



HfS Blueprint Report

Intelligent Automation

Excerpt for IBM

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Executive Summary



Introduction to and Scope of the HfS Blueprint Report: Intelligent Automation 2016

- Intelligent Automation (IA) is one of the most disruptive developments our industry is facing. The market development is still nascent, but we will see exponential growth set in within the next 12 months. However, the market communications about, and consequently the perception of, the progress of IA are blurred as the usual stakeholders that tend to educate and influence the market are on the sidelines. In particular, the supply side is anxious about the potential negative impact on profits. There is a lack of clarity about the best commercial models for dealing with the disruptive threat. Thus, market communications are dominated by automation tool providers with tiny marketing budgets and a vested interest.
- In line with the early market development, there is no commonly accepted understanding of IA or its key components, adding to the blurred perception. In HfS's view, the common denominator in all the innovative approaches is the decoupling of routine service delivery from labor arbitrage. At the same time, this denominator encapsulates the disruptive threat as many business models on the supply side are predicated on labor arbitrage.
- Against this background, the HfS Intelligent Automation Blueprint has three goals: to take stock of where the market is really at, to move the discussion beyond RPA (a narrow notion of a task automation and cost takeout) to a more holistic understanding of automation, and to understand how providers are driving IA across the boundaries of traditional business units to advance toward the As-a-Service Economy. Thus, the Blueprint is a challenging project for participants and for HfS. However, the strong over-subscription of this Blueprint is a strong endorsement for taking this approach. Suffice it to say, it is a learning exercise for all concerned.
- As we had strong demand for participation in the study, we tried to be transparent and fair by inviting the top 20 system integrators by revenue, the top 5 pure-play BPOs, the Big 4, and the 4 leading specialist automation consultancies. There is a lot activity beyond those players, which we will capture in our broader research coverage on Intelligent Automation.

The State of the Nation in Intelligent Automation (1)

- **Exponential growth is setting in below the radar:** Given the peculiarities of stakeholder management and marketing communications, the visibility of the market development in IA is blurred at best. Below the radar of the broader industry, exponential growth is starting to set in with broad-scale deployments and increasingly holistic automation approaches. Thus, the fundamental disruption of the decoupling of routine service delivery and labor arbitrage is about to challenge the dynamics of the broader industry.
- **Disruption is nigh:** This disruption is best summarized and encapsulated by two case studies: First, professional services firms, such as KPMG, are planning for and investing in the disruption of their core business, i.e., tax, accountancy, and advisory, which can hardly be described as being high on the technology affinity list. Second, banks, such as RBS in the UK, are about to launch robo advisors largely to reduce headcount. Thus, the disruption will happen not just in the long-term future or in back-office or offshore activities. Instead, the disruption will encompass the entirety of knowledge work.
- **Lack of definitions and common language:** Although HfS sees IA as the most disruptive transformation since the rise of offshoring, there is no commonly accepted understanding of IA or any of its key building blocks. However, the common denominator (and at the same time, the lever for disruption) is the de-coupling of service delivery from labor arbitrage. This lack of definition adds to the blurred perception and is fueling many misconceptions. Therefore, HfS uses the Intelligent Automation Continuum (see slide 12) to guide discussions with stakeholders. In addition, HfS is collaborating with a group of providers and advisors under the sponsorship of IEEE to advance the automation taxonomy. This will help to provide more clarity on the various automation approaches, but it will take considerable time for those suggestions to be adopted by the broader industry.

The State of the Nation in Intelligent Automation (2)

- **Heterogeneity in buyer maturity:** In line with the nascent market development, buyer maturity varies greatly. Although US and UK buyers are at the vanguard, as with most things sourcing, within geographic and vertical markets, the maturity and the levels of insights differ significantly. For example, many banks scale IA deployments, but the traction is not consistent across the sector. Thus, there are no simple answers to which vertical is leading in terms of traction. Broadly speaking, BSFI and Retail are ahead but within the limitations called out. Very few buyers have a deeper understanding of the broader notion of IA and the implications for service delivery. This gets exacerbated by the marginal contribution of sourcing and third-party advisors. Fundamentally, for many organizations, there is a chasm between their own sourcing journey and innovations presented by the supply side. Stronger alignment with process consulting and program management is critical to alleviate some of those concerns.
- **Focus should be on IA, not task automation:** A narrow focus on RPA (and often task automation) is missing the direction of travel for the broader notion of Intelligent Automation and the necessity of changing the mind set when advancing toward the As-a-Service Economy. There is neither a silver bullet nor a short cut today to overcome legacy and other issues. Organizations have to work toward orchestrating those innovative approaches as part of a service delivery strategy that goes beyond the organizational stovepipes and traditional business units. The starting point for the discussions needs to be the use cases irrespective of IT or business process–centric scenarios. Crucially, strategies have to put process owners back at center stage.
- **Ability to scale, service orchestration, and AI capabilities key differentiators:** Against this background, the leading service providers demonstrate an ability to scale deployments by focusing on service orchestration, often underpinned by standardization on platforms such as ServiceNow, which are being linked with orchestration engines, such as Automic and Cortex. Such approaches allow broad automation frameworks with the goal of integrating the plethora of IA tools in a plug-and-play modus. This goes far beyond RPA and Autonomics tools by expanding to broad cognitive and AI capabilities.

The State of the Nation in Intelligent Automation (3)

- **Broad AI capabilities are coming to the fore:** IBM's Watson is becoming ever more pervasive as IBM is starting to embrace the notion of an ecosystem. Although the market impact is far beyond Watson, HfS is seeing the emergence of the notion of Virtual Agents that are underpinned by broad automation capabilities. These agents range from the heavyweights Watson and Amelia to OpenSource avatars. At the same time, we are seeing traction of cognitive engines, such Celaton for integrating unstructured data or RAVN, as an example of vertically focused machine learning and Enterprise Search.
- **Data is the new currency:** The crucial (and at times missing) element is linking up IA with data sets on an industrial scale, in other words, this links IA to the capabilities of big data. However, the challenges are not just in terms of technical capabilities but providers getting access to clients' data. Beyond sensitivities and security concerns, some clients are demanding commercial contributions for enhancing providers' data models. At the same time, broad scale access to data sets will be a crucial differentiation for AI providers.
- **Indian service providers make the headlines, but don't lead:** Despite many headlines in the trade press and newspapers, Indian providers are not leading the space. Often, there is an overemphasis on technology aspects and individual tools while the process owners and decision-makers are out of sight. They should instead consider conveying the industrialization of service delivery, as well as integrating IA with consulting and program management, in particular, in the context of scaling out engagements and going beyond traditional organizational stovepipes. However, at the same time, providers like Wipro and Infosys are focusing on some of the implications of IA in financial earnings calls, presumably to demonstrate to financial stakeholders their ability to improve or ring-fence profitability.

The State of the Nation in Intelligent Automation (4)

- **Debate about the transformation of knowledge work urgently needed:** The common denominator for all flavors of IA is decoupling routine service delivery from labor arbitrage. Thus, HfS is forecasting a significant loss of jobs, although automation will create new jobs at the same time. Until 2020, we expect 9 million jobs will be lost globally. As generic activities, such as data entry, reconciliation, and compliance, are phased out, organizations need to prepare for this fundamental transformation of knowledge. The key here is look beyond scaremongering figures from reports from McKinsey and the World Economic Forum, and assess the fundamentally changing requirements for talent. The industry is largely ill prepared for this disruptive shift. Crucially, advisory engagements on these topics should be paid for work, not pre-sales engagement. Having said all that, the industry is largely in denial about most of those implications. Although the suggestion of human augmentation and amplification is a prudent way to think about the deployment of IA, we work in the sourcing industry. The whole rationale of our industry is about making activities and work redundant, whether through cost-cutting projects or outsourcing. As IA is all about transformation and change management, we need an open and transparent debate on the fundamental transformation of knowledge work.

