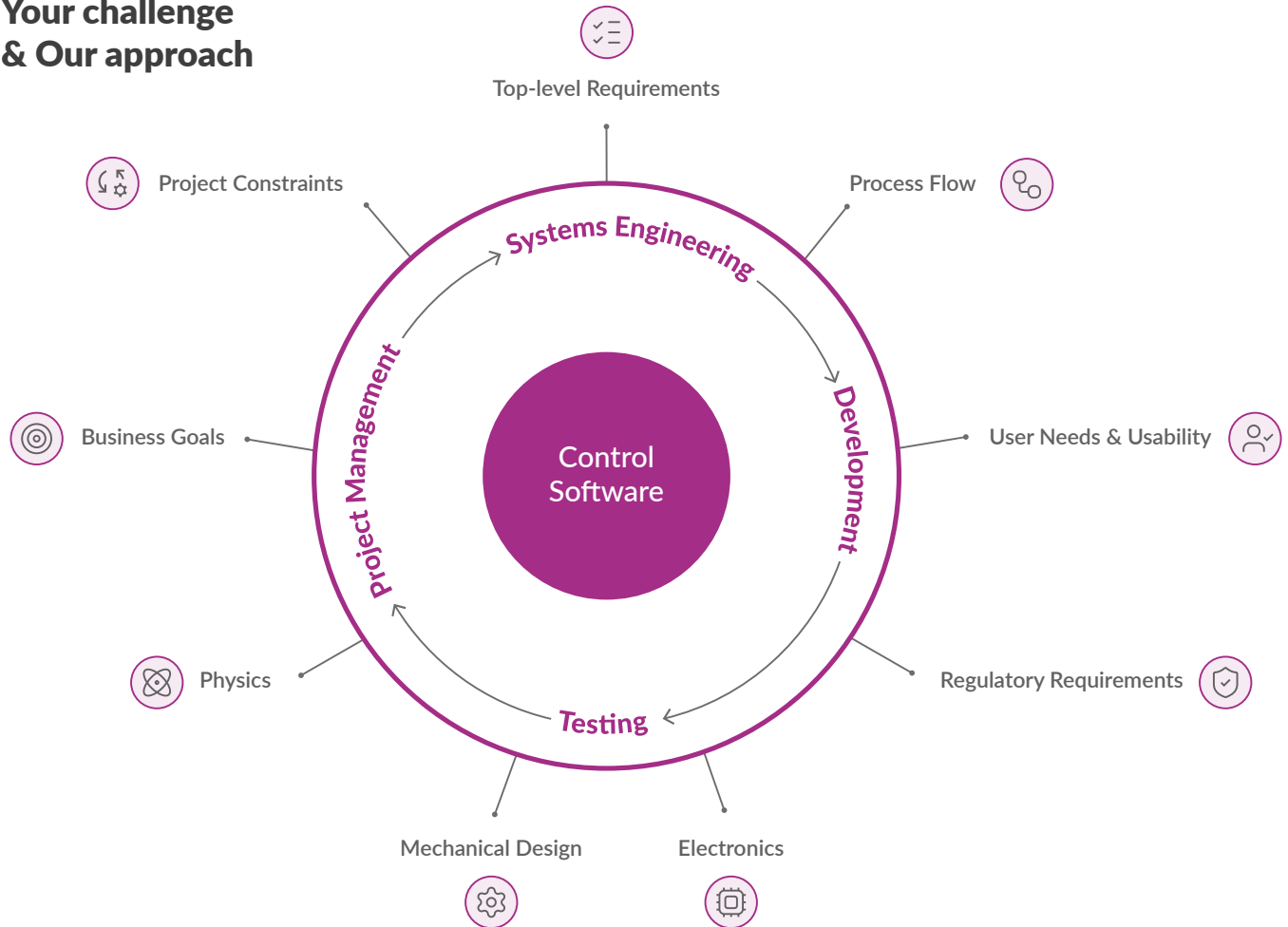




Advancing humanity.
Engineering remarkable.

Your challenge & Our approach



Software Control – Glue of every complex device

In successful deep-tech projects, software control engineering requires a holistic, systems-engineering approach that goes far beyond great code.

It connects software, hardware, and people through clear processes, documentation, and strong project leadership.

