CADTALK Integrate Intelligently℠

SolutionsX

SUN ONE HIVE

From Engineering to Execution

Connecting CAD, PLM, and ERP for Real Manufacturing Results Results

Tuesday, March 31, 2026

Meet Your Speakers

Joey Himes

Director of Sales and Customer Success — SolutionsX

Deep CSI/SyteLine expertise and a track record of driving customer success in complex manufacturing environments.

Scott Brickler

CEO — CADTALK

Integration vision and hands-on knowledge of what's now possible in real production environments.

Chris Cannady

Partner Development Manager — CADTALK

Sets the tone for today's session — focused on frameworks, not sales pitches.

Your ERP Is Working Exactly As Designed

> "The problem is that the data going into it is wrong — and nobody upstream owns fixing that. Today we're going to show you exactly where that breaks, what it costs, and what it looks like when it works."

The Cascade of Wrong Data

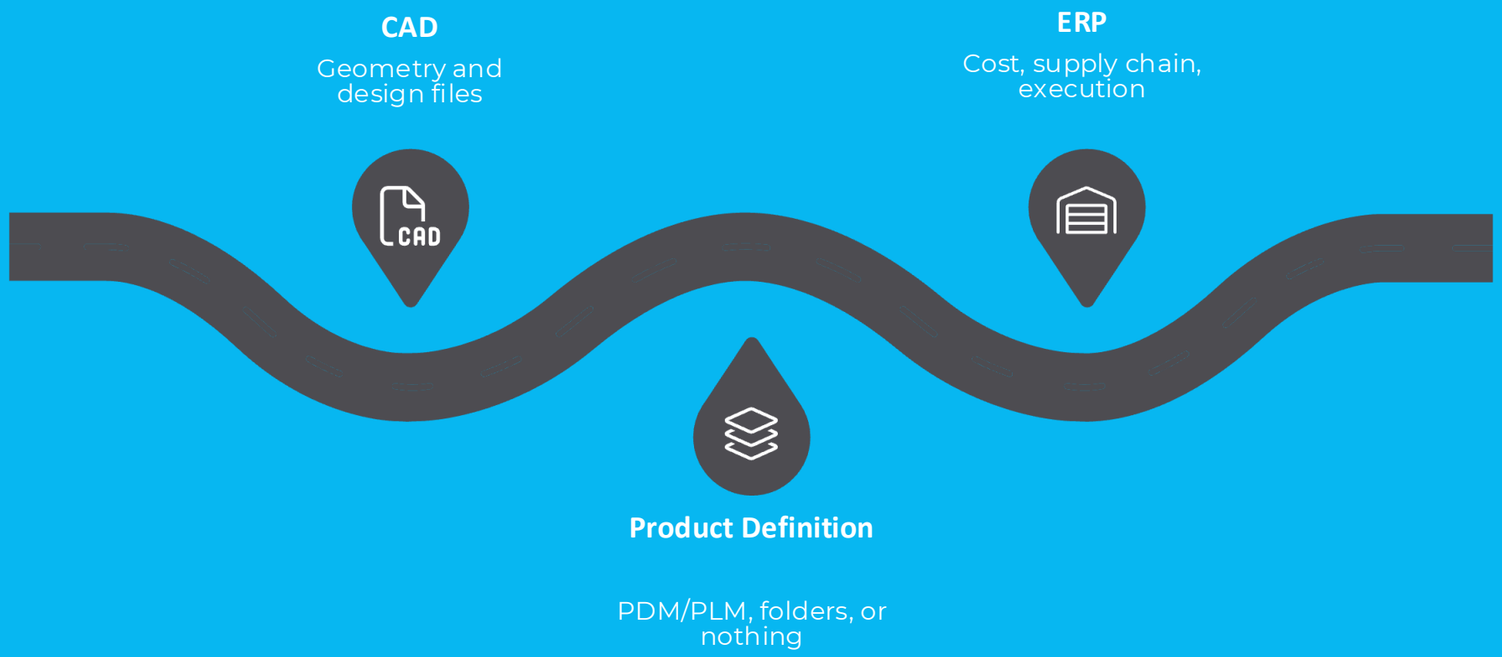
Product data in ERP is wrong

Your MRP is wrong

Your costs are wrong

Financial statements built on assumptions

The Disconnected Reality



Every manufacturer we work with has the same invisible problem. Engineering creates the product definition. Operations executes it. ERP is supposed to be the financial and operational system of record. But there's a gap — and most organizations are filling it with spreadsheets, emails, and tribal knowledge. **That's where your margin is going.**

When the chain of trust breaks between CAD, PLM, and ERP, MRP runs on bad data. Costs are wrong. Shop floor executes the wrong revision.

