Top trends to watch in Energy & Utilities

Read on for CGI client insights on how to accelerate your digital journey and stay relevant for the future

2022 CGI VOICE OF OUR CLIENTS

CGI

Accelerating sustainability for a green and vibrant future

Impact of macro trends

Climate change is the dominant macro trend for energy clients in 2022, and embracing a culture of sustainability is a key differentiator. The war in Ukraine further intensifies the need to rethink energy strategies.

Higher energy prices contribute to overall inflation and pressure governments to incent alternative energy sources. At the same time, technology and digital acceleration to meet customer expectations is driving the industry to be more customer centric.

We also see a growing interdependency between energy, manufacturing and financial services, influenced by ongoing geopolitical and regulatory changes.

Unique role in all net-zero agendas

Energy and utilities clients recognize that their progress toward decarbonization uniquely affects all people and industries, and executives are feeling the pressure to advance. The energy transition and carbon neutrality are among top trends and priorities, sharpening the focus on renewables and hydrogen.

Changing consumption and managing demand are increasingly important alternatives to producing more energy, at lower costs and without environmental impact. New DERMS-based companies are entering this market.

Executives also see digitalization and data as key enablers of innovation and agility for the energy transition.

This year, 29% are producing expected results from digital strategies, nearly 3X as many as in 2020. The pace must continue to support net-zero goals for 2030.

Cybersecurity rises to become the top industry trend, driven by growing threats, both to OT and IT. As cyber-attacks on critical infrastructure can affect society as a whole, the need for cyber vigilance and resilience has never been greater.

About the insights

Each year, we meet with client executives from around the world to get their views on the trends affecting their organizations and industries. Through the CGI Voice of Our Clients, we analyze these findings to provide actionable insights by industry to benchmark best practices, including the attributes of digital leaders.

In 2022, we met with 1,675 business and IT executives. **This summary report shares sample insights from 167 energy and utilities client executives.**

Interview demographics

Utilities 74%   26% Oil & gas

C-level 51%   49% Ops-level

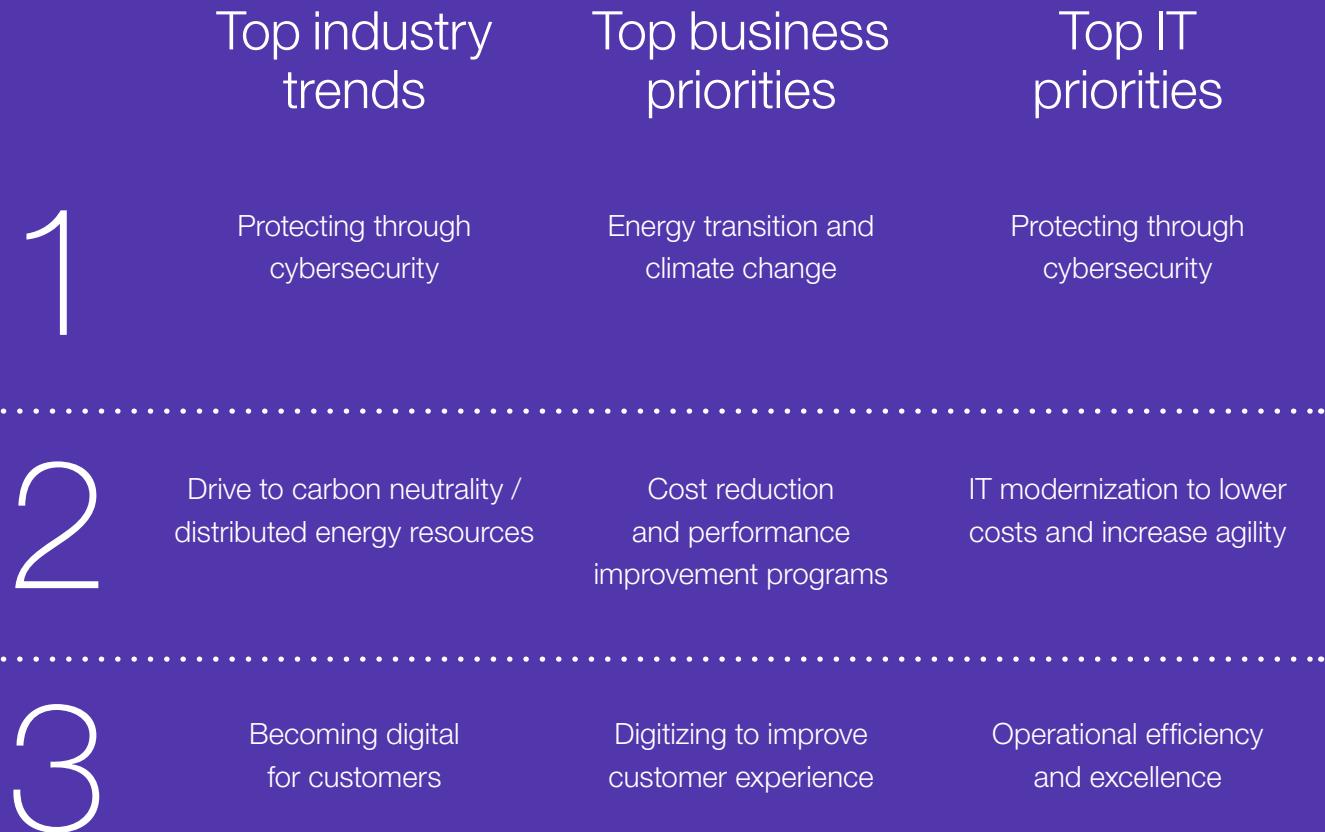Business leaders 42%   58% IT leaders
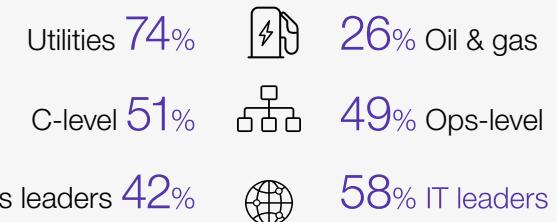
Top trends & priorities

