IFS Global Utility Survey 2024

A new era of utilities

Digitalization and green goals driving transformation

Executive summary

The utilities sector is undergoing a significant transformation, driven by digitalization, sustainability goals, and evolving customer expectations. To explore this transition and what it means for the industry as a whole, IFS commissioned a survey which polled 863 C-level executives and VPs from utilities companies specializing in power generation, transmission, distribution, natural gas, and water/ wastewater services across the UK, US, France, the Nordics, the Middle East, and Australia.

This report, "A New era of utilities: Digitalization and green goals driving transformation," examines the findings of the survey in depth and shines a light on the current state and future landscape of the industry.

As the research shows, the successful integration of digital tools and data-driven decision-making is increasingly crucial to the ongoing evolution faced by utilities companies, with data analytics and AI playing key roles. In line with this, 84% of survey respondents reference the former as key to their digital transformation strategy while 82% highlight the latter.

There is a growing recognition across the industry that composability and open architecture will also play a key role in allowing utilities to integrate new technologies and processes seamlessly, thereby ensuring agility and scalability. That interest is rapidly translating into action, with nearly four out of ten (38%) of decision-makers now seeking a composable enterprise platform to support their entire digital transformation journey.

At the same time, meeting environmental targets remains a top priority for utilities, with 46% of respondents saying they have reached the stage of establishing timelines and goals. However, as companies attempt to execute plans, less than one-third (31%) in total have hit their first milestones. Positively, strategies being put in place to achieve these objectives include improving asset efficiency, investing in energy-efficient assets, and engaging customers and suppliers.

Putting the right processes in place and underpinning those processes with the right technological solutions is clearly fundamental to the success of utilities today, and the research provides many examples of this.

Asset management and field service management, for instance, are pivotal for enhancing customer experience and operational efficiency. Over a third (36%) of respondents cited asset management as a key impact of digital transformation, while the same percentage focused on advanced field service management solutions. Running in parallel to this, predictive maintenance and improved asset lifecycle management are essential drivers for adopting enterprise software in the utilities sector.

Yet, while the latest technology clearly has great potential to drive positive change, utilities still face significant barriers, including the inability to accurately measure return on investment (ROI), conflicting priorities, and change management challenges. Not being able to able to make effective use of the technology they have at their disposal often lies at the heart of this. While 87% of respondents emphasize the importance of setting and measuring critical KPIs within their enterprise software systems, many still struggle to modernize their software to meet these needs.

So what's the solution? How can utilities optimize their use of technology to become utility of the future?

This report highlights the importance of a holistic approach, leveraging end-to-end digital tools, and fostering strong partnerships to navigate this complex landscape. IFS remains committed to supporting the utilities sector, providing innovative solutions that drive efficiency, enhance customer experience, and promote sustainable practices. By adopting the strategies outlined in this report, utilities can ensure a resilient and future-ready industry.

Introduction

While all utilities have set out on the challenging journey to digitalization, many are facing significant barriers along the way which are inhibiting them from achieving it. These are primarily related to the way they use technology. There are common challenges utilities face in leveraging technology, including conflicting priorities, change management issues, difficulties in measuring key performance indicators and ROI, and struggles to effectively use enterprise software. However, with the right tools and approaches, the survey shows that digital transformation for the sector is in reach.

Key survey findings

1. Utilities have started their digital transformation journey, but they need help navigating the way:

100% of respondents have initiated digital transformation, but only one-in-five (20%) have completed it.

2. Composability is in demand

38% of respondents see the search for a composable enterprise platform as the primary approach their utility organization is using to optimize its digital transformation journey, making it the most favored approach overall.

3. AI is an enabler, but data foundations are key

82% recognize the importance of AI to their digital transformation strategy.

4. Sustainability is a top priority, however companies must progress past planning

46% of C-Suite decision-makers have simply reached the stage of establishing timelines and goals for meeting sustainability targets, but less than a third (31%) of respondents overall have hit their first sustainability milestones.

5. Asset and field service management are key for the future success

When thinking about the ability to deliver new services and/or products and outcomes, 36% of respondents cited asset management as having a key impact on digital transformation.

