Healthcare Business Operations Services
An analysis of the BPO market for U.S. Healthcare Organizations, including Payers and Providers
Excerpt for Optum
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State of the Market

- The Healthcare Operations Services Blueprint is an analysis of the business process services and outsourcing market for industry-specific business operations in healthcare. The 2017 Blueprint builds on the previous years’ reports that can be found on [http://www.hfsresearch.com](http://www.hfsresearch.com).

- This Blueprint analyzes the market adoption of the following:
  - The [Eight Ideals of the As-a-Service Economy](http://www.hfsresearch.com) for redefining the value of services engagements
  - Achieving the vision of operating as an Intelligent OneOffice™

- This report covers market trends, an analysis of the execution and innovation capabilities of 13 service providers, and recommendations to increase the value of services engagements.

- Unlike other quadrants and matrices, the HfS Blueprint identifies relevant differentials between service providers across a number of facets in two main categories: innovation and execution.

- While the grid shows the relative success of the service providers in these categories based on client feedback and HfS analysis, it is also meant to show how each service provider is balancing and faring individually in these categories: account management, service delivery, use of technology to enable business process service impact, talent development, and workforce management.
In this report, we look at how service providers are partnering to enable business operations at payers, providers, and other risk bearing healthcare organizations, such as ACOs.

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**HfS VALUE CHAIN DEFINITION:**

Value chain refers to the series of departments which carry out value-creating activities to design, produce, market, deliver, and support a company’s product or service. In this usage, we refer to the range of primary processes and support services that providers offer to their clients.
State of the Market: Healthcare Business Operations

- **Service providers looking to help impact revenues as well as cost savings.** The business process outsourcing services market for healthcare was once a straightforward headcount-based, cost reduction value proposition – for example, contract for an offshore-based set of employees to use Citrix to access and process claims. Service providers often used reengineering, desktop automation, and workflow to make the processes more efficient. Now, we are seeing an increased focus on value propositions and services that address revenue and reimbursement, such as payment integrity, customer experience, and Stars and HEDIS ratings, as well as cost. These offerings focus more on outcomes, and are enabled by intelligent automation and analytics. Characteristics of these offerings include:
  
  - Insight-driven work from the service providers
  - Increased front/back office integration
  - Momentum around self-service, robotic process automation, and virtual agents
  - Joint investments for innovation and design thinking and problem solving workshops
  - Expansion into clinical services at health plans and claims processing at providers
  - Growth in government-funded health management support
  - On-shore resource support with new delivery centers and on-site staffing
  - Active listening, advisors, and consultants partnered with business process outsourcing services engagements

- **Active use of accessible data.** HfS heard a number of examples of service providers developing models, writing algorithms, and identifying patterns that led to changes such as reducing network and revenue leakage, member and patient satisfaction, and call deflection via self service.
Orienting around outcomes is driving increased focus and opportunity for analytics. Healthcare as an industry is increasingly oriented around outcomes – value-based care is about results. The Affordable Care Act and the Centers for Medicare and Medicaid are driving regulations and payment/reimbursement practices in such a way that services conversations are more and more about how to attract and retain desired members, increase “right time, right place” health and care management, impact revenues and reimbursements, and contain and reduce costs. This means that the need for real-time, dependable insight is increasingly critical for growth and sustainability. That kind of analytical insight comes from combinations of data to create a full view of individuals and populations – financial, administrative, clinical, structured and unstructured – that is difficult to achieve. Challenges include interoperability, feelings of “ownership”, concerns about security and privacy, etc. Accordingly, service providers are investing in intelligent automation, “apps” or on-demand as-a-service capabilities, and HITECH as well as HIPAA certifications and increasing clinical and transformation and advisory capability in their business process outsourcing services practices. They are also investing in and rolling out dashboards for real-time and accessible data.

To increase capability for strategic partnering, service providers are active in acquisition mode, with themes including:
- Data and analytics: RSA Medical by Conduent; RPM Direct, DataSource Consulting and IQR Consulting by EXL; Nuevora by Sutherland
- On-shore and government health support: TMG Health by Cognizant; Health Integrated by EXL
- Platforms: Tigerspike by Concentrix, Tribridge by DXC; HealthPlan Services by Wipro
- Design, consulting, advisory: Sagacious by Accenture; ReD Associates by Cognizant; Advisory Board Company’s health care practice by Optum
State of the Market: Healthcare Business Operations, Continued

- **More innovation but not always with the service provider.** “We are now looking at innovation pace more broadly – even beyond suppliers,” shared a healthcare operations executive. In other words, this healthcare payer is increasingly open to being innovative as an organization and can then partner with service providers along these lines. Another executive shared, “we (client) need to invest more in learning what’s out there in operations and how to champion it and bring it back into our organization.” On the other hand, HfS also heard from another client that while they are looking at incorporating technology such as RPA into the way they work internally, they are doing it outside of conversations with their service provider.

- **Increasing scope and maturity of services.** Clients and buyers increasingly acknowledging the clinical capability and resources within the service providers and expanding outsourcing services into health, care, and wellness programs, medical review and preauthorization review, and payment integrity. This is also helped with service providers investing more in consulting, thought leadership, and innovation and design centers and programs. “We are starting to move beyond transaction activity,” said a client. In the past year, the amount of claims processing work for government health sponsored programs has increased exponentially, but not always with additional headcount, e.g., “we have given them additional work and they have absorbed it without adding staff” due to the use of process improvement and automation.

- **Contracting still mostly FTE and headcount based but shifting to hybrid.** As one client explained, FTE based models are still in place for them “primarily because of our inability to forecast volumes and move to transaction based... we are trying to get our arms around forecasting to provide accurate volumes of work item types and build out the transaction model/running in parallel with FTE... we are finding transaction-oriented right now might cost us more...”
State of the Market: Healthcare Business Operations, Continued

- **Steady increase in understanding of value and use of intelligent automation.** The digital operations of the future need to be at the intersection of Analytics (insight to action), Artificial Intelligence (learn), and Automation (do). What needs to wrap around it is change management and cultural adaptation to digital and its implications, which are not just about technology but also about how the technology is used to drive real business results through behavior. Given this status of the business operations industry, healthcare organizations would do well to partner with service providers to design a thoughtful approach to the use of intelligent automation to solve problems and not look at it as a technology. One place we have seen more than one service provider incorporate this “triple trifecta” of analytics, RPA, and AI is using the technology to scan data in multiple documents to highlight key words and phrases that help shorten the time for medical review activities.

- As one client shared about their service provider partner use of RPA as part of a solution: “the model they use is very effective... training, planning, automation, and continuous improvement”

- Another one noted that as they are designing an internal strategy for the use of intelligence automation, they are in discussions with their service provider partner “and there is interest in looking at their tools for AI and machine learning and how we might work with them to use it”

However, most of the interviewees in the study noted that they are dealing with IT teams that are nervous about introducing something “new” into an environment of multiple and often homegrown legacy systems, which one described as having “tentacles into financial and provider systems.”
State of the Market: Healthcare Business Operations, Continued

- **Slow but steady growing market:** HfS is not seeing the multi-year, mega-million BPO deals of yesteryear; trends include:
  - Growth in government health services support, including eligibility and enrollment and claims processing as well as care management
  - More activity with mid-sized healthcare payers, Blues, and “payviders” at the intersection of payer/provider and networks of providers
  - Increased support for individual versus group member management
  - Increased demand for services including: case management, clinical support, data management, care coordination, network management, claims processing, and payment integrity

- **The value of speed.** A theme in this year’s research is helping clients shorten the time to payment and improve reimbursement, react to changes in demand quickly, and troubleshoot. Design thinking and intelligent automation are being used by most if not all providers to increase and improve auto-adjudication, reduce rejection rates, and lower penalty and interest payments – all at greater speed and accuracy. “Because of the issues with health insurance, the complexities of the business have increased and our service provider has had to respond to business needs in a more ready to go and get it done fashion and it has worked,” shared a healthcare operations executive.
State of the Market: Service Providers

As-a-Service Winners are service providers that are in collaborative engagements with clients, share a clear and compelling vision for the future of healthcare business operations, and are making recognizable investments in future capabilities in talent and technology to continue to increase the value over time. These providers are also leading in incorporating analytics and/or BPaaS to deliver insight driven services.

