HfS Blueprint Report
Smart Analytics

May 2018 | Authors:
Reetika Fleming, Research Director, Insurance, Smart Analytics & AI
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Introduction and key definitions
The HfS Blueprint: Smart Analytics is a periodically refreshed analysis of the enterprise analytics services capabilities of key service providers, with an emphasis on the smart analytics sub-set of the HfS Triple-A Trifecta of intelligent automation technologies. The 2018 Blueprint builds on the previous years’ reports that can be found on www.hfsresearch.com/research, including reports on the broad enterprise analytics services markets and sector-specific analyses.

The scope for this study includes services across the data to insight lifecycle, including analytics consulting, data management, reporting and visualization, and advanced analytics.

In the market, we see the emphasis shifting to favor service providers with innovative capabilities, such as using automation, mobility, and cloud to improve analytics outcomes. Moreover, the quality and availability of talent that service providers are developing to help their clients transform their analytics capabilities and achieve real value beyond cost has become a major differentiator.

This Blueprint covers market trends and direction, as well as analysis of participating service providers and recommendations for service providers and client organizations. We also include a grid, mapping the Innovation and Execution capabilities of the key service providers in this market.
Smart analytics is a critical part of the HfS Triple-A Trifecta

» As HfS has outlined in its Triple-A Trifecta framework, the Trifecta is where AI intersects with automation and smart analytics. While each element of the Trifecta has a distinct value proposition, there is increasing convergence between the three elements. For instance, smart analytics are increasingly reliant on AI tools such as natural language processing (NLP) to conduct search-driven analytics, neural networks for data exploration, and learning algorithms to build predictive models. In fact, the holy grail of service delivery transformation is at the intersection of automation, analytics, and AI.

» The Trifecta is non-linear, without a definite starting point. Transformation is not a linear progression. Enterprises can start anywhere across the Trifecta. It is not necessary to start with basic analytics and then advance to AI-based solutions. However, it is critical that you understand the business problem that you are trying to solve and then apply the relevant value lever or combination of value levers.
## HfS definition of smart analytics across the value chain

**Enterprise analytics services value chain**

<table>
<thead>
<tr>
<th>Analytics software, infrastructure design, and maintenance</th>
<th>Data preparation and management</th>
<th>Reporting and visualization</th>
<th>Advanced analytics modeling and ongoing decision support</th>
<th>Analytics consulting</th>
<th>Smart analytics technologies across the value chain—Automation of data, reporting, and analytics tasks and augmentation of decision-making</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Enterprise data warehouse design and implementation</td>
<td>• Data prep, ingestion, and integration</td>
<td>• Design and generation of routine reports</td>
<td>• Interpretation and analysis of structured, semi-structured, and unstructured data</td>
<td>• Strategic planning and business case development through analytics consulting</td>
<td>To HfS, smart analytics includes the use of cognitive and machine learning techniques to improve the impact of enterprise analytics services. Examples include using neural networks to undertake data exploration, using NLP to do search-driven analytics, using machine learning and automation tools to auto-generate reports and dynamic visualizations, and using supervised, unsupervised, or reinforcement learning algorithms in model building and validation.</td>
</tr>
<tr>
<td>• Infrastructure design and implementation</td>
<td>• Data entry, de-duplication of records</td>
<td>• BI support</td>
<td>• Development, implementation and maintenance of customized analytics model(s)</td>
<td>• Analytics and data infrastructure road mapping.</td>
<td></td>
</tr>
<tr>
<td>• Implementation of batch-based or near real-time ETL software product(s), reporting software product(s), advanced analytics software product(s).</td>
<td>• Data and analysis enrichment through through primary and secondary data sources</td>
<td>• Data discovery</td>
<td>• Development, implementation and maintenance of customized analytics model(s)</td>
<td>• Strategic planning and business case development through analytics consulting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Data quality and governance</td>
<td>• Visualization and dashboard design and generation</td>
<td>• Communicating and implementing recommendations from interpretation of analysis.</td>
<td>• Analytics and data infrastructure road mapping.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Metadata and data lake management.</td>
<td>• Reporting data analysis.</td>
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**In-scope for this Blueprint**

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Executive Summary
Key highlights: smart analytics (1)

» Data and analytics take center stage as key business drivers: Data and analytics have found new stakeholders and executive support in 2018 as automation, AI, and machine learning have become commonplace terms in boardroom discussions. Managing data has become a strategic imperative for business growth, with renewed interest and accompanied investments across business functions.

» Continued momentum with double-digit growth for most service providers: Smart analytics continues to be the biggest revenue driver within the “digital” portfolios of most global technology services firms in our research. HfS observes double-digit growth for this market, with several providers reporting between 20% and 35% revenue growth YoY as the demand for smart analytics continues to grow exponentially.

» The analytics services value chain is undergoing a complete change due to technology shifts:
The proliferation of intelligent automation technologies, the mainstreaming of open source platforms and big data infrastructure, and trends in broader digital transformation are starting to change the face of data and analytics services. Enterprise clients are demanding new efficiencies and smarter processes across the board. Leading service providers have been willing to invest in new services and solutions to support future growth. Examples include the use of:
  • machine learning for automating data discovery, cataloguing, and correcting master data
  • NLP and virtual assistants to improve self-service
  • RPA to auto-populate routine reports
  • machine learning to automate model validation and maintenance, and improve algorithmic accuracy and predictive and prescriptive capability through deep learning techniques.
Key highlights: smart analytics (2)

» **Market changes are a direct reflection of working around talent gaps:** Both service providers and clients are struggling to attract—and then retain—analytics talent across global markets. Some of the biggest challenges with the industry are thus around improving the productivity and quality of work of data and analytics teams, who spend an inordinate amount of time with low-value work in areas like data prep. We see a consequential response by service providers to focus on automation and technology enablement to improve processes across the lifecycle to get the most out of the available talent in their own and their clients’ teams.

» **Market is increasingly centering around the ability to manage data:** Enterprises are realizing that data connects everything inside and outside of their walls, but are yet to use data in an industrialized way. However, the scope of work they are demanding is starting to include more capabilities around handling semi-structured and unstructured data. The boutique analytics specialists are developing data engineering arms, the large service providers are modernizing and re-skilling their data management workforce, and analytics modeling is being presented as a way to better monetize and experiment with unstructured data to create new value.

» **“Smart analytics” is a small sub-set of work being done today:** While there are changes underway, we see the majority of work for service providers still being in legacy data management and traditional BI support. Few clients have gone down the path of working with providers to create end-to-end intelligent data orchestration and realize the vision of smart analytics. We see a few promising examples for most leading service providers, while they still carry legacy work forming the major components of their services portfolio today.
Key highlights: smart analytics (3)

» **Service providers are consolidating capabilities around platforms and ecosystems:** Whether it’s Accenture’s AIP, Wipro’s DDP, Atos’ Codex, Genpact’s Cora, or Cognizant’s BigDecisions platform, enterprise clients are increasingly finding themselves subscribing to ecosystems being setup by their smart analytics service provider. HfS sees progress from the supply side in organizing not only their product and data model catalogs, but also a consolidation of best practices such as ingestion frameworks, environments for data infrastructure, access to IP, and connections to partner technologies and capabilities through “LEGO block”-style modular ecosystems.

» **Commercial models make a slow move toward value:** The vast majority of the data and analytics services market operates on FTE-based or fixed-cost pricing, working on a per-project basis, or through established CoEs or using providers toward staff augmentation. However, as service providers productize and consolidate IP through platforms, examples of consumption-based commercial arrangements are emerging.

» **Talent remains the key differentiator among leaders and specialists:** Domain-centered advanced analytics teams ruled the roost as differentiation in the past, for boutiques and large service providers alike. Today, these firms need to attract broad-based talent to fulfill the demands of clients with diversified needs. From specialists in new technology platforms to a growing list of programming languages and certifications for company-specific specializations (e.g., Watson engineers), service providers are still differentiating on talent, but with a far bigger range of skills than in the past.
The smart analytics service provider landscape

» The HfS Winner’s Circle includes service providers that are continuing to make the biggest investments in increasing value over time for analytics clients. They have the strongest vision for smart analytics and are successfully collaborating with clients to explore new operating models and technologies to execute on their services vision.

» The HfS Winner’s Circle service providers have highly scaled data and analytics practices and are leading the discussions on the use of intelligent automation technologies, platform-based services, and driving business outcomes for smart analytics:
  • Accenture, Cognizant, EY, Genpact, IBM, Infosys, KPMG, TCS, Wipro.

» The High Performers have good execution capabilities and are making strategic investments to grow their footprint across the analytics services value chain.

» Several of the High Performers have industry-leading vision and need to focus on consistent execution among their client base:
  • Atos, Capgemini, DXC, eClerx, EXL, Fractal Analytics, Hexaware, LTI, MuSigma, Syntel, Tech Mahindra, WNS.

» The High Potentials are niche challengers that present good innovation potential in terms of technology roadmaps and talent expansion plans, but lack the scale and execution experience, as of today:
  • BRIDGEi2i, CSS Corp, NIIT Technologies.
Key market trends
The need for better data is a fundamental business driver today

Q. Which of the following business drivers will have a major impact on your business?

- The shift toward digital, online, and virtual experiences and away from physical and face-face engagements (27%)
- Making more predictive decisions based on rapidly accessible real-time data across the organization (26%)
- Combating the threat of potentially disruptive digital competitors (25%)
- Micro targeting customers and hyper personalization and customization of products to customer requirements (24%)
- Building relationships with external ecosystem and industry partners to drive innovation and growth (18%)
- Driving out costs through process automation (16%)

Data explosion, digital disruption, and increasing consumerism are the three main challenges that enterprises face in today’s business environment.

Source: HfS Research, 2018; “Intelligent Operations Study” conducted in association with Accenture
Sample: Enterprise Buyers = 460
Yet organizations struggle to harness data to make better decisions

Q. Can you estimate the proportion of structured vs unstructured data in your organization?

Source: HfS Research, 2018; "Intelligent Operations Study" conducted in association with Accenture
Sample: Enterprise Buyers = 460

Only 22% of organizations have more than half their data structured.
Enterprises are realizing what becoming “data-driven” really entails, with challenges across people, process, and technology

All organizations are at different stages of their smart analytics journey. From the ones that have declared analytics as a strategic imperative to the ones that are just getting started, there is a long road to becoming truly data-driven.

Mature enterprises that may have already focused on one or two pillars of organizational change will need to take a multi-pronged approach to succeed in the future.

Smart analytics needs multi-disciplined talent acquisition and retention, a new approach to process design to enable more intelligent decision-making and workflows, the accompanying cultural changes, broad-based technology modernization and investments, and a reorientation to play within a larger ecosystem of interconnected data, partners, and vendors.
Challenge #1: managing talent

» Innovative hiring and retention strategies to grow data and analytics talent

» Hiring talent across the enterprise with a proclivity to use data and insights

» New training programs and certifications

» Growing multi-disciplined talent including:
  • Data engineers with specific platform skills, such as MapReduce, Apache Pig, Apache Hive, and Apache Hadoop
  • Data scientists coming from a variety of fields including PhDs in statistics, math, and computer science
  • Data visualization experts with backgrounds in stats, graphic design, UX
  • Data analysts with experience in different programming languages, increasingly Python.
Challenge #2: embedding analytics into the organization

» Using new tools and methodologies like design thinking to rethink processes

» (Re)designing processes with digital data and analytical insights as native components

» Re-inventing roles and responsibilities with new processes in mind

» Ongoing training and education to embed a strong culture of insight-driven decision-making across the enterprise

» Ongoing development of governance models for the use of data and analytics

» Ongoing evolution of the operating model to deliver data and analytics services to the enterprise, including:
  • Analytics CoEs
  • Centralized and federated models
  • IT- vs. business-driven
  • Learning and collaboration across groups.
Challenge #3: a technology roadmap built on openness and collaboration

» Setting a holistic roadmap that views the industrialization of smart analytics across processes, beyond siloed engagements and projects

» Building interfaces and overlays to extract digital data and value from legacy systems and processes

» Using a broader ecosystem of curated data sets, playing in the API economy

» More intelligent workflows, hand-offs, and integration between data, analytics, and IT groups

» Making technology platform investments such as:
  • Big data infrastructure, data lakes, cloudification
  • Mobile BI
  • Data ingestion, integration.
State of the smart analytics market: data prep and management

» Data prep, ingestion, and integration
» Data entry, de-duplication of records
» Data and analysis enrichment through primary and secondary data sources
» Data quality and governance
» Metadata and data lake management.

» Key client concern
  • Making data available for discovery, mining, and analytics.

» Trends in services and solutions
  • Investments in planning, setting up, and managing data lake environments have surpassed all other investments and discussions in the last two years. Enterprises are embracing open source platforms and putting in place trust and security mechanisms to increasingly store and manage data in the cloud.
  • GDPR-related solutions are coming to the front, including data protection services, readiness assessments, and anonymization services.
  • Data quality as-a-service continues to be an integral need for many clients as their data sources grow.
  • Cognitive data ingestion and data cataloguing are getting deployed on a wider scale, as technologies mature and clients gain more confidence in capabilities.
State of the smart analytics market: Reporting and visualization

» Design and generation of routine reports
» BI support
» Data discovery
» Visualization and dashboard design and generation
» Reporting data analysis.

» Key client concern
  • Providing business users the best ways to consume data and insights.

» Trends in services and solutions
  • New kinds of workbenches for data discovery and visualization are evolving to give analysts and data scientists better ways to sift through data.
  • Automated generation and delivery of routine rules-based BI reports is emerging on the back of RPA applications.
  • We see more solutions that build connectors to embed actionable insights within enterprise applications.
  • User interfaces are seeing the next generation of evolution as machine learning, other AI techniques, and visualization technologies become more mature. Examples include:
    1. The use of natural language search and querying is sharply on the rise within BI applications and interfaces as NLG is deployed more and more.
    2. Virtual agents and assistants that interact with, alert, and guide business users through action items in their daily work routines.
    3. Initial pilots of AR and VR tech to create new data overlays.
State of the smart analytics market: advanced analytics

» Advanced analytics modeling and ongoing decision support

» Interpretation and analysis of structured, semi-structured and unstructured data

» Development, implementation and maintenance of customized analytics model(s)

» Communicating and implementing recommendations from interpretation of analysis.

» Key client concern
  • Finding the most accurate and relevant insights from data patterns.

» Trends in services and solutions
  • Biggest investments and solutions are in bringing in unstructured data into existing and new analyses.
  • Strong client interest and green lighting of new model development using machine learning, deep learning, and other AI techniques, most prominently computer vision and NLP.
  • Continued progress from service providers to develop industry and function-specific catalogs of (mostly) reusable assets and IP to speed up new projects.
  • Renewed interest in model lifecycle management solutions with the advent of intelligent automation technologies that can automate parts of the monitoring and governance roles.
  • Executive mandate for AI and intelligent automation is driving new needs for the industrialization and scaling of models, going beyond the project and department silos of the past.
State of the smart analytics market: analytics consulting

» Key client concern
  • Determining the best course of action on data, platforms, infrastructure, and operating model.

