Introduction and scope

Everest Group recently released its report titled “IoT Services PEAK Matrix™ Assessment and Market Trends 2017: Have You Taken the Plunge in IoT Yet?” This report analyzes the changing dynamics of the IoT landscape and assesses service providers across several key dimensions.

As a part of this report, Everest Group updated its classification of 18 service providers on the Everest Group PEAK Matrix for IoT into Leaders, Major Contenders, and Aspirants. The PEAK Matrix™ is a framework that provides an objective, data-driven, and comparative assessment of IoT service providers based on their absolute market success and delivery capability. Everest Group also identified five service providers as the “2017 IoT Market Star Performers” based on the strongest forward movement demonstrated on the PEAK Matrix™ year-on-year.

Based on the analysis, IBM emerged as a Leader. This document focuses on IBM’s IoT experience and capabilities and includes:

- IBM’s position on the IoT PEAK Matrix
- IBM’s year-on-year movement on the IoT PEAK Matrix
- Detailed IoT services profile of IBM

Buyers can use the PEAK Matrix™ to identify and evaluate different service providers. It helps them understand the service providers’ relative strengths and gaps. However, it is also important to note that while the PEAK Matrix™ is a useful starting point, the results from the assessment may not be directly prescriptive for each buyer. Buyers will have to consider their unique situation and requirements, and match them against service provider capability for an ideal fit.
Everest Group PEAK Matrix™

IoT Services – Services PEAK Matrix Assessment and Market Trends 2017: Have You Taken the Plunge in IoT Yet?

Everest Group IoT Services PEAK Matrix™ Assessment and Market Trends 2017: Have You Taken the Plunge in IoT Yet?

Vision and capability
(Vision, scope, innovation and investments, and delivery footprint)

Market impact
(Market adoption, portfolio mix, and value delivered)

Major Contenders

Leaders

Aspirants

Star Performers

Note:
Assessment for TCS includes partial inputs from the service provider, and is based on Everest Group’s estimates that leverages its proprietary data assets, service provider public disclosures, and interaction with buyers.
Assessment for Luxoft excludes service provider inputs on this particular study, and is based on Everest Group’s estimates that leverage its proprietary Transaction Intelligence (TI) database, ongoing coverage of the service provider, public disclosures, and interaction with buyers.

Confidentiality:
Everest Group takes its confidentiality pledge very seriously. Any information that is contract-specific will be presented back to the industry only in an aggregated fashion.

Source:
Everest Group (2017)
Overview of the IoT services practice: Watson IoT services works in conjunction with the Watson IoT platform and IoT products to offer integrated capabilities, and delivers services by leveraging its pool of consultants, data scientists, designers, security experts, and domain specialists.

**Strengths**
- Advanced next generation cognitive capabilities and a library of industry-focused solutions enable IBM to deliver innovative and scalable business transformation
- Co-development construct with enterprises, investments, and partnerships with niche players enable IBM to deliver solutions specific to customers’ needs

**Areas of improvement**
- IBM needs to be proactive in addressing customer concerns around IoT project delivery, support, and maintenance
- IBM needs to enhance its investments in training resources on Watson IoT, Bluemix, and other IBM technologies to address customer concerns for quality service delivery

**IoT projects scope**

<table>
<thead>
<tr>
<th>Solution architecture</th>
<th>Devices &amp; sensor engineering</th>
<th>Gateway &amp; network implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud enablement</td>
<td>Application services</td>
<td>Analytics &amp; data management</td>
</tr>
<tr>
<td>System integration</td>
<td>Managed services</td>
<td></td>
</tr>
</tbody>
</table>

**IoT services by function**

<table>
<thead>
<tr>
<th>Consulting</th>
<th>Design/implementation</th>
<th>Maintenance/management</th>
</tr>
</thead>
</table>

**IoT services revenue by buyer size**

- Small (annual revenue < US$1 billion)
- Medium (annual revenue = US$1-5 billion)
- Large (annual revenue = US$5-10 billion)
- Mega (annual revenue > US$10 billion)

**IoT services top five industries**

- Manufacturing
- Retail, distribution, & CPG
- Electronics, hi-Tech, & technology
- Energy and utilities
- Travel & transportation

**IoT services revenue by geography**

- North America
- UK
- Europe
- APAC
- South America
- MEA

Source: Everest Group (2017)
**IBM | IoT services profile (page 2 of 3)**

**Case studies and solutions**

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**Vision:** IBM’s vision is to become the unequivocal global leader in IoT transformational services enabled by an integrated multi-nodal team, a seamless ecosystem, a robust library of cloud based solutions with a compelling experience, and differentiated set of industry assets, models, and algorithms.

