

Industrial Automation: From Hardware Sales to Recurring Revenue

How industrial leaders are transforming software into sustainable growth

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1. Industrial Automation at a Turning Point

Industrial automation (IA) has entered a decisive phase. The previous decade focused on developing software offerings, connecting machines, optimizing efficiency, and digitizing production. The next decade is set to be about monetization— turning software, data, and connectivity into scalable recurring revenue.

As economic volatility, sustainability pressures, and accelerating innovation cycles, reshape the industry, hardware margins and service contracts alone can't sustain growth. The leaders of tomorrow are **transforming their industrial systems into revenue-generating platforms**, integrating AI, digital twins, and predictive analytics across the value chain.

2. The Shift: From Hardware to Recurring Revenue

For decades, industrial OEMs built their business on tangible products. Today, customers expect modern, software-driven experiences, pushing OEMs to deliver smart, connected experiences that create on-going user value.

Drivers of the Shift

- **Evolving customer expectations:** Enterprises now expect streamlined software, with ongoing functionality updates, predictive maintenance, and remote optimization.
- **Revenue diversification:** Hardware commoditization and margin pressure are pushing OEMs toward recurring, software e-based revenue.
- **Digital ecosystem maturity:** Edge computing, IoT, and AI have made it technically and economically viable to deliver software-defined features.
- **Competitive agility:** Fast, software-based differentiation enables quicker adaptation to market shifts and regulations.

Industry composite analysis shows that a large majority of industrial OEMs are prioritizing software-driven business models, yet many still lack mature systems to monetize them at scale

3. Unlocking Value Through Software Monetization

Delivering digital value is only half the equation. **Capturing that value** requires robust software monetization. This discipline turns IP and innovation into predictable, recurring revenue.

Modern Monetization Models

- **Usage-based licensing:** Customers pay based on consumption, aligning pricing with value delivered.
- **Feature-based licensing:** Enable or disable capabilities dynamically, creating flexible product tiers and upgrade paths.
- **Subscription and hybrid models:** Blend time-based, consumption-based, and perpetual licensing for maximum flexibility.
- **Data-driven monetization:** Use operational data to refine offerings, forecast demand, and create outcome-based pricing.

Feature-based licensing: With feature-based licensing, manufacturers can build standardized machines and use software licensing to define its value. one physical machine to serve as both the entry-level and high-performance model — simply by activating the appropriate features through licensing.

Subscription and hybrid models: With subscription or hybrid models, industrial providers can serve diverse customer needs while establishing recurring, software-driven revenue. The approach combines time-based and perpetual options, so that OEMS can meet customer expectations for subscription software and improving cash flow.

Usage based licensing: Usage-based licensing, also called consumption-based licensing, allows OEMs to align revenue directly with customer value. Instead of charging a flat fee upfront, customers pay for actual consumption— e.g. whether that's number of hours operated, processed parts, or data volume handled.

Data-driven monetization: Manufacturers refine pricing based on insights gleaned from usage intelligence into how, when, where, and how many utilize the equipment. This data can also be used to establish outcome-based pricing — meaning customers pay for measurable results—transforming product performance into a monetizable service metric.

The Results

- Increased lifetime customer value through ongoing renewals and upgrades
- Faster time to market for digital features
- Reduced revenue leakage via controlled entitlement
- Improved forecasting and customer insight from usage analytics

4. Licensing and Entitlement as Growth Infrastructure

Historically, licensing and entitlements were tactical controls — dongles, keys, and license files used to ship products and prevent misuse. Today, they are the connective tissue of growth, with a critical role in orchestration across activation, enforcement, and usage data collection. For industrial companies to operate with agility and monetize like leading software providers, robust licensing and entitlement technology is essential.

Why It Matters

Modern licensing and entitlement technology provides the foundation for both protecting and growing revenue at scale.

Here's how:

- **Protects IP and revenue** across on-prem, edge, and cloud through secure enforcement, encryption, and auditability.
- **Automates fulfillment and renewals** to accelerate delivery, reduce manual effort, and enhance customer experience.
- **Enables flexible pricing and remote feature activation** so companies can adapt offers, upsell, and expand revenue without engineering cycles.
- **Delivers feature-level usage insight** to guide pricing strategy, forecast renewals, and drive continuous growth.