CAD Owns Geometry

Design intent lives here — but it rarely travels cleanly downstream.

PLM/PDM/Folders Owns Product Definition

Revision control and engineering change management — the bridge that's often missing.

ERP Owns Execution

Cost, supply chain, production planning, and financial execution depend on accurate upstream data.

Poll #1: How Are You Moving Design Data Into ERP?

Before we go further — let's see where you are today. This is anonymous and will help us tailor the conversation.

Option A

Completely manual — engineers re-key everything into ERP by hand

Option B

Spreadsheet-based exports and imports — semi-manual with some structure

Option C

Basic integration — simple fields only, complex stuff still manual

Option D

Automated integration with business rules and validation in place

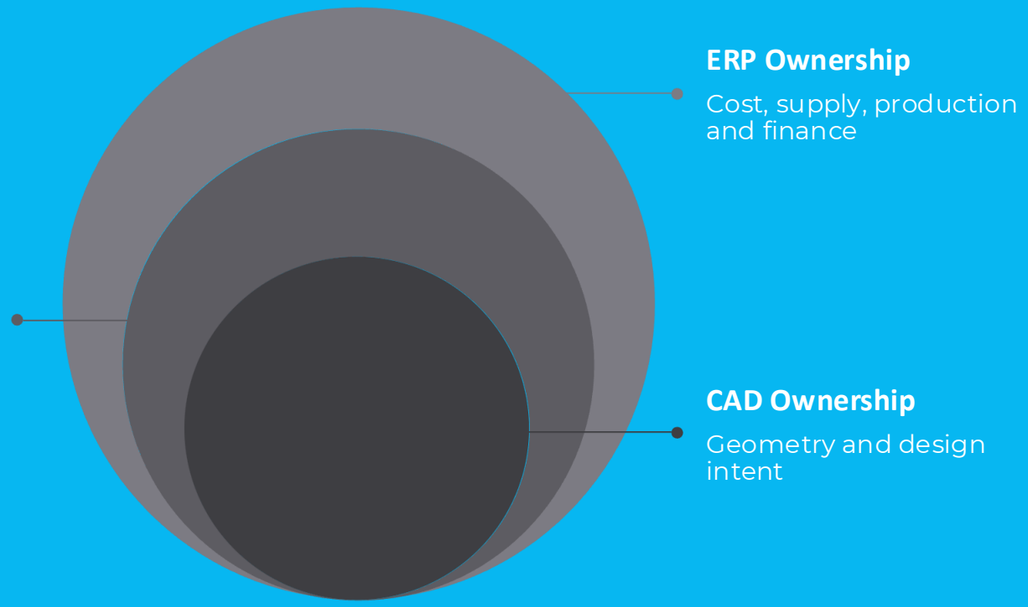
Option E

We have PLM but it's not deeply connected to ERP

What “Good” Looks Like

Clear Systems of Record

The problem isn't that these systems exist separately. The problem is that nobody has defined what crosses the boundary between them — and who owns that crossing.



When ownership is clearly defined at each layer, data flows with confidence. When it isn't, every handoff becomes a negotiation — and a risk.

CAD Layer

Geometry and design intent. The source of truth for what the product physically is.

PLM Layer

Product definition, revision control, and engineering change management. The governance layer.

