IX® Case Study

Deploying Digital Work Instructions to Enable Seamless Production Transfer

IMPLEMENTATION ENGINEERS®
BEYOND CONSULTING

IX® in Action

The Challenge: Ensuring Continuity in a Complex Production Relocation

A global manufacturer of electrical enclosures needed to relocate production from the U.S. to Mexico without disrupting quality, throughput, or delivery performance.

The challenge was not the physical move. It was the lack of standardized processes. Critical production knowledge lived with operators, not in systems.

Implementation Engineers deployed a digital manufacturing solution using Tulip to capture, standardize, and implement production processes. This enabled a controlled transition and created a scalable foundation for future digital operations.

The Challenge

The client operated a complex fabrication and assembly process spanning sheet metal forming, welding, finishing, painting, and final assembly.

Despite this complexity:

- No formal work instructions existed
- Processes varied by operator and shift
- Knowledge transfer relied on tribal expertise
- The receiving plant had no structured way to execute production

This created significant risk:

- Inconsistent quality
- Slow ramp-up
- Production delays during transition

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How We Implemented Digital Work Instructions to Enable Execution

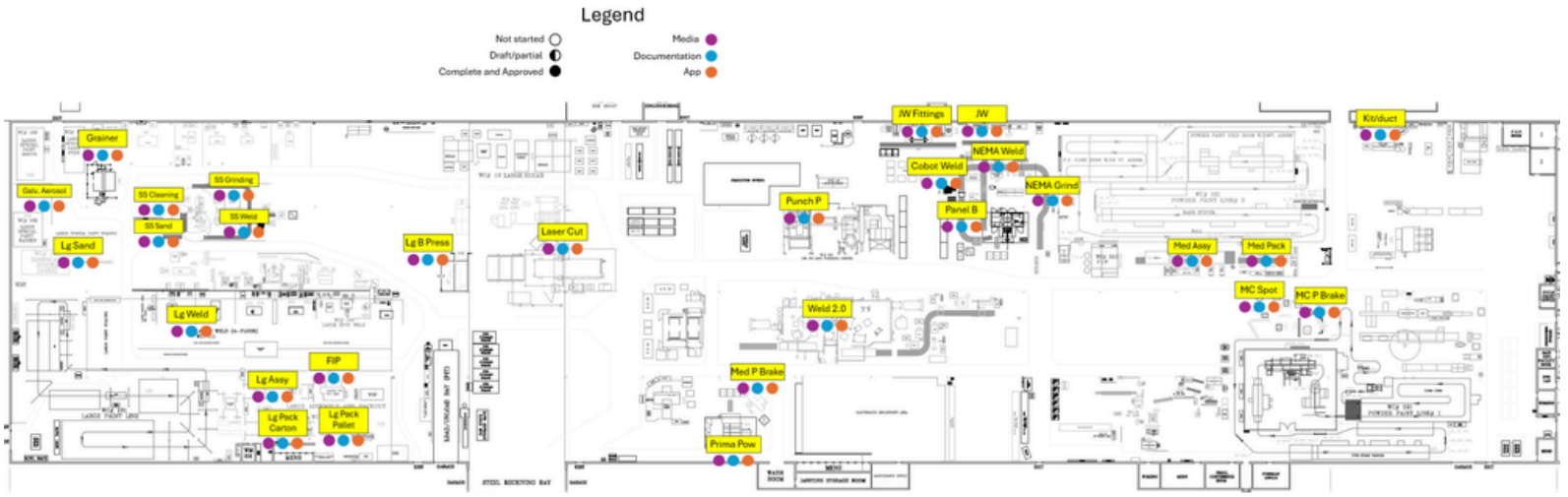
1

Mapped and Structured the Entire Production Process

We embedded in the U.S. facility to understand how work was actually executed.

- Identified all product families and processes in scope
- Observed operations directly on the shop floor
- Captured videos, images, and process steps
- Built a structured process map aligned to equipment and workflows

This resulted in a complete digital representation of the production system, not just static documentation.



WORK INSTRUCTION DEVELOPMENT WORKFLOW

Identify processes and product types in scope → Observe process, capture videos and pictures → Create work instructions in Tulip with images, videos, and app logic → Review work instructions with operators / engineering → Translate work instructions in Tulip and review with target site team

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How We Implemented Digital Work Instructions to Enable Execution

2

Built Digital Work Instruction Applications in Tulip

We converted each process into operator-ready applications.

- Developed 30+ Tulip applications aligned to production steps
- Embedded images, videos, and step-by-step logic
- Designed apps around how operators actually work
- Created a composable app structure to support scalability across processes and sites

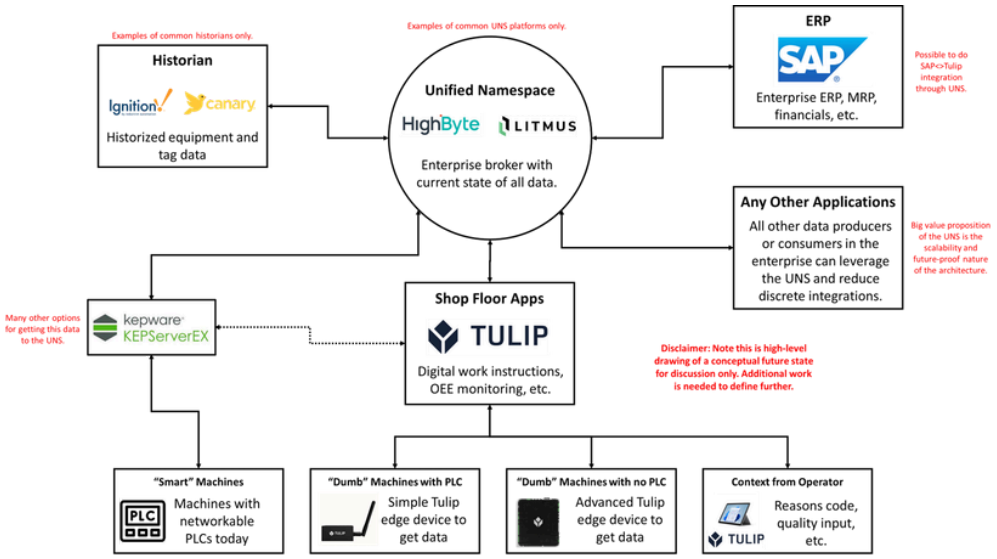
Instead of PDFs or SOPs, operators received interactive applications that guide execution in real time.