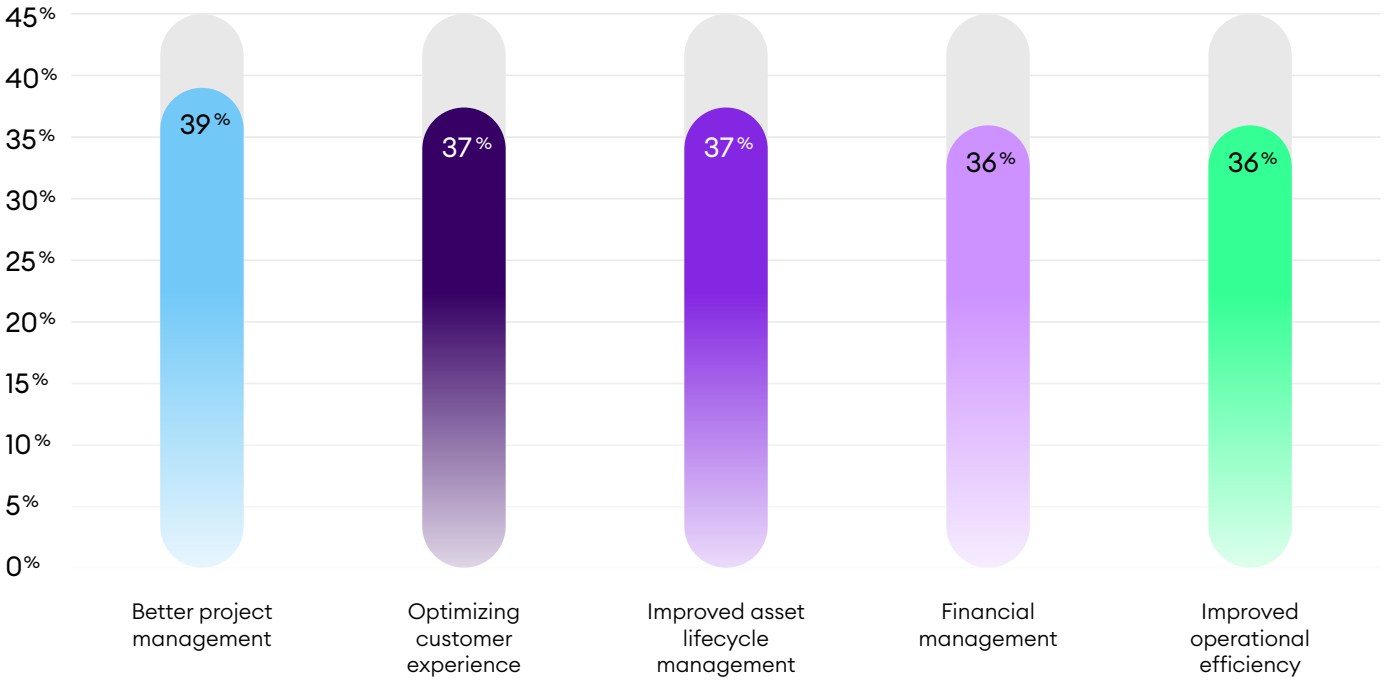
Getting started: The Drivers for Digital Transformation

Embracing digital transformation is imperative for utilities today. Its impact on the delivery of new services, products or outcomes is significant, with survey respondents keen to highlight several key areas in which it plays a crucial role: from resource optimization to customer experience strategy and from asset management to the introduction of new business models.

Equally, the success in technology adoption for digital transformation is driven by setting and measuring critical KPIs embedded in their enterprise software, something which 87% of the survey respondents say is important. This can be achieved by integrating advanced technologies such as AI, machine learning, and data analytics into the software, and drawing on the help of technology partners to measure the results and the possible return on investment.

There are a wide range of drivers in place that are incentivizing utilities companies to digitalize their operations, with respondents identifying several key impacts of digital transformation on their ability to deliver new services, products, or outcomes-emphasizing the importance of integrated project and asset management, ensuring optimum customer experience and the transition towards renewable energy sources in driving digital transformation efforts.

What are the top business drivers for the adoption of enterprise software systems across the utilities sectors today?



