



THE CLOUD IMPERATIVE FOR THE ENERGY INDUSTRY



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Executive summary

Cloud is a paradigm shift in computing, offering companies seamless and flexible access to virtually infinite computational power. With cloud, companies can employ applied intelligence and respond to their business and market needs at speed and at scale. They can accelerate innovation, drive business transformation as well as streamline operations and reduce costs. For all these reasons, cloud is now a “must-have” capability.

Energy companies are particularly well-positioned to take advantage of cloud, but in order to navigate the industry’s perpetual volatility and disruption, they must take drastic action. Incremental improvement “around the edges” is no longer enough. Reinvention is required—**one that can multiply the Return on Capital Employed (“ROCE”) by 2-3 times**, and make companies agile, resilient, competitive, and sustainable. That’s where cloud comes in.

Cloud transforms the energy industry in two major steps. First, it breaks the data and technological silos that have hindered the industry’s transformation. Second, it supercharges the newly integrated enterprise with differentiating capabilities such as artificial intelligence and machine learning, opening the door for unconstrained innovation.

Cloud touches every aspect of the energy industry. Upstream, midstream, and downstream value chain elements can be run more efficiently, with higher margins. Capital projects can be streamlined, accelerated, and managed much more effectively with less waste. Retail segments can take full advantage of customer insights and apply new tools like cloud-based scenario modeling to optimize everything from pricing to product placement. Even corporate functions such as finance, human resources, and supply chain can use cloud to introduce a step-change in productivity and power the business with insights.

To reap maximum benefits from cloud, energy companies must transform the “old core” while exploring new business models. First, they must build elastic cloud-hosted computing infrastructures with a pay-as-you-go model. Second, they must transition from their legacy core applications (both enterprise and core business) to cloud-native architecture to take maximum advantage of integrated processes and data; e.g., moving to a cloud-based enterprise resource planning (ERP). In parallel, they should consider pursuing completely new platform-driven and applied intelligence-powered value propositions.

Of course, there will be challenges along the journey to cloud, but those challenges can be overcome. The right strategy and leadership commitment at the front-end are essential, as are a new operating model, a well-planned implementation roadmap, and the proactive management of new workflows that cloud introduces to the organization.

Regardless of the form your journey to cloud may take, Accenture stands ready to act as a trusted guide and expert cloud partner. We have helped thousands of organizations—many in the energy sector—use cloud to recharge their growth. We know what your reinvention needs. It needs cloud.



INDUSTRY CONTEXT

Backdrop: Trends shaping the industry

The energy industry has witnessed remarkable disruption over the last decade. The abundance of resources has pushed prices lower, while the world's accelerating pivot to non-fossil fuels has made oil a less attractive commodity.

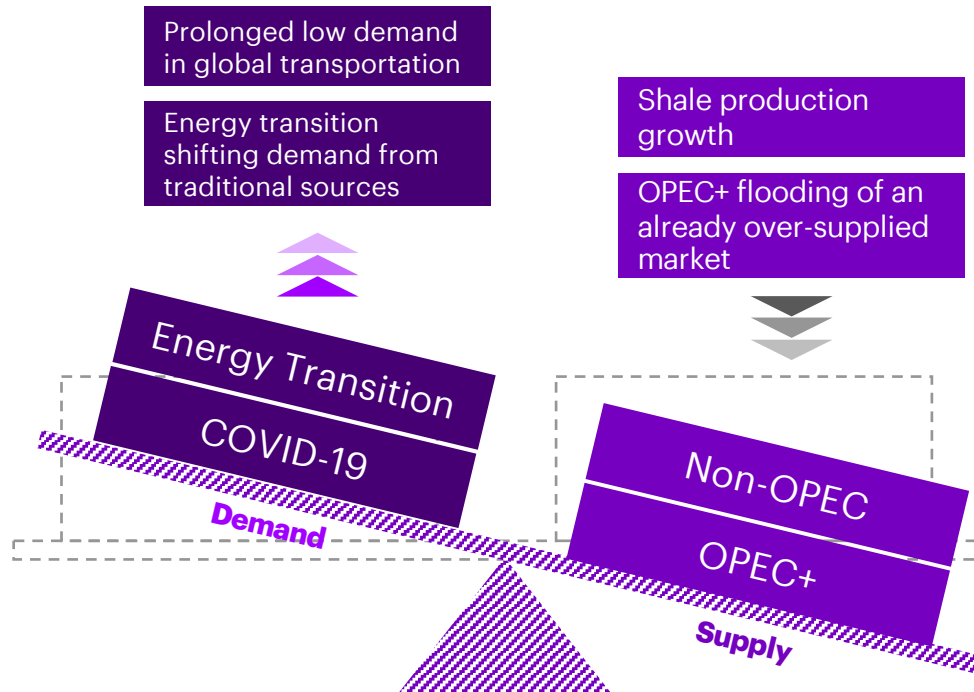
The convergence of supply and demand issues has caused returns to tumble and positioned the energy sector as the worst performing industry in the S&P 500¹. Equity prices continue to erode at three to four times the rate of the broader market. And the share of companies in the S&P index has fallen from 15% to less than 3%². It's no surprise that debt levels and bankruptcies are up, and investors have moved on, looking for safer shores.

COVID-19 and the OPEC+ nations' desire to preserve market share have compounded all these challenges. Crude oil demand fell nearly 20% in the second quarter of 2020, due to massive disruptions in road and air transportation and a weaker economy overall. Continuing economic uncertainty and excessive amounts of oil in storage are sure to keep a lid on commodity prices for the foreseeable future.

Against this backdrop, the industry is now at an inflection point. The days of energy companies holding on with incremental performance improvements are over. Reinvention is required.

Exhibit 1: Energy—an industry in the eye of the storm

An unprecedented dual-shock PLUS ...



Major market imbalance which Accenture estimates at over +8.8 million bpd

... an industry financially and operationally challenged

Industry's going-in position before crisis (global median)

Key observations for the 2020 Crisis	2008 Financial Crash	2014 Oil Crisis	2020 Double Punch
Higher susceptibility to disruption			
↑ Higher debt levels Leverage Ratio ¹	36% (Q2 '08)	55% (Q2 '14)	70% (Q4 '19)
↑ Higher risk of supply chain disruption OFSE EBIT Margin	22% (Q2 '08)	17% (Q2 '14)	2% (Q4 '19)
Lower financial returns			
↓ Lower returns Average ROCE ²	17% (Q4 '07)	9% (Q4 '13)	1% (Q4 '19)
↓ Lower market valuations Energy as % of S&P 500	15% (Q2 '08)	10% (Q2 '14)	2.5% (Q4 '19)
Lower sustainability			
↑ Higher greenhouse gas concentrations Global GHG Emissions ³	0.6B (Q4 '07)	1.8B (Q4 '13)	2.4B (Q4 '19)

Sources: IHS Markit – Upstream Capital Costs Index, Thomson Reuters Public Company Data (108 Companies), Bloomberg, S&P Global Market Intelligence, CDIAC, Thomson Reuters, Accenture analysis
 1) Leverage Ratio = Total Debt / Shareholders Equity 2) Excludes NOCs 3) Measured in Metric Tons of Greenhouse Gases; includes Scope 1, 2 emissions

Industry context

Path Forward: Energy's technology-led response

In response to the challenges it faces, the energy industry needs to pursue three reinvention imperatives.



Enhancing agility and resilience

The industry must build more flexible operations to deal with persistent volatility and cyclical. That means instituting a lower (and more variable) cost structure, relying less on on-site physical assets, and leveraging the supply chain network to help absorb market shocks.



Boosting competitiveness

The industry needs to maximize returns by making better decisions across the value chain and removing latency, waste, and costs from operations. The ways to accomplish this are, in upstream operations, reduce field development and increase speed to first oil, and, in downstream and retail operations, create a more flexible pricing/product mix.



Enabling sustainability

As the world continues to embrace non-fossil fuel energy sources and reward companies that take a strong stand on sustainability, the industry must rethink its approach to detecting, preventing and curbing the carbon footprint across its portfolio and subsectors.



