

HfS Blueprint Report

BFS Analytics Services Excerpt for TCS

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Executive Summary



Introducing the BFS Analytics Services Blueprint

- HfS Research is launching our inaugural Analytics Services Blueprint for the banking and financial services industry vertical, presenting a comparative analysis of the innovation and execution capabilities of service providers in this market. The service providers in scope are multi-national, multi-functional service providers with industry-specific data management, reporting, and analytics capabilities in their portfolio.
- Unlike other quadrants and matrices, the HfS Blueprint identifies relevant differentials between service providers across a number of criteria under two main categories: innovation and execution.
- The report focuses on analytics data preparation and management, routine business intelligence reporting and dashboarding, and advanced analytics modeling and ongoing decision-making for industry-specific use cases, including customer and marketing analytics, fraud, risk and compliance, and portfolio analytics.



Value Chain – Analytics Services in BFS

Functional Analytics Services Breakdown

Out of Scope of This Blueprint

Customer Analytics

Customer profitability and lifetime value (CLV) analysis

- Attrition and loyalty management
- Campaign management
- Cross-sell and offer management
- Channel mix analysis
- Competitor analysis

Fraud Analytics

- Risk scorecard development and validation
- Economic capital modeling and stress testing
- Fraud and risk alerts and reporting
- Customer account validation

Portfolio Analytics

- Reporting on portfolio risk metrics (internal/external)
- Capital adequacy analytics and stress testing
- Creation and maintenance of portfolio dashboards
- Reporting and decision support at the asset level
- Collateral analysis

Operational Performance Analytics

- Supply chain and procurement decision services
- HR analytics
- Process and transaction analytics
- Call center analytics
- IT management analytics

IN-SCOPE ENTERPRISE ANALYTICS SERVICES

Analytics Data Preparation & Management Routine BIReporting & Dashboarding Advanced Analytics Modeling & Decision Support

ENABLING TECHNOLOGIES

Digitization & Robotic Automation Mobility Social Media Cognitive Computing Artificial Intelligence

OPERATING MODELS, METHODOLOGIES AND PLATFORMS

Outsourcing Shared Services GBS COEs BPaaS/SaaS/laaS Design Thinking

HfS Value Chain Definition: A value chain refers to the series of departments that carry out value-creating activities to design, produce, market, deliver, and support a company's product or service. In this usage, we refer to the range of primary processes and support services that providers offer to their clients. For this Blueprint, BFS analytics services contracts must encompasses the management of at least one of the above value chain of services, with TCV >\$1M, excluding Analytics Consulting and Analytics Software, Infrastructure Design & Maintenance from the scope.



Key Highlights: State of the Market

- A Mature Market with Significant Investments and Expertise from Service Providers: The banking and financial services industry vertical has historically been the biggest revenue contributor for most service providers in our evaluation. They have developed meaningful relationships with BFS clients across the globe by taking on outsourced IT services, infrastructure, and BPO services. In the last decade, they expanded services to include data management, reporting, and analytics across industry-specific and horizontal business functions. As a result, today we observe a significantly mature set of service providers that have strategically invested in this vertical, have strong multi-tower relationships with their clients and have both analytics services and technology expertise across different BFS business needs. This is visible in our Blueprint grid results with several As-a-Service Winner's Circle and High Performer positions from leading service providers in this market.
- **Demand for Diverse Engagement Types:** Analytics services buyers are leveraging service providers in several different ways, with no clear dominant operating model emerging, including:
 - Short projects: Bringing service providers with niche skills onboard for short projects—to create, refresh, or validate models or to do some data discovery or roadmapping consulting
 - Small staff augmentation: Small teams from service providers working alongside internal analytics teams, in risk, marketing, and operational functions, using a staff augmentation model with both onshore/offshore support
 - Scaled engagements: Larger, more integrated, and longer-term engagements to meet the growing need for reporting and analytics. These clients have scaled, dedicated teams from multiple geographies delivering insights and decision support to multiple lines of business and regional businesses.



- Accordingly, Service Providers Have Evolved Differently: Due to this multi-faceted demand, service providers have evolved their analytics practices in different ways, e.g., EXL and Genpact have more large scale, multi-year BFS engagements, while Accenture and IBM have more experience with projects and consulting services for banking clients. They are now developing adjacent capabilities on the back of these traditional strengths.
- Demand Along the BFS Analytics Value Chain: HfS sees demand from BFS clients across fraud, risk and compliance, and marketing. The last few years have seen the focus on risk analytics intensify as regulatory changes and government scrutiny continue to mount. Along with balancing this growing compliance work, banks have also found a renewed interest in customer analytics to orient their growth initiatives. Most banks are not set up to meet digital consumer needs and are now embarking on digital transformation, led by customer and marketing analytics. Portfolio analytics is a relatively weaker offering set from most service providers, where BFS clients have typically preferred to retain this capability in-house.
- Global Analytics Talent is Emerging as a Critical Need from Buyers: Banks are either unable to find the talent they need, for areas like specialized fraud, risk and compliance, or technology platform expertise, or are unable to afford it at the level of scale needed today. We see BFS clients trying to balance and complement their internal analytics teams with the global talent access that some service providers can bring them. Cognizant and Infosys stand out for the level of scale and expertise they bring from a technology platform perspective (such as Tableau, Cloudera, or Adobe suites), while Accenture, TCS, Genpact, and EXL have highly specialized risk and compliance talent.