ERP Layer

Cost, supply chain, production planning, and financial execution. Where design becomes reality.

Controlled Data Flow: The Four Principles

Moving from chaos to control requires more than technology — it requires a disciplined approach to how data crosses system boundaries.

Structured Attributes, Not Free Text

Every field that crosses a system boundary should be defined, validated, and mapped. Free text fields are where data quality goes to die.

Automated BOM Creation with Validation

Not just transfer, but verification that what arrives in ERP is correct. Catch errors at the boundary, not after production runs.

Formal ECO Workflow with ERP Impact

Changes are approved and effectivity-dated before they reach the shop floor. No more informal change management.

Audit Trail Between Revisions and Orders

You can always answer: "What revision was running on this production order?" Traceability is not optional.

Governance: The Hard Part Nobody Talks About

Three Governance Pillars

Field Ownership

Defined ownership of item master fields — who controls each field, and who can change it. No ambiguity, no exceptions.

Approval Gates

Defined approval gates before data releases to ERP — prototype vs. production, effectivity dates and revision timing clearly established.

Conflict Escalation

Defined escalation when data conflicts — what happens when CAD and ERP disagree on a part number? Someone must own the answer.

Why Governance Fails

Most organizations skip governance because it requires difficult conversations about ownership and accountability. The result is that integration projects succeed technically but fail operationally.

The systems talk to each other. But nobody agreed on what they should say.

Timing Strategy: The Most Underrated Question

When does data cross from engineering to ERP? This single question determines whether your integration creates value or creates chaos.

1

Prototype Phase

Engineering data should be **visible but not executable** in ERP. Teams can see it's coming — but it can't drive purchasing or production yet.

2

Production Release

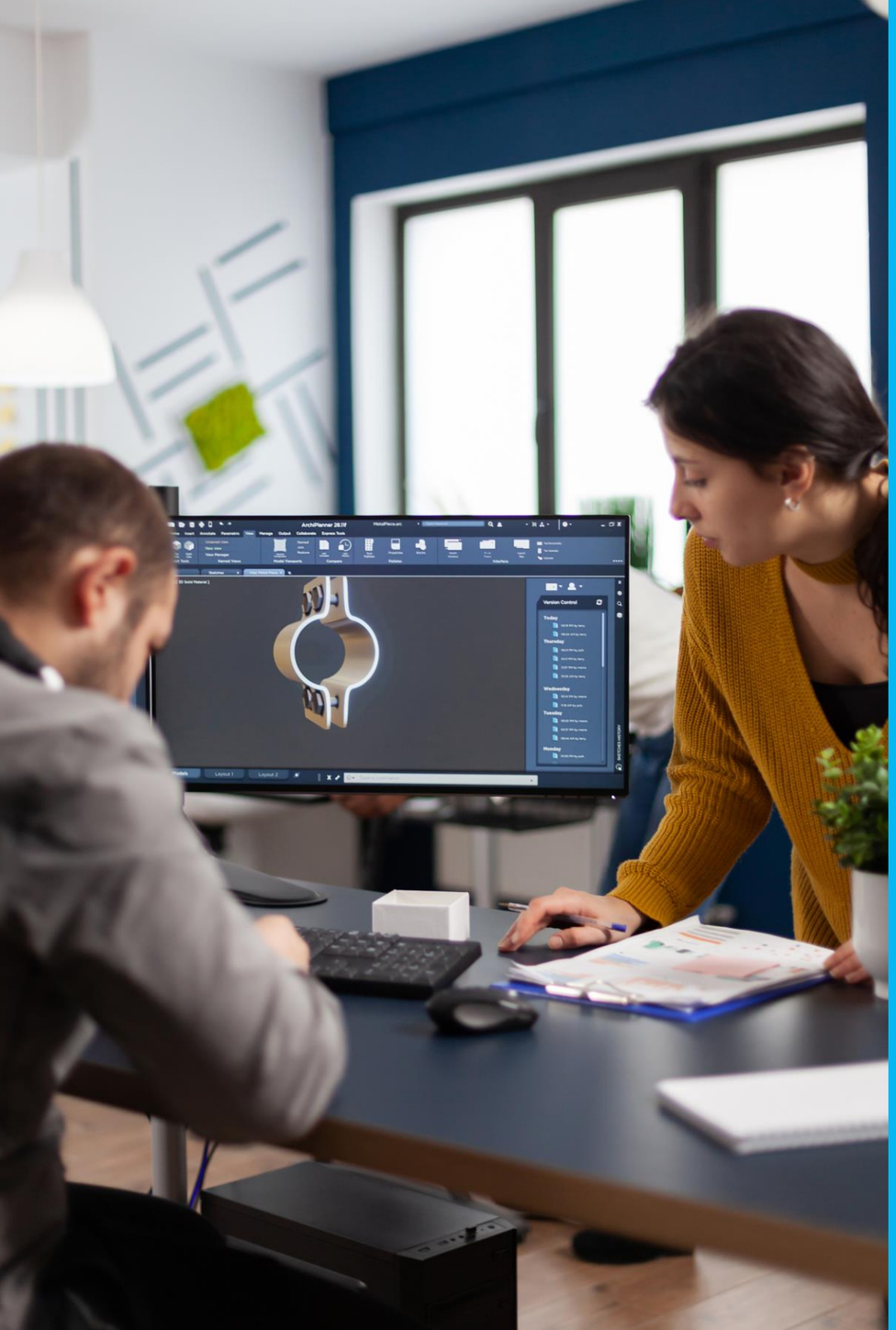
Data crosses only after **formal approval** — item master created, BOM structured, routing validated. The gate is real and enforced.

