Harness the power of 5G and edge with

5G Real-time Enterprise

Atos

It's time to build your real-time enterprise

Introduction

We're on the cusp of a new era. 5G is an enabler for a new generation of services, products and experiences that will change everyday life forever.

Preparing for the 5G revolution brings technological and investment challenges to ensure you have the capabilities, insights, and business models in place to succeed.

That's why Atos is here to help. As a world-leading systems integrator, we combine **extensive digital transformation expertise, rich industry experience and combined technological capabilities in cloud and edge computing, artificial intelligence, digital security, and IoT**. We'll work in partnership to guide, support, and accelerate your digital journey to unlock the value of 5G for your business, your customers, and your stakeholders.

It's time to change the way people live, learn, work, and communicate. Shape the future of real-time with Atos.

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5G is here:
from critical challenges
to rich opportunities

5G is rapidly becoming mainstream as the fifth-generation mobile network and new global wireless standard.

5G is better and faster than ever – 100 times faster than 4G. Its promise is compelling – more availability, resilience and reach, massive capacity, and ultra-low latency for richer experiences for more users in more places.

It's also the first mobile network to make edge capabilities systematically available as part of its infrastructure.

That's why, with 5G, you can make game-changing things happen:
· Networks of devices and sensors can predict anything.
· Seamless connectivity inspires new services and collaborations.
· Data processing at the edge enables better and safer decisions.
· Real-time analytics shape exciting customer experiences
· And the list goes on...

5G, to facilitate a new wave of digital transformation fueled by edge computing, is especially inviting in the following situations:

Mobile
Sensors, actors, video cameras and other connected devices need to be mobile–mounted on vehicles or drones.

Quality
The outstanding network Quality of Service (QoS) management of 5G is required. 5G QoS is superior not only to LTE and WiFi, but also to many wired networks.

Cost
The density or distribution of IoT devices or cameras would make a wired network excessively costly. Private campus 5G or public 5G ever so often is the more economical solution.

Time
Time to productiveness is essential for edge-computing-based business transformation, and the installation of wired networks would delay projects.

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Your new competitive edge

While 5G creates endless possibilities, to gain a competitive edge in new 5G-enabled markets, you need to:

Access edge computing capability through public 5G or your own private 5G mobile networks.

Harness the power of converging application technologies – cloud, edge, IoT, artificial intelligence (AI), machine learning (ML) – rapidly, securely, efficiently, and at scale.

Devise, prove and develop new use cases to test, prove and scale new applications to deliver measurable value.
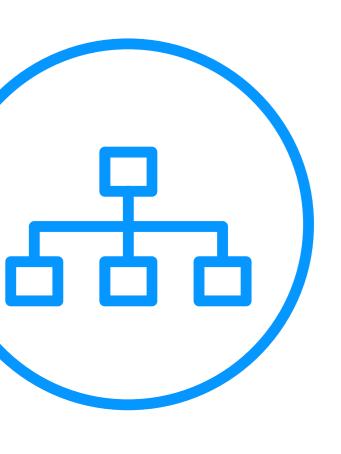
Integrate and co-orchestrate your edge applications with the public or private 5G network - called Multi-access Edge Computing (MEC) in telecom parlance.

Atos combines use case experience in many vertical industry sectors – manufacturing, healthcare, retail and transport, or public safety are only examples – with capabilities in IoT, cloud and edge, 5G network building, and cybersecurity.

AtoS

5G Real-time Enterprise your real-time is now

With Atos 5G Real-time Enterprise, you can unlock the power of 5G and edge to build your real-time enterprise.

5G Real-time Enterprise: your all-in-one private edge architecture

From smart healthcare to smart cars, the most exciting new 5G-enabled applications require fast, secure cloud-based AI processing of huge amounts of data at the edge.

Based on your requirements, we'll deliver your new capabilities as a service so that you can minimize your CapEx investment and maximize the benefits for you and your customers.

- **Value-driven business cases**, leveraging expertise in delivering large-scale global edge AI products & projects.

- **Ready-to-deploy applications and pre-trained AI models,** plus the ability to develop bespoke models for business use cases.

