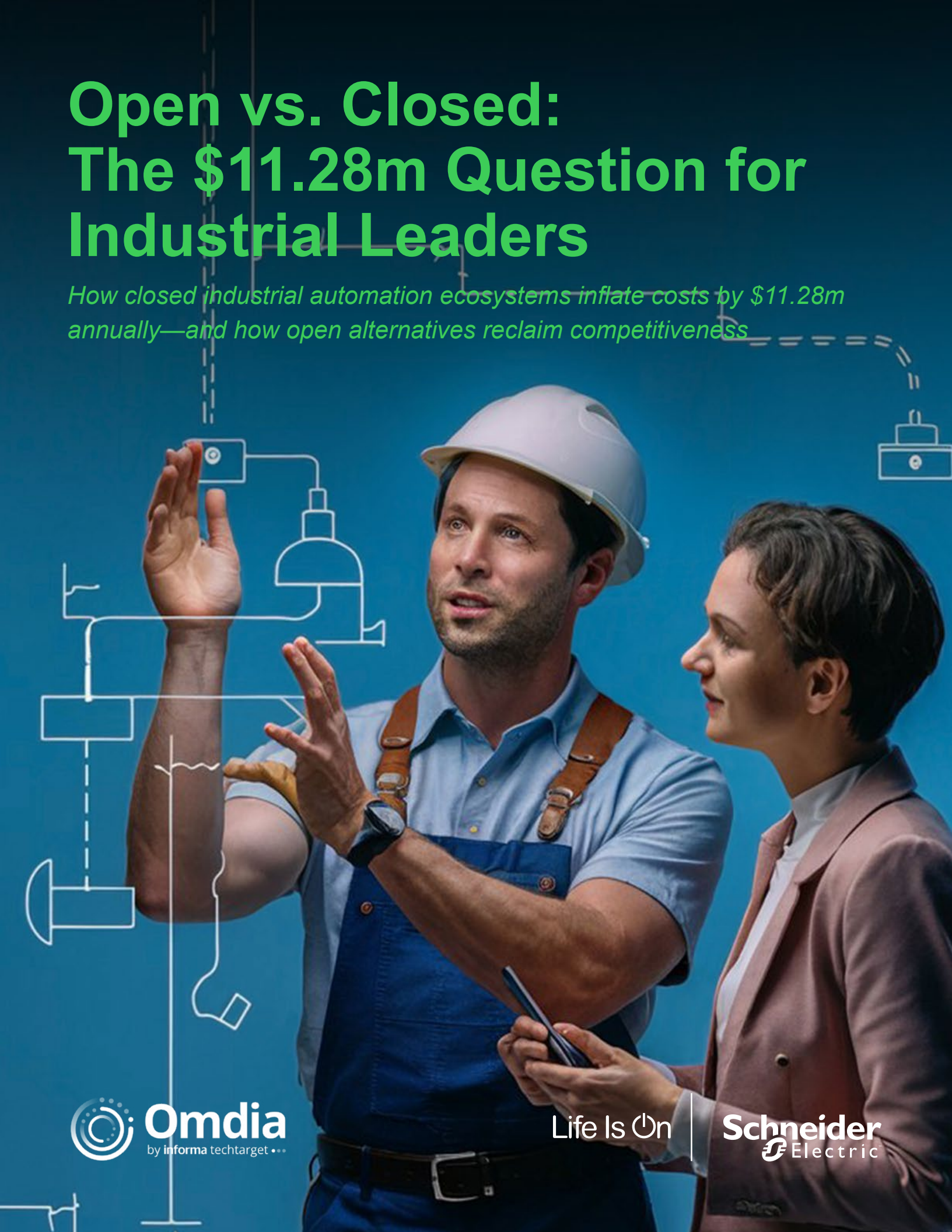
Open vs. Closed: The $11.28m Question for Industrial Leaders

How closed industrial automation ecosystems inflate costs by $11.28m annually—and how open alternatives reclaim competitiveness



Omdia by informa techtarget

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Contents

Executive Summary

- For generations, industrial leaders have pursued three unwavering priorities: growth, competitiveness, and the trust of shareholders and customers. What has changed? Everything else.
- Today's industrial environment faces relentless uncertainty, from supply chain volatility to regulatory upheavals and technological disruption. Yet, many organizations remain tied to closed automation ecosystems that were designed for stability, not adaptability. Closed ecosystems turn uncertainty into costs:

  These systems now impose hidden costs averaging $11.28m annually (7.5% of mid-sized companies' revenue) while actively preventing organizations from achieving their core objectives.

  A detailed breakdown of these costs will be provided later in this paper.
- While these costs may appear unavoidable and are often accepted as standard operating expenses, a strategic shift toward Open, Software-Defined Automation architecture offers a path to significantly reducing these operational costs while delivering flexible, agile responses to that volatile environmental demand. Unlike traditional automation systems that translate uncertainty into financial burden, this approach transforms automation from a rigid constraint into an adaptive capability.
- The purpose of the research is to reveal how yesterday's 'perfectly reliable' closed automation systems have become today's costly liabilities—and why open, modular architectures are no longer just an option, but an operational necessity for thriving in a world of perpetual uncertainty.

Methodology

This whitepaper features data and insights derived from 10 Chief-suite (C-suite) interviews across industries, including oil and gas; food and beverage; water and wastewater; metals; and other manufacturing. It also includes findings from a quantitative survey of 320 participants in energy and chemicals; manufacturing; mining, metals and minerals; warehousing; and water, wastewater and waste industries. Calculations are based on survey data and primary research interviews. The results are based on median survey results and insights from qualitative interviews.

I. The New Normal: Uncertainty Is Not a Crisis—It Is the Default

How market volatility transforms industries and current adaptation strategies. Based on C-suite interviews

Our research and executive interviews across industrial sectors reveal a fundamental shift: uncertainty is no longer an occasional disruption to manage, but the permanent operating environment. The in-depth C-suite interviews indicate industrial companies across verticals are grappling with the following issues:

Industries	Shifting customer expectations	Geopolitical and trade instability	Workforce shortages	Sustainability and regulatory pressures	Digital transformation needs	Climate adaptation demand
Energies and chemicals	●	●	●	●	●	●
Manufacturing	●	●	●	●	●	●
Mining, metals and minerals	●	●	●	●	●	●
Warehousing	●	●	●	●	●	●
Water, wastewater and waste	●	●	●	●	●	●

● High Priority ● Medium Priority ● Low Priority

Data shows the pervasive nature of these challenges across industries. These pressures are affecting industrial companies across different verticals, mostly operating within traditionally rigid automation ecosystems that collide with volatile market conditions, creating mounting costs and operational inefficiencies:

Energies and chemicals

Rising customer demand for low-carbon fuels and circular chemicals is colliding with volatile, geopolitically driven feedstock prices. One of the major challenges is meeting aggressive Environmental, Social, and Governance (ESG) targets without eroding margins.

