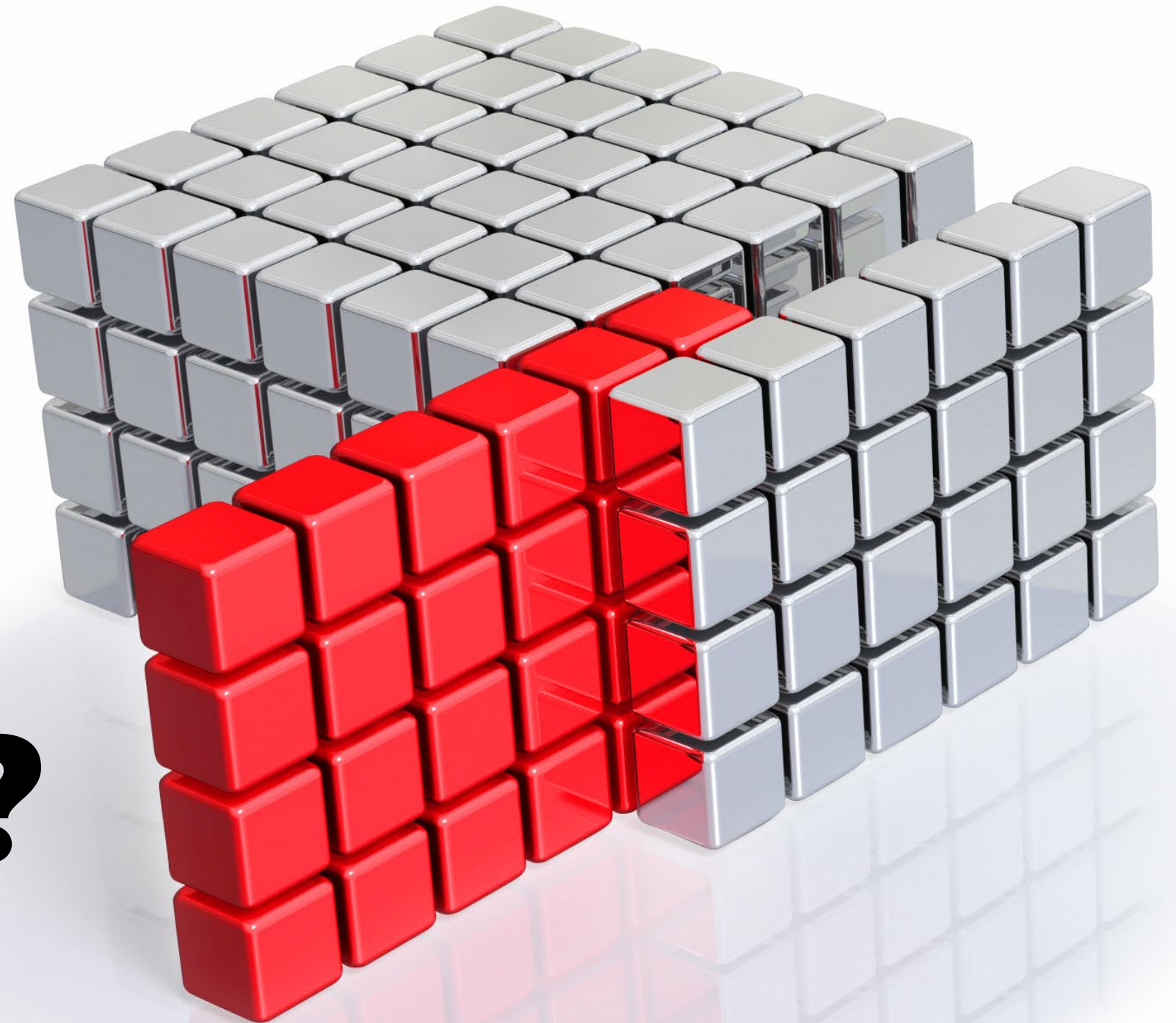




Hydrocarbons versus Renewables

**ALL IN?
OR IN ALL?**

ACHIEVE COMPETITIVE AGILITY



As the world becomes more concerned about environmental sustainability, several industries are stepping onto what has historically been oil and gas companies' turf. These interlopers aren't just positioning themselves to monetize their capabilities in a cleaner, lower-carbon world. They're accelerating the energy transition.

To maintain their competitive agility, oil and gas companies can't ignore this industry convergence. They need to tackle it head-on by embracing one of two distinct approaches to value creation: transforming their core business or pivoting to new opportunities. Choosing the right option is critical. But making the right choice is harder than many think.

