


# Go Beyond with Artificial Intelligence

How Fujitsu is empowering  
organizations like yours to  
achieve the extraordinary

FUJITSU



shaping tomorrow with you




The pace of change is accelerating inexorably. That was already true before the COVID-19 pandemic, and is only more so now. 2020 has been a stark reminder that everything can change in a second. Your business must be able to respond immediately, and globally.

Artificial Intelligence is already helping organizations like yours:

- to act, innovate faster and secure ongoing business value.
- to adapt to this new environment.
- by empowering businesses to go beyond their current capabilities and reimagine how they provide value to customers.
- with analytics about how they run their daily operations, and how they bring the best out of the people who work for them.

Artificial Intelligence can amplify your organizational abilities, to achieve the extraordinary outcomes you need to rise to the challenges of an increasingly complex world.





# Introduction



Every organization today is encountering unprecedented levels of complexity. Epoch-defining challenges such as climate change, an aging population, digitalization, shock pandemics, sprawling globalized supply chains and knotty financial networks – they all strain the boundaries of our abilities.

To adapt to this environment you must be faster, more efficient, more productive. You must find new ways of working, and of generating ongoing business value. You must be able to adapt in a second. The explosion of data offers extraordinary power – perhaps even answers – but most organizations lack the ability to parse the sheer volume, velocity, and variety of data available.

Artificial Intelligence (AI) is already emerging as a key strategic technology for this new environment - by augmenting your abilities, and helping evolve your business to succeed in an acutely challenging era.

86% of business leaders surveyed during recent research – carried out by independent research firm Forrester Consulting on a commission from Fujitsu – agree that AI will be crucial to their success in the next five years. 71% agree that businesses that fail to embrace AI risk irrelevance in the next 24 months.<sup>1</sup>

Why? First, because AI can help you shed the weight of routine knowledge work – menial mental labor that compresses cognitive bandwidth; impedes your ability to think creatively and strategically; and shackles the full potential of your existing intelligence. AI liberates your people to focus on higher value work.

1. Starting Today, AI Will Power Businesses Into The Future, a commissioned study conducted by Forrester Consulting on behalf of Fujitsu, May 2020



Second, because AI can help you to tackle the relentless increase in complexity. Whether you're an insurance carrier pricing risks for which there are no historical precedents, a manufacturer assessing for imperfections invisible to the naked eye, or a medical researcher unraveling the mysteries of novel diseases. AI can untangle the essential insights needed to tackle these challenges, unearthing them from the enormous datasets we lack the ability to process alone.

Third, AI systems provide the opportunity to easily scale up. AI cannot necessarily beat humans in identifying patterns when there are few attributes. As the volume of data or the number of attributes grows, human brains fail to identify patterns. In this instance, AI systems can do so quickly and accurately.

For example, an AI system working on analyzing video feeds from a small range of security cameras may not be able to better humans in identifying suspicious behavior. But with the number of security cameras in the hundreds, humans fail to communicate the same behavior. AI systems can scale up to analyze thousands of video feeds in real time. The same concept applies to robotic orchestration on the factory floor or optimization of 5G antenna locations.

But although AI can equip us with these extraordinary abilities – at often dizzying speeds – it must be built on a foundation of trust. The complicated public reaction to COVID-19 track and trace apps demonstrates that while speed is undoubtedly essential, so too is securing stakeholder trust.

**Good data governance, transparency, fairness, and human control must underpin AI functionality. Without these characteristics, AI cannot qualify as a solution.**

Over the next few pages, you'll see how AI is already being used in every business sector - from retail, transport, and manufacturing, to healthcare, finance and the public sector. You'll also see: how it is unleashing mental bandwidth to radically enhance productivity and efficiency - enabling knowledge workers to focus on more impactful work and deliver ongoing business value; how it is helping uncover deeper, richer insights from which to make better decisions - to do what you do best, but faster, further than ever before; to achieve the profound transformation you need to thrive in this new environment; all built on a foundation of trust.

# What is Artificial Intelligence?



»AI is applying advanced analysis and logic-based techniques, including machine learning, to interpret events, support and automate decisions, and take action.«

Gartner<sup>2</sup>

Essentially, AI is a computer technology with the ability to 'perceive' the world in much the same way as humans do. AI can distinguish cars from cats; differentiate between 'bass' the fish, and 'bass' the guitar; draw connections between seemingly unrelated bits of information, and also improve its knowledge over time.