Global issues and events continue to drive industry change, and we see some significant shifts in top industry trends and priorities this year.

Key takeaways

Climate change, carbon neutrality and cybersecurity rise to dominate industry concerns and mandates. Digital transformation to support the energy transition is a related IT priority, at fourth. Data is the key enabler behind all trends and priorities.

	Top industry trends	Top business priorities	Top IT priorities
1	Protecting through cybersecurity	Energy transition and climate change	Protecting through cybersecurity
2	Drive to carbon neutrality / distributed energy resources	Cost reduction and performance improvement programs	IT modernization to lower costs and increase agility
3	Becoming digital for customers	Digitizing to improve customer experience	Operational efficiency and excellence

The industry trends capture key drivers with the greatest impact on the clients' industry. The business priorities represent how clients are addressing the industry trends, and the IT priorities reflect the technology areas of focus to address the trends and achieve the business priorities.

Digital progress in Energy & Utilities

In 2022, the percentage of energy and utilities clients achieving results from digital strategies rises to 29%, which is above the average across industries (25%).

Following a slight dip early in the pandemic, results from digital strategies rebounded in 2021 and continued to advance in 2022. A combination of culture change, legacy systems and scarce IT talent are common challenges to achieving digital results.
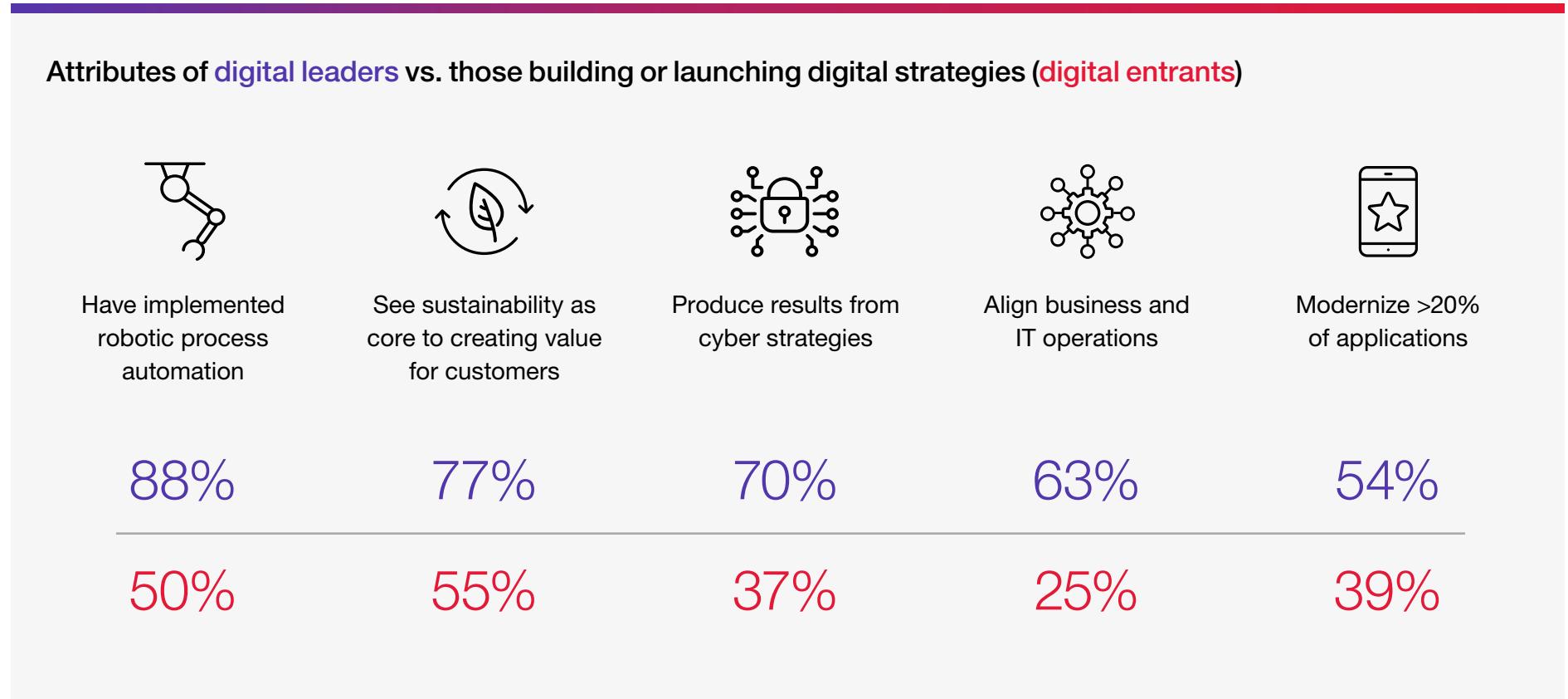
Notably, European clients are outpacing North American clients in producing results (34% compared to 14%).

