leveraging open source components, cloud/commodity hardware, MOSAIC Decisions can bring down the Total Cost of Ownership (TCO) for IT executives. The platform's cloud-native usage, deployment, and monitoring also result in lower overall CapEx for clients, with the option for pay-per-use service delivery. In the case of the leading E&C company, for example, the client saw a 60% reduction in asset failures, a 30% increase in asset utilization and had overall 25% cost savings from moving to the MOSAIC Decisions platform. The General Manager for Technology & CS Products at the credit information services firm had similar results, where the cost saving potential was one of the drivers for selecting MOSAIC Decisions, "We had the constraints of finding an innovative solution to our problem of scale (Indian market data analysis), and to do so cost-effectively." They saw its time-to-market reduced from three days to seconds and achieved 10x cost savings on their overall engagement.
- » **Collaborating With Partners And Clients For Future Success:** Despite these technical and cost-related advantages of using MOSAIC Decisions, the enterprise clients we interviewed especially highlighted aspects of service delivery, relationship management, talent pool development and platform vision as their motivators to continue working with LTI. The credit information services client spoke to the level of domain expertise that LTI has built up to help them with their credit risk analysis in India. He adds, "The kind of vision they have set – to be a facilitator of technology and let business do better has been their core strength. There aren't many service providers that partner with you at the level they have, and then continuously iterate on the value they are delivering. They understand each member of our team and their genuine problems, take all the challenges and come back with realistic answers."

HfS sees tremendous value in services engagements where service providers and buyers foster a partnership culture over time. These collaborative ventures have the best chance of driving sustained value because both parties are viewed as equals, with two-way feedback, collaboration, and accountability for success and innovation in the engagement.

MOSAIC Decisions' analytics solution marketplace has prebuilt models and accelerators for multiple industry vertical/horizontal use cases, including customer centricity, operational IoT analytics for asset monitoring and predictive maintenance, retail and CPG, financial analysis, and risk analytics for banking and financial services. While this library will grow organically over time, the marketplace has the capacity to bring in third party contributions from analytics specialists with whom LTI sets up joint go-to-market propositions with shared revenue. One such partner, Quadrisk, is a fraud and risk analytics specialist. Vishakha Chhawchharia, a Managing Partner at Quadrisk, mentioned how easy it is to partner, "MOSAIC Decisions' workbenches made it easy for us to get onboarded—in just a couple of weeks... MOSAIC Decisions is more like an ecosystem that can feature startups like us who have niche skills and models."



HfS sees the ability to understand the needs of the stakeholder and make it easy to do business with and use LTI as a differentiator for the company when compared to other big data analytics platforms available in the market today. In a world of complexity and speed – value is found in this kind of simplicity and ease of use.

Room To Grow Towards Truly Providing Analytics As-a-Service

In setting the platform vision for MOSAIC Decisions, the LTI leadership team has taken a pragmatic approach that allows them to tap into expertise where it lies and build holistic solutions that they can target for As-a-Service delivery in the future. LTI is flexible with the commercial model, experimenting with pure technology licenses, a combination of licensing and ongoing analytics services as well as training the client's teams on the underlying platform to be able to "DIY" the solution. With native cloud-hosting on Microsoft Azure and a planned pathway to AWS, LTI has plans to shape MOSAIC Decisions as a true, end-to-end, Analytics As-a-Service platform, from data infrastructure to analytics platform, user-friendly interface, accelerators, analytics talent, analytics models and visualizations ultimately used as insights by business users.

Our aim is to help clients not get bogged down on technology architectures and the complexities of setting up big data lakes, and instead focus on business outcomes first."

- Soumendra Mohanty, EVP & Head, Analytics, L&T Infotech (LTI)

As Soumendra Mohanty explains, "We [at LTI] have focused on simplifying to a large extent, the complexities of data management in the big data world and having an integrated platform to stand up and start delivering results back to business. Our aim is to help clients not get bogged down on technology architectures and the complexities of setting up big data lakes, and instead focus on business outcomes first."

HfS sees the MOSAIC Decisions platform story – as narrated by LTI, its current clients, and partners – as a coming together of multiple factors that have driven its initial success. The injection of a new leadership team, led by Soumendra, has helped shape a compelling strategy for analytics. In an extremely crowded marketplace, instead of trying to compete on advanced technology changes or niche skills, MOSAIC Decisions is partnering with specialists and taking an "ecosystem" view where clients can bring in their preferred internal/external IP specific to their domain.