Industry context

Currently, industry players are mostly taking incremental steps to bolster resilience, build competitiveness and forge a sustainable path forward. Few are prepared to tackle the holistic and systemic changes that are now required. One of the reasons energy companies are slow to develop a strategic, all-encompassing response is structural. Siloed operating models— coupled with disjointed processes, databases and platforms—impede visibility and collaboration across functional areas such as engineering, maintenance, production operations, and finance. The siloed structure makes it nearly impossible for companies to model decision impacts on the end-to-end energy system and creates a

process complexity that hinders the ability to flex to market demand. Further, the siloed approach creates pockets of hidden value that remain trapped by the interfaces between functions. This is one reason development and production costs are higher than they need to be. The inflexibility of the system causes large portions of the cost structure to appear fixed. These structural barriers also make it difficult to extend data-sharing and collaboration with ecosystem partners. That makes it harder to unlock value that sits at the interface of operators and partners. It also affects carbon capture and reduction efforts, which require a unified approach and involvement of multiple stakeholders.

Another reason that energy companies are pursuing these imperatives tactically, rather than strategically, has to do with their relatively slow adoption of technologies that could enable reinvention. Industry analysts estimate only 1-2% of total industry spending goes to IT and digital enhancements. Energy companies also allocate 20% less of their IT budgets to digital transformations than companies in other industries. Compared to digital leaders, they spend 55% less. Too many companies continue to rely on legacy IT environments that are simply not up to the challenge the industry faces.

“Build competitiveness and forge a sustainable path forward”

The state of cloud in energy

Despite low investments in transformative technologies, cloud is not a new concept to energy companies. In fact, Accenture estimates that almost 80% of energy companies have experimented with cloud, although most of their forays are limited to migrating functional processes. Very few energy companies have truly scaled their adoption to include core business systems and processes. As a result, the transformative benefits of cloud remain elusive.

The slow adoption of cloud at scale is not entirely due to the energy industry not realizing the value potential. Legitimate concerns around the high-performance computing (HPC) capabilities of cloud solutions to satisfy energy-specific demand, regulatory concerns, the specialized nature of operational technology (OT) and Internet of Things (IoT) systems, and other issues have traditionally left cloud as a CIO's secondary priority.

Decent advancements in technology and cloud service providers' growing focus on building energy-specific offerings have started to lift these barriers. The public cloud market is booming at 20% year-over-year growth, according to a 2019 report by Business Wire. This pace, however, is not fast enough to counter the industry's turbulent environment. There is still plenty of room for leaders to reap first-mover advantage and clearly separate themselves in the competitive landscape.

80%+
energy companies
have experimented
with cloud

20%+
YoY growth of energy
public cloud market



VALUE CASE FOR CLOUD

Value case for cloud

Why cloud?

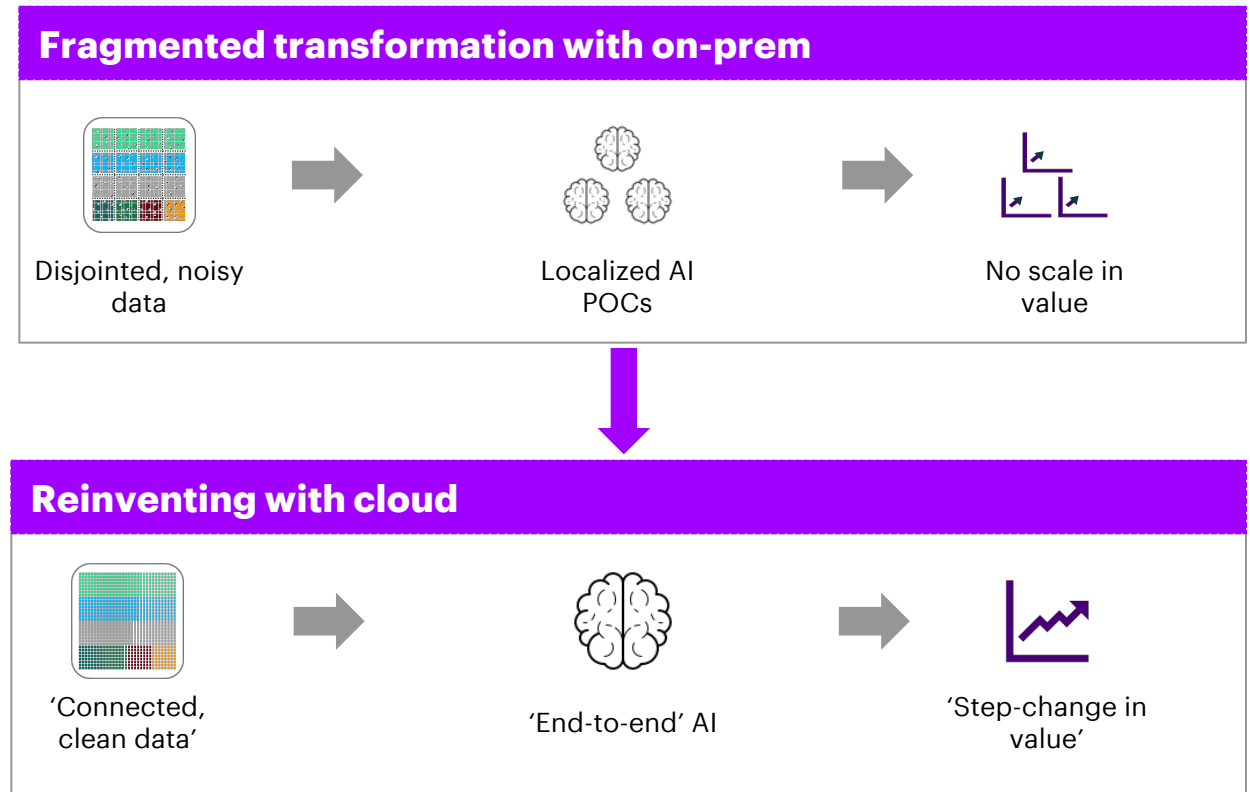
Energy companies' structural and technological limitations have created barriers to connectivity, scalability and effective data management—three things that are essential to achieving the industry's imperatives and its reinvention. Cloud helps to dismantle these barriers by providing seamless and instant connectivity and computing power that is scalable and comes at a lower cost. It also transforms an organization's ability to use data in fundamentally new ways.

Data in the energy industry is typically housed in many disconnected on-premise systems and databases. Reinvention calls for bringing all that data together to enable an enterprise-wide view, generate insights through the application of analytics and applied intelligence tools such as machine learning, and facilitate better and faster decision-making. Current IT environments are simply not up to the task. The issue will become even more daunting as the amount of data at energy companies' disposal continues to proliferate.

Companies that employ cloud (and cloud-only analytics tools) to harness the power of data will enjoy a clear competitive advantage. Those that continue to resist the move to cloud will inevitably fall behind.

Source: Accenture Analysis

Exhibit 2: Why cloud?