*"When we talk about **using more recycled products, first of all, quality-wise, it creates more issues in manufacturing.** The quality of recycled material is not homogeneous; it is more dispersed, meaning that it will cause more issues. It will impact the efficiency of the plant."*

— CFO, oil and gas company, India

Manufacturing

Hyper-personalization and sustainability have become non-negotiables. Trade tensions and shortages persist, while AI continues to reshape workforce needs.

*"Today's drinker will switch on a dime depending on location, mood, or whatever. So, to stay relevant—much less grow—you have to **increase your product mix and portfolio**. While we are very good and very efficient at making large volume products, **we have not been as efficient at making smaller volume products.**"*

— CFO, brewery, US

Water, wastewater and waste

Technical skills shortages intensify around treatment technologies while strict environmental standards create compliance pressures. Climate resilience becomes critical as extreme weather threatens aging infrastructure.

*"Over the next five years, our company will operate in **an environment defined by declining water consumption, mounting regulatory requirements, aging infrastructure, and evolving technical expectations.**"*

— CEO, water utilities company, Europe

Warehousing

Same-day delivery expectations surge with e-commerce growth while employee turnover and automation skill gaps persist. Regulatory complexity from safety and environmental standards is amplified by geopolitical and supply chain vulnerabilities.

*"I think the biggest challenge at the **moment is regulations**. There are so many regulations that are coming in and are changing that we are hesitant to change the technology very quickly. The second thing is that it is all dependent on the world economic setup."*

— CFO, leading warehousing and logistics company, Americas

Mining, metals and minerals

Extreme geopolitical dependencies drive pricing volatility while environmental regulations intensify around carbon and water usage increasing pressure to digitize.

*"We mine our own raw material, and that cost keeps escalating. Meanwhile, the finished goods are sold at London Metal Exchange-driven prices, which are not controlled by us. So, it **becomes very important for us to always see whether we are upgrading ourselves and whether we are taking up the technological advancements periodically**, like bringing in AI interventions, digital interventions, and automations because **the price is not controlled by us.**"*

— CEO, leading metals and mining company, India

II. Adaptive Strategies Today: How Industrial Leaders Respond to Market Volatility

In response to these mounting pressures, industrial leaders are deploying tactical solutions to sustain their core priorities of growth, competitiveness, and trust. These efforts focus on five key areas:

1 To **enhance agility and resilience** in rapidly changing markets, most advanced companies are deploying real-time visibility architectures and adaptive systems that enable faster response times. Traditional organizations rely on supply chain diversification, stronger vendor partnerships, strategic redundancies, and inventory buffers maintained across both their own and supplier facilities.

> *"Being agile is something that has to be a core value of the company. It is something that has to be a part of the company's DNA and cannot be an add-on parameter."*
>
> ***— CEO, leading metals and mining company, India***

2 To **optimize costs and increase efficiency,** companies are pursuing Overall Equipment Effectiveness (OEE)-driven performance management, smart and predictive maintenance deployment, energy and raw material consumption reduction, and supply chain diversification to minimize cost volatility.

> *"Efficiency and cost effectiveness are always at the top. On the defensive side, they will make your company more resilient."*
>
> ***— CFO, emerging markets, global food and beverage company***

> *"How can we reduce the consumption of energy? How can we recover more metal from the same amount of raw material? How can we reduce manual intervention?"*
>
> ***— CEO, leading metals and mining company, India***

3 To **enable and retain workforce**, companies are pursuing increased automation, utilizing specialized suppliers for workforce deployment, leveraging innovative technologies to attract next-generation talent, and implementing comprehensive workforce retention programs.

> *"We've been focusing on more and more assets to automate our plants, where we have less dependencies on labor. You do not want a scenario where because* ***you do not have people available, you have to shut down the lines.****"*
>
> ***— CFO, emerging markets, global food and beverage company***

4 To enhance **data-driven decision making**, companies are pursuing comprehensive monitoring systems, implementing AI for pattern recognition and anomaly detection, prioritizing quality automation to eliminate manual processes, and investing in digital twin models for virtual optimization.

"A production company has a lot of data—a lot of data—but that does not mean we have a lot of information, and it really does not mean we have useful information."

— CFO, major brewery, US

"Our drilling machines are operated by joysticks from the surface. The machines work 600 meters below ground, while the operator remains on the surface and controls them remotely.

— CEO, leading metals and mining company, India

5 To **ensure sustainability and compliance** while maintaining stakeholder trust, avoiding regulatory penalties, and stabilizing costs, companies are transitioning to renewable power, implementing recycling systems, developing sustainable products and packaging, and balancing environmental responsibility with operational efficiency.

"Today we are at 26% renewable power. In the next three years, it will be 100% clean energy. My power costs will remain half for the next 25 years with no inflation. ESG projects always give a big positive impact on the bottom line."

— CEO, leading metals and mining company, India

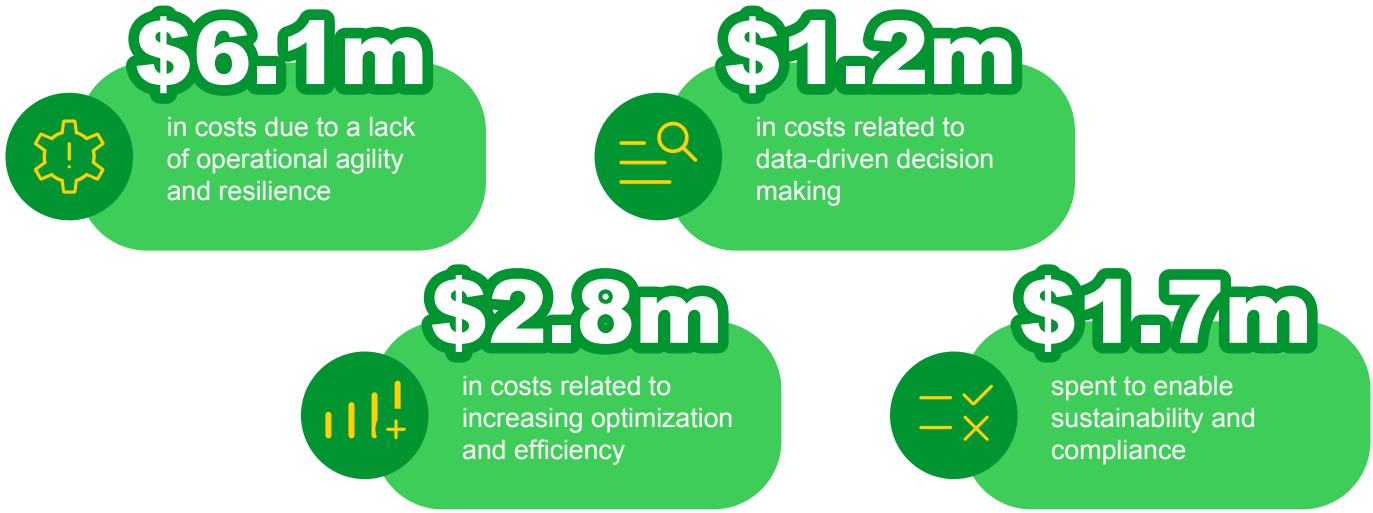
III. Hidden Costs of Addressing Today's New Normal

While these initiatives show progress in strategic areas, companies often overlook **a critical factor central to modern industrial operations: automation systems.** These systems drive efficiency, scalability, and responsiveness across production environments.