- Accenture, Cognizant, EXL, HGS, Optum, Sutherland

The High Performers all execute well, are investing in future capabilities, but need to gain more consistency and traction among clients in defining and delivering against business outcomes, and using analytics in ongoing services:

- Concentrix, Conduent, Infosys, NTT DATA

Service providers with High Potential for delivering increasing value over time, but currently need to gain momentum and client references behind the innovation:

- DXC, Hexaware, Wipro

As-a-Service Economy

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

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

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

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

Source: Beware of the Smoke: Your Platform Is Burning by HfS Research, 2015
Journey to OneOffice in Healthcare Business Operations
State of the Health and Care Market: Shift to Value-Based Care

In the U.S. healthcare industry, we need:

1. Better general health and wellness
2. Better care experience
3. Lower cost of healthcare services per capita
4. Economically viable businesses and organizations to provide products and services to make #1 – #3 real

As the healthcare industry moves from fee for service to value based care – payment and reimbursement for outcomes and results – the “value” of healthcare takes on new meaning.

Value shifts from being about a person or insurance company paying for services regardless of outcome to a healthcare provider being paid based on outcomes.

It puts greater emphasis on the quality and timeliness of services and the impact they generate for the person involved – as a patient, caregiver, physician, pharmacist, or community member.

This move needs to be about bringing humanity to health and care, which in turn will change the health, medical and financial outcomes for the better.

“There's no reason a 4-hour transfusion required 84 hours of negotiation and frustration.”

- Jess Jacobs, a patient who tracked time spent on filling out duplicate documentation, being rescheduled for appointments, waiting on calls, and in waiting rooms
State of the Health and Care Market: A Good Experience Is Good for Business

When we talk about people as healthcare consumers and patients and putting them at the center of care – for patient centered and value based care, we are often in a conversation about the “front lines” – the clinicians, caregivers, pharmacists, etc. However, everyone plays an impactful role in achieving value based care and health, medical, and administrative outcomes.

No matter the role or type of work – clinical nurse, x-ray technician, billing coordinator, coding professional – it impacts the healthcare consumer. Operational pain points evident in these stories and others include: lack of interoperability and communications, speed of transactions, and accessibility and quality of data.

A good healthcare consumer experience is also good for the industry – and for creating economically viable businesses. Healthcare business operations are core to this industry transformation.

“As a patient, I learned things about us – physicians and other medical professionals – that I might not have wanted to know...that though we do so many difficult, technical things so perfectly right, we fail our patients in many ways.”

- Dr. Rana Awdish after her first-hand patient experience in the hospital where she works
State of the Health and Care Market: Rethinking Business Operations

How important are the following mechanisms to support a digital operating model that achieves effective real-time customer alignment?

Data analysis, insight and sense-making on information derived from all customer touchpoints

- 21% Mission critical
- 58% Very important

Encouraging teams to work autonomously across functions to develop seamless end-to-end process chains across the...

- 23% Mission critical
- 51% Very important

Implementing Design Thinking to help your talent share problems and solutions to meet customer needs better

- 26% Mission critical
- 44% Very important

Changing digital customer interfaces / interaction channels with our organization

- 24% Mission critical
- 45% Very important

Cultivating employees that understand and can apply the new digital opportunities afforded by algorithms,...

- 25% Mission critical
- 44% Very important

Enhancing processes with insights to mirror the behavior of customers

- 20% Mission critical
- 46% Very important

Creating broader roles in the enterprise and aligning human performance with the achievement of common business...

- 22% Mission critical
- 43% Very important

Adopt a collaborative digital customer engagement model, such as Uber and AirBnB

- 22% Mission critical
- 39% Very important

Source: HfS Research, “Journey to the OneOffice 2017” Sample n=395 Enterprise Buyers

The healthcare industry is heavily regulated and while compliance can yield best results for the business, it also slows down change to be more connected with the consumer.

This industry is one that is in dire need of change as the cost of healthcare continues to rise and consumers become increasingly financially responsible and therefore more demanding about the quality and impact of services.

Effective future operations will be oriented around the customer and stakeholder experience and use analytics and digital technology to have predictive insight for proactive action and better outcomes – higher quality, speed, and profitability.

It’s what HfS calls the Digital OneOffice.

“We want to live the Blue Shield core values of building trusting relationships to do the right thing, busting silos and bureaucracy to respond to our customers’ needs.”

- Pradip Khemani, Senior Director, Global Business Services, Blue Shield of California

Consumer Centricity As the Heart of Cultural Change at Blue Shield of California
The Future of Operations: The Digital OneOffice

In healthcare business operations, this means, for example, designing processes that are digitally enabled to deliver the right service at the right time and place ... for a patient, in network, reducing or even eliminating disputes or collections or calls to customer support.
There are Eight Ideals to Enable the Journey to OneOffice

- Realizing the OneOffice vision means changing the nature and focus of engagement among enterprise buyers, service providers, and advisors to be more agile and collaborative, focused on shared outcomes.
- “As-a-Service” unleashes people talent to drive new value through smarter combinations of talent and technology focused on business results beyond cost reduction.

Change Management Ideals:
1. Write Off Legacy
2. Design Thinking
3. Brokers of Capability
4. Collaborative Engagement
5. Intelligent Automation
6. Accessible & Actionable Data
7. Holistic Security

Leveraged Assets
8. Plug-and-Play Digital Services
As-a-Service Economy
Solution Ideals
## Legacy Outsourcing

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<td><strong>Write Off Legacy</strong></td>
<td>Adopting a mindset to overhaul obsolete processes. Using platform-based solutions, DevOps, and API ecosystems for more agile, less exception oriented systems and processes</td>
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<td>Resolving problems by looking first at the process as the source of the solution</td>
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<td>Understanding the business context to reimagine processes and align technology to address end user needs</td>
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<td><strong>Brokers of Capability</strong></td>
<td>Orienting governance to source expertise from all available sources, both internally and externally, to address capability gaps</td>
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<td>Evaluating relationships on baselines of cost, effort, and labor</td>
<td><strong>Collaborative Engagement</strong></td>
<td>Ensuring relationships are contracted to drive sustained expertise and defined outcomes</td>
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<td>Operating fragmented processes across multiple technologies with significant manual interventions</td>
<td><strong>Intelligent Automation</strong></td>
<td>Using automation and cognitive computing to augment human performance</td>
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<td>Performing ad-hoc analysis on unstructured data with little integration or business context</td>
<td><strong>Actionable and Accessible Data</strong></td>
<td>Making data available and applying analytics models, techniques, and insights to drive insights and action plans</td>
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<td>Responding with post-event fixes, little focus on end-to-end process value chains.</td>
<td><strong>Holistic Security</strong></td>
<td>Proactively managing data across service chain of people, systems, and processes</td>
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<td>Undertaking complex transitions to reach steady state</td>
<td><strong>Plug-and-Play Digital Business Services</strong></td>
<td>Plugging in “ready to go” business-outcome focused, people, process, and technology solutions with security measures</td>
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How As-a-Service Is Taking Shape: Writing Off Legacy

Legacy technology investments that limit agility and create exceptions addressed by adding internal and external FTEs

Using platform-based solutions, DevOps, and API ecosystems for more agile, less-exception-oriented systems and processes

- Transformation is a buzzword of the day, and from many interviews HfS can tell you that it will not be successful without the willingness to change the way work has been done. A company will get the kind of results it is design to achieve – so if you want different results, the company needs to change, including a willingness to write off old systems, adapt or eliminate existing workflows and processes, and invest in people’s skills, talent, and engagement. There are many business silos, clunky and inflexible systems, and limiting policies in healthcare. At the center of the system, though, is the consumer and their health and care; it’s something that every organization has in common and can benefit from impacting in terms of increased access and experience with care at a higher quality and lower cost. The technology, passion, and talent are coming together to drive results.

