Energy, Environment and Utilities

Incumbents Strike Back
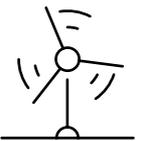
The IBM Institute for Business Value, in cooperation with Oxford Economics, interviewed 645 CxOs from the Energy, Environment and Utilities industry. These conversations included both quantitative and qualitative responses. The analytical basis for this Energy, Environment and Utilities industry report uses 633 valid responses from the total data sample collected.

More than 12,800 CxOs, representing six C-suite roles, 20 industries and 112 countries, contributed to our latest research. We used the IBM Watson Natural Language Classifier to analyze their contextual responses and ascertain overarching themes. We also used various statistical methods, including cluster analysis and discriminant analysis, to scrutinize the millions of data points we collected.

Which way to the future?

The signals are utterly bewildering. As digital technologies transform the world, monopolies are winning big-time. Yet collaborative systems are also flourishing, and even in industries where the competition is shrinking there's still plenty of creativity. Little wonder top executives are puzzled.

Energy, Environment and Utilities (EE&U) CxOs are no exception. Two years ago, they were unequivocal in saying that the competitive landscape was shifting away from traditional areas toward new, unexplored opportunities. Now, they're more evenly divided as to whether the focus will be on new or established markets (43 versus 40 percent). And where, previously, they expected that open innovation would predominate, a growing number now anticipate more internal innovation. There's also been a shift in the external factors most likely to affect EE&U organizations in the near future. Two-thirds of respondents now report that environmental issues will have the single biggest influence on their enterprises – a recognition that it has become a key agenda item in the boardroom.

EE&U CxOs see increased pressure from multiple areas: 63 percent anticipate increased energy conservation and 42 percent say stricter environmental regulations are likely to affect their organizations. The rapid escalation of renewable energy sources has also helped propel environmental issues to the top: over a third of respondents report that alternative energy sources will warrant a major strategic focus, including wind (39 percent), solar (38 percent) and hydropower (36 percent).

Reinventors race ahead

In the course of our research, we identified three distinct organizational "archetypes," each at a different stage on the road to Digital Reinvention™ (see Figure 1).

Reinventors focus on developing breakthrough products, services and business models; excel at extracting value from their ecosystems; and actively experiment. Their IT strategies are aligned with their commercial goals, and they're superb at managing change – all of which helps them stand out both financially and as innovators.

Practitioners are ambitious but haven't yet acquired the capabilities required to realize their ambitions. They're neither as focused nor as agile as Reinventors.

Aspirationals have even further to travel. They still need to devise a clear strategy, put the right processes and resources in place, and develop the agility to seize new opportunities.

Reading the road signs

So what's actually going on? Four topics stand out from our conversations with CxOs and our work with academics:

Dancing with disruption

The path to personalization

The pull of platforms

Innovation in motion.

"We are planning to expand our business model by acquiring a small, similar business and creating a scalable business unit."

Chief Financial Officer, EE&U, Switzerland

Figure 1

Energy, Environment and Utilities split

Industry archetypes have distinct characteristics that lead to differing vantage points

26% Reinventors

37% Practitioners

37% Aspirationals
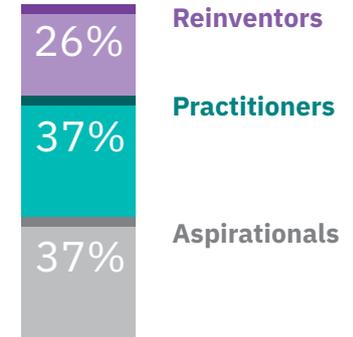
Dancing with disruption

Two years ago, CxOs told us they were somewhat worried about digital giants and ankle-biters from other industries invading their territory. Now, EE&U CxOs are far more relaxed. Only 16 percent say their sector is experiencing huge upheavals, and just 16 percent note an urgent need to transform their enterprises in response. But, like CxOs in other industries, they're no longer most concerned about outsiders: an overwhelming 76 percent of EE&U CxOs report that the *real* disruption is coming from innovative industry incumbents – once unwieldy enterprises that have reinvented themselves to thrive in a disruptive digital era.

But EE&U Reinventors are more fleet-footed than the rest of our sample: 73 percent have a culture that rewards fast failure and rapid innovation. They're also out-investing Practitioners and Aspirationals in technologies that bridge the physical and digital. Sixty-seven percent of EE&U Reinventors are investing in the Internet of Things (IoT), compared to 55 percent of all others. Investing in mobile, location awareness, and sensor and metering technology likewise ranks high on their to-do lists.

The path to personalization

Connecting with the customer on a personal level is essential these days, but designing compelling personalized experiences is extremely difficult; it takes a profound understanding of what makes different people tick. Again, EE&U Reinventors are ahead of the curve. They're particularly skilled at using data to identify unmet customer needs (see Figure 2).

However, EE&U Reinventors don't just trawl through yottabytes of data. They approach problems like design thinkers – by empathizing and engaging directly with customers, consulting their partners to get a better picture of the customer experience, analyzing detailed journey maps and using cognitive solutions to unearth deeply buried insights. The result? A full 69 percent of EE&U Reinventors are very effective at creating personalized customer experiences, compared with just 48 percent of Practitioners and 30 percent of Aspirationals.

"We hope to change the model of our relationship with our clients, responding to their needs with immediacy, quality and personalization."