Yet many companies still rely on legacy systems that are inflexible, rigid, and closed, hindering their ability to adapt to market volatility.

These infrastructures silently contribute to escalating costs, estimated at **$11.28m** during periods of disruption at mid-market companies. Such expenses are frequently accepted as unavoidable operational overhead, but our research shows that open, interoperable architectures offer a compelling alternative, reducing costs and enabling more agile, resilient responses.

To quantify these costs, we surveyed 320 participants across the target verticals and found the following financial opportunities:



These expenses stem from rigid automation hardware that demands costly customization, extended downtime, and specialized vendor support for routine adjustments. Closed hardware-based systems also create digitalization barriers through data, locked in proprietary silos, requiring expensive integration while limiting advanced analytics capabilities.

These hardware ecosystems, while historically reliable, **were designed for static environments**—not the dynamic operations modern markets demand. Their inability to adapt efficiently transforms routine business changes into expensive technical projects.

These costs were an accepted manufacturing burden, until an alternative emerged.

In the following sections, we fill explore how new approaches can eliminate vendor lock-in while maintaining operational reliability.

$6.1m Costs produced by Lack of Operational Agility and Resilience

Core issue: Automation system inflexibility is limiting customer service capacity

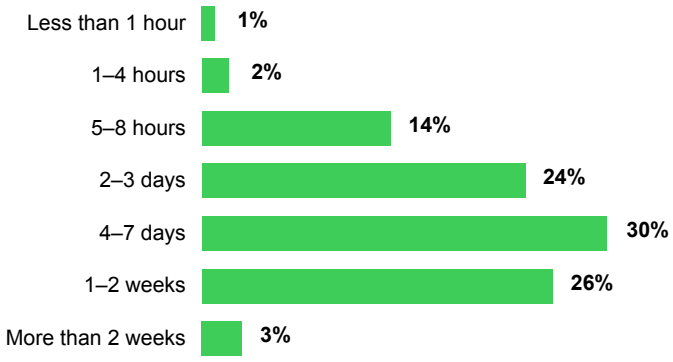
Root cause: Hardware-defined systems (77% of surveyed systems) require physical modifications for functional changes, while multi-vendor platforms create integration complexity.

"The consumer market here, especially in the US, consumers are always looking for something new and different."

— CFO, major brewery, US

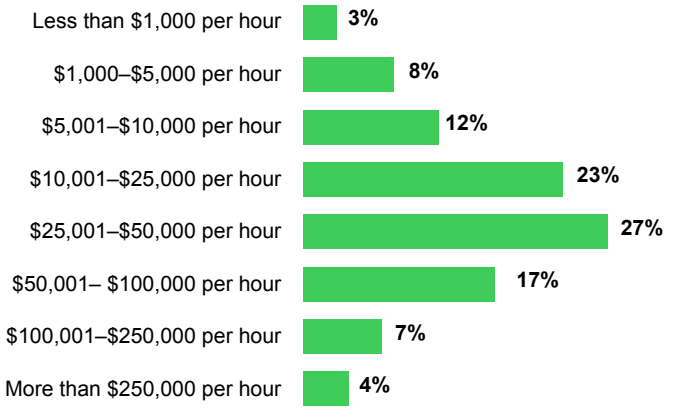
The need for **more frequent line modification to comply with shortened products life cycles,** supply volatility, and evolving regulatory requirements is resulting in annual modification and reconfiguration costs of **$4.9M**.

How long would it take to reconfigure or modify a typical process stage/processing circuit/treatment/ process/fulfilment line/production line?



In mining, metals, and water/waste industries, more than 14 days

What is the approximate hourly cost associated with reconfiguration activity (including lost production, labor, and other direct costs)?

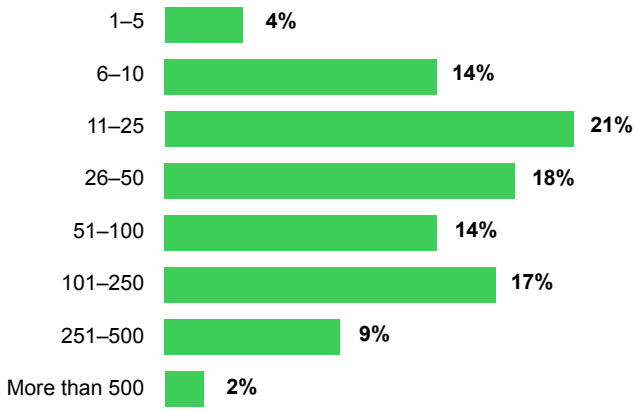


Escalating to $250,000 per hour for companies with revenue exceeding $1bn

Notes: n=320
Source: Omdia

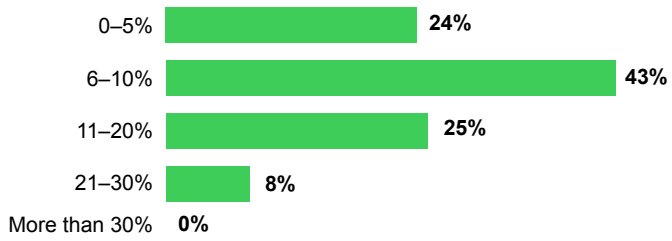
Product portfolio complexity and small order impact: Increasing market volatility and product proliferation are driving a significant volume loss of $1.2m, or 8% of order volume, as manufacturers struggle to support smaller orders efficiently.

How many product grades or formulations are produced at your site?



An average of 18 core products up to 170 products in manufacturing

What percentage of customer orders do you decline or lose due to minimum production or process volume requirements?