**IoT proprietary solutions (representative list)**

<table>
<thead>
<tr>
<th>Solution</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library of Semantic Models by Industry</td>
<td>A library of semantic models assimilating client data and applying analytics to enable effective decisions making and faster time-to-value. The model creates a ML engine, continually enriched and enhanced to offer clients optimization of algorithms and rules</td>
</tr>
<tr>
<td>IBM Cognitive plant Advisor (CPA)</td>
<td>CPA builds a cognitive model leveraging advanced ML techniques to reflect an operation/asset in the plant. This model self updates by using the current data and makes recommendations for the operator to achieve the desired goal for energy efficiency, throughput, quality, etc.</td>
</tr>
<tr>
<td>Building Optimization with IoT</td>
<td>The solution works with IoT platform as well as BMS systems such as Tririga and offers value added services to clients such as smarter building analytics, badge printing along with AI solutions around occupancy, energy forecasting, and people flow</td>
</tr>
<tr>
<td>API Library and Cognitive Technologies</td>
<td>Solution such as vision/sensors, touch &amp; gripping, learning perception, speech recognition. being developed in partnership with clients with the objective to enhance the capabilities of shop floor and consumer robots leveraging proprietary APIs and Watson technology</td>
</tr>
<tr>
<td>Cognitive Equipment Advisor (CEA)</td>
<td>An interactive ML assistant built on the organization of structured and unstructured data solution aimed at reducing the time to troubleshoot and repair equipment by imparting the knowledge gained via IoT, analytics, and cognitive computing</td>
</tr>
</tbody>
</table>

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**Case study 1**

**Enhanced connected experience for a white goods manufacturer**

**Business challenge**

The customer wanted to keep pace with consumer expectations by enabling connectivity within the product experience. The concern was regarding performance and scalability of IoT as more consumers began to connect with them.

**Solution and impact**

IBM provided the IoT platform including integration with other systems. IBM delivered the solution as-a-service and included device management, security, control, and sensor data management, thereby reducing the cost of the connected device by more than 50%.

**Case study 2**

**Rider assistance system for autonomous bus manufacturer**

**Business challenge**

The autonomous bus manufacturer needed to find a solution for riders’ assistance and enable multi-modal user experience including mobility for the aging and disabled.

**Solution and impact**

IBM designed and developed cognitive IoT enabled rider experience for the customer’s autonomous vehicles. The solution interacted with riders in their natural language for core operations, situational awareness, weather, and points of interest. The solution was awarded “Best Mobility Product 2017” by automotive industry at TU-Automotive awards.

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**Source:** Everest Group (2017)
## Investments and partnerships

### IoT investments
(representative list)

<table>
<thead>
<tr>
<th>Investment theme</th>
<th>Details</th>
</tr>
</thead>
</table>
| Research and development               | - IBM has approximately 750 IoT specific patents filed and/or granted, a US$6 Billion overall annual R&D budget, and 3,000 researchers in 12 labs worldwide.  
- Additionally, IBM has partnered with several academic institutions such as MIT, CMU for collaboration and solution development                                                                                                                                                                                                                                                                                                                                                       |
| Acquisitions                           | The Weather Company, Agile 3 Solutions (Data Security), Expert Personal Shopper (XPS) Division of Fluid, Sanovi Technologies (Cloud), Ustream (video streaming services), Vivant (Digital Consulting) as well as multiple other acquisitions focused on enhancing digital services capabilities to deliver data insights to customers by leveraging their creative services and design capabilities                                                                                                                                                                                                                                                                                                                                                                                                 |
| IoT labs and innovation centers        | - **IBM Watson IoT Headquarters:** Setup in Munich with 1000+ employees focused on research and customer facing roles. The center is established to drive client collaboration and accelerate adoption  
- Established **eight key client interaction hub sites** across the globe with locations in India, the United States (Columbus, Lansing, Baton Rouge, and Yorktown Heights), and Europe (Munich, Magdeburg, Stockholm, and Hursley) dedicated to various facets of delivering IoT solutions                                                                                                                                                                                                                                                                                                                                 |
| Talent                                 | Training initiatives include Watson IoT Sales Badge, Watson IoT Technical Badge, and IBM COGNIHACK to name a few                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### IoT partnerships
(representative list)

