

Emanuele Sabbadini

Solutions Architect & Technical Lead | IT/OT Convergence

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Professional Summary

Software Engineer & OT Specialist with 20+ years of end-to-end experience bridging modern IT architectures (web, desktop, mobile) and industrial automation (SCADA, MES, process control). Proven track record delivering **autonomous on-site commissioning** for mission-critical operations, architecting robust enterprise data pipelines and translating complex client requirements into scalable industrial solutions. Adept at **cross-functional leadership, stakeholder management and continuous technological modernization**. Seeking to drive digital transformation and assume technical leadership responsibilities in high-impact industrial or enterprise environments.

Technical Skills

Programming, Frameworks & Patterns		Databases, Tools & Platforms	
• C# • Ruby • PHP • Delphi • HTML & CSS • JavaScript, Python • .NET, Rails • Angular, React, Svelte	• Clean Architecture • Schema Design • System Integration • Event-Driven Architectures • Microservices • UNS/Message Brokers • Real-time Systems • Scalable Design Patterns	• PostgreSQL • SQL Server • Oracle • InfluxDB • MongoDB • Redis • Windows & Unix	• Git • Jira • Confluence • DELMIA Apriso • SAP • Docker • Grafana

Work Experience

05/2024 – Present

OT Specialist | MES & Industrial Integration @ *Faber Industrie S.p.a.* (Udine, Italy)

Environment & Tools: Delmia Apriso MES, Kepware OPC, MS SQL Server, Jira, Confluence.

- **Architecture & MES Modernization:** Co-design technical continuous improvement for enterprise Delmia Apriso MES, standardizing data models across production lines and work centers to ensure high-fidelity shop-floor tracking.
- **Shop-Floor to Enterprise Integration:** Configure edge telemetry pipelines via Kepware OPC servers, bridging PLC hardware directly with the MES to capture real-time production, state and traceability data.
- **Process Optimization & OEE Accuracy:** Collaborate with Value Stream Leaders to eliminate manufacturing bottlenecks, aligning system business logic with plant operations to improve Overall Equipment Effectiveness (OEE) metrics.
- **Vendor & Lifecycle Management:** Author technical specifications and functional blueprints for system expansions, managing external software vendors through delivery, integration testing and successful go-live phases.
- **Operational Enablement & Intelligence:** Design SQL reporting dashboards for plant management and conduct technical onboarding to drive adoption across plant supervisors and operators.

09/2015 – 05/2024

Lead Software Engineer & Process Control Specialist @ *SMS Group S.p.a.* (Udine, Italy)

Environment & Tools: C# (.NET Framework), WPF, WCF, WinForms, Delphi, Oracle, SQL Server, Git, Multithreading, Event Sourcing.

- **Mission-Critical Level 2 Architecture:** Architected and maintained Level 2 automation platforms for continuous casting and steelmaking, leveraging multi-threaded and event-sourcing patterns to process real-time PLC telemetry and deliver automated process optimization recommendations.
- **Technical Team Leadership:** Directed a cross-functional team of internal software engineers and external contractors in designing and delivering the core software suite for the casting area, managing code reviews, delivery sprints and architectural alignment.
- **Modernization & Refactoring:** Co-architected the phased migration of legacy components from Delphi to modern C#/.NET, replacing backend logic and user interfaces to enhance system maintainability and operator throughput.
- **Vision System Integration:** Co-designed the integration of an intelligent scrap yard management system incorporating computer vision algorithms for real-time operational classification and material tracking.
- **Autonomous Commissioning & Field Integration:** Executed end-to-end on-site deployment, commissioning and validation in global plant environments; engineered secure data interfaces connecting Level 2 systems to enterprise ERP/MES layers and mentored junior engineers on industrial protocol standards.

08/2004 – 08/2015

Full-Stack Software Engineer @ *Procne S.r.l.* (Udine, Italy)

Core Stacks: C#, .NET (WPF, WCF), Ruby on Rails, PHP, Node.js, SQL Server, PostgreSQL, AngularJS.

- **Enterprise Financial & Healthcare Engine (2012–2015):** Architected and deployed a calculation engine for public welfare institutions handling pension distributions, tax withholding and healthcare refunds; built high-density WPF desktop interfaces, automated batch reporting and managed on-site production deployments. *(C#, .NET, WPF, WCF, SQL Server)*
- **Real-Time Remote Support Platform (2014):** Engineered a full-stack web application for remote industrial/commercial diagnostics, implementing real-time messaging, ticket lifecycle workflows and automated image ingestion for field troubleshooting. *(Ruby on Rails, AngularJS, PostgreSQL)*
- **Graph Visualization Engine (2013):** Designed and developed an interactive data exploration tool rendering entity relationships using dynamic SVG graph topologies and graph databases. *(Node.js, D3.js, OrientDB, AngularJS)*
- **B2B E-Commerce & Portal (2009–2012):** Built scalable backend services for a distributed smart-home franchise network, integrating multi-supplier product catalogs, secure SOAP banking payments and cross-domain authentication. *(Ruby on Rails, PHP, PostgreSQL)*

Education

- E-commerce Technician Certificate | ENAIP – Udine, Italy | 2004
- Aeronautical Technician Diploma | I.T.I. "A. MALIGNANI" – Udine, Italy | 2002
- Languages: Italian, English