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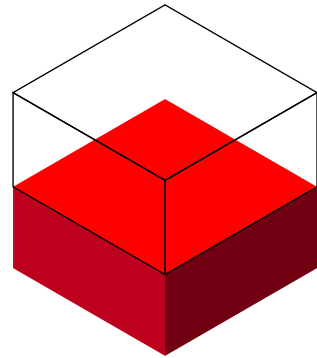
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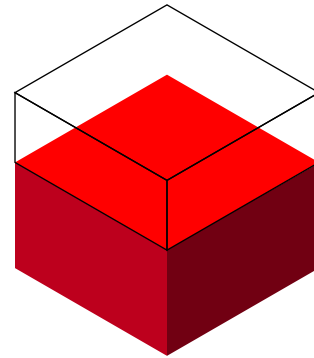
IT'S GETTING CROWDED IN HERE

To varying degrees, consumers and businesses around the world are demanding more sustainable solutions and services.



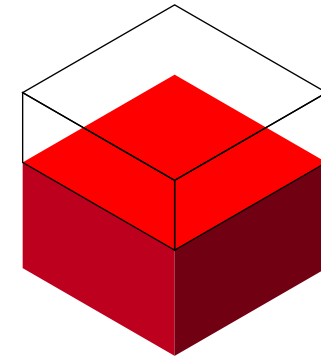
45%

of consumers indicate they want to sign up for solar power.¹



60%

have expressed interest in buying services from energy marketplaces.²



60%

say they support brands that take a stand on sustainability.³

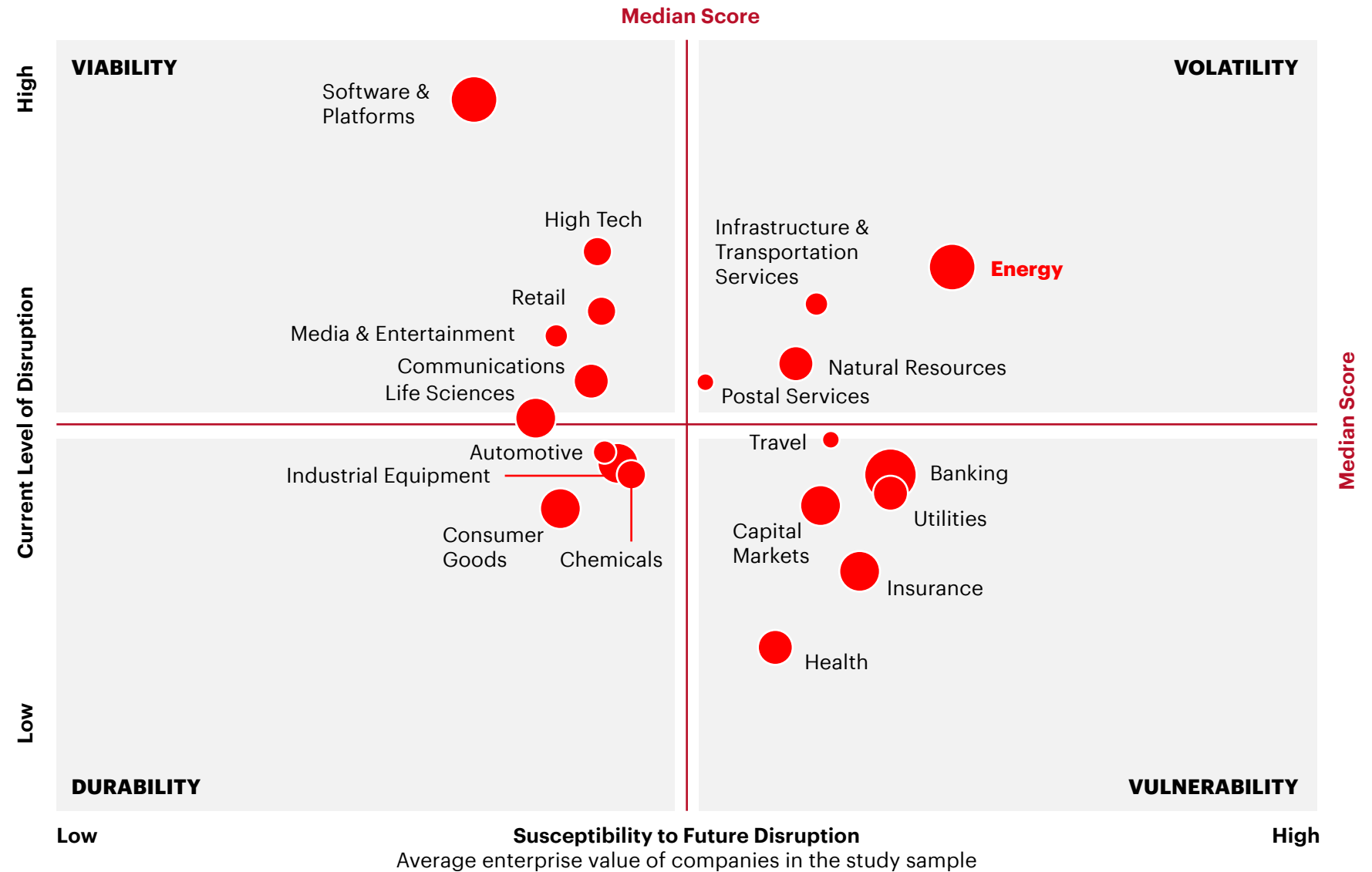
Companies in energy-adjacent industries—transportation, utilities, chemicals and even steel⁴—would be foolish not to explore these consumer sentiments and pursue opportunities to unlock new value.