Value case for cloud

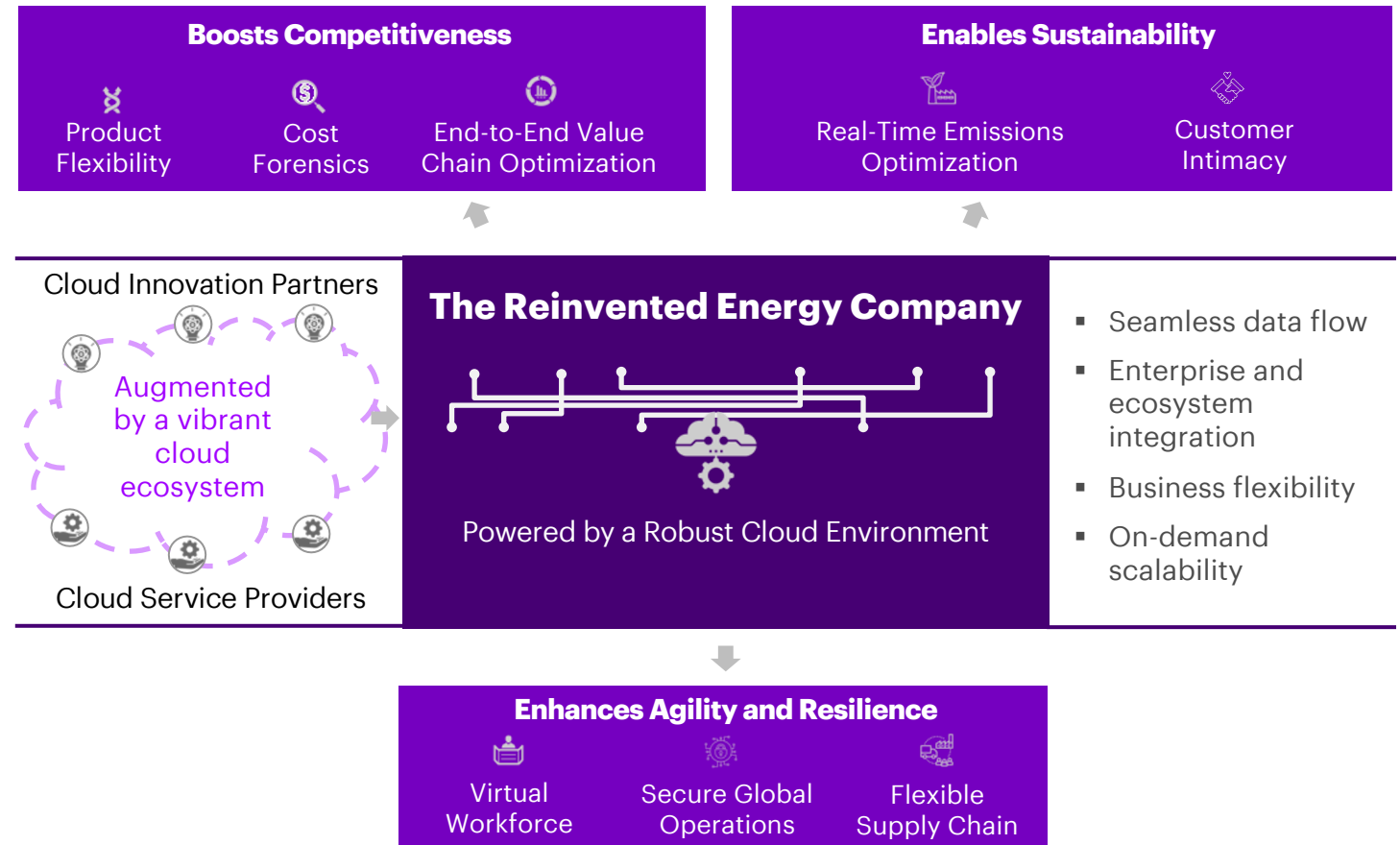
Why cloud?

Cloud platforms enable near real-time connectivity between what have traditionally been siloed functional areas. This connectivity allows companies to build and leverage advanced analytics to analyze, explore, and establish causal relationships between various functions. An understanding of these functional relationships, in turn, enables companies to take an integrated business view to decision-making. In an industry that is inherently volatile and cyclical, this integrated view is critical for developing resilience, as well as the flexibility that is needed to scale up or down with fluctuating cycles. Energy companies that fail to take advantage of cloud's connectivity, flexibility, and security will find it exceedingly difficult to achieve the business resilience, variable cost models, and value-optimization capabilities that enable competitiveness. Ultimately, it is a collaborative environment that enables the energy to become sustainable.

Source: Accenture Analysis

The cloud imperative for the energy industry

Exhibit 3: Reinventing energy

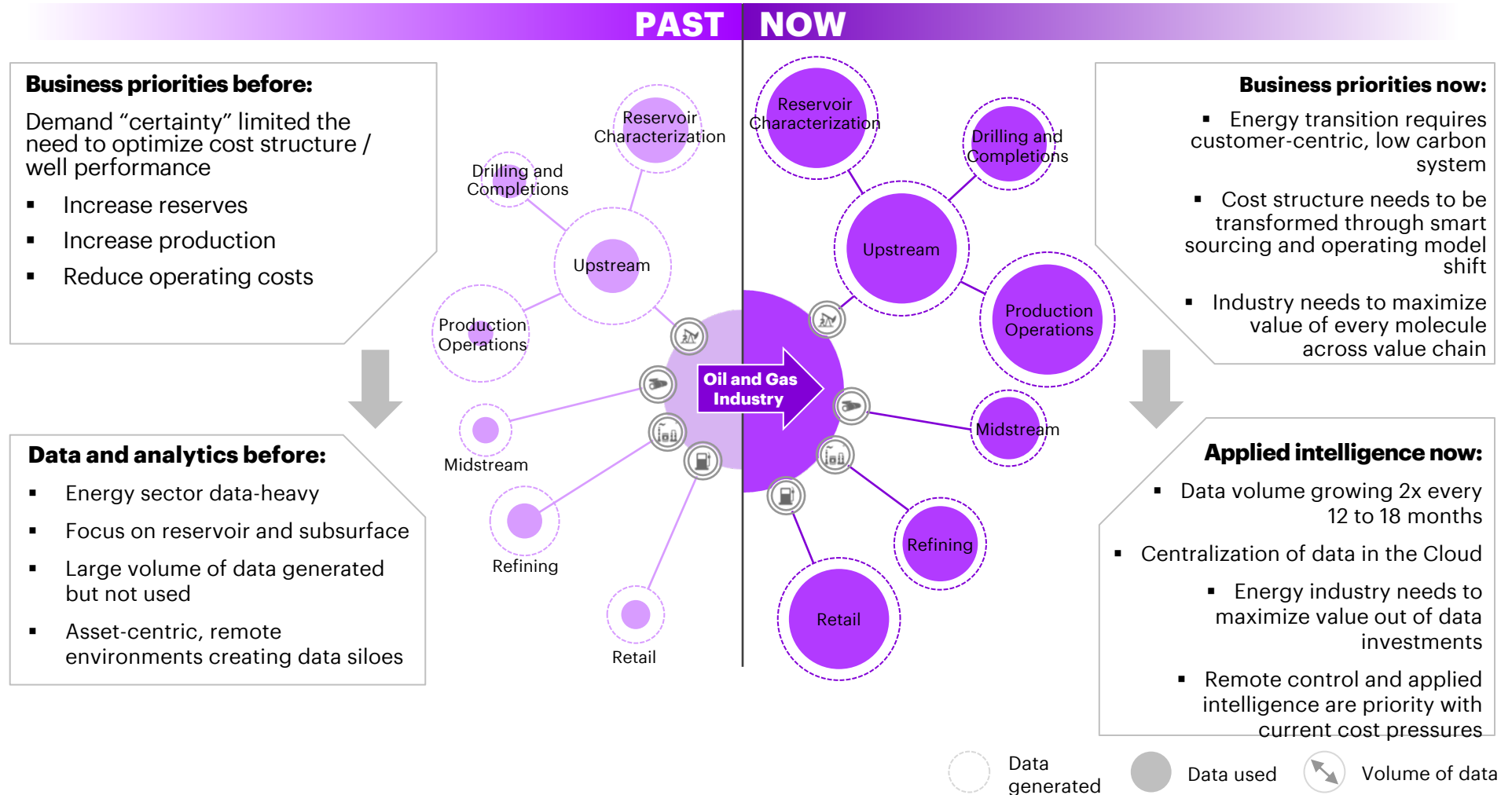


Value case for cloud

Why now?

With the energy industry priorities shifting and the volume of data steadily rising, the need for cloud has never been greater.

Exhibit 4 : Energy's cloud case—growing volume of data...the time is now



Source: Accenture Analysis

Value case for cloud

Why now?

At the same time, the cloud value proposition for energy companies has never been stronger, therefore truly embracing the potential now has become a business imperative. Cloud providers are eager to help. They are investing heavily in custom solutions for the energy industry and laying the groundwork for mass adoption. For example, **AWS has consistently lowered prices to cater to the energy market (over 70 times since 2006 allowing customers to achieve savings of 22-45%)³**. SAP is collaborating with a consortium of energy players to develop a standardized, public cloud ERP solution for energy industry's upstream business processes.

Finally, the energy industry has never been more ready to embrace the cloud potential. The energy cloud market is growing significantly each year, and most operators have started experimenting with cloud technologies⁴.

Oilfield services companies are leading the charge, with many planning to completely retire their on-premise IT in the next five years. Even the supermajors are embarking on their journey to cloud.

ExxonMobil is working with Microsoft to bring the management of the world's largest energy acreage to the Azure cloud⁵. Saudi Arabia has teamed with SAP to help build the country's first public cloud data center⁶ and a consortium of three large energy companies are implementing a cloud platform to collaborate on CO capture.⁷

“Embracing the potential now has become a business imperative.”

