

Drive insight and new value

Realize new possibilities
through digital innovation
that leverages data and
emerging technologies



Create future value fueled by the intelligence latent in your data

In our age of constant change, organizations need to be set up for continuous evolution and optimization. The capacity for adaptability is your competitive advantage and, as such, it must be developed and nurtured for sustained success in the future. While there are many aspects to building an adaptive organization – security, operational agility, efficiency, cost optimization, pace – a critical part is setting up your organization to be data driven. **Why?**

79%

of data-driven businesses achieve superior business outcomes compared to

29%

for data starved organizations.¹

So, what does 'data driven' really mean?

To be data driven is to exploit your data as a corporate asset that contributes to your organization's goals and bottom line. Data drives the insight and new value that will fuel your sustainable future.

¹<https://www.fujitsu.com/global/microsite/data-transformation/maturity/index.html>

It can connect your organization to improve collaboration, innovation, and intelligent decision making in real time. Analytics give you a richer and more nuanced understanding of your market and your customers, so you can improve their experience, retain their business, and win more. And you can identify and remove inefficiencies and waste from your operations to hit your sustainability targets. Moreover, advanced technologies such as AI, Computer Vision, Data Intelligence, and Blockchain help you derive more value from your data.

For example, we helped **GKN Aerospace** automate its defective recognition process. Computer Vision and AI collect quality control data and feed back to augmented engineering systems. This saves time, lowers costs, improves consistency, increases data value, and minimizes wastage.

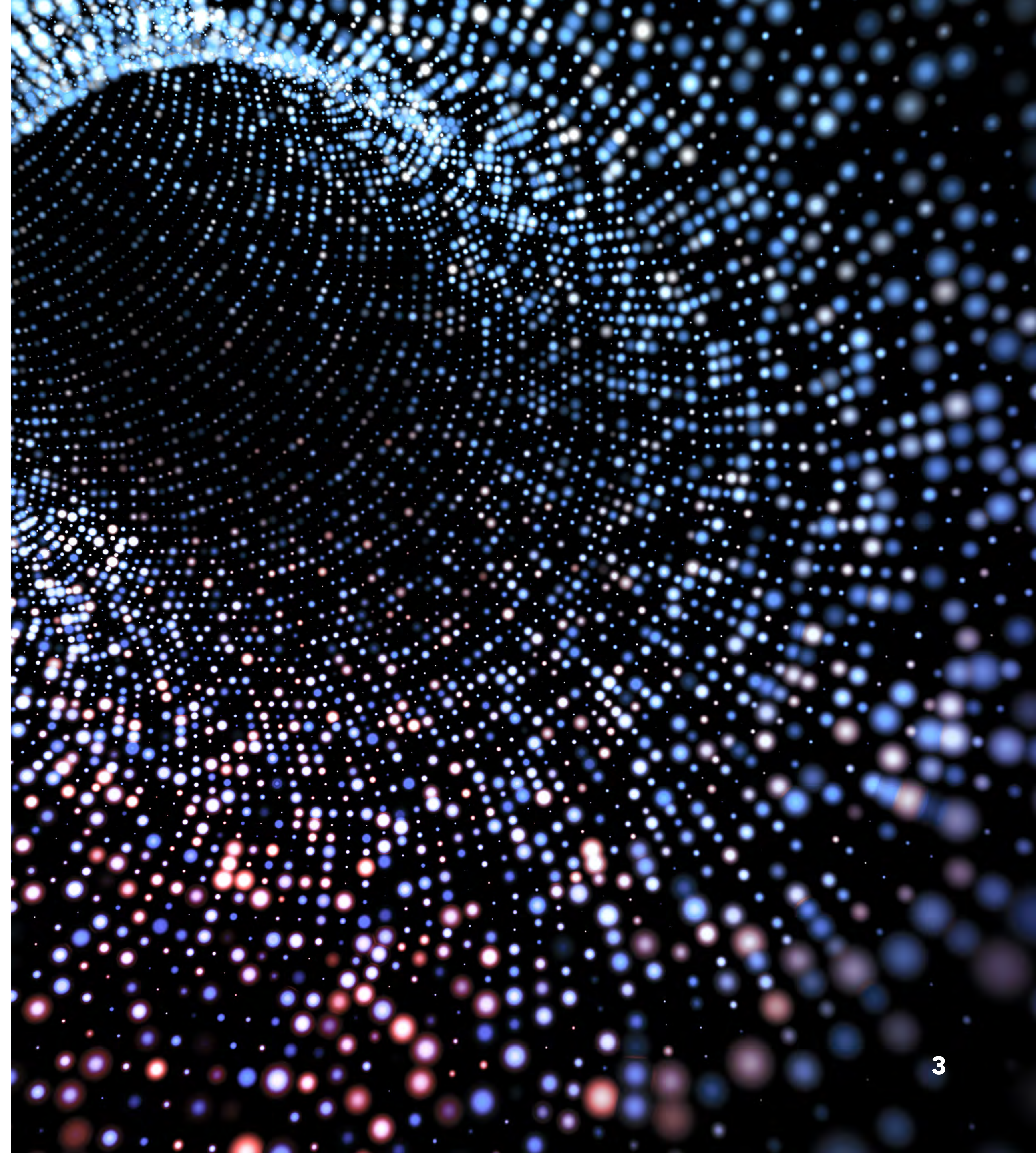
The problem for most organizations is that, currently, their data isn't standardized. It's siloed rather than connected. And it doesn't provide a single source of truth. The chaotic nature of many organizations' data storage and sharing habits means the intelligence and innovations hiding in their data can be hard to realize. It's not managed or protected accordingly, nor does it accelerate decision making or innovation. The solution for driving insight and new value, therefore, must be to calibrate the chaos.