But when it comes to digital transformation, few areas have the biggest impact in enabling utilities to deliver new products/services:

- Resource optimization
- Customer experience strategy
- Field service management
- Asset management

The key driver to find new approaches and strategies to deliver these products and services is the growing focus on flexible energy as utilities strive to ensure that they maintain the supply and demand curve balance, so that the grid never collapses at times of peak consumer need. Utilities need to ensure that they can continue to bring in more demand, without having to build a grid that is so monolithic that it is not sustainable and ends up being cost prohibitive.

That involves utilities delivering close consumer engagement to ensure that sufficient customers generate their own energy, store it, or use the grid in off-cycles to ensure that it is never overburdened. That involves making certain that they are communicating to customers the benefits of energy audit programmes and energy conservation, as well as marshalling their own resources, including field service operatives - and effectively managing assets.

Yet, the journey towards digital transformation remains complex and ongoing. **100% utilities who responded have embarked on this journey, yet only 20% have completed it so far**, meaning there is a significant gap in the execution of digital strategies and a need for more robust support systems and partnerships to enable utilities to succeed.

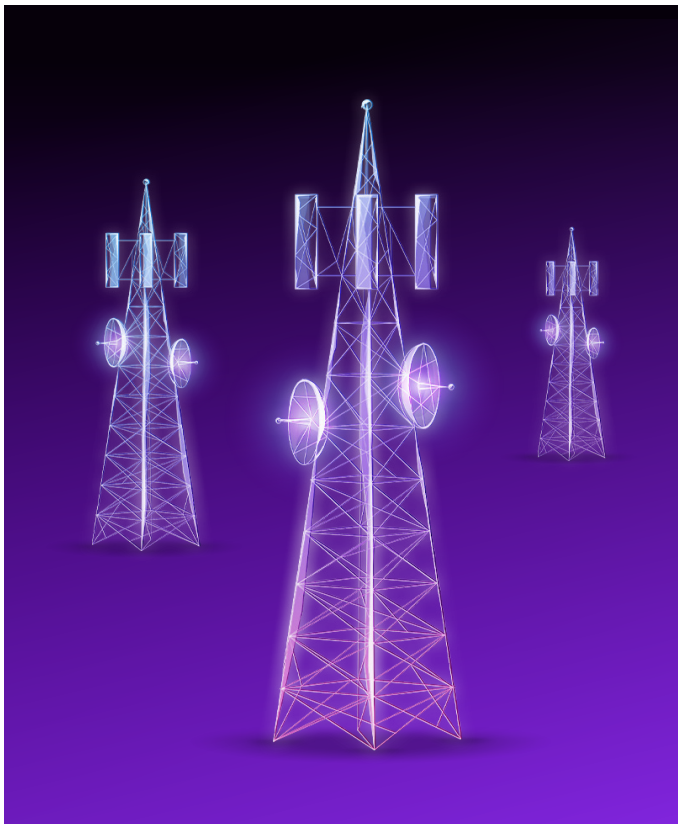
Accelerated adoption of AI and emerging innovative technologies

Effectively harnessing emerging technologies is clearly crucial to the successful roll-out of digital transformation. Over 84% of respondents said that data analytics were critical, and the same percentage cited large language models (LLMs). Moreover, 82% specifically referenced artificial intelligence (AI) as a whole to be critical to their digital transformation strategy.

