



 GlobalData

SPRING 2026

Business benefits of private wireless: how network performance can power operational outcomes

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Contents

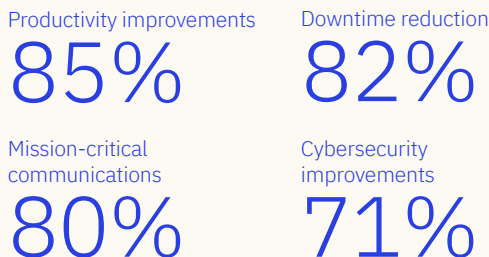
Executive summary	03
Introduction.....	04
Business benefits: what enterprises are realizing (and why it's showing up in KPIs)	05
Deployment timeline: from early wins to repeatable, multi-site value	09
Use cases and outcomes: turning use cases into benefits ...	11
Measuring success: KPIs that make benefits tangible	13
Conclusions and actions	17
Appendix.....	19

Executive summary

Private wireless using 5G and LTE is being redefined from pure connectivity into a “business outcomes engine” for operations.

This whitepaper draws on a survey of 305 large enterprises using private wireless networks and 15 in-depth interviews across multiple industries and functions to quantify the business benefits that organizations achieve when deploying private wireless solutions, and to explain how those results are operationalized and scaled.

The data shows strong overall momentum: 70% of survey respondents say they are extremely or moderately satisfied with their private wireless deployments, and all 100% have achieved at least one quantifiable business benefit so far. Among these organizations already measuring outcomes, **double-digit gains** are common (all greater than 10%) – including:




Importantly, business value is often realized quickly: **60%** of those seeing productivity gains report achieving benefits within three months, and **65%** report the same for downtime improvements. Respondents also cited unexpected benefits beyond the initial business case, including increased employee satisfaction (**35%**) and improved real-time data for decision-making (**31%**).

“Once the critical users got used to the new digital apps, it’s been like ‘why haven’t we had this forever?’”

Director of Enterprise Technical Operations
Oil & Gas

The research also highlights why some deployments scale while others can stall: organizations increasingly point to integration complexity and skills gaps as barriers, reinforcing the role of repeatable integration and managed operations in turning early wins into multi-site, multi-use-case impact.



“We don’t start with ‘let’s deploy private 5G.’ We start with where execution is breaking, how often it happens, and what the impact is—then we measure it and scale from there.”

Director
Data Science (Healthcare)

Introduction

Private wireless is increasingly being evaluated less as a “network upgrade” and more as an operational platform, one that connects people, machines, and environments in ways that translate into measurable business outcomes.

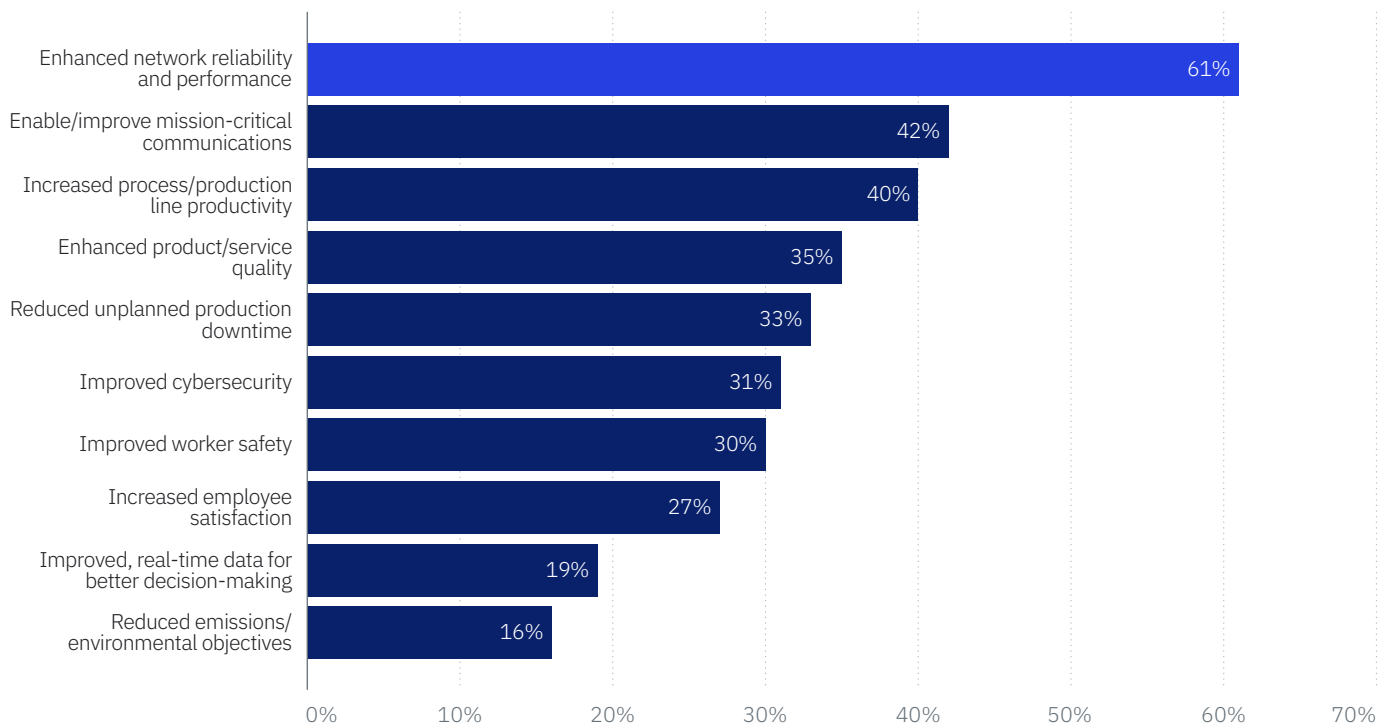
While early discussions often focused on coverage, speeds, or latency, enterprise leaders are now asking a different set of questions: *How does this reduce downtime? Increase throughput? Improve worker safety? Strengthen cybersecurity and compliance? And how quickly can those gains be proven and repeated across sites?*

This shift matters because private 5G and LTE deployments can look, at first glance, like costly infrastructure projects. In practice, the strongest business cases start with operational priorities and then work backward to the connectivity, integration, and operating model

required to deliver them. Survey responses reinforce that buying motivations are rooted in real-world constraints and performance needs. They cite priorities such as reliability, resiliency, security, control, support for mission-critical communications, and the ability to connect more devices and applications in challenging environments. In other words, private wireless is being adopted to make essential processes more predictable, safer, and easier to manage – not simply to make networks “faster”.

The in-depth interviews conducted for this research echo the same theme: value is realized when private wireless is treated as a cross-functional initiative, aligned to a small set of outcomes and linked with the right KPIs from the start – so early wins can be expanded and operationalized at scale.

