

Artificial Intelligence



Facts and figures / February 2024

In summary

Orange's Data and AI mission is to "Generate value and accelerate Orange with every job, every network, and every customer interaction super-powered by responsible AI". We advocate and work for the development and deployment of responsible AI systems as illustrated by the adoption of a Data and Artificial Intelligence Charter.

AI is central to Orange's innovation, driving growth and supporting social and environmental goals across three domains: smarter networks, operational efficiency and customer experience. In the B2B area, we help enterprises with AI-driven customer services, business process optimization, consulting, and cybersecurity.

Key figures

300+

Use cases in the Data and AI Hub, with 100+ in production

more than **30 years**

AI expertise

630

Patents in Data and AI

2,000+

Data and AI experts across Orange Group

27,00

Employees trained in Data AI Starter program, including ethical AI

190,000+

Hours of technical training undertaken by 7400 employees in cloud, data and AI

18,000+

Certificates issued

15,000+

Users of Dinootoo, the internal AI tool, with 2000+ daily users

Find out more

AI values at Orange:

- AI should be inclusive, ethical, and responsible, ensuring data security and privacy.
- Improving detection and correction of AI issues including bias and unexplainable results.
- Using well targeted and good quality data sets, under the right data governance.
- AI should support environmental and societal well-being, aiming for carbon neutrality by 2040 by optimizing energy use in networks and data centers.

Orange is committed to these principles by signing a Data and AI Charter in November 2022.

- Orange is part of Impact AI's Board, a group focused on ethical, social challenges, and positive innovations.
- Since 2021, Orange is holding regular Data and AI Ethics Council with 11 independent experts to advise on ethical data and AI usage for specific Orange use cases.

Top AI and Data use cases:

Smarter Networks use cases:

- **Energy Consumption:** AI analyzes cell usage data to identify when parts of the 5G network can be powered down or have reduced power during low usage times without impacting service quality.
- **Mobile Network Traffic Overloads:** AI predicts traffic congestion by learning from radio quality indicators, preventing network overloads.
- **Mobile Network Roll out:** AI optimizes mobile network planning in MEA countries by combining commercial and technical data with machine learning, saving significant investment costs.
- **Optimize network interventions using visual recognition:** AI verifies the accuracy of reported network damage, ensuring correct priority levels and ownership, reducing unnecessary interventions.
- **Autonomous Networks:** An AI platform detects anomalies and performs root cause analysis on network infrastructures, shaping future network supervision systems.

Operational Efficiency use cases:

- **Generative AI Solution:** A secure AI tool for Orange employees to generate text for various professional needs, ensuring data security.
- **Contract Screening:** A Proof of Concept uses GenAI to analyze contracts for sales, legal, and sourcing teams, with plans to expand in 2024.
- **Customer Support Operations:** Diagnostic Data & AI tools test FTTH boxes online, preventing over 180,000 field interventions annually and reducing costs.
- **Code Generation:** GenAI coding tools are being explored to streamline development and validation processes.

Customer Experience use cases:

- **Conversational Agents:** AI-powered agents process customer requests via text or voice, improving interaction with Orange services.
- **Customer Value Management:** Data and AI enhance understanding of customer needs, leading to more effective marketing campaigns and increased satisfaction observed in many Orange countries.
- **Information Search Acceleration:** GenAI technology helps call center operators find information quickly, reducing response times but it also helps marketing, Sales and Operations teams to speed up the reactivity and productivity.

Data Democracy strategy:

“Data Democracy” strategy aims to make Data and AI more easily accessible for internal use cases, in a secured and controlled manner while preserving our commitment to responsible and ethical AI. This has been operationalized through a large multi-country and multi-year foundational program.

It consists of a combination of state-of-the-art tools, transformation of our data architecture and process using Data Mesh, as well as significant training to support the related culture shift towards being a data-driven company.

Research:

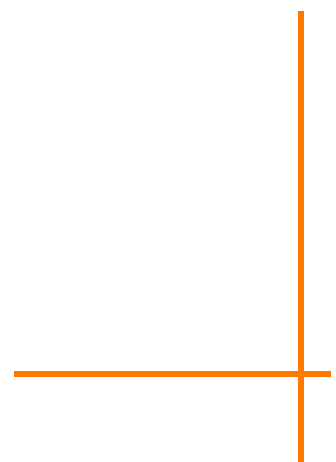
Orange has been working in the Data and AI domain for over 30 years, and more specifically in the areas of:

- Deep learning and Model optimization
- Natural Language Processing (NLP) incl. LLMs
- Speech Recognition incl. live and offline transcriptions and voice analysis & anonymization,
- Knowledge engineering including Knowledge Graphs

Current hot topics are mainly related to LLM adaptations to Orange domain including Retrieval Augmented Generation (RAG), finetuning, etc

Some of our recent achievements in those areas:

- [Challenge DSTC-11](#)
- [SIGTYP 2024](#)
- [Knowledge Graph opensourced](#)



Partnership and cooperation in the AI ecosystem

- We are supporting the **academic and industrial research ecosystem on AI** all over Orange footprint incl. France, Europe and MEA.
- Orange also supports **AI startups** through the **Orange Fab** accelerator program.
- Many **research activities** carried out by public institutions and agencies, such as ANR (Agence Nationale de la Recherche) projects, and European research projects, B<>Com, and Interdisciplinary Institutes for Artificial Intelligence (3IA) are cofounded by Orange.
- Orange's main Data and AI partner is **Google Cloud Platform (GCP)** for leveraging their platform and their cutting-edge Data/AI tooling. Press release: [Orange and Google Cloud - Newsroom Orange Groupe](#).
- Beyond Google (Bard/Gemini), Orange has **many other Generative AI partners** such as OpenAI/Microsoft. On open weight models we are exploring with Meta [The Llama Ecosystem: Past, Present, and Future \(meta.com\)](#) , Anthropic, Mistral, Hugging Face.

Data and AI skills development

As part as its Data Democracy strategy, Orange encourages trainings and new working methods that maximizes Data and AI value at scale.

- Orange provides access to platforms such as Coursera and Open Classroom to allow employees to develop AI and Data skills autonomously.
- Orange offers a range of skills upgrading and professional reskilling courses for its employees, as well as 2 Data Analyst & Data Scientist courses as part of the Orange Apprentice Training Center.