Examples:
- Accenture is working with executives in healthcare organizations that want to be “responsibly disruptive.” Often these leaders are from other industries like retail, financial services, and telecom, where the consumer has been central to the growth and transformation of new and existing companies. The focus is on engaging across client companies and tapping into Accenture’s capabilities for design, change management, analytics, and IT.
- A handful of established healthcare organizations have recently partnered with service providers to write off legacy – Emblem Health and HCSC (the TMG arrangement) with Cognizant and Blue Cross Blue Shield Rhode Island with NTT DATA. In each of these cases, the service provider is responsible for partnering to provide platform-based business services.
- Cognizant’s Health TranZform platform is designed to be system agnostic with published APIs and an “App Store” concept to enable data accessible by different groups looking to solve shared problems for patients and populations. Clients can subscribe to services, such as to Utilization Management As-a-Service, Wellness As-a-Service, and Quality As-a-Service.
How As-a-Service Is Taking Shape: Design Thinking

Resolving problems by looking first at the process as the source of the solution

Understanding the business context to reimagine processes and align technology to address end user needs

▪ “Design Thinking is a human-centered approach to innovation...to integrate the needs of people, the possibilities of technology, and the requirements for business success,” per Tim Brown, CEO, IDEO. While design thinking has been used to create innovative products for years, it’s a newer way to innovate services and business operations. Design Thinking provides a way to define and solution for problems with a human-centered approach. It helps shift the focus of work and engagement from “internal” to “external”: what matters to the end user and then map the process and technology solution.

Examples:

▪ Sutherland is integrating the principles of design thinking into the way they work internally as well as with clients, which is described by one of the clients and Sutherland Labs in How Design Thinking Is Changing Business Operations(link). It’s using insight from the collections process to re-think the front end interaction with patients to impact finance.

▪ To address the CMS mandate that provider directors get updated correctly within 30 days, Accenture worked with a provider network on what makes it easy for them to get it done – to develop the solution for a payer client.

▪ Concentrix facilitated a cross organization team with representatives from a manufacturer and healthcare provider and through an assessment of a delivery situation identified an opportunity that is targeted to deflect customer service calls by creating better communication and coordination on the front end of a hospital supply chain – more accurate deliveries, better timing, and fewer customer service calls.

“Healthcare is a challenging environment for a variety of reasons. So, we need innovative thinking to move us forward with value-based care. When people are at the most vulnerable moment in their lives, we want them to feel as comfortable as possible under our care.

Design thinking gives us a framework that puts the patient experience, where it should be for care – at the center – and the approach gives us a shared pathway for how we operate: shared within the hospital between departments, with the community, and with partners.”

- Dr. Pracha Eamranond, SVP, Medical Affairs and Population Health, Lawrence General Hospital

What Difference Does Design Thinking Make in Healthcare Services?
How As-a-Service Is Taking Shape: Brokers of Capability

Focusing governance and operations staff on managing to the letter of the contract and the decimal points of service levels. Orienting governance to source expertise from all available sources, both internally and externally, to address capability gaps.

- Being a broker of capability is about articulating a business problem or opportunity, the desired outcomes, and then coordinating and facilitating across internal and external entities to reach those results. Within service buyer organizations, we see more strategic management of service provider and vendor portfolio — increasing the focus and value on relationship management along with governance and contract management of third parties. We explore this change further in the interview-based The Rise of Supplier Management and in the effort of a healthcare payer: Consumer Centricity as the Heart of Cultural Change at Blue Shield of California.

Examples:
- Sutherland brokered across multiple health plans to define and solution for a shared challenge of matching Medicaid patients to in-network physicians for appointments within a specified time frame. The plans are using this outsourced shared services model with an analytics platform and agents to provide the service.
- HGS is considered a flexible proactive broker, for example, creating a proprietary training module to create coders for rework and denials in anticipation of the ICD-10 transition.
- Optum clients appreciate the forums that the service provider hosts; it gives them an opportunity to learn and share ideas and priorities.
- Many service providers are developing and incorporating business advisory and transformation leadership capability into their business process services, versus it being separate in their organizations. And, as the focus increases on reimbursement and revenue growth and population health and care management, and continues on cost containment at the same time, service providers are investing in clinical and technical resources and partnerships to be one step ahead.
How As-a-Service Is Taking Shape: Collaborative Engagement

At the core of the As-a-Service Economy—linking the solution ideals to the change management ideals that make a solution effective over the long term—is collaborative engagement. Increasingly, business, operations, and sourcing executives are consciously deciding if partnerships are strategic or tactical. Tactical partnerships are simply for delivering a product or service that meets key performance indicators. A collaborative engagement is more strategic – the service buyer shares the context and strategy with their partner, and looks for cultural alignment or synergy. Increasingly, HfS also hears examples of how service buyers and service providers balance KPI dashboards with discussions, pilots, and investments in innovation.

Examples:
- Cognizant with Emblem Health and NTT DATA with Blue Cross Blue Shield of Rhode Island have entered into BPaaS engagements that have the service provider as an integral part of the client’s organization going forward. These arrangements are only successful if the service provider and client are aligned on vision and a shared journey. For example, a client said of NTT DATA, “they are a strategic partner and part of the fabric of our organization.”
- Another example of collaborative engagement was reflected by a client that appreciates the depth of knowledge Conduent has about their business, “they are good at analyzing the business and being supportive but also knowing when to say no and suggest alternatives.”
- Active listening is a critical capability for a collaborative engagement and HGS has been described as being great in this area and doing a good job at managing expectations.
- Accenture and EXL consistently receive kudos for partnering in a thoughtful way. Accenture has effectively integrated business advisors and design principles into account management and service delivery; EXL is considered very flexible and resourceful in creating solutions and providing services.
How As-a-Service Is Taking Shape: Intelligent Automation

Operating fragmented processes across multiple technologies with significant manual interventions

Using automation and cognitive computing to blend analytics, talent, and technology

- “Intelligent Automation” is a way to describe the myriad technologies that automate work in an increasingly sophisticated way, from desktop automation to robotic process automation (RPA) to cognitive computing to artificial intelligence. In global business services and operations, RPA is the software that completes rules-based tasks, executes workflow, and processes transactions. Today’s conversations are less about whether or not to use it, but where to start, how to manage expectations, and how to govern the scale and integration into the way the business works.

- The consideration of RPA as a strategic component of a business framework, technical infrastructure, and talent model is still fairly immature in healthcare, but moving from tactical to strategic. Today’s questions about RPA have moved beyond point solution to enterprise management, governance, and impact on outcomes. In reality, RPA is one of three keys to strategic business services for impact on business outcomes. The other two are artificial intelligence and analytics. HfS has termed this model the “Triple A Trifecta” — the intersection is where the value of RPA is realized.

Source: HfS Research 2017
How As-a-Service Is Taking Shape: Intelligent Automation, Continued

Most healthcare payer and provider organizations are in pretty early stages of using robotic process automation (RPA) internally. An operations leader at a payer described their approach here: How a Healthcare Insurance Company is Bringing RPA and AI into Business Operations. If you are not using RPA yet, it’s time to take a look at how to do so. Across all industries, data collection and processing can be automated by over 60%, according to research by McKinsey. And healthcare is a data-intensive industry so has lots of potential. Having that work automated will create higher quality, consolidated data pools faster and free up resources to use that data in new ways.

Benefits of RPA include at least seven objectives and associated qualitative or quantitative metrics that can be used to build a business case and measure results of digital labor initiatives: cost, efficiency, effectiveness, speed, quality, scale, experience, and effort (e.g., does the use of RPA reduce the time a customer spends to purchase a product or service or get a request addressed), as shared by Lee Coulter, CEO of Ascension Services in an HfS Webinar (Making RPA and Data the Foundation for Your Digital Transformation Strategy).

The primary value points we heard during this study were: (1) accuracy to increase quality and (2) speed for throughput. What raises the value of RPA is using it as a building block in a solution. Increasingly, we hear of integrated business process management (BPM) and RPA, such as with PegaSystems, and OpenConnect combines RPA and operational analytics capabilities.

In general, it helps transform the work people are doing to increase engagement and excitement about their work and contribution to the business, shared Lee Coulter on the webinar. Within any initiative to use intelligent automation there must be change management to change the “push” to a “pull” for integration and impact on business outcomes, which is further described by Adrienne Peseller who leads the RPA change management effort at Prudential: The Human Side of RPA.
How As-a-Service Is Taking Shape: Intelligent Automation, Continued

• **RPA** “does the work” and opens the door to AI and analytics. It’s a building block for a more sophisticated business operation – automating processes for workflow and data input, validation, consolidation and management. It sits outside of and interfaces to existing platforms so is a good way to enable flow between disparate systems. Technology providers we hear about in healthcare include: Automation Anywhere, Blue Prism, OpenConnect, and UiPath.