Value case for cloud

Cloud's potential across the energy value chain and current industry applications

Cloud can transform every element of the energy value chain. Connectivity, scalability, analytics, and automation can drive cost savings and profitability in virtually countless ways.

In the **upstream** value chain, for example, cloud computing can connect financial and operational data along with real-time sensing technology to optimize decision-making on spending, well productivity, and cycle time across the upstream "system." Specifically, companies can significantly compress time for geological and geophysical analyses, identify optimal well designs, and drive effective and predictive interventions. The full impact can be a reduction in breakeven cost of more than of \$10/barrel of oil equivalent (boe)⁸.

In the **midstream** value chain, cloud can deliver impact in two key areas: pipeline network management and commercial optimization. Cloud makes it possible to carry out coordinated remote pipeline monitoring at scale, which enables more effective predictive operations, including emissions detection.

In the **downstream** value chain, cloud can help expand visibility and integration within and across plants and time periods, thereby enabling self-optimizing planning, predictive operations, risk calibration, and better cost management. As a result, additional margins of more than \$2/barrel of oil equivalent (boe) can be unlocked—a substantial return uplift in this business

A National Oil Company (NOC) implemented a cloud-based exploration and production solution that integrates oilfield production and reservoir engineering data. The insights gleaned from this unified data set—and the forecasting that the data enabled—allowed the company to reach top-quartile performance in capital management and time to first oil.

In addition, cloud can be used to optimize midstream margins and returns through system modeling that takes operational and market factors into account.

A supermajor implemented a cloud-enabled centralized production data system to carry out granular spend analyses, and rapidly deploy machine learning capabilities to drive automated cost categorization and resolve data gaps. The solution led to over \$1 billion in OPEX reduction in the company's downstream business.

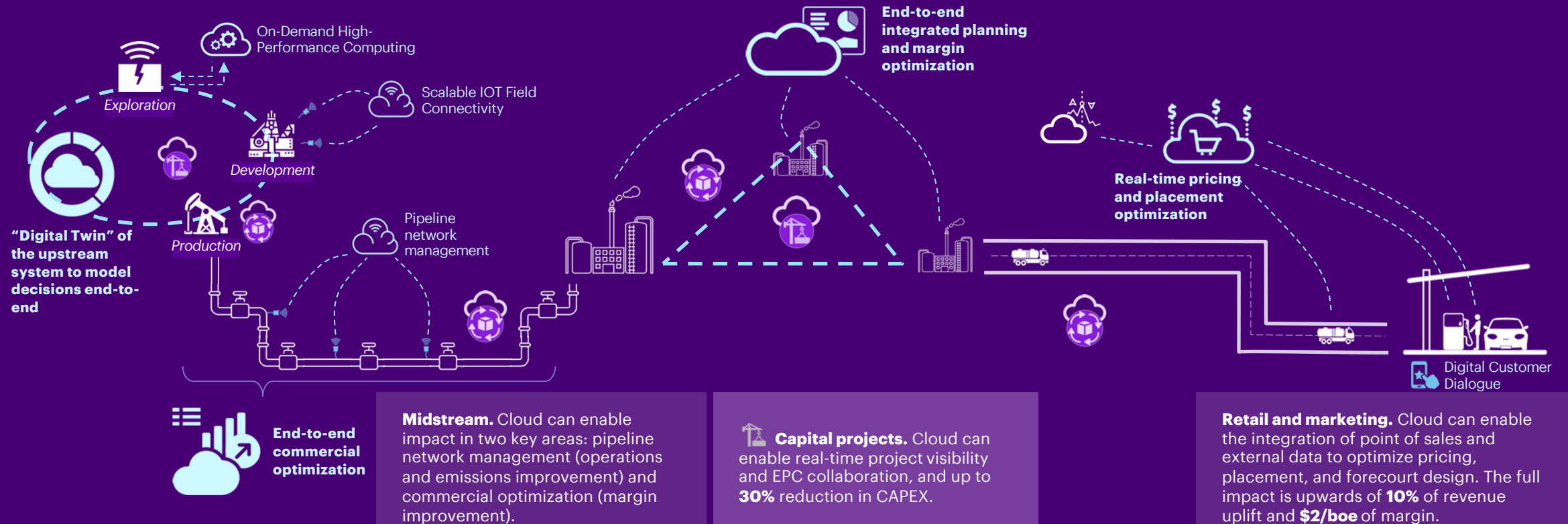
Value case for cloud

Exhibit 5: Cloud applications across the energy value chain

Upstream. Cloud can connect financial and operational data in real-time to optimize decision-making on spend, well productivity, and cycle time across the “system.” The full impact is upwards of **\$10/boe** of breakeven reduction.

Downstream. Cloud can help integrate across plants and time periods enabling self-optimizing planning, predictive operations, risk calibration, and cost management. The full impact is upwards of **\$2/boe** of margin uplift.

Supply chain. Cloud helps provide real-time visibility over demand and logistics, and automate fulfillment, reducing COGS **8%**, logistics cost **30%**



Value case for cloud

In **B2C retail and B2B marketing**, cloud can enable the integration of point of sales and external data. That, in turn, enables advanced scenario modeling to self-optimize pricing, customer selection, product flows, placement mix, and forecourt design. Such capabilities can boost incremental revenue by more than 10% and margins by more than \$2/boe.

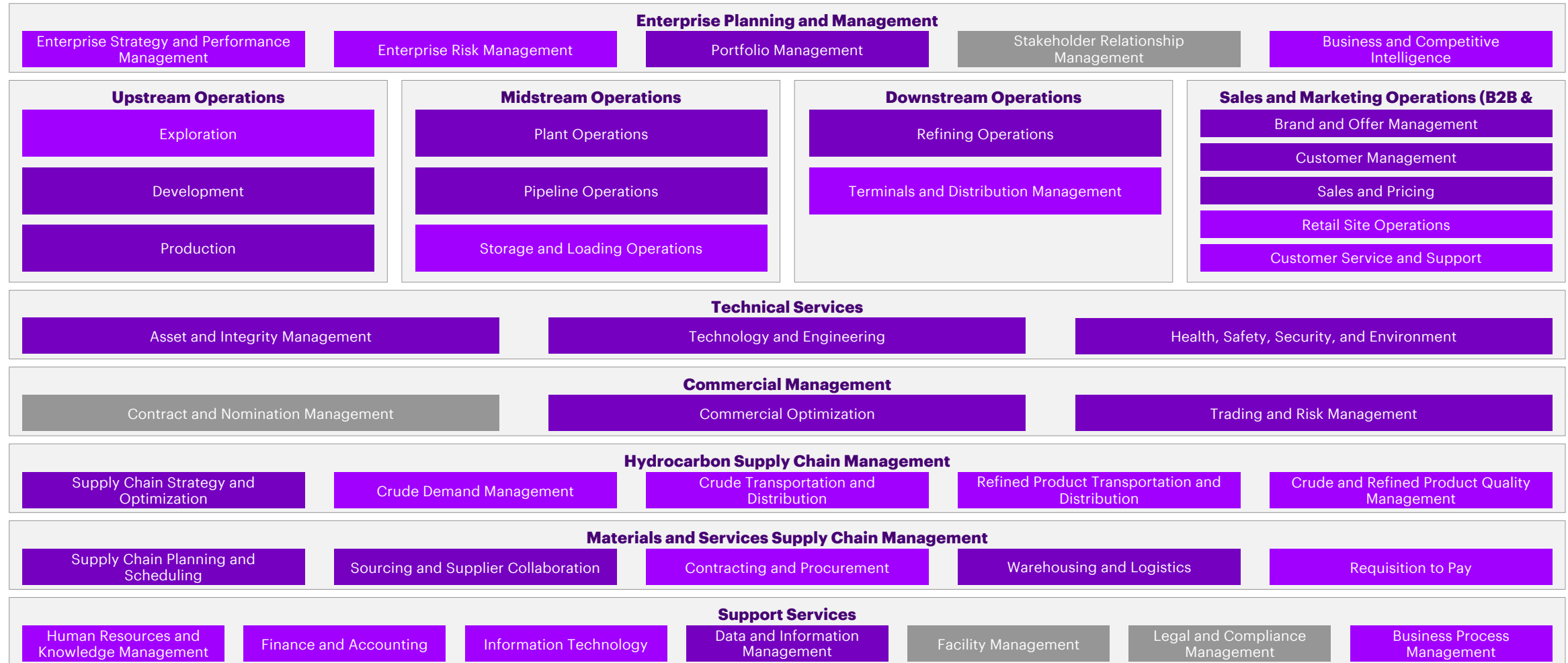
For **capital projects** across the energy value chain, cloud can help integrate project cost and time data into complex 5D models. This enables real-time visibility over a project's progress, the quick definition of design standardization or optimization options, and better collaboration with Engineering, Procurement and Construction (EPC) companies without the need for complex system integration. In these ways, cloud can reduce project cycle time by 30%-50% and capital spend by up to 30%.