Top 10 primary business objectives for deploying private wireless



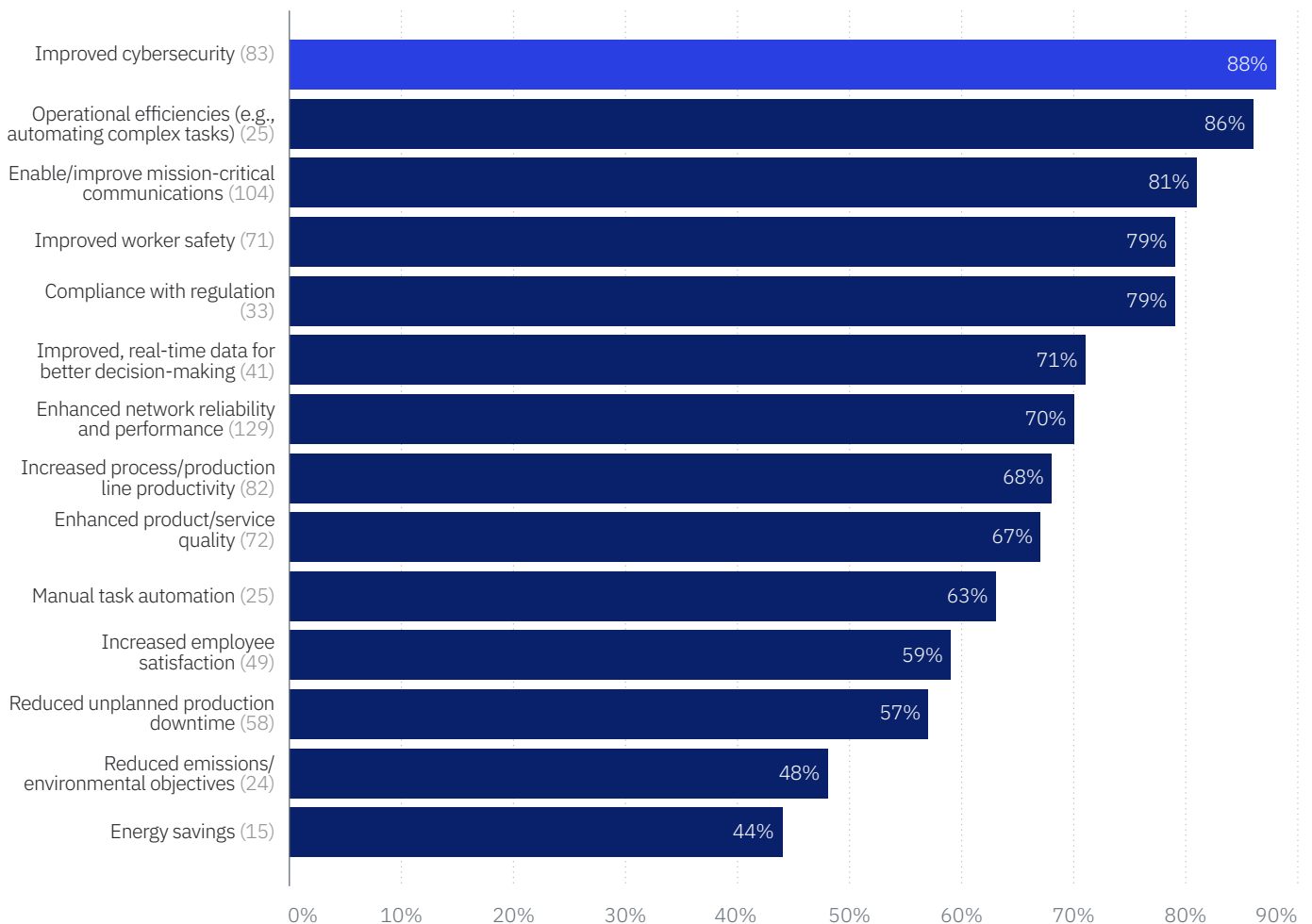
Source:
GlobalData

Business benefits: what enterprises are realizing (and why it's showing up in KPIs)

Across industries, private networks are about more than just 'better connectivity'. They are now increasingly seen as drivers of horizontal business benefits that can be applied to multiple workflows and then measured in operational KPIs. In the survey, respondents

most often described the value of private wireless in terms of more reliable performance, stronger control and security, and the ability to support new devices and applications in challenging environments.

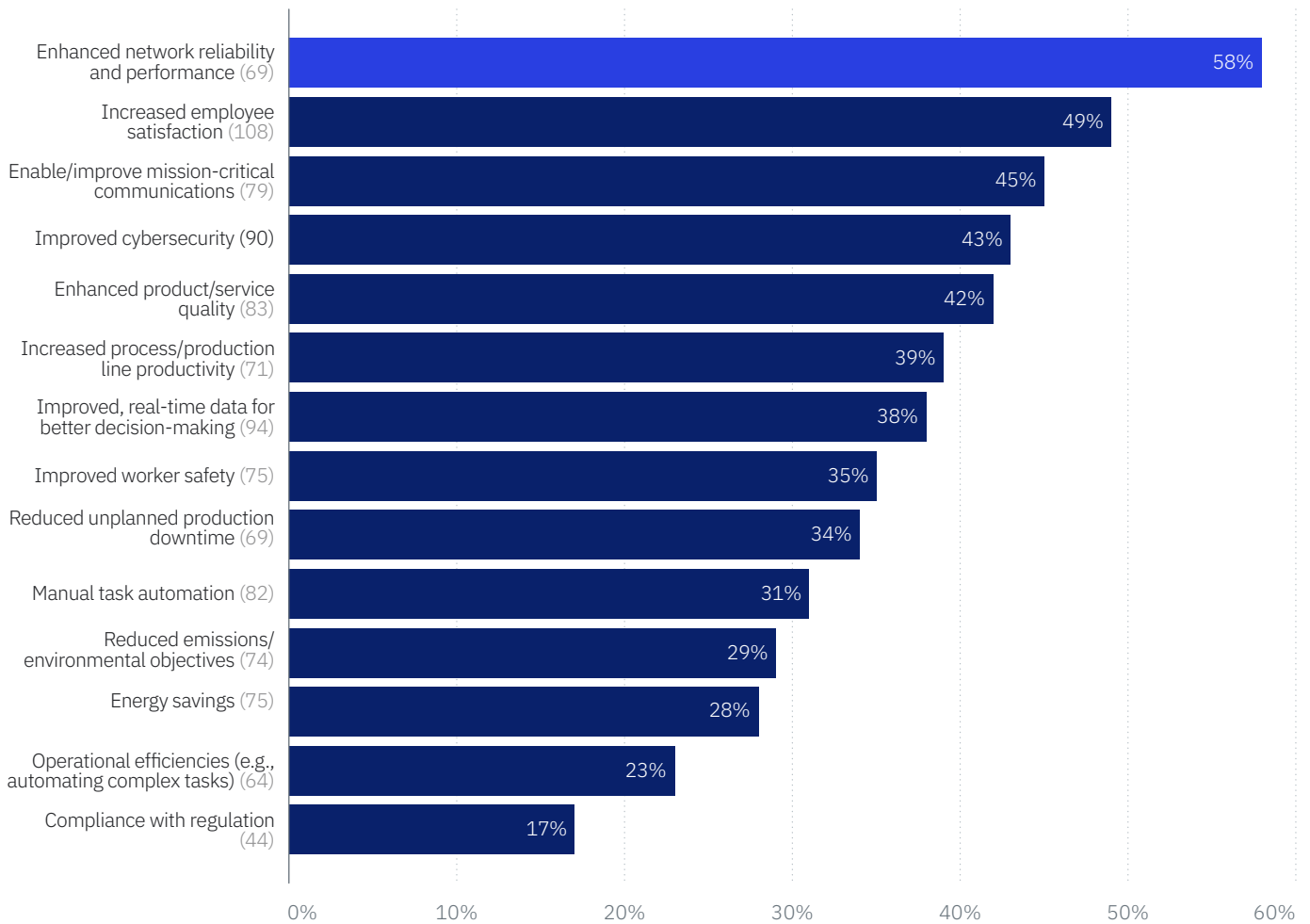
Desired benefits achieved



Source:
GlobalData

Note:
Number of respondents shown in brackets

Unexpected benefits achieved



Source:
GlobalData

Note:
Number of respondents shown in brackets

With these benefits, private 5G/LTE is acknowledged to create a more stable digital foundation for operations. That stability – and, as a result, predictability – is what enables improvement in operational throughput, uptime, safety, and risk posture.