Simply having the latest data analysis software isn't enough

For your data to have customer and societal benefits, you need the right data skills, security, and governance to ensure integrity and trust. You need alignment between IT teams, data leaders, DevOps, senior leadership, and other business units. You need upskilling programs to counter the insufficient data literacy you'll encounter. And you need a data strategy built around clearly defined and measurable business objectives.

The catalyst for all this is to position data advocates up and down your organization to drive cultural change and influence strategy, resourcing, processes, and procurement.

The rewards for those driving insight and new value from data are great: increased efficiencies and reduced costs; the ability to swiftly enter new markets with new products and services developed with deep insight; fast-paced DevOps; high-quality, personalized customer service; engaged and empowered low-churn workforces.



So, it comes as a surprise that only around

5–7% of businesses consider themselves data driven.

However, with a change in mindset and approach, and support from experienced, well-resourced partners, more organizations can gain insights and create new value, pushing them along the path to becoming an adaptive organization.

Fujitsu, in collaboration with Astroscale, The University of Glasgow, and Amazon AWS, is helping spacecrafts plan space debris removal missions. Data is interpreted by Fujitsu's quantum-inspired optimization services to calculate the most energy-efficient flight path.

Opening thoughts:

Driving insight and new value starts with taking responsibility for data



Naeem Sarwar

Head of Analytics at Fujitsu

The difference between organizations that are data sustained or data empowered in what we call the data maturity model, and those that are truly data driven, is having a person or team that is squarely assigned responsibility for the data and its contribution to business goals.

Focusing on tools and technologies without a clear understanding of business objectives is a clear recipe for under-utilizing the available data assets. You need to understand what data you need, the integrity associated with it, accessibility, security, and governance.

From our conversations with customers, we are now visibly seeing a change in this aspect with the emergence of chief data officers and digital officers, who are able to link business transformation to data architecture transformation and digital transformation.



Key initiatives for you to focus on

In our recent research, over 75% of IT and business leaders said they need to react faster to market disruption and change.² The truth is, many are spending too much of their precious time, budget, and resource simply 'keeping the lights on' at a time when the need for a reliable business as usual (BAU) approach has been superseded by the need for futureproof adaptability.

Organizing, standardizing, integrating, and utilizing trusted data will deliver the insights and new value key to serving this demand. But while most organizations acknowledge the advantages of becoming data driven, the significant challenges mean it's not a reality for most.