- **Trusted 5G security orchestration,** through our holistic end-to-end security solutions and expertise as a global cybersecurity leader, manufacturer and developer protecting heterogenous environments, including IT, OT, IoT, IIoT and edge. Atos security is end-to-end, from the applications down to the 5G network.

- **Cloud services through Atos OneCloud, our world-leading cloud partner ecosystem,** and global managed services. Atos OneCloud extends seamlessly into edge computing, as well as into private and public 5G telco cloud.

- **Network solutions services to build private 5G infrastructures for our customers,** based on proven Atos capabilities in telco cloud & edge and next-generation telecom networking. One of our specialties is to align and integrate edge hardware and software with private 5G networks, to build comprehensive private MEC *(Multi-access Edge Computing)* solutions.

- **Unparalleled partner ecosystem** including 5G network ecosystem partnerships to provide end-to-end 5G MEC deployment and support.

- **Edge hardware, with our BullSequana Edge range of compact,** rugged, and energy-efficient edge servers designed for AI workloads at the edge to deliver powerful new applications. Atos edge servers are augmented with accelerator HW modules for computer vision *(Graphical Processing Units, a.k.a. GPUs)*, Radio Access Network *(RAN)* functions, & other AI/ML applications at the edge.

Atos

Rely on the end-to-end computer vision approach

Our deep technological and data science capabilities are combined with in-depth experience and understanding of business, operational and end-user needs across all industry sectors.

To support and guide your journey, we can help you to:

1. **Develop your 5G and edge strategy** and build the business case

2. **Provide a value-driven architecture and integrate best-of-breed components**

3. **Use trial and pilot opportunities along with proven use cases;** solutions can be proven at one of our own Labs or at your site

4. **Introduce and integrate the necessary network provisions,** in terms of a private 5G network or of public 5G telecom operator services

5. **Plan and implement a change management strategy** to introduce new systems, processes, behaviors, and ways of working

6. **Deliver ongoing management and development of new services**.

Atos Computer Vision Platform: your access to leading-edge capabilities as a service

Atos Computer Vision Platform is a unique end-to-end computer vision platform providing pre-trained and customizable AI models powered by the BullSequana server range and enriched by Atos computer vision experts.

VISuite is a versatile, artificial intelligence video analytics platform that automatically raises alerts from existing CCTV cameras and/or video management systems. It turns video data into real-time, actionable intelligence to optimize business, security, and operational decisions.

▶ Discover more

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Work with a trusted security orchestrator for your 5G networks

The integrity and continuity of critical infrastructures leveraging 5G like smart cities, connected energy utilities, and healthcare should remain a priority. New threat vectors are targeting 5G, and successful cyberattacks have huge impacts, sometimes disrupting critical infrastructure. That is why 5G networks need to be reliable and protected from cyberattacks.

To navigate through the 5G security and resiliency journey, we can help you:

1. **Ensure the availability of your critical infrastructure**

2. **Deploy complete private wireless networks**

3. **Secure and manage your equipment**

4. **Encrypt your data flow – including "any-haul" in RAN and MEC**

5. **Secure your cloud platforms and containers,** applying state-of-the-art concepts like Cloud Security Posture Management *(CSPM)* and Cloud Workload Protection *(CWP)*

6. **Protect your network slicing**

Atos Digital Security: cybersecurity services, products, and mission-critical systems for trusted infrastructures

Atos helps its end customers identify risks, develops the end-to-end security strategy to protect critical business and data, and works to support telecom operators in accelerating their digital transformation, including the use of trusted identities and encryption to secure network cloud & edge security solutions.

▶ Discover more

Atos Sovereign Shield: data, compute and network sovereignty for the 5G Real-time enterprise

Atos assists with data classification in the edge-cloud continuum, and helps its customers build cloud, edge, and comprehensive MEC systems that are not vulnerable to foreign influence.

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Work with an industry-leading partner in the telecom sector

The convergence of new technologies such as 5G, edge, and cloud, creates major new opportunities to build the next generation telecom networks.

Based on our 20 years of experience as a systems integrator and trusted partner in the telecom sector, we can help you to build your private 5G networks:

1. **Define the situational fitness:** Is a private 5G solution needed with a private cell tower or two to cover a factory site? Or with a dense network of high-throughput microcells outdoor and indoor? Or a combination of both?

