HFS Research

HFS Top 10 Energy Service Providers 2019

Excerpt for Infosys

HFS Research authors:
Saurabh Gupta, Chief Strategy Officer
Mayank Madhur, Knowledge Analyst

TOP 10

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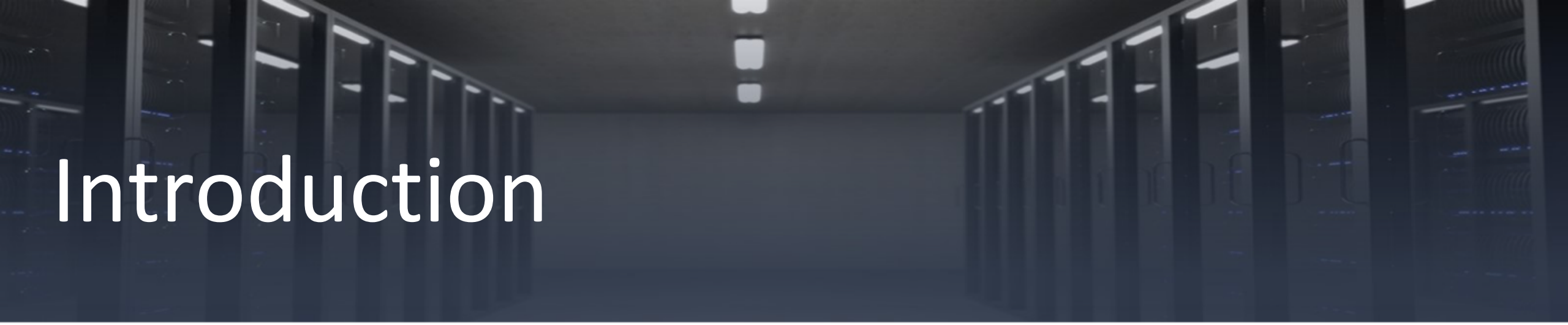
The global oil and gas sector faces two competing priorities as the “energy transition” becomes real: finding new growth avenues while optimizing operational efficiencies, production levels, and capital needs. Emerging technologies promise to solve these business challenges, but the roadmap to success remains unclear.

— Saurabh Gupta, Chief Strategy Officer

What you'll read

Topic

Introduction, methodology, and definitions



Introduction

- The global oil and gas sector faces two competing priorities as the “energy transition” becomes real: finding new growth avenues while optimizing operational efficiencies, production levels, and capital needs. Emerging technologies promise to solve these business challenges but the roadmap to success remains unclear. Consequently, the role of third parties is no longer restricted to cost reduction; it now includes becoming strategic partners to help their clients drive meaningful change.
- The HFS Top 10 Energy services report examines the role service providers play in the uncertain and volatile global energy industry. We assessed and rated the energy-specific service capabilities of 11 service providers across a defined series of innovation, execution, and voice of the customer criteria. The report highlights the overall ratings for all 11 participants and the top five leaders for each sub-category.
- This report also includes detailed profiles of each service provider, outlining their overall and sub-category rankings, provider facts, and detailed strength and development opportunities.
- The report specifically focuses on industry-specific capabilities for the energy sector, as defined in our energy value chain. It does not focus on horizontal IT or BPS services such as application management or finance and accounting outsourcing, which may be delivered to energy clients.

TOP 10

Service providers covered in this report

accenture
High performance. Delivered.