For industrial companies, these capabilities transform software, that was once given away with the equipment purchase, into an agile growth engine.

Thales's customers report a remarkable 301% return on investment from their licensing and entitlement platform.

Forrester Total Economic Impact™ (TEI) Study 2023

5. Cybersecurity, Compliance, and Trust

With digitalization comes risk. Each connected device, software module, and data exchange widens the threat surface. The convergence of operational technology (OT) and information technology (IT) demands secure-by-design monetization.

- **IP theft and reverse engineering:** OEMs often embed valuable algorithms (control logic, vision, motion, safety systems) in software shipped on edge controllers or PLCs. Piracy and unauthorized replication of these modules present a multi-billion-dollar risk.
- **Unauthorized feature activation or untracked usage:** This tends to happen when end users enable premium features without entitlement updates or clone licenses across machines. Uncontrolled usage across machines, sites, or regions can also lead to compliance issues and revenue loss.
- **Regulatory and export compliance:** In tightly regulated sectors such as manufacturing, healthcare, energy, and defense, every software deployment is subject to strict controls. When software updates or licenses are distributed without centralized oversight, OEMs risk enabling restricted features in embargoed regions, storing operational data outside approved jurisdictions, or lacking traceable usage records during compliance audits.
- **Cyber-resilience for mission-critical industrial systems:** In industrial automation, downtime equals production loss. Licensing and activation mechanisms must remain secure, available, and fail-safe for mission-critical systems operating at the edge or offline.

Thales Sentinel uniquely combines **hardware and software enforcement** with enterprise-grade encryption, authentication, and auditability, providing confidence that revenue streams and customer trust remain secure.

6. Partnering for Scale: The Connected Ecosystem

No single company can master every layer of the industrial digital stack. The path forward lies in **collaboration** — integrating licensing, entitlement, analytics, and security across the ecosystem.

The New Industrial Ecosystem

- **OEMs** providing smart devices and sensors
- **Platform operators** hosting industrial clouds and digital twins
- **System integrators** orchestrating connected value delivery
- **SaaS providers** offering billing, analytics, and visualization services

By aligning licensing and entitlement across this ecosystem, companies can:

- Accelerate go-to-market for joint solutions
- Enable cross-vendor interoperability
- Ensure unified user experiences
- Create data-driven co-innovation loops

7. A Trusted Partner for the Digital Era

For more than 30 years, **Thales Sentinel's software monetization platform** has helped industrial organizations transition confidently into the software era. With a team of over **450 experts** across 20 countries, Thales delivers trusted licensing, entitlement, and IP protection solutions that power the world's most advanced industrial ecosystems.

Our **Sentinel platform** provides:

- Unified license and entitlement management for hardware, software, and cloud solutions
- Flexible monetization models — subscriptions, usage-based pricing, and feature controls usage-based pricing
- Integration with leading cloud and edge architectures
- Built-in encryption, compliance, and cybersecurity controls
- Data, analytics, and insights about upsell and cross sell opportunities delivered directly into your CRM

“Thales Software Monetization ... provides the most comprehensive platform and services for license and entitlement management.”

Frost & Sullivan, 2022

Conclusion

The future of industrial automation is software-defined, data-driven, and service-oriented. As the industry moves from **hardware-driven to software-driven**, success will depend on each company's ability to monetize intelligence securely, flexibly, and at scale.

Licensing and entitlement management have become **the digital backbone** for this transformation — enabling industrial players to protect IP, deliver customer value continuously, and achieve sustainable, recurring growth.

Thales stands ready to help you navigate this transition — with proven technology, trusted expertise, and a clear vision for the connected industrial future.

Contact Thales Software Monetization

For more information or to discuss how to modernize your licensing and entitlement strategy,

Visit cpl.thalesgroup.com/software-monetization

About Thales

Thales is a global leader in cybersecurity, helping the most trusted organizations protect critical applications, data, identities, and software anywhere, at scale. Through Thales' integrated platforms, customers achieve better visibility of risks, defend against cyber threats, close compliance gaps, and deliver trusted digital experiences for billions of consumers every day.



Contact us

For contact information, please visit
<https://www5.thalesgroup.com/wp/industrial-automation-contact-us>