How these benefits happen is consistent across deployments. First, organizations establish deterministic coverage and capacity in the areas that matter most (production lines, yards and aprons, warehouses, campuses, remote sites). Second, they integrate connectivity into existing operating workflows – identity and access, device management, OT systems, and incident response – so the network becomes part of how work gets done, not a separate “IT project.” Third, they identify desired outcomes with a small set of KPIs and

baselines early, which makes performance improvements visible and repeatable. The typical first use cases reflect this practical mindset: connecting handhelds and tablets for frontline teams, enabling reliable push-to-talk or dispatch communications, improving visibility with sensors and cameras, and hardening connectivity for critical OT assets – use cases that are easy to pilot yet meaningful to operations.

Below are what can be considered primary outcome groupings, along with quantitative proof points from the survey and the common mechanisms that convert private wireless connectivity into business value.

Productivity and operational gains

When private wireless is tied to specific workflows (asset or inventory tracking, quality checks, remote expert support), productivity gains can be significant. Among respondents who listed increased productivity as a priority objective, **85%** measured improvements of **11%** or more, including **51%** who said productivity increased by more than **20%**.

Achieved productivity benefits within three months

60%

Furthermore, **60%** achieved productivity benefits within three months.¹ In in-depth interviews with enterprises, the pattern is often the same: fewer interruptions, fewer manual workarounds, and faster cycle times because devices and applications stay connected where Wi-Fi or public networks are inconsistent.

“We moved from weekly or quarterly reports to continuously monitoring machine and station-level KPIs in a central ‘nerve system.’”

Head of Product Development/Group R&D
Manufacturing

Operational continuity: uptime (and downtime reduction)

Downtime is one of the clearest outcome categories because it can be measured directly with the cost quantified quickly. Among those who listed reduced downtime as a priority objective, **82%** measured reductions of **11%** or more (of which **35%** measured reductions of **21%** or more) and **65%** saw downtime benefits within three months.²

Saw downtime benefits within three months

65%

Benefits typically come from eliminating coverage gaps in critical areas, stabilizing connectivity for monitoring and control systems, and improving the speed of detection and response. Integration matters here: when alerts feed into existing ticketing and incident workflows, teams can act faster and with clearer accountability.

1 Respondents who listed ‘Enhanced connectivity’ as a priority desired outcome. N=75.

2 Respondents who listed ‘Reduced downtime’ as a priority desired outcome. N=49.

3 Respondents who listed ‘Enabled/improved mission-critical communications as a priority desired outcome.’ N=86.

“If a warehouse doesn’t have connectivity, then it’s a huge problem... we’re not able to dispatch... or do transport documentations.”

Operations Manager
Logistics & Transport

Mission critical communications and the connected worker

Many organizations begin with workforce communications because the use case is intuitive and cross-functional: reliable voice, push-to-talk, dispatch, or coordination tools that work consistently across a facility or site. Among respondents who listed enabled/

Measured gains of 11% or more

80%

improved mission critical communications as a priority objective, **80%** measured gains of **11%** or more, and **56%** achieved benefits within three months.³ In practice, private wireless enables more predictable coverage and performance, but the measurable outcome is realized through worker efficiency: clearer escalation paths, faster dispatch, fewer missed handoffs, and safer coordination in high-risk environments.

“Everything’s available... on an iPad or a phone at all times.”

Director of Enterprise Technical Operations
Oil & Gas

Cybersecurity, compliance, and risk posture

Private wireless is also used to reduce risk by improving segmentation, controlling who and what connects, and limiting exposure with default isolation. In interviews, enterprises emphasized the benefit of using an on-prem core network for keeping traffic local, supporting, for example, separate APNs/segments for cameras vs OT vs user devices. Among respondents who listed cybersecurity improvements as a priority objective in their private wireless deployments, **71%** measured gains of **11%** or more, and **60%**

“Since deploying private wireless, there are far fewer incidents, accidents and fatalities in the field.”

Project Manager, Operations
Utilities

Measured gains of 11% or more

71%

improvements are strong as well (e.g., 87% measuring 11%+ improvement in regulatory compliance).⁵ The key is operational governance: identity, policy, monitoring, patching, and integration with security operations so the private network is managed as part of the enterprise security posture.

achieved benefits within three months.⁴ Where compliance is listed as a priority objective, reported

Achieved safety benefits within three months

71%

produce “culture” benefits that weren’t always part of the original business case: 35% cited improved employee satisfaction as an unexpected benefit⁷ and among those who listed it as a priority objective, **83%** reported **11%+** improvement.⁸

11% or more, and **71%** achieved safety benefits within three months.⁶ The survey also suggests that private wireless can

Taken together, these results reinforce a simple point: private 5G/LTE creates value when it is deployed as an outcomes engine – anchored to a targeted set of operational priorities, integrated into the systems and workflows that run the business, and measured early so successes can be scaled.

“Most important thing is to know your environment properly first. Analyze it beforehand. Top down and bottom up, office and production environments, subnets, endpoints, separated line by line.”

Technical Project Manager
Automotive Manufacturing

Safety, culture, and employee experience

Safety outcomes are often closely linked to communications and visibility: fewer coverage gaps, better situational awareness, and faster response when incidents occur. Among those who listed improved worker safety as a priority objective, **73%** measured improvements of

“When a process becomes a ‘red line’ because it could cause injury, we stop it immediately across all sites. Private LTE let us remove workers from railcars without losing real-time visibility.”

Network Manager
Steel Manufacturing

4 Respondents who listed ‘Improved cybersecurity’ as a priority desired outcome. N=78.

5 Respondents who listed ‘Compliance with regulation’ as a priority desired outcome. N=30

6 Respondents who listed ‘Improved worker safety’ as a priority desired outcome. N=58.

7 Respondents who achieved ‘Improved employee satisfaction’ as an unexpected benefit. N=263.

8 Respondents who listed ‘Improved employee satisfaction’ as a priority desired outcome. N=42.

Deployment timeline: from early wins to repeatable, multi-site value

Private wireless projects are often evaluated through the lens of implementation timeframes.