3

Effectivity Management

Revision changes on open production orders require **explicit handling** — not automatic override. Every change is a decision, not an assumption.

The timing question is where most integrations break down in practice. Getting this right is the difference between controlled change management and revision chaos on the shop floor.



From Architecture to Impact

The Executive Framing

> "If your engineering data is not synchronized with ERP, your **financial statements are built on assumptions.**"

Every integration gap has a direct financial cost. Here's how to frame it for leadership:

BOM Error Cost

Every BOM error drives scrap, rework, expediting, and delayed shipments. These costs are real, measurable, and preventable.

Manual Handoff Cost

Every manual handoff costs engineer time, introduces data entry errors, and creates lag between design and production readiness.

Late Revision Cost

Every revision that doesn't reach the shop floor in time means wrong parts ordered, wrong revision run, and customer commitments at risk.

The Real Cost? What That Data Does When it Reaches CSI

Your ERP is only as good as the data it receives. Every manual touch in the engineering-to-ERP handoff is an opportunity for wrong data to reach your MRP, your cost model, and your shop floor.

33%

Engineer Time Wasted

Spent on non-value-added work — data entry, error correction, and chasing approvals. The symptom, not the problem. *(Tech-Clarity/Engineering.com, 2024)*

10hrs→5min

BOM Entry Time

Complex BOM entry reduced from 10 hours to under 5 minutes — production environment, not a demo. *(Russ Bassett Corporation)*

Material Variance

Unexplained Scrap & Rework

Often traces directly to BOM inaccuracy and revision miscommunication — not process failure.