<table>
<thead>
<tr>
<th>Partner name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABB</td>
<td>Partnership for joint solution development with ABB to help customers address industrial challenges and assist in improving quality control, reducing downtime, and increasing speed &amp; yield of industrial processes</td>
</tr>
<tr>
<td>Apple</td>
<td>Partnership to add design thinking and iOS capabilities with IBM’s cognitive and cloud manufacturing capabilities</td>
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<tr>
<td>AT&amp;T</td>
<td>Partnership to combine strengths in cognitive computing and global connectivity to create open standards-based tools</td>
</tr>
<tr>
<td>Cisco</td>
<td>Partnership for edge analytics to enable business and organizations in remote and autonomous locations to more deeply understand and act on critical data on the network edge</td>
</tr>
<tr>
<td>SAP</td>
<td>Partnership for co-innovation to increase customer value through cognitive capabilities and industry-specific functionality</td>
</tr>
</tbody>
</table>

Additionally, IBM has joint GTM with clients such as Airbus, Visa, Vodafone, Texas Instruments, Nokia, Schaeffler, Bosch, and GM. IBM has also partnership with technology players such as Industrial Skyworks (Drones), BEET Analytics, ARM, OSI Soft, and PTC (digital twin) to name a few.

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Source: Everest Group (2017)
Appendix
## Everest Group’s definition of scope of IoT services

<table>
<thead>
<tr>
<th>IoT services</th>
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</thead>
<tbody>
<tr>
<td><strong>Consulting</strong></td>
</tr>
<tr>
<td>Strategy formulation, use case development, roadmapping, and IoT architecture</td>
</tr>
<tr>
<td><strong>Design/implementation</strong></td>
</tr>
<tr>
<td>Solution designing and implementation, system integration, and technology deployment</td>
</tr>
<tr>
<td><strong>Maintenance/management</strong></td>
</tr>
<tr>
<td>Ongoing management, monitoring, support, and upgrades/updates</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
</tr>
<tr>
<td>Application development, API development &amp; publishing, user interface design, customer experience management, application distribution, and interoperability</td>
</tr>
<tr>
<td><strong>Analytics and data management</strong></td>
</tr>
<tr>
<td>Master data management, big data solution integration, data storage, cleaning &amp; mining, event processing, predictive analytics, visualization, reporting, and dashboards</td>
</tr>
<tr>
<td><strong>Gateways and network</strong></td>
</tr>
<tr>
<td>Device connectivity, device registration, cloud connectivity, device management, and performance management</td>
</tr>
<tr>
<td><strong>Infrastructure and security</strong></td>
</tr>
<tr>
<td>Cloud platform development, device permissions, DR/back-up, authentication, data encryption, and vulnerability assurance</td>
</tr>
<tr>
<td><strong>Device and sensor engineering</strong></td>
</tr>
<tr>
<td>Firmware development/upgrade, chip design/selection, sensor/device design, CAD/CAM, prototyping and deployment, configuration, provisioning, and asset management</td>
</tr>
</tbody>
</table>

*NOT EXHAUSTIVE*
Everest Group PEAK Matrix™ is a proprietary framework for assessment of market impact and vision & capability.
Services PEAK Matrix™ evaluation dimensions

Measures impact created in the market – captured through three subdimensions

**Market adoption**
No. of clients, revenue base, and YOY growth, deal value/volume

**Portfolio mix**
Diversity of client/revenue base across geos and type of engagements

**Value delivered**
Value delivered to the client based on customer feedback and transformational impact

Measures ability to deliver services successfully. This is captured through four subdimensions

**Vision and strategy**
Vision for the client and itself; future roadmap and strategy

**Scope of services offered**
Depth and breadth of services portfolio across service sub-segments / processes

**Innovation and investments**
Innovation and investment in the enabling areas, e.g., technology IP, industry/domain knowledge, innovative commercial constructs, alliances, M&A, etc.

**Delivery footprint**
Delivery footprint and global sourcing mix

Major Contenders
Aspirants
Leaders
Vision & capability
Everest Group confers the Star Performers title on providers that demonstrate the most improvement over time on the PEAK Matrix™

Methodology
Everest Group selects Star Performers based on the relative YOY improvement on the PEAK Matrix.