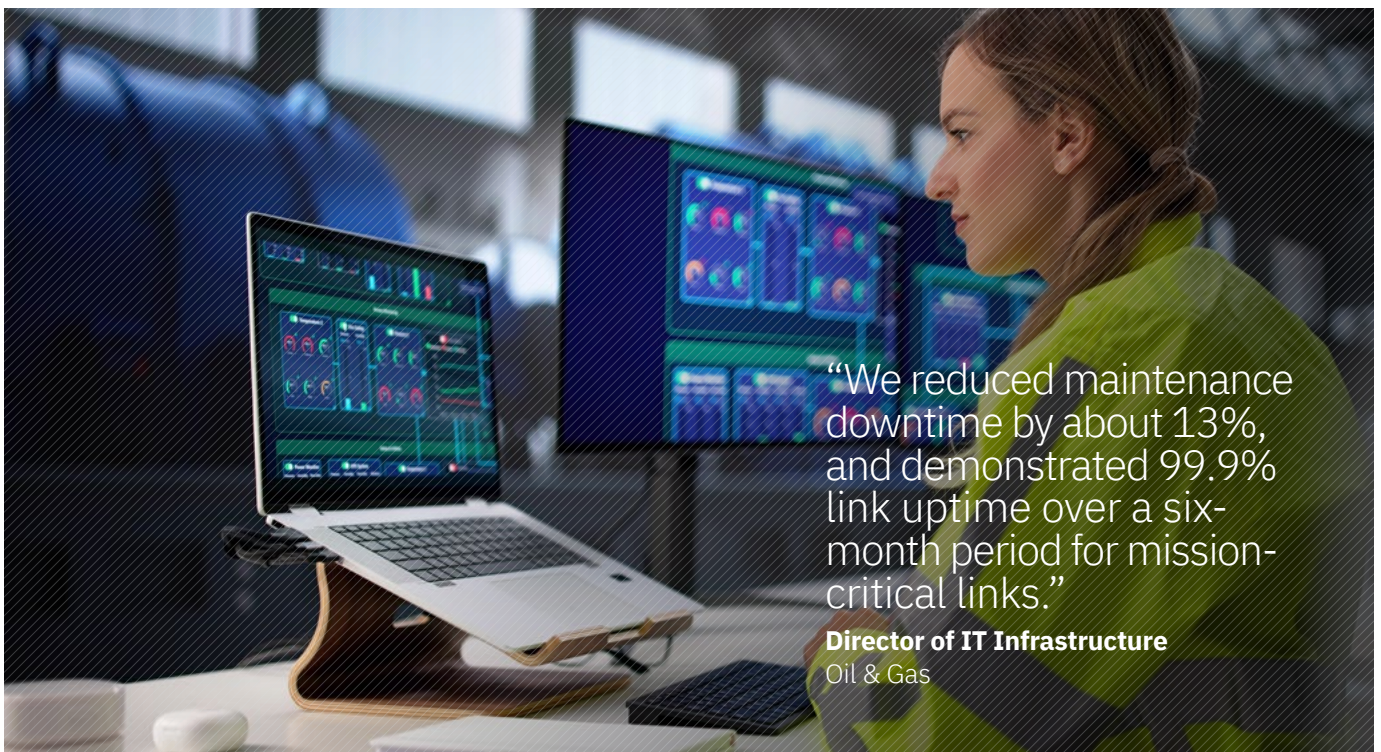
Interviews show that end-to-end delivery timelines can run 6–18 months once site assessments, cybersecurity approvals, OT integration, and construction constraints are included (some of which can come as a surprise during first deployments). But what matters to business leaders is not how long it takes to install infrastructure, but how quickly measurable outcomes – aka business benefits – show up after implementation, and whether they can be repeated and scaled. The survey results suggest that many organizations begin realizing value within the first quarter after going live, then expand benefits as they stabilize and standardize operations, further integrate systems, and add additional sites and use cases.

9 Timeframe within which respondents achieved their desired outcomes.

- Enhanced productivity: N=75.
- Reduced downtime: N=49.
- Enabled/improved mission-critical communications: N=86.
- Improved cybersecurity: N=78.
- Improved worker safety: N=58.

0-6 months: prove value with a focused, measurable win

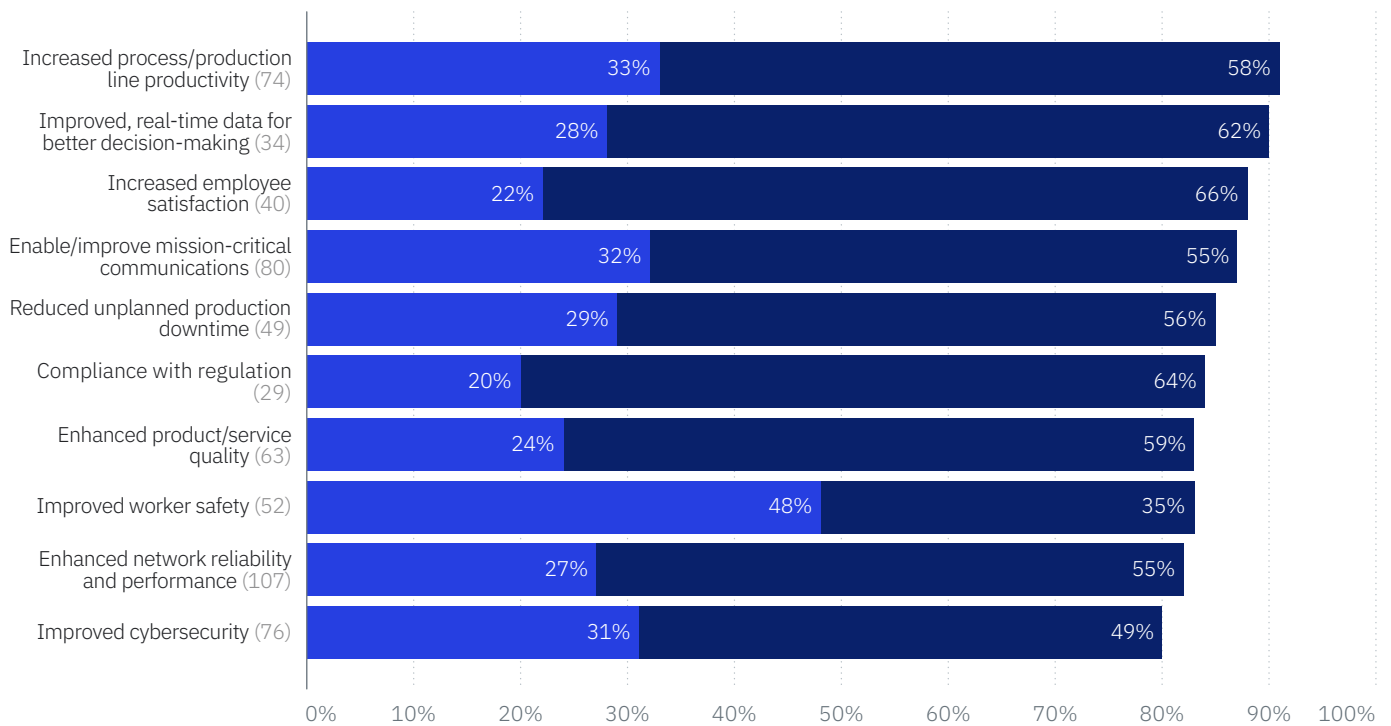
The first phase focuses on translating connectivity into measurable KPI gains – fast. Many respondents achieved outcomes within three months, including improvements in productivity (**60%**), downtime reduction (**65%**), mission-critical communications (**56%**), cybersecurity (**60%**), and worker safety (**71%**).⁹ The common pattern behind these early wins is focus: one site or zone, one workflow, one KPI. Examples include stabilizing communications for dispatch and frontline coordination, using handhelds for work execution, connecting a critical production line area to reduce micro-stoppages, or improving visibility in a safety-sensitive zone. Just as important is for teams to establish a baseline early in the process – current downtime hours, response times, throughput rates, number of incidents – so improvements are credible and attributable.



“We reduced maintenance downtime by about 13%, and demonstrated 99.9% link uptime over a six-month period for mission-critical links.”

Director of IT Infrastructure
Oil & Gas

Further benefits expected



Source:
GlobalData

Key:
● Within the next 6 months
 ● Within the next one year

Note:
Number of respondents shown in brackets

6-12 months: expand scope and harden the operating model

Once the initial use case is working, organizations typically broaden coverage, onboard more devices, and integrate into core systems including OT platforms (e.g., MES/SCADA), IT systems (identity, ticketing), and security operations. This is when private wireless starts behaving like a platform rather than a project: performance monitoring becomes routine, additional use cases are supported, and responsibilities between IT, OT, and operations are clarified. In parallel, many organizations expect additional benefit gains over the next year, reflecting the compounding effect of adding workflows and improving operational discipline. In practice, this phase is where the initial deployment success turns into operational reliability, and where repeatability is engineered for resilience and expanding benefits further across the operation.

12-18 months: scale across sites with a repeatable blueprint

By the 12-18-month mark, the value conversation shifts again, from “did it work?” to “how fast can we replicate it?” Organizations that scale effectively standardize on a site solution blueprint including reference architecture, device and application standards, KPI definition(s), security policies, and playbooks for operations and support. This approach reduces friction as additional sites and use cases come online, shortens time-to-value for each rollout, and makes outcomes more consistent across the enterprise.