Small companies are losing 20% of orders

Notes: n=320
Source: Omdia

$2.28m Price of Optimization and Efficiency: The Maintenance and Downtime Burden and Talent and Time Gap

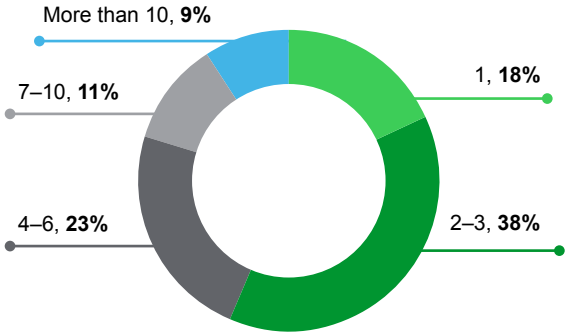
Core issue: Automation hardware complexity driving operational inefficiencies and consuming specialized human resources

Root cause: Multiple hardware platforms create maintenance complexity and vendor dependencies, while specialized hardware knowledge requirements limit workforce effectiveness.

Companies deploy **2 to 10+** hardware platforms on average, with **$1bn+** companies managing even more complex environments. Each platform has unique maintenance requirements, creating vendor dependencies where **30%** of maintenance issues require specialized hardware vendor support.

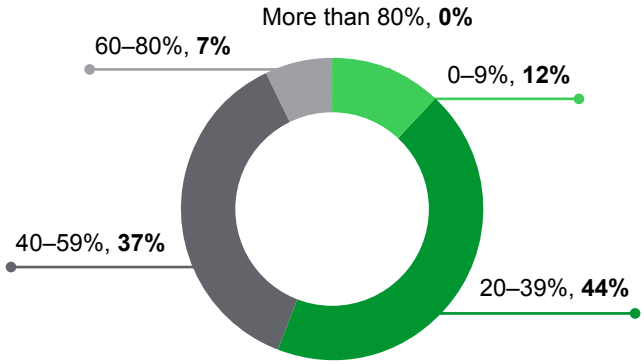
Hardware-based, siloed automation systems limit predictive maintenance capabilities and rapid issue resolution, with costly downtime generating average costs that can reach millions in industrial environments.

How many different automation vendors/systems do you currently use at this site? – Manufacturing vertical



The majority of enterprises in manufacturing verticals use over 10 different vendors systems

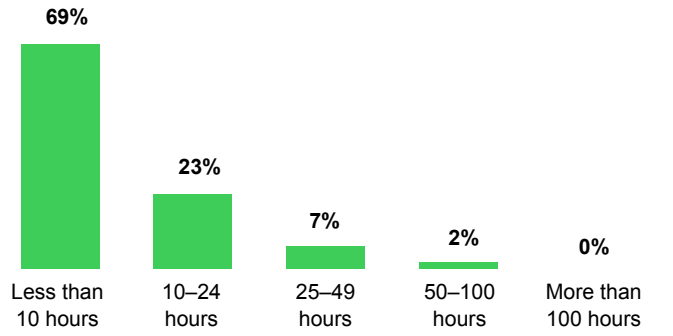
What percentage of maintenance activities require vendor specialists or on-site visits?



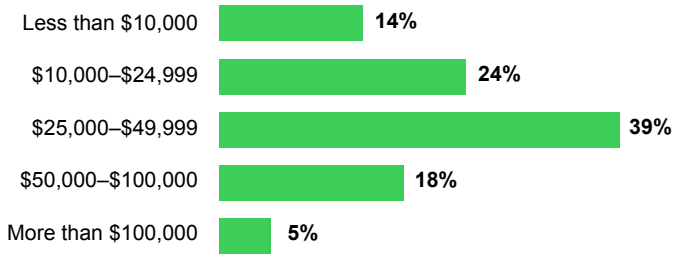
In Water and Wastewater, 40-59% of maintenance activities require vendors on-site presence

Notes: n=320
Source: Omdia

On average, how many hours per month does your site experience full production stoppage due to unplanned downtime?



What is your estimated cost per hour of unplanned downtime at your site?



$75,000/hour for large companies with over $1B revenue

Notes: n=320
Source: Omdia

"If you shut down an automotive OEM assembly line, they charge you tens of thousands of dollars a minute for that shutdown."

— CFO of a leading automotive Tier 2 supplier, US

$1.2m Spent on Data-Driven Decision-Making, Yet Information Silos and Visibility Gaps Remain

Core issue: Proprietary hardware and systems blocking unified data access and digital transformation initiatives.

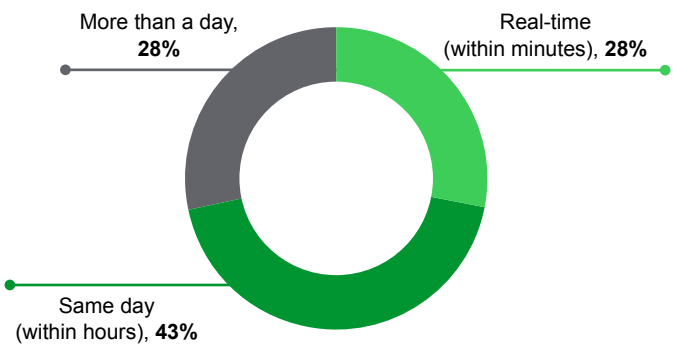
Root cause: Hardware-specific data formats prevent unified analytics and real-time decision-making, while vendor dependencies limit integration flexibility and data accessibility.

Most companies struggle to achieve real-time operational insights. Automation system limitations and expensive data maintenance across different vendor ecosystems create major barriers to digitalization projects. These challenges result in high costs from preventable quality issues, among other costs that could be avoided with proper data.

"I would say that I would invest more in advanced forecasting models or digital twin models. I think we are already late in this process. We should have been thinking about this a couple of years ago."

— CFO, water utilities company, Europe

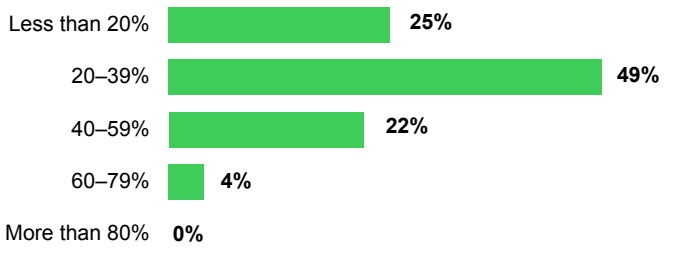
How long does it take to get actionable insights from your operational data?