Tulip in Action

We used Tulip as a composable platform to build a suite of applications aligned to the production process.

- Modular apps tied to specific operations
- Shared data structure across applications
- Agile deployment and iteration model
- Scalable across sites and value streams

This approach allows manufacturers to move beyond static documentation and implement connected, operator-driven digital operations.



IX® in Action

How We Implemented Digital Work Instructions to Enable Execution

3

Enabled Real-Time Execution and Feedback on the Shop Floor

The applications were not just instructional, they were operational tools.

- Operators could follow sequenced work steps digitally
- Built-in functionality allowed users to flag issues or request support
- Standard work was enforced at the point of execution
- Engineering teams could continuously improve processes through feedback loops

This shifted work instructions from static documents to live operational systems.

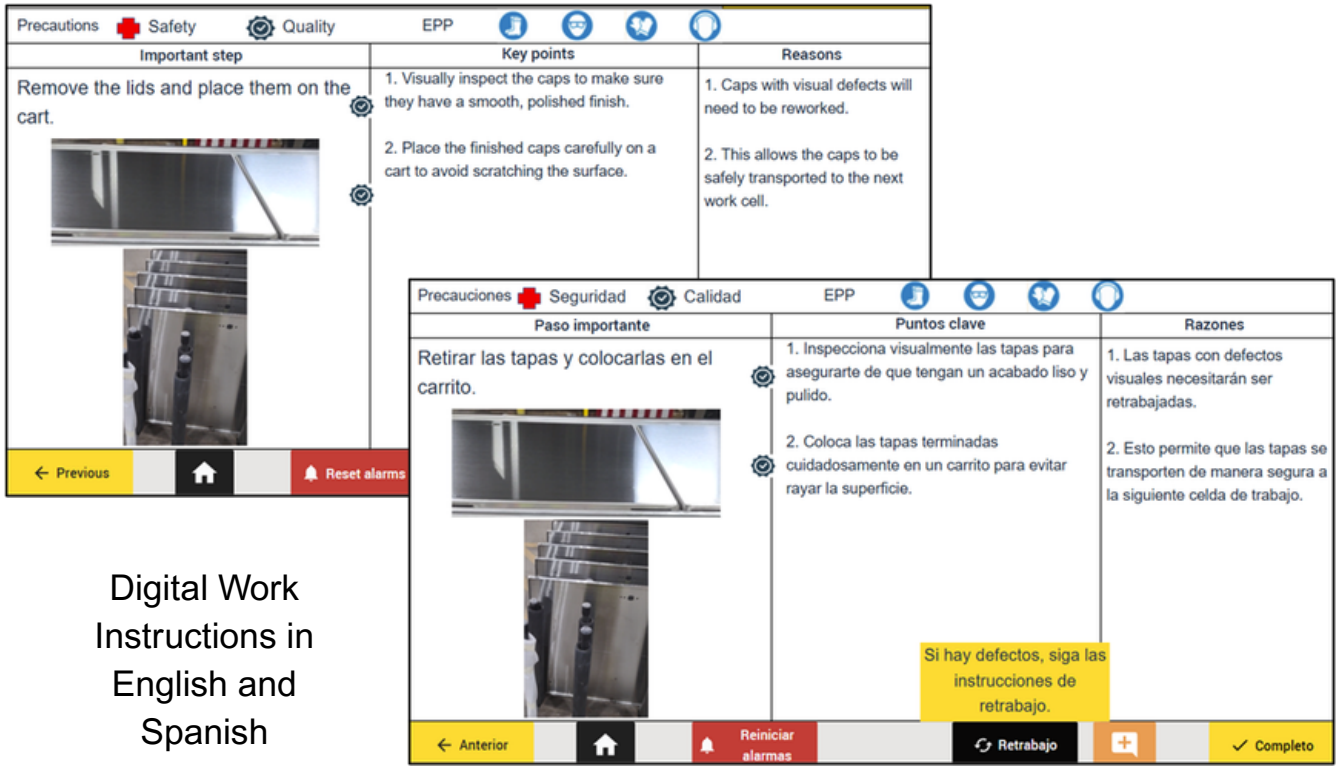
4

Translated, Validated, and Deployed Across Facilities

To ensure adoption at the Mexico facility:

- All applications were deployed in English and Spanish
- Each app was reviewed and approved by the receiving engineering team
- Training was delivered to operators and engineers
- Deployment included clear workflows for usage, escalation, and updates

This ensured the system was not just built, but fully implemented.



Digital Work Instructions in English and Spanish

Let’s Turn Your Vision into Results

At Implementation Engineers, we don’t just execute projects - we transform your vision into operational reality. Our proven 3-phase approach - **Align, Design, Execute** - delivers lasting value, from aligning your team on strategic goals to optimizing operations and driving measurable outcomes. Whether you’re aiming to lead your market, boost efficiency, or maximize shareholder value, we’re here to make it happen, step-by-step, side-by-side.

Ready to Get Started?

Let’s explore how we can bring your vision to life. Contact us today to schedule a conversation. Together, we’ll chart the path to your success.

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