



HOW MODERN SOFTWARE DEVELOPMENT SHAPES INDUSTRIAL INNOVATION

Lars Roith

WHAT DRIVES INDUSTRIAL INNOVATION TODAY?

Industrial innovation is no longer about building better machines. It's about building smarter systems.



Customer & Market Pressure

- Customization, speed, and digital value add drive differentiation
- Customers expect software-like experiences e.g. transparency, updates, uptime.



Technological Convergence

- Boundaries between mechanics, electronics, and software dissolve.
- Innovation happens at interfaces: AI x Automation x Connectivity.



Regulation & Responsibility

- Compliance becomes a design driver, e.g. CE, CRA, NIS2, RED, MR
- Sustainable and secure by design is the new innovation baseline.



Data-Driven Value Creation

- Usage data becomes R&D fuel.
- From selling hardware to selling performance, availability, and insights.



Organizational Agility

- Cross-functional collaboration beats departmental silos.
- Small, empowered teams can innovate faster than complex hierarchies.

WHAT DEFINES MODERN SOFTWARE DEVELOPMENT?

Modern software development is not just about code. It's a mindset for continuous evolution!



Iteration over perfection

- Rapid prototyping, feedback, and improvement in short cycles.
- Failure isn't fatal. It's part of the learning loop.



Modular & composable architecture

- Systems built from small, replaceable components.
- Reuse beats reinvention.
- Integration over isolation.



Automation & DevOps culture

- Continuous integration, testing, and deployment ensure stability and speed.
- Machines build machines.
- Human creativity focuses on design, not routine.



Data and user-centricity

- Decisions based on telemetry, analytics, and user behavior and not on assumptions.
- The product improves in operation, not just in the lab.



Collaboration & transparency

- Open-source culture, shared platforms, collective problem-solving.
- Visibility of work (boards, commits, reviews) creates alignment and trust.

Software development has evolved from an engineering discipline into a model for how complex systems and organizations can continuously adapt and improve.

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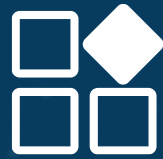
Software doesn't just enable machines. It transforms how we innovate them.



From projects to products

- Software teams treat every release as a living product that evolves.
- Continuous improvement replaces “done & shipped.”.

Machines become updatable assets. Features can grow in the field, not only at the next model cycle.



From monoliths to modular systems

- Software decomposed into microservices; industries follow with platform architectures.
- Interfaces become the new currency of collaboration.

Machine builders can reuse, upgrade, and scale modules independently with faster innovation and lower lifecycle cost.



From planning to learning

- Agile methods focus on early feedback and adaptive decisions.
- Innovation emerges from iteration, not prediction.

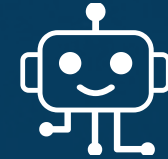
Digital twins, simulation, and virtual prototypes bring learning forward even before the first chip or casting is made.



From secrecy to ecosystems

- Open source and APIs turned isolated coders into global collaborators.
- Shared foundations allow faster progress for everyone.

Industrial alliances (e.g. OPC UA, umati, ROS) mirror this openness enabling interoperability and joint innovation.



From efficiency to intelligence

- Data pipelines and AI let software adapt autonomously.
- Products no longer just execute; they decide.

Machines optimize themselves. Predictive maintenance, adaptive control, energy efficiency become continuous services.



THE MINDSET SHIFT FOR INDUSTRIAL LEADERS

The future of industrial innovation will be won by those who think like software teams and lead like system architects

- Create clarity of purpose, then let experts decide *how*.
- Treat every project as a hypothesis and not a plan to be defended.
- Build teams around outcomes, not departments.
- Lead your organization like a platform, not a pipeline.
- Compete on insight, not on isolation.

WHO AM I



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WHAT WE MAKE HAPPEN



Trusted advisor for strategic decisions: We dig deep to understand what our customers truly need. Our advice is independent, practical, and focused. We help our customers make sustainable and economically sound decisions that move their business forward.



Tailored solutions that deliver measurable impact: When off-the-shelf software hits its limits, we create custom-built solutions that stand out from the crowd and give our clients a genuine competitive edge.



Uncompromising quality for sustainable software: With rigorous development standards, efficient processes, clean code, and smart architecture, we build software that's robust, scalable, maintainable, and built to last.



Cutting-edge technology for maximum efficiency: We leverage modern tools, platforms, and components from the Microsoft ecosystem and the open-source world to deliver secure, efficient, and future-ready solutions.



Empowerment over dependency: We share our expertise so our customers can develop, extend, and maintain their own solutions building long-term independence and true digital sovereignty.



Success through partnership: We believe in collaboration at eye level. The success of our clients sets the benchmark for our own because together, we achieve more

WE BUILD CUSTOM DIGITAL SOLUTIONS



TRAINING FOR MORE EFFICIENT DEVELOPMENT TEAMS

Challenge

Your development team is struggling with inefficient processes, unstructured code, and underused potential of modern tools like GitHub Copilot? Legacy code is hard to understand, and automation isn't where it could be?

Solution

Our training programs strengthen your team's foundation and empower them to deliver clean, efficient, and production-ready solutions. We teach the practical use of modern development tools and methods to help your developers understand existing codebases and achieve a high level of automation.

Value

Faster development cycles, higher code quality, and smarter use of modern tools – enabling strong, productive teams that deliver sustainable software.



SOFTWARE DEVELOPMENT CONSULTING

Challenge

Your software architecture is reaching its limits? Development processes feel inefficient, or cloud costs are getting out of hand? Missing or poorly integrated CI/CD pipelines slowing you down?

Solution

We meet you where you are and optimize your software development – from scalable architectures to efficient processes and cloud cost reduction. Our experts rely on modern Microsoft technologies and proven best practices to create measurable results.

Value

Better performance, higher efficiency, and a future-proof development setup that fits seamlessly into your existing environment.



CUSTOM SOFTWARE DEVELOPMENT

Challenge

Your software is outdated, hard to maintain, or not scalable? You need a custom-built solution perfectly aligned with your business processes? Or your cloud, IoT, or IIoT platform is hitting technical roadblocks?

Solution

We develop tailor-made software solutions – from greenfield projects to modernizing existing systems. We work flexibly as part of your team or as a dedicated development unit. Together with our long-term nearshore partners, we build high-performing teams that deliver.

Value

Future-ready, scalable, and high-performing software solutions that integrate seamlessly into your IT landscape – driving sustainable business success and efficient digital processes.

THE RIGHT PARTNER FOR YOUR SUCCESS – WITH EXPERIENCE AND EXPERTISE



Uncompromising quality in development and operations

We insist on top quality in both development and operations to deliver solutions that are stable, secure, and built for the future.



Customer-focused understanding and pragmatic solutions

We work with you as equals, truly understand your challenges, and develop tailored, pragmatic processes that fit your business needs perfectly.



A network of top experts you can rely on

With our strong network of specialists, we ensure the right minds are always on board to tackle every challenge effectively.



Technology that works – driven by passion and expertise

We don't just talk about technology; we live it. With deep technical know-how, years of experience, and a clear focus on real, practical results.



Your success is our measure for sustainable solutions

We see ourselves as your partner on equal footing. Your success is the benchmark for ours and that's what drives us every single day.