In spite of this challenge, we believe driving insight and value from data is a critical part of your iterative, holistic transformation into an adaptive organization. In this guide, we explore three key initiatives to address to drive insights, enable adoption of advanced technologies, and act as a source of new business value. **Read on to find out more.**

² Fujitsu research, Fragile to Agile, 2021

All organizations need to get three fundamentals right to drive insight and new value from your data for future prosperity



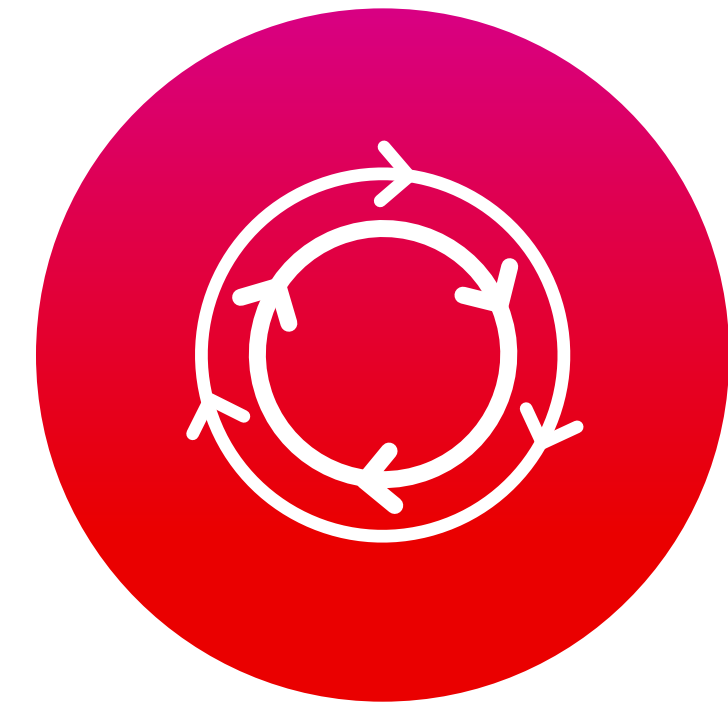
1. Ensure data integrity, trust, and readiness

Make your data visible, understood, and usable as a source of future insight and new value



2. Drive intelligence through data insight

Use data as a source of insight to drive intelligent decisions for your organization and its customers



3. Innovate to generate new value

Deliver innovative solutions that generate new sustainable sources of value from data

1. Ensure data integrity, trust, and readiness

The storage of data in many organizations is far from organized. Working with customers, we often find inconsistent, duplicated, or incomplete data sets as a result of data strategies that are no longer fit for purpose. Data can exist in many siloed systems across legacy databases and contain structured and unstructured data. As a result, it's not analytics-ready, it takes a long time to make sense of, and it's not used efficiently by the business – it has no integrity nor is it trustworthy.

Data integrity can be achieved with hygiene and governance applied at source. As well as a foundation of integrity, your data must be ready for analysis. For this to happen it must be available in a single place for analysts and non-technical staff to start using it. And if it's not simple to use, it will be more challenging to create new value before competitors do.

If it's ready and trusted, your data can be used to inform strategy, chase business goals, and add societal value.



Break down silos for data sharing

One of the fundamental challenges for organizations is siloed data. Data is generated in multiple systems and held across multiple databases, which don't speak to each other and, as we sometimes find, are incompatible. This leads to duplication of data and analysis based on incomplete information.

Collecting and accessing data through one platform will help establish a single point of truth, which in turn keeps analysts aligned.

For example, our customer CITB had multiple data sources with duplication and inconsistent data, no data governance process, and ensuing lack of trust in data quality. We created a single customer view with cleansed, enriched, and standardized data for more informed analytics, modeling, and insights.

There is also a misconception around where data responsibility lies which leads to major inefficiencies. We see IT departments tasked with setting up data systems and storage in complete isolation from wider strategic goals. The tactics become divorced from the strategy.