A supermajor has implemented a cloud-enabled, centralized, real-time customer insight system to enable optimized re-supply based on consumption, margin optimization, and production data. They see this as creating the possibility to move from selling products to services, creating long-term loyalty and enhancing brand value.

Cloud solutions are also applicable across **shared services and corporate functions**. In supply chain, cloud can boost ecosystem collaboration, provide real-time visibility, and enable the application of analytics to fulfillment and logistics through, for example, a cloud-based marketplace. This type of cloud solution can reduce cost of goods sold by nearly 8%, reduce logistics costs by 30% and virtually eliminate rogue spending. Equally important, cloud can enable the reinvention of corporate functions—not only by automating back-office processes, but also by creating better employee experiences and giving employees tools to be more productive. With cloud-based tools and automation, companies can reduce costs by 5%-30% and improve employee satisfaction by more than 25%.

Value case for cloud

Exhibit 6: Cloud application across the energy value chain (process/sub-process view)

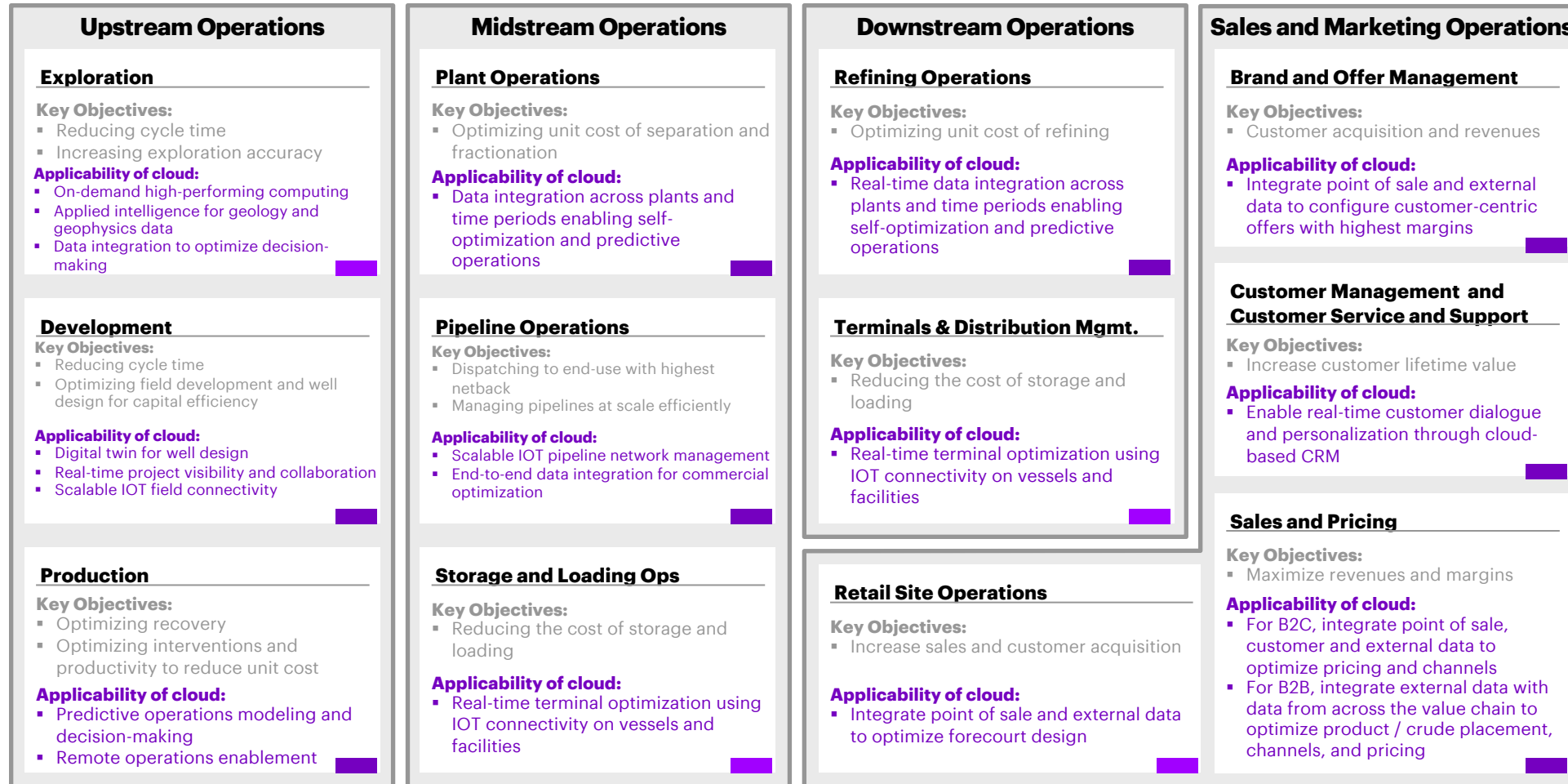


Source: Accenture Analysis

Impact of cloud on business capability: ■ High (transformative) ■ Medium (incremental) ■ Low

Value case for cloud

Exhibit 7 – Cloud application across the energy value chain – Focus on core operations



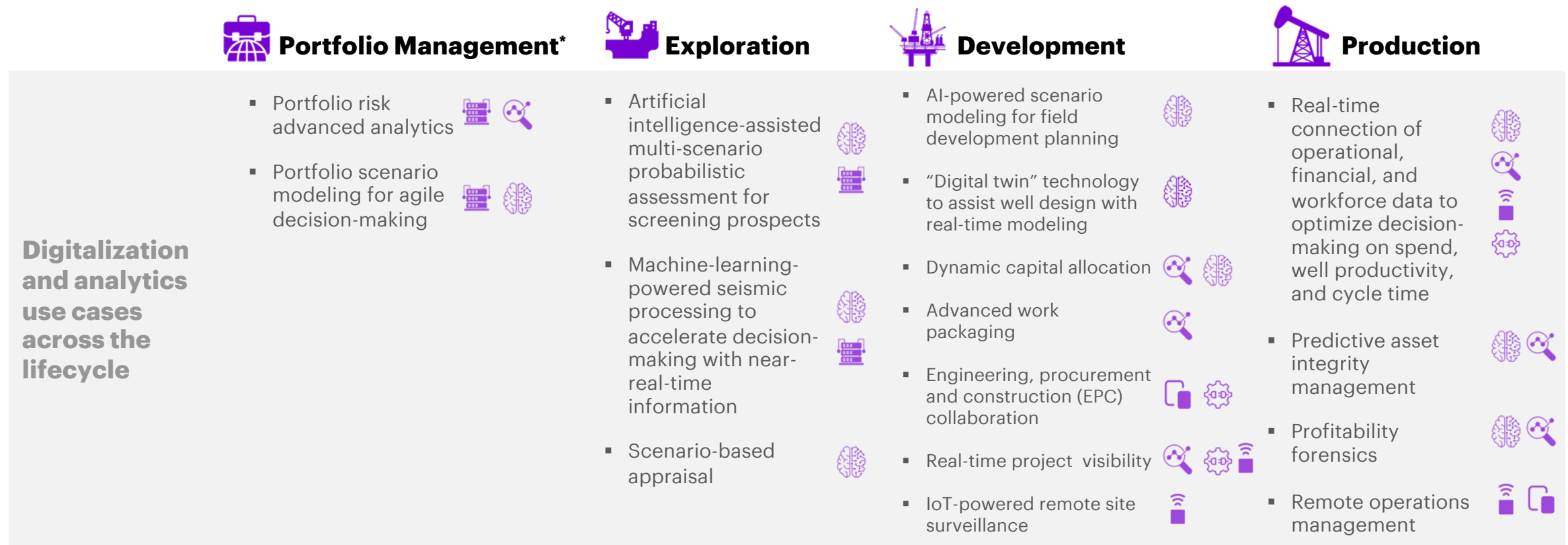
While the nature of cloud offerings is similar, the applications of cloud manifest themselves and deliver value differently along the energy lifecycle, transforming traditional industry processes. The exhibits below highlight two examples of cloud impact on the upstream and retail sales and marketing lifecycles.