2. **Prioritize the functionalities and applications:** Is Ultra-Reliable Low Latency Communication (URLLC) a priority, e.g., to control automated vehicles or drones? Or low-power, low-bandwidth massive Machine Type Communication (mMTC), to connect thousands of IoT sensors?

3. **Deploy the security and sovereignty plan,** end-to-end, from the 5G application down to the network. SD-WAN (SW-Defined Wide Area Networking) facilitates the secure deployment of encrypted virtual private networking over public 5G and other open networks.

4. **Integrate the applications:** 5G networks may need to provide services like network monitoring or bandwidth reservation to 5G applications, and 5G applications and the underlying network be orchestrated together.

Atos tightly cooperates with leading private 5G technology vendors,

Telecom operators, and public cloud providers and routinely co-develops solutions with these. For cost synergies, private 5G is often implemented in cooperation with providers of public cloud or 5G services, of which many employ Atos themselves in their edge and MEC programs.

Work with a decarbonization pioneer

Energy effectiveness, for carbon footprint and cost effectiveness reasons, is a major concern in 5G-powered edge computing. As a leader in decarbonized digital and a founding member of the European Green Digital Coalition, Atos has strengthened its net zero digital solutions and expertise with highly specialized skills from EcoAct, an Atos company.

▶ Discover more

5G Real-time Enterprise
Imagine your 5G future

Exciting new experiences, services, business models, and revenue streams for your customers and your business

Smart city
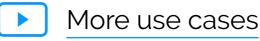**It's (real) time to improve citizens' quality of life**

- Connected traffic control, air, and water quality monitoring
- Smart city infrastructure with smart buildings, surveillance, crowd management, and safety systems
- Real-time experiences and services for citizens, businesses, visitors and investors, bringing them more choice, security, livability and accessibility

▶ More use cases

Smart retail
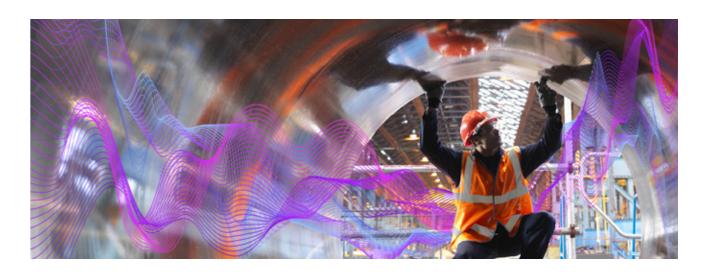**It's (real) time to provide AI-driven in-store experience**

- Personalized pricing, offers, promotions and immersive shopping apps, virtual reality for product or brand information, passing trade conversion
- Touchless and contactless checkouts, queue and crowd management, entrance / exit, customer flow management
- Connected inventory and store operations, intrusion detection

▶ More use cases

Smart factory
It's (real) time to turn your workplace into your safe space

- Physical security, perimeter protection, fire / smoke detection, parking management, contactless access control
- Shop floor management, worker support, mask and security equipment control, restricted area
- Industrial optimization, quality controls, robots, inventory optimization, predictive maintenance
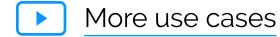
▶ More use cases

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Smart healthcare
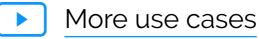**It's (real) time to digitally enable health**

- Fall detection & "non-movement" detection, remote emergency rescue and surgery
- Early and AI-driven diagnosis, detection of health anomalies, tumors
- New models of remote care with virtual high-definition consultations, remote patient monitoring

▶ More use cases
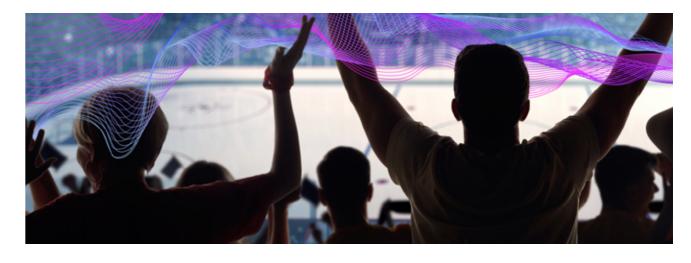
Smart mobility
It's (real) time to arrive on time