- Even with In-house Delivery Centers, Clients Find Value in Service Providers: BFS organizations have extensively grown their own analytics capabilities, setting up delivery centers in offshore locations over the years, alongside IT and BPO operations. We find that BFS clients that have made these captive analytics investments are still working with service providers in a variety of ways. They value the breadth of talent that is accessible from service providers and the flexibility in scaling projects up and down as per internal clients' needs.
- FTE and Fixed Price Contracts Are Still the Norm: BFS clients mostly contract for fixed price projects or resource-based engagements on the number of FTEs or time and materials. Several clients mentioned that they have been locked into global rate cards for service providers by their procurement teams, and only see wiggle room for experimenting with contractual norms on smaller projects that are technology driven, e.g., where outcome or usage-based fees can be applied for customer acquisition analytics or per-report pricing.



- As-a-Service Winners in this Blueprint have the vision, innovation, and execution capabilities that are driving the take up and maturity of Analytics As-a-Service, across fraud, risk & compliance, customer and portfolio data management, reporting, and analytics:
 - Accenture is creating an industrialized analytics model using FinTech networks and innovation
 - Cognizant is fostering specialized talent for BFS analytics and platforms
 - EXL has been described as an "extension to the advanced analytics team" by its BFS clients
 - Genpact is augmenting niche BFS talent development with a new IP-led strategy
 - IBM is introducing its BFS clients to the potential of cognitive risk management with Watson
 - Infosys is investing in analytics platform specializations to drive new value for its BFS clients
 - TCS is a BFS domain expert bringing automation to legacy analytics engagements

AS-A-SERVICE ECONOMY

The use of operating models, enabling technologies and talent to drive business outcomes through outsourcing. The focus is on what matters to the end consumer.

HfS uses the word "economy" to describe the next phase of outsourcing as a new way of engaging and managing resources to deliver services.

The 8 Ideals of the As-a-Service Economy:

- 1. Write Off Legacy
- 2. Design Thinking
- 3. Collaborative Engagement
- 4. Brokers of Capability
- 5. Intelligent Automation
- 6. Accessible and Actionable Data
- 7. Holistic Security
- 8. Plug-and-Play Digital Services

Source: <u>Beware of the Smoke: Your Platform Is Burning</u> by HfS Research, 2015



- The High Performers have innovative approaches to BFS analytics:
 - Wipro is a flexible partner driving cognitive and analytical solutions in compliance
 - Fractal Analytics is an analytics specialist walking the line between futuristic technology and onthe-ground problem solving
 - Capgemini is delivering customer experience analytics to global BFS clientele
 - Mu Sigma is a specialist analytics consulting service provider with expertise across marketing,
 risk, and supply chains



Key Market Dynamics



Banking And Financial Services Analytics: Ready For The Next Wave

The BFS industry is heavily reliant on the use of data, and yet the potential for embedding analytics-driven insights into operations is still far greater than adoption. With greater pressures around profitability, regulatory scrutiny, and customer churn, major banks and financial institutions are once again intensifying their focus on the next generation of analytics models, tools, and skillsets. The areas where we see the greatest level of activity are: customer acquisition and retention, fraud, AML/KYC, credit risk, and portfolio analytics.

In the HfS 2015 Enterprise Analytics Services Blueprint report, we found that the market for enterprise analytics services is continuing on an exponential growth path. For most service providers, big data and analytics services are the fastest-growing businesses in their portfolios. This is due to the growing adoption of data-driven decision making within different parts of the enterprise and the need for more analytical support than internal staff can support. Analytics has been a key area of investment for service providers to move up the value chain and provide higher value services to clients.

This investment focuses on verticalization, with service providers turning initial work with clients for analytics modeling and reporting into portfolios of pre-packaged industry-specific use cases and catalogues. As service buyers consistently stress the need for domain expertise from service providers, we see service providers strengthening industry training programs and hiring professionals from BFS industry backgrounds to increase our contextual understanding and allowing for a more meaningful analysis.



Banking And Financial Services Analytics: Ready For The Next Wave, Continued

The types of BFS analytics solutions are also changing today, with the next level of analytics use case development. BFS analytics services buyers seek the following:

- The application of cross-vertical learnings to banking, especially from other consumer-facing industries that have progressed in customer experience analytics, e.g., from telecom to retail banking
- The incorporation of newer sources of data into existing analytical models to gain new insights into fraud, risk, and marketing, e.g., sensors, geolocation mobile data, and web and social data
- The exploration of modern business intelligence and reporting applications and tools, big data infrastructure, and advanced analytics platforms, e.g., cloud-based data warehousing, the mobile delivery of reports, and insights

These initiatives are step changes for in-house data and analytics teams that are already struggling just to keep up with the demand from a growing list of internal clients.