Chief Marketing Officer, EE&U, Spain

The pull of platforms

After a long stretch of relative predictability, the radical reshaping of the traditional EE&U business model and value chain prompted an initial period of reassessment. EE&U CxOs have since sharpened their focus and become more proactive in their responses to these business model shifts. They're increasing their attention on B2B (77 percent), embracing the role of energy integrator (63 percent), and actively experimenting with or considering a platform business model (32 percent).

The platform business model connects producers directly with consumers, enabling organizations to grow faster and generate higher profits. But what makes a platform work? We identified three "rules" for success: creating value from reciprocity, capitalizing on data and committing to innovation. EE&U Reinventors fit this profile. They're more convinced of the merits of partnering with others to create the underlying network. And they're more effective at leveraging partnerships to create a better customer experience (68 percent versus 52 percent of Practitioners and just 35 percent of Aspirationals).

Figure 2

Know now

Reinventors excel at using data to understand their customers' unmet needs

Reinventors
Practitioners
Aspirationals

Effective   Highly effective

	Effective	Highly effective
Reinventors	41%	42%
Practitioners	48%	16%
Aspirationals	20%	12%
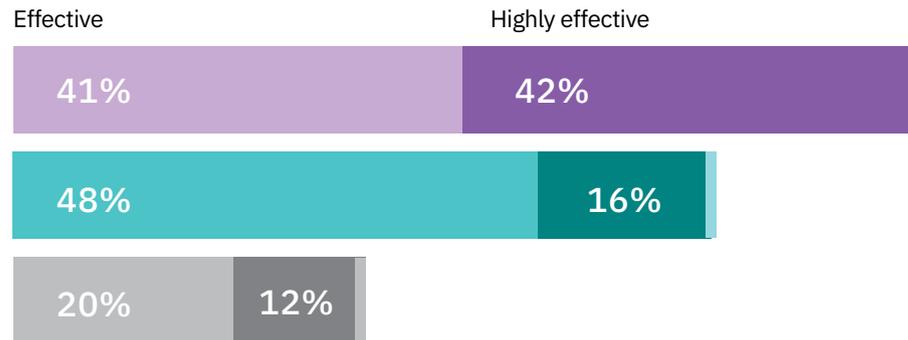
Q: How effective is your enterprise at using data to identify undefined and unmet customer needs?

Innovation in motion

The organization of work is altering dramatically, as enterprises collaborate to innovate and ecosystems replace go-it-alone entities. The smartest C-suites are preparing for the future by creating teams that learn on the fly. Most of the Reinventors in our EE&U sample already solicit input from employees to develop new approaches. But the Reinventors have gone much further: 70 percent rely upon fluid, cross-functional teams to stimulate continuous learning (versus just 43 percent of Practitioners and 30 percent of Aspirationals). More than three-fourths of EE&U Reinventors have also empowered their teams to decide on the best course of action (see Figure 3). The CxOs who head these companies lead through trust.

There's more. EE&U Reinventors have C-suite teams that are consistently better at promoting a culture of transparency and ongoing dialogue with employees than those heading Practitioners and Aspirationals. They're also better at creating an effective network of partners, suppliers and distributors, and putting in place the necessary resources to execute their strategies, including people with the right skills. In other words, they combine a dynamic vision with an open culture and agile operations – and these, as our research shows, are the three stepping stones to organizational dexterity.

Figure 3

Reinventors
Practitioners
Aspirationals

Autonomous teams

Reinventors empower their teams to decide on the best course of action

77%
52%
31%
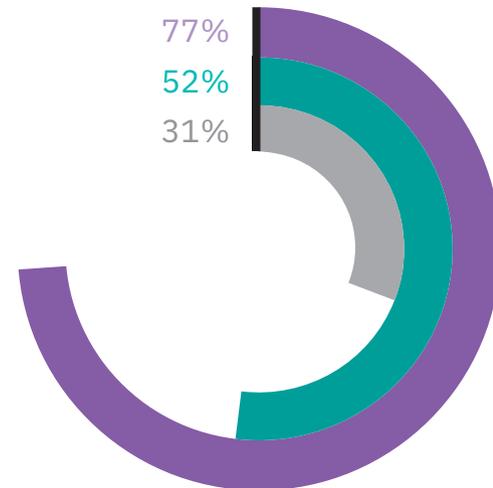
Q: To what extent does your enterprise empower teams to decide on the best course of action? (Percentage of respondents choosing "to a large extent.")

Strengthening advantage: Actions to take now

Interrogate your environment. Heed the growing importance of environmental issues. Embrace your role in the energy integration ecosystem and assume the mantle of sustainability. Find opportunities for growth with the rapid escalation of alternative energy sources.

Commit with frequency. Identify emerging requirements and re-conceptualize talent for the utility of the future. Continuously adapt and reapply assets to meet ever-changing environmental, regulatory and customer needs.

Experiment deliberately. Invest in intelligent technologies and innovate through analytics-driven operations. Orchestrate inclusive ecosystems and create marketplaces for new energy models. Determine the right balance of physical and digital with the IoT and use it to create competitive advantage.

Related IBM IBV C-suite Program executive reports
To read the full report, "Incumbents Strike Back," please go to ibm.com/globalcsuitestudy. You can also find copies of our monthly insights and related C-suite executive reports on IoT, artificial intelligence and blockchain at the same location.

For more information
To learn more about this IBM Institute for Business Value study, please contact us at iibv@us.ibm.com. Follow @IBMIBV on Twitter, and for a full catalog of our research or to subscribe to our monthly newsletter, visit: ibm.com/iibv

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