Understanding the Intelligent Automation Ecosystem



Intelligent Automation: Background

- **RPA is dominating the discussions:** RPA is dominating (not necessarily for the right reasons) the discussion on IA. On the one hand, the suggestion that bots are accessing enterprise applications just like a user does has captured the imagination of stakeholders. On the other hand, RPA is often used as a placeholder for the broader notion of IA. As a distinct proposition, RPA should be confined to business process–centric scenarios with a focus on capabilities to extract data from heterogeneous systems, as well as to capture, schedule, and execute process steps in a drag-and-drop studio approach. As business processes are often badly designed and lack standardizations, RPA is often discussed in the context of task automation rather than end-to-end automation. Slide 10 provides a detailed definition of the key concepts of IA.
- **The scale is around Autonomics:** In contrast to RPA, Autonomics are typically applied in IT-centric scenarios. As IT processes are well defined through methodologies such as ITSM and ITIL, Autonomics deployments have a significant scale and reach. The core value proposition involves self-healing and self-remediating systems at scale. We are starting to see the convergence of IT and business process–centric scenarios, in particular with IPsoft’s Amelia aiming to gain traction with business process owners.
- **Virtual Agents are coming to the fore:** HfS is seeing a lot of activity around the broader notion of Virtual Agents. A Virtual Agent encapsulates decoupling service delivery from labor arbitrage. IBM’s Watson is starting to be deployed as a service agent, IPsoft’s Amelia is gaining traction, as are OpenSource-based agents, underpinned by continuously expanding automation capabilities.
- **Service Orchestration is a necessity:** With increasing market maturity, we see service providers integrating and orchestrating broad IA capabilities. Examples are providers like Atos, Hexaware, and Tech Mahindra standardizing service delivery on ServiceNow, linking up orchestration engines like Automic or Cortex that then link up with the plethora of IA tools.

HfS Definition of Intelligent Automation Services

INTELLIGENT AUTOMATION VALUE CHAIN: spectrum of services supporting transformation service delivery. The scope of these services varies greatly between discrete automation projects and managed services contracts.

PLAN	IMPLEMENT	MANAGE	OPERATE	OPTIMIZE
<ul style="list-style-type: none"> • Advisory on RPA, Autonomics, Cognitive Computing, and AI • Workshops on IA vendor landscape and implications • Design thinking • Automation opportunity assessment • Business case development for automation deployment • Operating model evaluation • Automation roadmap • Compliance and risk assessment • Security implications • HR/talent management strategy • Governance policy • Rollout strategy 	<ul style="list-style-type: none"> • Program management for process automation • Process automation and customization • Solution and technical design • Process recording, mapping, updating • Data extraction from heterogeneous systems • Leverage repository of pre-built components and utilities • Predictive analytics • Specialist development modules • Enterprise systems integration • Employee communications • Employee education • HR policy adherence and development 	<ul style="list-style-type: none"> • Governance of automation and human environments • Maintenance of automated processes • Optimization of BPO contracts and SSC delivery • Upgrade support • IA help desk • Ongoing integration • Support and Maintenance • Testing and QA • New release and upgrade coordination • Training and certification • Acceptance testing • Change management • HR policy adherence and development 	<ul style="list-style-type: none"> • Infrastructure management • Application management • IT help desk management • BPO • (Ro)Bot-as-a-Service • Real-time analytics • Identify any required changes in service delivery or process to account for changing business requirements, e.g., M&A, divestment, new investments in IT • Mandatory regulatory adjustment ramification management and resolution • API support 	<ul style="list-style-type: none"> • New feature value identification and benefit analysis • Ongoing adds/upgrades, migrations, and consolidation • Integration of big data analytics and insights • Best practice understanding, documentation and end-user adoption, content creation, and curation • User community participation • Design Thinking/continuous challenging of status quo and relevance of business outcomes

How HfS Defines the Building Blocks for Intelligent Automation

Robotic Process Automation describes a software development toolkit that allows non-engineers to quickly create software robots to automate rules-driven business processes.

For example, digitizing the process of collecting of unpaid invoices, which involves mimicking manual activities in the RPA software, the integration of electronic documents, and the generation of automated emails to ensure the whole collections. The process is run digitally and can be repeated in a high-throughput, high-intensity model.

Cognitive computing is the simulation of human thought processes in an Intelligent Automation process or set of processes. It involves self-learning systems that use data mining, pattern recognition, and natural language processing to mimic the way the human brain works, without continuous manual intervention.

For example, an insurance adjudication system assesses claims based on scanned documents and available data from similar claims and evaluates payment awards.

Autonomics refers to self-learning and self-remediating engines, where the system makes autonomous decisions, using high-level policies, constantly monitoring and optimizing its performance and automatically adapting to changing conditions and evolving business rules and dynamics. There is increasingly minimal human intervention.

For example, a virtual support agent continuously learns to handle queries and creates new rules/exceptions as products evolve and queries change.

Artificial Intelligence refers to intelligent automation systems that go beyond routine business and IT process activity to make decisions and orchestrate processes.

For example, an AI system manages a fleet of self-driving cars or drones to deliver goods to clients, manages aftermarket warranties, and continuously improves the supply chain.

Understanding the HfS Intelligent Automation Continuum

- **The IA Continuum is just the starting point for discussions:** Given the lack of understanding of the notion of IA and the plethora of approaches that have “automation” as part of their moniker, the IA Continuum is meant to provide stakeholders with a common reference point for discussions. Thus, the Continuum should not be over-interpreted for every little detail in the IA discussion. HfS continues to evolve the Continuum. The latest changes are the introduction of an Automation Framework and the notion of Service Orchestration cutting across the Continuum. With increasing maturation in the market, we see service providers building out much more holistic capabilities, aligned with the key research themes of this Blueprint.
- **Main assumptions of the IA Continuum:** The key thought process behind the IA Continuum is that all the approaches (traditional and innovative) overlap and are interdependent. Crucially, that applies not only to the innovations shown in the white chevrons in the middle but also to the traditional approach depicted on the left-hand side, such as runbook and scripting, as well as BPM and SOA. To scale deployments, broad integration capability is a necessity.
- **Direction of travel is along three dimensions:** The Continuum does not suggest that providers have to start with RPA in order to progress toward notions of AI. However, HfS suggests that the direction of travel is broadly along three dimensions: unsurprisingly toward unstructured data, less obviously toward less well-defined processes, and toward the broad bucket of Cognitive Computing and AI.
- **Avoid pigeonholing tool providers:** Technology and tool providers can take on multiple roles on the Continuum. Therefore, the positioning of a provider on the Continuum should be seen only as providing rough guidance for the competitive landscape. Good examples are Wipro’s HOLMES and TCS’s ignio platform that have capabilities across all four IA chevrons. Again, the positioning on the right of the Continuum is not necessarily meant to suggest increased value or scale.