- Real-time processing of manifests, luggage, and container processing automation
- Connected passenger security, safety monitoring, temperature screening and social distancing
- Predictive maintenance, augmented reality-enabled connected workers, autonomous guided vehicle control

▶ More use cases

Smart stadium
It's (real) time to make live experience more alive than ever

- Augmented and virtual reality visitor experiences, live information overlays, multi-camera, multiple angle views and personalized instant replays
- Real-time people counting, crowd control, security, perimeter and access systems
- Paperless staff security, face recognition, watchlist alerts and reports
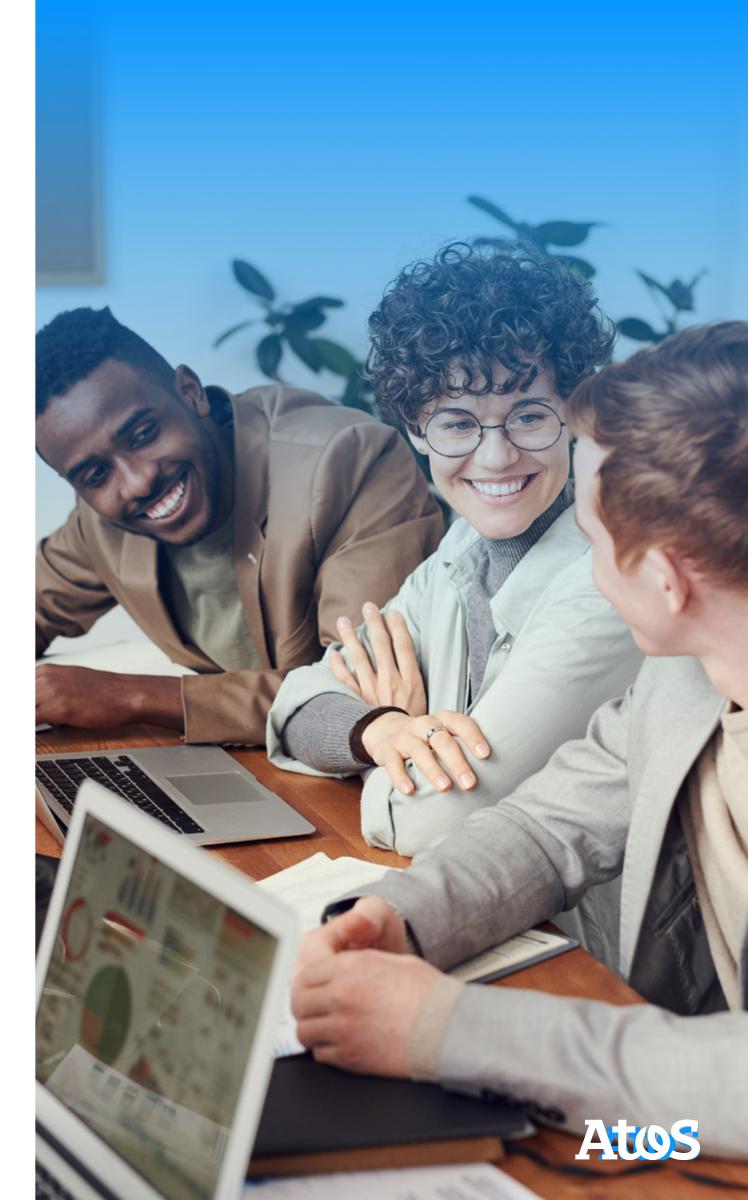
▶ More use cases

Ready to build your real-time enterprise?

Whether you have already made your first move into 5G or are yet to start the journey, partnership through Atos 5G Real-time Enterprise can help you to achieve your ambitions.

▶ Let's start the dialogue with our experts

About Atos

Atos is a global leader in digital transformation with 107,000 employees and annual revenue of over € 11 billion. European number one in cybersecurity, cloud and high-performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea), listed on the CAC 40 ESG and Next 20 Paris Stock Indexes.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.