Traditional hydrocarbon-centric companies can't blame players from other industries for pursuing energy-related opportunities. Neither can they be surprised by the intrusion. Oil and gas executives are clearly aware their industry is in upheaval. According to Accenture Strategy research, 82 percent of them believe their current business models will be unrecognizable in five years.⁵ Further, Accenture's Disruptability Index confirmed that, among 20 industries, the energy industry is highly susceptible to disruption (see Figure 1).⁶

Why? Part of the reason has to do with technological advances, which have blurred the lines between historically siloed industries. As just one example, utilities, automakers, public transit agencies, technology companies and even local government agencies are joining forces to deliver Mobility-as-a-Service solutions. Each player can wield control of their part of the value chain because technology allows them to do so.

82% of oil and gas executives believe their current business models will be unrecognizable in five years.

Figure 1: The energy industry is subject to disruption both now and in the foreseeable future



Source: Accenture Disruptability Index

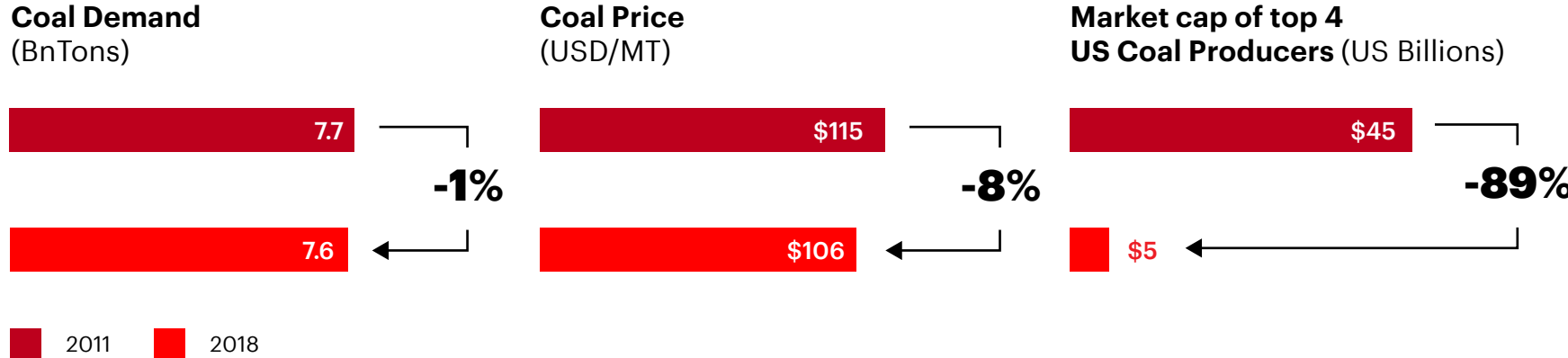
ON THE VERGE OF CONVERGENCE

The speed of industry convergence is likely to increase as hydrocarbon demand growth diminishes, as more stringent carbon regulations are enacted, and as consumers more strongly voice their desires for less carbon-intensive, end-to-end energy-related products and services.

This accelerated pace of change puts tremendous pressure on oil and gas companies to determine when and how to position themselves. If they jump into the convergence game too early—or without adequate resources and/or the ability to leverage technology to change their cost structures—they risk financial distress. If they delay their participation, they risk being squeezed out of higher-margin opportunities by early market entrants. Or, as has been the case in the US coal industry, they may see their market capitalization shrink, despite relatively stable demand and price (see Figure 2).

Expanding to adjacent industries is not the right strategy for all players. The world will continue to need oil and gas (hydrocarbons) for the foreseeable future. And while demand growth may sputter, there is still a role for Exploration and Production (E&P) companies willing to accept the risk of volatility in exchange for potentially higher returns.