In fact, forward-thinking organizations are recruiting more data-specific roles. This aligns the business from the boardroom to product development around specific outcomes. But this change must come from the top to be truly impactful.

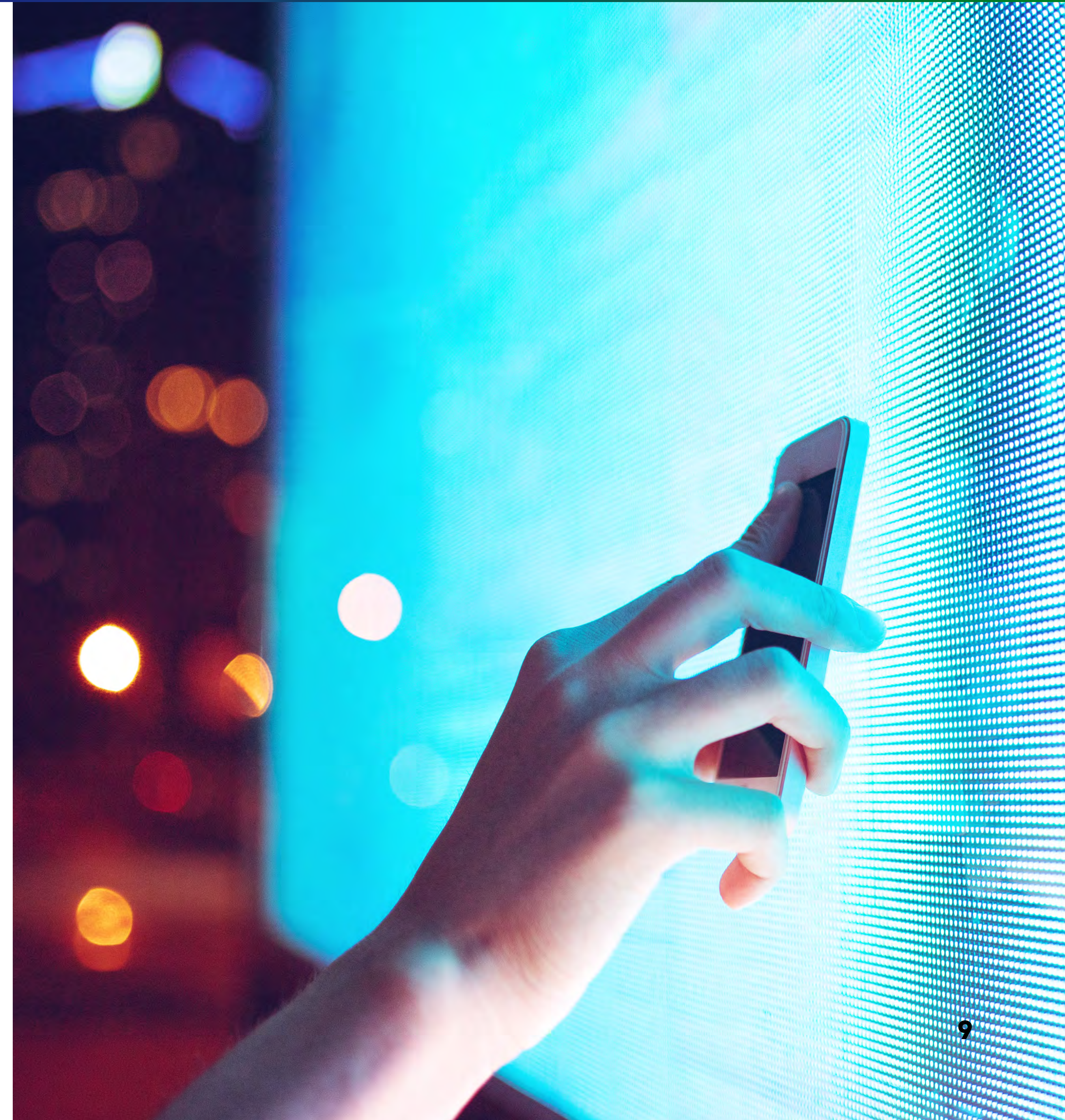


Make your data available

Of course, to have any value, your data must be available and 'analytics ready'. For this to work, data sources must be connected and sending structured data to one single place for analysis. Manually, getting data ready in this manner is slow, time consuming, and very expensive. Our approach is to automate these processes to give your business intelligence in real time.