For $1bn+ companies, same-day response increases to 63%

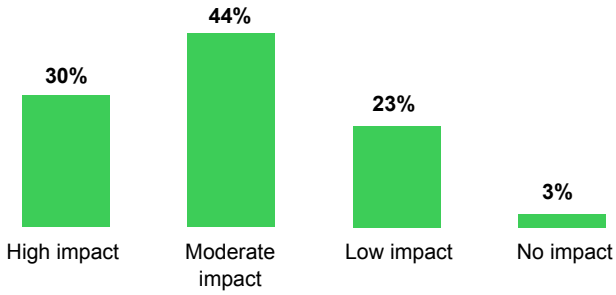
Notes: n=320
Source: Omdia

What percentage of your critical operational data is NOT available in real-time due to system limitations or integration challenges?



40-59% for small companies with less than $10M revenue

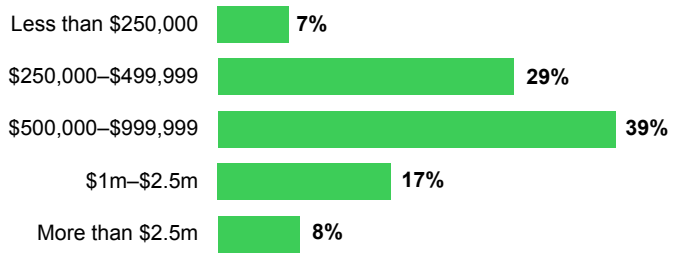
To what extent have automation system limitations affected your organization's digitalization projects in the past 24 months?



Notes: n=320
Source: Omdia

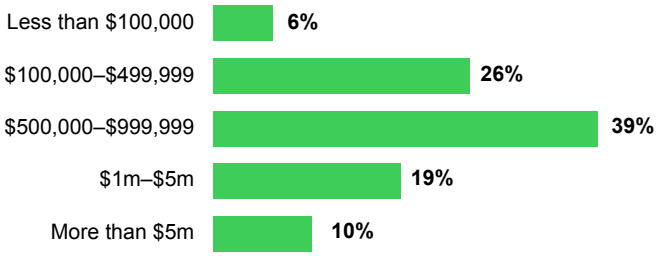
Besides hardware-based closed systems being expensive to manage, they also prevent the application of digital technologies. Take, for example, the case of quality management, real-time insights and adjustments can reduce costs in the range of **$1m–5m by reducing preventable quality issues.**

What total annual cost do you incur by maintaining and sharing operational data across all your digital/ intelligent devices?



$1-$2.5 in large companies

Estimate the annual cost of quality issues that could be prevented by real-time production or process adjustments at your site?



$1-$5M for large companies

Notes: n=320
Source: Omdia

$1.7m Lost on Sustainability and Compliance: Regulatory and Environmental Adaptation Costs

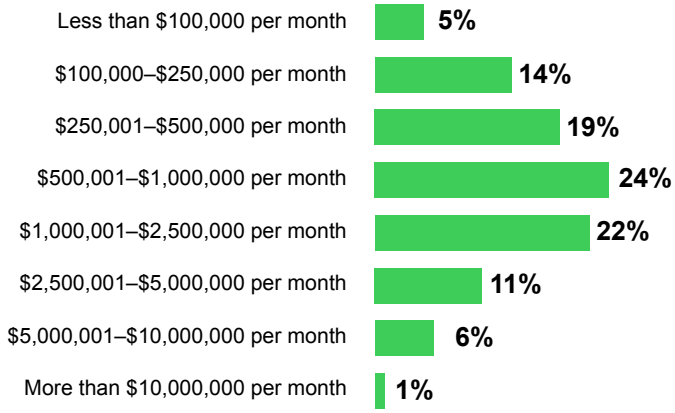
Core issue: Hardware retrofits required for compliance changes

Root cause: New regulations demand costly hardware modifications for physical systems. Proprietary constraints limit affordable component options, and approval processes create major delays.

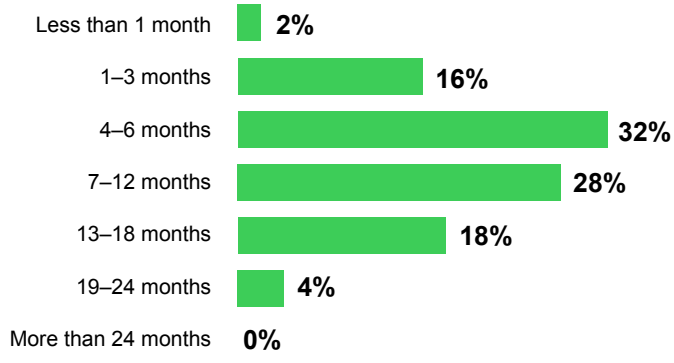
Mid-market companies face significant financial pressure from sustainability compliance requirements, spending **$1.7m annually on retrofits and integration**, along with substantial workforce time allocated for compliance projects (assuming major retrofits every two to three years).

Hardware-based system upgrades are costly, requiring companies to modernize equipment to meet new emissions standards and energy efficiency requirements, with delays risking fines and competitive disadvantages.

What is the approximate monthly cost associated with such retrofit (including equipment, engineering, implementation, and lost production)?



When implementing a complete retrofit or expansion of an existing process stage, what is the typical timeframe from project initiation to full operational status?



Notes: n=320
Source: Omdia

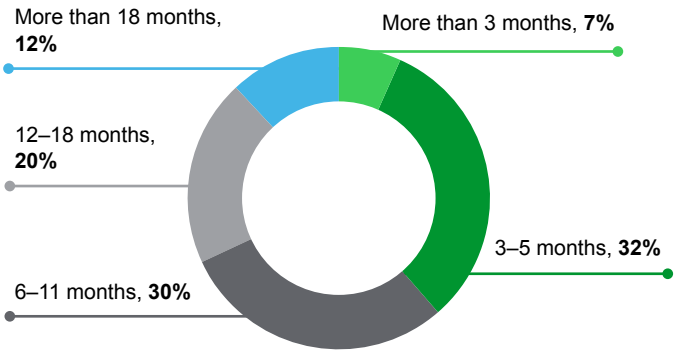
Three to Five Months Lost in Time-to-Market Owing to Hardware Design Cycle Delays

Beyond these costs, hardware automation systems cause major delays through long design cycles dominated by component selection and integration challenges. These delays limit their ability to respond quickly to market changes.

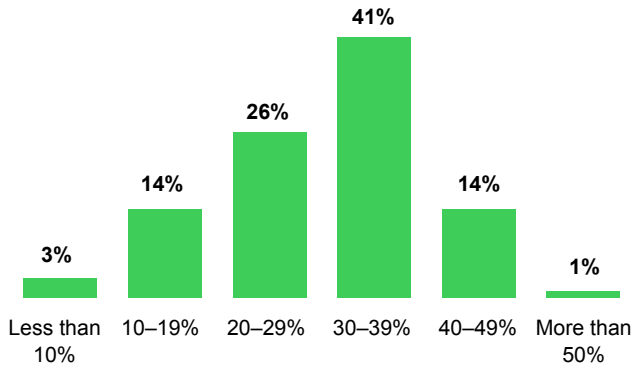
Companies typically require three to five months from initial concept to final design approval. Of this time, **35%** is dedicated to selecting and specifying the right hardware components and connectivity solutions, while another **30%** is spent on ensuring different automation components work together properly.