Cognizant

DXC.technology

HCL

NTT DATA

Tech Mahindra

Infosys

epam

TATA
TATA CONSULTANCY SERVICES

LTI

wipro

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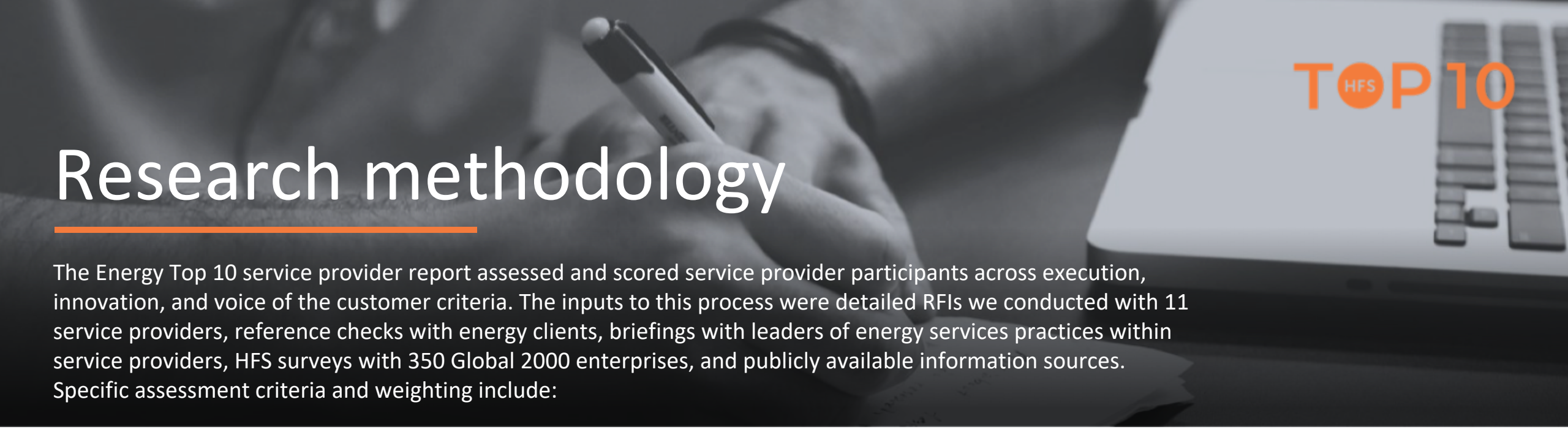

Research methodology

The Energy Top 10 service provider report assessed and scored service provider participants across execution, innovation, and voice of the customer criteria. The inputs to this process were detailed RFIs we conducted with 11 service providers, reference checks with energy clients, briefings with leaders of energy services practices within service providers, HFS surveys with 350 Global 2000 enterprises, and publicly available information sources. Specific assessment criteria and weighting include:

33.3%

Ability to execute

- **Size and experience of energy practice** including energy sector revenues and the scale of energy BPM and IT services
- **Geographic mix of energy clients** across North America, Europe, Asia Pacific, and other regions
- **Depth and breadth of industry-specific offerings** across the energy value chain

33.3%

Innovation capability

- **Clear vision for the energy industry** including credibility of go-to-market strategy and strong understanding of industry trends and challenges
- **Innovative solutions** including platform-offerings, deployment of intelligent automation, and development of internal IP
- **Recent (2017-2018) investments** in inorganic growth and development of partnership ecosystem
- **Co-innovation and collaboration** with clients including creative commercial models

33.3%

Voice of the customer

- **Direct feedback from enterprise clients** via reference checks, HFS surveys, and case studies critiquing provider performance and capabilities

Energy operations value chain

TOP 10

The in-scope services for this study are identified below:

Industry specific

Upstream	Midstream	Downstream		
Exploration, development, and production	**Transportation**	**Refining**	**Distribution**	**Marketing and retail**
• Asset management • Asset integrity management • Digital oil field management • Drilling and well completion management • Petro technical computing infrastructure • Reservoir engineering • Upstream accounting • Upstream engineering and R&D • Production optimization • Upstream data management • Field development and planning and contract management	• Linear asset management (pipeline operations, modelling, surveillance) • Transportation operations management • Supply and trading	• Emission management • Integrated refinery information systems • Plant operations • Refinery production planning and scheduling • Supply planning and sourcing	• Terminal operations • Distribution management	• Energy marketing services • Retail and franchise operations • Energy trading and risk management

Primary report focus

Horizontal

Cross Functional operations

Capital project management ● Risk management and monitoring ● Field force and workforce management ● Regulatory compliance ● Reporting