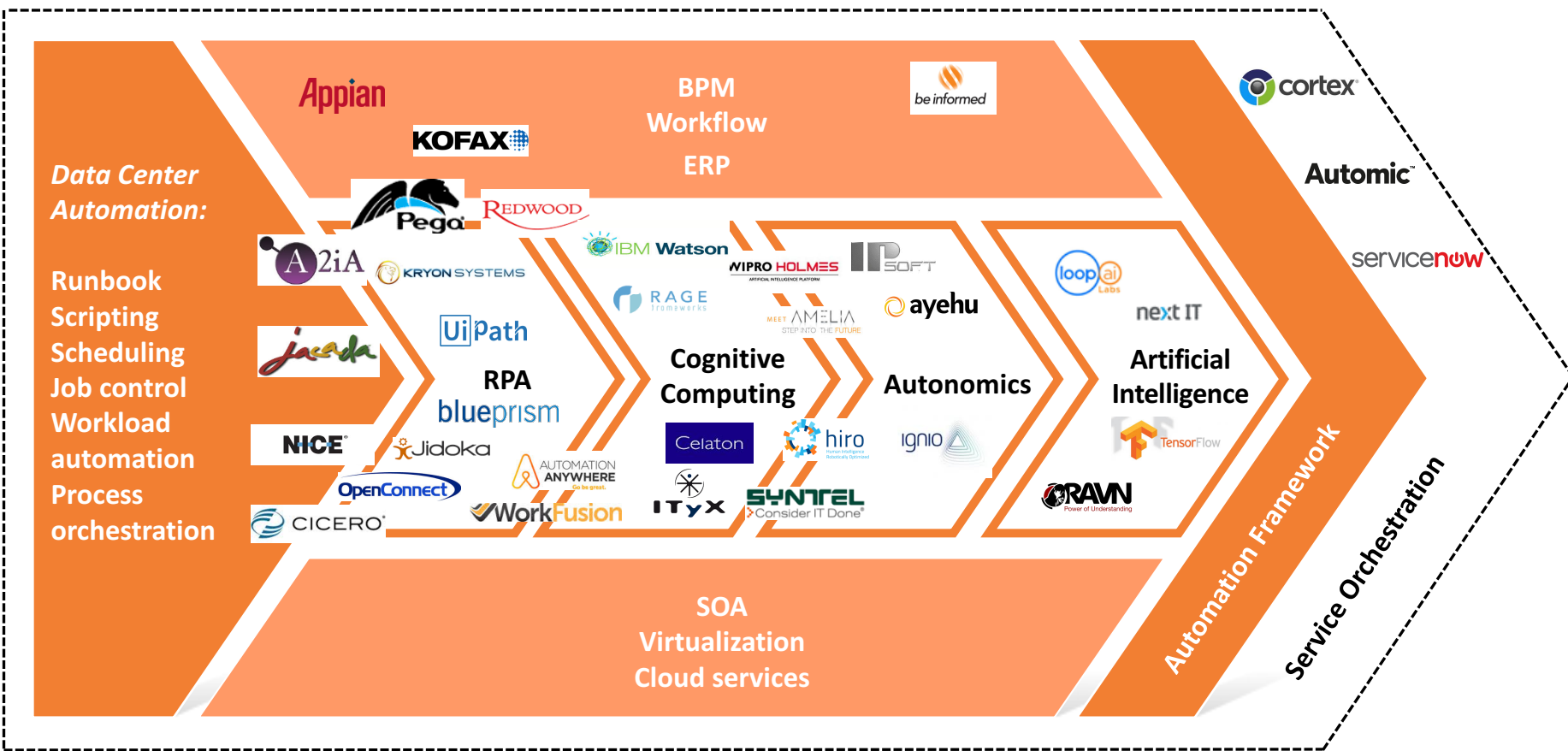
The HfS Intelligent Automation Continuum

Process characteristics

Trigger based

Rules-based
standardized language

Rules-based
dynamic language



Characteristic of data/information

Structured

Unstructured patterned

Unstructured without patterns

Key Highlights – State of the Intelligent Automation Market – Technologies (1)

- **Moving beyond RPA 1.0:** RPA tools are evolving from business process–centric scenarios. As business processes are largely badly designed and standardized, the scale of deployments is often limited, frequently on the sub-process level. For the wrong reasons, RPA remains the focal point for discussions on the broader notion of IA. At the same time, for some stakeholders, RPA and IA are interchangeable. However, the core value proposition of RPA is extracting data from heterogeneous sources and capturing, scheduling, and executing process steps in a drag-and-drop modus. Thus, the robots access enterprise application just like humans or agents. The leading technologies are Blue Prism, UiPath, and AutomationAnywhere while OpenSpan and NICE are crossing over from desktop automation.
- **Autonomics provide scale and reach:** Evolving from IT-centric scenarios, in particular, help desk, Autonomics deployments have significant scale as processes tend to be standardized through ITSM and ITIL. The core value proposition is self-learning and self-remediation, thus providing a much higher level of sophistication than RPA tools. Leading technologies include IPsoft’s IPcenter and Arago’s Hiro, while TCS’s and Wipro’s proprietary platforms (ignio and HOLMES) are starting to gain traction. Conceptually, the boundaries between Autonomics and Cognitive Computing are blurred. The latter are typically used for IBM’s Watson and IPsoft’s Amelia that have the capability to directly interact with agents.
- **Service Orchestration is coming to the fore:** With increasing market maturation, the emphasis on market communication is changing from suggestions for turn-key solutions that are non-invasive to the need for transformation. The latter is related to integration with traditional automation tools and with broader concepts such as BPM or cloud services (see the Continuum on slide 12). At the same time, we see an endeavor to move to the notion of automation frameworks that evolve toward the notion of plug-and-play of automation tools depending on use cases. As part of these developments, orchestration engines, such as Automic (largely app centric) and Cortex (more infrastructure centric), are gaining prominence.

Key Highlights – State of the Intelligent Automation Market – Technologies (2)

- **Virtual Agents integrate broad automation capabilities:** The biggest shift in the development of IA is the emergence of virtual agents that are underpinned by broad automation capabilities. Examples include the broad capabilities of IBM’s Watson and IPsoft’s Amelia, as well as OpenSource-based avatars. Virtual agents encapsulate the common denominator of IA: decoupling routine service delivery from labor arbitrage. In our view, the broadest and, thus far, most compelling buildout is Accenture’s myWizard. It comprises a broad set of building blocks that can be leveraged in a similar way as PaaS platforms such as IBM’s Bluemix that allows clients to build applications in a plug-and-play studio approach without the need for comprehensive coding. The myWizard platform has enhanced those building blocks by virtual agents that interact with developers and service desk agents. Examples of use cases are the Intelligent Data Scientist and the Virtual Scrum Master solutions.
- **Test Automation is lagging in development:** Testing services are lagging the development of the broader IT market, and test automation is no different. “Test automation” typically has connotations of test case automation and automatic provisioning of test environments. Although Cognitive Computing should be central to predictive maintenance and testing, very few customers have started PoCs around it. Thus, Accenture’s myWizard should be seen more as the vanguard of innovation rather than a reference point for broader traction. Its Virtual Testing Savant provides advice to human testers on a wide range of judgement-based tasks, such as test planning, test coverage, prioritization, and even staffing. It provides test artifacts for reuse and solutions based on past fixes, helping testers spend less time preparing and fixing and more time fine-tuning applications to improve business performance.
- **Convergence of tools and scenarios:** HfS is seeing a convergence in the technical capabilities of RPA, Autonomics, and Cognitive Computing tool sets. RPA tool providers are building out analytical and cognitive capabilities, while Watson and Amelia are being driven into business process-centric scenarios. This reinforces HfS’s contention to assess IA along a Continuum. With more scale integration through automation, frameworks will supersede a misplaced emphasis on individual tools.

Intelligent Automation in 2016 — *The Market and Service Provider View (1)*

- **A nascent market:** The market for IA is still nascent, but we are seeing signs that exponential growth is about to set in. The reference points for our assessment are the increasing scale in the deployments, the increased maturity in our discussions with stakeholders, the acceleration in building out IA capabilities by service providers, and the shift in emphasis from tools to transformation. In terms of building out capabilities, the reference points, in particular, are the move toward service orchestration and automation frameworks.
- **Pace of innovation:** The acceleration in pace by service providers in building IA capabilities is breathtaking. We are seeing providers like Tech Mahindra and HCL that were lagging in the development now leapfrogging their peers by leveraging insights from the early deployments. All leading providers have built CoEs and are starting to build dedicated automation organizations. Focal points for innovation are Artificial Intelligence and the integration of industrial-scale unstructured data.
- **Lack of differentiation:** Only the runaway leaders in our Blueprint, Accenture and IBM, have achieved a marked differentiation. The other featured providers differ more in nuances with use cases offering ways to gain a clearer profile. With that in mind, another way of reading the Blueprint grid is that the featured providers are the vanguard of innovation while smaller or regional providers are often struggling to get a seat at the table for the larger automation projects.
- **Innovators dilemma:** Automation juggernauts, such as CA and BMC, are absent from the IA discussions, but below the radar, they are screening the market for M&A opportunities. It is a classic case of “innovators’ dilemma” as they are ring-fencing their traditional licensing revenues while assessing when to make the jump into the new era. At the same time, ISVs with capabilities adjacent to IA are likely to push for M&As, as we have seen already in the case of Pega and OpenSpan.