Executives who say their organizations are producing expected results from digital strategies

12%	10%	21%	29%
2019	2020	2021	2022

Digital leaders in Energy & Utilities

In examining the 29% who are producing results, the digital leaders, some common attributes emerge.

The table compares responses to questions from the digital leaders to those from executives whose organizations are still building or launching digital strategies, or digital entrants.

Attributes of digital leaders vs. those building or launching digital strategies (digital entrants)

Have implemented robotic process automation	See sustainability as core to creating value for customers	Produce results from cyber strategies	Align business and IT operations	Modernize >20% of applications
88%	77%	70%	63%	54%
50%	55%	37%	25%	39%

Key findings from our interviews with Energy & Utilities executives

1.

The energy transition drives business priorities.

The energy transition is the top business priority overall and ranks significantly higher in importance for digital leaders than for digital entrants. Additionally, the drive to carbon neutrality and distributed energy resources is the second top industry trend.

2.

Cybersecurity is top of mind.

Cybersecurity rises to become the top industry trend this year, after ranking second in 2021. Clients say their top three cyber security program elements are: identifying critical assets, employee training and awareness, and securing cloud platforms.

3.

Sustainability is core to creating stakeholder value.

Energy and utilities lead all other industries at the C-level in terms of ranking environmental sustainability's impact on future value creation for stakeholders as high (80% in oil and gas and 75% in utilities).

4.

Highly agile businesses are 2 years ahead on digital results.

39% of energy and utilities executives with highly agile business models are producing results from digital strategies, compared to 29% for the industry. Average progress in digital results is 5.6 points/year, putting "agile leaders" nearly 2 years ahead.

5.

Europeans accelerate their drive to net-zero.

The energy transition and climate change ranks as the top business priority for European executives, but is fifth for their North American counterparts.

6.

Achieving business priorities takes a focus on people.

Cultural change and change management is the top constraint to achieving business priorities, according to 57% of energy and utilities executives.

7.

Digitization is vital to meeting customer expectations.

Digitizing to improve the customer experience is the third top business priority overall. For 54% of C-level executives, it is the top business priority.

8.

Use of automation accelerates success.

Clients report increases in every category of automation in the "implementation done" or "in-progress" stages. The most advanced category, AI automation, increased 17 points to 23%, and algorithmic automation rose 15 points to 38%.

9.

Evolving business needs require cloud modernization.

50% of energy and utilities executives say they plan to modernize or migrate to the cloud more than 40% of their applications portfolio over the next 2 years.

10.

All of these drivers call for talent, but talent is scarce.

88% say they are experiencing an IT talent scarcity challenge. In this industry, more digital leaders use managed services for business processes than do digital entrants.