This also supports broader work to create real industry, environmental, or societal value by making structured and unstructured data available to the wider data community – data analysts, data scientists, researchers, and across your network ecosystems – in a format that is ready to go and trusted.

For example, working with RBS we managed to reduce a manual data audit process, which involved pulling information from multiple unstructured data sources, from 12 days to one. Using automation we reduced task time and eliminated human error. With this approach, analysts can do their job rather than spending valuable and costly hours just finding the data. This is what we mean by having your data 'analytics ready'.



Maintaining data security and governance

Data security is central to data integrity. Its storage must follow governance guidelines for a number of reasons: to comply with industry data regulations; to keep your customers secure; and to keep your brand's reputation intact.

It is, therefore, very important where data is stored and who has access to it. We work with our customers to continually optimize data hygiene with consistent labeling and tagging of data as it's generated, giving much faster time to insight.

When it comes to data integrity, Fujitsu can help you standardize, automate, and ensure high quality data. But crucially we'll help design the solution with very specific business outcomes in mind in order to efficiently uncover new insights and create new value.

Expert view:

Data readiness needs to start with data trust



Naeem Sarwar
Head of Analytics at Fujitsu

From our conversations with customers, we find that organizations that are truly data driven ensure data readiness by having 'analytics ready' data that is maintained, trusted, and fit for purpose.

The data is ready for analysts to use without the need for further mass manipulation or transformation. This data would already be compliant to GDPR and other privacy regulations and would not have any duplication or inconsistencies.

Where possible, AI would already be embedded to assign business context. This accelerates the ability to transform data to business value.

2. Drive intelligence through data insight

Once your data is of high quality, standardized, and in the right place, then its analysis can start to provide the business intelligence that informs product and service design and gives a competitive edge.

Utilizing data can provide historical, current, and predictive views of business operations to identify insights which can support tactical and strategic decisions as well create new business opportunities.

For example, we worked with Scottish Water to reduce complaints and improve customer experience. We used data analysis – combining third party data assets including demographic and household information – to understand root causes of customer complaints. With this information we were able to build a comprehensive predictive model across 4.1m households, helping Scottish Water to fix issues before they became complaints.



Enable advanced, augmented analytics

One of the outcomes of an incoherent and unaligned data strategy is the inability to carry out complex analytics and cognitive solutions. On the other hand, get your data strategy right and you can implement complex analytics programs with the potential to provide extreme value to your organization.

Advanced analytics and cognitive solutions is an approach of data analytics that employs the use of machine learning (ML) and natural language processing (NLP) to automate analysis processes normally done by a specialist or data scientist. Augmented analytics is the ability to run 'on the fly' analytics using analysis-ready data in a simple useable environment, using automation, AI, and low code to further the capabilities of the 'data citizen'.

We were able to assist the UK Government with the COVID-19 track and trace program, using data analysis, augmented analytics, and data engineering to build predictive models utilizing a range of techniques to forecast the "R" rate.



Reporting for the future

Every organization reports using data. It's simply anecdote or hearsay without it. Unfortunately, many businesses are reporting from data that is often incomplete, untrusted, and does not bear a single version of the truth.

With proper analysis, reporting can take a look at what has gone before to provide actionable insights for what is to come. Reporting should, with the right information, help put you on a path to achieving your strategic aims.

We don't find reporting being used like this in every organization, but at Fujitsu we believe reporting is only of real value in this way. To achieve this, we can work with you in a consultative manner to help you orchestrate your reporting tools, such as self-service analytics dashboards, providing insight to the people who need it fast.



Data Intelligence

'Data Intelligence' goes beyond analytics and uses AI, ML, and NLP to work on unstructured data. While most IT services organizations are able to work with structured or semi-structured data, Fujitsu is able to offer unstructured data processing.