Intelligent Automation in 2016 — *The Market and Service Provider View (2)*

- **Many tool providers will be absorbed by M&As:** The example of Pega acquiring OpenSpan is a blueprint for what is likely to happen to most tool providers. Most will be absorbed largely by ISVs. This could significantly change the cost of licensing those tools, and organizations should have contingency plans. Another scenario is private equity companies building out a portfolio of automation assets.
- **Managing the business case:** Decoupling service delivery from labor arbitrage will disrupt the market significantly. Many Tier 2 and 3 providers will struggle to make this transition. However, we don't have enough reference points for the best commercial constructs for IA. Suggestions for outcome-based models and gain/share have to be backed up with proof points. At the same time, TCS, Wipro, Infosys, and, to a lesser degree, HCL are building out broad-scale proprietary engines, presumably to optimize the business case. However, proprietary platforms require more investments in marketing in order to demonstrate capabilities that tend to get pigeonholed around third-party tools. Disruption will be exacerbated by providers, like EXL, that state they are willing to cannibalize revenue streams by embracing automation to gain and retain client relationships and expand the scope over time.

Buyers Face Challenges in Intelligent Automation Adoption (1)

- **Look beyond task automation:** The marketing noise is largely around RPA and implicitly notions of task automation. Therefore, it can be challenging to get a sense of the bigger picture. However, as one provider aptly put it: “Automation success starts with good design, efficient processes, and data curation.” Crucially, what is the future state and how do organizations get on the path toward the As-a-Service Economy? Consequently, providers need to expand their efforts in pre-sales and consulting. Again, providers need to step up and demonstrate their ability to innovate given the lack of proactive innovation mentioned in our interviews.
- **Automation is a journey:** Automation is not a quick fix; it is a journey. It takes preparation to find the right candidates and can be done effectively only by taking support from the people who are involved in the business or IT operations. Projects should start with advisory and process consulting.
- **War for talent:** IA strategies require a unique talent set with the right mix of technical knowledge and business acumen. Scarcity of this talent is currently the biggest factor limiting the speed of execution. Undertake strategic reviews of your talent.
- **Finding a common language:** As IA is not defined, stakeholders are struggling with blurred perceptions in the marketplace. Many tools and approaches use the automation moniker. Many stakeholders fail to understand the nuanced differences, equally the differences compared with more traditional automation approaches. Thus, in negotiations, you need to pay attention and clarify requirements and statements of work.

Buyers Face Challenges in Intelligent Automation Adoption (2)

- **Crossing the chasm:** A major challenge is to convince and align client stakeholders. In the words of one executive: “People don’t believe, people don’t trust. A lot of people are talking about automation, but few really understand it.” Therefore, the market urgently needs reference cases that demonstrates the achievements of successful deployments. In particular, insights into change management strategies are critical to safeguard the rollout of projects. Cultural change is an important aspect of implementing automation solutions, as it often involves skill upgrades, role changes, and people movement.
- **Data curation is critical:** Applying Cognitive and machine learning solutions to IA requires access to large amounts of relevant data to build reliable models. Data can be pertinent to IT operations (e.g., for ITSM-related data, SOPs, RCAs), business processes (call records, support transcripts, product information), and publicly accessible data. Thus, there is a need for quality and quantity of the data, and associated compliance considerations are often under-estimated by clients when they consider AI-based automation solutions.

Spotlight Pure-Play BPOs

- **Pure-play BPOs included in this report: Xerox, Genpact, Sutherland, EXL**
- **Strong propensity for machine learning:** Invariably, pure-play BPOs approach IA from business process–centric scenarios. However, in terms of the scale of RPA deployments, these providers are lagging the more IT-centric system integrators as their sales teams are used to selling FTEs and labor arbitrage. Thus, we see many activities around machine learning as the logical extension of more traditional contracts.
- **Differentiation between front- and back-office services:** Front-office projects are currently only scratching the surface of IA. Most initiatives involve desktop automation and machine learning. Most buyers have an overriding focus on cost and commoditization. On the back-office side, we see only a gingerly expansion beyond RPA.
- **Genpact is leading the pack:** Genpact is decidedly leading the pack. Not only has the company formalized strategy partnerships with the likes of AutomationAnywhere, UiPath, and Automic, but Genpact is also embracing IA holistically.
- **Xerox has to demonstrate benchmarks:** With its proprietary approach, Xerox has to demonstrate that its capabilities are as efficient and scalable as those of its peers. In particular, Xerox must show that the expansion to machine learning is moving beyond traditional efficiency tools.
- **Sutherland is leveraging Design Thinking:** Sutherland is leveraging Design Thinking while building out a Virtual Agent program. Having been an early educator and thought leader on RPA, the company is now largely working out of the limelight.
- **EXL is playing the challenger playbook:** Although the company is early on its IA journey, clients stated that EXL is willing to cannibalize its revenue stream for a potential expansion of scope and for new clients and is willing to work on guaranteed outcomes. Therefore, we expect EXL to advance its position over the next 12 months.

Spotlight The Big 4

- **Big 4 providers included in this report: KPMG, EY**
- **Strength in deep client relationships and process consulting:** The Big 4 have been late to IA but are starting to accelerate. Often, competencies are on the individual partner level rather than on the institutional level. Most are expanding from RPA capabilities toward more holistic IA capabilities. As with everything else in consulting, the core strength lies in deep client relationships. Broad process consulting capabilities provide differentiation, especially with system integrators.
- **KPMG and Deloitte strong on thought leadership:** KPMG and Deloitte are the forefront of educating the market on the implications of IA from a broader sourcing and process consulting perspective. EY and PWC are slightly behind in terms of building out capabilities and have a strong emphasis on RPA rather than on the broader notion of IA.
- **Sourcing advisory not always aligned with delivery capabilities:** Across the market, sourcing advisors are not seen as proactively bringing deals or being decisive in making tool selections, but clients acknowledge that their level of knowledge is starting to broaden. However, more fundamentally, most sourcing advisors are not aligned with broader IA delivery capabilities. Although the independence of sourcing advisory services is essential, a blurred perception of the boundaries between sourcing advisory services and broader automation advisory services remains. However, broadly speaking, sourcing advisory and IA delivery capabilities are largely separate offerings with modest levels of synergy.
- **KPMG case study encapsulates level of disruption:** KPMG is planning for and investing in the disruption of its core business through the ascent of robo advisors and robo accountants. This is the level of disruption facing the industry but also explains why KPMG has to build out the broadest IA capabilities among the Big 4. However, it also highlights that the buildout of capabilities is advancing fast toward holistic notions of IA. This case study also demonstrates that the timeline for the maturity of and disruption through IA is not 5 or 10 years out but is looming large on the horizon.

Spotlight Specialist Consultancies/Automation Pure Plays

- **Pure-play automation providers included in this report: Symphony Ventures, Virtual Operations, GenFour, thoughtonomy**
- **Specialist consultancies are the pioneers and educators:** Consultancies, such as GenFour, Virtual Operations, Symphony, and thoughtonomy, are the vanguard on IA. Their value proposition is less about the depth of tools and offerings and more about the knowledge to make IA projects work. In many cases, they have helped the leading service providers to build out their capabilities. Cognizant poached the Virtual Operations U.S. team. Furthermore, they continue to educate the market despite tiny marketing budgets, as the large service providers remain coy.
- **Understanding their position on the Blueprint grid:** These consultancies have fewer than 50 employees, which means their positioning on the Blueprint grid can be misleading. Suffice it to say, on this scale it is difficult to compete with the large system integrators. However, these consultancies should be considered for advisory and implementation. In individual projects, their execution is on par with that of the leading service providers.
- **Born out of RPA:** All of these consultancies have a history in RPA as strong Blue Prism partners. Thus, the relevant use cases are more in business process-centric scenarios. However, all have evolved their capabilities. In particular, Symphony is starting to build out AI capabilities, while thoughtonomy is expanding into IT scenarios.
- **Symphony and Virtual Operations are leading the pack:** In terms of scale and depth of client relationships, Symphony and Virtual Operations are slightly ahead of GenFour and thoughtonomy, which emphasize more strongly their platforms. However, with the scarcity of proven IA capabilities, these providers boast a strong order book. If anything, in acknowledgement of their skill sets, clients often wish they “could clone them,” or to put it slightly more negatively, some clients are concerned about scalability.
- **Thoughtonomy is driving crossover with IT scenarios:** Leveraging its founders’ background as UK MD for IPsoft, thoughtonomy is starting to drive its platform into traditional IT scenarios. Examples include supporting application management and development for Atos and supporting help desk services for Computacenter.