5 recommendations for staying relevant for the future

1. Expand your value chain view.

With the drive toward carbon neutrality a top trend, the energy value chain is becoming linked intrinsically to banking and manufacturing. Business model shifts require new hardware and systems, which will need financing. Such financing will rely on fast, accurate data. Banks are becoming guardians of the planet, integrating sustainability data into their credit and lending risk models. In addition, the physical supply chain and the energy value chain are tightly coupled. Green manufacturing depends on green energy, and all of this requires secure ways to access and exchange the data needed to make informed decisions and prove decarbonization progress.

Within the energy sector itself, market participants will need to collaborate even more to address fuel shortages caused by the war in Ukraine.

2. Avoid getting blindsided by a changing competitive landscape.

The energy transition is the top business priority this year, and market disruptors are coming from unexpected places like manufacturing. These entrants come with a different mindset and are currently free of some regulatory limitations facing traditional energy producers. They also come with Industry 5.0 views on sustainability, ESG, and human centricity, as well as first-principles thinking. For example, manufacturers that have produced hydrogen for industrial purposes are now building hydrogen plants to gain market share from traditional energy producers. While they may have more experience with hydrogen production, they may lack the retail and distribution networks. Assess your competitive landscape to identify new entrants who may be challengers, but also who may be potential collaborators.

Case in point

Piloting a data exchange platform for a German transmission system operator in 5 weeks

A major German gas transmission operator wanted to integrate hydrogen into their current value chain. Establishing a commercial operations data exchange platform was too complex for managing by spreadsheet, and too costly to integrate directly into their legacy IT landscape. With our intelligent data exchange platform, CGI AgileDX, we jointly developed a proof of concept, with power to scale, in just five weeks.

3. Ensure your data strategy bridges the new with the legacy.

Innovation is imperative for successful transformation initiatives, and innovation teams need access to data in legacy core systems. As supply chains face limitations and energy security drives the move to additional community power generation, energy companies also need greater visibility into customer-owned renewable generation, requiring better and smarter DERMS solutions. Does your data strategy ensure access to an accurate and integrated view of operations, even if relevant data resides in many systems? Data from the new physical devices required for wind, solar and hydrogen is needed to prove traditional ROI and operational requirements, and now must also prove ESG "ROI." Can your legacy systems digest this data?

4. Foster a culture of innovation.

With the urgent need to improve energy efficiency, particularly to meet energy security and energy sobriety objectives, innovation becomes even more important.

Sustaining innovation is a major challenge in energy and utilities, as is culture change and change management. Executives cite difficulty in attracting IT talent where, in some cases, younger talent may look to companies that candidates feel are more innovative.

The ability to create and strengthen human connections is key. It requires executive orchestration to ensure that independent, empowered innovation teams are driving toward the same outcomes. It also requires investing in employee skills to drive innovation as a team, and establishing clear KPIs with regular reviews at all levels of the organization.

Case in point

Developing control systems for an energy company's green hydrogen plant

For a leading energy company and a leader in developing green hydrogen, we developed a solution that supervises the end-to-end hydrogen production process for their control center at one of Europe's largest green hydrogen plants. The plant is an ambitious innovation project to promote the decarbonization of industrial sectors. It uses 100% renewable hydrogen for emissions-free ammonia and fertilizer production.

5. Embed sustainability, security and data privacy in everything you do.

Digital leaders see sustainability as highly core to creating their future value. They also achieve cyber strategy results at twice the rate of digital entrants, and realize data privacy strategy results at more than 3X the rate of digital entrants. We can see clearly the value of embedding measures for sustainability, security and privacy in every aspect of the energy and utilities business.

Key questions to ask include:

- Governance: Who has what responsibilities?

- Standards: Who defines the standards, protocols and procedures and who tests them?

- Technology: Which platforms and tools will be used to accelerate, monitor and measure results?

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Hear more about these and other insights in our Energy Transition Talks podcast series.

Case in point

Providing security operations and event management services for Fjordkraft

For Norway's largest electricity supplier, Fjordkraft, we provide the security operations center and security information and event management (SIEM) services to protect security and data privacy for both the organization and their energy retail customers. Fjordkraft previously had multiple security vendors, but wanted a partner able to provide comprehensive security services. In choosing CGI, Fjordkraft now has a trusted partner to build and maintain best-practice routines and services.

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. We are insights-driven and outcome-based to help accelerate returns on your IT and business investments. Our insights represent deep knowledge of industry trends and your business and IT priorities.

For the latest CGI Voice of Our Clients industry insights, and to consult with one of our experts, please contact us.

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