For example, working with Hospital Clínico San Carlos, we co-created mining algorithms to predict mental health patient risk using AI and NLP techniques. By creating a probabilistic knowledge graph based on previous patient symptoms, context, and outcomes, these algorithms could make links across vast amounts of data that previously would have been impossible, with over 80% accuracy.

Expert view:

Today's reporting should predict the future



Naeem Sarwar

Head of Analytics at Fujitsu

Reporting is often considered a backwards looking view of what has already happened. But I think this is an outdated view, particularly when you consider today's business climate where change and uncertainty can be classed as the only constant forces.

Good reporting in the modern era should be about forecasting what is likely to happen — yes, based on past data but also on current trends that are taking shape right now. Even more importantly, this reporting needs to enable action through genuine insight that can be trusted.

And remember — the majority of people that need to consume and act on insights to drive business improvement are not data scientists, so the importance of intuitive reporting really cannot be overstated to ensure the insights are usable and not wasted.

3. Innovate to generate new value

The final piece of the puzzle is to use your data to innovate, to power advanced technologies. Through innovation your organization can be a disruptive force in your industry, enter new markets, and create new value. This is where the investment in data integrity and intelligence pays off.

Working with Fujitsu Enterprise Blockchain solutions, AB InBev launched a pilot in Europe to give full traceability of its supply chain of barley, from consumer to the farm, for the Leffe beer brand. The connectivity, transparency, and insight of blockchain also help to advance agricultural development by improving growers' yields, water, and energy efficiency, as well as soil health.



Achieve your strategic business goals

In a data-driven organization, data informs strategic business decisions as well as helps identify the tactics to achieve them. Currently, business strategy usually comes first, and further down the line, department heads need IT managers and DevOps leaders to provide the tools, solutions, and data needed to deliver.

However, data can and should be doing much more. It should be used to spark boardroom debates and it should shape overall business strategy, as well as helping deliver against it by establishing very specific outcomes. Because of this, as discussed, data needs to have its own advocates at every level of the organization, especially in the C-suite.

At Fujitsu, we too are laser focused on your strategic goals, and we ask ourselves how we can provide you with competitive advantage through our digital services in pursuit of these goals.

Data needs to be recognized as a key corporate asset, at the highest level of the organization. Without C-suite support, digital initiatives can often have a limited chance of success.



Develop your people, skills, and culture

Many organizations are now starting to leverage schemes and training to enable people in their organization to be more data savvy and data literate — examples include the Data Analyst and Data Science Apprenticeships offered by the UK Government.

Understanding your data can improve the experience of your staff too, whether that's giving them the education they need, better tools and streamlining processes, or improving wellbeing and retention.

Innovating with advanced technology will help attract the best talent, who will always want to work in a place that recognizes and invests in the importance of their work.

The challenges lie in giving non-technical staff the time to learn and think about data in a different way, as well as the tools to become practitioners. For many organizations, this requires a top-to-bottom culture change. Which brings us onto the people specifically responsible for data...