Having said that, the LTI team will need to continue to invest in growing its library of prebuilt models and accelerators to shorten the turnaround time for new clients seeking commonly known use cases. LTI has a roadmap to integrate IBM Watson and Microsoft Cortana APIs onto its platform to bring cognitive capabilities to clients in the future, as well as further invest in its "simplification" mission. As an example, MOSAIC Decisions now features a search-based analytics feature, from integration with its partner ThoughtSpot that brings Google-like querying abilities to the platform.



These are expectations that current clients outlined as well, as they described their future journey on MOSAIC Decisions. The use cases continue to be diverse. The E&C major wants to take analytics to their finance and accounting department after the IoT initiative. The banking client has chosen to further improve its customer-oriented functions, investing in developing customer 360 views and early warning systems for commercial credit risk analysis. While the business priorities are different, what is common is the need for data to be more accessible and actionable across the enterprise. MOSAIC Decisions plays a critical role in enabling that journey for the clients in our research. The platform is providing them a quick, plug-and-play solution that accelerates their time to value – from the time of setting up big data infrastructure and analytics platform, underlying statistical analyses and model development, to visualization and final insight consumption. When data is more accessible and actionable, it creates foundational capabilities for enterprises to become digital organizations.

The analytics AVP at the bank makes the same links for her organization, “We’re in the digital design phase right now, trying to figure out where we can use real-time triggers, marketing strategies, or better risk assessments...that’s the vision. We are on the right path to achieve that with MOSAIC Decisions. The tools, as well as the basic architecture on which we have started building, are great enablers for us to move at a faster pace than if we had tried to redesign internally.” The use of technology and business services providers is common in this process. What will differentiate the level of success is for enterprises to find partners that truly understand the need for “time to value” and find ways to accelerate the journey through collaboration and simplification.



About the Author

Reetika Joshi



Reetika Joshi is Research Director, Operations & Analytics Strategies at HfS Research. She currently tracks verticalized technology-enabled operations in insurance and banking and financial services. Her research coverage also includes enterprise analytics services and its evolution towards Accessible & Actionable Data within client organizations. She regularly contributes to HfS' research content in the form of HfS Blueprint reports, PoVs and Soundbites. She also supports custom research and strategy projects; analyzing data, supporting client inquiry, conducting regular discussions and briefings with both buyers and service providers, providing consultative, analytical and expert support to HfS clients.

Prior to HfS, Reetika worked in the sourcing research wing of business research and consulting firm ValueNotes. Her responsibilities as Project Manager included research product design and development, managing custom research engagements, developing thought leadership through targeted content and community interaction, and business development support. She was also responsible for driving the unit's web and social media strategy and presence.

Based in Cambridge, MA, Reetika has undertaken several research assignments across the outsourcing spectrum, including market studies in niche areas such as analytics, medical transcription, market research and e-learning. She has delivered bespoke research engagements including competitive intelligence studies, market and investment opportunity assessments, demand-side surveys and marketing communication optimization for global IT and business operations buyers, providers, consultants and investors. Her work has appeared in many industry-relevant publications and websites, including Outsourcing magazine, Global Services Media and the Horses for Sources blog. She has presented her views at various industry conferences and webcasts.

Reetika has completed her Masters in Marketing Management with distinction from Aston University, UK, receiving Beta Gamma Sigma honors. Prior to this, she received her Bachelor's in Business Administration with distinction from Symbiosis International University, India.

On a more personal note, she enjoys reading fantasy series, travelling to world heritage sites and strategy/simulation gaming.



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HfS coined the terms "The As-a-Service Economy" and "OneOffice™", which describe HfS Research's vision for the future of global operations and the impact of cognitive automation and digital technologies. HfS' vision is centered on creating the digital customer experience and an intelligent, single office to enable and support it. HfS' core mission is about helping clients achieve an integrated support operation that has the digital prowess to enable its organization to meet customer demand - as and when that demand happens. With specific practice areas focused on the Digitization of business processes and Design Thinking, Intelligent Automation and Outsourcing, HfS analysts apply industry knowledge in healthcare, life sciences, retail, manufacturing, energy, utilities, telecommunications and financial services to form a real viewpoint of the future of business operations.

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