Enabling technologies

RPA ● Artificial intelligence ● Smart analytics ● Blockchain ● IoT ● Cloud ● Mobility ● Social media

Horizontal business processes

Customer engagement ● Human resources ● Procurement ● Finance and accounting ● Payroll ● Legal and compliance

Horizontal IT processes

Planning, design, and implementation ● Application development and maintenance ● Infrastructure management ● Security

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The energy operations value chain defined (1 of 2)

- HFS developed the industry value chain concept to graphically depict our understanding of the processes and functions that specific industries engage in to operate their businesses.
- Industry-specific processes: These processes include the following specific value chain functions:
  - **Exploration, development, and production**— Processes focused on the search for rock formations associated with oil or natural gas deposits, exploratory drilling, designing and building of wells, and the process of extracting the hydrocarbons;
  - **Transportation**— Processes of transporting oil and gas from the field to refining facilities via road, rail, pipelines or water, and the storage of crude oil and natural gas;
  - **Refining**— Process where crude oil is transformed and refined into products such as petroleum, gasoline, diesel fuel, asphalt base, heating oil, kerosene, liquefied petroleum gas, jet fuel, and fuel oils;
  - **Distribution**— Processes of delivery of oil and natural gas products from refineries to the end users;
  - **Marketing and retail**— Processes of trading and retailing oil and gas products.

The energy operations value chain defined (2 of 2)

- **Enabling technologies:** Energy industries are being digitally transformed by various change agents. They include elements such as RPA and AI, IoT, and smart analytics. Our research on these topics will focus on how they are being utilized within energy firms, which service providers are bringing them to the table, and what real business impact is being realized.
- **Horizontal IT and business processes:** Enterprises in all sectors have a range of consistent business and IT processes that are essential to running their businesses but are executed similarly regardless of industry. We refer to these as horizontal processes and have segmented them by IT and business functions.
- Our coverage of the energy sector will examine core value chain processes across industry-specific and horizontal functions with an emphasis on the impact of critical change agents.

Executive Summary

Executive summary (page 1 of 3)

The energy industry needs to manage two competing priorities (see Exhibit 1).

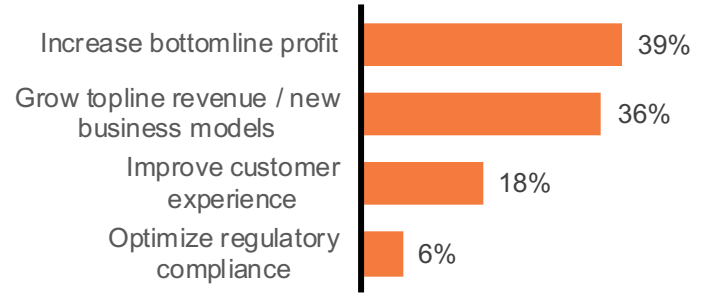
- Growing topline revenues and create new business models. Rising social and political pressure in conjunction with technology advances and economic shifts are combining to create a positive atmosphere to address the energy transition in order to lower carbon emissions. Natural gas has replaced coal as the cheapest source for power generation. It's not only much cleaner, it's now also cheaper. Solar and wind have become economically competitive alternatives, with many wind and solar projects now cheaper than generating power from coal, oil and even natural gas. In any case, the demand for natural gas continues to grow and it is seen as a bridge fuel in the energy transition, and it is a big driver for the North American shale revolution.
- Improving bottom-line profitability. In the past, most oil and gas companies let inefficiencies exist in a world of high oil prices and cash abundance. But that changed after 2015 and 2016 when prices crashed from above $100 per barrel to less than $40. While the prices have remained somewhat stable in the $50 to $70 range in 2017 and 2018,there is a strong imperative to find new efficiencies, optimize production, and decrease capital needs.

Given the revenue and margin pressure, the attractiveness of offshore third-party services is reducing where the primary value proposition is cost-reduction.