» Trends in services and solutions
  • Strong client demand in strategy and consulting work to redefine the role of data and analytics in the era of AI.
  • We see a gradual rise in the use of design thinking to help stakeholders discover and prioritize use cases.
  • Greater use of collaborative work spaces to help clients imagine the “art of the possible”, with an emphasis on rapid prototyping of new models with test data.
  • The need for organizational change management is going to skyrocket as enterprises realize the impact of smart analytics on traditional processes and job roles.
  • The operating model for delivering data, insights, and analyses is gradually evolving, and consulting engagements are helping clients to plan for new groups and capabilities.
Research Methodology
Research Methodology

» Data summary
We collected data in Q4 2018-Q1 2018, covering buyers, service providers, and advisors and influencers of data and analytics services.

» Service providers mentioned

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 participants in global market research studies.

» 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.

*Note: Fractal Analytics and MuSigma did not participate in this Blueprint and have been represented throughout the document based on best available information.
# HfS Blueprint scoring: smart analytics

<table>
<thead>
<tr>
<th>Execution</th>
<th>100%</th>
<th>Innovation</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of service delivery</td>
<td>20%</td>
<td>Vision for and investments in the evolution of smart analytics</td>
<td>25%</td>
</tr>
<tr>
<td>Ability to attract and retain key skills</td>
<td>10%</td>
<td>Tool, data, and platform strategy for smart analytics</td>
<td>20%</td>
</tr>
<tr>
<td>Flexibility and creativity in pricing and contracting</td>
<td>10%</td>
<td>Framework for integration of insights into operational decision making</td>
<td>5%</td>
</tr>
<tr>
<td>Overall size and scale</td>
<td>15%</td>
<td>Fostering culture of creative problem finding, more meaningful analysis and analytical storytelling</td>
<td>15%</td>
</tr>
<tr>
<td>Scale and repeatability of deployments</td>
<td>15%</td>
<td>Collaborative engagement (consultative sales, design thinking, thought leadership)</td>
<td>10%</td>
</tr>
<tr>
<td>Breadth and depth of industry and horizontal specific solutions that drives use case identification and approach</td>
<td>15%</td>
<td>Ecosystem development including alliances, partnerships and consortiums</td>
<td>15%</td>
</tr>
<tr>
<td>Development of capabilities across value chain into advanced analytics, predictive modeling, and machine learning</td>
<td>15%</td>
<td>Framework for multi-disciplinary talent acquisition and development</td>
<td>10%</td>
</tr>
</tbody>
</table>
## HfS Blueprint scoring: smart analytics

<table>
<thead>
<tr>
<th>Execution</th>
<th>How well does the service provider execute on its contractual agreement? How well does the provider manage the client-provider relationship?</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of service delivery</td>
<td>What are the clients’ overall impressions of the quality of service?</td>
<td>20%</td>
</tr>
<tr>
<td>Ability to attract and retain key skills</td>
<td>How is the service provider addressing scaling deployments within and across clients? Is the service provider seeking to move to repeatability of solutions and projects?</td>
<td>10%</td>
</tr>
<tr>
<td>Flexibility and creativity in pricing and contracting</td>
<td>How well does the service provider tap into industry practices and expertise? Any specific solutions or services within different segments?</td>
<td>10%</td>
</tr>
<tr>
<td>Overall size and scale</td>
<td>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?</td>
<td>15%</td>
</tr>
<tr>
<td>Scale and repeatability of deployments</td>
<td>Do service buyers have access to the skills and capability needed to deliver relevant, continuous, quality work? What is the workforce management and development capability of the service provider. Is the attrition at, above, or below average for the industry?</td>
<td>15%</td>
</tr>
<tr>
<td>Breadth and depth of industry and horizontal specific solutions that drives use case identification and approach</td>
<td>How competitive and flexible are service providers in determining contract pricing? Are they willing to make investments in clients for long-term growth? What percentage of the contracts are FTE, transaction, gain-sharing? Anything innovative in the contracting?</td>
<td>15%</td>
</tr>
<tr>
<td>Development of capabilities across value chain into advanced analytics, predictive modeling, and machine learning</td>
<td>Overall practice maturity, including revenues, headcount, number of clients</td>
<td>15%</td>
</tr>
</tbody>
</table>
## HfS Blueprint scoring: smart analytics

<table>
<thead>
<tr>
<th>Execution</th>
<th>How well does the service provider execute on its contractual agreement? How well does the provider manage the client-provider relationship?</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framework for multi-disciplinary talent acquisition and development</td>
<td>How well is the provider updating its strategy towards the recruitment and development of data and analytics technology, domain expertise, and statistical talent to address emerging needs?</td>
<td>10%</td>
</tr>
<tr>
<td>Tool and platform strategy for smart analytics</td>
<td>What is the role of tools and platforms in the service provider’s offering strategy? Are the selected platforms developed in-house, or are they provided by third parties? Is there a demonstrable intent to maintain and enhance the in-house platforms?</td>
<td>20%</td>
</tr>
<tr>
<td>Vision for and investments in the evolution of smart analytics</td>
<td>Does the service provider have, share, and engage in dialogue regarding the future of smart analytics? Is the vision communicated clearly?</td>
<td>25%</td>
</tr>
<tr>
<td>Framework for integration of insights into operational decision-making</td>
<td>How well does the service provider facilitate the “last mile” actioning of analytical insights and operational decision making for clients? How well does smart analytics capabilities relate back into the HfS Triple A Trifecta technologies, back into service delivery</td>
<td>5%</td>
</tr>
<tr>
<td>Collaborative engagement</td>
<td>Does the service provider work as a partner in collaboration and increase the value of the engagement over time? Or does it mostly take direction and deliver based on KPIs? Are there outcome-based engagements and contracts? What is the level of use of design thinking, problem solving, and consultative sales to develop and deliver solutions?</td>
<td>10%</td>
</tr>
<tr>
<td>Ecosystem development including alliances, partnerships, and consortiums</td>
<td>How well does the provider leverage a broader ecosystem of partnerships and alliances to put forward the most integrated solution for clients?</td>
<td>15%</td>
</tr>
<tr>
<td>Fostering culture of creative problem finding, more meaningful analysis and analytical storytelling</td>
<td>What innovative techniques and methodologies is the service provider investing in to drive more creative problem solving to drive more value in data, reporting, and analytics engagements?</td>
<td>15%</td>
</tr>
</tbody>
</table>
Service provider grid and profiles
Guide to HfS Blueprint Grid

To distinguish service providers that show competitive differentiation across innovation and execution, HfS awards these providers the “HfS Winner’s Circle” designation.

<table>
<thead>
<tr>
<th>Category</th>
<th>Execution</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HfS Winner’s Circle</strong></td>
<td>Collaborative relationships with clients, services executed with a combination of talent and technology as appropriate, and flexible arrangements.</td>
<td>Articulate vision and a “new way of thinking,” have recognizable investments in future capabilities, strong client feedback, and are driving new insights and models.</td>
</tr>
<tr>
<td><strong>High Performers</strong></td>
<td>Execute some of the following areas with excellence: worthwhile relationships with clients, services executed with “green lights,” and flexibility when meeting clients’ needs.</td>
<td>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 or develop new insights with clients.</td>
</tr>
<tr>
<td><strong>High Potentials</strong></td>
<td>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.</td>
<td>Well-plotted strategy and thought leadership, showcased use of newer technologies or roadmap, and talent development plans.</td>
</tr>
<tr>
<td><strong>Execution Powerhouses</strong></td>
<td>Evidence of operational excellence; however, still more of a directive engagement between a service provider and its clients.</td>
<td>Less evident vision and investment in future-oriented capability, such as skills development, “intelligent operations,” or digital technologies.</td>
</tr>
</tbody>
</table>

Legend for offering maturity on provider profiles:

- **Mature**
- **Developing**
- **Nascent**
HfS Blueprint Grid: smart analytics

- High Performers
- High Potentials
- Building All Capabilities
- Execution Powerhouses
- Execution Is Ahead of Innovation
- Investing in Innovation to Change
- Excellent at Innovation and Execution
Execution highlights

» **Scale and repeatability of deployments:** Clients seek help in scaling out their operating model, going beyond use case and project-based work. Creating reusable assets and libraries not only helps clients to kickstart their engagements faster, but also to consolidate knowledge and IP for providers. **KPMG, Cognizant, and Accenture** are playing strongly in this space to build out scale for clients.

» **Development of capabilities across the value chain into advanced analytics, predictive modeling and machine learning:** Advanced analytics has always been a high-value offering that’s highly dependent on maintaining specialized talent pools—a work in progress for most service providers. **Accenture, IBM, EXL, Genpact, KPMG, and TCS** have made great progress on expanding their capabilities in the advanced analytics part of the services value chain.

» **Ability to attract and retain key skills:** Our research questioned clients on the biggest strengths of their service providers. In more than half the responses, we saw the theme of access to talent rise to the top. Analytics clients are looking for the trio of technical expertise, data science knowledge, and domain knowledge in their engagements today. **HfS** found Winner’s Circle providers including **Accenture, IBM, TCS, Cognizant, KPMG, and Genpact** to score high on this capability, as well as **BRIDGEi2i, EXL, WNS, and NIIT.**

» **Ecosystem development including alliances, partnerships and consortiums:** Service providers across the board have recognized the need to develop alliances, but few are comprehensive as of today. Clients would like to see more structured ways of accessing startup innovations and more ways to plug in partner capabilities into provider solutions overall. The breadth of ecosystem development and level of strategic partner connect will truly differentiate providers in the next two years. We see **Accenture, KPMG, Wipro, TCS, and Cognizant** investing significantly to drive ecosystems for smart analytics.

» **Collaborative engagement:** These require consultative sales frameworks that focus on problem solving, using thought leadership and design thinking to truly collaborate alongside a client. As of today, **Capgemini, IBM,** and **KPMG** are progressing quickly with new ways of engaging clients through structured workshops, investments in collaborative experiential spaces, and other activities.

» **Vision for and investments in the evolution of smart analytics:** **Accenture, KPMG,** and **IBM** stand out overall, and are leading the industry forward on smart analytics. Their vision is well articulated, brings clients along from different stages in the analytics journey, and is starting to plan for the connected data ecosystems that enterprises will need in the near future.
# Relevant Acquisitions and Partnerships

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquisition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>acquired Search Technologies</td>
<td>to expand content analytics and big data engineering expertise</td>
</tr>
<tr>
<td>2016</td>
<td>acquired OPS Rules</td>
<td>to expand its machine learning and operations analytics capabilities</td>
</tr>
<tr>
<td>2016</td>
<td>acquired dGroup, MOBGEN, and Tecnilogica</td>
<td>to expand digital transformation capabilities</td>
</tr>
</tbody>
</table>

**Partnerships with:**
- Technology alliances: SAP, SAS, AWS, IBM, Google, Paxata, 1QBit, Informatica, Cloudera, Qlik, Tableau, Teradata, Hortonworks, Talend, Avanade and Microsoft
- Academic alliances: MIT, Harvard, Stanford, Duke University, Georgia Tech, Stevens Institute of Technology, Turing Institute, ESSEC Business School and Das Deutsche Forschungszentrum für Künstliche Intelligenz (DFKI)

## Strengths

- **Thought leadership across the data and analytics landscape.** Accenture enjoys a high brand recall and mindshare with analytics clients, who view the service provider as being on the “cutting edge” of industry advancement for machine learning with its Applied Intelligence group.

- **Analytics consulting and strategy.** Accenture’s consulting stands out as a key strength, helping clients in defining their analytics strategy and think about data more holistically.

- **Alignment of solutions around AIP platform.** Accenture has spent considerable time and investments to evolve its AIP platform in the last three years. The solution is available in the cloud and on-premise, with as-a-service offerings and a comprehensive framework for integration, from data ingestion to insight discovery and visualization.

- **Global practice with wide range of capabilities.** Overall service execution is a key strength for Accenture. In particular, clients point out that the service provider has developed a truly global data and analytics practice, and when local teams need any kind of help, Accenture is able to pull together remote expertise swiftly. It is able to “think locally with global resources.”

## Challenges

- **Continued perception as expensive.** Several clients in our research maintained that while Accenture’s premium pricing generally correlates with the quality it provides, it needs to find ways to make engagements more cost effective.

- **Potential attrition risk for high-value talent.** The skillsets and training that Accenture’s analysts, data scientists and engineers, and consultants possess make them targets for competing employers. A client mentioned that they have seen some turnover due to the high quality talent in their engagement.

- **Persistent focus on open source technologies.** Accenture was slightly late to the market with catching up on open source technologies, leading clients to work with some competitors in the last few years. It has since pivoted to expand to a broader ecosystem of partners and solutions developed on open source technology stacks. Accenture will have to continue to look outward as the industry grows more diverse.

## Key Clients

<table>
<thead>
<tr>
<th>Client split by geography:</th>
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<tbody>
<tr>
<td>NA: 25%</td>
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<tr>
<td>LATAM: 10%</td>
</tr>
<tr>
<td>EMEA (including UK): 45%</td>
</tr>
<tr>
<td>APAC: 20%</td>
</tr>
</tbody>
</table>

**Vertical specialization includes:**
- Products, financial services, CMT, resources, health, public service, customer and channel, supply chain and operations, finance and risk, and enterprise performance
- 2,500 clients, including:
  - US federal government
  - Boston Scientific
  - Ducati
  - Melia
  - Biesse
  - Airbus
  - BBC

## Global Operations Centers

| Headcount | 19,500 |
| Data scientists | 2,200 |
| Delivery and innovation centers in 50+ countries with center locations broken down as follows: |
  - North Americas: 10%
  - EMEA: 15%
  - Other APAC: 75% |

## Key Proprietary Technologies

- Accenture Insights Platform (AIP): analytics-as-a-service platform
- Accenture Intelligent Automation Platform: scalable, agile, and insightful customer experience-focused platform
- Accenture Connected Platform as a Service: IoT platform that is integrated with AIP
- Intelligent Data Quality Platform: Learning-enabled data quality tool
- Accenture Cyber Intelligence Platform: augmented security
Cognizant Winner’s Circle