“If I build it, they will come... the enablement just keeps coming and coming because the foundation is there.”

Director of Enterprise Technical Operations
Oil & Gas

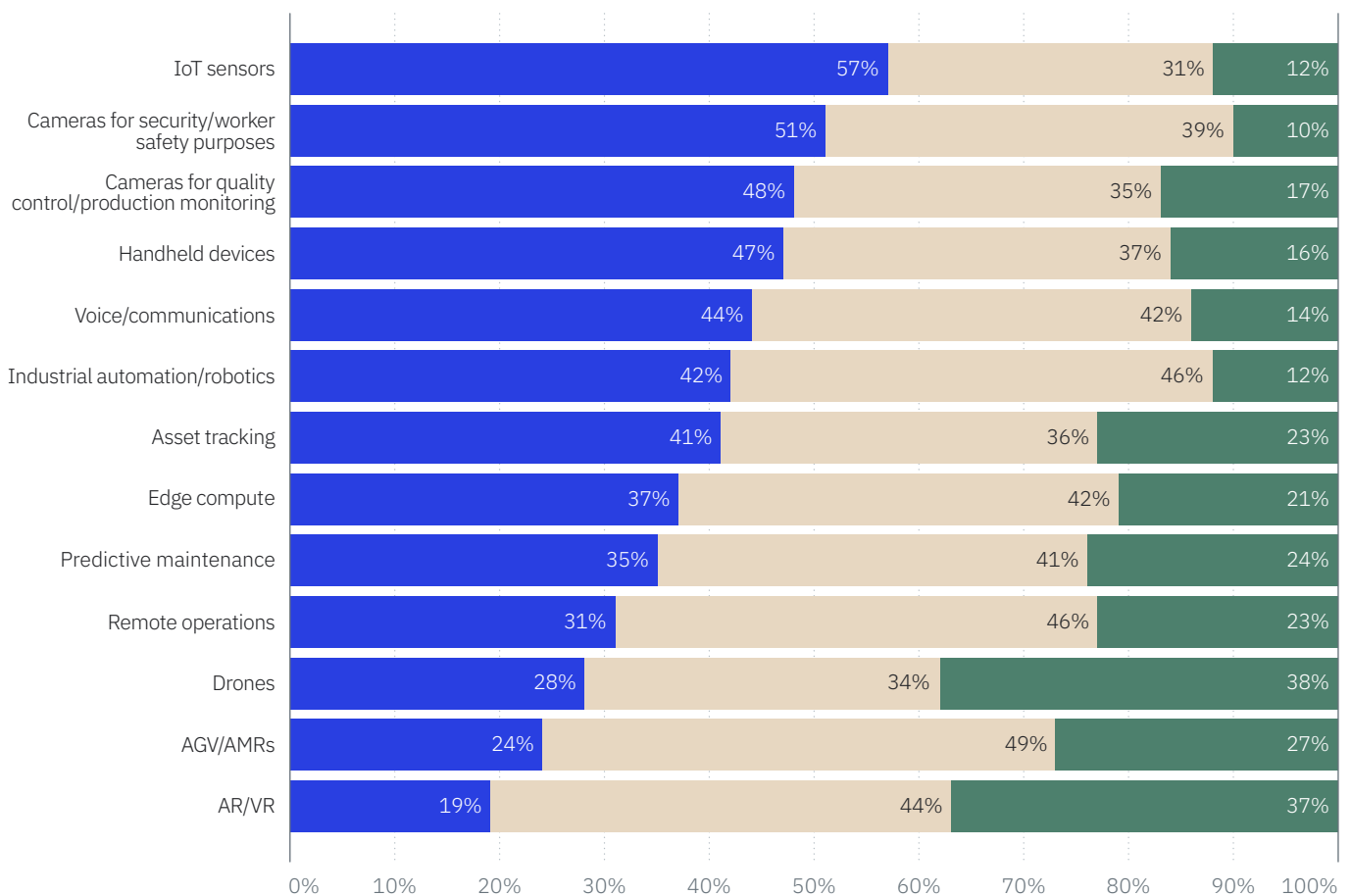
Use cases and outcomes: turning use cases into benefits

It's tempting to describe the value of private 5G/LTE in terms of "top use cases." But use cases are better understood as paths to outcomes: repeatable ways to deliver productivity, continuity, safety, and risk reduction. "Outcomes" are also much more compelling than "use cases" for budget-approving leadership.

The survey shows that enterprises are running a mix of use cases today while planning to expand their device and application footprint further over the next 1–2 years. The point is that it's

not the novelty of the application that matters, but whether it demonstrably and sustainably improves a business KPI (and whether it can be scaled across sites). In that context, measured business impacts align with use cases that directly touch frontline workflows and operational visibility enabled by network capabilities that make performance predictable. In other words, network features like coverage, reliability, latency, and speed are not the story on their own; they are the enablers that make operational change possible.

Use cases deployed and planned



Source:
GlobalData

Key:
● Currently running
 ● Plan to run in next 1-2 years
 ● No plans to run

The survey data suggests four recurring use-case groupings that map cleanly to business outcomes:

1 CONNECTED OPERATIONS VISIBILITY (IOT SENSORS, SCANNERS, CAMERAS)

These use cases create the data foundation for faster decisions and fewer disruptions: asset condition monitoring, production visibility, inventory tracking, video-enabled quality checks, and digital work execution on handheld devices. The primary outcomes are higher operational productivity and throughput, improved quality, and downtime reduction – often because teams can detect exceptions earlier and respond faster.

2 AUTOMATION AND AUTONOMY (ROBOTICS, AGVS/AMRS, DRONES)

Where organizations are pushing into automation, private wireless supports higher device density and more predictable performance across larger areas than many Wi-Fi deployments. Outcomes are typically focused on production throughput and equipment utilization, reduced manual handling, and safety (by removing people from hazardous tasks).

3 WORKFORCE ENABLEMENT (VOICE/COMMS, CONNECTED WORKER, AR/VR)

Mission-critical communications and connected worker applications often become early, high-visibility wins because they are so closely tied to highly visible day-to-day operations: push-to-talk, dispatch, lone-worker support, digital checklists, and remote expert guidance. For organizations with these use cases, business benefits tend to show up in mission-critical communications performance, safer coordination, faster response, and reduced “rework” – especially when integrated into standard operating procedures.

4 RESILIENCE AND REMOTE OPERATIONS (REMOTE OPS, EDGE COMPUTE, PREDICTIVE MAINTENANCE)

In remote or high-availability environments, private wireless enables architectures that keep critical operations running even when connectivity to central systems is constrained. Remote monitoring, local processing at the edge, and condition-based maintenance programs are common examples. The outcomes of these use cases benefit operational continuity, improved risk posture, and faster incident response—often in conjunction with cybersecurity and governance requirements.

Interviews with enterprises were instructive in understanding where and when private wireless networks served the use case, and, therefore, the outcome. Not every site or use case benefits from private 5G or LTE and so enterprises often run it concurrently with traditional LAN/Wi-Fi; enterprises tend to prioritize the most high-density, harsh, mobile, and/or mission-critical environments. Private LTE is often sufficient for many operational workloads, while 5G is used where density/latency/uplink needs justify it.

“After using fleets of connected robots for collecting parts and assembling goods, we produced more products in the same amount of time.”

Head of Finance
Manufacturing

Measuring success: KPIs that make benefits tangible

Private wireless deployments often start with network questions: coverage, latency, throughput, availability. Those metrics matter, but they are rarely the reason a project is funded. The organizations that sustain momentum make an explicit shift: they treat network performance as an enablement layer and measure success primarily in business and operational KPIs. The survey reflects this evolution, with respondents tracking a mix of operational and network measures to quantify impact.