  - In the realm of **artificial intelligence**, for business operations, a common scenario is the use of natural language processing (NLP) to capture data and machine learning to process content faster and more accurately or to run a process such that it combines automated work with human work. One example is providing customer support online through self service and chat that is optionally picked up by an agent in process as needed. Technology providers we hear about in healthcare operations include IPSoft (Amelia) and IBM Watson.

Examples:

• Wipro is working with clients to use analytics models and artificial intelligence in the Opera Signal Hub to compare and contrast data in real time and determine propensity for over- or under-payment on a claim, then route outliers to nurses or coding specialists for remediation. As appropriate, Wipro will commit to cost savings and impact.

• NTT DATA is exploring with clients how to move from “routine task automation” to “non-routine” – e.g., “routine” use of autonomous bots collecting data from spreadsheets, PDFs, and unstructured data in a provider data management solution, and “non-routine” integration of virtual agents like Amelia to provide automated natural language support such as helping a customer pick a plan during enrollment. NTT DATA also creates a visual tracker like a thermometer to show impact on outcomes and give a feeling of progress.

• Through use of “SmartProviderDataManagement,” Sutherland found 30% of customer calls were people trying to get information about healthcare providers relevant to their medical needs and introduced a virtual assistant tool that helps people pick physicians in network without having to call.
How As-a-Service Is Taking Shape: Intelligent Automation, Continued

Examples:

- Cognizant’s Healthcare Process Automation (HPA) is a robot-to-robot management structure integrated with domain-centric process knowledge used to delegate work actions to myriad individual robots; Cognizant is experimenting with “Smart UM” to apply automation to data entry, authorization case creation, and reviews to move toward “real-time authorization.”

- HGS has integrated automation into the architecture designed for an omnichannel experience through its “DigiCX” initiative. Intelligent Automation is used to enable self-service online and with call center/customer service agents to provide integrated views of members, for example, that call with questions, and text and voice analytics are used to automatically identify and route feedback.

- A common scenario we are finding for AI is in medical chart review. In some instances, it can take 15 minutes or more to review a document to find conditions and evaluate for HEDIS and utilization and authorization, for example. Documents can be converted into digital through OCR or NLP as needed and the computer can be taught to read, identify, and evaluate, make recommendations, and learn over time based on feedback from human supervision and intervention. Accenture, EXL, and Infosys are using AI for medical chart review.

- Infosys is helping a client reduce a manual two-step quality control process in claims transactions by introducing RPA. RPA will run quality checks at scale with fewer resources and enable the client to increase the size of business covered by this work without increasing investment. It’s also introducing AI into provider data management, using the proprietary NIA platform to continually monitor provider data sources, match records, and select the correct value.

- Hexaware takes an automation-first approach and if a client is interested, will sign up for guaranteed outcomes when using its solution-based offering for healthcare operations support. For current operations, it has a very straightforward model of what can be automated within a process to help focus and map a plan.
Healthcare Organizations Are Mostly Using RPA in Discrete Parts of Processes and Building Strategies for Integration into Operations

How would you describe your organization’s current automation strategy?

- Project use/case focused
- We are integrating in our service delivery
- We are in the process of formulating a strategy
- We have built/are building a Center of Excellence
- We are mandating this as a requirement for our service provider
- No strategy

Source: “State of Automation 2017”
Sample: Enterprise Buyers = 400
Healthcare N= 80
Outside of IT, the Greatest Satisfaction with RPA Is When It Is Part of a Broader Initiative

In a survey of 80 executives in the healthcare industry, 33% said their organization has piloted or implemented RPA. IT finds high value in the use of RPA as it is applying it at a point in time. Business leaders need to look at broader businesses cases where RPA is part of an overall solution to solve a problem, not THE solution.

**SAVINGS: How satisfied have you been with its ability to drive savings? (RPA)**

- **n=26**

<table>
<thead>
<tr>
<th>Function</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
</tr>
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<tbody>
<tr>
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<td>Master Data...</td>
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<tr>
<td>Finance &amp; Accounting</td>
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**BUSINESS VALUE: How satisfied have you been with its ability to drive business value? (RPA)**

- **n=26**

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<tr>
<td>Finance &amp; Accounting</td>
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<td>50%</td>
</tr>
<tr>
<td>Marketing</td>
<td></td>
<td>29%</td>
</tr>
</tbody>
</table>

IT has found quick win in using RPA for automating the workflow of who should have access to what systems and applications, identity management, as well as resetting member, patient, and clinic personnel passwords.

Source: “State of Automation 2017” Sample: Healthcare Industry Enterprise Buyers out of 80 that have piloted or implemented RPA = 26
How As-a-Service Is Taking Shape: Accessible and Actionable Data

Performing ad-hoc analysis of unstructured data with little integration or business context

Applying analytics models, techniques, and insights from big data in real-time

- Accessible and actionable data is the key to impacting financial, administrative, health, and medical outcomes. It’s central to pretty much every conversation about how to impact change in the healthcare industry. Service providers that have been processing transactions for years as business process outsourcing providers have also been working on how to best use this data in a secure way to derive insights that can lead to greater efficiencies. All service providers are working with data, but are at varying degrees of sophistication in terms of making it actionable and accessible or going the next step to analytics it for insights and actions. Many have developed dashboards for operational and clinical reporting and analysis.

- The most effective analytics – analysis of data for insight that leads then to plan and action – starts with aggregated, cleansed, and standardized processes and data. It typically builds on where a service provider has established a level of trust, operational stability, and depth of industry or functional expertise. Much of the analytics work in healthcare operations business process services has been in payment integrity, addressing fraud, waste, and abuse, managing networks and network leakage, improving customer service such as with first call resolution, identifying opportunities for health outreach and care interventions, and improving cash flow, reimbursement, and revenue opportunities.

- Service providers are engaged in all levels of the spectrum, including data aggregation and cleansing, stratification, analytics, and action. Some are engaged at a certain point, and others, across the board. We’ve seen an increase over the past year in the engagement of service providers in on-going analytics support versus point projects or consulting engagements, such as “analytics as-a-service.” With the focus in healthcare overall on impacting health outcomes and the associated challenge in healthcare organizations to find and keep the resources who define and execute this work, we expect this type of engagement to grow.
How As-a-Service Is Taking Shape: Accessible and Actionable Data, Continued

Examples:

▪ Working with a healthcare provider, Sutherland helped improve cash flow and accounts receivable by evaluating the patient access and information points, noting expenses and pain points created by missed appointments, cancelled surgeries (due to misinformation on prep), incomplete presurgical verification and authorization. The solution included education and communications for patients as well as predictive analytics and performance management to track key indicators that have helped decrease rescheduling, claim denials, and AR. (link)

▪ For one health plan client, Conduent’s acquisition, RSA Medical, used MedGine/Conduent Link to help stratify, prioritize, recommend, and action plans to improve health risk assessment completion and member integration into clinical and support programs to meet state requirements. According to a client, “they have the ability to touch a portion of the population we do not have the resources to reach.”

▪ During the enrollment period, NTT DATA is evaluating “customer friction factor” for a group of health care payers to help identify and address pain points for consumers, members, and agents to create a better experience and impact overall.

▪ To help a healthcare payer client reduce readmissions, EXL used proprietary consumer and financial score data (from its RPM acquisition) combined with health and medical data to model and prioritize interventions and how to approach the intervention. The consumer score was used as input for determining behavior and as a guide for how to do the intervention. It helped nurses prioritize cases and focus resources.
How As-a-Service Is Taking Shape: Accessible and Actionable Data, Continued

Examples, continued:

- In the area of payment integrity, Optum worked with a healthcare payer client to help manage medical and administrative expenses. The team focused on pre-payment and ability to move claims editing from post pay to pre pay. They did a health assessment on the process and outcomes and set up a solution that’s on track to show a 30% improvement in the first year. Optum brings together its enterprise data platform, machine learning, and “micros services” in the health and care management space as well, matching patients to “optimal” providers and care facilities, identifying opportunities for intervention, and evaluating appropriate treatment options.