Investing in machine learning and AI to expand high-value analytics portfolio

<table>
<thead>
<tr>
<th>Blueprint Leading Highlights</th>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Scale and repeatability of deployments</td>
<td>• Overall size and scale. Almost a $4B business for Cognizant, data and analytics is a distributed practice with capabilities across data management, reporting and business intelligence, advanced analytics, and analytics consulting.</td>
<td>• Development of capabilities across the value chain into advanced analytics, predictive modeling and machine learning. Cognizant has grown its advanced analytics capabilities in the last few years. Cognizant has invested in advisory services in particular, but this is a relatively small practice compared to some other industry leaders. The majority of its revenues today still lies in data management and foundational services. It will need to continue its work in capability building with its platform and investments in machine learning and AI.</td>
</tr>
<tr>
<td>• Overall size and scale</td>
<td>• Developing ecosystem of partners. Cognizant has a comprehensive partnership strategy that has helped it develop strategic ties with giants such as Microsoft and Informatica, as well as accessing relevant startups such as Feedzai.</td>
<td>• Branding to match investments in machine learning and AI. Due to its traditional IT heritage, Cognizant will have to push harder to differentiate its abilities as an innovative partner to work on machine learning and AI projects.</td>
</tr>
<tr>
<td>• Ecosystem development including alliances, partnerships, and consortiums</td>
<td>• Focus on automation. Cognizant has a markedly differentiated approach to embedding automation within parts of the data and analytics lifecycle, including advanced automated data quality, discovery, and data preparation. It is partnering as well as developing proprietary frameworks in this area.</td>
<td>• Getting more out of its creative partnerships and MBA. Cognizant has acquired and invested in design and creative houses in the last couple of years. It needs to develop more linkages into how these capabilities can rejuvenate and extend its data and analytics portfolio.</td>
</tr>
<tr>
<td>• Vision for and investments in the evolution of smart analytics</td>
<td>• Platform, IP, and accelerators. Cognizant continues to build on its strength, highlighted in our last Blueprint, around creating technology accelerators and platforms to support clients across the analytics stack. Its BigDecisions platform now has IoT and AI versions to support the nuances of data ingestion and model development in these emerging areas.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Relevant Acquisitions and Partnerships</th>
<th>Key Clients</th>
<th>Global Operations Centers</th>
<th>Key Proprietary Technologies</th>
</tr>
</thead>
</table>
| • 2018: acquired TMG Health to strengthen business offerings in the government in US | Vertical specialization includes:  
  - BFSI, retail, insurance, life science, healthcare, travel and hospitality, manufacturing, logistics, energy telecommunication  
  Clients include:  
  - Large multinational banking and financial services holding company  
  - American multinationl financial services corporation  
  - Major fast food restaurant chain  
  - Swiss global financial services company  
  - Large investment and insurance company  
  - Large healthcare services company | • Headcount: 41,510  
 • Data scientists: 300  
 • 153 delivery centers worldwide across 31 countries: North America (49), Europe (33), and RoW (71)  
 • Locations: Delivery breakdown by FTE percentage:  
  - North America: 31%  
  - LATAM: 0.2%  
  - EMEA: 6.5%  
  - APAC: 61.55%  
  - ANZ: 0.6%  
 | • BigDecisions: Cognizant’s proprietary insight platform  
 • Platform for Information Value Management: a platform for automating key activities in analytics  
 • BI Harmony: a report rationalization solution that creates metadata repositories and business definitions catalog  
 • ZDLC IT Knowledge Automation: zero-deviation life cycle IT knowledge automation  
 • Customer Journey Analytics (formerly SightPrism): Cognizant’s proprietary customer journey analytics solution with AI capabilities |
| • 2018: acquired Brilliant Service, Netcentric, and Zone to expand digital transformation portfolio and capabilities | | | |
| • 2016: acquired Frontica Business Solution, Mirabeau BV, and Idea Couture to expand digital transformation capabilities | | | |
| • 2016: minority investment in ReD Associates to infuse human-centric thinking with analytics engagements | | | |
| • Partnerships with:  
  - IBM, Microsoft, Google, AWS  
  - Qlik, Tableau  
  - Cloudera, Informatica  
  - ESRI, Versium, Paxata, DataRobot | | | |

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A comprehensive data and analytics service provider with unique technology assets

### Blueprint Leading Highlights

**Strengths**
- Coverage across the services value chain. EY has broad capabilities along the data and analytics services value chain. In particular, its scale and experience in analytics consulting is significantly high.
- New initiative in talent development. EY has created a "Badges" program to promote continuous learning in analytics and AI. Employees can earn different levels of badges on different data and analytics topics, and display them externally. This promotes learning, incentivizes and recognizes talent, and map skills with EY’s workforce.
- Focused on non-linear growth. EY has been gradually executing on its strategy to move to outcome-based pricing, including subscriptions and asset-based work. Twenty-one percent of its revenues today are from managed services and asset-based solutions.
- Innovative use of VR for data visualization. EY has an interactive data visualization platform, designed for VR, that can be plugged into projects with dashboards and data visualization to create a more immersive experience.

**Challenges**
- Presence in client markets—UK and LATAM. EY has a geographically dispersed business, like many consulting houses. However, it has not penetrated the UK and LATAM markets to a large degree. Despite an aggressive growth strategy for the next three years, EY will need to compete in an increasingly competitive and crowded market for Smart Analytics across key client markets such as the UK.
- Leading with technology platforms. EY’s competitors have launched platforms similar to its Synapse and other solutions, making it a late entrant in this space. However, it has made significant progress in the last year through its asset-based work. EY will need to continue to demonstrate how its recent pivots towards “infusion and innovation” in analytics and AI impact clients globally through its expanding platform ecosystem.

### Relevant Acquisitions and Partnerships

- 2018: acquired Cognistreamer for platform to scale innovation and AI
- 2018: Society Consulting (USA) specialises in front office analytics and digital analytics
- 2018: Innovalue Management Consulting (Germany), a BFS strategy and operations consultancy that brings a group of 40 data scientists
- 2016: acquired Bluestone Consulting to expand expertise in advanced analytics consulting
- 2015: acquired C3 Information management to have expertise in advanced analytics, and business intelligence firm
- Partnerships with:
  - Tier 1: SAP, Microsoft, IBM, GE
  - Tier 2: Hortonworks, Cisco, SAS, Adobe, LinkedIn, Los Alamos, Dell EMC

### Key Clients

- Client split by geography:
  - NA: 37%
  - LATAM: 4%
  - UK: 3%
  - EMEA: 31%
  - APAC: 20%

### Global Operations Centers

- Headcount: 21,000
- Data scientists: NA
- Locations: Delivery breakdown by FTE percentage:
  - America: 18%
  - LATAM: 7%
  - UK: 3%
  - EMEA: 36%
  - India: 23%
  - Other APAC: 14%

### Key Proprietary Technologies

- EY OPTIX: intelligent automation platform designed to evolve the risk function by providing industry benchmarks
- EY CASE: end-to-end suite of global commercial analytics that drive tangible client returns through actionable business insights across sales
- EY ENVISION: provides health organizations with advanced analytics that assist clients with information-driven transformation
- EY VALUE CHAIN SYNCRONIZATION: to support the supply chain function with advanced analytics
- EY HELIX: data and analytics platform to support the audit process
## Genpact

Winner’s Circle

Advanced analytics provider with IP around domain-specific platform based solutions

### Blueprint Leading Highlights

- Development of capabilities across value chain into advanced analytics, predictive modeling, and machine learning
- Vision for and investments in the evolution of smart analytics
- Quality of service delivery

### Smart analytics offering maturity:

<table>
<thead>
<tr>
<th>Data prep and management</th>
<th>Reporting and visualization</th>
<th>Advanced analytics</th>
<th>Analytics consulting</th>
</tr>
</thead>
</table>

### Relevant Acquisitions and Partnerships

- **2018:** acquired TandemSeven for customer and digital experience expertise
- **2018:** acquired RAGE framework to enhance AI capabilities
- **2018:** acquired OnSource, BrightClaim, and national vendor for insurance industry expertise
- **2016:** acquired PNMSoft for workflow management and Strategic Sourcing Excellence (SSE) to strengthen procurement-as-a-service
- **2015:** acquired Endeavour to enhance digital transformation capabilities.
- Partnerships with:
  - Sequoya, Knowledgent, Signals, Cogniturn, Barkawi, International Institute of Analytics, Sparkbeyond, Cisco, Decisyon, OmPrompt, Rosslyn Analytics, Arria, Predix, Oliver Wyman

### Key Clients

Client split by geography:
- **NA:** 70%
- **Europe:** 20%
- **APAC:** 10%

Vertical specialization includes:
- Banking financial services and insurance (BFSI), consumer goods retail life sciences and healthcare (CGLRH), high-tech, manufacturing services (HMS)

400 clients, including:
- GE
- BUPA
- Panasonic
- Express Scripts
- PayPal

### Global Operations Centers

- **Headcount:** 8,000
- **Data scientists:** 1,300 (includes analysts)
- **Locations:** Delivery breakdown by FTE percentage:
  - APAC (includes Bangalore, Gurgaon, Hyderabad, Kolkata): 85%
  - Global (includes resources from US, EU): 15%

### Key Proprietary Technologies

- Cora PharmacoVigilance: a touchless artificial intelligence based adverse event identification and qualification digital product
- Cora OrderAssist: digital product that provides real-time support to decision making
- Cora Inventory Optimizer: digital product that facilitates intelligent and collaborative supply chain planning
- Cora Omnichannel Campaign Manager: digital product that helps in evolving the customer experience to an omni-channel environment
- Cora Intelligent Reporting Assistant: digital product using machine learning and data science to source and enrich structured and unstructured external data

### Strengths

- **Smart analytics alignment around Cora.** Genpact is pinning its future growth around its AI-based platform, Cora. The Cora framework has thus seen significant investments, bringing data and analytics to the front and center for the service provider. The modularity, focus on governance, and open APIs make Cora a differentiated offering for Genpact's clients. Its acquisitions in AI specialist RAGE framework have been pivotal for this alignment across the company.

- **Excellence in service delivery.** Clients maintain that Genpact is very efficient in maintaining seamless knowledge transitions, integration of onshore-offshore working models, process documentation, and standardization. As one client put it, "Genpact's strength is its resources—people, as well as their management ability to not get in the way of their teams' performance."

- **Breadth of offerings across industry verticals.** Genpact has a strong and diversified client base where it is delivering industry-specific analytics. Clients commend its domain understanding and solution development for specific industry challenges such as pharmacovigilance in life sciences. Genpact's investments in creating innovation centers and design studios has furthered this experience.

### Challenges

- **Creating industry engagement for clients.** Clients would like to see more industry engagement from Genpact. Given their breadth of presence in various domains, Genpact can add significant value to its clients by benchmarking vs. best practices in their core strength areas and provide opportunities to share among peers.

- **Giving clients visibility into overall vision.** While Genpact has been quietly reinventing itself over the last year with new branding and strategy, it needs to now reach out to share its roadmap with the market and especially with its clients. One client mentioned that they would like Genpact's senior level team to provide visibility to its vision, acquisitions, new capabilities and how they can solve the client's key business problems.
Using acquired assets to stitch together unique smart analytics solutions

**Blueprint Leading Highlights**

- Overall size and scale
- Scale and repeatability of deployments
- Breadth and depth of industry and horizontal specific solutions
- Vision for and investments in the evolution of smart analytics

**Smart analytics offering maturity:**

- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

**Relevant Acquisitions and Partnerships**

- **2016:** acquired The Weather Company for acquisition to large scale data and analytics platform, vast weather data sources, and superior data science talent
- **2016:** acquired UStream as a leading platform for digital video services
- **2016:** acquired Promontory Financial Group for risk management and regulatory compliance expertise
- **2015:** acquired AlchemyAPI for NLP and big data technology
- **Partnerships with:**
  - SAS
  - Datameer
  - Aginity
  - Alation
  - Teradata

**Key Clients**

- Client split by geography:
  - NA: 40%
  - LATAM: 3%
  - Europe: 25%
  - MEA: 2%
  - APAC: 30%
- Vertical specialization includes:
  - Sales and revenue management, HR, marketing, supply chain, finance, customer service
- 60,000 clients, including:
  - SunTrust
  - Unilever
  - Philips Morris International

**Global Operations Centers**

- **Headcount:** Over 20,000
- **Data scientists:** NA

**Key Proprietary Technologies**

- Digital Insights Platform: micro-services to efficiently populate and manage data through the creation of cloud and hybrid environments
- IBM Watson: core AI technology platform
- MetroPulse: powered by Watson Geospatial analytics platform leveraging hyper-local external and internal client data
- SmartPages: approach to understand the DNA of a document
- Cognitive Foundation Platform: Cognitive Foundation Platform is an adaptable solution framework used to build virtual assistants and virtual agents

**Strengths**

- **Commitment to developing analytics and AI talent.** IBM has a reputable talent strategy, where it collaborates with top schools to set analytics curriculum and makes advances in the IBM Research org to attract and develop data science, engineering, and consulting talent. IBM has a $240M alliance with MIT to advance AI and analytics work in healthcare and build its talent pool.

- **Design thinking and building mindshare at Cognitive Garage.** IBM’s new way of engaging with clients in its Cognitive Garage sessions, which are a compelling way to create and further its clients analytics and AI strategies. This design-thinking led approach is building thought leadership for and speeding up the pace of moving from pilots to rapid deployments.

- **Rethinking analytical storytelling and deliverables.** IBM has adapted the way in which its consultants communicate analytics results with business owners. Its IX capabilities and Apple partnership have helped it take a new approach using design thinking and user experience principles.

- **Better integration.** IBM has demonstrated several examples where it is using capabilities from its several acquired assets. HfS sees improved integration and communication, leading to clearer understanding of its offerings to the market.

**Challenges**

- **Driving the industry forward in new areas such as machine learning.** IBM has an uphill battle in driving more enterprises and governments forward to adopt, test, and create industrialized production environments for smart analytics, in particular machine learning. The next few years will be instrumental for the service provider in putting together and iterating on emerging best practices.

- **Presence in emerging client markets—LATAM.** IBM has a geographically dispersed business like global technology and services providers. However, as its business gets even more globalized and enterprises start to get more sophisticated with their data and analytics needs, IBM will need to invest to create more opportunities in emerging economies including Middle East, Africa, and LATAM countries.