Figure 2: Market capitalization in the coal industry has dropped significantly



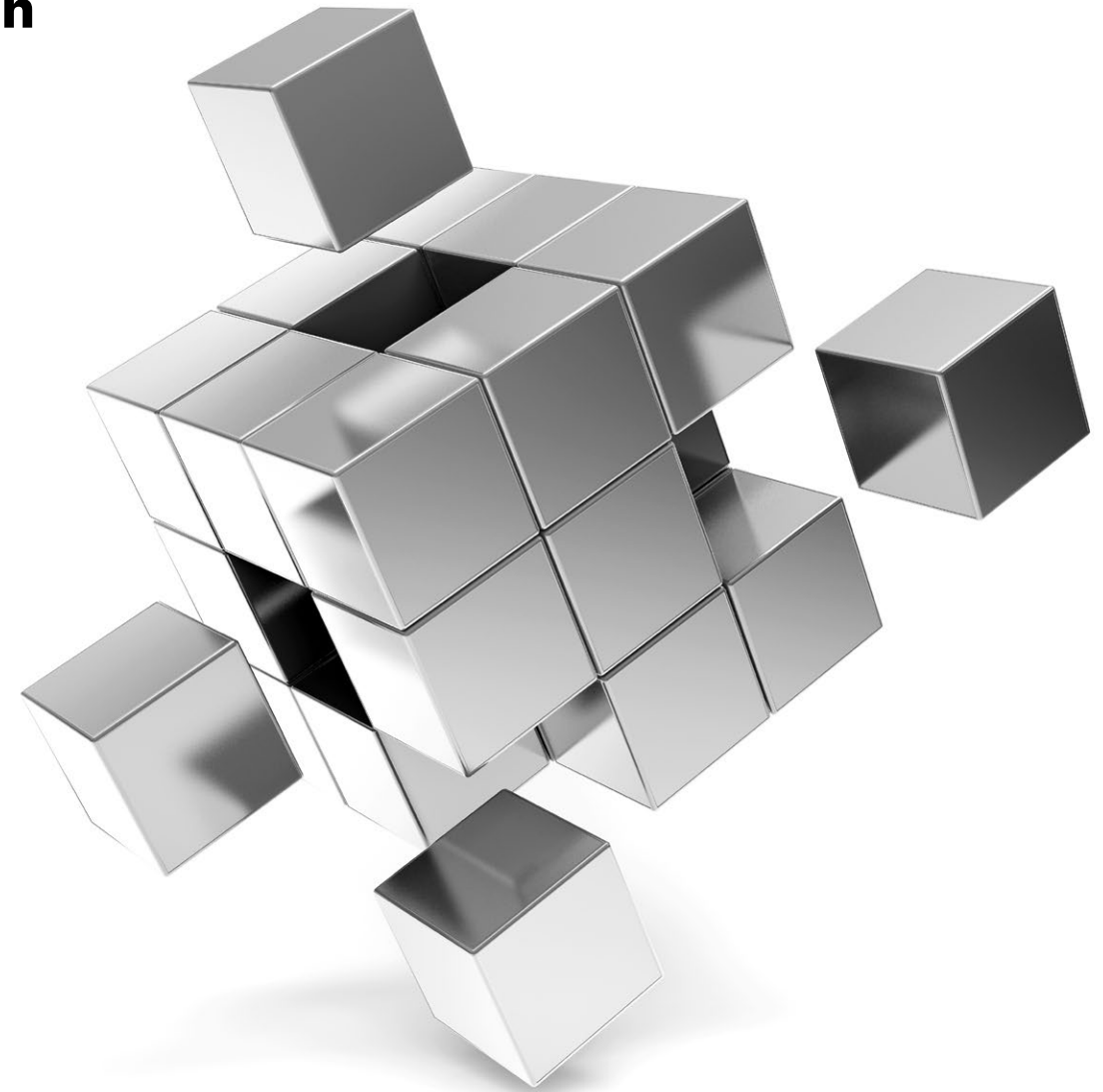
Source: Accenture Strategy Energy analysis; BP Outlook of World Energy; Rystad; Company websites

For some companies, however, the potential to deliver higher margins to shareholders by expanding their asset portfolios into adjacent sectors such as renewables and alternative fuels will be hard to resist. Early players are already making their moves:

- Royal Dutch Shell has completed acquisitions in renewable electricity, smart energy storage and electric vehicle (EV) charging platforms.^{7,8,9}
- Saudi Aramco signed a memorandum of understanding with Masdar, a renewable energy and sustainable urban development company, to collaborate on clean electricity and carbon capture solutions.¹⁰
- Repsol SA is expanding its gas and electricity business in Spain and Peru with investments specifically targeting wind and solar projects.¹¹
- Equinor recently acquired one of Europe's largest short-term electricity traders.¹²

While such investments represent a relatively small portion of companies' capital spend today, they indicate there is value to be captured. Companies that invest now will be well positioned to scale once value is demonstrated.