- A number of service providers including Accenture, Cognizant, and NTT Data have dashboards and command centers that give greater visibility into operations and alignment with outcomes. Even without a dashboard though, most are getting better about sharing performance indicators within context, such as HGS, which a client described as providing impactful, actionable data.
How As-a-Service Is Taking Shape: Holistic Security

Responding reactively with post-event fixes; little focus on end-to-end process value chains
Proactively managing digital data across a service chain of people, systems, and processes

- Holistic Security is the proactive management of data security and privacy across internal and external people, process, and technology. In business process outsourcing engagements, data has typically been secured by being accessed remotely via Citrix for transaction processing. However, there is potential for greater value in collaborative engagement when healthcare service buyers and service providers use data for insight-driven services. As such, service providers invest in training and system security with increasing sophistication in order to reach new levels of digital trust and provide insight-based and analytics-as-a-service. In addition to training and certifying employees on HIPAA compliance and PHI, a number of service providers have invested in HITRUST (Health Information Trust Alliance) training and certification for systems. Additionally, we’ve heard of tools and efforts to mask data for analysis to build algorithms and show what could be done with “live” data.

Examples:
- Accenture has HITRUST certification for its Accenture Insights Platform to raise the level of confidence in the use of data for analytics. NTT DATA is also pursuing HITRUST certification to provide cloud-based services in a confidently secure environment.
- Cognizant has developed a specialty compliance team and its solutions solutions allow for processes to create “bread crumbs” so clients can track each process step and ensure compliance to regulatory standards and adherence to standard operating procedures.
- Consider the security investments that third parties have made in their modern platforms, e.g., DXC’s acquisition, Tribridge’s cloud-based care management solution. One client said, “We’ve seen that the cloud is a safe place to keep information, and vulnerabilities only arise from the ways in which users access information: for example, having weak passwords, or downloading information onto a personal computer.” It’s not BPaaS but shows the potential for a secure cloud-based business process offering. (link)
How As-a-Service Is Taking Shape: Plug-and-Play Services

Undertaking complex and often painful technology transitions to reach a steady state

Plugging into “ready to go” business outcome-focused, people, process, and technology with security measures

- With “newer” problems to solve that are not easily addressable with legacy systems, there is an opportunity for BPaaS in the healthcare industry. And the interest in growing among health plans, healthcare providers, and new companies/organizations that need a reliable solution fast. Service providers that have been willing to take a risk to lead the way have the most momentum in this area. The problems and opportunities being addressed are mostly around outreach and quality (driven by Stars and HEDIS), outdated legacy systems for member services and provider network management. The service providers that seem to be getting the most traction are those that have been known for infrastructure and application capability as well as business process services.

Examples:
- Cognizant has the broadest portfolio and greatest momentum with BPaaS. One of the examples is with a Medicare health plan that had a 2014 Star rating that did not meet organizational expectations, leading to low reimbursement. The client now uses the Onvida BPaaS – Cognizant nurses identify and reach out to members to encourage medication adherence and address gaps in care that are identified by the StarSERV application. The Star rating increased as desired.
- A large Health Plan is using a BPaaS model run by Accenture to manage senior health products and services on behalf of other plans. The service agents use a platform to support the plans administration and care management including CMS mandated reporting. This approach proactively manages the seasonal peaks in enrollment, claims, and update transactions and includes a visual interface for reporting and analytics.
- EXL, Hexaware, NTT DATA, and Wipro also offer platform-based business process as-a-service.
Research Methodology
Research Methodology

Data Summary

- Data was collected via RFIs, interviews, briefings, and publicly available information sources Q3 and Q4 2017. Sources include: buyers, providers, and advisors or influencers of healthcare operations business process services for operations and outsourcing.

Participating Service Providers

This report is based on:

- **Tales from the trenches:** Interviews with buyers who have evaluated service providers and experienced their services. Some contacts were provided by service providers, and others were interviews conducted with HfS Executive Council members and participants in our extensive market research.

- **Sell-side executive briefings:** Structured discussions with service providers regarding their vision, strategy, capability, and examples of innovation and execution.

- **Publicly available information:** Thought leadership, investor analyst materials, website information, presentations given by senior executives, industry events, etc.
## HfS Blueprint Scoring: Healthcare Operations Services

### EXECUTION

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Account Management</td>
<td>15%</td>
</tr>
<tr>
<td>Quality of Service Delivery</td>
<td>15%</td>
</tr>
<tr>
<td>Embedding Automation</td>
<td>10%</td>
</tr>
<tr>
<td>Point Solutions vs End-to-End Enablement</td>
<td>10%</td>
</tr>
<tr>
<td>Workforce Management and Talent Development</td>
<td>15%</td>
</tr>
<tr>
<td>Generating Accessible and Actionable Data</td>
<td>10%</td>
</tr>
<tr>
<td>Ability to Attract and Retain Skills</td>
<td>15%</td>
</tr>
<tr>
<td>Flexible Pricing Models and Contracting</td>
<td>10%</td>
</tr>
</tbody>
</table>

### INNOVATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Automation and Examples in Healthcare Operations</td>
<td>10%</td>
</tr>
<tr>
<td>Investing in Future Talent and Technology</td>
<td>15%</td>
</tr>
<tr>
<td>Vision for Future Healthcare Operations As-a-Service or for OneOffice™</td>
<td>15%</td>
</tr>
<tr>
<td>Use of Analytics</td>
<td>15%</td>
</tr>
<tr>
<td>Collaborative Engagement and Value of Engagement Over Time</td>
<td>15%</td>
</tr>
<tr>
<td>Use of Technology: Tools, Platforms</td>
<td>10%</td>
</tr>
<tr>
<td>Use of Design Thinking and Creative Problem Solving</td>
<td>10%</td>
</tr>
</tbody>
</table>
## HfS Blueprint Scoring: Healthcare Operations Services

<table>
<thead>
<tr>
<th>EXECUTION</th>
<th>How well does the service provider execute on its contractual agreement, and how well does the provider manage the client/provider relationship?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of Account Management</strong></td>
<td>How engaged is the executive and management team in defining and managing the delivery of business services? How well does the service provider take feedback and incorporate it into the solution and delivery?</td>
</tr>
<tr>
<td><strong>Quality of Service Delivery</strong></td>
<td>What is the clients’ overall impression of the quality of service?</td>
</tr>
<tr>
<td><strong>Embedding Automation</strong></td>
<td>Is the service provider using automation? Is the client aware of it?</td>
</tr>
<tr>
<td><strong>Point Solutions vs End to End Enablement</strong></td>
<td>Does the solution provider offer or deliver solutions at a point in the process or end-to-end? Does the solution provider offer or partner to offer support across the whole value chain?</td>
</tr>
<tr>
<td><strong>Workforce Management and Talent Development</strong></td>
<td>How well does the service provider tap into industry (same or cross) practices and expertise? What is the talent development program?</td>
</tr>
<tr>
<td><strong>Generating Accessible and Actionable Data</strong></td>
<td>Is the service provider generating data through client work that is accessible and actionable by the client or by itself on behalf of or in partnership with clients?</td>
</tr>
<tr>
<td><strong>Ability to Attract and Retain Key Skills</strong></td>
<td>Do service buyers have access to the skills and capability needed to deliver relevant, continuous, quality work? The workforce management and development capability of the service provider. Is the attrition at, above, or below average for the industry?</td>
</tr>
<tr>
<td><strong>Flexible Pricing Models and Contracting</strong></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>
</tr>
<tr>
<td><strong>INNOVATION</strong></td>
<td><strong>Innovation is the combination of improving services and business outcomes.</strong></td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Intelligent Automation and Examples</strong></td>
<td>Is the service provider moving up the maturity curve of automation using robotic process automation, cognitive computing, artificial intelligence, etc.? Use cases and examples?</td>
</tr>
<tr>
<td><strong>Investing in Future Talent and Technology</strong></td>
<td>Is the service provider investing in developing talent with an eye toward capabilities that will impact value in the future? Is the service provider investing in the use of digital technologies in solutions?</td>
</tr>
<tr>
<td><strong>Vision for Future Healthcare Operations</strong></td>
<td>Does the service provider have, share, and engage in dialogue regarding the future healthcare operations? Is the vision communicated clearly?</td>
</tr>
<tr>
<td><strong>Use of Analytics</strong></td>
<td>Is the service provider offering or providing analytics? What are the use cases and examples?</td>
</tr>
<tr>
<td><strong>Collaborative Engagement</strong></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/contracts?</td>
</tr>
<tr>
<td><strong>Use of Technology Tools and Platforms</strong></td>
<td>What digital platforms does the service provider use to deliver healthcare operations support? Are they integral to the service provider’s offering(s)? How pervasive is the uptake of these digital platforms by clients today? Does the service provider offer/deliver BPaaS? How effectively does the service provider partner with third parties or integrate acquisitions for impact?</td>
</tr>
<tr>
<td><strong>Use of Design Thinking and Creative Problem Solving</strong></td>
<td>How effectively does the service provider identify and articulate problems and issues, and provide suggestions or partner to explore solutions? Has the service provider shared or recommended ideas or initiatives that have resulted in step change? Are they using design thinking with clients (with examples)?</td>
</tr>
</tbody>
</table>
Service Provider Analysis
Guide to the Blueprint Grid