But AI can process volumes and velocities of data orders of magnitude greater than a human can tackle. AI can parse in an hour what would take us a lifetime. The consequences for our understanding of the world – and our ability to shape it – are profound.

2. <https://www.gartner.com/smarterwithgartner/the-cio-s-guide-to-artificial-intelligence/>

# Harnessing AI

**Much like organic intelligence, AI is adaptable. It can be harnessed for nearly any conceivable task.**

36% of business leaders expect AI to improve their customer service.  
35% to increase employee productivity. 34% to improve security.<sup>3</sup>

## AI technologies •



Advanced image recognition



Natural Language Processing (NLP)



Real-time video recognition



Interactivity and recommendations



Semantic analysis



Predictive Maintenance

## harnessed to build solutions for •



Quality control



Social infrastructure inspection



Crowd analysis



Customer flow analysis



Financial fraud detection



Risk prediction and assessment

## • for results like



Increased revenue



Reduced costs



Quality improvement



Operational efficiency



Improved customer experience



Resilient digital transformation



New business models

At a minimum, applied AI dramatically enhances efficiency, accelerating time to value. At its best, it yields entirely new methods and models of working. Fresh solutions to unprecedented challenges – and familiar ones.

3. Starting Today, AI Will Power Businesses Into The Future, a commissioned study conducted by Forrester Consulting on behalf of Fujitsu, May 2020



# Think beyond

Hyperautomating work  
to liberate intelligence



Humans are good at creativity. We're also good at relationships. But instead of playing to these strengths, we spend much of our time performing simple, repetitive tasks.

AI enables *hyperautomation* - a scenario where *all* low-value tasks are automated, with little or no human intervention. The benefits are enormous: costs are lowered; efficiency improves; mistakes become less frequent; or are eliminated entirely.

It also gives workers the time and freedom: to concentrate on critical and creative thinking; to dedicate more time to customers; to apply their full, focused, and undivided intelligence to strategic decisions. This is where we see AI creating true business value.

## Eliminating imperfection

A manufacturer of car doors had long wanted to solve an issue with imperfections on aluminium sheets that would often go unseen, and wouldn't emerge as a problem until two years after shipping.

By integrating AI with their ERP system, they were able to employ existing sensor data to uncover these flaws - and address them before they left the factory. The business impact was profound: QC time was dramatically reduced, freeing workers to focus on more productive tasks; fewer doors were shipped with imperfections; fewer costs were incurred resolving customer issues; all by simply applying AI to systems already in place.

## Nurturing vendor relationships

Vendor management has two sides: there's the administrative side - maintaining and updating records; and there's the relational side - the side that generates real value.

After applying Fujitsu's AI automation, one company achieved a 100% reduction in manual administrative errors, thus improving data accuracy, and enhancing operational performance. Consequently, managers were freed up to focus more on vendor relationships than worry about administrative overheads.

## Transforming insurance. Improving road safety

Car insurance claims typically rely on the drivers' subjective accounts of the accident. Accuracy may suffer from drivers' emotional states, as well as the time between the event and contacting the insurance company.

Aioi Nissay Dowa Insurance is utilizing Fujitsu's AI-based image recognition technology to record an accurate, objective version of events to halve processing time for insurance claim pay outs. Ultimately, the partnership aims to use the technology to prevent accidents from happening in the first place.



# See beyond

Revealing the invisible to  
discover new possibilities



Business leaders know the value data holds.  
85% surveyed by Forrester said the success of their  
data insights practices were linked to business outcomes.<sup>4</sup>

But there is a skills gap. Data is locked in silos, along with the insights it contains. Organizations lack the systems to combine structured (dates, names) and unstructured (audio, video) data.

AI applies a human-like intelligence to big data, effortlessly navigating silos, easily combining and comparing structured and unstructured data, and keeping pace with the relentless daily creation of historically massive datasets.

In doing so, it distills a world that grows more complex by the second, into something understandable. This helps you to clearly demarcate the decisions you must make, and the actions you need to take, to provide essential value to your business.

This can be further understood in the context of car insurance. Many companies are now using AI to gain more customers by being more competitive. To do so, it is essential to “lose” high risk customers. Traditionally this would have been done on the driver profile, but AI is able to detect other potential risk factors from huge datasets such as the color of the car. Interestingly, AI has identified red cars as being more dangerous.