- However, more energy companies are planning to expand onshore and localized services (see Exhibit 2) that can bring in the latest and greatest emerging technologies (See Exhibit 3 on the next page) to drive revenue growth while reducing costs.

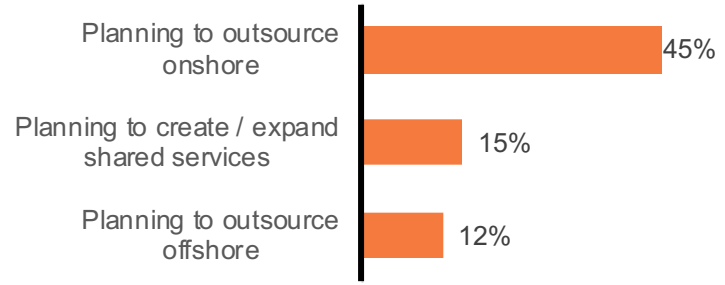
Exhibit 1. Strategic objectives over the next 3 years

(Rank 1 only, 33 energy leaders)



Exhbit 2. Plans to invest in 3rd party services (Offshore versus onshore)

(33 energy leaders)



Executive summary (page 2 of 3)

There are five key initiatives in the energy industry driven by adoption of emerging technologies.

- Real-time data analytics for operational excellence (e.g., predictive analytics driving drilling efficiencies) and safer environments (e.g., analytics on IOT/sensor data creating safer and more efficient operations), engineering breakthroughs using cloud data lakes and operational analytics, and improving forecast accuracies (e.g., reducing cost of inventory through real time supply chain optimization).
- Customer and employee experience such as connected worker solutions leveraging mobility and social platforms that empower a smaller, smarter oil and gas workforce; using unstructured to understand consumer behavior; and leveraging cognitive assistants for querying SOPs, manuals, policies, and specifications.
- Integrated IT (information technology) and OT (operations technology) initiatives such as remote asset surveillance using IoT sensors, predictive maintenance to reduce machine downtimes, material and process optimization using AR/VR digital twins, 3D printing for frequently used and long lead-time spare parts.
- Reduction in CAPEX and optimization of OPEX through modernization of legacy IT operations using cognitive automation, cloud, and workplace re-imagination. Even specialized and high performance computing applications are starting to move to the cloud as solutions mature and energy companies try to reduce their CAPEX dependence. Intelligent automation (IA) initiatives are also increasing to automate transactional activities, especially in corporate functions such as HR, F&A, and procurement.
- Holistic security investments, especially around cybersecurity, to manage increasing digital threats and leverage managed security services.

Exhibit 3. Top inhibitors in achieving strategic objectives

(Rank 1 only, 33 energy leaders)

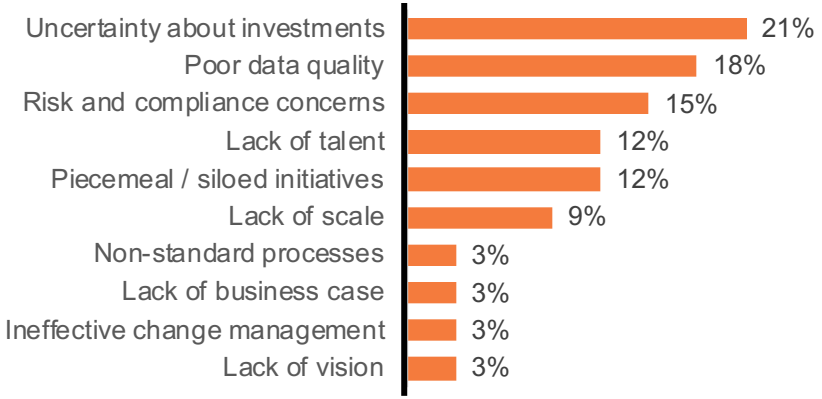
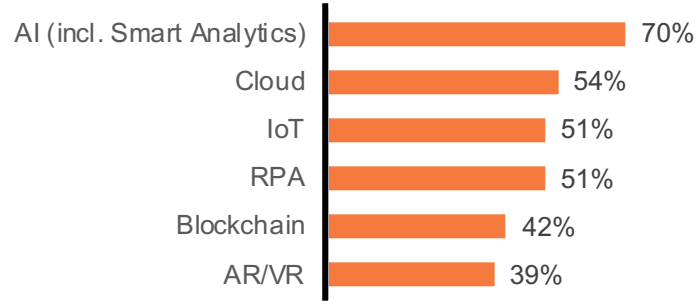