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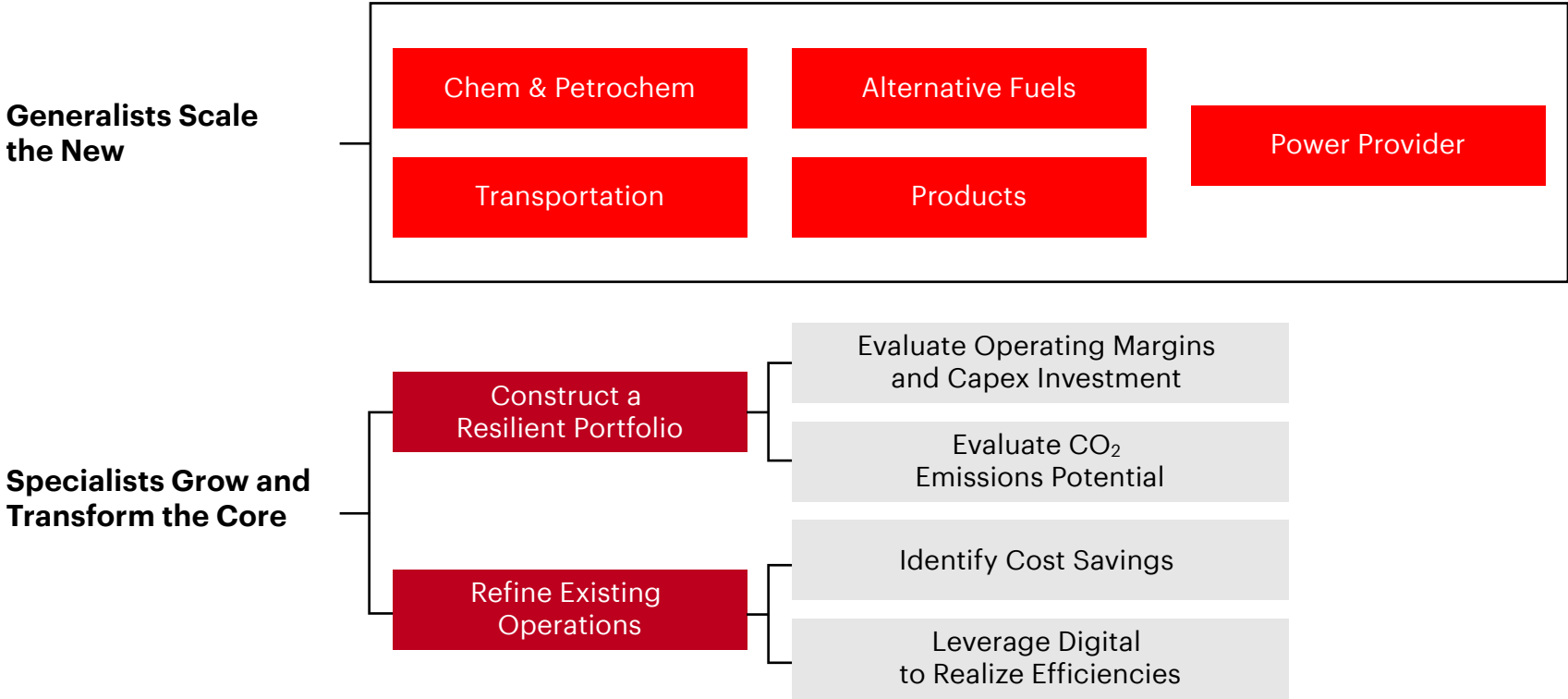
THE GENERALIST/SPECIALIST CONUNDRUM

The oil and gas industry has historically been characterized by high returns and high volatility.

Going forward, the industry’s persistent demand/price volatility will likely bring intermittent high returns for investors focused on exploration and production. The average rates of returns, however, will be under pressure. Risks will be higher. Energy companies need to decide which role they will adopt (see Figure 3).

Oil and gas companies can take one of two approaches: that of a generalist, or a specialist.

Figure 3: Traditional oil and gas companies can take one of two approaches to maintain value in the energy transition



Generalists

These operators choose to diversify their holdings and capabilities across the energy value chain. With large market capitalizations and strong balance sheets, they embrace the energy transition and its accompanying industry convergence by investing in (sub)segments in adjacent industries that typically offer either higher returns or lower volatility (see Figure 4).

Whereas the return on invested capital (ROIC) for E&P companies has been highly volatile—ranging from -11 to +3 percent in the past decade due to large swings in commodity prices—companies in the utilities, chemicals and renewables sectors have seen better returns and lower volatility year on year. Generalists, therefore, have the opportunity to integrate across the extended value chain to create incremental value. As an example, companies that expand into Integrated Gas can link the demand from end-consumers with the supply and transportation of natural gas in a systemic way, thereby taking advantage of value opportunities across the upstream, midstream and downstream continuum.