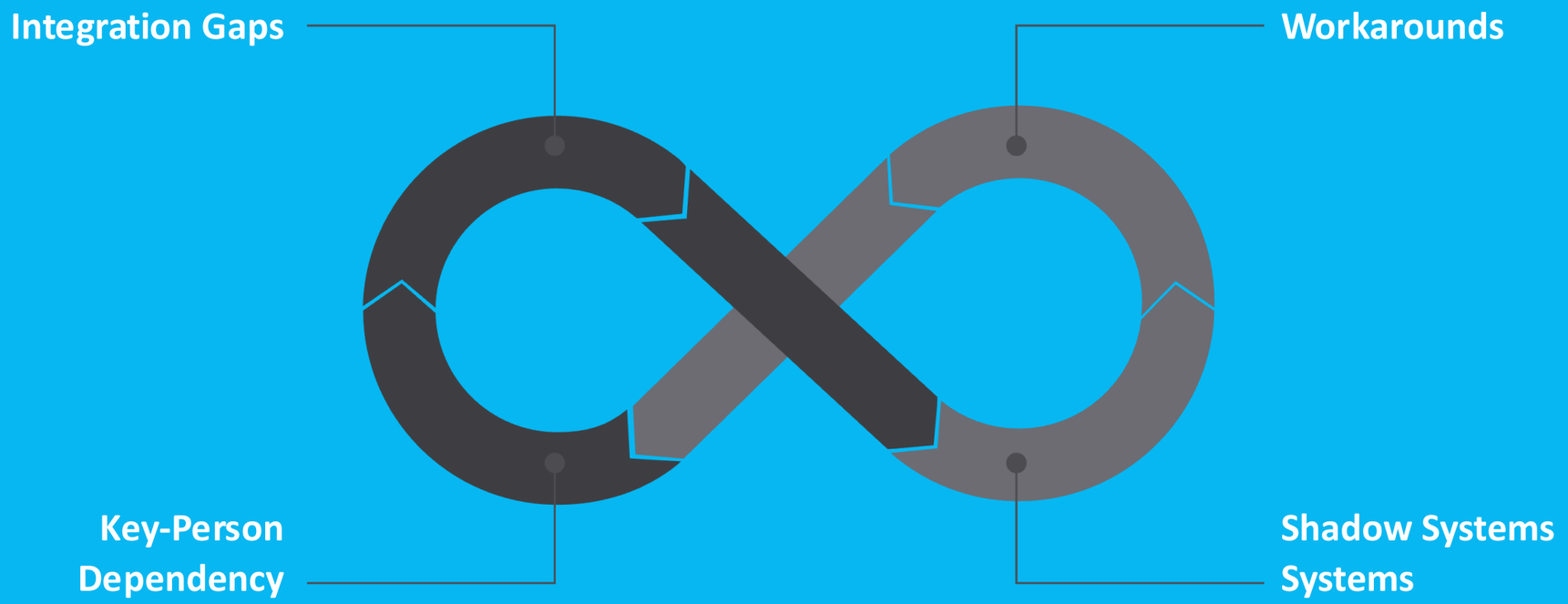
MRP Noise

Cascading Inefficiencies

Purchasing and planning decisions built on outdated or incorrect item master data create downstream chaos across the entire operation.

The Compounding Effect

Integration gaps don't just create individual errors — they create a **culture of workarounds.** And cultures are much harder to fix than software.



> The cost of doing nothing compounds. Every month you run manual processes, you're building **technical debt that's harder to unwind.** The longer this continues, the harder it is to clean up — and the harder it is to automate.

What Modern Integration Actually Enables

This is a production environment, not a demo. Managing by exception rather than managing by task.

Under 2 Minutes

SolidWorks design approval → Infor CSI item master, multi-level BOM, and routing in **under 2 minutes**. Fast isn't the point — a human didn't touch it.

Low-Code Configuration

Business rules applied without custom development — configurable by the people who understand the process, not just developers.

Multi-Level BOM Handling

Complex assemblies with variants and configurations handled automatically — not just flat BOMs, but real-world product structures.

Governed Revision Control

Engineering changes reflected in ERP through a defined, controlled process — not an automatic override.

Real-Time Validation

Errors caught at the boundary before they reach ERP — not after production runs. Prevention, not correction.

Industry-Specific Impact

The integration gap looks different depending on your industry — but the consequences are equally serious across all of them.