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

<table>
<thead>
<tr>
<th>HfS Winner’s Circle</th>
<th>Execution</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>show excellence recognized by clients in the Eight Ideals in execution and innovation</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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Performers</th>
<th>Execution</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate strong capabilities but lack an innovative vision or momentum in execution of the vision</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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Potentials</th>
<th>Execution</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate vision and strategy but have yet to gain momentum in execution of it</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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Execution Powerhouses</th>
<th>Execution</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate solid, reliable execution but have yet to show significant innovation or vision</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>
HfS Blueprint Grid: Healthcare Business Operations 2017

**INNOVATION**

- **HIGH POTENTIALS**
- **HIGH PERFORMERS**
- **EXCELLENT AT INNOVATION AND EXECUTION**
- **HFS WINNER’S CIRCLE**

**EXECUTION**

- Accenture
- Cognizant
- Conduent
- Concentrix
- Infosys
- NTT DATA
- Sutherland
- HGS
- EXL

**Building All Capabilities**

- DXC
- Wipro
- Hexaware

**Execution Is Ahead of Innovation**

Excerpt for Optum
Healthcare Business Operations Services and Outsourcing Coverage

The service providers in this study all provide business process services, ranging from strategy and consulting to business process outsourcing and business process as-a-service (BPaaS). BPaaS is the combination of people, process, and technology packaged and contracted for outcomes with transaction pricing to address specific business issue or opportunity.

<table>
<thead>
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<th>Member Services</th>
<th>Provider Services</th>
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<th>Health and Care Management</th>
<th>Performance Management and Operational Analytics</th>
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<td>&lt;&lt; Full Coverage &gt;&gt;</td>
<td>&lt;&lt; Full Coverage &gt;&gt;</td>
<td>&lt;&lt; Full Coverage &gt;&gt;</td>
<td>&lt;&lt; Full Coverage &gt;&gt;</td>
</tr>
</tbody>
</table>

Coverage is based on service provider responses and contract reviews.
## Data and platform-driven analytics capability infused into healthcare business operations

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision for Speed to Value:</strong> The Optum business is built within a healthcare company to serve healthcare interests. Its vision is to enable a consumption-based, on-demand ecosystem that brings together multiple sources of data on a platform and uses machine learning and real-time analytics that enable people with decision support and recommendations. Clients find a powerful combination in the Optum consulting, platform, and services, such as with Optum360 using LifeCode natural language processing and computer-assisted coding to improve revenue capture and unbilled AR as well as increased physician query response rate. Optum offers BPaas for claims adjudication, payment integrity and automated call and contact center complemented by Technology As-a-Service cloud computing, machine learning, and automation. There is also an appreciated balance of on/offshore resources.</td>
<td><strong>Transparency on Workforce Development:</strong> HfS heard some questioning on how the workforce is sourced and developed, that perhaps it could be more transparent and faster. It’s not a debilitating issue, more of a wondering how people are trained and engaged in the more complex areas of work, to instill more confidence.</td>
</tr>
<tr>
<td><strong>Analytics:</strong> “They are good at finding a needle in a haystack,” said a client who taps into the platform and services; and the investment in resources for analytics and AI “shows” said another. Optum’s health care solutions are built on a data and platform-driven strategy featuring OptumIQ. OptumIQ integrates 180 million lives of claims, 98 million lives of clinical data and other disparate sources to build a common language that is leveraged in Optum risk adjustment, claims, payment integrity, and pop health.</td>
<td><strong>“Cooperation”:</strong> Optum is a part of UnitedHealthcare Group and some payers and providers may find this connection a little too close for comfort. Optum does operate separately and has examples of how it can set up firewalls to alleviate any discomfort in this area.</td>
</tr>
<tr>
<td><strong>Community Development Forums:</strong> Optum hosts an annual conference that is a great opportunity for clients to network, get ideas, and share challenges with each other as well as with Optum. They can also see where Optum is making investments in a show and tell environment This type of interaction also happens internally for talent development, for example, “The Garage,” a technology innovation sandbox and a corporate-wide “Innovation Day” that focuses on ways to improve the health care system. It’s also exploring the value of partnerships with academic institutions.</td>
<td><strong>Cross Industry Leverage:</strong> Because Optum is a healthcare industry only organization it does not have ready access to resources from other industries. Optum will likely have some because of the people it hires, however, it will not have a network or program around this area.</td>
</tr>
<tr>
<td><strong>Horizontal Administration:</strong> If a client is looking to partner for services for F&amp;A, Procurement, etc. they will need to look elsewhere and not have the synergies that may come through bundling. One area that this may be most relevant is digital marketing.</td>
<td><strong>Proprietary Technologies</strong></td>
</tr>
</tbody>
</table>

### Acquisitions and Partnerships

<table>
<thead>
<tr>
<th>Acquisitions</th>
<th>Key Clients</th>
<th>Service Delivery</th>
<th>Proprietary Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acquisitions:</strong></td>
<td>Top publicly named clients for Business Process Outsourcing Services include: UnitedHealthcare, Triple-S, Medica, Dignity Health, Mayo Clinic, Northwell Health, Quest Diagnostic, Monarch Healthcare, Southwest Medical</td>
<td><strong>Accreditation:</strong> NCQA for Case Management, Disease Management, Managed Behavioral Healthcare; URAC for UM and Case Management</td>
<td><strong>Optum Performance Analytics:</strong> comprehensive patient-linked, longitudinal data set</td>
</tr>
<tr>
<td>2017: Advisory Board Company’s health care business; Surgical Care Affiliates: ambulatory care services platform</td>
<td>2015: Catamaran: pharmacy care solution</td>
<td><strong>Healthcare Headcount:</strong> &gt;130,000 total FTEs with ~40,000 Service Delivery FTEs (Data, analytics and technology experts, combined with clinicians, actuaries and researchers)</td>
<td><strong>Optum360 Computer-Assisted Coding (CAC):</strong> Optum LifeCode</td>
</tr>
<tr>
<td>2014: MedSynergies, Inc.: RCM for physician practices; Alere Health: population health</td>
<td>2013: Humedica: population health analytics</td>
<td><strong>Healthcare Operations Delivery Centers:</strong> Operations in 38 cities across 6 countries:</td>
<td><strong>Optum Claims Manager:</strong> to drive rules-based clinical editing</td>
</tr>
<tr>
<td><strong>Partnerships:</strong></td>
<td></td>
<td></td>
<td><strong>Optum Electronic Data Interchange (EDI):</strong></td>
</tr>
<tr>
<td>Merck to develop and simulate the performance of contractual reimbursement models</td>
<td>University of California: to help transition to a value-based health care system</td>
<td>North America: ~50% (multiple sites), services, analytics</td>
<td><strong>Link:</strong> A secure digital platform that connects payers, providers, and vendors to exchange clinical and administrative data in real-time</td>
</tr>
<tr>
<td>Availity: for real-time admin, financial clinical data</td>
<td>Availability: for real-time admin, financial clinical data</td>
<td>Philippines: ~20% (Manila, Cebu), voice and clinical services</td>
<td><strong>Optum Enterprise Data Platform</strong></td>
</tr>
<tr>
<td>6 countries:</td>
<td></td>
<td>South America: &lt;5% (Brazil)</td>
<td><strong>Optum Application Services:</strong> API driven ecosystem of pre-built adaptors</td>
</tr>
</tbody>
</table>
Contract Data Analysis
Healthcare Outsourcing Contracts by Company Size