**Do you recognize any
of these challenges
that might slow your growth
or cost you money?**

Let's scope your
control system
together.

**Scan to discuss
your control
system needs**



Technology limits:

Hitting current tech ceilings → Insufficient throughput and precision → Learnings

Legacy maintenance:

Fixing old issues → Slows innovation → Missed Business Opportunities

Expertise gaps:

Missing full-stack skills → Hinders Compliant Execution → Potential Cost Overruns

Mechatronics complexity:

Siloed software engineering → Causes Integration Friction → Project Delays

Team bandwidth:

Limited capacity → Delays New Initiatives → Lost Revenue Potential



What you get

Tailored Solutions: Optimally aligned with your tech and business needs

Knowledge: White-box solution enabling smooth knowledge transfer

Support: Holistic service and maintenance for continued performance

Peace of Mind: Full Stack Single Partner

Clarity: Well documented solution

Bridge of Disciplines: Physics–mechanics–software integration

Ownership: No vendor lock-in; your IP and know-how remain fully yours.

Coverage: From firmware to factory integration

Reliability: Documented, standards-compliant, maintainable delivery

Proven Expertise: 25 years in complex control across deep-tech industries

Precision: Fast, cross-system control with sub-nanosecond synchronization

Independence: Multi-disciplinary, vendor-independent support for any project stage

Solutions & Expertise

Process-driven Project Delivery

- Comprehensive Project Plan, Requirements and Scope Definition
- Tailored System Study and Analysis
- Verification and Validation
- On-Site Commissioning & Support
- End-to-end Project and Risk Management

Expertise

- Technology-agnostic Approach
- Specialized Systems and Custom Solutions
- Systems Engineering and Project Management
- Full-Stack Machine Control Software and Integration
- Greenfield & Brownfield Projects Delivery

Capabilities overview

Tiers of control and technology stack

Cross-functional teams for full-stack control systems

Tier 1: Central control (SCADA, high-level apps)

Tier 2: Subsystem & device control (real-time and “slow”)

Tier 3: Firmware (FPGA), microcontroller development

Tier 4: Custom electronics design, low-volume production & certification



Systems engineering

as project glue

**Ensuring consistency
across all tiers.**

C# and Java

Workflow
management
applications

WinCC OA, Siemens PLCs

Real-time control
and SCADA
systems

C++ Embedded

Image acquisition
and engineering
maintenance, etc.

FPGA and LabVIEW

Timing, DAQ, and
dosimetry systems

Electronics design

Low-volume
production and
certification

Heritage

25 years across accelerators, fusion, medtech, and more—bringing reliability and compliance to every project.



“Cosylab people are super dedicated - it's amazing how they come back with solutions and proposals to challenges that are not even part of their scope of work. Many times, we're in a meeting, and someone would say: "I was thinking about your challenge, and I think you could address it like this." I really respect this drive.”

Leo Szeto, Director, Control Systems and Electronics Engineering, Nusano, an innovative medical technology company pioneering the production of rare radioisotopes to advance cancer diagnostics and treatment through its proprietary accelerator platform.



400+
successful projects



25+ years of
experience &
know-how



200+
skilled engineers



5 locations
worldwide



30+ PhD Holders
from STEM fields



20 % annual growth
rate over 15 years

Certified with
ISO 9001, 13485

Highest credit rating
SB1 (AA by S&P)

Compliant with
ISO 14971, IEC 62304

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About Cosylab

Cosylab is the leading provider of software solutions for the world's most complex, precise and advanced control systems. Our expertise enables organisations to discover scientific breakthroughs, offer state-of-the-art cancer treatment and healthcare innovations, and bring clean fusion power to the future energy market. We provide software products and services to the largest medical device manufacturers and cancer centres worldwide.

We have contributed to the particle accelerator community in the scientific, medical and industrial sectors, working on complex, distributed and highly regulated projects. Our clients include the most innovative and cutting-edge accelerator applications such as FAIR, SLAC, DIAMOND, RIKEN, Nusano, AVO ADAM and many more. With our efficient support and up-to-date expertise, we enable organisations to keep their focus on their scientific and business objectives.

Through its headquarters in the EU and subsidiaries across Europe, North America and Asia, Cosylab has worked on hundreds of multi-year and multi-people projects worldwide.