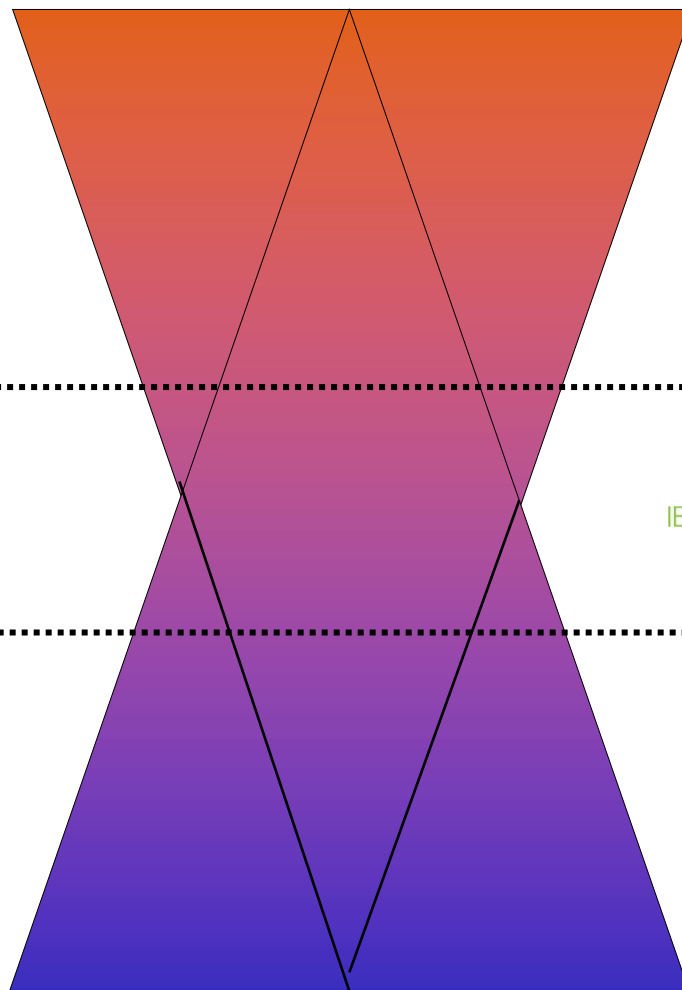
Endgame for Service Delivery: Vertically infused data and insights?!

Insights, Data

Machine learning,
Neural networks,
Enterprise search,
Artificial intelligence
Analytics

Vertically infused
insights and data

BPaaS, BPO as-a-stack,
Industry platforms



Logos of various companies associated with the funnel sections:

- Top Section (Insights, Data):** Cortana, IBM Watson, context relevant, blueyonder, loop ai Labs, Ignio, AlchemyAPI™, next IT, SPARKBEYOND, IP SOFT, splunk>, Dato, WIPRO HOLMES ARTIFICIAL INTELLIGENCE PLATFORM, AUTOPILOT, Cognitive Scale THE COGNITIVE CLOUD COMPANY.
- Middle Section (Vertically infused insights and data):** RAGE Frameworks, Lex Machina, IBM Watson Health, AUGMATE, CRAMN Power of Understanding, rocketfuel, HONEYCOMB.
- Bottom Section (Vertical Processes):** accenture, Cognizant, Capgemini, GENPACT GENERATING IMPACT™, workday, ThingWorx AFFIX BUSINESS, Infosys, successfactors™ BUSINESS EXECUTION SOFTWARE, Finacle, TCS B0NCS, salesforce.

Vertical Processes

Research Methodology



HfS Blueprint Scoring Percentage Breakdown

EXECUTION

100%

How the Service Provider Works With Clients To Integrate Automation into their Delivery Capabilities	16%
How the Service Provider Incorporates Customer Feedback and Collaboratively Engages	5%
How the Service Provider is Addressing the Transformation of Knowledge Work, Both Internally and Externally	15%
Actual Delivery of Services	26%
Scale and repeatability of deployments	17%
Flexibility of the Service Provider To Deliver End to End and Point Solutions	10%
How the Service Provider Works with Clients to Guarantee Outcomes	11%

INNOVATION

100%

Vision for and Investments in the Evolution of Intelligent Automation	25%
How the Service Provider Increases Value for Clients Over the Contract Life Cycle	7%
Tool and Platform Strategy for Intelligent Automation Delivery	20%
Solutions for Accessible and Actionable Data in Intelligent Automation	8%
Approach to Apply Intelligent Automation Across Organizational Boundaries and Traditional Business Units	13%
Availability of Testing Services (e.g. Testing CoEs etc.)	10%
Integration of Process and Organizational Consulting and Technology Capabilities	10%
Leverage of Design Thinking	7%

Execution Definitions

EXECUTION	How well does the service provider execute on its contractual agreement, and how well does the provider manage the client/provider relationship?
<i>How the Service Provider Works with Clients to Integrate Automation into Their Delivery Capabilities</i>	How engaged is the executive and management team in defining and managing the delivery of IA? Do providers help clients to understand the end goal of automation?
<i>Incorporating Customer Feedback and Collaboratively Engage</i>	How has the service provider taken feedback and incorporated it into the solution and delivery? How does the service provider maintain a collaborative engagement?
<i>How the Service Provider Addresses the Transformation of Knowledge Work, Both Internally and Externally</i>	Is the service provider addressing the impact on talent? How is the provider advising on and supporting the transformation of knowledge work? What is the impact on the service providers internally?
<i>Delivering Actual Services</i>	What are the clients' and the market's overall impression of the quality of service across the value chain from this service provider? How is IA helping clients to transform processes? What is the overall impact on client processes?
<i>Scale and Repeatability of Deployments</i>	How does the service provider address scaling deployments across clients' processes? Is the service provider seeking to move to repeatability of IA solutions and projects?
<i>Flexibility to Deliver End-to-End and Point Solutions</i>	When looking at a client's IA issues, can the service provider offer various solutions (point and end to end) to create a flexible and configurable (or customized) response?
<i>How the Service Provider Works with Clients to Guarantee Outcomes</i>	Is the service provider able to leverage IA as a conduit to move toward outcome-based models?

Innovation Definitions

INNOVATION	How well does the service provider innovate its offering(s) in response to market demand, client requirements, and its own vision for how the IA market will evolve?
<i>Vision and Committed Investments for the Evolution of Intelligent Automation</i>	What is the service provider's vision for the evolution of IA? Is there a clear strategy for delivering broader capabilities As-a-Service, and are identifiable investments in place to realize this strategy today? How are these new environments to be governed?
<i>Approach to Increasing Value for Clients over the Contract Life Cycle</i>	How does the service provider view a client's contract? Is there an active effort on the part of the service provider to create value year on year beyond the contract commitments?
<i>Tool and Platform Strategy for Intelligent Automation Delivery</i>	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?
<i>Solutions for Accessible and Actionable Data in Intelligent Automation Services</i>	How does the service provider work with clients to develop a comprehensive set of data and then, in turn, make the analysis of that data and the development of insights possible? Is the service provider allowed by clients to act upon the developed data to improve the effectiveness of overall service delivery? Does the service provider have a vision for integrating IA with actionable data?
<i>Approach to Apply Intelligent Automation Across Organizational Boundaries and Traditional Business Units</i>	How does the service provider address applying IA beyond the traditional business unit (infrastructure, apps, BPO, etc.)? Do the service providers address the convergence of IT and business process-centric scenarios?
<i>Availability of Testing Services (e.g., Testing CoEs)</i>	How does the service provider test these new environments? How does this approach differ from traditional testing approaches?
<i>Integration of Process and Organizational Consulting and Technology Capabilities</i>	How does the service provider combine capabilities in process and organizational consulting and support technology in the form to create innovative IA offerings?
<i>Leverage of Design Thinking</i>	How effectively does the service provider embed Design Thinking methodologies in its IA engagements to define, prioritize, and execute against business outcomes of IA initiatives?