- **Persistent focus on open source technologies.** IBM was slightly late to the market with catching up on open source technologies, leading clients to work with some competitors in the last few years. It has in the last year and a half shifted to build its platform on open source technologies and partner with leading players. IBM will have to continue to look outward as the industry grows more diverse.
Infosys
Winner’s Circle

Growing analytics practice with a re-energized partnership strategy

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stronghold in data and reporting with growing analytics capabilities.</strong> Infosys has significant experience in foundational services around data management, BI, and data visualization. Its analytics practice has been gaining ground with new strategic engagements with blue-chip clients. Infosys’ vertical penetration for BFSI and CPG retail has helped propel this capability.</td>
<td><strong>Building out a high-value analytics consulting brand and capability.</strong> Infosys’ overall scale and local presence for analytics consulting is fairly limited today compared to the rest of its business. Partly due to this, it is also still perceived as more of an executioner, vs. clients engaging on “top-down” analytics and strategy.</td>
</tr>
<tr>
<td><strong>Re-energized execution on strategy to go beyond linear growth.</strong> Infosys seems to have taken a definitive step in defining its strategy for analytics by migrating from pure services to solution based offering with software, consulting, etc. Clients and partners appreciate the new energy and enthusiasm that Infosys is bringing to move their business forward.</td>
<td><strong>Juggling services and product offerings.</strong> Infosys has defined its intent to grow with products such as Infosys Nia, and Infosys Genome. However, clients in our research feel a disconnect between the product and services group currently. Infosys will need to consistently develop and communicate alignment for these solutions, especially how consultants and sales and solution leads develop new opportunities.</td>
</tr>
<tr>
<td><strong>Flexibility and trust with clients.</strong> Multiple Infosys’ clients feel strongly about the level of engagement that the service provider has in their accounts, noting that they are “absolutely invested” and working on creating true partnerships.</td>
<td><strong>Addressing talent gaps in non-technical areas.</strong> Clients would like to see an improvement in analysts’ day-to-day abilities to rapidly deliver on non-technical areas such as storytelling and presentations.</td>
</tr>
<tr>
<td><strong>Focus on automation.</strong> Infosys has a progressive view on the use of automation technologies across the smart analytics value chain. Clients as well as partners feel confident in Infosys’ approach and progress on using multiple types of automation tools to improve analytics outcomes.</td>
<td><strong>Sharing best-in-class technology trends.</strong> Infosys could expand its client relationships by sharing and recommending technologies that it believes are best-in-class.</td>
</tr>
</tbody>
</table>

Relevant Acquisitions and Partnerships

- 2018: acquired Skytree or providing enterprise-grade machine learning software for big data
- 2018: acquired Brilliant Basics for digital innovation and customer experience
- 2015: acquired Noah Consulting for advanced information management consulting services for oil and gas industry
- 2015: acquired Skava for delivering visionary digital experiences
- Partnerships with:
  - Strategic partners: Microsoft, SAP, Oracle, IBM, AWS
  - Major partners: Tableau, Informatica, Cloudera, Hortonworks, SAS, Pega Robotics, Kofax Kapow

Client split by geography:
- NA: 61%
- LATAM: 1%
- UK: 10%
- EMEA: 19%
- APAC: 10%

Vertical specialization includes:
- Services, oil and gas, utilities, resources, communication, energy, financial services, healthcare, insurance, life-sciences, manufacturing, retail, CPG and logistics

496 clients, including:
- ATP
- Levi’s
- AIMIA
- University of Melbourne

Global Operations Centers

- Headcount: 15,428
- Data scientists: 850
- Locations: Delivery breakdown by FTE percentage:
  - North America: 18.5% (USA and Canada)
  - LATAM: 0.1% (Brazil and Mexico)
  - UK: 1.91% (multiple cities)
  - EMEA: 2.55% (Belgium, Finland, France, Germany, Hong Kong Special Admin Region of China, Ireland, Netherlands, Norway, Portugal, South Africa, Sweden, Switzerland, Poland)
  - India: 74.6% (multiple cities)
  - Other APAC: 2.3% (Australia, China, Japan, New Zealand, Philippines, Singapore, South Korea, Thailand)

Key Proprietary Technologies

- Infosys Nia: knowledge-based platform
- Infosys Analytics Workbench: platform for data discovery, wrangling, analytical modeling, etc.
- Infosys Genome: technology assets for automated transformation, pre-fabricated deep domain analytical features
- Infosys Enterprise Cognitive Platform: caters to broad use cases(s) by combining application of various AI techniques
- Infosys BI BOT: guided exploration, personalization and contextualization with NLP and narrative intelligence

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### Strengths

- **Scale and repeatability of solutions.** KPMG drives scalability in smart analytics through its use of open source tools, libraries, and APIs that it uses through its platforms, along with its own accelerators, frameworks, and models that clients believe are practical implementations of emerging technology.

- **Focus on automation.** KPMG has a comprehensive view of how automation technologies come together with data and analytics. Its Ignite and Lighthouse platforms integrate smart analytics with RPA, AI, and other emerging technologies into more bundled solutions for clients.

- **Strong network of partners, alliances, and consortia.** KPMG has built a formidable ecosystem of strategic alliances and partners such as Microsoft, IBM, and Google. As an example, Microsoft alliance partners believe KPMG to be highly strategic to their success in analytics and AI, earning the service provider early access to strategy and technology decisions.

- **Cross-industry experience with a reputation for finance and accounting.** While KPMG has breadth of capabilities across industry verticals and horizontal data and analytics, it has particularly gained a reputation with clients and partners as an industry thought leader in finance and accounting.

### Challenges

- **Driving the industry forward in new areas such as machine learning.** KPMG has an uphill battle in driving enterprises and governments forward to adopt, test, and create industrialized production environments for smart analytics, in particular machine learning. The next few years will be instrumental for the service provider in putting together and iterating on emerging best practices.

- **Inconsistent sharing of best practices and community development.** While some clients mention a significant amount of industry interaction with the service provider, others are yet to experience industry-level discussions, forums for evolving best practices in analytics, etc. KPMG will have to take a consistent approach to engaging its globally dispersed clientele.

### Relevant Acquisitions and Partnerships

- **2018:** acquired KIANA for its research and expertise in AI
- **2018:** acquired Relken Engineering for its asset management capabilities
- **2018:** acquired Terria Mobile for its digital development capabilities
- **2018:** acquired DEVtalk/Axelia for its BPM/CRM/ERP/SI capabilities
- **2018:** acquired Matchi for its mobility and cloud capabilities
- **Partnerships with:**
  - Technology partners: Google, Microsoft, IBM, Alteryx, Invidia, EMC2, Hortonworks, Oracle, Qlikview, RSA, SailPoint, and SAS
  - Data partners: Dun & Bradstreet, BHI, CMS, ExactData, Thomson Reuters, and Sky

### Key Clients

Client split by geography:
- **NA:** 61%
- **LATAM:** 1%
- **UK:** 12%
- **EMEA:** 18%

APAC: 8%

Vertical specialization includes:
- Healthcare, financial services, government, D&A transformation, customer, audit, and tax

10,000 clients, including:
- Telstra
- Banco Santander
- Rabobank
- Sprint
- Top banks of world
- Top telecom provider

### Headcount:

12,500

### Data scientists:

1,700

### Locations:

- **North America:** 61%
  - LATAM: 1%
  - UK: 12%
  - EMEA: 18%
  - India: 1%
  - Other APAC: 7%

### Key Proprietary Technologies

- KPMG Ignite: AI ecosystem
- KPMG Clara: an industry leading, D&A focused, audit platform
- Tax Intelligence Solutions: KPMG’s integrated suite of indirect tax technology analytical tools
- CX Cloud: Microsoft Azure based customer insights solution
- Intelligent Signaling Engine: uncover the underlying drivers of clients’ business using big data to enable them to either augment or automate decision-making
A highly scaled data and analytics player growing alliances to create IP

**Strengths**

- **Proactively expanding partnerships and alliances.** TCS has an industry-leading practice of creating alliances that help deliver more holistic solutions to clients. Its COIN network expanded in FY 2018 to cover 150 ecosystem partners, 2,000 startups, and 27 partnerships in academia, many of which are in the data and analytics realm.

- **Products, platforms, IP.** TCS has gone full steam ahead in the last two years to create a solutions portfolio that goes beyond its linear growth. As an example, TCS has products for data management, platforms for IOT, and IP in areas such as visual analytics and data governance.

- **Talent at scale.** Clients value the scalability that TCS brings to the table with its offshore talent, especially comparing its cost effectiveness against competitors. As one client points out, “We need more technical and analytical talent that are hard to find here [onshore], so we lean on our partners at TCS to help us.”

- **Investments in R&D.** TCS has created a dedicated group that focuses on emerging trends in data and analytics. Clients find value in accessing new developments through this group.

**Challenges**

- **Fostering culture of creative problem finding, more meaningful analysis, and analytical storytelling.** TCS must focus on instilling a culture of continuous learning and innovation. As one client mentioned, “With the level of technical talent they have, I’d hope that they would push for more training and skills enhancement of their employees.” TCS has an internal digital learning program that it has rolled out to 215,000 employees to upskill talent.

- **Growing presence in local markets.** TCS has made some investments in expanding its nearshore and onshore delivery presence for its key client markets, but these are yet to be scaled as per client needs.

### Relevant Acquisitions and Partnerships

- **No recent acquisitions**

  - **Partnerships with:**
    - Strategic partner alliances: IBM, Microsoft, SAP, Oracle
    - Some technology alliances: Cloudera, Teradata, Informatica, SAS, Hortonworks, EMC, HP, Splunk, Tableau, Tibco, Jaspersoft, QlikView, CA, AWS, Pivotal, Riversand, MarkLogic, Aprimo, Talend, Datastax, Syncsort, Aprimo, MongoDB, Google

- **Client split by geography:**
  - NA: 54%
  - UK: 13%
  - EMEA: 13%
  - APAC: 16%
  - LATAM: 2%

  900 clients (of which 400 are group clients), including:
  - Leading US financial service provider
  - Fortune 50 manufacturing company
  - Fortune 500 manufacturing company
  - Cargotec

### Key Clients

- **Headcount:** 30,000
- **Data scientists:** 4,200
- **Locations:** Delivery location breakdown:
  - N. America: 7
  - Latin America: 8
  - APAC: 2
  - India: 111
  - Europe: 6
  - UK: 3
  - MEA: 8

  TCS also has 20 data and analytics (including AI and robotics) centric labs across the globe

### Global Operations Centers

- **TCS ignio:** cognitive automation solution for IT operations
- **TCS Decision Fabric:** cognitive engine with fabric of AI and immersive analytics components wove together for contextual industry solutions
- **TCS Connected Universe Platform:** PaaS offering for the development and deployment of IoT applications
- **TCS Optumera:** shopper-centric merchandise optimization suite
- **TCS PEACOCK:** an advanced process and equipment analytics framework for optimization and control
Wipro
Winner’s Circle

Going to market with innovative partnerships and operating models

**Blueprint Leading Highlights**
- Breadth and depth of industry and horizontal specific solutions
- Overall size and scale
- Vision for and investments in the evolution of smart analytics

**Smart analytics offering maturity:**
- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

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<tr>
<th>Strengths</th>
<th>Challenges</th>
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<tbody>
<tr>
<td>• Joint go-to-market and IP creation with partners. Wipro has been expanding its partner ecosystem systemically, not only going after majors such as Informatica and Microsoft, but betting on emerging players such as Snowflake. Its partnership-driven solutions, such as with Hart Hanks and Opera, are helping it go to market in new ways.</td>
<td>• Developing a brand for high-end smart analytics. Wipro, like several of its competitors, is targeting the high-end analytics consulting and data science space, using its platform and products to demonstrate its capabilities. However, some clients still perceive it more as an execution partner, which creates an uphill challenge for Wipro to take on more higher-value consultative work in the future.</td>
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<tr>
<td>• Crowdsourcing talent at scale. Wipro’s Topcoder investment is yielding results for its smart analytics business. It is able to offer clients a wider range of data science skills through the crowdsourcing platform. Wipro has run programs for clients where it creates a Topcoder COE, and its analytics teams put together anonymized data sets and use cases for the data science community. The team then helps the client understand results and work to productize results.</td>
<td>• Talent retention. A client mentioned that Wipro is particularly challenged in holding on to key talent, which once embedded into the engagement, become invaluable and impact project outcomes on their departure.</td>
</tr>
<tr>
<td>• Meeting expectations of value. Wipro’s clients are satisfied with the service provider’s overall value delivered, in comparison with the cost. One client found great comfort in Wipro’s ability to invest in the upfront pilot and POC phase, which helped build confidence to sign up for a larger engagement.</td>
<td>• Blending design and data. Wipro needs a stronger narrative on how it is using its acquired digital design capabilities from Designit, Appirio, and others in its smart analytics practice, if at all.</td>
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<tr>
<td>• Breadth of industry use cases. Wipro has evolved depth of industry-specific solutions, which helps clients drive use case identification and approach.</td>
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**Relevant Acquisitions and Partnerships**
- 2018: acquired Cooper to strengthen digital design and innovation capabilities
- 2016: acquired Appirio to expand its cloud expertise
- 2015: acquired Designit to expand its digital transformation capability
- 2015: acquired Cellent to scale up its business in Germany, Austria, and Switzerland
- Partnerships with:
  - Microsoft, IBM, Oracle, SAP, AWS, Qlik, Tableau, Informatica, Snowflake, Cloudera, Hortonworks, Trifacta, Alteryx, Teradata, waterline data, SAS, Anaplan, Reltio, Denodo, Microstrategy, Google, Spark, ThingWorx, GE Intelligent Platforms, Altizoon, IBM Bluemix, MS Azure, AWS IOT, Harte Hanks, Palantir

**Key Clients**
- Vertical specialization includes:
  - BFSI, retail, insurance, energy, healthcare, manufacturing, transportation
  - 400 clients, including:
    - Western Power
    - Harte Hanks
    - Airtel
    - Lev1s
    - Shire

**Global Operations Centers**
- Headcount: 18,500
- Data scientists: 500
- Locations: Delivery breakdown by FTE percentage:
  - Offshore: 61%
  - Onshore and client location: 39%

**Key Proprietary Technologies**
- Data Discovery Platform: Wipro’s exploratory analytics platform
- Opera Signal Hub: self-service platform that empowers data science teams in the business to accelerate the build out of an analytical application
- Digital Services Hub: enables enterprises to consume an increasing diversity of cloud services
- HOLMES: automation solutions for build and run services
- Big Data Ready Enterprise: open source product for enterprise data provisioning and data lake management

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European major with growing international presence focused on ecosystem development around digital data

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<tr>
<th>Strengths</th>
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<tr>
<td>• Differentiation through Atos Codex. Atos has developed an impressive cross-practice portfolio of capabilities under the Codex umbrella. The core reference Codex architecture includes software assets from several partners. Solutions available through Codex are wide-ranging, from its intelligence platform to fraud risk management and horizontal data lake support.</td>
<td>• Growing in North America. While Atos has strong presence in Europe and has secured some important strategic wins in 2018, it will need to continue to work hard to establish an analytics brand both for clients and potential employees in a crowded NA market.</td>
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<tr>
<td>• Broad ecosystem developing around digital data. The strategic partnerships that Atos is putting in place are helping it address clients challenges around harnessing digital data. In particular, Atos' partnerships with the likes of Siemens and Dell are creating new opportunities for smart analytics for the service provider.</td>
<td>• Talent development for emerging areas. Atos will have to ramp up its hiring and development of talent focused on high value areas such as machine learning, predictive modeling, and data engineering. Clients mention that they find Atos' statistical talent extremely competent, but would like to see more availability of talent in emerging areas.</td>
</tr>
<tr>
<td>• Experience and presence in European market. Atos has significant delivery presence and existing clientele across Europe, making it a natural fit for clients in the region.</td>
<td>• Maintaining quality with global delivery. As Atos scales, it needs methods and processes to maintain the quality of output and engagement when it is transitioning work offshore. One client mentioned that they lost some of the tribal knowledge of business requirements and context on expanding the team to India.</td>
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<tr>
<td>• Flexibility and willingness to invest. Clients commend Atos' commitment to creating buy-in and investing up-front to get analytics projects underway. One client mentioned that Atos helped them to do an &quot;initial consultation using Agile methodology, to help get our bases right and get funding.&quot; Atos is a flexible partner willing to work with clients to fit within their unique needs.</td>
<td></td>
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### Relevant Acquisitions and Partnerships