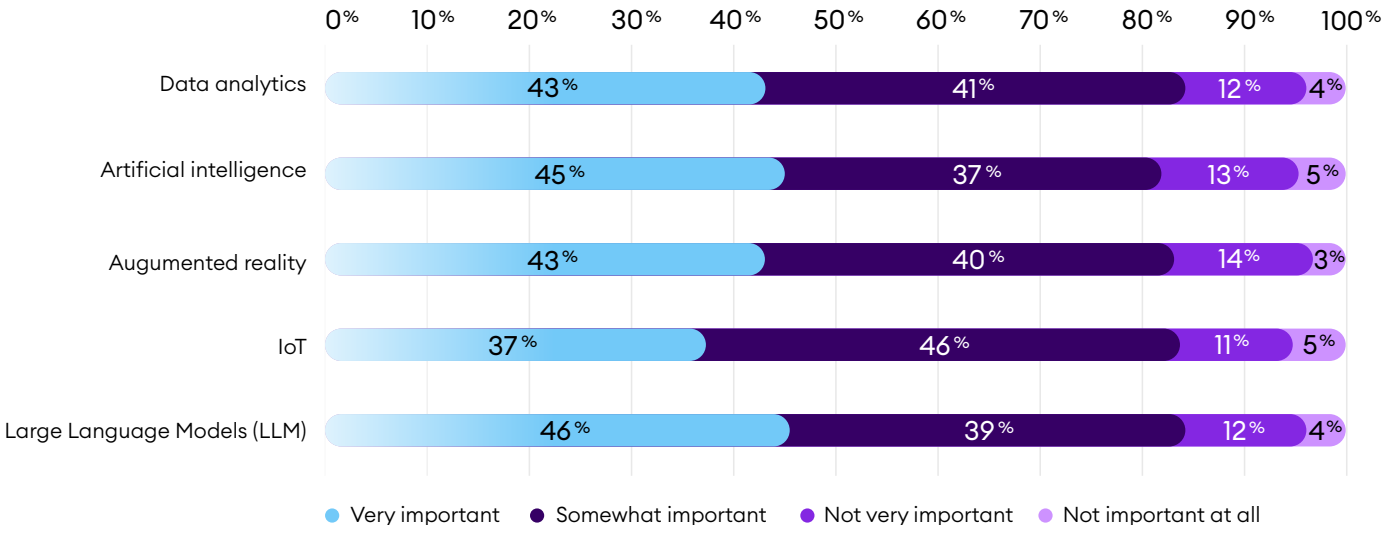
As interest in leveraging AI to drive transformation grows, making better use of the data at their disposal is core to this. Filling in data holes is key, as evidenced by the use of the latest generation of advanced metering infrastructure (AMI 2.0) to gather more gird edge intelligence.

Nearly a third of respondents in total (31%) highlight data population as an important AI strategy they are looking to introduce to help drive their digital transformation priorities. Customer experience and optimization are also top focuses, with 30% and 28% of the survey sample respectively, referencing them.

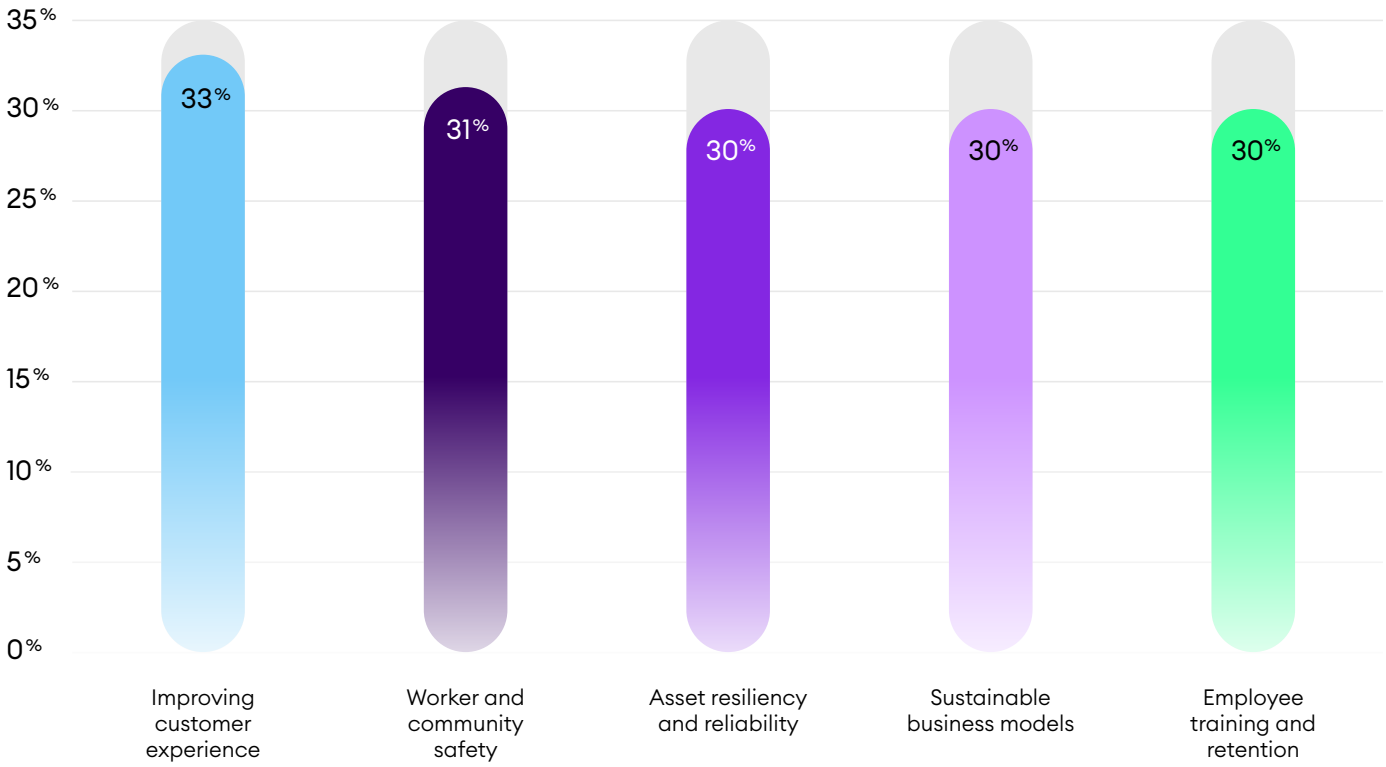
The areas with biggest focus for applying these emerging technologies in your business:



How important are the following emerging innovative technologies to your digital transformation strategy?



Which areas are the biggest focus for applying these emerging technologies in your utility business?



In broad terms, however, the emphasis on AI and emerging technologies underlines the need for utilities to establish strong data management practices to support intelligent decision-making.

The critical role of composable enterprise solutions

Data may be key across the board, but when it comes to applying that data and emerging technologies more generally, there are a wide range of applications that utilities are focusing on for their digital transformation journey. The top areas for applying emerging technologies include improving customer experience (33%), worker and community safety (31%), and asset resiliency and reliability (30%).

The focus on these areas is not particularly surprising when you consider the three biggest challenges that any utility is facing today typically center around customers; workforce; and assets. Utilities know that maintaining the status quo in these areas is no longer sufficient, so they are looking to technology to help solve these pain points. These businesses are increasingly turning to automation, including AI, to effectively connect and communicate with an increasingly digitally-savvy customer base.

Utilities are also looking to emerging technologies to help them better engage with the workforce. IFS can help by ensuring that utilities are making use of the latest up-and-coming, cutting edge technologies that enable them to transform their business and position themselves to prospective employees as being part of the future rather than 'a dinosaur of the past'.

Technology will be key in ensuring that utilities can retain and train new workers once they have attracted them into the fold. AI (and augmented reality) can be key here in guiding new workers in the field that are carrying out unfamiliar tasks, or in accessing useful information to help them to achieve their goals.

Moreover, the safety of workers and the wider community remains critically important, particularly given the growing number of reported incidents of wildfires being started by faulty utility equipment. Utilities are increasingly making use of IoT sensors on equipment to monitor performance and condition in real-time, while also leveraging machine learning models to predict equipment failures based on historical data and address problems before they occur.

Finally, in terms of asset management, AI and predictive data analytics are increasingly key in ensuring utilities are not simply keeping to scheduled maintenance cycles when servicing assets, which are in many cases increasingly aged and at the mercy of escalating climate change. Instead, they need advanced technologies that can pinpoint their problem assets and help them to understand the impacts that asset failures could have on their business.

Composable platforms can be instrumental in addressing these diverse needs, offering industry-focused solutions that harness data more effectively, while also enhancing operational efficiency and sustainability. **This approach, built around a flexible and modular technology infrastructure, enables businesses to adapt quickly to changing requirements and integrate various applications, services, and functionalities seamlessly.**

Flexible, composable solutions and open architectures are, after all, essential for adapting to changing demands and achieving long-term success. These approaches ultimately facilitate seamless integration and scalability, both crucial for the utility of future. The adoption of these solutions will allow utilities to stay agile and responsive to evolving needs, ensuring they can harness the data they need and integrate new technologies and processes, without significant disruptions.