Exhibit 4. Investments in emerging technologies

(% respondents piloting or implementing, 33 energy leaders)



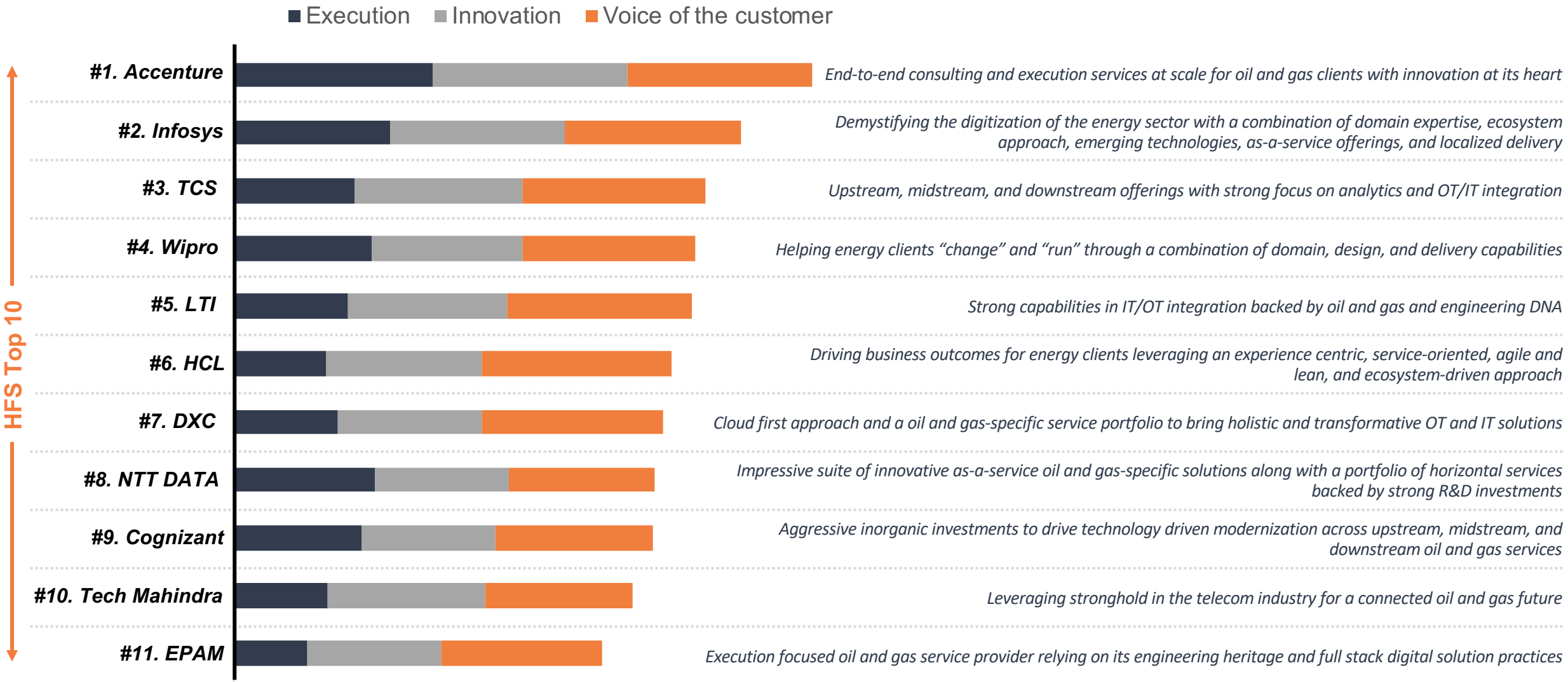
Executive summary (page 3 of 3)