Aerospace & Defense

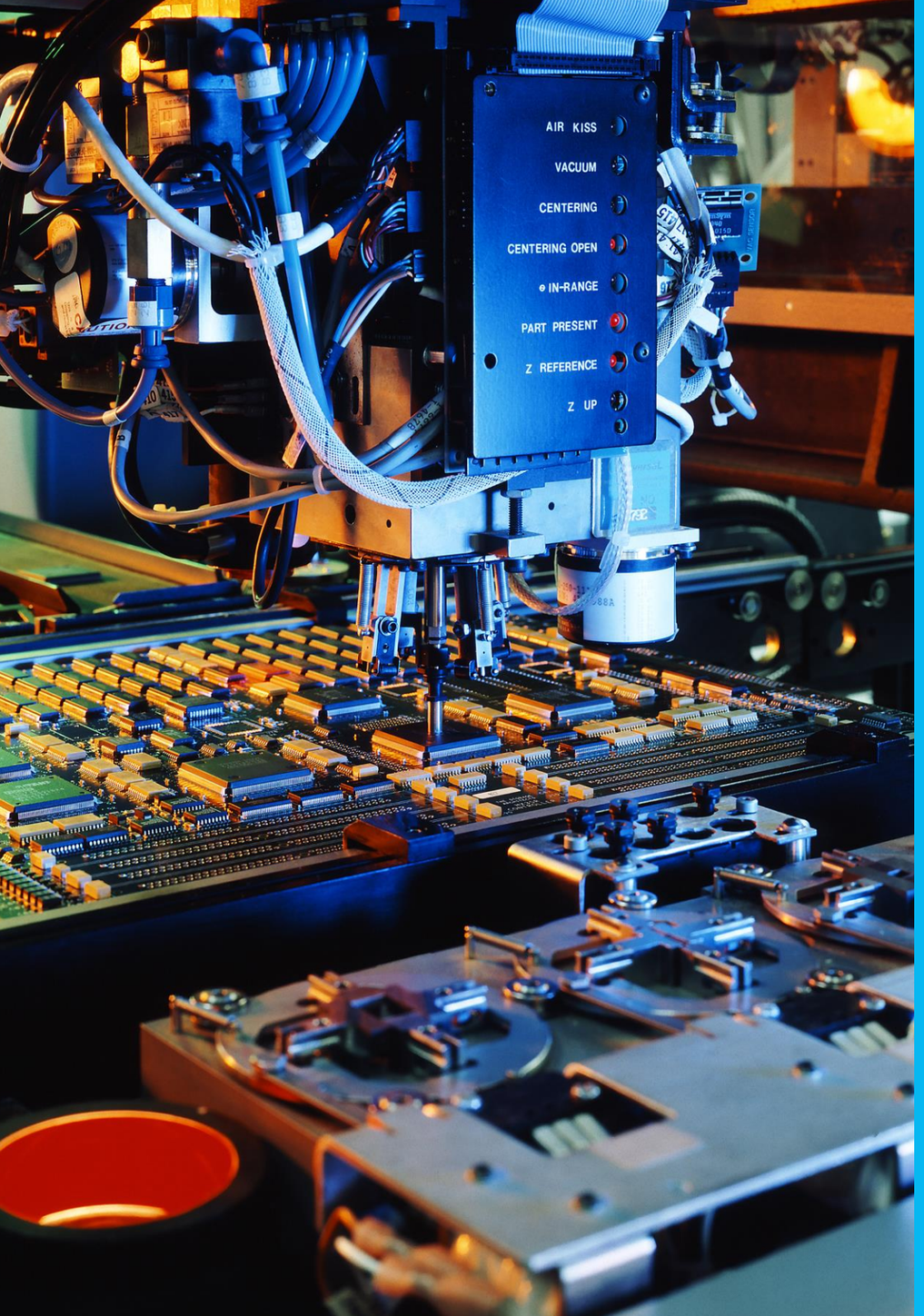
Configuration control is non-negotiable. A revision error isn't just expensive — it's a **compliance failure.** Audit trails must be unbroken from design to delivery.

Medical Device

Design History File integrity depends on audit-trail linkage between engineering and production records. Regulatory submissions require it. There is no workaround.