Research Methodology

Data Summary

- The data for this Blueprint was collected in Q2/3 2016, covering services buyers, service providers, and advisors/influencers of Intelligent Automation.
- Invitations were sent to the top 20 system integrators by revenue, top 5 pure-play BPOs, the Big 4, and the 4 leading specialist consultants.
- This report builds on the research of HfS's Intelligent Automation practice. Thus, the insights and findings go beyond the RFI process.

This Report Is Based On:

- **Tales from the Trenches:** Interviews were conducted with buyers who have evaluated service providers and experienced their services. Some were supplied by service providers, but many interviews were conducted by HfS Executive Council members and participants in our extensive market research.
- **Sell-Side Executive Briefings:** Structured discussions with service providers were intended to collect data necessary to evaluate their innovation, execution and market share, and deal counts.
- **Publicly Available Information:** Financial data, website information, presentations given by senior executives, and other marketing collateral were evaluated.

Participating Service Providers



Intelligent Automation in the As-a-Service Economy



Intelligent Automation Is Supporting Realizing the Eight Ideals of the As-a-Service Economy

LEGACY OUTSOURCING

Legacy technology investments that limit agility and create masses of exceptions addressed through adding internal and external FTEs

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

Focusing governance staff on managing to the letter of the contract and the decimal points of service levels

Evaluating relationships on baselines of cost, effort, and labor

Operating fragmented processes across multiple technologies with significant manual interventions

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

Responding with post-event fixes; little focus on end-to-end process value chains

Undertaking complex, painful technology transitions to reach steady state

Intelligent Simplification

1.
Write Off Legacy

2.
Design Thinking

3.
Brokers of Capability

4.
Collaborative Engagement

5.
Intelligent Automation

6.
Actionable and Accessible Data

7.
Holistic Security

8.
Plug-and-Play Digital Business Services

AS-A-SERVICE ECONOMY

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

Understanding the business context to reimagine processes aligned with meeting client needs

Orienting governance to source expertise from all available sources, both internally and externally, to address capability gaps

Ensuring relationships are contracted to drive sustained expertise and defined outcomes

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

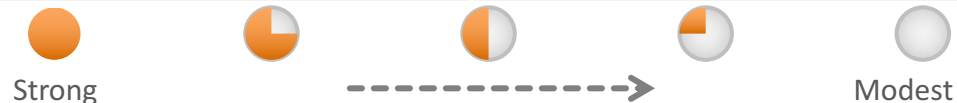
Applying analytics models, techniques, and insights from big data in real-time

Proactively managing digital data across service chain of people, systems, and processes

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

Impact on the Other Ideals of the As-a-Service Economy

IDEAL	AS-A-SERVICE IDEAL DEFINITION	Impact	Comments
Write Off Legacy	Using platform-based solutions, DevOps, and API ecosystems for more agile, less exception-oriented systems		IA is all about making legacy work or integrating it into innovation. RPA is all about fudging legacy processes without embarking on process re-engineering.
Design Thinking	Understanding the business context to reimagine processes aligned with meeting client needs		Design Thinking offers the opportunity to reimagine processes. However, thus far, we have seen very few examples of practical application. The more providers build out consulting capabilities, the more we expect that to change significantly.
Brokers of Capability	Orienting governance to source expertise from all available sources, both internally and externally, to address capability gaps		Largely no direct impact. However, the notion of plug-and-play IA could enhance the ability to manage and integrate resources.
Collaborative Engagement	Ensuring relationships are contracted to drive sustained expertise and defined outcomes		Varies greatly depending on buyer and provider maturity. Suffice it to say, higher-level process automation could enhance interacting in an ecosystem. Data curation and process consulting are critical at the project start.
Accessible and Actionable Data	Applying analytics models, techniques, and insights from big data in real-time		The leading providers are working toward integrating broad and disparate sets of data on an industrial level into IA.
Holistic Security	Proactively managing digital data across the service chain of people, systems, and processes		Taking the robot out of the human and the human out of the process chain will enhance security in service delivery. However, this is dependent on effective governance processes.
Plug-and-Play Digital Business Services	Plugging into “ready to go” business-outcome-focused people, process, and technology solutions with security measures		Having an industrialized service delivery backbone provides the platform to accelerate toward plug-and-play services.



Service Provider Grid



Guide to the Blueprint Grid

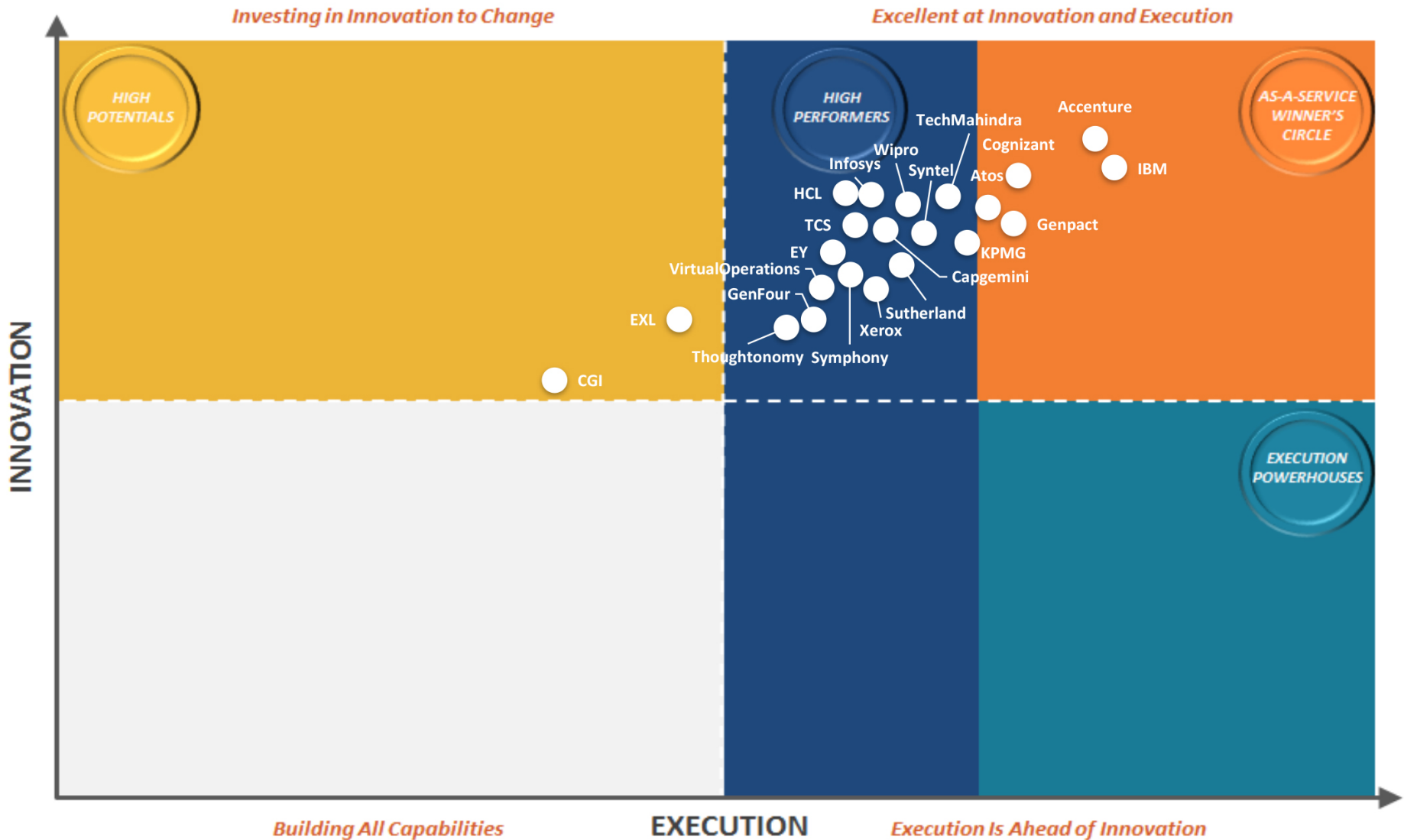
To distinguish service providers that show competitive differentiation in a particular line of delivery with progress in realizing the As-a-Service Economy of business-outcome-oriented, on-demand talent and technology services, HfS awards these providers the As-a-Service Winner's Circle designation.