“We’re not looking to replace the traditional Wi Fi. We’re looking to complement it, with private wireless running in parallel for guaranteed connectivity and continuity.”

Director of Digital Manufacturing
Food Manufacturing & Warehousing

A practical way to align stakeholders is to define a KPI (or set of KPIs) that connects what the network delivers to what the business values:

Business KPIs (outcomes): downtime hours avoided, throughput/output volume, safety incidents, security/compliance events, service interruptions, and time-to-restore. These are the metrics executives recognize and that operations teams can act on.

Operational KPIs (process performance): overall equipment effectiveness (OEE), first-pass yield, downtime frequency, mean time to detect/repair (MTTD/MTTR), labor productivity, and cycle time. These translate metrics into day-to-day business outcomes.

Digital/network enablers (proof the platform works): availability/uptime, coverage, latency/jitter, device reliability, packet loss, and time-to-isolate or remediate a fault. These indicators diagnose why an operational process did, or didn’t, improve.

Financial KPIs (value narrative): cost avoidance, avoided penalties, asset utilization/return on assets, revenue protection, and (where applicable) reduced worker time or site visits.

Best practice is to avoid “measuring everything.” Successful deployments start each use case with one primary KPI and, optionally, two to three supporting KPIs. For example:

OPERATIONAL METRIC	PRIMARY KPI	SUPPORTING KPIS
Downtime reduction	Downtime hours	MTTD/MTTR; network availability in critical zones
Connected worker / comms	Incident response time or task cycle time	Call/session success rate; coverage in safety-critical areas
Automation / autonomy	Throughput or utilization	Latency/jitter; device reliability
Cybersecurity	Number/severity of incidents	Policy compliance; segmentation/identity controls

Role-based insights: aligning priorities to overcome IT/OT friction

Private wireless deployments succeed more frequently and scale faster when the core stakeholders agree on a small set of outcomes, how those outcomes will be measured, and who owns day-to-day decisions. But the survey suggests that this alignment is not automatic: nearly a third of respondents cite unaligned IT/OT governance as a deployment barrier. The differences are visible in how each function frames “success.”

Operations teams tend to focus on reliability and continuity – keeping workflows moving and minimizing disruption. In the survey, operations leaders most frequently point to network reliability and performance as a primary objective, alongside productivity and downtime reduction. Their constraints are practical: they’re more likely than leaders from other functions to report an internal

skills shortage as a barrier, which can slow expansion unless operating responsibilities are clear and well-supported.

“Our 5G initiatives acted as a good bridge between IT and OT: the OT teams gained more control over data and analytics, and IT implemented the standardized security practices.”

Director of IT Infrastructure
Oil & Gas

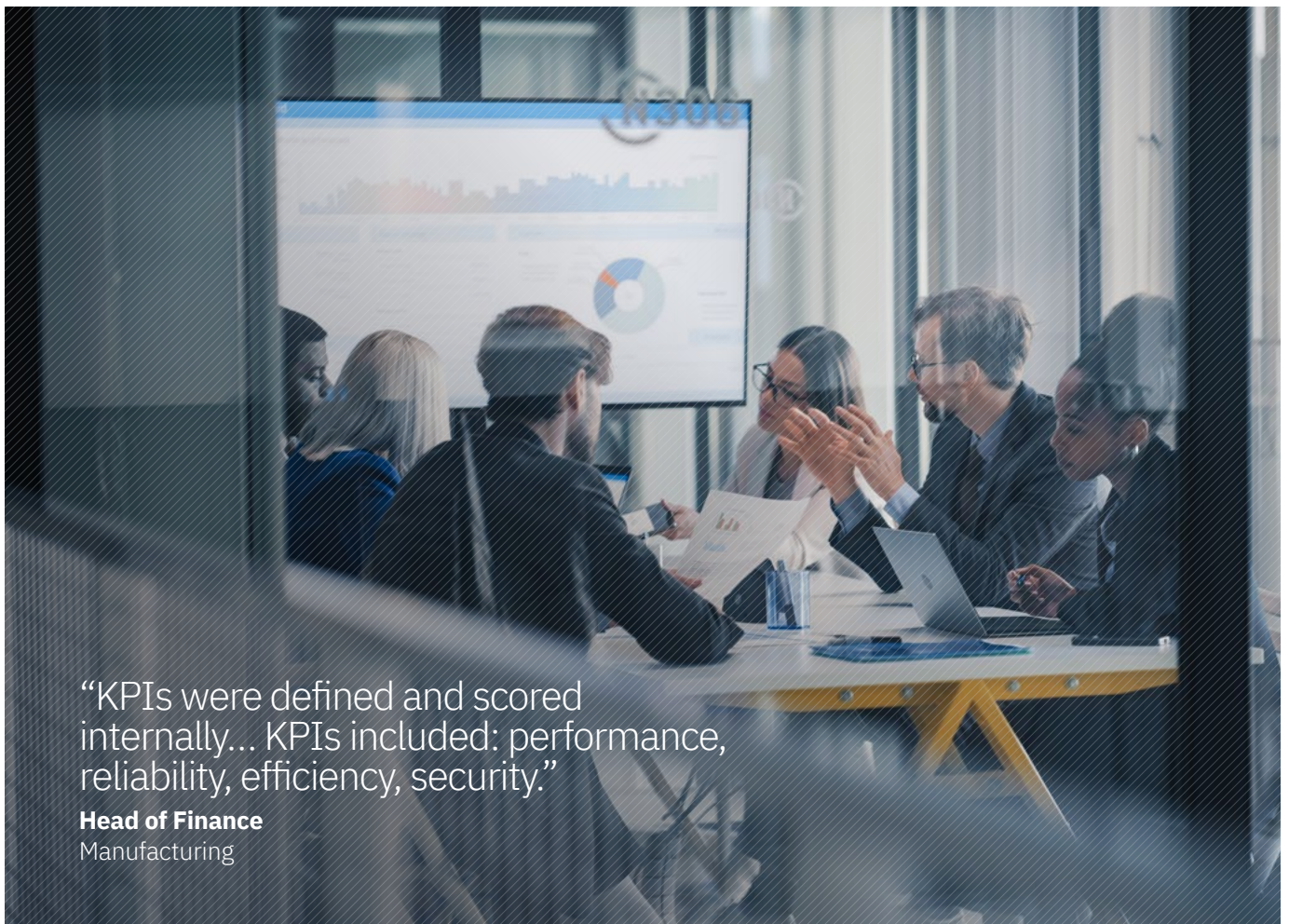
IT leaders, meanwhile, balance the needs of the mission with scalability, valuing secure connectivity, integration with enterprise tools, and a support model that can be repeated across sites. They frequently cite reliability as a driver, with strong emphasis on communications and productivity use cases, and they are more

likely to flag legacy integration challenges – a reminder that it is systems and workflow integration that creates value, not the placement of wireless radios per se.

Information security stakeholders focus on risk reduction and governance, often translating private wireless value into measurable detection/response and policy-control outcomes. Their role is typically to ensure the private network strengthens, rather than complicates, the organization’s security posture.


Process/plant strategy & innovation, and facilities/site management often sit at the intersection: they may sponsor use cases tied to quality, safety, and site performance, while also showing concern about governance and ROI.

The takeaway is straightforward: treat private wireless as a shared operating model. Define outcome owners, agree on a KPI baseline, clarify IT/OT change control, and align on what is managed internally versus through partners, so that early wins become repeatable at scale.



“KPIs were defined and scored internally... KPIs included: performance, reliability, efficiency, security.”

Head of Finance
Manufacturing



“Don’t spend too much time trying to design everything internally from scratch. Find a partner that’s done it 10 times successfully with other companies.”