Source: Accenture Analysis

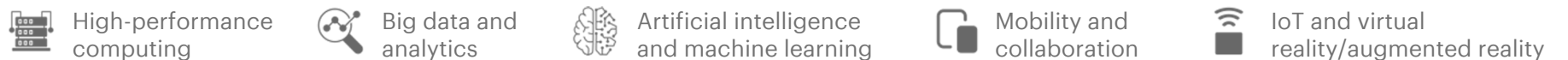
Impact of cloud on business capability: High (transformative) Medium (incremental) Low

Value case for cloud

Exhibit 8 – Mapping of cloud applications across the upstream lifecycle

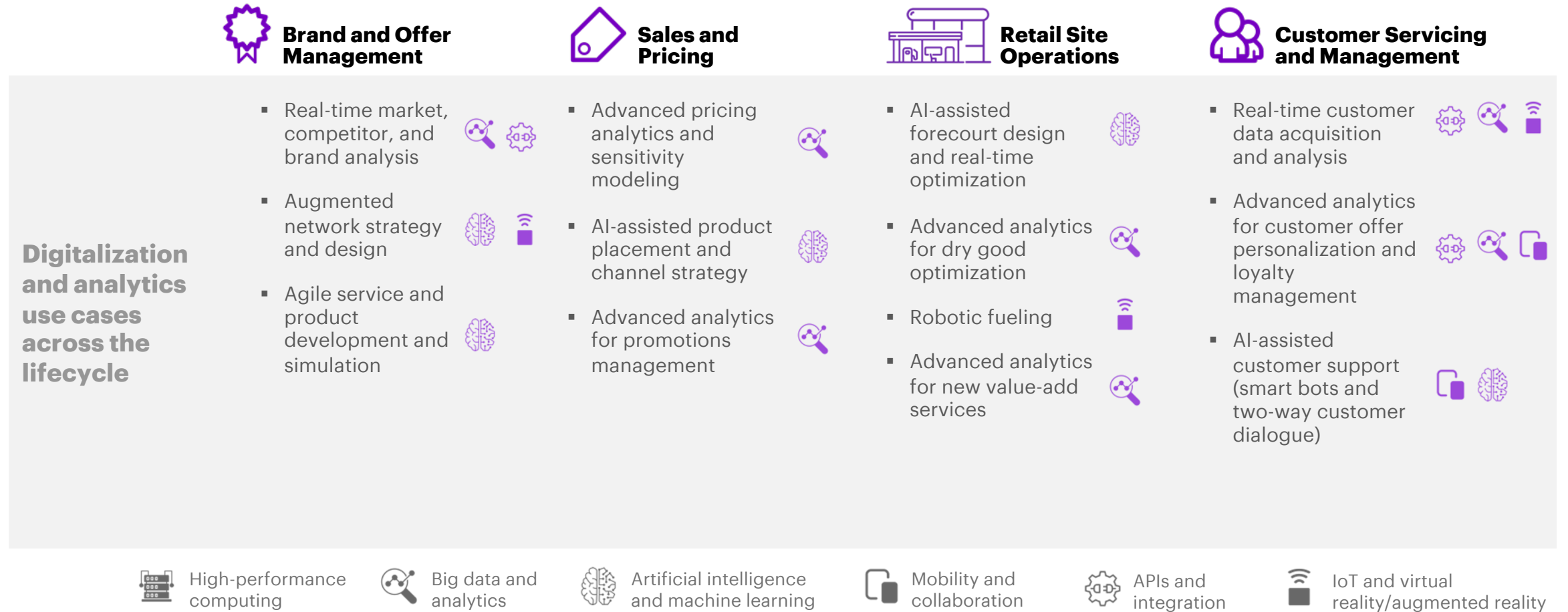


* The overall portfolio management capability is part of Enterprise Planning and Management. Upstream portfolio management is included here for completeness of the lifecycle.



Value case for cloud

Exhibit 9 – Mapping of cloud applications across the sales and marketing lifecycle



Source: Accenture Analysis

Value case for cloud

How cloud brings a lasting impact to energy

Not all cloud solutions are created equal. The farther along companies advance on their cloud journey, the greater the benefits. At its most basic level, cloud is used to **optimize technology**. Accenture's analyses indicate this use of cloud typically reduces total IT spend by 25%-30%, which translates to ~0.5 percentage point (pp) increase in ROCE. For example, an asset-intensive company reached a 0.5% reduction in total OPEX by optimizing workloads and IT asset utilization, and by enhancing application performance⁹.

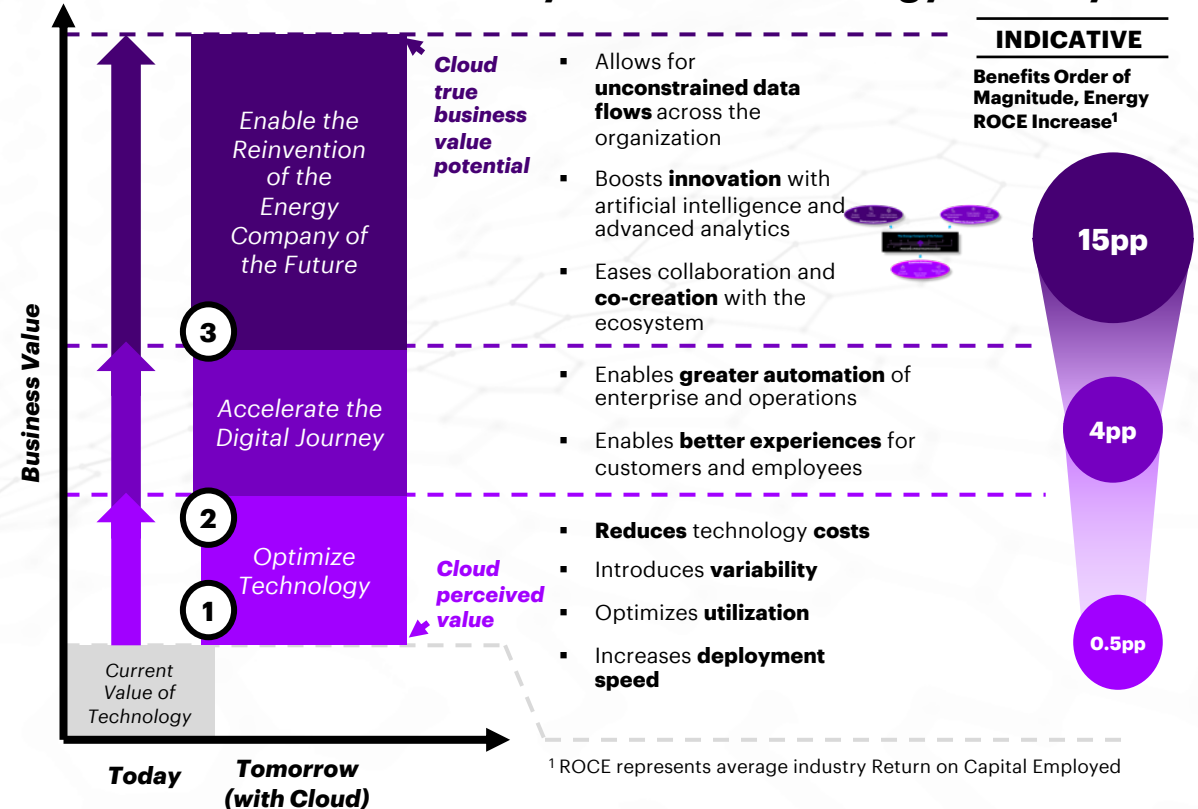
In the next level of maturity, cloud can be used to **accelerate a company's digital journey** through the adoption of cloud-first automated processes. Accenture estimates the benefits at this stage to be in the order of four to 6 pp of ROCE. For example, a large public company transitioned to a cloud-based enterprise resource planning (ERP) system which allowed it to uplift its revenues, significantly lower inventory, and reduce its OPEX, translating into a 4 pp ROCE improvement¹⁰.