Sustainability: Turning plans to action

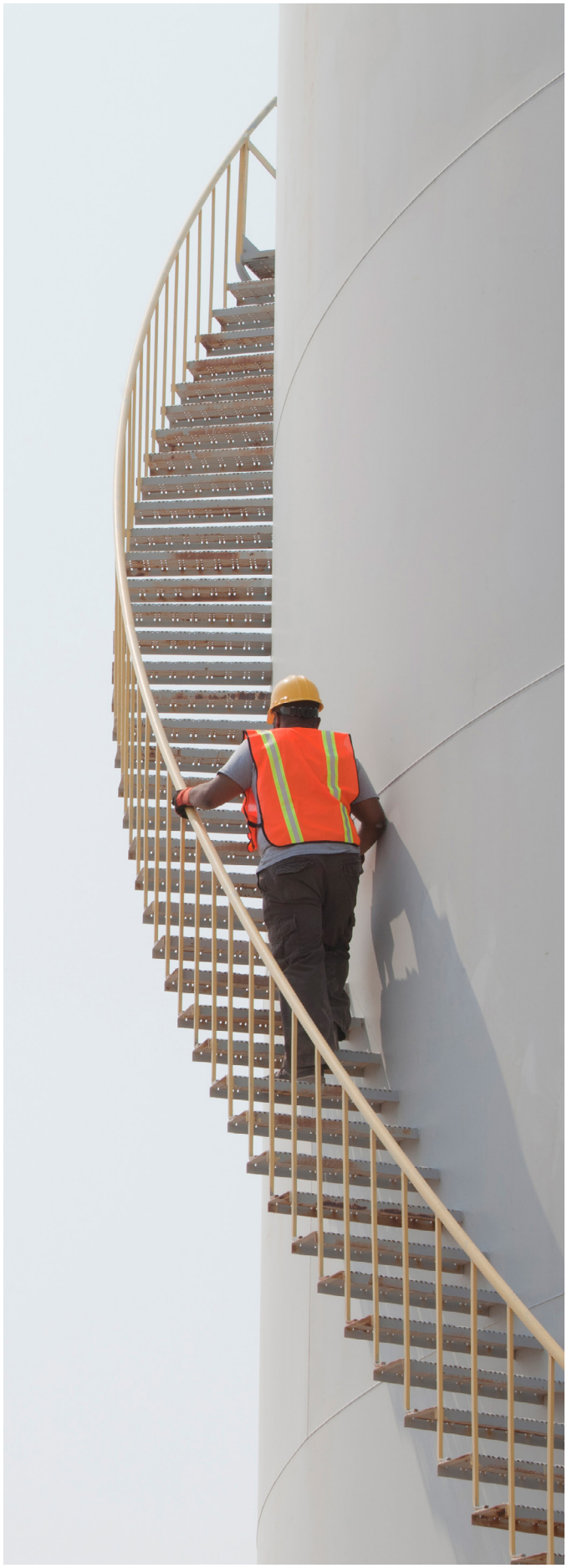
Becoming more sustainable is another crucial part of the digital transformation journey for many utilities. Nearly half of the respondents have established timelines and goals for meeting sustainability targets, but less than a third (31%) have hit their first milestones.

In terms of how respondents say their organizations plan to reach these sustainability goals, we see a range of approaches taking center stage. Over 2 in 5 (43%) respondents say they are primarily improving asset efficiency, while 42% are investing in more energy-efficient assets and infrastructure.

To meet their sustainability goals, the survey indicates that utilities are actively at work establishing ESG teams and engaging customers and suppliers in meeting these goals.

These strategies reflect a broad commitment to reducing environmental impact and promoting sustainable practices within the industry, but implementing actionable plans and fostering continuous improvement are crucial to these efforts.

Partnering with third party providers and leveraging their technologies to help move forward on the digital transformation journey are also critical for success. In line with this, IFS' own sustainability initiatives, including fuel savings with planning and scheduling optimization tool and the ESG module embedded in IFS Cloud, are further helping utilities in their sustainability pledges.



Turning plans to action

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Inhibitors and Barriers to Success

The progress we have outlined above indicates that many utilities are well underway with their digital transformation efforts, with various factors driving and shaping this transition, but significant challenges still remain.