In order to assess advances on market impact, we evaluate each service provider’s performance across a number of parameters including:
- Yearly ACV/YOY revenue growth
- # of new contract signings and extensions
- Value of new contract signings
- Improvement in portfolio mix
- Improvement in value delivered

In order to assess advances on vision and capability, we evaluate each service provider’s performance across a number of parameters including:
- Innovation
- Increase in scope of services offered
- Expansion of delivery footprint
- Technology/domain specific investments

We identify the service providers whose improvement ranks in the top quartile and award the Star Performer rating to those service providers with:
- The maximum number of top-quartile performance improvements across all of the above parameters AND
- At least one area of top-quartile improvement performance in both market success and capability advancement

The Star Performers title relates to YOY performance for a given service provider and does not reflect the overall market leadership position, which is identified as Leader, Major Contender, or Aspirant.
**FAQs (page 1 of 2)**

**Does the PEAK Matrix™ assessment incorporate any subjective criteria?**

Everest Group’s PEAK Matrix assessment adopts an objective and fact-based approach (leveraging service provider RFIs and Everest Group’s proprietary databases containing providers’ deals and operational capability information). In addition, these results are validated / fine-tuned based on our market experience, buyer interaction, and provider briefings.

**Is being a “Major Contender” or “Aspirant” on the PEAK Matrix, an unfavorable outcome?**

No. PEAK Matrix highlights and positions only the best-in-class service providers in a particular functional/vertical services area. There are a number of providers from the broader universe that are assessed and do not make it to the PEAK Matrix at all. Therefore, being represented on the PEAK Matrix is itself a favorable recognition.

**What other aspects of PEAK Matrix assessment are relevant to buyers and providers besides the “PEAK Matrix position”?**

PEAK Matrix position is only one aspect of Everest Group’s overall assessment. In addition to assigning a “Leader”, “Major Contender” or “Aspirant” title, Everest Group highlights the distinctive capabilities and unique attributes of all the PEAK Matrix providers assessed in its report. The detailed metric level assessment and associated commentary is helpful for buyers in selecting particular providers for their specific requirements. It also helps providers showcase their strengths in specific areas.

**Does PEAK Matrix assessment incorporate “customer satisfaction” as an evaluation criteria/metric?**

Everest Group does not have “customer satisfaction” as a separate metric in its PEAK evaluation framework. This is primarily because it is challenging to obtain interviews with a meaningful number of reference buyers for each service provider. Also, “customer satisfaction” is a highly subjective and opinion driven metric and there is no foolproof methodology to normalize this input. That said, we validate our PEAK results through buyer interaction and capture some consistent “spikes” or “lags” in performance through metrics such as “renewal rate”, etc.

**What are the incentives for buyers and providers to participate/provide input to PEAK Matrix research?**

- Participation incentives for buyers include a summary of key findings from the PEAK Matrix assessment
- Participation incentives for providers include adequate representation and recognition of their capabilities/success in the market place, and a copy of their own “profile” that is published by Everest Group as part of the "compendium of PEAK Matrix providers" profiles.
What is the process for a service provider to leverage their PEAK Matrix positioning, or “Star Performer” status?

- Providers can use their PEAK positioning or “star performer” rating in multiple ways including:
  - Issue a press release declaring their positioning/rating
  - Customized PEAK profile for circulation (with clients, prospects, etc.)
  - Quotes from Everest Group analysts could be disseminated to the media
  - Leverage PEAK branding across communications (e-mail signatures, marketing brochures, credential packs, client presentations, etc.)
- The provider must obtain the requisite licensing and distribution rights for the above activities through an agreement with the designated POC at Everest Group

Does the PEAK Matrix evaluation criteria change over a period of time?

PEAK Matrix assessments are designed to serve present and future needs of the enterprises. Given the dynamic nature of the global services market and rampant disruption, the assessment criteria are realigned as and when needed to reflect the current market reality as well as serve the future expectations of enterprises.
About Everest Group

Everest Group is a consulting and research firm focused on strategic IT, business services, and sourcing. We are trusted advisors to senior executives of leading enterprises, providers, and investors. Our firm helps clients improve operational and financial performance through a hands-on process that supports them in making well-informed decisions that deliver high-impact results and achieve sustained value. Our insight and guidance empower clients to improve organizational efficiency, effectiveness, agility, and responsiveness. What sets Everest Group apart is the integration of deep sourcing knowledge, problem-solving skills and original research. Details and in-depth content are available at www.everestgrp.com.

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