Fly High Engineering
YOUR TRUSTED INNOVATION PARTNER

Strategic Modernization of Mission-Critical Production Systems

Bringing aerospace-grade systems rigor to industrial production

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The Problem: Accumulated System Risk

- 20–40 years of incremental PLC modifications
- Patchwork logic with unclear architecture
- Obsolete components & concentrated knowledge
- Limited traceability of changes
- Weak or absent structured production data
- ERP/MES integration missing or improvised

Hidden Consequences

- Increasing downtime probability
- Dependence on few key individuals
- Limited scalability of production lines
- Poor production transparency
- OEE metrics not reflecting physical reality
- Strategic exposure often underestimated

Who We Are and What We Do

- Independent advisor for the modernization of mission-critical industrial production systems
- 25+ experience in highly-regulated industries with technical know-how and executive / general management background
  - Aerospace
  - Healthcare
  - Industrial production
- We focus on high complexity and impact aspects of critical importance
  - Operational risk reduction
  - Architectural integrity restoration
  - Structured data enablement
  - ROI-driven ERP/MES integration

Our Unique Approach

- Governance of change and traceability
- Reliability via engineering rigor
- Architecture before implementation
- Separation of runtime vs. configuration logic
- Role-based HMI structure
- Data modelling before dashboards
- No fashionable trends, only measurable impact

Methodology

1. Diagnostic & Risk Assessment
2. Architecture Redesign
3. Data & Integration Enablement
4. Controlled Implementation

Each phase produces executive-level deliverables

Phase 1 – Diagnostics & Risk Assessment

1. Obsolescence mapping
2. Downtime exposure analysis
3. Architectural integrity review
4. ERP/MES integration gap analysis
5. Economic impact evaluation

Deliverable: Executive report + Modernization roadmap

Phase 2 – Controls & HMI Architecture Redesign

1. Logical functional segmentation vs. roles
2. Operational vs. configuration parameters separation
3. Structured and intuitive HMI navigation
4. Clean PLC structure & PLC-HMI interface

Goal: Restore system integrity

Phase 3 – Data & Integration Enablement

1. Structured production database
2. Meaningful KPI definition
3. Clean ERP/MES interfaces
4. Elimination of manual data re-entry
5. Data reflecting physical reality

Focus: Business goals

Phase 4 – Controlled Implementation

1. Traceable change management
2. Perform the smallest changes enabling the biggest return

Focus: Measurable return

Typical Results

- Reduced downtime risk
- Improved equipment lifetime and maintainability
- Reduced dependency on individuals
- Increased production transparency
- Scalable architecture for future upgrades
- Clear economic return

Engagement Model

- Small, highly-focused structure
- Direct executive interface
- Additional specialists engaged when required
- High architectural oversight throughout

Selected projects with controlled scope = High impact

Why Modernization is Strategic Now

- Aging production assets worldwide
- Increasing integration requirements
- Growing cybersecurity exposure
- Retirement of legacy systems

Modernization is becoming a strategic necessity

Contact details

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