Generalists with investments in adjacent industries benefit from a less volatile portfolio and more stable ROIC.

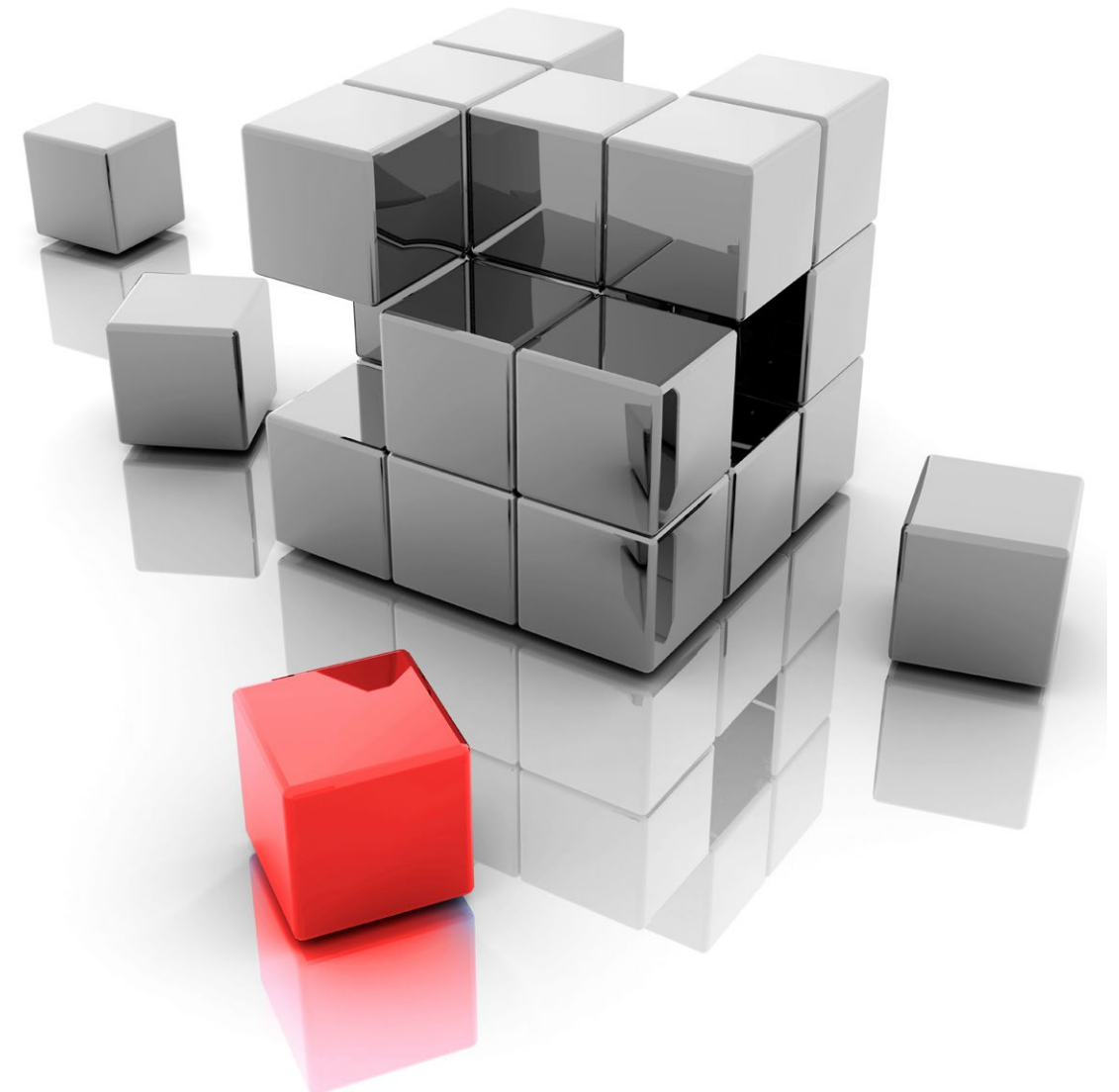
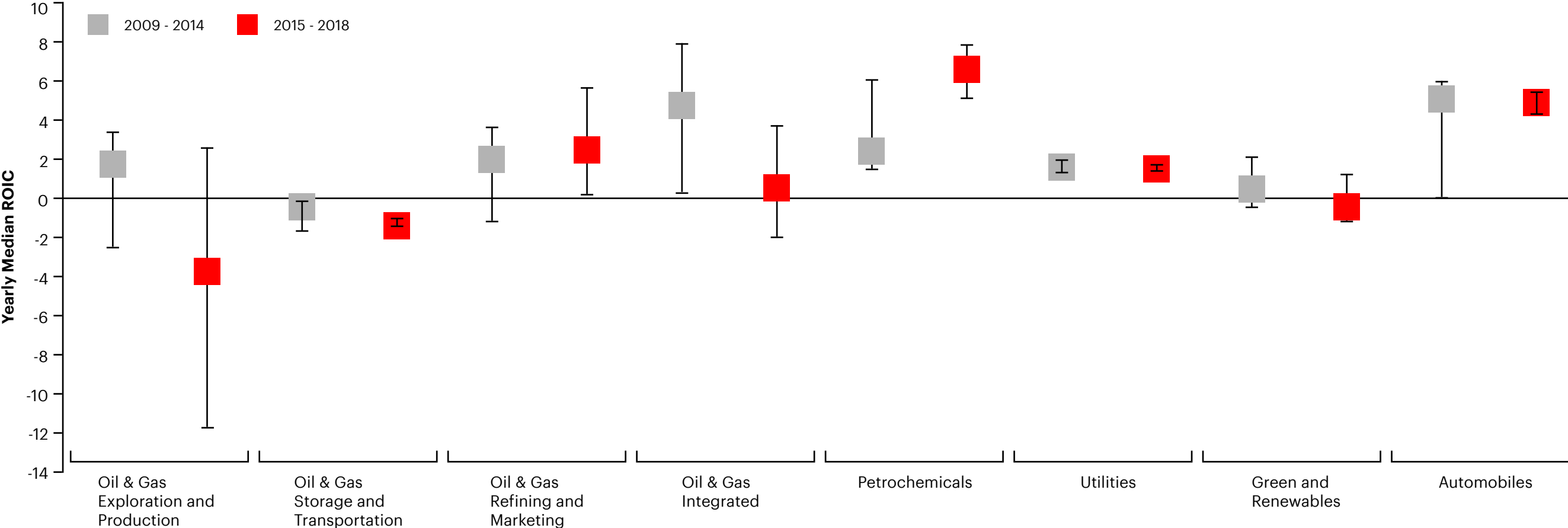