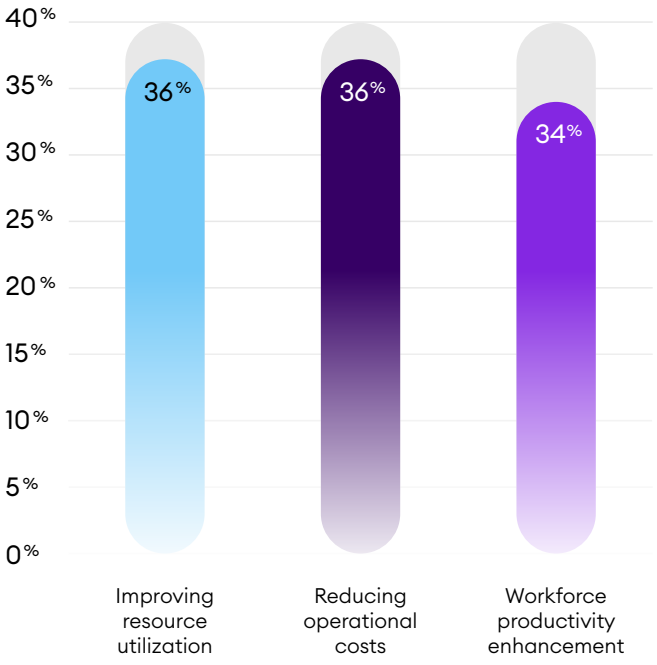
Survey respondents identified several primary barriers to digital transformation which are associated with aligning efforts with measurable outcomes.

Barriers for digital transformation

- Inability to accurately measure return on investment (RoI)
- Conflicting priorities
- Change management

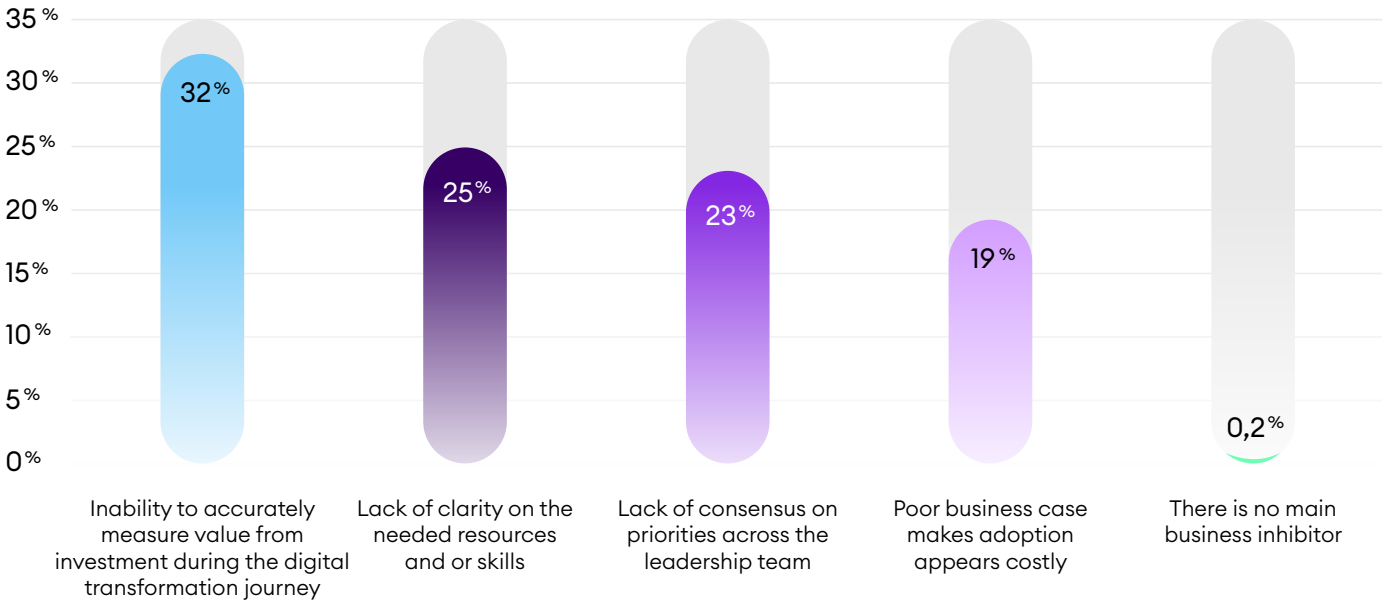
At the same time, many utilities are struggling to update their enterprise software to ensure that it is fit for purpose, as they undertake the digital transformation process.