Client Organization’s Revenue as % of Deals

<table>
<thead>
<tr>
<th>Client Organization’s Revenue as % of Deals</th>
<th>Percentage of Deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20 B+</td>
<td>40%</td>
</tr>
<tr>
<td>$10 B - $20 B</td>
<td>9%</td>
</tr>
<tr>
<td>$5B+</td>
<td>8%</td>
</tr>
<tr>
<td>$1 B - $5 B</td>
<td>6%</td>
</tr>
<tr>
<td>&lt;$100 M</td>
<td>15%</td>
</tr>
<tr>
<td>NA</td>
<td>11%</td>
</tr>
</tbody>
</table>

- Healthcare BPO is dominated by large enterprise buyers
  - All contracts having the TCV of < $20 million are driven by large enterprises with revenue of $5 billion and above
  - From 2015 to H1 2017, large enterprises contributed 70% to contract renewals/extensions

- The size of contracts is proportionately related to the length of contract. Larger contracts have an average length of 4.3 years

- Midmarket service buyers continue to outsource smaller deals and are the target market, especially as these enterprises can take advantage of As-a-Service offerings.

Source: HfS Research, 2017; n = 324 live multi-process Healthcare BPO Contracts; based on live contracts over $0.5M in TCV with a minimum of two core processes bundled
Healthcare Outsourcing Deal Length Consistently Trends Toward Five Years or Less

Length of PO Contract Term
Number of Contracts

<table>
<thead>
<tr>
<th>Length of Contract Term</th>
<th>Number of Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2 Years</td>
<td>16%</td>
</tr>
<tr>
<td>2-3 Years</td>
<td>22%</td>
</tr>
<tr>
<td>4-5 Years</td>
<td>41%</td>
</tr>
<tr>
<td>6-7 Years</td>
<td>5%</td>
</tr>
<tr>
<td>8-10 Years</td>
<td>14%</td>
</tr>
<tr>
<td>&gt; 10 Years</td>
<td>3%</td>
</tr>
</tbody>
</table>

Behind the Numbers

- The medium term deals of 4 to 5 years are on the rise.
- Less than 2 years preferred for smaller scope of services – usually these contracts are later renewed for larger size and length once the relationship is successful.

Source: HfS Research, 2017; n = 324 live multi-process Healthcare BPO Contracts; based on live contracts over $0.5M in TCV with a minimum of two core processes bundled.
Healthcare Engagements Show a Mix of Processes Bundled with Other BPO and IT Services

<table>
<thead>
<tr>
<th>Claims and Member Services</th>
<th>Claims adjudication and processing</th>
<th>Payment integrity</th>
<th>Account setup</th>
<th>Eligibility and enrollment</th>
<th>Billing</th>
<th>Benefit management</th>
<th>Customer service</th>
<th>Complaints and appeals</th>
<th>Provider credentialing</th>
<th>Provider data management</th>
<th>Contracting</th>
<th>Network management</th>
<th>Population health and wellness</th>
<th>Utilization management</th>
<th>Care coordination and case management</th>
<th>Remote monitoring support</th>
<th>Fraud, waste, and abuse analytics</th>
<th>Quality and compliance analytics (e.g., for STARS, CAHPS, HEDIS)</th>
<th>Document and print operations</th>
<th>Market analysis, branding and publicity, campaign</th>
<th>Accounts payable, accounts receivable general accounting/GL</th>
<th>Logistics management (incl. delivery scheduling and planning)</th>
<th>Purchase-to-pay or transactional purchasing, strategic sourcing</th>
<th>Payroll, benefits admin, talent sourcing, employee contact</th>
<th>Legal support, legal advisory services</th>
<th>Adm-business analysis, requirements definition, coding, testing</th>
<th>Adm-please describe systems supported, e.g., care</th>
<th>Voice and data communication networks, email and messaging</th>
<th>Desktop support, help desk, issue management, reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>67%</td>
<td>48%</td>
<td>48%</td>
<td>55%</td>
<td>53%</td>
<td>50%</td>
<td>42%</td>
<td>36%</td>
<td>41%</td>
<td>46%</td>
<td>34%</td>
<td>40%</td>
<td>19%</td>
<td>23%</td>
<td>20%</td>
<td>7%</td>
<td>28%</td>
<td>39%</td>
<td>16%</td>
<td>24%</td>
<td>33%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
<td>28%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: HfS Research, 2017; n = 324 live multi-process Healthcare BPO Contracts; based on live contracts over $0.5M in TCV with a minimum of two core processes bundled.
RPA Technology and Tools Gaining Acceptance – The Providers Led Customized RPA Tools Lead the Adoption

RPA Technology Deployed in Healthcare Outsourcing Contract
Percentage of Contracts

Behind the Numbers

- Use of RPA is mostly proprietary with deployment of third party software by BPO providers still nascent
- A lot of the automation is for workflow or at a point in a process for data management
- Major drivers: to increase quality and accuracy of data and workflow
- Points to note: In interviews, healthcare operations clients have told HfS:
  - Appreciate demos to “see” what RPA can do
  - Looking to develop internal capability that might replace the service provider’s work so (a) service provider invited into the discussion or (b) it’s happening away from the service provider
  - Having trouble getting procurement to understand that contracting for use of RPA is different from BPO

Source: HfS Research, 2017; n = 324 live multi-process Healthcare BPO Contracts; based on live contracts over $0.5M in TCV with a minimum of two core processes bundled
Pricing Trends in Healthcare Outsourcing Contracts by Year Signed – Shifting Toward Fixed Fee with Rise in Multi-tower Engagements

Overall the number of fixed-fee deals is less than transactional pricing and FTE based pricing. Gain sharing and subscription-based pricing models need a solid awareness and willingness to take risk at both ends, provider as well as buyers.

Year-on-Year Pricing Trends
Percentage of Contracts

<table>
<thead>
<tr>
<th>Year</th>
<th>FTE (full time equivalents)</th>
<th>Transactional</th>
<th>Fixed fee</th>
<th>T&amp;M (time and material based)</th>
<th>Gain-sharing and outcome-based</th>
<th>Subscription based (e.g., X cents per user)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>23%</td>
<td>7%</td>
<td>7%</td>
<td>32%</td>
<td>7%</td>
<td>29%</td>
</tr>
<tr>
<td>2016</td>
<td>18%</td>
<td>11%</td>
<td>6%</td>
<td>31%</td>
<td>18%</td>
<td>33%</td>
</tr>
<tr>
<td>2017</td>
<td>5%</td>
<td>18%</td>
<td>33%</td>
<td>6%</td>
<td>24%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Pricing Trends From 2005 until 2017 (H1)
Percentage of Contracts

- **Transactional**: 26%
- **FTE (full time equivalents)**: 22%
- **Gain sharing and outcome based**: 21%
- **T&M (time and material based)**: 14%
- **Fixed fee**: 12%
- **Subscription based (e.g., X cents per user) / analytics as a service**: 5%

Source: HfS Research, 2017; n = 324 live multi-process Healthcare BPO Contracts; based on live contracts over $0.5M in TCV with a minimum of two core processes bundled
Market Direction and Recommendations
It’s Prime Time for Partnerships That Help Move Healthcare Organizations to More Intelligent Operations

To optimize revenues and reimbursements and reduce costs, healthcare payers and providers need to be more friendly, affordable, and accessible with high quality for individuals. That’s the bottom line for growth and survival in value-based care. Service providers can be a partner in this effort, but both the service buyer and service provider need to find strategic and cultural alignment to be successful.

In the healthcare industry, our research indicates that service buyers are ready to switch out primary service providers that fail to help them evolve to a more flexible, automated, and insight-driven operation: 66% say it’s likely they would opt for a different partner.¹

Why is that? Many of the healthcare organizations that are already using outsourcing in their operating model entered into the engagements years ago when cost reduction and labor arbitrage were the value proposition and rate cards and KPIs formed the basis of the contracts. In the past few years, the work that can be offshored has been, and to Tier 1 and Tier 2 cities, with balancing to create the greatest level of arbitrage possible without affecting quality and compliance. The cost value proposition for much of this work, like claims processing, eligibility and enrollment processing, revenue cycle management and billing and collections, has been maximized by players in the market.