- **2018**: acquired Pursuit Healthcare Advisors Conduent’s Healthcare Provider Consulting and Conduent’s Breakaway Group for healthcare industry expertise
- **2018**: acquired Zdata for big data consulting and solutions
- **2016**: acquired Anthelio for industry expertise in healthcare
- Partnerships with:
  - Microsoft on Codex platforms on Azure cloud
  - Dell EMC on infrastructure for heavy analytics applications and big data
  - Siemens for Codex for MindSphere vertical solution for Industry 4.0
  - HANA and Leonardo

<table>
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<tr>
<th>Client split by geography:</th>
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<tbody>
<tr>
<td>• NA: 10%</td>
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<td>• LATAM: 3%</td>
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<td>• EMEA: 65%</td>
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<tr>
<td>• UK: 17%</td>
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<td>• APAC: 5%</td>
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2,500 clients, including:
- Bank Of India: reduce and avoid payment fraud
- Ulster Bank: improving customer care
- International theme park: improving customer experience
- Middle Eastern mobile operator: improving operational excellence
- US-based quality assurance company

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<tr>
<th>Key Clients</th>
<th>Global Operations Centers</th>
<th>Key Proprietary Technologies</th>
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</thead>
<tbody>
<tr>
<td>• Headcount: 10,000</td>
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<tr>
<td>• Data scientists: 100 leading team of 500 analysts and data engineers</td>
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<td></td>
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<tr>
<td>• Locations: Delivery breakdown by FTE percentage:</td>
<td></td>
<td></td>
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<tr>
<td>- North America: 10%</td>
<td></td>
<td></td>
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<tr>
<td>- Latin America: 1%</td>
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<td></td>
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<tr>
<td>- India: 41%</td>
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<tr>
<td>- EMEA: 32% (France, Germany, Spain, Austria, Poland, Italy, Netherlands, Nordics, South Africa, Abu Dhabi)</td>
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<tr>
<td>- UK: 41%</td>
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<td></td>
</tr>
<tr>
<td>- Other: 6%</td>
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</table>

- Atos Codex Fabric: reference architecture for a full data lake and smart data analytics enterprise scale solution
- Atos Cloud Foundry: a certified, fully managed, multi-cloud application platform
- Atos Compose: tool for IT professionals to control and manage applications to a variety of cloud platforms
- Evidian: security solutions for IAM and SSO
- Alien4cloud: DevOps platform
- Sequana servers for high performance and data intensive workloads with architectures tailored to real-time and in-memory, as well as specialized AI and ML use cases
Doubling down to make data “cool” again

**Strengths**

- **Modernizing the BI space.** With offerings like the Cloud Data Migration Factory and Data Quality as-a-service, Capgemini is looking ahead at the evolution of data management and business intelligence. The majority of its revenues are in these areas, and Capgemini has industry leading frameworks, IP and solutions and investments in the future of agile, cloud-based data, and insights.

- **Increasing focus on issues of data privacy and security.** In 2018 Capgemini is rightly orienting its portfolio around creating trust by design. With GDPR, data security, and privacy coming up as issues for the EU and beyond, enterprises need better MDM, data management skillsets, and technologies in these areas. Capgemini has specifically developed a GDPR catalogue of services, including timely services such as assessment, data discovery, breach management, and assurance.

- **Applied innovation exchange.** Capgemini has aligned well around its AIE framework and resources for data and analytics. It has 12 labs globally, helping to demonstrate emerging areas to clients including data analytics, visualization, and artificial intelligence. AIE has also helped Capgemini create a broader ecosystem of partners, especially with niche startups.

**Challenges**

- **Development of capabilities across value chain into advanced analytics, predictive modeling, and machine learning.** Capgemini has grown its advanced analytics capabilities in the last two years. However, the majority of its portfolio today still lies in data management and BI. It will need to continue its work in capability building, as well as branding, to position itself as a more rounded out data and analytics partner. Capgemini is working on this with its applied AI, insights from catalog, and trust by design portfolio offerings.

- **Lack of referenceable clients.** Capgemini needs a stronger pipeline of clients that are willing to act as references to peers and influencers to further their growth in the market.

- **Relative maturity of vertical-specific offerings.** Capgemini must focus on developing and demonstrating a more differentiated vertical industry portfolio of solutions and use cases, drawing from its current engagements. It has strengths in verticals such as retail, manufacturing, and consumer goods and must continue to invest in industry-specific solutions across data, reporting, and analytics.

### Relevant Acquisitions and Partnerships

- **2018:** acquired Lyons Consulting, Idean & Itelios for digital commerce industry expertise
- **2016:** acquired Orion for sales force industry expertise and Fahrenheit for digital customer experience solution
- **2015:** acquired IGATE for end-to-end digital services portfolio and geographic expansion
- **Partnerships with:**
  - Microsoft: GDPR, cloud, artificial intelligence
  - SAP: fast digital for discrete industries and digital control room analytics embedded in SAP Leonardo
  - IBM: insights and data and analytics, cognitive IoT, cloud services
  - Amazon Web Services: elastic analytics, cloud choice with AWS

### Key Clients

- Client split by geography:
  - North America: 32%
  - Western Europe: 60%
  - RoW: 8%
- Vertical specialization includes:
  - BFSI, automotive, consumer products, retail, utilities, manufacturing, and high-tech
- 1,500 clients, including:
  - Unilever
  - IKEA
  - McDonald’s
  - Akershus University Hospital
  - HMRC
- **Headcount:** 16,700
- **Data scientists:** 1,000
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 45%
  - WE: 46%
  - RoW: 9%

### Key Proprietary Technologies

- **Applied Insights Platform:** self service data and insights platform available on multiple clouds
- **Applied Insights Center:** the Applied Insights Center provides the capabilities, tangibles, and services to combine data, analytics, and AI
- **Customer Analytics Framework:** customer and marketing analytics
- **SMART Business Insights Suite:** a pre-built, multi-cloud, suite of comprehensive business insights solutions on enterprise performance
Building on data and reporting experience with public sector specialty

**DXC**

**High Performer**

<table>
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<tr>
<th>Blueprint Leading Highlights</th>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart analytics offering maturity:</td>
<td>Managed services in data and BI. DXC Technology is traditionally strong in running managed services in BI environments, implementing data warehouses, and supporting clients around data management.</td>
<td>DXC as a smart analytics brand. DXC will need to aggressively get out its new message to the market, from where HP and CSC left off. Its overall brand awareness and market perception as a smart analytics partner is lagging other competitors.</td>
</tr>
<tr>
<td>Data prep and management</td>
<td>Depth and experience in public sector. DXC has a strong presence in the public sector, owing to its CSC heritage. This is a challenging vertical to grow in for several of its competitors, making it a niche for DXC.</td>
<td>Local presence in key client markets. As DXC expands its advisory-led solutions, it will need more local presence in key markets such as North America and the UK. Presently, much of its delivery is based out of India, the Philippines, and Poland.</td>
</tr>
<tr>
<td>Reporting and visualization</td>
<td>Scale and repeatability of deployments. DXC has an analytics platform to offer highly packaged tools and accelerators, including reference architectures, blueprints, deployment scripts, design patterns, and solution accelerators, by which it speeds up deployments across clients.</td>
<td>Fostering culture of creative problem finding, more meaningful analysis and analytical storytelling. DXC will need to focus more on going beyond technical skills training to enhance the capabilities of analytics talent in creativity and communication.</td>
</tr>
<tr>
<td>Advanced analytics</td>
<td>Good progress on advanced analytics. DXC has grown its advanced analytics and ongoing decision support services in the last two years, accounting for 30% of its business today.</td>
<td>Ecosystem development. While DXC Technology does have strategic partnerships with platform and tool providers, it needs to broaden its level of engagement with other alliances and consortiums such as academic research and joint GTMs with partners.</td>
</tr>
</tbody>
</table>

**Relevant Acquisitions and Partnerships**

- 2016: acquired Eclipse for Microsoft Azure Analytics IP
- 2015: acquired Fixnetix solutions for financial markets analytics IP
- Partnerships with:
  - Security analytics: BAE Systems, PwC
  - Financial services and fraud analytics: FICO
  - Cloud-based analytics: Microsoft, AWS, Informatica
  - Big data management and analytics: DataSift, GoodData, Vertica
  - Open source: SAS, Hortonworks, Cloudera, Spark, MongoDB

**Key Clients**

Client split by geography:

- **NA**: 29%
- **LATAM**: 2%
- **UK**: 10%
- **EMEA**: 36%
- **APAC**: 23%

Vertical specialization includes:

- BFSI, retail, healthcare, manufacturing, transportation, public sector
- 600 clients, including:
  - YRC Freight
  - University Hospital Zurich
  - Bayer
  - CalWin
  - Google Fiber
  - Vodafone

**Headcount**: 7,200

**Data scientists**: NA

**Locations**: Delivery breakdown by FTE percentage:

- North America: 11% (Pontiac, Plano, El Paso)
- LATAM: 1%
- UK: 4%
- EMEA: 18% (Warsaw)
- India: 49% (Bangalore, Chennai, Gurgaon, Hyderabad, Mumbai, Noida)
- Other APAC: 18% (Taguig City, Shanghai, Cyberjaya)

**Key Proprietary Technologies**

- DXC Analytics Platform
- Bionix Automation Platform for service delivery
- Irregular Operations for airlines
- Spikes & Cavell Spend & Procurement
- Open Health Connect for Patient 360
- Fixnetix: financial markets analytics IP
Developing a rounded out data and analytics capability for the front office

**Strengths**

- **Services excellence in data and reporting.** Clients commend eClerx’s ability to drive large, data-driven engagements. It has built up a solid reputation and scores high on overall service delivery in data management and reporting.

- **Depth in sales, marketing, and customer analytics.** eClerx has developed significant depth and capabilities around smart analytics for the CMO’s office. It has marquee clients where it is a strategic partner for data, reporting, and analytics in the areas of customer engagement, pricing, and e-commerce.

- **Focus on automation.** eClerx has developed what clients call an “automation mindset”, where it is focused on developing automated solutions to improve ROI for both parties. This includes automated data uploads, using RPA to prepare reports, and evaluating opportunities to embed machine learning and AI in the workflows using its Kaiza AI automation framework.

- **Talent development and retention.** eClerx has an above-average rate of retention of key talent, according to clients. The service provider includes learning from internal and external programs as a part of its employees’ four top key result areas for performance.

**Challenges**

- **Overall size and global delivery capabilities.** eClerx’s current scale of operations across the smart analytics landscape is comparatively smaller than many of its competitors in this industry. It is also primarily delivering services from offshore locations in India, along with onsite support. Clients increasingly seek scalability and a balance of global delivery capabilities, including nearshore, offshore, and onshore locations, making this a priority for eClerx to grow its presence, especially in analytics consulting.

- **Developing a broader ecosystem.** As eClerx grows further into delivering advanced analytics and AI/ML, it will need to branch out and develop deeper relationships with its partner and alliances ecosystem, including technology platform and tool vendors, consulting, and other firms.

- **Problem solving speed.** While eClerx is good at working with clients to solve complex problems, at times the speed of resolution is slow. As it scales its business, the service provider will have to keep a sharp eye on maintaining quality and speed of service delivery.

**Blueprint Leading Highlights**

- Quality of service delivery
- Ability to attract and retain key skills
- Framework for integration of insights into operational decision making

**Smart analytics offering maturity:**

- Data prep and management
- Reporting and visualization
- Analytics consulting

<table>
<thead>
<tr>
<th>Relevant Acquisitions and Partnerships</th>
<th>Key Clients</th>
<th>Global Operations Centers</th>
<th>Key Proprietary Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partnerships with:</strong></td>
<td><strong>Client split by geography:</strong></td>
<td><strong>Headcount:</strong> 616</td>
<td><strong>Kaiza AI: library of artificial intelligence components</strong></td>
</tr>
<tr>
<td>Adobe</td>
<td>• NA: 55%</td>
<td><strong>Data scientists:</strong> 70</td>
<td><strong>Roboworx: robotic process automation engine</strong></td>
</tr>
<tr>
<td>Enlighten</td>
<td>• UK: 16%</td>
<td><strong>Locations:</strong> Delivery breakdown by FTE percentage:</td>
<td><strong>eCube: data harvesting from websites</strong></td>
</tr>
<tr>
<td>Tealium</td>
<td>• EMEA: 22%</td>
<td>- North America: 2% (Austin, New York, Bay Area)</td>
<td><strong>Extractor: capturing data from agreements and documents</strong></td>
</tr>
<tr>
<td>Salesforce / Radian 6</td>
<td>• APAC: 7%</td>
<td>- UK: 1% (London)</td>
<td><strong>eMatch: string matching and content matching platform</strong></td>
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<tr>
<td>Nuance</td>
<td>Vertical specialization includes:</td>
<td><strong>- EMEA: 1% (Italy)</strong></td>
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<tr>
<td>Google Vision</td>
<td>• High tech, consumer and retail banking, retail, travel and distributors</td>
<td><strong>- India: 93% (Mumbai, Pune, Chandigarh)</strong></td>
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<tr>
<td>Plus expertise in</td>
<td>86 clients, including:</td>
<td><strong>- Other APAC: 1% (Singapore)</strong></td>
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<tr>
<td>• Tableau</td>
<td>• Leading IT solutions provider in America</td>
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<tr>
<td>• Qlikview</td>
<td>• American multinational software corporation</td>
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<tr>
<td>• Business Objects</td>
<td>• Leading American financial services corporation</td>
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<td>• SAS</td>
<td>• American telecommunications conglomerate</td>
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<td>• R</td>
<td>• Large American security software company</td>
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<td>• SPSS</td>
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<td>• Google Analytics</td>
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<td>• Python</td>
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Advanced analytics specialist with depth in BFSI

**Blueprint Leading Highlights**
- Quality of service delivery
- Framework for integration of insights into operational decision making
- Fostering culture of creative problem finding, more meaningful analysis and analytical storytelling

**Smart analytics offering maturity:**
- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

### Relevant Acquisitions and Partnerships
- **2016:** acquired Datasource Consulting for data management capabilities and IQR Consulting Inc for BFSI industry analytics expertise
- **2015:** acquired RPM Direct LLC for data-driven consumer marketing expertise in insurance and healthcare and Overland Solutions Inc. for P&C analytics and technology solutions
- Partnerships with:
  - Automation Anywhere, Hyland, Camunda, UIPath, Firescope, OpenText, Virtual Ops, Pega, Applan, Rage Frameworks, and Blue Prism for business process management and automation
  - SAS, MicroStrategy, Oracle, Tableau, DATAnomic, Collibra, Informatica, and Infoverity for analytics products

### Key Clients
- **Client split by geography:**
  - NA: 80%-85%
  - LATAM: <5%
  - UK: 10%-12%
  - EMEA: <5%
  - APAC: <1%

### Global Operations Centers
- **Headcount:** 3,000-3,200
- **Data scientists:** 2,900
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 15%-20% (New York, New Jersey, Hartford, Denver, Lambertville, Richmond, VA)
  - LATAM: <1% (Colombia)
  - UK: 3%-5% (London)
  - EMEA: <1% (Johannesburg)
  - India: 80%-85% (Gurgaon, Noida, Bangalore, Ahmedabad, Mumbai)
  - Other APAC: <1% (Singapore)

### Key Proprietary Technologies
- **MicroAnalytix:** a proprietary methodology (SAS-based) tool, used for end-to-end model building and high-end analytics
- **ACE (Adaptive Content Extraction):** obtain insights from structured and unstructured documents using NLP and ML techniques
- **KYC/AML Solution:** standardize KYC processes for customer onboarding, due-diligence, and management
- **Readmission:** predict likelihood of 30-day readmission for in-patient visits
- **FCR (First Call Resolution):** improve FCR by predicting future call reasons and improving agent performance

**Progress in developing capabilities across the value chain.** EXL has made concerted efforts to augment its advanced analytics capabilities with more foundational services support across data management. It has done this in the last two years with acquisitions such as RPM Direct for proprietary datasets and Datasource Consulting for data management and quality services.