Banking And Financial Services Analytics: Ready For The Next Wave, Continued

As one analytics leader from an American multinational financial services firm explained, "All our [LOB] leaders are realizing that our ability to assimilate data, rapidly gather, consolidate, and generate reports and insights to drive data-driven decisioning is the big core differentiator left for us."

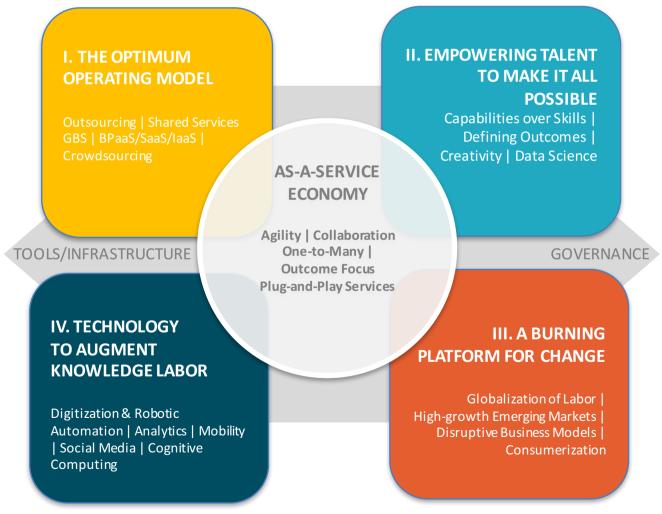
Service providers are bringing in the skills, technology, and scale to these categories coming from investments in the last few years in this industry vertical. We see this market as gradually transitioning, with service buyers and providers becoming more collaborative and focused on solving business problems to improve the outcomes for different functions within banking and financial services organizations.

We view this as a step in the direction of a transition to the As-a-Service Economy, with service buyers leveraging their service providers more strategically for their big data and analytics needs.



Welcome to the As-a-Service Economy

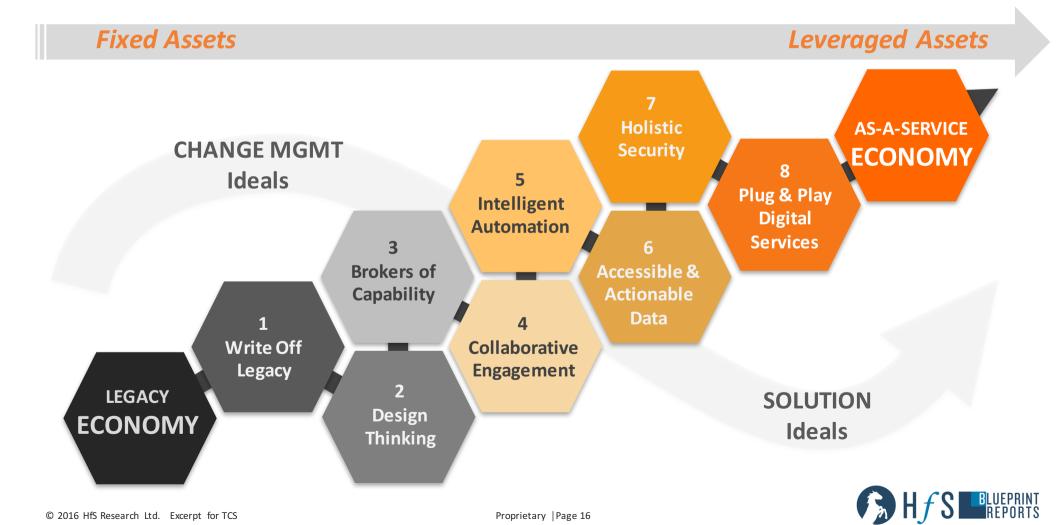
HfS uses the word "economy" to emphasize that the emerging next phase of outsourcing is a more flexible, outcome-focused way of engaging and managing resources to deliver services. Operating in the As-a-Service Economy means architecting the use of increasingly mature operating models, enabling technologies and talent to drive targeted business outcomes. The focus is on value to the consumer.





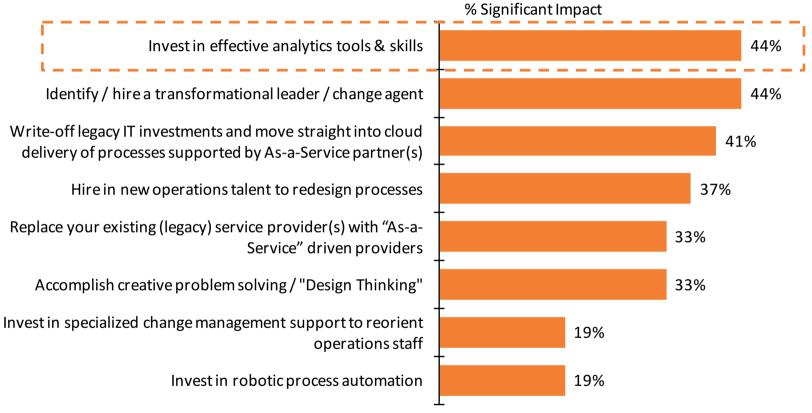
Journey to the As-a-Service Enterprise

- Moving into the As-a-Service Economy means changing the nature and focus of engagement between enterprise buyers, service providers, and advisors
- "As-a-Service" unleashes people talent to drive new value through smarter technology and automation, and analytics plays a critical role