**Head of Product Development / Group R&D
& Product Support**
Manufacturing

Operationalizing for scale: integration and managed operations as the accelerators

Many private wireless initiatives can demonstrate value in a single area or site. Fewer can scale those results across multiple locations, teams, and use cases without stalling. The difference is rarely the radio technology or spectrum used. It is the ability to make delivery repeatable through integration and a clear operating model, so each new site starts from a proven blueprint rather than reinventing the deployment.

Interviews sometimes highlighted ‘hidden’ site-readiness work – power, mounting, conduit, safety restrictions, and contractor scheduling – as a key driver of both timelines and total cost, even when the radio technology performs as expected. The challenge is to anticipate, budget, and schedule for it.

Operationalizing for scale begins with repeatable integration. Private 5G/LTE must connect cleanly into the systems that run the business: OT platforms (e.g., SCADA/MES), IT identity and access, device management, security monitoring (SIEM/SOC), and service management/ticketing. Pre-integration planning, looking at operational data flows, user/device onboarding, and policy definitions, reduce surprises once the team is ready to switch on the network. Just as important is testing that reflects real operations: coverage and performance in the “hard places,” mobility and handoffs, device certification, and failover

scenarios tied to the workflows that matter most. Interviews with enterprises highlighted several “integration hotspots”:

- OT protocol translation/gateways and segmentation
- Identity/device onboarding at scale (SIMs/eSIMs)
- Edge and security stack design
- ITSM policies and change control to prevent outages

Scale also requires clear operational ownership. Who monitors performance? Who responds to incidents at 2 a.m.? Who approves changes, patches, and device additions? Without explicit answers, organizations often see the same failure modes: pilots that can’t be supported, security policies that aren’t enforced consistently, and escalating integration tasks that slow down new use cases.

This is where managed delivery and integration partners can materially accelerate outcomes, especially given common barriers like “internal skills shortages” and the “complexity of integrating legacy environments”. The goal is not to outsource accountability, but to ensure the program has the capacity and expertise to standardize the blueprint: monitoring, incident response, software update routines, SLA governance, documentation, and continuous improvement, while internal teams retain control over priorities, risk, and business change decisions.

Private wireless and AI: making real-time intelligence operational

AI initiatives in industrial and operational environments often fail for a simple reason: the data pipeline is unreliable. Models may perform well in a lab, but in the field they depend on consistent, secure connectivity for sensors, cameras, and worker devices – plus predictable latency when decisions must be made in near real time. Private 5G/LTE increasingly functions as the data plane that makes AI operational: it stabilizes data capture, supports mobility and device density, and enables architectures where sensitive or time-critical data can be processed closer to where it is generated.

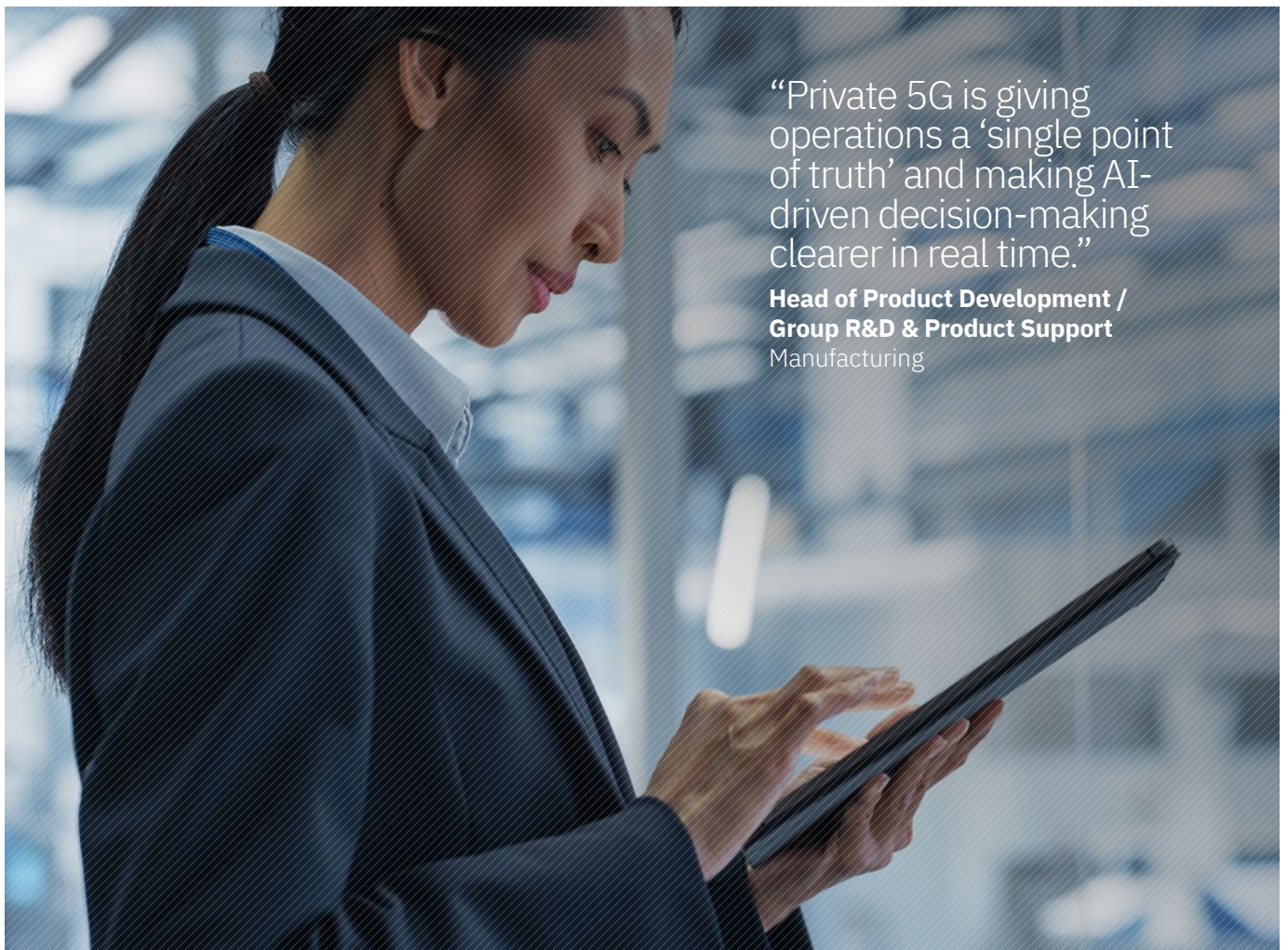
The survey suggests enterprises are seeing early signals of this connection. Nearly a third of respondents cite “improved real-time data for better decision-making” as an unexpected benefit (31%), indicating that private wireless can expand value beyond the initial connectivity use case¹⁰. Adoption and planned

growth in enabling technologies – such as IoT sensors and cameras, and edge compute – also point toward a roadmap where private wireless supports more data-intensive and latency-sensitive applications over time.

In practice, private wireless supports three common AI patterns. First, machine vision for safety and quality, where consistent uplink performance and coverage matter as much as raw bandwidth. Second, predictive maintenance and anomaly detection, where reliable streaming from critical assets improves model inputs and reduces blind spots. Third, real-time operations optimization, where decisions (and alerts) must reach the right people quickly and securely.

The implication is not necessarily that private wireless “enables AI,” but that it reduces friction in the end-to-end system – connectivity, identity, data governance, and edge-to-cloud orchestration – so AI can move from isolated pilots to measurable operational impact in real-time environments.

¹⁰ Respondents who achieved ‘Improved real-time data for better decision-making’ as an unexpected benefit. (94 out of 305 respondents).



