EMPOWERING THE DIGITAL SUPPLY CHAIN
USE CASE
Empowering the Digital Supply Chain

There’s a mandate across industries to incorporate digital-first strategies into operations. The material handling industry—which literally touches every product and other industry—may feel the pressure of this mandate most acutely. Unsurprisingly, this industry has been at the forefront in the search for solutions:

Automation, sensors, automatic identification, predictive analytics, 3D printing, autonomous vehicles, wearable technology, artificial intelligence...

The velocity and breadth of solutions are enough to make anyone’s head spin. So, we have terms like Industry 4.0, Supply Chain 4.0, IoT, IIoT, & Digital Transformation that try to make sense of it all.

But, there is one undeniable takeaway from this: the digital supply chain is coming.

Supply chain leaders’ perspective

80% of experts believe the digital supply will be the predominant model within 5 years.

16% of experts believe that it already is the predominant model.

There will be winners and losers in this new era. Regardless of where you’re at in your digital journey, it’s time to move with urgency. “How?” and “To where?” are the pressing questions that nio helps you solve.
The Challenges

Adoption of the digital supply chain is inevitable, but that doesn’t mean there aren’t challenges along the way.

Security, talent gaps, and lack of a clear business case are cited by industry leaders as the top barriers to adoption.3

SECURITY

There are always counterbalances to the utopian future promised by innovation. Cybersecurity, or lack thereof, is one such counterbalance. Leaders are concerned with taking care of the basics and mitigating risk before getting too caught up in the benefits. Solutions must not only be well-tested, but vigilant in the neverending security arms race.

TALENT GAPS

The (still) most important variable of hard technical innovation is often forgotten—the people. Technology lifts the people that use it. It must actually be usable to reap the benefits. True innovation is accessible to the novice and continuously stimulating for the expert.

UNDEFINED USE CASE

Lacking a clear plan and purpose is an easy way to fail with the best of intentions. The possibilities of the digital supply chain are endless! A gift and a curse for which each hypothesis should be rigorously tested, validated, and then scaled.

WHAT IS THE DIGITAL SUPPLY CHAIN?2

The digital supply chain necessitates diverse solutions working as cohesive systems. Therefore, it’s best defined by benefits, rather than a set of solutions:

FASTER
Move products to their destinations with smarter and shorter lead times

MORE FLEXIBLE
Elegantly react to changes in demand with dynamic capacity and shorter planning

MORE EFFICIENT
Doing more with less through higher capacity usage and minimal waste

MORE ACCURATE
Real-time transparency augmented with automated QA throughout the product journey
The nio Platform

nio was built to tackle these challenges and deliver the promise of digital transformation.

nio is a platform for creating unified digital systems. It simplifies the development and connection of diverse technologies to create powerful solutions that deliver significant, faster, and robust ROI.

SECURE & PRIVATE

nio is adaptable to ever-changing application and system requirements. It can integrate with existing and new best-in-class enterprise security tools. In-transit system data is end-to-end encrypted using nio’s communication layer. nio is not a cloud-only platform. It’s designed to be installed and run everywhere—including locally on your various machines or products—which limits data transmission and allows users to maintain control of their own data.

WORKFORCE MULTIPLICATION

nio is a tool designed to amplify the ingenuity and skills of people that work with it. It simplifies the complexity of building digital systems—making IT (information technology) more efficient and extensible while creating new possibilities for OT (operational technology). The nio platform utilizes visual data workflows, encourages reusable configurable functionality, and erases traditional hardware & protocol constraints.

PROGRESSIVE ADOPTION

nio helps minimize the cost of iteration and never requires rip-and-replace. Its modular architecture means new technology, new equipment, and new ideas can be incrementally integrated, tested, and scaled with the same unbiased platform. nio simplifies the distribution and redistribution logic/functionality to help minimize one-off development. All of this means your organization can efficiently validate digital use cases in your supply chain and products.

nio’s answers to top IoT challenges

Security
- End-to-end encryption
- Edge processing of data
- Modularity & flexibility

Talent
- IT/OT friendly
- Limit custom development
- Tools to eliminate technical complexity

Lack of Clear Business Case
- Progressive Adoption
- No rip & replace
- Unlimited platform extensibility
The Possibilities with nio are Endless

The use cases that nio can unlock span the entire product journey and technology stack. Here are just a few solutions to get your imagination started:

**ASSET TRACKING**
With RFID, GPS, and an unlimited array of other sensors, nio can provide visibility into inventory and asset conditions. This granular data helps drive better forecasting, quality control, and efficient operations.

**MACHINE MONITORING**
nio can monitor the health of machines throughout the supply chain to avoid costly downtime. Deploying nio to the field offers the reliability and speed needed for mission-critical motors and equipment. Monitoring logic can span from simple threshold notifications to machine-learning-driven predictive maintenance.

**CROSS-SYSTEM INTEGRATION**
Existing systems like ERPs, CRMs, and WMSs offer essential—but often siloed—functionality. nio can act as a unifying fabric to flatten these systems and create true digital transformation.

**SMART PRODUCTS**
OEMs can embed nio into their product offerings. Pre-built and easily integratable solutions differentiate hardware. The extensibility of nio running natively on a product can make it the anchor of an end-customer’s digital supply chain, warehouse, and production floor.

**nio is built to deliver your digital transformation.**
Contact us at sales@n.io to set up a demo and explore your digital supply chain solution.
REFERENCES

1 The 2017 MHI Annual Industry Report-Next Generation Supply Chains: Digital, On-Demand, and Always-On by MHI and Deloitte

2 McKinsey & Company Supply Chain 4.0 in Consumer Goods by Knut Alicke, Daniel Rexhausen, and Andreas Seyfert

3 The 2017 MHI Annual Industry Report-Next Generation Supply Chains: Digital, On-Demand, and Always-On by MHI and Deloitte