BFS Leaders Consider Analytics Tools And Skills To Be A Key Driver For As-a-Service Impact

To what extent would taking the following actions help you reach your desired "As-a-Service" end-state, if you were to make them today? (BFS)



Equally important as the analytics tools and skills, BFS organizations value the actions that would stir a cultural shift to an As-a-Service end state. They believe that hiring transformational leaders, writing off legacy, and hiring to redesign processes will help operations teams become more effective internally, focusing organizations on using analytics, and bringing more value to partnering.

Source: "Ideals of As-a-Services" Study, HfS Research 2015

Sample: 27 BFS Executives

FH fS

State Of BFS Customer & Marketing Analytics

Customer & Marketing Analytics

- Customer profitability and lifetime value (CLV) analysis
- Attrition and loyalty management
- Campaign management
- Cross-sell and offer management
- Channel mix analysis
- Competitor analysis

The banking and financial services industry is grappling with consumerization and digital technologies, with many trying to transition into **omni-channel BFS brands**. The key challenges here are functional and regional silos that hinder a holistic view of the customer and their various interactions with companies, not just at a product level.

As branch banking transactions reduce and transition to digital, **customer experiences and marketing and product strategies** need to rapidly evolve. Customers expect faster approvals and turnaround times on loans. This is where the majority of the demand for data, reporting, and analytics services is coming from for BFS customer analytics.

While retail banking and credit card lines are relatively ahead of the curve here, BFS clients need these analytics and reporting **insights to reach other LOBs**, such as asset management and mutual funds.

Key offerings from service providers are focused on driving a better understanding of customer behavior through integrating multiple data sources and leveraging advanced analytics and visualization. These are being used for further personalizing marketing campaigns to influence customer decisions, build loyalty, and maximize lifetime value. We see innovative IP-led solutions in this space from Fractal Analytics, Capgemini, IBM, and EXL.



State Of Fraud, Risk, And Compliance Analytics

Fraud, Risk, & Compliance Analytics

- Risk scorecard development and validation
- Economic capital modeling and stress testing
- Fraud and risk alerts and reporting
- Customer account validation

Financial crimes, including anti-money laundering (AML), fraud, and risk, have long been the focus of analytics investments from BFS companies. In recent years, however, the demand has intensified due to the need for new rules engines as fraudsters become more sophisticated, as well as respond to changing regulations. **CCAR, FATCA, and BCBS239 compliance** in particular are areas where banks have sought third-party service providers to develop and scale new capabilities.

We see a greater level of integration of risk and finance with IT due to these changing regulatory requirements, which are driving the consolidation of systems, creating new needs for end-to-end **data lineage and common reporting standards**.

Leading service providers such as Cognizant and TCS are supporting BFS clients through CCAR monthly reporting, loss forecasting, and revenue forecasting analytics, data strategy, and stress testing.

There is an industry-wide need for analytics **model validation**, **documentation**, **and governance** due to greater regulatory scrutiny. Timelines for validation are growing shorter, with stricter parameters for model reviews from regulators across key markets. Banks are turning to service providers where their in-house teams can no longer support these onerous tasks. We see proprietary frameworks and solutions focusing on automation, from Cognizant, Wipro, TCS, Capgemini, and Dell.



State Of Portfolio Analytics

Portfolio Analytics

- Reporting on portfolio risk metrics (internal/external)
- Capital adequacy analytics and stress testing
- Creation and maintenance of portfolio dashboards
- Reporting and decision support at the asset level
- Collateral analysis

Following from the previous related category in fraud and risk, regulatory changes have similarly driven BFS clients to seek specialized services in the areas of stress testing, portfolio analysis, and capital adequacy.

One of the biggest tactical challenges here is the need for viewing and monitoring all stress testing activities for comprehensive compliance submissions. Buyers also seek improvements in **portfolio performance reporting** and dashboarding to be able to measure and monitor at the asset level with greater ease.

We see key offerings from service providers across modeling, analysis, and reporting support for credit risk, market risk, operations risk, and liquidity risk. Cognizant has, for example, used its ModelEye platform to help with stress testing consolidation. Accenture is applying for several patents in this area, for example, in the application of advanced analytics in systemic risk detection.

BFS analytics leaders are gradually becoming more open to third-party service providers contributing to **macroeconomic awareness and recommendations** for portfolio analytics. Alongside internal teams, SMEs and data scientists from service providers are helping to build frameworks to predict early warning signals, detect imminent portfolio stress, and provide preventive steps and recommendations.