It’s Prime Time for Partnerships That Help Move Healthcare Organizations to More Intelligent Operations, Continued

- Healthcare organizations refreshing their sourcing strategy or entering the sourcing market now should be for a balance of on and offshore resourcing, focusing on quality and compliance, and exploring ways to address new business problems and opportunities like growth in new market segments and meeting new compliance regulations driven by the ACA in the US, for example. Service providers today are increasingly capable of also helping to maintain a local presence because of data privacy, unions, and a desire to create or maintain integration with the community.

- There are a number of under-utilized tools and resources in the business process outsourcing services market – including design thinking to focus on understanding and creating end user experience that is relevant, intelligent automation, and analytics working together as part of a solution to focus resources on intelligent, impactful work, and plug-and-play digital and services that can provide more agile solutions to today’s problems.

- Overall, the healthcare operations market needs to make bold moves to make impactful change.
Healthcare Business Operations Leaders Can Check Strategy Against This HfS Timeline

**Horizon 1: Act-now**
- Right-shoring
- Robotic Process Automation (RPA)

**Horizon 2: Watch-out**
- Smart Analytics
- Artificial Intelligence (AI)

**Horizon 3: Investigate**
- Blockchain
- Internet of Things (IoT)
Where to Next for Healthcare Business Operations Services

We see the following as the major trends shaping and fostering the evolution of healthcare business operations:

- **Making a “Cultural Match”:** Companies will always be subject to changes in leadership, and as service providers are an increasingly integral part of a company’s operations, it’s critical to have alignment over time on the context, direction, and alignment between the service buyer and the service provider. As one executive put it, “we will have change in our leadership and the challenge is to have new leaders on both sides continue to build on what we have started…that we don’t have to start over.”

- **Investing in Technology and Talent Who Can Use It:** Increased use of digital technology – RPA, AI, blockchain – in healthcare operations is inevitable. Therefore everyone at all levels of an organization from executive to staff need to be learning about digital technology and thinking about the relevance and meaning of it to the end user needs and experience. Service providers need to be training people on what it is and how to use it and designing new roles and career paths. We see an increasing number of service providers offering education and training opportunities to increase analytical, industry, and intelligent automation capability of BPO services professionals. This provides an opportunity for clients to think about how much they want to invest in building – or partnering for – what skill sets. Consider: Training for jobs that don’t yet exist: the AT&T story

- **Analytics Embedded and As-a-Service:** Where service buyers and service providers have partnered to stabilize and standardize processes, with the increasing use of process robotics to integrate data sources and drive predictable and higher quality data, and noting the increase in sophistication in visualization and reporting tools, we see an increasing number of both service provider-driven and collaborative efforts to embed and better drive analytical insights and action plans in engagements.
2017 – 2018 Recommendations: Enterprise Buyers

- Move Toward Outcome-Oriented Engagements: Service level agreements are an integral part of managing a contract, but cannot be the only way to manage it if you want to have strategic business operations that help drive revenue growth as well as reduce costs. Define and share – and ask your service provider partner for input – on what business outcomes you want to achieve, such as reducing network leakage, improving targeted member retention, creating touchless claims, bringing down fraud and collections by being more proactive. Evaluate if you are in the kind of partnership or engagement that is best for your business – what is the problem you want to solve, the outcomes to impact, and how do you want to work with this partner – strategically and collaboratively, end-to-end and outcome oriented and innovative, or point solution and tactical. (see: Why an Outcome-Based Approach Can Shatter the Watermelon Effect [link])

- Explore the Relevance of Triple A Trifecta: The “magic” of the future business process services will be at the intersection of RPA, AI, and Analytics – how you collaborate with your outsourcing provider to define and solve problems using these three capabilities as part of the solution. RPA is the software tool for “doing” the work and creating and maintaining the data pool. AI interprets, learns, and updates the process and outcomes with natural language processing and machine learning; analytics enables the insights and influences the actions that will impact outcomes. Service providers increasingly have capabilities in these areas, mostly focusing on specific sets of business problems that are most relevant to their expertise.

- Share Your Story, Questions, and Issues: Many of the operations leaders and service buyers we interviewed for this study applauded the forward thinking and open-mindedness of their service provider partner and said their own organization held back innovative efforts. These service providers want to change the healthcare industry and are willing to partner and invest collaboratively in many cases. Share your business priorities or challenges, ask for a design or innovation workshop – or as part of your QBR to start. Challenge your service provider to create networks, workshops, or forums that bring you together with executives with similar challenges, in different or complementary industries or at different parts of the value chain. Be willing to share your story “in process” so we can learn from each other and move this industry forward quickly.
2017 – 2018 Recommendations: Service Providers

- **“Show and Tell”**: As the business process outsourcing services market moves beyond “lift and shift” and you want to be more of a partner than a “doer” for your client base, it’s increasingly important to create a “feeling” that quality work is happening and producing results. This feeling is something HfS heard about in interviews during the research. Technology has granted many ways to create “windows” to activity, so incorporate them into your operations if you haven’t already, including virtual tours of delivery centers, QBRs at innovation centers, dashboards with real-time data and activity, and demos of work in action, as well as forums with and between clients to share ideas and challenges.

- **Share Your Clear and Compelling Vision**: To create more strategic alignment and partnership with clients, share your vision for the future of healthcare and the role of talent and technology. Focus in on where your company can have the biggest impact – don’t try to boil the ocean. No one service provider can be all and do all with its client base so pick where you can have the greatest impact and make it relevant and meaningful to your client. Share your vision and strategy with your software and technology partners too, and create unique value propositions in partnerships. Experiment with partners and contract and pricing models. We are hearing a higher interest in it from service buyers than a year ago.

- **Shake Up Your Workforce**: While technology plays a critical role in helping to achieve the better health outcomes, improved care experience, lower administrative and medical cost, and viable businesses we target for the industry, it is the people who make a difference and who can make your company unique. Give Millennials not just a seat at the table, but a voice and a budget, continue to create unique opportunities for learning technology and industry nuances, and bring in people from other industries to shake it up.
Additional HfS Research Publications on Healthcare

• HfS Blueprint: Population Health and Care Management
• What Difference Does Design Thinking Make in Healthcare Operations?
• POV: Getting the Ball Rolling with RPA in Healthcare Operations
• POV: Journey to Intelligent Operations in Healthcare
• Blog: Which Service Providers will help our healthcare organizations survive, even thrive, post-ACA?
• Blog: Putting healthcare services at the fingertips of your patients and members
• Blog: VCU Health tests telehealth for shortening time to treatment for stroke patients (#telestrokercare)
• Blog: How One Health System is Putting Patients and Physicians at the Center of “Digital” Healthcare
• Blog: Whatever the fate of the ACA, Consumerism in Healthcare is here to stay
• Blog: WNS and Its HealthHelp Acquisition “Will Not Deny” Health Care
• Blog: HCSC’s Sale of TMG Health to Cognizant Shows A Move to Focus – and Partner– for Better Outcomes
• Blog: Moving beyond the numbers in healthcare to drive and measure change
• Blog: How a Healthcare Insurance Company is Bringing RPA and AI into Business Operations
About HfS Research
The HfS Mission: Revolutionizing the Industry

HfS’ mission is to provide visionary insight into the major innovations impacting business operations: automation, artificial intelligence, blockchain, digital business models and smart analytics. We focus on the future of operations across key industries. We influence the strategies of enterprise customers to develop operational backbones to stay competitive and partner with capable services providers, technology suppliers, and third party advisors.

HfS is the changing face of the analyst industry combining knowledge with impact:

• ThinkTank model to collaborate with enterprise customers and other industry stakeholders.
• 3000 enterprise customer interviews annually across the Global 2000.
• A highly experienced analyst team.
• Unrivalled industry summits.
• Comprehensive data products on the future of operations and IT services across industries.
• A growing readership of over one million annually.

"The As-a-Service Economy" and "OneOffice™“ are revolutionizing the industry.