The most mature applications of cloud enable the full **reinvention of enterprises** by breaking silos and taking full advantage of new technologies, such as artificial intelligence and machine learning. We believe the value potential of such cloud solutions is up to 15 pp of ROCE, enough to restore the industry's performance and cover its increasing cost of capital. While no energy company has achieved this level of cloud maturity, pockets of excellence are emerging. For example, a US-based independent oil company is using cloud to create a digital twin for its end-to-end enterprise. It is expected that this solution will help decrease production OPEX by 5%, well CAPEX by 10%, and uplift production by 3%¹¹.

Source: Accenture Analysis

The cloud imperative for the energy industry

Exhibit 10: Value unlocked by cloud for the energy industry





MOVING TO ACTION

Making the cloud work for the energy industry

There are four ways companies can move to the cloud. Each option—or cloud state—addresses specific needs and migrates different aspects of on-premise IT architecture to the cloud over different timeframes.



Moving to action

Infrastructure on the cloud. A business can move current workloads from its data center to a cloud infrastructure hosted by a third-party provider. Generally, applications and business logic don't change; they simply run more efficiently in the as-a-service environment.

Enterprise systems on the cloud. A company can move its enterprise business process applications such as ERP or CRM to versions that are offered natively on the cloud platform. Along with migrating applications, processes are likely transformed and automated, and applied intelligence on enterprise data is made available.

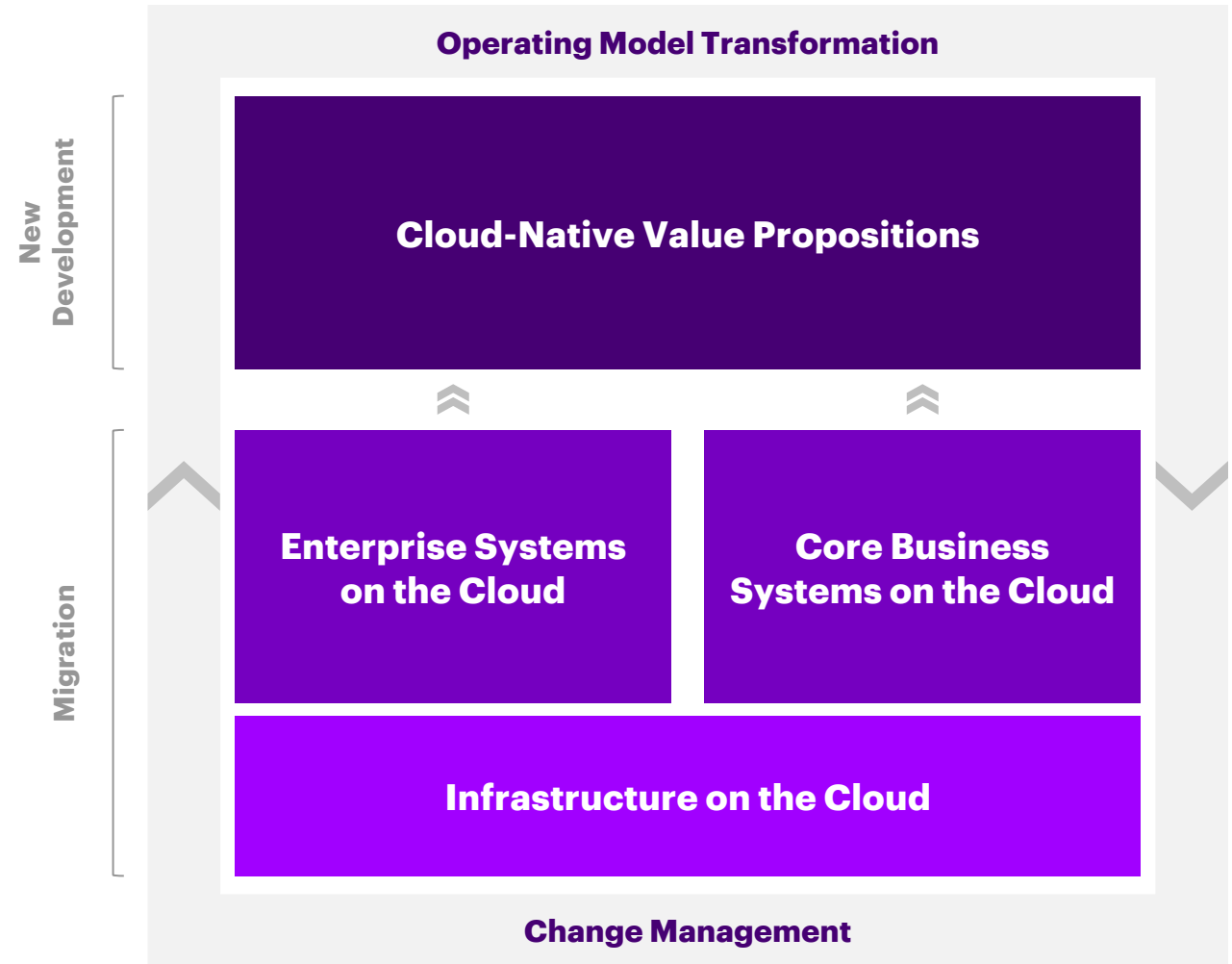
Core business systems on the cloud. Similar to enterprise system migrations, core business processes and systems—such as asset performance management—can be shifted to applications and platforms offered natively on the cloud. The migration usually involves transforming processes and adopting new ways of working to leverage the value of applied intelligence and automation.

Cloud-native value propositions: While the three cloud states mentioned above involve the migration of applications and data to the cloud, cloud-native options focus on creating new business solutions from scratch—such as an application that measures decision impacts across the end-to-end organization. Such solutions can benefit from cloud-based IT capabilities that may not have been available before, for example, AI or machine learning.

Moving to action

These cloud states are not sequential, nor are they mutually exclusive. Energy companies must address the cloud transformation at scale and at speed to maximize value. Typically, we see energy companies adopting an agile approach to boost speed-to-value: first, quick wins can be achieved by migrating smaller applications that need minimal re-platforming for a cloud environment. In parallel, companies often begin transforming key processes and mapping the respective enterprise or core business systems to the future cloud platform. At any time, companies can work with cloud providers to explore native cloud plays.

Regardless of the cloud state(s) that an energy company pursues, changes to its operating model will be needed. However, the degree and nature of change highly depends on the cloud state(s) pursued. Changes in the operating model are needed because cloud infrastructure and cloud applications run differently, use different processes, and require different roles, metrics and data governance rules. We believe that a revamp of the operating model for cloud is best achieved by a dedicated team focused not only on the technical aspects of cloud migration and development, but also the organizational and cultural aspects.





Moving to action

The impact of moving a company's infrastructure to the cloud usually primarily impacts IT. IT workforces need to be reskilled to support the cloud transformation by managing services and taking advantage of new capabilities such as DevOps. IT policies will need to be updated to ensure data and security protocols remain uncompromised.

When looking at the adoption of enterprise and/or business systems on the cloud, the impact on the operating model becomes broader. In this case, a company needs to rethink the processes, organization structure, skillset, and performance metrics of the functions impacted by the cloud migration. This is mainly due to the impact that automation and applied intelligence have on the "old way of doing things".

The operating model impact also grows proportionally when looking at cloud-native value propositions. Instead of incremental changes in operating model, we generally see energy companies rethinking their whole approach to managing the business.

For example, rethinking the functional specialization of teams, or the way P&L (Profit and Loss) responsibilities are distributed.