**Expertise in banking, financial services, and insurance.** Almost half of EXL’s analytics business comes from the BFSI vertical, where it is a respected analytics brand. It has credibility as an industry thought partner across multiple segments in BFSI, and referenceable blue-chip clients to attest to these capabilities.

**Services excellence and level of partnership with clients.** Clients rate EXL high on overall service delivery, citing its key strengths in clear communication, adapting an agile delivery methodology, and attention to quality. As one client states, “They always do a lot more, add more value than I ask for; they want to see us succeed.”

**Non-linear growth.** EXL’s analytics business has grown at 31% YoY over the last two years (2015-2018), partly due to its efforts around IP and product-driven solutions.

**Challenges**
- **Scaling of local talent in key client markets.** EXL has a solid training infrastructure and talent pipeline in its key delivery centers in India. As it grows its talent pool in clients markets in the UK and North America, it is challenged to scale it in the same way. Over time, EXL will need to build a strong base of data scientists, engineers, and consultants locally.
- **Further integration and consistency with acquired entities.** Clients from acquired companies such as Datasource and RPM have not seen any major changes since EXL has taken over. EXL will need to continue its cross-pollination and integration efforts to build relationships with the new client bases and share its industry best practices.
- **Coverage across the value chain.** EXL is an advanced analytics specialist, but its capabilities in other areas of client demand are comparatively nascent. These include data management, reporting, and analytics consulting.

**Strengths**
- **Data prep and management**
- **Blueprint**
- **Reporting and visualization**
- **Analytics consulting**
Fractal Analytics
High Performer
Advanced analytics specialist with a “problem solver” brand

Strengths

- Perceived as an innovative business problem solver. Fractal’s clients are impressed with the ability of the service provider to take complex unstructured situations, use analytical thinking and algorithms to do problem solving, and mostly importantly, help clients operationalize solutions. It has been able to strike a fine balance between "futuristic cognitive, machine learning, platforms, and IP® conversations, and practical approaches to solve business problems.

- Analytics expertise leading to greater client penetration. Fractal has very successfully created strategic connections and become a “preferred partner” with several of its marquee clients due to its domain experience in industry verticals including BFSI, retail, and consumer goods. This has helped it win new work in various different LOBs and geographies of multinational client organizations, such as Visa.

- Artificial intelligence powered omni-channel analytical framework. The service provider has invested significantly in evolving its Customer Genomics solution in the last few years. Clients that have implemented it feel confident in its capability to improve hyper-personalized marketing and customer experience.

Challenges

- Coverage across foundational services. Clients seeking broad-based data and analytics work will be challenged in working with Fractal Analytics. The service provider does have the comparable focus and capability in data management and reporting as others in our research.

- Developing a broader ecosystem of partners. Fractal Analytics has partnerships with key technology vendors, but it could expand its alliances network with niche data and analytics technology companies to further enhance its platform offerings.

Relevant Acquisitions and Partnerships

- 2018: acquired FinalMile for behavioral economics and cognitive science capabilities
- 2018: acquired 4i Inc to expand its strategy consulting capabilities
- 2015: acquired Imagna Analytics to expand AI capabilities
- 2015: acquired Mobius Innovations to expand big data capabilities

Key Clients

- Vertical specialization includes:
  - Consumer packaged goods, financial services, healthcare, insurance, retail, technology, hospitality

- Clients include:
  - Visa (Europe)
  - Franklin Templeton Investments
  - World’s leading retail bank
  - Global online store
  - Fortune 100 technology company
  - Top five healthcare insurance company
  - One of the top three adult beverage companies

- Headcount: 1,200 (HfS estimate)
- Data scientists: NA
- Locations:
  - US (New Jersey, San Mateo, Seattle, Chicago)
  - UK (London)
  - UAE (Sharjah)
  - India (Mumba, Gurgao, Bangalore)
  - Canada
  - Germany
  - Switzerland
  - China

- Centralized Analytics Environment: CAE-business insights from data platform
- dCrypt: AI engine for text classification
- Concordia: platform to enable intelligent and impactful business decisions by harmonizing data from disparate sources
- Cuddle: AI-based personal analyst
- Customer genomics: personalized marketing platform that addresses customer acquisition, valuation management, attribution, loyalty, offer decisions and interaction rules

Blueprint Leading Highlights

- Development of capabilities across value chain into advanced analytics, predictive modeling and machine learning
- Vision for and investments in the evolution of smart analytics

Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

Global Operations Centers

- US (New Jersey, San Mateo, Seattle, Chicago)
- UK (London)
- UAE (Sharjah)
- India (Mumba, Gurgao, Bangalore)
- Canada
- Germany
- Switzerland
- China

Vendor Profile Summary

Fractal Analytics

Fractal Analytics is a high performer in the advanced analytics domain, offering a "problem solver" brand that appeals to clients seeking innovative solutions to complex business problems. The company has demonstrated strong capabilities in several areas:

- **Perceived as an innovative business problem solver:** Fractal’s clients are impressed with its ability to take complex unstructured situations, use analytical thinking and algorithms to solve problems, and operationalize solutions. The service provider has been able to balance "futuristic cognitive, machine learning, platforms, and IP® conversations, and practical approaches to solve business problems.

- **Analytics expertise leading to greater client penetration:** Fractal has successfully created strategic connections and become a "preferred partner" with several of its marquee clients, such as Visa, due to its domain experience in industry verticals like BFSI, retail, and consumer goods. This has helped it win new work in various different LOBs and geographies of multinational client organizations.

- **Artificial intelligence powered omni-channel analytical framework:** The company has invested significantly in evolving its Customer Genomics solution in recent years. Clients that have implemented it feel confident in its capability to improve hyper-personalized marketing and customer experience.

**Relevant Acquisitions and Partnerships**

- **2018:** Acquired FinalMile for behavioral economics and cognitive science capabilities.
- **2018:** Acquired 4i Inc to expand its strategy consulting capabilities.
- **2015:** Acquired Imagna Analytics to expand AI capabilities.
- **2015:** Acquired Mobius Innovations to expand big data capabilities.

**Key Clients**

- **Vertical specialization includes:**
  - Consumer packaged goods, financial services, healthcare, insurance, retail, technology, hospitality.

- **Clients include:**
  - Visa (Europe)
  - Franklin Templeton Investments
  - World’s leading retail bank
  - Global online store
  - Fortune 100 technology company
  - Top five healthcare insurance company
  - One of the top three adult beverage companies

- **Headcount:** 1,200 (HfS estimate).
- **Data scientists:** NA.
- **Locations:**
  - US (New Jersey, San Mateo, Seattle, Chicago)
  - UK (London)
  - UAE (Sharjah)
  - India (Mumba, Gurgao, Bangalore)
  - Canada
  - Germany
  - Switzerland
  - China

**Key Proprietary Technologies**

- Centralized Analytics Environment: CAE-business insights from data platform.
- dCrypt: AI engine for text classification.
- Concordia: platform to enable intelligent and impactful business decisions by harmonizing data from disparate sources.
- Cuddle: AI-based personal analyst.
- Customer genomics: personalized marketing platform that addresses customer acquisition, valuation management, attribution, loyalty, offer decisions and interaction rules.
## Strengths

**Experience across data management lifecycle.** Hexaware has built up a competent practice around helping clients with data management for the last twelve years. Its experience includes data migration and consolidation between systems, metadata management and governance, BI, and cloud migration. In the last few years, it has gained experience in big data projects, and advanced analytics.

**Decision sciences lab for rapid experimentation.** Hexaware has created a decision sciences community and lab infrastructure with licenses to big data and AI platforms such as IBM Watson to be able to support clients’ needs for quick piloting and experimentation. In the spirit of partnering and flexibility, Hexaware promises zero upfront investments to new clients for its lab services.

**Focus on operationalization of insights and analysis.** Hexaware has demonstrated examples of where it is impacting specific business outcomes and embedding insights into operations for clients, particularly in the banking, financial services, and insurance industries.

## Challenges

**Scale of advanced analytics capabilities.** To expand its services to high-value predictive solutions, Hexaware will need to rapidly grow the number of data scientists and analysts across global locations. Its presence and experience is fairly limited as of today.

**Building credibility and brand for smart analytics.** Hexaware has a growing team and IP around advanced analytics, and a few examples of where it is combining automation technologies and analytics to solve specific client challenges. However, its overall perception as of today is of a data management provider, and it will need to build a stronger talent and technology base for the next phase of smart analytics.

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**Relevant Acquisitions and Partnerships**

- **Partnerships with:**
  - Data preparation and integration: Informatica, Microsoft, IBM, Alteryx, SAP, Oracle, AWS
  - Reporting and visualization: SAP, IBM, Microsoft, Qlikview, Tableau, Oracle
  - Unstructured data analytics: IBM (Watson), Microsoft (Azure ML), Google, AWS

**Key Clients**

- **Client split by geography:**
  - NA: 58%
  - UK: 10%
  - EMEA: 18%
  - APAC: 14%

**Vertical specialization includes:**

- BFS, capital markets, insurance, healthcare, manufacturing, retail, travel, and transportation

**Clients include:**

- Large mining giant in North America
- Large bank based out of London
- Large Lloyds market insurance firm, UK
- Leading US financing and mortgage company
- One of the top four auditing companies of the world
- Leading asset management company of US

**Global Operations Centers**

- **Headcount:** 1,100
- **Data scientists:** 100
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 20% (New Jersey, Atlanta, Virginia, Washington DC)
  - UK: 5% (London)
  - EMEA: 5% (Bucharest, Frankfurt)
  - India: 65% (Chennai, Mumbai, Pune)
  - Other APAC: 5% (Tokyo, Singapore, Hong Kong)

**Key Proprietary Technologies**

- **Data Modernization platform:** data modernization is a purpose built integrated platform for data management and migration
- **BI Modernization platform:** suite of toolsets that enable BI application information discovery
- **Big Leap:** intelligent integrated work flow based data management and analytics platform
## Aligning data modernization capabilities around Mosaic platform

### Relevance

- **Data modernization experience.** LTI has built up a credible practice in information management, particularly in recent years, to help clients with data modernization and migrating onto cloud-based platforms. This has helped its market growth, coupled with BI capabilities on new platforms. Over half of its revenues are in data management as of today.
- **IP development around Mosaic.** LTI has spent the last two years developing a proprietary framework around open source technologies to consolidate its IP in data and analytics. Mosaic is a way for LTI to build repeatable solutions and create a marketplace for different analytics use cases.
- **Willingness to invest.** Clients find value in LTI’s flexible approach to exploring new use cases and technologies in data and analytics. The service provider is willing to invest, especially in advanced analytics and machine learning, as it builds those capabilities out.

### Strengths

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- **Willingness to invest.** Clients find value in LTI’s flexible approach to exploring new use cases and technologies in data and analytics. The service provider is willing to invest, especially in advanced analytics and machine learning, as it builds those capabilities out.

### Challenges

- **Progress on automation.** While LTI has introduced automation technologies in its data and analytics work, currently they are not pervasive across engagements. The service provider will need to take a consistent approach to introduce various automation technologies across the smart analytics lifecycle.
- **Speed of onboarding.** A client mentioned that LTI had a slower turnaround time for initial service delivery. As the service provider grows its Mosaic and analytics business, it will need to create methodologies to speed up delivery, understand clients’ business problems, and come up with solutions.
- **Innovation and proactive idea generation.** Clients see LTI as a service provider transitioning from being an execution arm to an innovative partner. As of now, they would like to see more proactive idea generation from LTI.

### Relevant Acquisitions and Partnerships

- **2018:** acquired Syncordis SA, a Europe-based firm having deep expertise in banking and financial services segment
- **2016:** acquired Augment IQ to expand smart analytics expertise
- **Partnerships with:**
  - Microsoft: powered LTI’s MOSAIC Decisions platform on Azure and Cortana Intelligence Suite
  - ThoughtSpot: integrated with MOSAIC Decisions platform to provide Google-like search functionality for data
  - Collibra: GDPR Initiative
  - Elastic: enhancing search functionality on MOSAIC Decisions Platform
  - IBM Watson: AI

### Key Clients

- **Client split by geography:**
  - NA: 65%
  - UK: 2%
  - EMEA: 21%
  - APAC: 11%
  - LATAM: 1%
- **Vertical specialization includes:**
  - Financial services, insurance, media and entertainment, consumer packaged goods, manufacturing, life sciences, high tech, oil and gas
  - 100 clients including:
    - Leading global bank
    - Leading US-based P&C insurer
    - Indian governmental tax organization
    - Global pharma major
    - Leading semiconductor manufacturer

### Global Operations Centers

- **Headcount:** 3,300
- **Data scientists:** 100
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 10% (USA, Canada)
  - LATAM: <1% (Costa Rica)
  - UK: 1% (London, Belfast)
  - EMEA: 5% (Germany, Poland, Netherlands, France, Spain, Denmark, Finland, Norway, Sweden, Belgium, Austria, Kuwait, Saudi Arabia, Dubai, Abu Dhabi, Qatar, South Africa)
  - India: 80% (Mumbai, Pune, Bangalore, Chennai)
- **Other APAC:** 3% (Australia, Singapore, China, Japan, Philippines)

### Key Proprietary Technologies

- **LTI Mosaic Things:** responsible for device-to-cloud connectivity
- **LTI Mosaic Decisions:** with an ability to connect, capture, integrate, store, analyze, serve and consume data
- **LTI Mosaic AI:** enables advanced analytical functions such as cognitive computing and conversational intelligence
- **LTI Mosaic Automation:** facilitates knowledge-led automation by consuming advanced analytics provided by the base platform
- **LTI Mosaic Experience:** provides features to measure, monitor and improve the application experience
Mu Sigma
High Performer