Industrial / Custom Equipment

Variant management and ETO configurations require **intelligent BOM handling,** not just field mapping. Every order is unique — the integration must handle that complexity.



From Theory to Reality

Case Stories from the Field

Joey Himes

Director of Sales and Customer Success — SolutionsX

Scott Brickler

CEO — CADTALK

Five Warning Sign Questions

Score your own integration honestly. These questions will tell you more about your integration maturity than any vendor assessment.

01

Engineer Time Allocation

How much of your engineering team's time is spent on data entry and error correction vs. actual engineering? If you don't know, that's your first answer.

02

ECO Cycle Time

How long does an engineering change take to reach the shop floor — in hours, not days? If the answer is "days," you have a governance problem.

03

Revision Traceability

Can you answer right now what revision was running on your last 10 production orders? If you'd need to ask someone, that's a red flag.

04

Key-Person Dependency

If your integration specialist left tomorrow, would the process keep running? If the answer is no, you have a shadow system, not an integration.

05

BOM Accuracy

Does your BOM in ERP exactly match what engineering released — every field, every level? "Mostly" is not the same as "yes."

Poll #2: What's Your Biggest Barrier?

Now that we've walked through the framework — what's standing between you and better integration? Let's find out where the room is stuck.

Option A

Data Quality — Our existing data is too messy to automate. We'd need to clean it up first.

Option B

Governance — Nobody agrees on who owns what. The organizational challenge is bigger than the technical one.

Option C

Executive Buy-In — Hard to quantify the ROI. Leadership doesn't see the cost of the status quo.

Option D

Technical Complexity — Our product configurations are too complex for standard integration approaches.

Option E

We Don't Know Where to Start — The problem is clear but the path forward isn't.

The Monday Morning Playbook

You don't need a six-month project to start. Here's what you can do this week, this month, and this quarter.

This Week

- **Audit one workflow:** Pick the single process where engineering data enters ERP. Map every step. Count the manual touches.
- **Score yourself:** Ask the five warning sign questions — honestly. Write down the answers.

This Month

- **Map your systems of record:** Is it actually clear what CAD, PLM, and ERP each own? Document it — or discover that it doesn't exist.
- **Benchmark cycle time:** How long does a BOM release currently take from design approval to ERP? Measure it.

This Quarter

- **Define one governance boundary:** Pick one field in your item master. Define ownership, validation rules, and the approval process for changing it.
- **Pilot one integration:** One document type, one CAD system, one ERP module. Prove value. Then expand.

Summary

Three things to take with you from today's session.

1 Your ERP Is Only as Good as as Its Inputs

Your ERP is only as good as the data it receives from engineering. If that data is wrong, slow, or missing — your ERP investment is underperforming. The most sophisticated ERP in the world cannot compensate for bad upstream data.

2 Integration Is the Easy Part

Discipline and governance are the hard parts. But both are achievable — and far cheaper than the alternative. The technology exists. The question is whether your organization is ready to use it correctly.

3 Start Small. Prove Value Fast. Fast.

Don't wait for a perfect data state — use integration to improve your data incrementally. Pick one process, one system boundary, one pilot. Prove it works. Then expand with confidence.

Q&A

Submit your question in the chat — we'll work through as many as we can.

Resources & Next Steps

Everything you need to keep the momentum going after today's session.

The CADTALK Journey

Where are you in your climb up Integration Mountain? — Assess your integration maturity and identify your highest-priority gaps.

Integration Discovery — CADTALK

Schedule an integration discovery session with the CADTALK team. See what's possible in your specific environment.

cadtalk.com

PLM/ERP Strategy — SolutionsX

PLM/ERP strategy consultation with the SolutionsX team. CSI/SyteLine expertise applied to your specific challenges.

solutionsx.com

Recording & Slides

Recording and slides available within 24 hours. A link will be emailed to all registered attendees — share it with your team.

Thank you for joining today. The gap between engineering and execution is real — but so is the solution. Start with one process. Prove the value. Then build from there.