To replicate a successful production or process setup in a new facility, companies spend **six to 12 months,** with **77%** of the time and costs spent on hardware procurement and installation.

For your most recent production line or process stage design project, how long did the overall line or process stage design phase take from initial concept to final design approval?

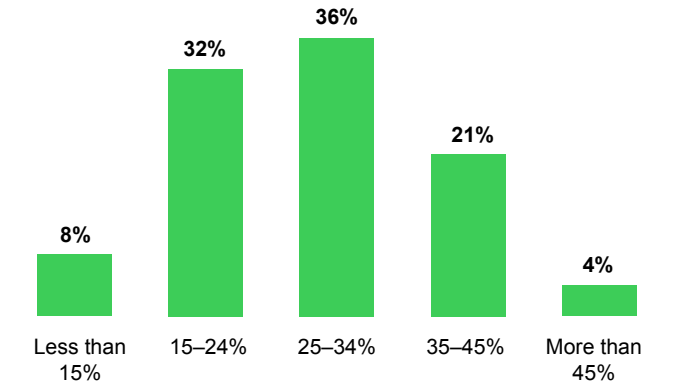


For your most recent production line or process stage design project, what percentage of the total design time was dedicated to selecting and specifying the right hardware components and connectivity solutions?



Notes: n=320
Source: Omdia

For your most recent production line or process stage design project, what percentage of design time was spent on ensuring different automation components which would work together properly?



Notes: n=320
Source: Omdia

According to the survey, hardware-based closed systems impose a financial burden on companies, with the cumulative costs of integration challenges, operational inefficiencies, and digital transformation barriers creating substantial economic impact across manufacturing organizations.

For mid-market companies (with $150m in revenue), these costs total $11.28m annually—that is 7.5% of their revenue

Large companies (with over $1bn in revenue) face annual costs exceeding $45.18m—over 4.5% of company revenue. In smaller companies, hardware inefficiencies can result in opportunity costs and operational disruptions equivalent to up to 25% of annual revenue, e.g. up to $2.5M for $10M companies. This disproportionate impact reflects small businesses' limited ability to absorb operational disruptions, higher portion of missed business opportunities due to technical limitations and their dependence on reliable systems

$6.1m

in costs due to a lack of operational agility and resilience

$4.9m in system modification expenses

$1.2m in lost opportunities from limited small MOQ support

$1.2m

in costs related to data-driven decision making

$4.9m in system modification expenses

$500,000 spent maintaining fragmented data flows

$2.8m

in costs related to increasing optimization and efficiency

Downtime expenses from disparate systems

$1.7m

spent to enable sustainability and compliance

$1.7m in retrofit and integration expenses

While these costs may seem inevitable, a growing number of industrial leaders are discovering that different automation architectures—such as **Open, Software-Defined Automation architectures—can help recover much of this lost value,** addressing each strategic imperative while reducing the financial burden of proprietary lock-in.

IV. Measurable Outcomes: Customer Results from Open, Software-Defined Automation Deployment

This is not theoretical. With Open, Software-Defined Automation, change happens faster—and it is repeatable.

The true value of Open, Software-Defined Automation is not in the technology itself, but in how it translates into measurable improvements across key operational KPIs—proven by real customers who have moved beyond theory to tangible results.

We believe Open, Software-Defined Automation can help industrial enterprises address the five business issues and reduce the $11.28m in costs outlined above.

Open, Software-Defined Automation is a new type of automation system, designed to fully support industry as it navigates the continuous uncertainty of today's world.

"This is a game-changer for us. Advanced engineering tools will help us reduce the time to develop an application and support easy integration of IT technologies, including predictive maintenance. This translates into faster time-to-market with an easier to maintain solution for our customers."

— Industrial automation vendor, Europe

"The solution provides us with faster time-to-market and the flexibility that critical industries like food and beverage and pharmaceuticals need."

— Machine builder, Europe

Value of Open, Software-Defined Automation as Confirmed by Early Adopters

Faster engineering and process launch

- **30%** lower design and engineering costs
- **40%** fewer errors in the development phase
- Significantly reduced time-to-market
  - — **Chemical recycling and green technology provider, Europe**

- **≈10%** smaller but still robust architectures
- **50%** faster engineering deployment
- **30%** faster commissioning
  - — **Water and wastewater provider, Europe**

Better operational energy efficiency and sustainability

- **43%** better energy efficiency and up to **100%** engineering efficiency improvement
  - — **Industrial equipment and vacuum technology manufacturer, Asia & Oceania**

- Digitized data collection and **30%** faster test data processing, enabling a significant increase in the number of tests and productivity
  - — **Electrochemical and water treatment provider, Europe**

Open Software-Defined Automation customer value

Faster commissioning, remote support, and simplified integration of different systems

- **2x** faster system development and commissioning
- Greatly simplified system repeatability
  - — **Solar technology manufacturer, Europe**

- **50%** savings in commissioning
  - — **Machine builder, Europe**

- Remote operations and maintenance support
- Simplified integration of new or upgraded equipment
  - — **Carbon removal and climate tech provider, EMEA**

100% future-ready solution that is open to reduce the impact of hardware obsolescence

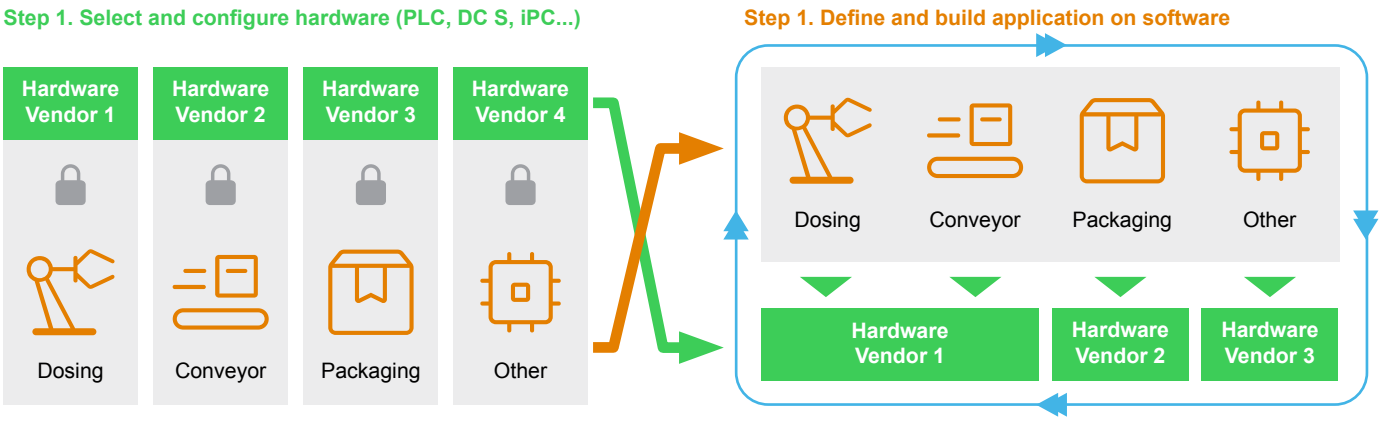
- **50%** less effort to develop industrial control software
- Digital twin capabilities accelerated development time and reduced costs
- **100%** future-ready solution
- Improved operational effectiveness through system diagnosis and ease of integrating advanced data-driven applications
  - — **Non-profit consortium for Industry 4.0 and advanced manufacturing solutions provider, Europe**

