Plant-Floor Judgment.

Why senior industrial advisory matters in an industry losing its memory.

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Senior industrial advisory built on plant-floor reality - delivered where mechanical reliability, pneumatic and hydraulic systems, instrumentation, controls, and process improvement decisions require the judgment of someone who has stood at the panel and at the equipment before, across multiple disciplines and multiple industries.

// 01 · OPENING

The Cost of Losing the People Who Know Where to Look First.

Industrial operations today increasingly run on systems that were built, tuned, and kept running by people who are now retiring. The replacement pipeline is thin, and the knowledge being lost is practical - not something a classroom, a vendor manual, or a software interface can reproduce.

When a production line goes down at two in the morning, the question is rarely what the documentation says. The question is who has stood in front of this panel before, who has put a hand on this gearbox, who has chased a leak in this pneumatic circuit, who recognizes the signature of this particular fault, and who knows where to look first.

The pressure is not isolated to controls. Mechanical reliability work, pneumatic and hydraulic systems, instrumentation drift, loop tuning, sensor selection, field calibration, and process improvement systems all require judgment that is developed through operating experience.

For an operations leader, this is not a future problem. It is a present one. Recurring faults run longer before resolution. Upgrade decisions are made without the internal depth to evaluate them objectively. Reliability concerns surface at the seams between maintenance, operations, controls, and process - the exact place where cross-functional judgment is most needed.

This whitepaper exists to name that gap plainly, and to describe a practice built specifically to help close it.

// 02 · THE PRACTICE

Alsup Industrial Systems Advisory.

What AISA Does

Diagnostic & Reliability Advisory. A paid on-site advisory audit of recurring fault conditions, persistent downtime causes, and reliability gaps. Engagements are reviewed across mechanical, electrical, pneumatic, hydraulic, instrumentation, controls, and process systems together because most plant-floor problems live across more than one discipline.

Workforce Development & Knowledge Transfer. A structured advisory review of how knowledge flows across maintenance, operations, controls, and instrumentation teams; where institutional judgment lives; and where capability gaps are already affecting performance. Confidential follow-on capability may be discussed only after an advisory relationship is established and appropriate confidentiality terms are in place.

Automation, Controls & Process Advisory. Senior guidance for PLC strategy, controls architecture, instrumentation selection and loop tuning, equipment commissioning, upgrade planning, vendor evaluation, and industrial systems direction. Includes FAT support and process improvement practice - translating MES, OEE, TPM, and CMMS data into the right actions on the floor.

Disciplines Covered

Mechanical Systems. Bearings, couplings, gearboxes, drives, conveyors, sealing systems, alignment, vibration patterns, and root cause analysis on mechanical failures that appear as one thing and are caused by another.

Pneumatic & Hydraulic Systems. Air systems, hydraulic power units, valving, actuators, leak diagnosis, pressure and flow troubleshooting, and subtle degradation that appears as production variation before it appears as a hard failure.

Electrical & Instrumentation. Power distribution, motor controls, drives, sensor selection, loop tuning, calibration, and field instrumentation across analog and digital signal paths.

Controls & Automation. PLC strategy and programming, HMI and SCADA architecture, industrial networks, plant commissioning, and the decisions that go into building or upgrading an automation environment.

Process Improvement. MES, OEE, TPM, and CMMS implementation and optimization. Process improvement only delivers real return when operating experience translates data into the right actions on the floor.

// 03 · THE PRACTITIONER

Randy O. Alsup.

Randy O. Alsup brings thirty years of field-hardened experience as a multi-discipline plant-floor engineer - covering controls, mechanical, electrical, pneumatic, hydraulic, and instrumentation systems, with a substantial process improvement track record.

His most recent engagement was as Lead Senior Controls Engineer on a $120 million manufacturing plant startup, supporting commissioning across PLC strategy, HMI and SCADA architecture, instrumentation, industrial networks, and full plant startup.

Beyond hands-on engineering, Randy has supervised maintenance, electrical, and controls technicians, managed teams of up to six, led capital improvement projects, directed FAT and equipment commissioning, designed CMMS programs, and driven process improvement through MES, OEE, and TPM implementation across multiple facilities and industries.

Alsup Industrial Systems Advisory operates as a division of Alsup Franchuk Legacy Group LLC, a Washington State holding company. The parent entity provides the legal and operational structure; AISA delivers the advisory practice.

// 04 · THE APPROACH

How This Practice Works.

Every engagement with Alsup Industrial Systems Advisory follows a simple, repeatable pattern. The goal is not to generate volume - it is to produce judgment a client can actually use.

01 Direct Conversation. An honest discussion of the operating challenge, recurring issue, or advisory need.

02 Scoped Review. On-site or remote assessment of the system, fault patterns, documentation, operating context, and discipline interfaces.

03 Documented Findings. Plain-language recommendations with clear reasoning, prioritized paths forward, risk observations, and practical next actions.

04 Implementation Support. Optional engagement to manage the recommended projects or process changes through completion.

What Makes This Practice Different

Conventional consulting tends to deliver frameworks, and conventional engineering services tend to deliver narrow specialization. The difference with AISA is that the practitioner has held the role the client is trying to fill across multiple industries, disciplines, and responsibility levels. The advisory is the direct application of plant-floor decision-making to the specific problem the client brings to the conversation.

// 05 · WHEN AISA IS THE RIGHT CALL

The Conversations Worth Having.

01 The same fault keeps shutting the line down. The team resets and restarts, and within days or weeks the condition reappears. The root cause has not been addressed.

02 Critical senior knowledge is about to leave. A key controls engineer, maintenance supervisor, instrumentation technician, or plant specialist is retiring, transferring, or otherwise moving on. The organization needs to capture what that person knows in a way that actually transfers.

03 A controls or instrumentation upgrade decision is coming. PLC platform changes, HMI and SCADA modernization, network architecture decisions, and instrumentation replacement programs are consequential, expensive, and difficult to reverse.

04 Reliability is slipping across the seams. The root cause is not cleanly owned by maintenance, operations, or controls. It lives at the boundary between mechanical, pneumatic, hydraulic, instrumentation, and process.

05 New equipment needs FAT, commissioning, or startup support. Factory acceptance testing, equipment commissioning, instrumentation checkout, and line startups benefit from an outside senior presence who catches problems before they become production failures.

06 Process performance is falling short and no one can pinpoint why. OEE is declining, MES data is not translating into action, TPM practices have stalled, or CMMS data is not driving the right maintenance work.

// 06 · BEGIN THE CONVERSATION

Start a Working Discussion.

If any of the situations described in this whitepaper reflect what your organization is carrying right now, the first step is a direct conversation. No pressure. No generic proposal. Just a practical review of the issue and whether Alsup Industrial Systems Advisory is the right advisory fit.

Practice Summary

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