Figure 4: In the age of convergence, oil and gas companies have the opportunity to seek sources of value within the larger ecosystem



Source: Accenture Strategy analysis based on S&P CapIQ data, 2019.
 Note: The analysis encompassed those companies with current market capitalization greater than US\$100M.

Specialists

In contrast to their generalist counterparts, specialists choose to remain focused on a specific segment of the energy value chain—even partnering with specialists in other areas of the value chain to serve their customers better. Successful specialists surgically select the assets or products they want to develop or the markets they want to lead. In E&P, for example, a specialist focus makes sense when oil prices—and E&P ROIC—are on the rise (see Figure 5). As described in Accenture Strategy’s Beating volatility in exploration and production, to thrive with this strategy, E&P companies need to build a balanced and dynamic portfolio of short- and long-cycle assets. Once risk/reward analyses and a faster, more efficient merger and acquisition process are in place, these companies can develop and produce the right assets quickly and cost effectively.

Although specialists are subject to higher return volatility when commodity prices fluctuate, they are typically able to boost their ROIC and enjoy intermittent higher average returns. Importantly, the technology revolution that is accompanying the energy transition will bring transparency to performance—likely further pushing specialization and separating the “E” and the “P.” A new class of pure data-driven “explorationists”—production-only operators and non-operating investors—is likely to emerge.

Within the specialist cohort, there is wide variation in performance between the leaders and the average company. As evidence, some E&P specialists’ stocks have performed much better than the S&P index (doubling their market capitalization since 2006). For the industry as a whole, average market capitalizations have remained flat.¹³

Although specialists are subject to higher return volatility, they are typically able to boost their ROIC and enjoy intermittent higher average returns.

Figure 5: The average ROIC based on commodity price environment

Environment	Oil price change from previous year	E&P	Refining	Integrated
Deteriorating	< -10%	-15.5%	-0.7%	-9.9%
Stable	-10% – 10%	4.8%	6.5%	7.9%
Increasing	> 10%	4.7%	2.3%	2.5%

Source: Accenture Strategy analysis based on EIA, S&P CapIQ data.
 Note: Period studied is 2010 to 2018.