The State Of As-a-Service Ideals Adoption In BFS Analytics Services

IDEAL	AS-A-SERVICE IDEAL DEFINITION	NON- EXISTENT	INITIAL	EXPANSIVE	EXTENSIVE	ALL PERVASIVE
Write Off Legacy	Using platform-based solutions, DevOps, and API ecosystems for more agile, less-exception-oriented systems			2016		
Design Thinking	Understanding the business context to reimagine processes aligned with meeting client needs	2016				
Brokers of Capability	Orienting governance and operations to source expertise from all available sources, internally and externally, to address capability gaps		2016			
Collaborative Engagement	Ensuring relationships are contracted to drive sustained expertise and outcomes			2016		
Intelligent Automation	Using automation and cognitive computing to blend analytics, talent, and technology		2016			
Accessible and Actionable Data	Applying analytics models, techniques, and insights from big data in real-time			2016		
Holistic Security	Applying analytics technologies, processes and resources on relevant data sets to derive insights that can help improve an enterprise			2016		
Plug-and-Play Business Services	Plugging into "ready-to-go" business outcome-focused, people, process, and technology with security measures		2016			



Research Methodology



Research Methodology

Data Summary

Data were collected in Q1 2016, covering buyers, service providers, and advisors/influencers of enterprise analytics services for banking and financial services.

Participating Service Providers













TATA CONSULTANCY SERVICES















This Report Is Based On:

- Tales from the Trenches: Interviews with buyers who have evaluated service providers and experienced their services. Some contacts were provided by service providers, and others were interviews conducted with HfS Executive Council members and participants in our extensive market research.
- Sell-Side Executive Briefings: Structured discussions with service providers regarding their vision, strategy, capability, and examples of innovation and execution.
- Publicly Available Information: Thought leadership, investor analyst materials, website information, presentations given by senior executives, industry events, etc.



HfS Blueprint Scoring: BFS Analytics Services

EXECUTION		100%
Quality of the Service Provider's Account Management Team	12%	
How the Service Provider Incorporates Customer Feedback and Collaboratively Engages	10%	
How the Service Provider Works with Clients to Write Off Legacy	12%	
Actual Delivery of Services	28%	
Geographic Footprint and Scale of the Service Provider	8%	
Flexibility of the Service Provider to Deliver End-to-End and Point Solutions	10%	
How Service Providers Engage Customers and Develop Communities	12%	
Service Providers' Experience in Delivering Industry-Specific Solutions	8%	
INNOVATION		100%
Vision for and Investments in the Evolution of Industry-Specific Analytics Solutions	26%	
How the Service Provider Increases Value for Clients Over the Contract Lifecycle	10%	
Fostering a Culture of Creative Problem Finding and More Meaningful Analysis	12%	
Development of Capabilities Across Value Chains into Advanced Analytics and Predictive		
Modeling	15%	
Talent Acquisition and Development Framework	12%	
Leverage Intelligent Automation, Security, Social Media, Mobility, Cloud, and Industrial IoT	15%	
Incorporation of Alliances and Partnerships	10%	



Execution Definitions

EXECUTION	How well does the provider execute on its contractual agreement, and how well does the provider manage the client/provider relationship?
Quality of the Account Management Team	What is the quality level of professional skills in the account management team?
How Service Providers Incorporate Customer Feedback and Collaboratively Engage	How have service providers taken feedback and incorporated that feedback into their product/solution?
How the Service Provider Works with Clients to Write Off Legacy	How proactively do service providers develop and suggest new ways of delivering, contracting, and measuring operational performance? Do clients see ongoing change and improvement?
Actual Delivery of Services for Each Sub-Process	Taking into account each sub-process and the entire macro process, does each sub-process sum to the successful delivery of the service being provided? For example, in the Finance and Accounting macro process of Order to Cash, are all sub-processes being delivered upon successfully?
Geographic Footprint and Scale	Specific to the category, to what degree do service providers have geographic locations that offer strategic value, and do they have scale?
Flexibility to Deliver End-to-End Solutions and Point Solutions	How flexible are providers with delivering multi-process end-to-end solutions versus single-point solutions?
How Service Providers Engage Customers and Develop Communities	How well does the service provider develop client communities and create industry networks to share and create best practices?
Experience Delivering Industry-Specific Solutions	What is the depth of capability and experience of the service provider for supporting vertical markets?



Innovation Definitions

INNOVATION	Innovation is the combination of improving both services and business outcomes.
Vision for and Investments in the Evolution of Industry-Specific Analytics Solutions	Does the provider have a vision for services specific to the industry vertical?
How the Service Provider Increases Value for Clients Over the Contract Lifecycle	A clear understanding is present about what value levers exist and how the service provider will deliver that value. Examples of value may include labor arbitrage, technology, automation, quality, revenue, global scale, and flexibility.
Fostering a Culture of Creative Problem Finding and More Meaningful Analysis	What innovative techniques and methodologies is the service provider investing into drive more creative problem solving in analytics engagements?
Development of Capabilities Across Value Chains into Advanced Analytics and Predictive Modeling	How much progress has the service provider made in developing ongoing decision support, advanced analytics, and predictive modeling capabilities, beyond traditional data management, ETL, BI, and reporting services?
Talent Acquisition and Development Framework	How is the service provider evolving its strategy for analytics talent acquisition, development, and retention?
Leverage Intelligent Automation, Security, Social Media, Mobility, Cloud, and Industrial IoT	How effectively does the service provider use emerging technology platforms, data sources, and advancements in digital technologies (social, mobile, automation, IoT, security, and cloud) to deliver solutions and results?
Incorporation of Alliances and Partnerships	How well does the provider leverage a broader ecosystem of partnerships and alliances to put forward the most integrated solution for clients?