- **20%** less engineering time
- Future-ready automation system easily adaptable to changing business requirements
  - — **Wastewater treatment provider, Europe**

V. How Open, Software-Defined Automation Works—and Why It Should Be Based on Open Standards

As we have seen from the survey results, it takes significant time and resources to modify production processes with today's traditional automation systems. Even minor changes to production lines typically involve reprogramming controllers, rewiring I/O systems, or replacing hardware components. Multi-vendor environments create additional integration complexity, often requiring specialized expertise or on-site vendor support.

Open, Software-Defined Automation addresses these limitations by separating control logic from hardware infrastructure. Control logic is realized in **open** software, which can run on any manufacturer's compliant **open** hardware and does not rely on specific hardware's embedded functionality. Production reconfiguration can be accomplished with redeployment of software, like application updates. This can eliminate or greatly reduce reprogramming, rewiring, and overall control system modification time and cost. The approach reduces engineering time, enables faster changeover and launch.



Architectural Foundation

Open, Software-Defined Automation allows your control logic to run on open, standards-compliant hardware platforms rather than proprietary dedicated devices. Instead of purchasing vendor-specific controllers with fixed functionality, industrial control systems use standard industrial edge devices that can execute control logic through software updates, without the need to rely on support from any specific vendor.

This is similar to approaches common in today's IT world and applies the same principles as software-defined networking and data centers: it separates automation functions from the underlying hardware. Control systems and safety functions run as open software on standardized platforms—edge devices, servers, or cloud infrastructure. Hardware becomes a commodity infrastructure while software defines operational behavior.

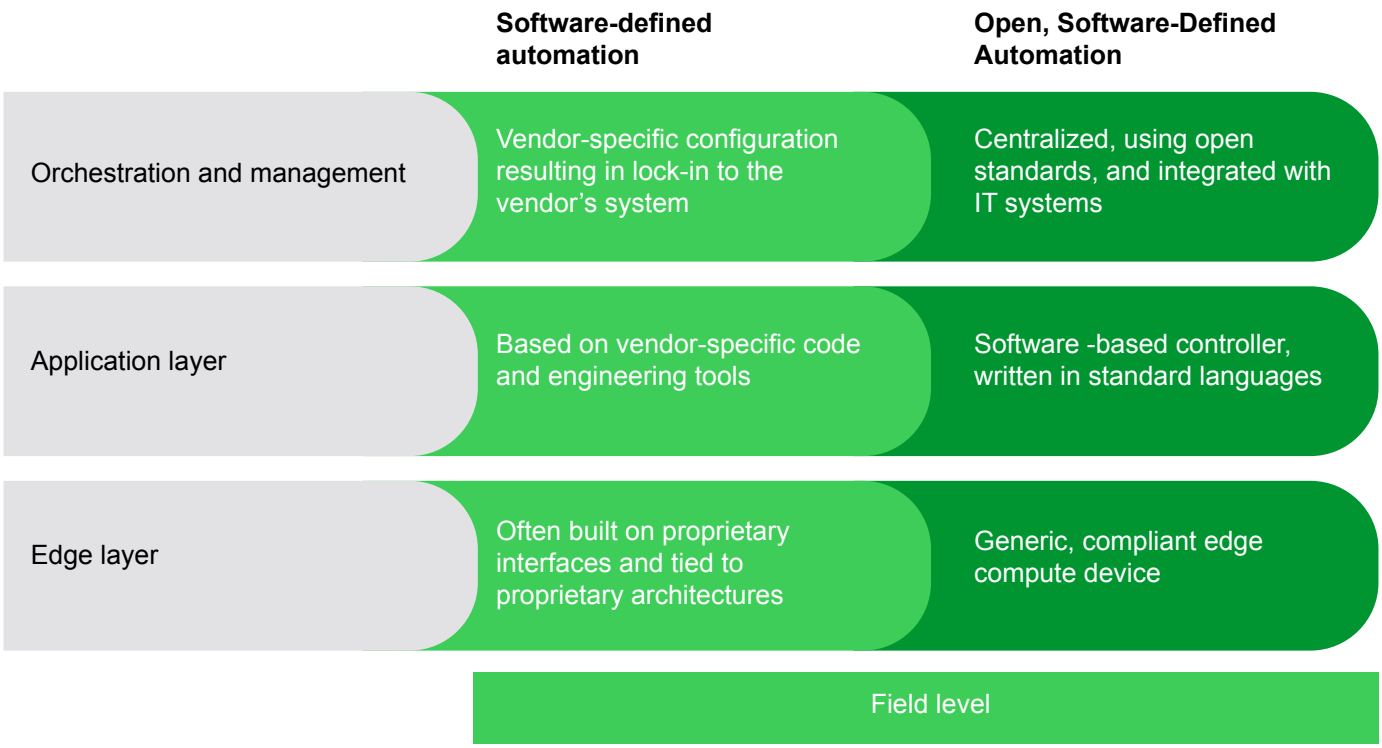
The Importance of Open Standards

The transformative potential of software-defined automation depends on openness. Simply virtualizing proprietary controllers within closed systems is not true Open, Software-Defined Automation. While the virtual controllers approach moves logic away from traditional controllers to different hardware, it still uses vendor-specific code, development tools, and communication protocols—effectively maintaining the existing lock-in with the agility and flexibility constraints it places on industrial companies.

Real transformation requires control logic that runs on open standards, such as IEC 61131-3, IEC 61499, OPC UA, OPC UA FX, Margo, MQTT, and related protocols. Open standards enable code portability, system interoperability, and cross-platform integration. This ensures the long-term adaptability, vendor independence, and scalable architectures necessary for today's sustainable industrial operations to survive and thrive.