	EXECUTION	INNOVATION
<ul style="list-style-type: none">● As-a-Service Winner's Circle shows excellence recognized by clients in the Eight Ideals in execution and innovation	Collaborative relationships with clients, services executed with a combination of talent and technology as appropriate, and flexible arrangements	Articulates vision and a “new way of thinking,” has recognizable investments in future capabilities and strong client feedback, and is driving new insights and models
<ul style="list-style-type: none">● High Performers demonstrate strong capabilities but lack an innovative vision or momentum in execution against the vision	Execute some of the following areas with excellence: worthwhile relationships with clients, services executed with “green lights,” and flexibility when meeting clients’ needs	Typically, describe a vision and plans to invest in future capabilities and partnerships for As-a-Service and illustrate an ability to leverage digital technologies and/or develop new insights with clients
<ul style="list-style-type: none">● High Potentials demonstrate vision and strategy but have yet to gain momentum in executing the strategy and vision	Early results and proof points from examples in new service areas or innovative service models but lack scale, broad impact, and momentum in the capability under review	Well-plotted strategy and thought leadership, showcased use of newer technologies and/or roadmap, and talent development plans
<ul style="list-style-type: none">● Execution Powerhouses demonstrate solid, reliable execution, but have yet to show significant innovation or vision	Evidence of operational excellence; however, still more of a directive engagement between a service provider and its clients	Less evident vision and investment in future-oriented capability, such as skills development, “intelligent operations,” or digital technologies

Background Information for the Blueprint Ranking

- **Look for relevant clusters:** Assessing IA across system integrators, pure-play BPOs, the Big 4, and specialist consultants is not an easy undertaking as they have different value propositions and focus areas. With that in mind, when reading the Blueprint grid, one should bear this in mind and look for clusters of comparable providers.
- **Keep in mind the weightings:** The highest ratings for the Blueprint grid are actual services, the vision, and the tool and platform strategies. Thus, scale and a holistic strategy beyond organizational stovepipes are key. Invariably, global system integrators have an implicit advantage. For instance, pure-play BPOs and specialist consultants could offer strong value for process-centric requirements and advisory services.
- **Align providers to your requirements:** When drawing up provider lists for RFIs or other activities, we recommend focusing on specific use cases and not simply looking at the overall positioning. In particular, we recommend differentiating between IT and business process–centric scenarios. Partnerships and proprietary IP provide guidance for specific capabilities.
- **Capabilities are expanding fast:** IA capabilities are changing with an astounding pace. Therefore, rankings might need to be adjusted over time. By the same token, we expect new providers to come to the forefront. When doing an assessment, we suggest you discuss with HfS any changes and developments.

HfS Blueprint Grid: Intelligent Automation



Service Provider Profile



HfS Intelligent Automation Value Chain: Key to Profiles

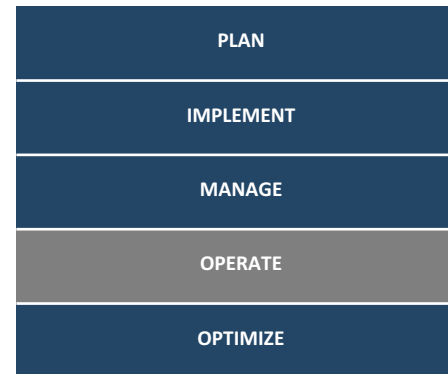
- Value Chain coverage is indicated by blue shading. Grey shading indicates that the service provider does not offer these services.

For Example:

Full Value Chain offered



Operate not offered



- Each profile also includes an “Operations” box where we list service provider statistics.
- “N/A” indicates that the service provider does not have this service today. In many cases, the service provider may have these certification applications in progress.

Major Service Provider Dynamics: Highlights

EXECUTION

IBM is the leading provider in execution as it is pragmatically scaling out selected core technologies (Blue Prism, IPcenter, Watson).

- **Actual Services:** Combines the scale and reach of the IA practices with feedback from clients about the quality of the delivery and the ability of the account teams to provide innovation underpinned these scores. Clients interviewed for this Blueprint were especially positive about **IBM, Accenture, Cognizant,** and **Atos**.
- **Scale and repeatability of deployments:** This category is about moving toward automation on an industrial scale, thus moving beyond more task automation-oriented RPA projects. Clients referenced **IBM, Accenture,** and **Atos** in particular.
- **Works with clients to integrate IA into their delivery capabilities:** Despite the nascent state of the ecosystem, the leading providers are investing strongly in industrializing IA delivery. Clients called out specifically include **IBM, Accenture, Cognizant,** and **KPMG**.
- **Addressing the transformation of knowledge work:** Although a large part of the industry are in denial about the implications, **KPMG** is investing for the disruption of its core business, and **Genpact** is blending IA into its Lean Digital narrative.

INNOVATION

Accenture is the leading provider in innovation-based predominantly on the plug-and-play notion of its AI Engine and the broad cognitive capabilities of its myWizard platform.

- **Vision for and investments in the evolution of IA:** Across the board, clients were encouraging providers to be more proactive about innovation and help them to get a better sense of the “future state” of their processes. **Accenture, Cognizant, HCL,** and **Tech Mahindra** stand out for their vision for the evolution of service delivery.
- **Tool and platform strategy:** The leading providers demonstrated practical experiences of integrating a plethora of IA tools and aligning them to specific use cases. **Accenture, HCL, Cognizant,** and **Tech Mahindra** impressed in terms of depth and breadth.
- **Approach to apply IA across organizational boundaries:** **Accenture** has folded IT and operations and built out an IA extraction layer with its AI Engine thus moving beyond traditional stovepipes. **IBM** has created synergies between its GBS and GTS units while driving a holistic IA strategy based on Watson-based Virtual Agents.

Leading global service provider driving automation at scale with differentiating assets around the Watson ecosystem



Blueprint Leading Highlights	Strengths	Challenges
<ul style="list-style-type: none"> Actual delivery of services Works with clients to integrate IA into their delivery capabilities Solutions for accessible and actionable data in IA Scale and repeatability of deployments Approach to apply IA across organizational boundaries 	<ul style="list-style-type: none"> Holistic approach to automation: Although IBM is driving different strategies in different business units, it always approaches automation holistically. Reference points are IBM's E.P.I.C. (Enterprise Process Innovation Continuum) methodology that is spanning desktop automation, RPA, Autonomics, and Cognitive Computing. Similarly, the enhancement of core automation platforms through Watson. Be it analyzing false alarms in Autonomics scenario or the virtual agent extension in vertical solutions. Leading in Cognitive Computing: The investments in the Watson ecosystem are IBM's strongest asset and differentiation. Opening up Watson to peers will drive more insights and will position IBM as the heart of As-a-Service strategies. Driving scale through focus on core technologies: IBM is focussing on three core technologies and driving them out at scale: Blue Prism in RPA, IPsoft in Autonomics, and Watson as a virtual agent and broader analytics scenarios. Some clients value IBM as a strategic partner that has demonstrated the robustness of automation without a single outage. Expanding into vertical offerings: IBM's Cognitive Business Solutions are increasingly extended into vertical solutions, such as health, retail, and telecom, leveraging Watson as a virtual agent. Embracing Design Thinking: IBM is applying its Design Thinking methodology to develop collaborative solutions, and many are conducted at their Austin, TX, design studios. With the help of design thinking facilitators, IBM is focusing on how agreed outcomes can be achieved by implementing automation. 	<ul style="list-style-type: none"> Managing and mitigating organizational complexity: IBM size and wealth of assets have the flipside of organizational complexity. There is not yet a "centralized" strategy across the various business units. Consequently, IBM has to assure that its messages don't get diluted. Similarly, clients reference the siloed way IBM goes to market. An automation incubator could be a pragmatic move to mitigate some of these effects. Clarity about the evolving Watson ecosystem: Although undoubtedly IBM's strongest asset, responsibilities as well as messaging should be better defined and conveyed. Mitigating lack of broad automation portfolio: Although the strategy of focusing on core technologies in order to scale is sound, IBM has to address how it is responding to requirements for specific use case and capabilities, not least in terms of pricing flexibility.
PLAN		
IMPLEMENT		
MANAGE		
OPERATE		
OPTIMIZE		