Service Provider Grid



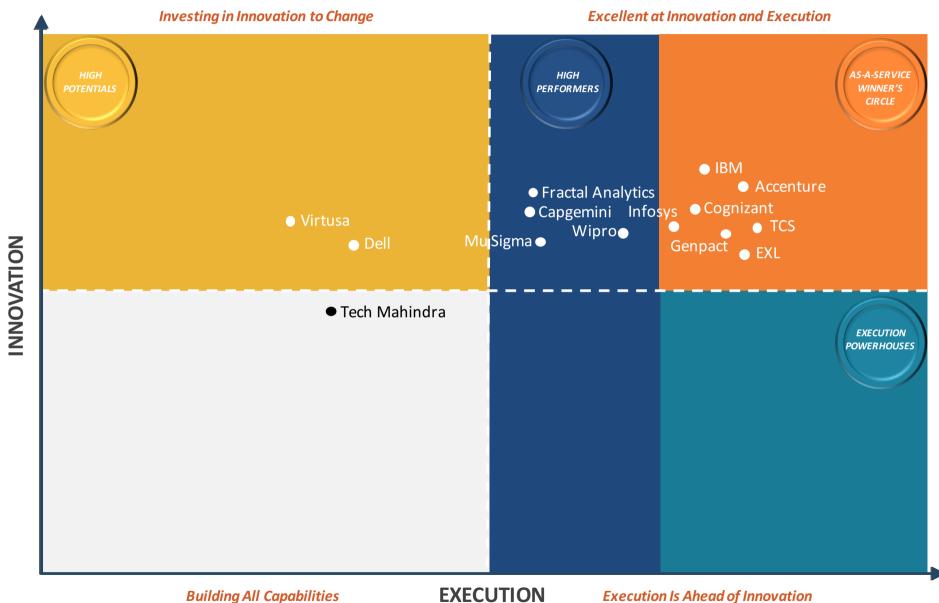
Guide to the Blueprint Grid

To distinguish service providers that show competitive differentiation in a particular line of delivery with progress in realizing the "As-a-Service Economy" of business outcome-oriented, on-demand talent, and technology services, HfS awards these providers the "As-a-Service Winner's Circle" designation.

		EXECUTION	INNOVATION
	As-a-Service Winners Circle shows excellence recognized by clients in the 8 Ideals in execution and innovation	Collaborative relationships with clients, services executed with a combination of talent and technology as appropriate, and flexible arrangements.	Articulate vision and a "new way of thinking," have recognizable investments in future capabilities, strong client feedback, and are driving new insights and models.
•	High Performers demonstrate strong capabilities but lack an innovative vision or momentum in execution of the vision	Execute some of the following areas with excellence: worthwhile relationships with clients, services executed with "green lights," and flexibility when meeting clients' needs.	Typically, describe a vision and plans to invest in future capabilities and partnerships for As-a-Service and illustrate an ability to leverage digital technologies and/or develop new insights with clients.
	High Potentials demonstrate vision and strategy, but have yet to gain momentum in execution of it	Early results and proof points from examples in new service areas or innovative service models, but lack scale, broad impact, and momentum in the capability under review.	Well-plotted strategy and thought leadership, showcased use of newer technologies and/or roadmap, and talent development plans.
	Execution Powerhouses demonstrate solid, reliable execution, but have yet to show significant innovation or vision	Evidence of operational excellence; however, still more of a directive engagement between a service provider and its clients.	Lack of evident vision and investment in future-oriented capability, such as skills development, "intelligent operations," or digital technologies.



HfS Blueprint Grid: BFS Analytics Services



Service Provider Profile



TCS

As-a-Service

A BFS domain expert bringing automation to legacy analytics engagements



Winner's Circle

В	lueprint	Lead	ing	High	ıligl	hts
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- Actual Delivery of Services
- Flexibility To Deliver End-to-End and Point Solutions
- Experience in Delivering Industry Specific Solutions
- · Vision for and Investments in the Evolution of Industry-Specific **Analytics Solutions**
- Development of Capabilities Across Value Chains into Advanced Analytics and Predictive Modeling

BFS Analytics Services Offering Maturity:

Customers & Marketing

Fraud, Risk, & Compliance

Portfolio & Credit Risk

 Scaled Practice For High-End Regulatory Compliance Analytics: TCS has built on its strength as an advanced analytics service provider with BFS domain expertise to service complex regulatory compliance requirements for BFS clients. For example, TCS has built a practice for several U.S. banks to ease the Federal Reserve's CCAR stress testing requirements, where TCS provides monthly reports, loss forecasting and revenue forecasting analysis, data strategy, stress testing, Basel II, and other related risk work, including

model building, validation, and documentation.