- Despite the promise of emerging technologies to solve business challenges, the roadmap to achieve the strategic objectives remains unclear. Energy companies are uncertain about the financial investments required to meet their challenges. Poor data quality and a lack of digital-savvy talent make decision making even harder. Innovation is often stifled given the risk and compliance concerns, and most initiatives end up becoming small and piecemeal, which are hard to scale at an enterprise-wide level.

- In this report, we assessed and ranked 11 leading service providers in the energy sector to understand how they are helping their clients become successful. The top 10 leaders for the energy sector are Accenture, Infosys, TCS, Wipro, LTI, HCL, Tech Mahindra, DXC, NTT DATA, and Cognizant. These firms exhibited a strong mix of service execution excellence, applied innovation and vision, and verified customer satisfaction to rise to the top of our energy sector study.

The HFS Top 10 Energy service provider results

HFS Top 10 Google AI services 2019



Source: HFS Research 2019

HFS top five energy sector service providers by individual assessment criteria

TOP 10

Rank	Overall	Execution			Innovation				Voice of the customer
		Size and experience	Geographic mix of clients	Value chain coverage	Investments and ecosystem	Innovative solutions	Co-innovation and collaboration	Clear vision for energy	
#1	accenture	accenture	accenture	Infosys	accenture	accenture	LTI	accenture	HCL
#2	Infosys	DXC.technology	NTT DATA	accenture	Infosys	TATA CONSULTANCY SERVICES	accenture	Infosys	accenture
#3	TATA CONSULTANCY SERVICES	NTT DATA	Infosys	wipro	Cognizant	Infosys	Cognizant	TATA CONSULTANCY SERVICES	LTI
#4	wipro	Infosys	DXC.technology	LTI	LTI	wipro	HCL	HCL	TATA CONSULTANCY SERVICES
#5	LTI	TATA CONSULTANCY SERVICES	wipro	Tech Mahindra	TATA CONSULTANCY SERVICES	LTI	Tech Mahindra	wipro	Tech Mahindra

Notes:
- Service providers assessed: Accenture, Cognizant, DXC, EPAM, HCL, Infosys, LTI, NTT Data, TCS, Tech Mahindra and Wipro
- Source: HFS Research, 2019

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Energy service provider profile

Demystifying the digitization of the energy sector with a combination of domain expertise, ecosystem approach, emerging technologies, as-a-service offerings, and localized delivery

Dimension	Rank
HFS Top 10 position	**#2**
Ability to execute	
Size and experience:	#4
Geographic mix of clients	#3
Value chain coverage	#1
Innovation capability	
Investments and ecosystem	#2
Innovative solutions	#3
Co-innovation and collaboration	#7
Clear vision for energy	#2
Voice of the customer	**#6**

Strengths

- **End-to-end upstream and downstream oil and gas experience and expertise:** With 20+ years of experience as a dedicated oil and gas practice, Infosys offers strong capabilities across the entire value chain encompassing consulting, digital transformation, IT services and BPM services. A substantial part (over 25%) of Infosys' oil and gas workforce are industry experts, including geologists, geophysicists, and petroleum engineers.
- **Investments in acquisitions and ecosystem:** Infosys acquired Noah consulting in 2015 to help upstream oil and gas companies plan, architect, and deploy IT solutions. Its acquisitions of WongDoody and BrillantBasics added design capabilities, strengthening its digital transformation value proposition for energy clients. Infosys has built an impressive ecosystem of upstream, trading, downstream and enterprise IT partners (e.g., Fluido) to address current challenges of the oil and gas industry.
- **Triple-A Trifecta of automation, analytics, and AI for the energy sector:** Powered by its proprietary Infosys NIA platform as well as partnerships with COTS platforms, Infosys has energy sector-specific offerings around cognitive agents, RPA, machine learning, computer vision, and analytics.
- **Demystifying digital transformation for energy:** Using a combination of emerging tech. (IoT, blockchain), as-a-service offerings (IT as-a-service, cloud-based business platform as-a-service), and localized delivery (mini-hub dedicated for oil and gas in Houston and other hubs include London, Indianapolis, Raleigh, Rhode Island, Connecticut, Arizona, and Texas).