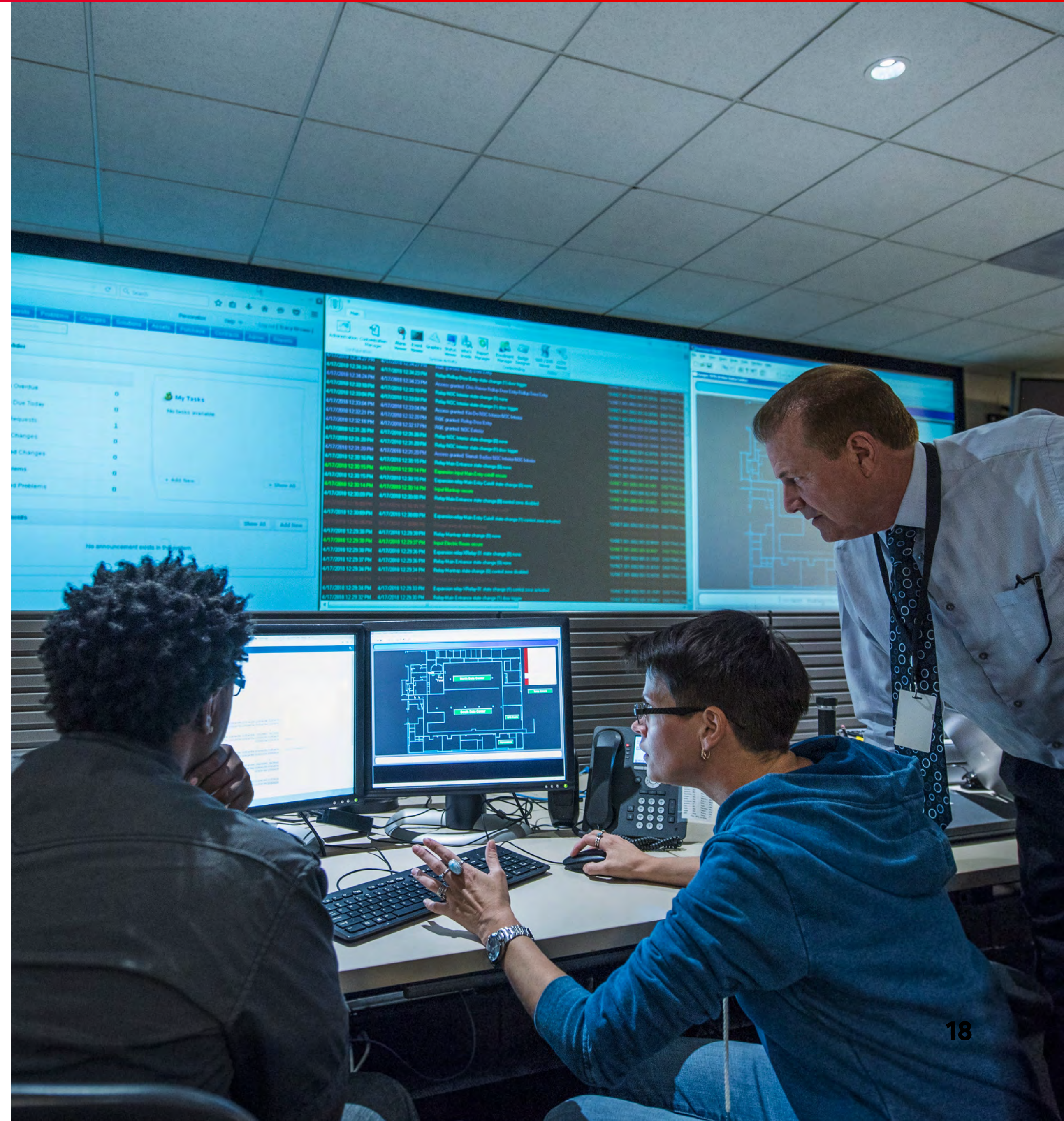


The emergent CDO

Data is often seen as an IT worry, the responsibility for its maintenance sitting somewhere between the Chief Technology Office (CTO) and the Chief Information Office (CISO).

But in recognition of the value of data – as important as human resources, or the IT infrastructure it uses, or real estate – distinct data roles are being created. Not to usurp existing digital roles but to complement them.

This is why we're seeing more Chief Data Officers (CDO), often working directly alongside the CTO. As well as helping get value from data from an operational and product point of view, these appointments also bring cultural change. Once data has its own champions in the boardroom, influencing the most senior decision makers and actually playing a large part in key strategic decisions, data-specific roles will have a greater mandate and can start to influence the approach and processes of the organization as a whole; this importance will naturally cascade throughout the organization.



Access to technical resources

While creating a data literate workforce with easy-to-use analytics tools at their disposal is the ambition, it's not yet a reality for most. Organizations have a challenge that most non-technical staff actually can't access analytics, and certainly cannot perform the complex enquiries needed to answer questions. Augmented analytics will solve this with low/no code solutions that don't require complex programming, enabling data citizens to generate intelligent insights.