Strengths

- Multiple Examples Of Automation In Analytics Engagements: TCS brought automation to CCAR reporting for a U.S. bank, reducing errors by 20% and costs by 30-40% by focusing on data quality. It provided several other examples in the areas of model risk management, contact center forecasting and campaign management where it has built automation tools and accelerators to improve accuracy and eliminate work.
- Retaining And Growing High-Value Analysts: Multiple clients are impressed with TCS' ability to find, grow, and retain specialized analytics talent. The service provider often sponsors onsite trips to enrich engagements and keep analysts motivated.

- Challenges
- Sharing Vision With Clients: Some clients mentioned that they would like TCS to provide more opportunities to discuss its vision as an analytics and big data provider of the future, beyond operational performance discussions taking place today. TCS is making investments in creating platforms and forums to discuss the future of analytics and industry implications to address this.
- **Onshore delivery:** Clients appreciate its nearshore centers, such as in Mexico, but TCS primarily delivers its analytics solutions out of India along with onsite client location support. The service provider must invest in more onshore delivery capabilities in key client markets. We see limited expectations set by the service provider to hire locally in clients markets, such as the U.S., in comparison with its competitors.

Relevant Acquisitions/Partnerships	Client Profile	Service Delivery Operations	Proprietary Technologies
Acquisitions: None Partnerships: EMC to co-develop analytics products, e.g., Active Archive is a joint product with EMC contributing the hardware and TCS bringing in the software Archival-in-a-box SAS and SAS E-miner for data manipulation, data cleaning, and building various statistical models IBM CPLEX to build optimization models SPSS & SPSS Modeler for building various statistical models	 British retail and commercial bank Top global bank Leading U.S. bank Top 5 Australian bank Large mortgage servicer in the U.S Dutch banking and financial services company 	BFS Analytics Services Headcount: 2000–2,500 BFS Analytics Delivery Center Locations: India – Bangalore, Mumbai, Gandhinagar, Pune, Chennai, Kolkata, and Hyderabad Hungary – (Budapest) Mexico – (Guadalajara) Others - Uruguay – Montevideo	 TCS Analytics Platform TCS Listening Platform for Social Media TCS MValid TCS Optumera TCS Reporting Analytics Dashboard Data Migration Tool Active Archive Big Data Desktop PeriVista Sensor Data Analytics



Market Direction and Recommendations



Market Direction In The Next Three Years

- Greater Use of Automation in Risk and Compliance: Automation is a priority for most leading service providers, with investments in place, but varying levels of execution today. Service providers such as TCS and Genpact are eyeing an elimination of 50–70% of manual activities across the BFS analytics value chain, in areas such as model risk management, model monitoring or validation, and monitoring data quality (e.g., data consolidation for CCAR). Accenture and EXL are partnering with robotic process automation (RPA) vendors to improve efficiencies in reporting services.
- Greater Use of Machine Learning and Cognitive Platforms for Augmented Decision Making: We see BFS service buyers being increasingly open to experimenting with new delivery models powered by cognitive technologies. Wipro, IBM, and Accenture have made in-roads in use cases for BFS clients, cognitive risk, and compliance, with several pilots underway collectively. Accenture's focus with cognitive platforms revolves around creating risk leakage and portfolio summaries, while IBM and Wipro have examples in risk and compliance on their respective cognitive platforms. Fractal Analytics' machine learning platform for customer hyper-personalization is another example of a type of solution that we see gaining traction with BFS clients in the next few years.
- More Take-up of Cloud-based Solutions: BFS buyers are gradually shedding their risk averseness as cloud-based technologies become more mainstream for data infrastructure. Particularly in the customer analytics space, we expect this market to evolve as frameworks such as Hadoop and NoSql databases proliferate, shrinking the costs and turnaround time for bridging enterprise and external data and providing more availability for self-serve reports. We expect service providers such as Infosys that have proprietary cloud-based platforms to drive the adoption for the enterprise BFS market, following the heels of more ambitious mid-market buyers.

