

Interim CTO / CDO - Tech & Data

OLIVIER PENIN

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Location: Nantes, France | Mobility: All of France, hybrid



◆ PROFIL

CTO / CDO with over 27 years of experience in tech and 15 years in leadership roles. Specialist in building tech and data stacks from scratch, recruiting and managing teams (up to 20 engineers), and providing strategic leadership at executive committee level. Hands-on: equally comfortable framing a roadmap for the board in the morning and designing a BigQuery schema, writing a Python POC, or benchmarking a cloud option in the afternoon. Operational expertise in applied AI: deployment of SLMs (Small Language Models) on client infrastructure, product-embedded agents, RAG, and tooling for dev and business teams. Industry experience: e-commerce, retail, telecom, deeptech, omnichannel.

◆ COMPÉTENCES

◆ Technical leadership: Tech & data strategy, governance, product roadmap, architecture, executive committee, build vs buy

◆ Management: Recruitment, team building and upskilling (up to 20 people), interim management, budget oversight

◆ Data: Design and industrialization of data stacks (data lake, data warehouse), governance, BI, activation, machine learning

◆ Operational AI: Small Language Models (SLM) on client infrastructure, product-embedded agents, RAG, embeddings, vector DB, team tooling

◆ Architecture: Cloud GCP / AWS / Azure, microservices, containerization, scalability, architecture overhaul

◆ Industries: E-commerce, omnichannel retail, telecom, deeptech, aerospace

◆ Cloud: GCP, AWS, Azure, Oracle Cloud

◆ Environment: Linux, BSD, Docker, Kubernetes, Node.js

◆ Databases: PostgreSQL, Oracle, MSSQL, MongoDB, Redis, BigQuery, S3, Elasticsearch

◆ Data engineering: Airflow, DBT, ELT pipelines, data warehouse modeling, data quality, BI

◆ Development: Python (Django, FastAPI, Flask, TensorFlow, PyTorch), PHP (Symfony, Laravel), JavaScript / TypeScript (React, React Native), Java (Spark, Spring), Ruby

◆ AI / Machine Learning: LLM APIs (Anthropic Claude, OpenAI), Small Language Models (SLM), agentic systems, tool use, RAG, embeddings, vector DB, TensorFlow, PyTorch

◆ Methodologies: Agile, Scrum, roadmap management, build vs buy, data governance

◆ EXPÉRIENCES

February 2024 - Present **CTO / CDO** | *Fyre - Interim engagement (freelance)*

- Built a transactional platform for restaurant operators, then pivoted to a data hub targeting enterprise clients.
- Recruited and structured an 8-person tech and data team.
- Complete architecture overhaul, implementation of technical and data governance.
- Deployed AI use cases in production: SLM on client infrastructure, product-embedded agents.

2023 - 2024 **CTO / CDO for startups** | *INRIA Startup Studio - Advisory (freelance)*

- Supported deeptech startups in transitioning from research to industry.
- Architecture, tech recruitment, and process implementation for scaling.

2020 - 2022 **E-commerce & retail CTO** | *Maison Standards - Interim engagement (freelance)*

- Complete omnichannel overhaul: alignment of digital and in-store tools.
- Modernization of the e-commerce platform and legacy retail tools.
- Built and managed a 3-person tech team.

2021 **Data infrastructure advisory engagement** | *Synalia - Advisory engagement (freelance)*

- Set up the data infrastructure: architecture, tool selection, governance framework.
- Actionable recommendations for the board and hands-on execution support.

2018 - 2020 **Data Director (interim management)** | *Aquitem - Interim engagement (freelance)*

- Led a 45-person data team in an interim management capacity.
- Operational leadership and structuring of the data organization.

2019 - 2026 **Development engagements (freelance)** | *Various clients*

- Data engineering: design and industrialization of ELT pipelines with Airflow and DBT, data warehouse modeling (BigQuery, PostgreSQL), job orchestration and data quality.
- Generative AI: integration of LLM APIs (Anthropic Claude, OpenAI) in production, deployment of SLMs (Small Language Models) on client infrastructure, RAG implementation (embeddings, vector DB).
- Agentic systems: design and industrialization of product-embedded AI agents, multi-step orchestration, tooling and tool use.
- Machine learning: prototyping and productionizing models with PyTorch and TensorFlow, from POC to production.
- Web development: projects in Python (Django, FastAPI, Flask), PHP (Symfony, Laravel), and JavaScript (ReactJS, React Native) for data analytics and web applications.

2017 - 2018 **Digital Data Director** | *Bouygues Telecom - Digital executive committee member*

- Created the digital data team (6 people) responsible for digital-side analytics and activation.
- Data-driven leadership of the digital division: KPIs, decision-making, activation.
- Onboarded the executive committee on day-to-day data challenges.

2014 - 2017 **Data Director** | *Maisons du Monde*

- Created the data team (8 people) and built the BI / data warehouse stack.
- Industrialized data activation across 11 European countries.
- Led the data roadmap and drove business adoption.

2011 - 2013 **Technical Project Director** | *Maisons du Monde*

- Launched and structured the e-commerce technical team for 11 European countries.
- Managed a team reaching 20 engineers at peak capacity.
- Defined the e-commerce architecture, supporting rapid growth.

1999 - 2011 **Pixmania, Hourra, Alcatel Space and others** | *Developer, Lead Dev, Project Manager*

- Development, lead development, and project management for several e-commerce and aerospace companies.
- Agile methodology, from legacy code to early distributed architectures.

2019 - 2022 **Managing Director** | *Family-owned SME (non-IT)*

- Operational management of a family-owned industrial SME alongside consulting engagements.

◆ **LANGUES**

◆ French: native

◆ English: professional, fluent (technical proficiency)

◆ German: basic knowledge

Engagement formats

Freelance by default. Open to interim engagements (fixed-term contracts) or permanent positions depending on the opportunity. Hybrid presence with occasional travel, mobile across all of France.