“Private 5G is giving operations a ‘single point of truth’ and making AI-driven decision-making clearer in real time.”

**Head of Product Development /
Group R&D & Product Support**
Manufacturing

Conclusion and actions

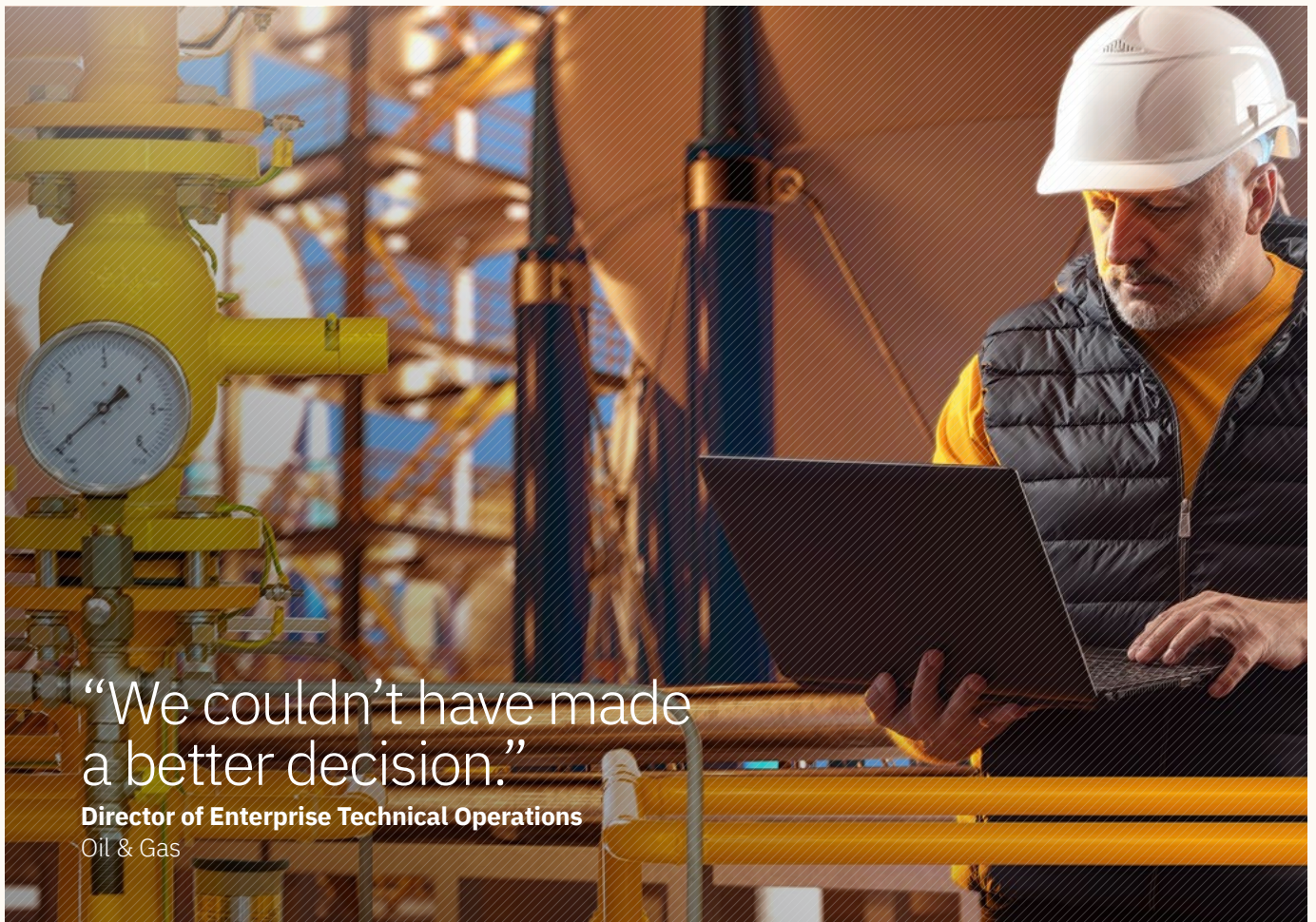
The survey and interviews point to a clear conclusion: private wireless is delivering measurable business benefits, and often faster than many organizations expect.

For the 100% of enterprises that report improvements in at least one area, benefits such as productivity, downtime reduction, mission-critical communications, cybersecurity, and safety are frequently realized within the first three months, providing a practical window to prove value and build organizational confidence.

Just as importantly, the value story often expands after deployment. Respondents report “second-order” gains that weren’t always part of the initial business case, including improved employee satisfaction and improved real-time

data for decision-making. These outcomes reinforce the idea that private 5G/LTE is not simply a connectivity upgrade; it can become a platform for new workflows, better visibility, and more resilient operations.

Scaling these business benefits, however, is not automatic. Common barriers, such as upfront cost concerns, internal skills shortages, legacy integration complexity, and governance misalignment, are still widespread concerns. Organizations that move beyond successful pilots typically treat integration and operations as high priority workstreams, supported by a repeatable network blueprint and, where needed, managed delivery and integration partners.



“We couldn’t have made a better decision.”

Director of Enterprise Technical Operations
Oil & Gas



We chose 5G because it was a turnkey solution. Our partner offered the infrastructure, the software, and the architecture that we can implement.”

**Head of Product Development /
Group R&D & Product Support**
Automotive Manufacturing

Based on the survey findings and consistent interview themes, enterprises should prioritize the following actions:

ASSESS VIABILITY OF PRIVATE 5G USING LIFECYCLE ROI, NOT JUST UPFRONT COST

Build the business case around total cost of ownership and total value: implementation and integration effort, operating model/managed services, device onboarding at scale, and the financial impact of downtime, safety incidents, and security/compliance risk. Include “cost of not doing” (continued outages, manual workarounds, delayed automation) and use relative ranges rather than a single-point ROI.

START WITH OUTCOMES, NOT INFRASTRUCTURE

Pick 2-3 priority outcomes (e.g., downtime reduction, or improved productivity, mission-critical comms, safety, or cybersecurity) and define what “better” means in business terms before finalizing architecture or vendor choices. Treat connectivity as the enabler, but make the program accountable to operational KPIs.

ENGINEER ONE “EARLY WIN” IN THE FIRST 90 DAYS – WITH A BASELINE

Target one site/zone, one workflow, and one primary KPI, and capture a clear pre-deployment baseline so results are credible and attributable. Use the first win to validate adoption and to establish their technical and operational blueprints so that they can be reused.

LINK NETWORK PERFORMANCE TO BUSINESS VALUE

For each use case, track a small set of measures that connect network enablers (availability, coverage, latency/jitter) to operational KPIs (OEE, MTTR, cycle time, labor productivity) and finally to business/financial outcomes (downtime hours avoided, throughput, risk reduction, cost avoidance). This makes performance diagnosable and keeps stakeholders aligned as scope expands.

BUILD A REPEATABLE BLUEPRINT – BACKED BY INTEGRATION AND MANAGED OPERATIONS

Treat integration (OT, security, ITSM, device management, data/edge platforms) and operational ownership (monitoring, incident response, updates, documentation) as critical priorities, not afterthoughts. Where skills shortages or legacy complexity are constraints, use managed delivery/integration partners to accelerate rollout while keeping outcome accountability and governance inside the enterprise.

SCALE SELECTIVELY WITH STANDARDIZED DESIGN AND OPERATING MODEL

Use a phased rollout with a consistent vendor/partner strategy and repeatable site designs/ITSM operations, but deploy where private wireless is economically justified (mobility, harsh/remote coverage, high density, mission-critical workflows) and where lighter alternatives (Wi-Fi/public networks) are insufficient.

Appendix


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