Market Direction In The Next Three Years...(Continued)

- The Evolution of Utility Models: Cost pressures and the need for common standards and efficiencies in back office functions are making BFS buyers more open to considering utility-based shared service models. Multiple service providers, including Accenture, Infosys, IBM, and Genpact, are investigating the potential of creating shared utilities with their marquee BFS clients. Genpact, with its KYC.com offering, has just announced its expansion into Asia for its global clients that need regional KYC standardization. We see other use cases mushrooming in the areas of post-trade reconciliations and exceptions handling, data management, and reporting for regulatory compliance. BFS buyers are advised to explore these and other non-competitive activities that can become multi-tenant in this industry in the next few years.
- More Focus on Self-Serve Reporting and Analytics, Beyond "Prima Donna" Scientists: BFS clients mention that one their biggest investment areas in the short term is to formulate a roadmap and execution plan for how to operationalize the use of analytics and reporting within the enterprise, freeing up the bottlenecks of having to deal with IT or expensive analytics resources. This is an area that service providers should focus on as well, beyond contributing to the strategy work of a few small teams. As one BFS analytics leader put it, "There's an insatiable demand for data at this point, and IT budget constraints doesn't stop those finance analytics and data needs. We're extremely focused now on more self-service models—building controls, entitlements, auditability for staff to go create and share reports without back and forth with IT, which couldn't have kept up with the demand anyway!"



Market Recommendations: Service Buyers

- Contract for Innovation: BFS clients in our research brought up several examples of innovative ideas from their service providers from a pricing perspective, such as outcome-based pricing on results from analytical insights. However, in most cases, the clients could not proceed due to global rate cards and locked-in negotiations already in place. When it comes to innovation in delivery models, procurement teams often inhibit the progress, and need to stop thinking of outsourcing service providers as providing labor arbitrage, and as offering services instead.
- Take the Time to Reacquaint Your Firm with Your Service Provider: BFS clients are advised to take a new look at their analytics service provider to freshly evaluate their capabilities. In the last few years, service providers have undertaken several acquisitions and other investments in developing critical thinking, data sciences, and analytics technology platforms. Due to past perceptions of capability, we see the pigeonholing of service providers as a key inhibitor to partnering at a strategic level. There is an opportunity here for service buyers to collaborate and influence market direction for strategic partners at this stage of their growth, where they are extremely amenable to making investments in industry-specific solutions.



Market Recommendations: Service Providers

- Facilitate Industry Collaboration: Barring a couple of Winner's Circle leaders, the majority of service providers lack the ability to act as facilitators for sharing ideas across companies in their client base. BFS clients mention that they would really value the opportunity to connect through forums, etc. with other enterprise analytics users, academic communities, and FinTech startups to understand next-generation analytics developments. While it is difficult to orchestrate given confidentiality concerns in the banking industry, clients would also value cross-industry perspectives, especially for consumer-facing verticals that have rapidly advanced their analytics adoption in the last few years.
- Find New Ways of Lowering Costs: In the near term, there is still value to be found in leveraging offshore talent for BFS analytics, and this is an area of utmost importance to BFS clients. However, the costs continue to rise year after year for Indian analytics data scientists, PhDs, and analysts. Service providers must continue to explore cost controlling levers, including hiring in Tier III locations, and building in more automation to eliminate work (and pass on savings to clients).
- Above Everything, Have an Iron-proof Global Talent Strategy: We see a few service providers like Accenture, Genpact, Infosys, and EXL focus on expanding the talent pool and contributing to curriculum development with university tie-ups across global talent locations. As the data sciences field continues to grow, BFS-specific specializations in risk and compliance will command greater attention from clients.



About the Author



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Overview

- Tracks verticalized technology-enabled operations in banking, financial services, and insurance
- Tracks enterprise analytics services across business functions and industry verticals
- Conducts Blueprint reports across service areas in global sourcing

Previous Experience

- Project Manager in the sourcing research wing of the business research and consulting firm ValueNotes, driving research product design and development for the outsourcing community, the management of custom research engagements, and the development of thought leadership through targeted content and community interaction
- Niche BPO and KPO coverage, including analytics, medical transcription, market research, and elearning
- Bespoke engagements, including in-depth competitive intelligence studies, market and investment opportunity assessments, demand-side surveys, and marketing communication optimization for outsourcing buyers, providers, consultants, and investors

Education

- Bachelor's in Business Administration, Symbiosis International University, India
- Master's in Marketing Management with Beta Gamma Sigma honors, Aston Business School, UK



About HfS Research

We coined the As-a-Service Economy term because we see a profound change under way that is more allencompassing than a simple business model or product line. It's a global shift that will leave few sectors of business or society untouched.

To help our clients and the market get to the As-a-Service Economy, we serve the strategy needs of business operations and IT leaders across finance, supply chain, human resources, marketing, and core industry functions in organizations around the world. HfS provides insightful and meaningful analyst coverage of best business practices and innovations that impact successful business outcomes, such as the digital transformation of operations, cloud-based business platforms, services talent development strategies, process automation and outsourcing, mobility, analytics, and social collaboration. HfS applies its acclaimed Blueprint Methodology to evaluate the performance of service and technology in terms of innovating and executing against those business outcomes.

HfS educates and facilitates discussions among the world's largest knowledge community of enterprise services professionals, currently comprising 100,000+ subscribers and members. HfS Research facilitates the HfS Sourcing Executive Council, the acclaimed elite group of sourcing practitioners from leading organizations that meets bi-annually to share the future direction of the global services industry and to discuss the future enterprise operations framework. HfS provides sourcing executive council members with the HfS Governance Academy and Certification Program to help its clients improve the governance of their global business services and vendor relationships.

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