

Custom Software and Integration

We help life sciences and manufacturing organizations engineer digital infrastructure that scales, integrates, and complies – from pilot labs to global cGMP.



LIFE SCIENCES

CONSUMER GOODS

Custom Software and Integration

Operational Complexity Is Rising. So Are the Stakes.

Across pharma, biotech, medtech, and process manufacturing, operational systems are evolving but regulations remain rigid. Manual processes, siloed systems, and outdated automation slow progress and raise audit risks. Catalyx exists to fix that. We bring engineering precision and regulatory alignment together in one team. Our job is to help you modernize systems, unify data, and scale operations without compromising performance or compliance.

Who We Work With



CDMOs (Clinical
and Commercial)



Biotech
Innovators



Pharmaceutical
Manufacturers



Medical Device
& Diagnostics



CPG and Food
& Beverage



We Design, Build, and Validate the Systems That Run Your Business

Our services aren't off-the-shelf, they're engineered around your unique process, tech stack, and regulatory profile.

1. Automation & Control System Engineering

We develop full-spectrum automation architectures serving the plant floor and QA. Expertise includes:

- PLC, SCADA, DCS, HMI design
- Siemens, Rockwell, Emerson (DeltaV), Opto 22
- Batch control (ISA-88), alarms, failover
- Functional/Design Specs, IQ/OQ/PQ
- Validated/non-validated commissioning

2. OT-IT Integration & Unified Data Infrastructure

We connect your systems for real-time answers.

- MES, ERP, WMS, LIMS integration
- Historian data (Canary, Aveva PI)
- Secure cloud and control system connections
- REST APIs, OPC UA, MQTT bridges

3. Environmental Monitoring & Utility Systems

Built to meet Part 11 standards, with performance you can see.

- EMS/BAS via SCADA or standalone interfaces
- Real-time mobile/web monitoring
- Custom dashboards + historian integration
- Escalation alarms and audit logs
- Complete validation

4. Custom Software for Regulated Workflows

We develop intuitive, validated tools your team can trust.

- Dashboards for QA, Ops, and Maintenance
- Downtime/deviation reporting
- Lab portals, logbooks, mobile/web apps
- Role-based access + GAMP 5 lifecycle

5. Legacy Modernization & Migration

Upgrade with zero guesswork and minimal downtime.

- Reverse-engineering undocumented systems
- Validated replacements mapped with continuity
- Seamless SCADA/HMI upgrades
- Change control maintained end-to-end



Technology Expertise

We're experts in today's most important industrial automation technologies:

- SCADA/HMI Systems: Ignition (Inductive Automation), Rockwell FactoryTalk, Siemens WinCC, Opto 22 groov EPIC
- PLC/Control Systems: Emerson DeltaV, Rockwell Studio 5000, Siemens TIA Portal
- Data Integration & IIoT: Canary Labs, MQTT, OPC UA, REST APIs, Kepware



Why Catalyx

Compliance-first engineering

We align everything, architecture, logic, documentation with GAMP 5, 21 CFR Part 11, and data integrity guidelines.

Real partnership

We embed with your teams, listen first, and deliver solutions that last. Many of our clients have trusted us for over a decade.

Proof under pressure

No major audit findings across hundreds of projects. Our work consistently meets the standards of the FDA, EMA, and our clients.

Scale and flexibility

Whether you're commissioning a single cleanroom or integrating global manufacturing sites, we build systems that evolve with your needs.

Deep platform integration

We're not tied to any vendor. We build ecosystems that suit your infrastructure, not ours.

Take the First Step
Toward Connected,
Compliant Manufacturing.

Speak to a Solutions Expert today

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