THE DIGITAL PATH TO RELEVANCE

For generalists, the primary challenge will be guaranteeing ongoing, steady and more predictable returns. For specialists, the main challenges include determining the degree of specialization, surviving during periods of subdued commodity prices, and ramping up quickly during commodity price upswings. For both groups, competitive agility is key. Our research has found that a one-point increase in a Competitive Agility Index score would result in future revenue growth for oil and gas companies of 1.5 percent.¹⁴

Digital technologies that have democratized information and blended human/machine decision-making can play a key role in determining how—and how effectively—oil and gas companies achieve their competitiveness goals. Yet, only 7 percent of oil and gas companies are using technology advances to drive financial performance.¹⁵ As a result, billions of dollars are left on the table. Accenture Strategy analysis revealed that digital can unlock 15 to 30 percent EBITDA improvement for upstream oil and gas companies. For downstream companies, the digital impact translates into a 15 percent EBITDA improvement and 5 percent improvement in capital employed.¹⁶

Automation, augmentation and digitally-enabled ecosystems are particularly relevant to the successful deployment of an oil and gas company's convergence strategy by enabling:

Cost reduction

Automation and augmentation can both be used to drive down costs, thereby improving average returns of converging industries.

Improved decision making

Augmentation helps companies make better, faster decisions and capture higher returns in a high-price environment. In effect, augmentation boosts the effectiveness of a company's employees.

Consumer connection

Digital technologies can strengthen the links between companies and their consumers by accelerating the generation of insights into consumers' needs and behaviors.

Digital technologies play a key role in determining how—and how effectively—oil and gas companies achieve their competitiveness goals.

A reinvigorated talent pipeline

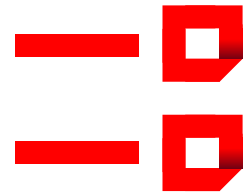
Digitally enabled ecosystems enable energy companies to quickly tap into adjacent industry capabilities like data science and variable capacity during times of high prices.

Both generalists and specialists will need to embrace digital's potential. But they will do so in different ways. Generalists will focus on automation and related capabilities such as analytics. They will also leverage digital technologies to optimize decisions across their own organizational siloes to create synergetic value. Specialists, on the other hand, will use automation, augmentation and ecosystems to exceed their peers' performance during periods of high commodity prices and match their peers' performance during down-cycles.

MAKE YOUR MOVE

To ensure prosperity for the world's growing population and to power the world's expected economic development, it is estimated that oil and gas companies will need to spend approximately US\$100 trillion over the next 20 years.¹⁷

They must be wise with their investments, meaning they need to first define the areas in which they can maintain a competitive advantage in the energy transition. Leaders are already taking three actions. Others would be wise to follow their lead.



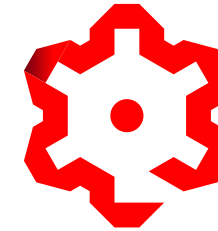
Choose.

Oil and gas executives should examine their organization's current position to determine whether to be a generalist or a specialist. Their decision will be based largely on their brand purpose, the level of shareholder support for either option, and their abilities to strengthen their core business and pivot to new opportunities.



Enable.

Industry leaders regularly revisit their digital strategies to ensure they have robust automation and augmentation features that will reduce costs and drive agility. This continual re-evaluation is as relevant for generalists as it is for specialists.



Engage.

Oil and gas companies that choose to double down on hydrocarbons cannot sit on the sidelines of the industry convergence. They must connect to a larger ecosystem to identify further opportunities for digital plays and collaborations.

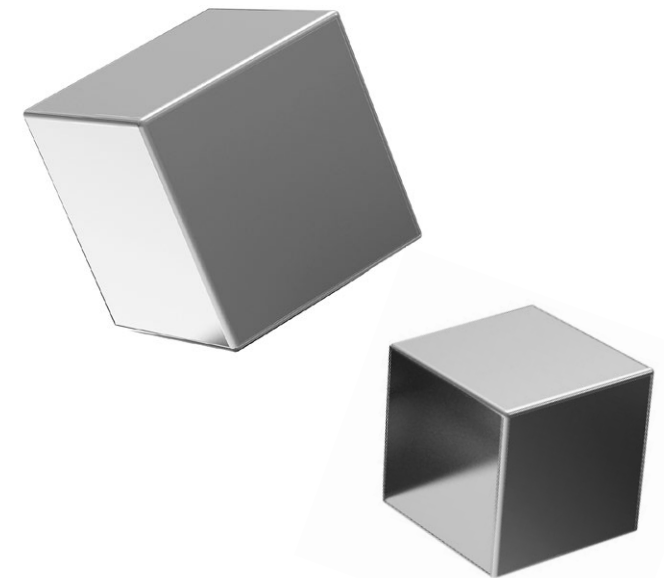
THE CHOICE IS YOURS

Oil and gas executives no longer question whether the world will transition toward more renewable sources of energy. Instead, they are asking: How can my hydrocarbon-based company navigate the transition? And when will it be too late for us to make our move?

At a basic level, companies only have two options. Industry convergence and technological advances provide clues about which choice will be the right one.



[Reach out to our authors to explore the options for your organization.](#)



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