4. Starting Today, AI Will Power Businesses Into The Future, a commissioned study conducted by Forrester Consulting on behalf of Fujitsu, May 2020

## Harnessing the whole genome

Understanding the relation between genes and drugs has enormous potential for designing cancer treatments. But with 30 million research papers to mine – growing at a rate of 200,000 per year – it is a time-consuming task that grows every day.

Fujitsu implemented an AI Knowledge Graph at The Institute of Medical Science at The University of Tokyo (IMSUT) that halves the time it takes to extract insights from genomic research – paving the way for whole genome medicine as the body of knowledge expands.

## Adapting to climate change

Climate change affects countries differently. In the UK, increased flooding is a primary risk. Working with Fujitsu, the Environment Agency implemented an early warning system to alert those at risk.

The system uses predictive analytics to anticipate river flooding, sending text messages to people who may be affected, so they can take appropriate action. Text-To-Speech (TTS) messaging sends voice messages to landlines, leveraging machine learning to ensure pronunciation of place names is correct.

## Uncovering opportunities

Bricks and mortar retailers are grappling with how to position themselves in a digital age. That goes double for gas stations – facing the existential threat of home-charged electric vehicles.

Fujitsu's AI image recognition technology can be applied to CCTV to enable ecommerce-style analytics. In a trial at a European gas station, an unusually high proportion of Audi and BMW drivers was discovered. The gas station capitalized by carrying more Audi and BMW accessories.

Further opportunities lie in offering access to this audience to the manufacturers themselves, perhaps through co-brands, discounts, and service plans. They could even sell advertising based on how many times customers view a poster, and for how long.

# Secure beyond

Evolving cyber security  
to proactively defend data



Every organization becomes more reliant on data by the day. And as AI extends our abilities to mine data for invaluable understanding, that reliance will only deepen.

It is crucial that this data - both the raw input and processed output - is kept safe, for the protection of its subjects, the security of business insights, and the integrity of AI itself.

It is an enormous challenge for today's cyber security to keep up with the sheer volume of threats - and the speed at which new threats are introduced.

No software will be able to detect all threats. Even if it is updated on a daily basis, it will always be reactive.

AI can be proactive. As it monitors the patterns of data access and application utilization by each user, it will quickly detect any change in behavior and any anomalies.

This could be a cyber-threat or even internal abuse, or negligence.

AI has the capability to learn which type of assets are the most precious within an organization, and detect the leakage of such assets, as well as discriminate whether there is an intended leak or just negligent employees making copies on less secured local storage, for example.



# Fujitsu AI:

Our trusted,  
human centric approach  
to Artificial Intelligence



Fujitsu AI is what we call our human centric approach to AI. Why human centric? Because instead of applying specific technology to specific problems, we start by identifying the real, human challenges your organization faces, and then develop a solution to match.

And instead of the inscrutable 'black box' approach AI is known for, Fujitsu AI is an open book. We are dedicated to designing and deploying explainable solutions that put transparency and trust above all else – and that always remain in your control.

Our focus on ethics, transparency and trust makes Fujitsu AI the benchmark for responsible AI.

## How Fujitsu AI works

Fujitsu AI is composed of a set of certified solutions, structured as a toolbox of bleeding edge AI technologies, configurable into bespoke implementations. This includes technologies such as image recognition, machine learning, big data suites, and natural language processing.

These technologies can be adapted, combined and deployed to variously transform process efficiency, enhance customer experience, innovate new business models, and improve sustainability.



## What makes Fujitsu AI different

Fujitsu AI is not the only AI solution on the market. But it is unique.

### Create value

Our human centric approach means we put people first, technology second. We recognize our clients as experts in their domain, and closely consult when designing your unique Fujitsu AI solution, co-creating around your goals. So you get AI that enables your people to create more value, faster and smarter.

### Deploy quickly

While other AI solutions languish in proof of concept, Fujitsu AI deploys in weeks, not months. We use repeatable, scalable implementation processes, and utilize pretrained machine learning algorithms for key verticals.

### Build AI into your organization

To deliver real value, AI cannot be considered an 'add-on.' Our end-to-end, modular approach – with capabilities across all areas of hardware, software, and consulting – enable you to build AI into the bones of your organization, augmenting intelligence in every area.