Relevant Acquisitions/Partnerships	Key Clients	Operations	Technology Tools and Platforms
<p>Partnerships include:</p> <ul style="list-style-type: none"> Blue Prism IPsoft AI Partnership with Amazon, Google, Facebook, Microsoft Promontory Financial Group for AI-based risk and compliance automation 	<p>IBM works with clients across industry sectors:</p> <ul style="list-style-type: none"> Oriflame Cosmetics, Global beauty company Suntory, Japanese brewing and distilling company group Global banking client Global Fortune 500 security firm 	<p>Geographic footprint and scale of the Intelligent Automation practice</p> <p>IBM has four major automation development factories, which it supplements with several regional franchises. They are focused on reusing components and enabling rapid prototyping associated with automation content: US (spread across the country), Brno, Czech Republic, Hortolandia, Brazil, and Bangalore, India.</p> <p>IBM has hosting facilities for Dynamic Automation in each geographic region. It also has a dual site managed RPA service hosting global workload.</p> <p>IBM operates development Centers of Excellence (COEs) in Bangalore, Delhi, Manila, Krakow, and Dalian.</p> <p>IBM has a 2,000-consultant-strong Cognitive Business Consulting practice. IBM is investing heavily to capitalize on its position in Cognitive Business.</p>	<ul style="list-style-type: none"> Watson: End-to-end cognitive solutions for procedural assistance, to provide insightful guidance to helpdesk resources, SAP coders, and end users, and well as to add intelligence to automated processes and tasks, IBM Automation with Watson: Is IBM's Cognitive Automation Delivery Platform. It uses an integration layer that ties problems within the IT ecosystem to automation in order to seamlessly resolve them. It uses Watson in the event of more non-deterministic issues and drives deep analytics into the data associated with running. Dynamic Automation: Collation, Reduction, Automated Remediation, Measurement and Analysis of Events, and Service Requests. Broad set of testing accelerators, including Watson Quality and Test Workbench, Cognitive Defect Analytics, and Model Driven Test Automation. In addition to partner technologies, proprietary automation enablers, such as IBM DataCap, IBM eForms, Watson Policy Manager, Watson APIs, and Analytics to drive business process automation.

Market Wrap-Up and Recommendations



2016 Recommendations: Service Providers

- **Define and fund a holistic automation strategy:** In order to support clients' journeys toward the As-a-Service Economy, providers should accelerate a more holistic automation strategy. Leverage Design Thinking and broader process consulting to reimagine processes rather than using automation as a short-term fix.
- **Make data the centerpiece of your strategy:** An industrial-scale integration of often unstructured data and data curation should form the centerpiece of your strategies. Vertically relevant data will be the key for differentiation and value creation.
- **Be clear about the goals for automation:** Clients need help in imagining the end goal for automation initiatives. Devise communication strategies that go beyond generic "Future of Work" thought leadership by providing specific use cases and processes. Support clients through playing back insights and lessons learned from early deployments.
- **Train and incentivize your salesforce:** Sales is still often disconnected from automation projects. Similar to the early cloud days, Sales personnel need specific training and, even more importantly, an incentive system that encourages the adoption of IA. Build playbooks with elevator pitches for specific use cases. Training needs to be driven equally into the service delivery organization to help identify opportunities for automation.
- **Put the process owner back at center stage:** Especially in business process-centric scenarios, the process owner has to get back to center stage. RPA projects are all too often short-term task automation that might compromise the work of process owners. Facilitate stakeholder and change management on the client side to avoid disruption and antagonism.

2016 Recommendations: Buyers

- **Assess and invest in the transformation of knowledge work:** IA will fundamentally disrupt knowledge work. Generic activities, such as data entry, compliance, and reconciliation, will be largely reduced. At the same time, new skill sets in automation capabilities will be required, and a general shift toward more analytical activities will impact the cost base. Organizations need to adapt their strategies for talent accordingly and develop a clear roadmap.
- **Seek advisory services:** Given the nascent state of the market and thus the lack of broader insights from early deployments, organizations should leverage independent advisory services from management and specialist consultants to move toward realistic business cases. Plan for the M&A of key technologies, in terms of licensing costs and integration issues.
- **Start with use cases and data—not automation tools:** Resist the temptation of claims of cost savings and start with use cases and specific strategies for data curation. This is critical for scaling out projects. Value creation and differentiation will come from the intersection of automated, standardized service delivery and leverage of unstructured data through neural networks, deep learning, and AI.
- **Define and fund an innovation agenda:** Across the board, buyers were underwhelmed by the proactive guidance on innovation by their service providers. You should clarify, define, and fund innovation projects at the outset. Conversely, be realistic in your own expectations when negotiating with providers as the business case has to stack up.

About the Author



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Overview

- Tom Reuner is Research Vice President, Intelligent Automation at HfS. Tom is responsible for driving the HfS research agenda for Intelligent Automation across the whole gamut ranging from RPA to Autonomics to Cognitive Computing and Artificial Intelligence. A key element in Tom's responsibilities is guiding clients and stakeholders on the evolution of Intelligent Automation including the coverage of new players and approaches. Furthermore, he is driving the research on application testing and service management. A central theme for all of his research is the increasing linkages between technological evolution and evolution in the delivery of business processes.

Previous Experience

- Tom's deep understanding of the dynamics of this market comes from having held senior positions with Gartner, Ovum and KPMG Consulting in the UK and with IDC in Germany where his responsibilities ranged from research and consulting to business development. He has always been involved in advising clients on the formulation of strategies, guiding them through methodologies and analytical data and working with clients to develop impactful and actionable insights. Tom is frequently quoted in the leading business and national press, appeared on TV and is a regular presenter at conferences.

Education

- Tom has a PhD in History from the University of Göttingen in Germany.

About HfS Research

[HfS Research](#) is The Services Research Company™—the leading analyst authority and global community for business operations and IT services. The firm helps enterprises validate their global operating models with world-class research and peer networking.

HfS Research coined the term [The As-a-Service Economy](#) to illustrate the challenges and opportunities facing enterprises needing to re-architect their operations to thrive in an age of digital disruption, while grappling with an increasingly complex global business environment. HfS created the Eight Ideals of [Being As-a-Service](#) as a guiding framework to help service buyers and providers address these challenges and seize the initiative.

With specific focus on the digitization of business processes, intelligent automation and outsourcing, HfS has deep industry expertise in healthcare, life sciences, retail, manufacturing, energy, utilities, telecommunications and financial services. HfS uses its groundbreaking [Blueprint Methodology](#)™ to evaluate the ability of service and technology providers to innovate and execute the Eight Ideals.

HfS facilitates a thriving and dynamic global community of more than 100,000 active subscribers, which adds richness to its research. In addition, HfS holds several [Service Leaders Summits](#) every year, bringing together senior service buyers, providers and technology suppliers in an intimate forum to develop collective recommendations—for the industry and add depth to the firm’s research publications and analyst offerings.

Now in its tenth year of publication, HfS Research’s acclaimed blog [Horses for Sources](#) is the most widely read and trusted destination for unfettered collective insight, research and open debate about sourcing industry issues and developments. Horses for Sources and the HfS network of sites receive more than a million web visits a year.

HfS was named [Analyst Firm of the Year for 2016](#), alongside Gartner and Forrester, by leading analyst observer InfluencerRelations.

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