In the meantime, it's important to find the technical resources that can bring value to data and help senior leadership deliver on their data-driven strategies.



Scaling for growth

Scaling your innovations is challenging. Many organizations are stuck in the proof of concept phase when it comes to implementing AI and ML, and often need assistance developing a framework to help move them to deployment. Support is also needed to continuously modify data-fueled programs, as the maturity of the data and the models change, and they need to be iteratively updated to increase accuracy.

Scaling will become easier as being data driven becomes more established in the culture of your organization. In the meantime, support can help you build an MLOps approach to develop solutions and deliver them at scale.

Working with Hamburg Port Authority, we deployed quantum-inspired algorithms to cut traffic jams to optimize supply chain logistics and greenhouse gas emissions in the harbor.

Using Fujitsu's Digital Annealer solution, we were able to speed up journeys, lower CO² emissions, and address a common challenge for logistics infrastructure operators: how to increase supply chain capacity within a finite physical footprint.

Closing thoughts:

Today's reporting should predict the future



Naeem Sarwar

Head of Analytics at Fujitsu

Generating new sustainable value from data is a truly holistic practice.

Using advanced technologies to transform the nature of work, empowering employees with valuable insights, and freeing young talent to work on more creative and social aspects of work will all pay rich dividends by making your organization more innovative.

Fundamental to all this however, is a change in mindset and culture of your business; one that maximizes data as a valuable asset for insight and new value.

Get this right, and it will drive not only efficiencies, but a clear advantage for future relevance, profitability, and growth.

Five key actions for driving insight and new value:

Connecting, preparing, and exploiting your data is a complex undertaking. Fujitsu, through its advisory and consulting process, provides a fusion of technology, people, and process expertise to support you.

Here are five actions you can take now to accelerate your journey to becoming data driven.

1

Get your data ready. Break down siloes, improve your network, observe governance, and get your data ready to start creating value.

2

Promote data roles in your organization. Give data its own representative in the C-suite and embed skills at every level – this will help foster a data-first culture too.

3

Invest in analysis and analyst skills. This will help you unearth the value and insights latent in your organization's data.

4

Streamline processes and speed up DevOps. This will allow you to create new value from your data faster.

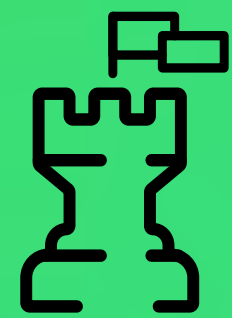
5

Accelerate adoption of advanced technologies such as AI and Data Intelligence to create more value from your data.

The bigger picture:

Creating your adaptive organization

Driving insight and new value is just one crucial component of creating your adaptive organization of tomorrow. There are four other important areas for continuous transformation which allow you to build resilience, responsiveness, and relevance for the future:



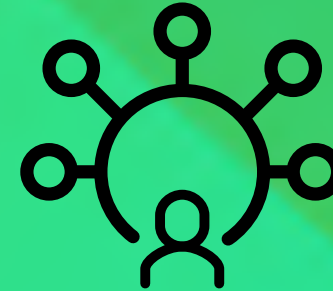
Protected foundations

For a safe and secure digitally-enabled business



Optimize cost and agility

For efficiency today and flexibility for the future



Enhance effectiveness

For intelligent decisions and rapid action



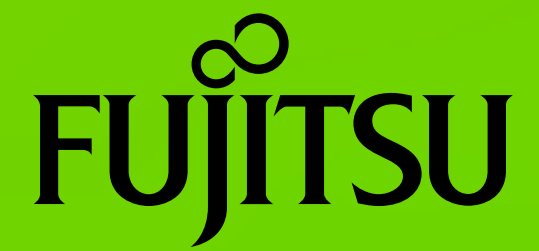
Build services faster

For delighting customers and disrupting competitors



Drive insight and new value

For business, consumers, and societal good



Accelerate and evolve holistically with Fujitsu

Every business has the potential to become an agile, adaptable, and thriving entity. With the support, expertise, and experience of Fujitsu, you can turn that potential into reality.

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