### Employ trustworthy AI

Fujitsu AI is built on an 'ethics by design' approach. All its workings are transparently on display. It is always controllable by humans. And data is only used with a targeted approach, to ensure the privacy of customers, citizens, and service users.

Your data is always your data. Other AI models often utilize customer data to train their systems to retain this knowledge to be used elsewhere and for other organizations. Our approach ensures that the knowledge secured from your data is applied solely to your business.



## What does Fujitsu AI look like in practice?

Every Fujitsu AI deployment is unique – co-created with our customers in direct response to the unique challenges they face. But there are similarities. Rather than building from the ground up, we often integrate AI into existing core applications; much as in the examples you've seen in this brochure.

Across three broad areas – Workplace & Workforce, Enterprise Applications & Multi-Cloud Transformation, and Security - we deploy AI to enhance existing infrastructure – to generate real value, deliver real business benefits, while ensuring everything is built on a foundation of trust.

### **Modernizing Workplace & Workforce: Introducing Fujitsu Work-Life Shift**

We are empowering people with AI and automation tools to take care of the routine tasks they have to perform. Improving business agility, enhancing real corporate value creation, reducing operating costs and ultimately enabling Smart Working.

At the same time, we also set the foundations for true organizational Culture Change. Workforce Analytics helps visualize workforce work styles, supports effective communication and offers advice to improve productivity.



## **Enterprise Applications & Hybrid, Multi-Cloud Transformation**

Enterprise applications are the fundamental building blocks of a business. We help to build an Intelligent Enterprise using AI technology and data-driven cloud applications – and advise you on the right hybrid and cloud strategy to transform your cloud vision to deliver a connected, intelligent and transformed enterprise whether it is across public, private, hybrid or multi-cloud environments.

In on-premises and hybrid IT environments, we offer, in collaboration with partners, high-performance PRIMERGY servers optimized for AI, and data management solutions & storage with the lowest latency, all aimed at delivering insights faster from computationally intensive Deep Learning workloads. Our consultants work with you to build the right infrastructure stack, balancing cost and performance for your particular scenario.

Harnessing real-time data, predictive analytics, personalized information, and technologies such as machine learning, an Intelligent Enterprise powered by Fujitsu AI, can help you achieve profound digital transformation, helping you drive innovation, deliver a better customer experience, and make smarter business decisions.

### **Security**

AI relies on a lot of data. Maintaining the integrity of that data is paramount – for you, your customers, and society as a whole. Multi-Cloud transformation requires additional security consideration – particularly due to the gaps and differences between platforms, and the shared responsibility model between cloud providers and customers.

We provide managed security services that protect your IT and AI infrastructure, with a predictive, proactive approach that secures the network right to the very edge; especially for organizations in heavily regulated industries with particularly stringent security requirements.



## Getting started with Fujitsu AI

With so many potential applications – and so much potential power – it can be difficult to know where to start with Fujitsu AI.

That's why we begin by consulting with you to co-create your Fujitsu AI deployment around your organizational goals. To ensure we arrive at the solution that perfectly aligns with your objectives.

### **Solutions first. Technology second**

Drawing on our broad range of capabilities, we take a true **digital transformation** approach. It could be that Fujitsu AI is not the solution you need to arrive at your goals. Our decision tree approach identifies the most appropriate technology to help you overcome the challenges you face – whether Fujitsu AI or not.

### **Unique, rapid methodologies**

Our Digital Transformation Centers harness Fujitsu experts to facilitate collaborative, use-case focused engagement with key business stakeholders; synthesizing your knowledge and ours into a precisely tailored, co-created solution.

Our proven Human Centric Experience Design (HXD) methodology enables innovative concepts to be developed at a speed designed to focus minds. Once PoC is achieved, projects can be fast-tracked to deliver MVPs with real ROI within days.

### **End-to-end solutions. Globally**

Our decades of IT experience – and carefully selected partner capabilities – enables us to deliver truly end-to-end solutions, wherever you are in the world. From initial ideation through to implementation, training, and deployment – including all supporting technology and consultation along the way.

Go beyond with Fujitsu's AI solutions

Discover more about how Fujitsu's AI technology  
is helping organizations achieve the extraordinary.

Visit [fujitsu.com/AI](https://fujitsu.com/AI)

Or [get in touch](#) to discuss how  
AI could help you to Go Beyond.

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