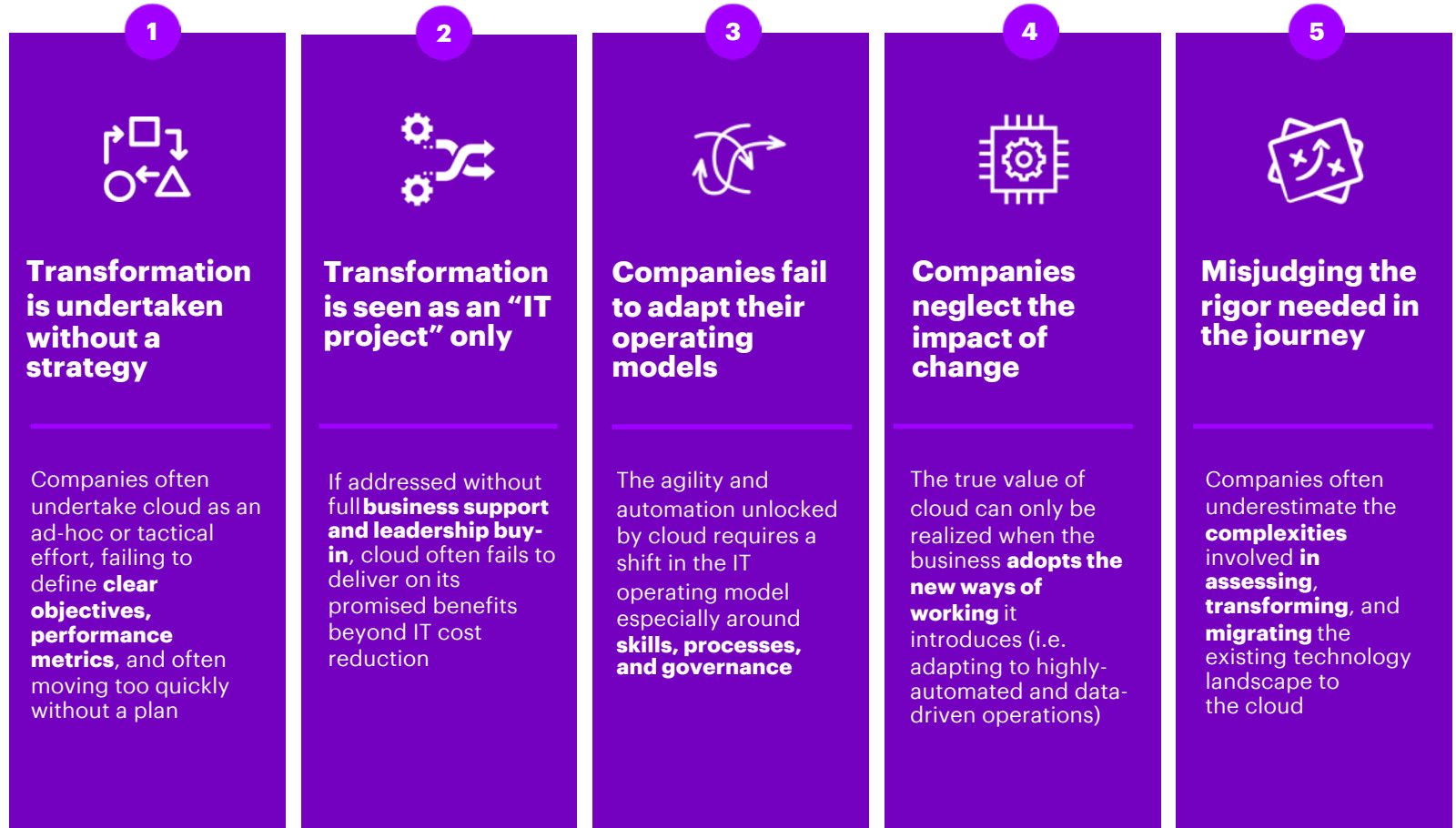
There is no silver bullet for what a post- cloud operating model should look like. Each transformation should cater to the existing context of the company and strive to build future-proof capabilities with minimal disruption to current operations.

Moving to action

Potential challenges to cloud adoption in energy

A company's journey to cloud will not always be straightforward. Accenture estimates that only a third¹¹ of cloud transformations today achieve their intended benefits, due mainly to five key factors.

Exhibit 11: Common pitfalls in large-scale cloud transformations



Moving to action

Potential challenges to cloud adoption in energy

In energy, these factors are compounded by barriers that are unique to the industry. Fortunately, recent cloud advances should alleviate many of these barriers and pave the way for mass cloud adoption in the industry. For example, many energy companies:

- Maintain a complex environment with many **fragmented applications and data silos**. Instead of fully transforming the whole landscape for cloud compatibility, two-speed migration approaches are available, as well as AI and machine learning solutions that can help automatically map data and resolve gaps.
- Rely on **specialized industry solutions**, including OT and IOT applications. While such applications have been slower to adapt to a cloud environment, IOT platforms are now more abundant and maturing on the cloud.
- Are rightly concerned about cyberattacks and have invested heavily in **cyber security**. Cloud service providers have staked their reputations on their abilities to keep data and systems safe.
- Resist cloud adoption for fear of running afoul of **regulatory compliance**. Cloud service providers are now continually addressing industry-specific requirements and instituting rigorous compliance measures. Also, sensitive data can be protected with “Hold Your Own Keys” (HYOK) encryption to avoid “blind subpoena” scenarios.
- Have **invested heavily in their IT infrastructure** and are locked in long-term support contracts. Cloud service providers are now willing to enter in agreements to purchase non-depreciated infrastructure from their clients in return for committed long-term capacity.

“Fortunately, recent cloud advances should alleviate many of these barriers”

Moving to action

No time to wait

Amid the industry's current state of disruption and the critical energy transition looming ahead, energy companies need to redefine resilience, boost competitiveness, and prepare for the sustainable energy future. Cloud is a critical enabler of each of these imperatives—and, by extension, the industry's reinvention. There are four steps energy companies can start taking today to accelerate the transformation that is needed.

Exhibit 12: Getting started now—your 90-day Plan 90-day approach to launch cloud-enabled transformation



Start by **defining clear business objectives** across each of the cloud value horizons



Design a sourcing strategy for cloud, deciding which processes to keep running on-premise and which to migrate



Assess your current applications for cloud readiness and decide which to re-platform, discard, or migrate as-is



Develop an operating model that encourages the use of analytics and new ways of working

Moving to action

Lessons learned and outcomes delivered

Accenture is prepared to help you start your cloud journey today. We recognize that every cloud journey is unique and needs to be tailored to the context and business needs of every company. We also recognize that in the energy industry, there's no time to waste.

Exhibit 13: Learnings and Impact from Accenture's Journey to Cloud Partnerships

Example 1



National Oil Company

Core Business Applications on the Cloud

- The NOC implemented a **cloud-based E&P software portfolio**, which integrates and forecasts oilfield data with production and reservoir engineering fundamentals
- **Achieved top quartile operations and capital performance**, reduced time to prospect and production of first oil

Key Lessons Learned

The migration to the cloud-based E&P suite was done **incrementally** around specific "use cases" **prioritized based on business need**

Cloud fundamentally changed operational processes, requiring **heavy change management**

Example 2



Independent E&P Company

Cloud-Native Value Proposition

- A US Independent is developing a **cloud-native value proposition** to enable real time scenario modeling, **cost and production optimization** and predictive maintenance analytics
- The program has an expected value release of **~10% reduction in well CAPEX, ~5% OPEX savings, and ~3% uplift in production**

Key Lessons Learned

Operations-led prioritization of use case development enabled **business buy-in and support** for program

Approach driven by parallel agile development to establish **scalable MVP**

Example 3



Global Supermajor

Infrastructure on the Cloud

- A global supermajor developed a **roadmap for an operating model transformation** driven by a move to an integrated cloud service-based model
- The program has an expected value impact of **>\$1bn OPEX reduction and 20% emissions reduction**

Key Lessons Learned

The revamp of the operating model for cloud requires a **dedicated team** effort to holistically address it

Shift to cloud-based model requires **radical shift in workforce technical capabilities**

Example 4



Large Non-O&G Company

Enterprise Applications on the Cloud

- A large public company transitioned to a **cloud-based ERP** system to optimize and digitize its processes
- The program unlocked benefits of **~15% reduction in inventory, ~2% increase in revenues, and ~6% reduction in IT costs**

Key Lessons Learned

Data management and migration was one of the most effort-consuming and critical activities for value realization

Benefits grew proportionally to the **adoption of new ways of working**, through rigorous change management

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