Advanced analytics specialist with a “problem solver” brand

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Challenges</th>
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<tbody>
<tr>
<td><strong>Perceived as an innovative specialist.</strong> Mu Sigma has earned a trusted reputation as an analytics specialist, with its mission of &quot;institutionalizing decision support&quot; across marketing, risk, and supply chain processes.</td>
<td><strong>Rebuilding client confidence after management turmoil.</strong> MuSigma is still recovering from challenges in the last two years due to its management turnover and the resulting restructuring of the company. A couple of clients in our research expressed a slight lack of confidence in the future of the company due to the management turnover. MuSigma will have to invest significant management time and effort in reassuring existing and new clients about its strategy going forward.</td>
</tr>
<tr>
<td><strong>Advanced modeling capabilities.</strong> Clients are impressed with Mu Sigma’s advanced analytics and technical skills.</td>
<td><strong>Comparative breadth of partnerships and alliances.</strong> Compared to many of its competitors, Mu Sigma does not have a broad portfolio of partnerships or alliances strategy for either major data and analytics platform and tool vendors, or industry-specific companies.</td>
</tr>
<tr>
<td><strong>Service quality of offshore teams.</strong> Mu Sigma’s clients value the ability of the service provider to ensure responsiveness, quality, and speed of delivering insights while leveraging offshore teams.</td>
<td><strong>Coverage across foundational services.</strong> Clients seeking broad-based data and analytics work will be challenged in working with MuSigma. The service provider does have the comparable focus and capability in data management and reporting as others in our research.</td>
</tr>
<tr>
<td><strong>Focus on problem solving.</strong> Mu Sigma has built a system called “the art of problem-solving system.” More than 10 clients are in the process of adopting, training on, and rolling out this new model, which brings order and scalability to BFSI clients’ data analytics programs.</td>
<td></td>
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</table>

**Relevant Acquisitions and Partnerships**

- Partnerships with:
  - Boston Consulting Group

**Key Clients**

- Vertical specialization includes:
  - Telecom, retail, financial service, insurance, healthcare, hospitality, life science, airline

- Clients include:
  - Three of the top five US airlines
  - Eight of the top 25 global food and beverages companies
  - Seven of the top 20 US commercial banks
  - Two of the top three US healthcare companies
  - Two of the top five US telecom operators

- **Headcount:** 3,500 (HfS estimate)
- **Data scientists:** NA
- **Locations:** Delivery breakdown by FTE percentage:
  - India (Bangalore)
  - USA (New York, Atlanta, Bentonville, Seattle, Northbrook, Austin)
  - UAE (Dubai)
  - UK (Harrow)
  - Australia (Sydney)
  - Canada (Ottawa)
  - Japan (Tokyo)
  - Germany

**Global Operations Centers**

- muXo: advanced decision optimization engine designed to solve complex business problem
- muText: text mining engine that enables knowledge discovery from unstructured and semi-structured data
- muHPC: machine learning platform built over Spark and Hadoop
- muDetect: a meta-software that integrates cross-industry experience for detection problems across verticals
- muRx: decision sciences workbench that democratizes the use of analytical method
- muMix: platform that helps marketers to systematically and efficiently tackle the marketing mix modeling problem

**Key Proprietary Technologies**

- Headcount: 3,500 (HfS estimate)
- Data scientists: NA
- Locations: Delivery breakdown by FTE percentage:
  - India (Bangalore)
  - USA (New York, Atlanta, Bentonville, Seattle, Northbrook, Austin)
  - UAE (Dubai)
  - UK (Harrow)
  - Australia (Sydney)
  - Canada (Ottawa)
  - Japan (Tokyo)
  - Germany

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Syntel
High Performer

An IT player leading capability growth with data science R&D labs

<table>
<thead>
<tr>
<th>Blueprint Leading Highlights</th>
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<th>Challenges</th>
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<tbody>
<tr>
<td></td>
<td>Building capabilities across value chain from data management. Syntel’s capabilities are growing across the value chain of data management, visualization and advanced analytics, with developments in machine learning and AI. The service provider has demonstrated client stories that go across use cases and industry verticals in data and analytics.</td>
<td>Late to the platform game. Syntel’s competitors have launched similar platforms to ATOM, making it a late entrant in this space. Syntel will need to showcase ATOM’s impact with marquee clients that it can use to bring its differentiation to the market.</td>
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<td></td>
<td>Flexibility and willingness to invest. Syntel has examples of looking beyond short-term revenues to build long-term and collaborative partnerships that may decrease the scope of engagements initially, but lead to more work in the long-term.</td>
<td>Developing a broader ecosystem of partners and considering M&amp;A opportunities. Syntel has partnerships with key technology vendors, but it could expand its alliances network with niche analytics technology companies to further enhance its platform offerings. Further, Syntel could develop, partner, or acquire for gaps in areas like design where its competitors have made headway.</td>
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<td></td>
<td>Investment in R&amp;D labs and IP. Syntel has invested in its Digital Labs, with relevant technology accelerators for clients moving to big data environments, including solutions for data ingestion, analytics workbench, and industry-specific use case catalogs.</td>
<td>Global delivery capabilities. Syntel needs to continue its expansion of delivery capabilities in key client markets. Particularly as it grows its analytics consulting, it needs to set up local presence in a greater capacity than today.</td>
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<td>Talent development. Clients in our research selected Syntel due to its availability of data scientists and Hadoop data engineering capabilities. Its data scientists have good domain experience, skillsets, and communication skills.</td>
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<tr>
<th>Relevant Acquisitions and Partnerships</th>
<th>Key Clients</th>
<th>Global Operations Centers</th>
<th>Key Proprietary Technologies</th>
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<tbody>
<tr>
<td>• Partnerships with:</td>
<td>Vertical specialization includes:</td>
<td>• Headcount: 1,600</td>
<td>• ATOM: accelerated development platform with ready solution building blocks for digital development</td>
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<tr>
<td>- Leading players in big data and analytics, including Cloudera, Hortonworks, Microsoft (Azure), Informatica, Talend, MicroStrategy, QuerySurge, and Tableau</td>
<td>• Banking and financial services, insurance, healthcare, life sciences, manufacturing, retail, logistics, and telecom</td>
<td>• Data scientists: 100</td>
<td>• Building blocks on ATOM</td>
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<td></td>
<td>Clients include:</td>
<td>• Locations: Delivery location breakdown:</td>
<td>• Automated data ingestion from disparate sources into Hadoop</td>
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<td>• American Express</td>
<td>- US: Phoenix, Nashville, Memphis</td>
<td>• Ready analytics algorithms in the areas of customer value analytics, healthcare analytics, insurance analytics</td>
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<td>• State Street Corporation</td>
<td>- India: Mumbai, Pune, Chennai</td>
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<td>• FedEx</td>
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<td>• Fortune 100 health insurer</td>
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<td>• Leading US healthcare provider</td>
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<td>• Leading global independent credit rating agency</td>
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<td>• Leading US truck manufacturer</td>
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<td></td>
<td>• Fortune 50 Retailer</td>
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**Tech Mahindra**

**High Performer**

Exploring targeted solutions for telecom and manufacturing clients

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<th>Blueprint Leading Highlights</th>
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<tbody>
<tr>
<td>• Ability to attract and retain key skills</td>
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<tr>
<td>• Ecosystem development including alliances, partnerships, and consortiums</td>
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**Smart analytics offering maturity:**

- **Data prep and management**
- **Reporting and visualization**
- **Advanced analytics**
- **Analytics consulting**

### Relevant Acquisitions and Partnerships

- **2018:** acquired HCI Group to strengthen electronic health records
- **2016:** acquired BIO Agency to augment capabilities in digital consulting
- **2016:** acquired Target Group for building of portfolio analytics
- **Partnerships with:**
  - Tool and platform vendors: Informatica, IBM, SAS, Statistica, Hortonworks, Cloudera, Qlik, Tableau, SAS, Diyotta, Teradata, Splunk, Microstrategy, MapR, MongoDB, Ab Initio, Talend, Couchbase, Stilbo Systems, Data RPM
  - Qlik
  - Splunk
  - Hortonworks

### Key Clients

Client split by geography:
- **NA:** 48%
- **LATAM:** 1%
- **UK:** 9%
- **EMEA:** 21%
- **APAC:** 21%

Clients include:
- Largest American multinational conglomerate
- Largest American and UK Telcos
- Top British pharmaceutical company
- One of Australia’s largest financial services companies
- Worldwide leader in networking technology

### Global Operations Centers

- **Headcount:** 5,500
- **Data scientists:** 100
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 48%
  - UK: 9%
  - EMEA: 21%
  - APAC: 21%

### Key Proprietary Technologies

- **PRISM:** a collaboration platform for self service predictive analytics
- **UDMF:** a data management framework to reduce the risk of data migration failures and increase reliability
- **TAP:** big data platform with collection of reusable components
- **DAP:** a reusable platform to jumpstart data anonymization and data masking
- **Infowise:** a tool for production support monitoring and BI modernization
- **TACTIX:** an artificial intelligence based framework for automating IT and business operations by providing actionable intelligence

---

**Strengths**

- **Vertical specializations in telecom and manufacturing.** Tech Mahindra’s heritage in working with British Telecom and coming from the Mahindra Group has tremendously influenced its vertical leanings for data and analytics, where nearly a third of its analytics business comes from telecom today, followed by manufacturing. It has invested in IP, industry-specific models, and holistic solutions along with analytics for these industries, and has increased its depth in BFSI, retail, and healthcare.

- **Partnering to create product-led growth.** Tech Mahindra’s approach to productization has been focused around partnering—with VC firms, product companies, clients, and niche specialists. As an example, it has developed product partnering with a leading US telecom product company that works in the area of data cataloguing.

- **Ability to find specialized talent.** A client highlighted Tech Mahindra’s ability to find the right talent needed for different projects. Further, the service provider is willing to train its talent pool on the diverse tools and technology already existing in client environments.

**Challenges**

- **Setting up large scale engagements.** Tech Mahindra has had the opportunity in the last two years to take on large-scale projects in the areas of big data infrastructure design and deployment. A client mentioned that the service provider’s initial team construct and full-scale project management model was not fully ironed out for them at the outset. Tech Mahindra has identified four or five key roles for teams and is building this out.

- **Getting value out of acquired assets.** Tech Mahindra has made a few strategic acquisitions in the last three years in the broad categories of digital design and transformation. The service provider is missing a critical link in applying these new capabilities in its smart analytics engagements.
Strategic focus on advanced analytics

**Strengths**

- **Advanced analytics now leading to productized solutions.** WNS has retained and grown its high-end analytics capabilities and clients find confidence in its abilities. It has more actively focused on developing new capabilities, using new technologies for individual clients and then trying to cross-pollinate them with other clients and use cases. It is now leveraging its data science capabilities to develop productized offerings in the areas of content analytics, sentiment analytics, and industry-specific solutions.

- **Ability to attract and retain key skills.** WNS’ clients value its ability to incentivize and retain key talent, in particular analysts that are able to take their skills and apply them creatively according to business needs.

- **Executive focus on analytics.** WNS has restructured the sales and solutioning for its analytics practice in the last three years, which has helped its recent focus on analytics clients and tap into resources across the organization.

**Challenges**

- **Global delivery capabilities.** WNS’ analytics capabilities are predominantly in India, with very few resources in client markets. As it expands its analytics consulting capabilities, the service provider will need to invest more in creating a local presence in the US and UK.

- **Growth across foundational parts of the value chain.** WNS has gradually expanded its portfolio of offerings to be more “end-to-end”, along areas outside of advanced analytics—data management and infrastructure services. However, it has not reached scale in these areas compared to similar competitors.

### Relevant Acquisitions and Partnerships

- **2018: acquired HealthHelp, care management services**
- **2018: acquired Denali, a provider of strategic procurement solutions**
- **2016: acquired Value Edge, a provider of consulting-grade marketing and data analytics**

**Partnerships with:**
- NectarOM: a marketing personalization platform
- InsightJedi: a machine learning platform that automates data science process
- Qubole: cloud-based big data platform for processing and analyzing data sets
- Analyze Datacorp: a new customer acquisition enabler to enable clients to expand customer base for targeted campaigns

### Key Clients

- Client split by geography:
  - NA: 45%
  - UK: 40%
  - EMEA: 5%
  - APAC: 10%

### Global Operations Centers

- **Headcount:** 2,550
- **Data scientists:** 100
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 5% (South Carolina)
  - UK: 1% (London)
  - EMEA: 1% (Romania, Cape town - South Africa)
  - India: 92% (Bangalore, Mumbai, Gurgaon, Pune, Chennai, Vizag, Nashik)
  - Other APAC: 1% (Manila, Philippines)

### Key Proprietary Technologies

- WNS Brandttitude: plug and play, big data based analytics platform
- SocioSEER: intelligent social media analytics platform
- Unison: omni-channel, intelligent customer interaction analytics platform
- Insights as a Service platform: big data enabled analytics platform
- Commercial Planning Suite: cloud-based travel and hospitality revenue analytics platform

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**Blueprint Leading Highlights**

- Ability to attract and retain key skills
- Fostering culture of creative problem finding, more meaningful analysis and analytical storytelling

**Smart analytics offering maturity:**

- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

---

**Relevant Acquisitions and Partnerships**

- **2018: acquired HealthHelp, care management services**
- **2018: acquired Denali, a provider of strategic procurement solutions**
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- Qubole: cloud-based big data platform for processing and analyzing data sets
- Analyze Datacorp: a new customer acquisition enabler to enable clients to expand customer base for targeted campaigns
BRIDGEi2i
High Potential

Boutique analytics house with an eye on customer experience

**Blueprint Leading Highlights**

- Ability to attract and retain key skills
- Vision for and investments in the evolution of smart analytics

**Smart analytics offering maturity:**

- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

---

**Strengths**

- **Niche customer analytics brand.** BRIDGEi2i has quickly built up a reputation as an analytics boutique with a focus on customer experience, personalization, and marketing and sales effectiveness.

- **Strong and referenceable clientele.** BRIDGEi2i serves 10 of the Fortune 500 clients, helping it grow in its chosen industries of banking and financial services, retail, insurance, technology, and consumer packaged goods.

- **Hands-on management team.** Clients commend BRIDGEi2i's leadership team for its level of engagement and attention to them. In particular, the experience in running analytics departments that the management team brings gives clients confidence in the company's abilities.

- **Talent acquisition and retention.** Clients find BRIDGEi2i's level of talent retention to be comparatively better than its competitors. The service provider is able to attract creative and high quality analysts, data engineers, and data scientists in competitive talent markets.

**Challenges**

- **Overall size and scale.** BRIDGEi2i is a relatively small and young company, and has yet to pivot toward scaling its business. This is where the majority of analytics boutiques have failed in the past, with only a few able to credibly grow and scale, operate globally, and maintain quality. BRIDGEi2i’s journey in the next couple of years will be critical as it uses its recently secured funding towards this goal.

- **Consistent approach to innovation.** Clients would like to see more of a consistent approach to innovation from BRIDGEi2i. This will mean investing more on the product side, truly understanding client processes, and, in day-to-day operations, building in mechanisms to become proactive about giving innovative ideas and opportunities to improve.

- **Developing a community and ecosystem around data and analytics.** BRIDGEi2i will need to focus on further developing its ecosystem of partners that can help it deliver more holistic solutions to clients. Further, it can improve the level of best-practice sharing and industry-level discussions and events for clients to learn new analytics approaches.

- **Focus on automation.** HfS does not see a concerted effort by BRIDGEi2i in embedding automation into the analytics lifecycle.

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**Relevant Acquisitions and Partnerships**

BRIDGEi2i raised Series A capital investment from Edelweiss Private Equity fund in 2018 to invest in products and grow in other geographies.