Development opportunities

- Driving new business models for energy sector. Infosys should start to leverage its relationships across upstream and downstream participants to become the strategic orchestrator of capabilities in the emerging hyper-connected ecosystem of the oil and gas industry.
- Digital change management. Beyond consulting and IT enabled services, there is an opportunity for Infosys to seamlessly integrate its digital change management capabilities further to partner with energy clients in their transformation journeys.

Relevant acquisitions and partnerships

Acquisitions:
- Fluido (2018)
- WongDoody Holding (2017)
- Brilliant Basics (2017)
- Skytree (2017)

Partnerships:
- **Upstream:** Schlumberger, Landmark, Paleton, Weatherford, Baker Hughes, Petex, Teitonator, OSISoft
- **Engineering:** PTC, Dassault, Alstom, Siemens, ABB, GE, Schneider, Honeywell, Emerson, Rockwell, Aspentech
- **Trading:** Allegro, Murex, TriplePoint
- **Downstream:** Labview, LIMS, PHD, SCADA, PI Historian, Pipesim, Pipeline studio
- **Enterprise systems:** SAP, Oracle, IBM Maxmio, Microsoft Dynamics, SharePoint, Pega, Sucessfactor, Salesforce

Key clients and locations

Revenue mix: 95% IT and 5% BPS

Client mix by geography:
- North America: 55%
- Europe: 32%
- Middle East, Africa: 9%
- Asia Pacific: 3%
- Latin America: 1%

120+ clients including:
- Four of the top five integrated oil and gas majors
- The top five OFS companies
- Eight of top 10 independent upstream companies
- Three of the top five pipeline companies

Global operations and resources

5,300 dedicated FTEs including 1,325 domain experts

20 delivery locations across the US and Canada (Houston, Plano, Oklahoma City, Anchorage, Calgary), India (Bangalore, Hyderabad, Mysore, Mangalore, Pune, Chennai), Europe, and Asia Pacific (Australia, Indonesia, Malaysia, Singapore, Dubai)

Recent developments in support of energy sectors

- **March 2019:** Infosys opened a new digital Innovation Center in Romania.
- **February 2019:** Infosys was recognized among the top three employers in Europe and Middle East.
- **February 2019:** Infosys inaugurated the Providence Digital Innovation and Design Center.
- **December 2018:** Infosys formed a joint venture with Hitachi, Ltd., Panasonic Corporation, and Pasona Inc., strategically enhancing its presence in Japan.
- **August 2018:** Infosys opened a North Carolina Technology and Innovation Hub.
- **March 2018:** Infosys opened a Indianapolis Technology and Innovation Hub.

About the authors

HFS Research authors

Saurabh Gupta

Chief Strategy Officer | HFS Research

Saurabh oversees HFS' global research function managing the global team of analysts across US, Europe, and Asia-Pac. He works closely with the CEO to set the strategic research focus and agenda for HFS Research, understanding and predicting the needs of the industry and ensuring that HFS maintains its position as the strongest impact thought leader for business operations and services research.

As an analyst, Saurabh leads our coverage for horizon 3 change agents such as blockchain, business services (such as finance & accounting and supply chain) as well as overarching and cross-cutting themes under the OneOffice concept like digital change management

saurabh.gupta@hfsresearch.com

Mayank Madhur

Knowledge Analyst

Mayank Madhur is a Knowledge Analyst at HFS Research, supporting different practice leads in area of Industry Research, IoT and Blockchain by working on secondary research, data analysis, PoVs and research writing.

mayank.madhur@hfsresearch.com

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