What are the top 3 critical KPIs you would like to set and measure within your enterprise software?



The survey also highlighted a range of inhibitors to modernizing enterprise software systems across businesses. These included an inability to accurately measure value from investment during the digital transformation journey lack of clarity on needed resources and / or skills and a lack of consensus on priorities across the leadership team. As is so often the case, problems often boil down to a lack of access to quality data, and the slow time to insight that this inevitably causes.

What is the main business inhibitor to modernizing enterprise software systems across your organisation today?



IFS' enterprise solutions, primarily around enterprise asset management, aim to provide clarity and support in overcoming these obstacles, emphasizing the importance of setting and measuring critical KPIs within enterprise software systems. Especially when it comes to supporting utilities with key business drivers for adopting enterprise software in the utilities sector i.e., better project management, optimizing customer experience, and improved asset lifecycle management.

IFS Cloud combines a composable, AI-enabled native enterprise asset management (EAM), field service management (FSM), mobile workforce management (MWM) and enterprise resource planning (ERP) solution tailored to the needs of the utilities' industry.

Looking ahead: Becoming the utility of the future by capitalizing on opportunities

The report reveals a sector in transition, with digital transformation, sustainability, and customer experience at the forefront of strategic priorities. Despite significant progress, utilities face challenges in executing comprehensive digital strategies and measuring the impact of their efforts.

There is a significant gap in the execution of digital strategies, suggesting a need for more robust support systems and partnerships, but digitalization is only possible if all areas work in tandem. The adoption of composable solutions helps to address this need by harnessing different technologies and enabling them to work together, thereby allowing utilities to stay agile and responsive to evolving needs, and ensuring they can integrate new technologies and processes without significant disruptions to their operations.

Promisingly, AI holds significant potential for driving innovation and efficiency, but it requires a robust data foundation. Utilities must therefore look to enhance data management practices to support AI initiatives. Emerging technologies are playing a key role in shaping digital transformation strategies, urging utilities to establish strong data management practices to support intelligent decision-making.

When it comes to sustainability, utilities need to be laser-focused on areas like improving asset efficiency, investing in energy-efficient assets, and engaging customers and suppliers in sustainability initiatives. Adopting such strategies is key to reducing environmental impact and promoting sustainable practices within the industry, while putting in place effective asset management and advanced field service management solutions will support the provision of better customer service, optimize field operations and reduce downtime.

Partnering for success

Moving forward, the utilities industry must continue to prioritize collaboration with technology partners, adopt flexible and scalable solutions, and focus on data-driven decision-making. By doing so, utilities can achieve their digital transformation and sustainability goals, ensuring a resilient and future-ready industry.

They won't realize the results they are looking for on their own and will need to work with a partner that understands the sector and can help deliver the capabilities needed to move forward with digital transformation.

That's where, at IFS, we can add value by acting as a guide to this transformation journey, and by providing the innovative solutions that utilities need to establish sustainable practices, enhance customer experience and drive operational efficiency.

The IFS Solution for Utilities

IFS stands out in the asset-heavy utilities industry with its unique ability to manage the complete lifecycle of assets through a seamless Design-Build-Manage approach. Our integrated solutions blend asset and service management, allowing utilities to oversee their infrastructure from concept to completion and beyond. This comprehensive management ensures operational excellence and enhances sustainability across electricity and gas networks, energy generation and renewables, and water management sectors.

Discover how IFS's expertise in orchestrating the complexities of the utilities industry makes us the partner of choice for achieving end-to-end efficiency and strategic ESG goals.

Visit our website

About IFS

IFS develops and delivers cloud enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers – at the Moment of Service™.

The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector. Our global team of over 5,500 employees every day live our values of agility, trustworthiness and collaboration in how we support thousands of customers.

Learn more about how our enterprise software solutions can help your business today at ifs.com.

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