**Key technology capability investments:**

- Internet of things: data management and algorithms
- Application development
- Machine learning and artificial intelligence
- Big data, Hadoop, Spark
- Digital marketing
- Business intelligence suite
- Cloud technologies

**Client split by geography:**

- NA: 80%
- APAC: 16%
- UK: 4%

**Vertical specialization includes:**

- BFSI, retail, technology, insurance, CPG

**34 clients, including:**

- Leading Fortune 500 semiconductor company
- Fortune 100 computer networking and equipment company
- Fortune 100 enterprise technology company

**Key Clients**

**Global Operations Centers**

- Headcount: 276
- Data scientists: 176
- Locations: Delivery breakdown by FTE percentage:
  - North America: 10% (Texas, Washington, California, Massachusetts, Illinois)
  - India: 90% (Bangalore, Pune, Delhi NCR)

**Key Proprietary Technologies**

- Sales decision engine
- Intent marketing
- Assortment planning tool, market mix modeling, price promotion modeling
- Customer experience tracking
- Demand forecasting, commodity pricing
- Sales and marketing recommendation engine
- Commodity pricing tool, demand planning
- Model risk management
CSS Corp
High Potential

Customer experience analytics specialist supporting hi-tech, media clients

**Blueprint Leading Highlights**

- Development of capabilities across value chain into advanced analytics, predictive modeling and machine learning
- Collaborative engagement (consultative sales, design thinking, thought leadership)

**Smart analytics offering maturity:**

- Data prep and management
- Reporting and visualization
- Advanced analytics
- Analytics consulting

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<th>Key Clients</th>
<th>Global Operations Centers</th>
<th>Key Proprietary Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Partnerships with:</td>
<td>Client split by geography:</td>
<td>• Headcount: 70</td>
<td>• Yodaa: virtual assistant platform</td>
</tr>
<tr>
<td>- Microsoft</td>
<td>• NA: 90%</td>
<td>• Data scientists: 15</td>
<td>• Active Insights: smart analytics platform</td>
</tr>
<tr>
<td>- Amazon</td>
<td>• EMEA: 10%</td>
<td>• Locations: Delivery breakdown by FTE percentage:</td>
<td>• Contelli: an intelligent automation platform that combines advanced analytics and machine learning capabilities</td>
</tr>
<tr>
<td>- Google</td>
<td>Vertical specialization includes:</td>
<td>- North America: 10% (Dallas)</td>
<td>• Early Warning System: predictive analytics solution that helps support teams to categorize issues, improve time to resolution, and prioritize issues</td>
</tr>
<tr>
<td>- Tableau</td>
<td>• Telecom, high-tech, media, banking and financial services, healthcare, manufacturing</td>
<td>- India: 90% (Chennai and Bangalore)</td>
<td></td>
</tr>
<tr>
<td>- GE Predix</td>
<td>34 clients, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Oracle</td>
<td>• Large US-based railroad company</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Apigee</td>
<td>• World’s leading digital streaming company</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Freshworks</td>
<td>• Leading networking company</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A leading pharmaceutical major</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• World’s leading tire manufacturer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Strengths**

- Highly specialized on customer experience analytics. CSS Corp’s primary analytics focus is being close to the end customer ecosystem for its clients, including anything that can directly impact customer experience and revenue generation. The service provider has worked with a large high-tech client to create dashboards to present its results around customer segmentation analytics. CSS Corp also has experience in driving improved customer interactions in the call center space.

- Emerging capabilities in packaging horizontal solutions. CSS Corp has developed some broad solutions on the back of its experience with client challenges in data and analytics. Examples include an IoT analytics early warning system that it has used at a few clients, a predictive maintenance solution, a customer intelligence platform, and an AI platform for conversational services to end customers.

**Challenges**

- Current size and scale. CSS Corp’s current scale of operations is extremely small compared to its competitors in this industry. It is also primarily delivering services from offshore locations in India, along with onsite support. This makes it a challenge to work with the service provider on larger smart analytics initiatives.

- Comparative breadth of partnerships and alliances. CSS Corp’s partnerships and alliances are not as broad as its competitors for data and analytics services. As it gets deeper into AI and machine learning, it will need to broaden its alliances to stay ahead of technology trends.

- Depth of industry-specific solutions. CSS Corp lacks the in-depth domain expertise that some of its competitors have developed from longstanding analytics engagements. As it grows its capabilities around customer experience, it must focus on talent as well as technology solutions and frameworks that are industry-specific, especially for its “sweet spot” verticals of telecom, media, and high-tech.
NIIT Technologies

Niche data and analytics expertise with BFSI clients

**Blueprint Leading Highlights**

- Quality of service delivery
- Flexibility and creativity in pricing and contracting
- Tool, data, and platform strategy for smart analytics

**Strengths**

- **BFSI data and analytics expertise.** NIIT Technologies has predominantly gained experience in serving banking, financial services, and insurance clients. Its solutions are targeted and include data management and aggregation, advanced analytics and machine learning, and NLP.

- **Execution of service delivery.** NIIT’s clients describe it as being very responsive, with consistent service delivery throughout the engagement.

- **Ability to attract and retain key skills.** Multiple clients value NIIT’s ability to find, grow, and retain specialized analytics talent. NIIT Technologies uses its training entity to provide analytics programs and courses for talent development.

- **Unique solution in marketing data and analytics.** NIIT Technologies’ Digital Foresight solution and its ability to bring in external marketing data with Customer 360, particularly for BFSI clients, is differentiated. A client mentioned that it has been working with the service provider to harness hard-to-get marketing analytics data, which it was unable to find anywhere else.

**Challenges**

- **Overall size and scale.** To expand its services to high-value predictive solutions, NIIT Technologies will need to rapidly grow the number of data scientists and analysts across global locations. It has developed a niche with its client base, but lacks the scale and size of many of its competitors.

- **Lack of annuity-based work.** NIIT Technologies primarily works with project based, fixed-fee engagements. It will need to expand some client relationships to create more recurring revenues as it grows past its current scale.

**Relevant Acquisitions and Partnerships**

- Partnerships with:
  - Open Finance
  - Artificial Solutions—Teneo
  - Microsoft
  - UI Path
  - AWS (Amazon)
  - Arago

**Client split by geography:**

- NA: 52%
- UK: 20%
- EMEA: 12%
- APAC: 16%

**Vertical specialisation includes:**

- Insurance, travel, banking financial services, media and retail

25 clients, including:

- Thrivent: Fortune 500 not-for-profit financial services
- Bankers: large insurance group in the US
- Virgin Australia: large airline in Asia Pacific
- Iberia: large airline in Europe
- Caesars: large entertainment corporation

**Key Clients**

- **Headcount:** 333
- **Data scientists:** NA
- **Locations:** Delivery breakdown by FTE percentage:
  - North America: 20% (Atlanta, other cities)
  - UK: 6% (London)
  - EMEA: 6% (multiple locations)
  - India: 66% (Greater Noida, UP)
  - Other APAC: 2% (multiple locations)

**Global Operations Centers**

- Digital Foresight High Value Targeting
- Customer 360
- Customer Insights for Advisors
- Media Sight
- Data Aggregation and Reconciliation Platform
- Exact Advantage Suite
- Advanced Risk Management Suite
- Digital Assistant
- Advantage Suite Acumen
- Process Gym, TESS for RPA

**Proprietary | Page 55**
Market Direction and Recommendations
Enterprises are planning and piloting smart analytics as a strategic priority in 2018 and beyond...

Q. Please characterize your organization’s current use of the following value creation levers to achieve the business outcomes described in the previous question [accelerating speed to market, improving customer experience, driving down operating cost].

<table>
<thead>
<tr>
<th>Value Creation Lever</th>
<th>Planning</th>
<th>Piloting</th>
<th>Implementing</th>
<th>Production environment</th>
<th>No plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart analytics</td>
<td>41%</td>
<td>38%</td>
<td>11%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Machine learning</td>
<td>40%</td>
<td>35%</td>
<td>11%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Design thinking</td>
<td>37%</td>
<td>30%</td>
<td>9%</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Internet of Things (IoT)</td>
<td>35%</td>
<td>41%</td>
<td>9%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>Augmented reality</td>
<td>33%</td>
<td>36%</td>
<td>6%</td>
<td>3%</td>
<td>22%</td>
</tr>
<tr>
<td>Cognitive agents</td>
<td>32%</td>
<td>35%</td>
<td>10%</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>Blockchain</td>
<td>31%</td>
<td>40%</td>
<td>7%</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>Robotic process automation (RPA)</td>
<td>26%</td>
<td>40%</td>
<td>9%</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Shared services</td>
<td>24%</td>
<td>36%</td>
<td>24%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>Cloud-based business process services</td>
<td>24%</td>
<td>29%</td>
<td>27%</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>Outsourcing - offshore</td>
<td>13%</td>
<td>16%</td>
<td>34%</td>
<td>31%</td>
<td>7%</td>
</tr>
<tr>
<td>Outsourcing - onshore</td>
<td>6%</td>
<td>12%</td>
<td>38%</td>
<td>43%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: HfS Digital Transformation, 2018; Total n = 352
What’s next: developing smart analytics capabilities across the Digital OneOffice conceptual framework (1)

» HfS envisions the future of business operations as the OneOffice organization, collapsing the silos of front-, middle- and back-office processes and reorienting to deliver better experiences and outcomes for all stakeholders, leading with the end customer (read more here).
What’s next: developing smart analytics capabilities across the Digital OneOffice conceptual framework (2)

» The OneOffice evolution will use Smart Analytics and digital technology to drive predictive insight for proactive action and better outcomes—higher quality, speed, and profitability.

» The smart orchestration of data and insights will be the foundational pillar that will support all the fundamental principles of OneOffice initiatives:

• **Fundamental 1—Fostering genuine digital customer, partner, and employee engagement.** The use of ethnographic research and behavioral sciences to augment traditional customer data will drive a more nuanced understanding of customer, employee, and partner experiences and the motivators and influencers to improve them.

• **Fundamental 2—Embedding design thinking techniques to achieve continuous digital outcomes.** Using design thinking principles can greatly improve the end user experience on the collection, analysis, and interpretation of data and insights (read more [here](#)).

• **Fundamental 3—Building a scalable digital underbelly that automates and digitizes.** Moving to cloud-based data infrastructure, creating data lakes, and overall data consolidation and modernization efforts are critical to developing a digital underbelly.

• **Fundamental 4—Achieving an intelligent digital support function without hierarchies and silos.** Embedding operational insights across horizontal business and IT functions, creating self-serve analytics and reporting interfaces, and providing better access and real-time availability of data are all goals that will create intelligent digital support functions.

• **Fundamental 5—Establishing intelligent, cognitive processes that promote predictive decision-making.** The focused use of machine learning and deep learning and other advanced analytics technologies to provide predictive and prescriptive guidance will help enterprises to better anticipate and respond to market changes.
Recommendations: services buyers

» Go beyond “better math” with intelligent automation technologies: Several analytics leaders in our research pointed to the planning and piloting of machine learning and neural network based algorithms to augment existing data models. However, there is still a lack of wider acceptance on the use of intelligent automation technologies to improve the data, reporting, and analytics processes themselves. Bar a few pioneering examples, we see a strong opportunity for services buyers to introduce modern automation tools to speed up and improve the quality and accuracy of connected data and insights.

» Challenge your service provider on the assumption of “retraining” talent for Smart Analytics: Large service providers today manage vast estates of legacy work for enterprise clients in the areas of data management, reporting, and traditional statistical analysis. While they are all investing in creating new capabilities with change in technology platforms and languages, the emerging narrative has been around retraining talent to take on new tasks. HfS cautions clients against this strategy; the talent availability and skillsets for traditional ETL and BI work or statistical analysis are significantly different from new needs around data engineering and machine learning. A segment of a service provider’s workforce may be upskilled or retrained, but for the large part, this industry will need to create and infuse new talent to take on these roles. Work with the service providers that are realistic and pragmatic about these changes, and truly committed to closing the talent gap for the future.

» Drive governance and coordination across data, analytics, and automation CoEs: HfS sees a resurgence of strategic investments and modernization of data and analytics CoEs across enterprises. Many enterprise clients in our research are in the transitionary phase of moving from regional hubs or limited data centralization efforts to creating a focused analytics COE to drive organization-wide data strategy. The operating model for delivering smart analytics will need to build on the existing structures already created in the past, augmented with better coordination across other Triple A Trifecta technology initiatives.
Invest in adjacent capabilities that will help clients with data-driven transformation: Enterprises are increasingly seeking to buy business outcomes, not individual technologies. In this vein, one client set their expectation, “they should be my main partner in all business of transformation we are planning, developing other capabilities that will help me not only in data and analytics but finding broader ways to transform our business with digital.” Continue to expand on partnerships, acquisitions, and organic investments that go across digital technologies such as IoT, automation, and AI, and methodologies that help enterprises adopt them, such as using design thinking, behavioral sciences, and ethnography.

Investigate new ways to bring holistic integration and orchestration across client environments: Service providers working at any stage of the data, reporting, and analytics lifecycle must invest in better ways to design the integration of new technologies and solutions with client data architectures and platforms. Further, as advanced analytics and machine learning capabilities start to scale out in enterprise operations, service providers have the opportunity to play more of an orchestrator role to simplify, improve, and better manage collaboration between data scientists, IT operations, and business analysts.

Develop broader ecosystem of partners to continue to deliver on innovation: Most clients in our study pointed to areas like machine learning and other AI techniques as areas of innovation that they want to see from service providers in the next two years. Developing an eye for outside-in innovation and forging partnerships with a wider base of partners will greatly benefit service providers in the quest to be innovative partners for smart analytics in the future.
About the author and HfS
Reetika Fleming is Research Director, Insurance, Smart Analytics & AI at HfS Research. Her research extends into defining future business operations for property and casualty, life and annuities and reinsurance companies. She studies the broad use of data and analytics within enterprises, with a new research focus on machine learning and AI techniques to improve business decision making. Reetika regularly contributes to HfS’ research content in the form of evaluation studies, surveys, and point-of-view papers. She also supports custom research and strategy projects; analyzing data, supporting client inquiry, conducting regular discussions and briefings with both enterprises 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. She also managed the unit’s web and social media strategy and presence.

Based in Cambridge, MA, Reetika has led numerous research assignments spanning global technology and business operations, and has spoken at multiple forums about the future of work.

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, traveling to world heritage sites, and teaming up with her husband on strategy/simulation gaming.
HfS Research: Defining Future Business Operations

The HfS mission is to provide visionary insight into the major innovations impacting business operations: Automation, Artificial Intelligence, Blockchain, Internet of Things, Digital Business Models and Smart Analytics.

HfS defines and visualizes the future of business operations across key industries with its OneOffice™ Framework.

HfS influences the strategies of enterprise customers, to help them develop OneOffice backbones to be competitive and to partner with capable services providers, technology suppliers, and third-party advisors. The "As-a-Service Economy" and "OneOffice" are revolutionizing the industry.

Read more about HfS and our initiatives on our website.