

Digitalizing a Discrete Manufacturing Factory

in Precision Engineering, One App at a Time

From paper-based processes to connected factory intelligence.

A precision engineering manufacturer began its digital transformation with ActivaSuite's Quality App, replacing paper-based inspections with digital workflows and structured quality data. As the factory gained visibility and confidence in the platform, it expanded into OEE monitoring, energy management, maintenance, and end-of-line testing.



Start Small

Digitize one high-impact process and establish a reliable source of production data.

- ✓ Low upfront investment
- ✓ Quick wins in a few weeks
- ✓ Trusted real-time data



Expand by Value

Add applications for OEE, energy, maintenance, and testing as new business needs emerge.

- ✓ Pay only for value
- ✓ Higher OEE and uptime
- ✓ Lower energy costs



Scale Across the Factory

Replicate proven applications across more lines without requiring a complete system replacement or major implementation project.

- ✓ Faster rollout per line
- ✓ No costly system replacement
- ✓ Consistent data plant-wide

Building on the same digital foundation, the manufacturer was able to scale across additional production lines with minimal support from i4TECH.

ActivaSuite™
Composable Digital
Manufacturing

The Challenge

Digital transformation does not have to start with the entire factory.

Like many precision engineering manufacturers, the factory had production processes that depended heavily on manual data collection and paper-based workflows. Quality inspections, production information, equipment performance, and testing data were captured across different processes, making it difficult to establish a consistent digital view of operations.

The factory needed to improve operational visibility and reduce manual work, but without disrupting production or committing to a large-scale digital transformation project from day one.

This created several operational challenges:

1. Quality inspections relied on paper

Operators and quality teams depended on manual inspection records and paperwork to capture production and quality information.

Typical situation:

- Inspection results were recorded manually
- Paper records created additional administrative work
- Quality information was difficult to access and consolidate
- Historical data was not readily available for analysis
- Manual processes created opportunities for inconsistent data entry

2. Production performance was difficult to monitor

As production expanded, the factory needed better visibility into how individual machines and lines were performing.

Typical situation:

- Production performance was not available in a single real-time view
- Actual performance was difficult to compare against targets
- Downtime and production losses required manual investigation
- Supervisors relied on different sources of information to understand performance

3. Equipment and energy data remained underutilized

Machine and operational data existed, but was not yet connected into a broader operational view.

This limited the factory's ability to understand:

- Equipment performance
- Downtime patterns
- Energy consumption
- Maintenance requirements
- Opportunities for operational improvement

The Challenge (Continued)

4. End-of-line testing created another data silo

Testing at the end of the production process generated important product and process information, but this information was not fully connected to the rest of the manufacturing workflow.

This made it harder to create a continuous digital record from production through final testing.

5. Scaling digitalization across lines needed to be practical

The factory did not need another large, complex transformation project. It needed an approach that could demonstrate value quickly, then be replicated across additional processes and production lines.

The challenge was therefore not simply how to digitize one process, but how to create a digital manufacturing foundation that could grow with the factory.

Root Causes

Challenge	Root Cause
Manual quality inspections	Quality data was captured through paper-based processes
Limited production visibility	Production performance was not available in a unified real-time view
Difficult downtime analysis	Machine and production events were not consistently contextualized
Underutilized energy data	Energy information was not connected to operational performance
Reactive maintenance	Equipment information was separated from production context
Disconnected end-of-line testing	Testing data was not integrated into the wider production workflow
Difficult factory-wide scaling	Digital applications needed to be deployed incrementally without disrupting existing operations
Reporting workload	Operators and supervisors spent time collecting, consolidating, and transferring information manually

The Approach

One App at a Time

Instead of attempting to digitalize the entire factory at once, the manufacturer started with a clearly defined operational problem: quality inspection.

ActivaSuite provided a practical starting point to digitize the process, establish structured production data, and demonstrate value on the factory floor.

Once the first application was in place, the same digital foundation could be extended to other operational needs.

ActivaSuite™ Digital Manufacturing Solution

ActivaSuite enables manufacturers to build their digital factory incrementally by connecting applications around the operational processes that matter most.

In this case, the manufacturer could move from:

Quality → OEE → Energy → Maintenance → End-of-Line Testing

Without having to replace the existing factory architecture or undertake a single large-scale transformation project.

The approach creates a common digital foundation across machines, lines, processes, and operational teams. From individual applications to connected manufacturing intelligence.

Quality

- Digital inspections
- Structured quality records
- Reduced paperwork

Performance

- OEE monitoring
- Production visibility
- Downtime analysis

Energy

- Energy monitoring
- Consumption visibility
- Operational efficiency insights

Maintenance

- Equipment information
- Maintenance workflows
- Production-maintenance connection

Testing

- Digital end-of-line testing
- Test result capture
- Improved traceability

Business Impact

Reduced Manual Work

Replacing paper-based inspection and manual reporting processes reduces administrative workload and allows operators and quality teams to spend more time on production and quality activities.

Greater Production Visibility

OEE monitoring provides a clearer view of how machines and lines are performing, helping teams identify production losses and areas requiring attention.

Better Quality at Source

Digital inspection workflows make quality information more structured and accessible, supporting faster identification of quality issues and more consistent data capture.

Connected Operational Data

By bringing quality, production, energy, maintenance, and testing applications onto the same digital platform, the factory can move beyond isolated datasets toward a more connected operational view.

Scalable Digitalization

The factory can extend proven applications to additional production lines without having to restart its digital transformation from scratch.

Management Impact

The biggest value is not simply replacing paper with digital forms.

It is creating a scalable digital foundation for continuous improvement.

Instead of implementing a large system across the entire factory at once, the manufacturer can start with one operational problem, demonstrate value, and then expand into the next.

This approach allows factory teams to:

- Start with a clearly defined business need
- Build digital capability progressively
- Reuse the same platform across multiple processes
- Connect operational data across applications
- Expand to additional production lines
- Reduce dependency on external implementation support

As more applications are added, each new capability contributes to a broader picture of factory operations.