The result is hardware-agnostic automation infrastructure where software creates competitive advantage rather than proprietary hardware dependencies.

How Open, Software-Defined Automation Works and Why It Should Be Based on Open Standards



Open, Software-Defined Automation value for customers

Software-defined automation based on open standards principles	Customer value
• Emphasis on open standards and interoperability	• Maximize agility and efficiencies through scalable design – scale rapidly without reengineering
• Open and collaborative ecosystem	• Protect your original investments in legacy systems – can run on your legacy infrastructure and maximize ROI
• Vendor-neutral frameworks	• Maximize efficiency via seamless data flow enablement – a native feature of Open, Software-Defined Automation
• Seamless integration	• Upgrade without production interruption by modifying the software rather than hardware
• Orchestration across diverse systems	• Select hardware freely – software will define the functionality

VI. Every Quarter You Delay Addressing Closed Ecosystem Costs is Another $1m+ in Lost Value—Money You Can Reinvest in Growth and Innovation

In a world where product lifecycles shrink, supply chains fracture, and talent gaps widen, agility and flexibility are not optional—they are survival.

Open, Software-Defined Automation is not just a technical upgrade. It is a strategic imperative for industrial organizations to thrive in the face of the permanent uncertainty which comes from rapidly changing customer and market demand, labor shortages, sustainability mandates, profitability demand, and global supply chain fragility.

Every quarter you delay addressing the cost of closed automation ecosystems is another **$1m+ in lost value**—money you could reinvest to grow and innovate.

The volatility reshaping your operations is not temporary. Your responses should not be either.

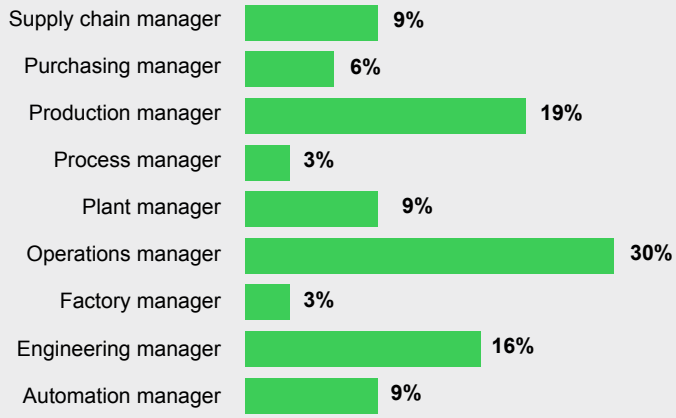
While yesterday's systems were built for stability, today's reality demands architectures that can adapt as fast as the rapidly changing industrial environment.

The future belongs not to those who build faster machines, but to those who build adaptable systems that evolve to meet the demand of today's business world.

Appendix

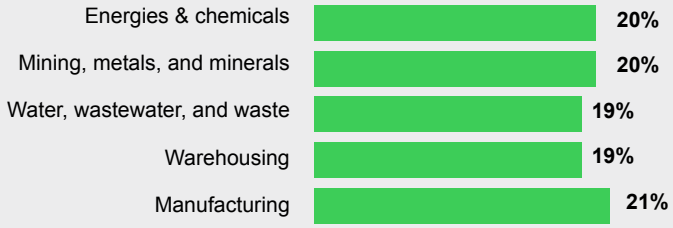
Survey Details - Respondent Profile

What best describes your job role?

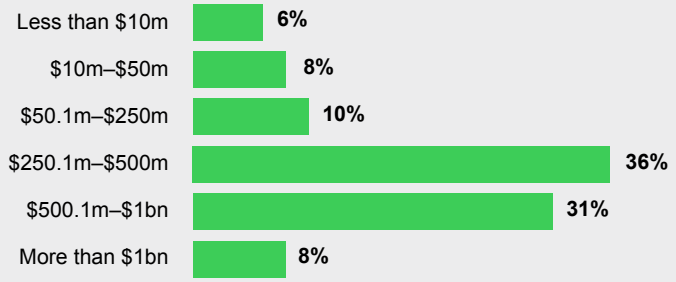


Notes: n=320
Source: Omdia

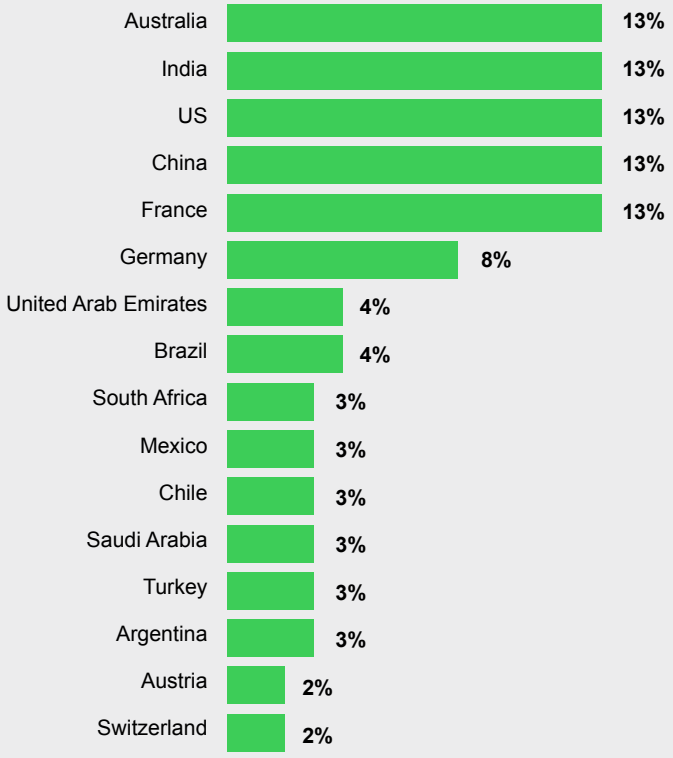
Which industry best describes your company's activity?



What was your organization's approximate annual turnover (revenue) in the most recent complete fiscal year?



Which country do you currently reside in?



Notes: n=320
Source: Omdia

Omdia consulting

Omdia is a market-leading data, research, and consulting business focused on helping digital service providers, technology companies, and enterprise decision makers thrive in the connected digital economy. Through our global base of analysts, we offer expert analysis and strategic insight across the IT, telecoms, and media industries.

We create business advantage for our customers by providing actionable insight to support business planning, product development, and go-to-market initiatives.

Our unique combination of authoritative data, market analysis, and vertical industry expertise is designed to empower decision-making, helping our clients profit from new technologies and capitalize on evolving business models.

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help your company identify future trends and opportunities.

Get in touch

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