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From compliance to competitive edge:

Embracing Net Positive in manufacturing

Contents:

1. Introduction

Sustainability is no longer a mere formality to appease regulators or environmentally aware consumers. Across industries, businesses are increasingly recognizing the urgent need to accelerate sustainability efforts. According to Fujitsu's Advancing Net Positive Agenda, developed and researched by Economist Impact, a significant majority of companies (63%) are beginning to integrate social and environmental targets alongside financial metrics.

Even for the most ambitious of manufacturers, this hasn't been easy. Overcoming cost concerns, organizational resistance, and supply chain inefficiencies all form part of the complex tapestry they need to weave when making sustainable progress. Manufacturers have come a long way in recent years. But is there room to go further, beyond ESG goals? We think so.

So far, much of the focus around sustainability initiatives has been on minimizing harm and reaching Net Zero targets. To be truly progressive means embracing a 'Net Positive' mindset. That's a world where organizations not only minimize their social and environmental footprint, but simultaneously generate a positive impact for both.

In this article, we'll examine how a Net Positive approach in manufacturing can bolster industry stability while helping you drive profitability and growth. We'll also explore how the right technology and a comprehensive modernization strategy can bridge the gap between sustainability goals and practical implementation. This leads to a more ethical and efficient operational blueprint, benefitting the planet, society, and the bottom line.

2. Understanding the Net Positive imperative for manufacturing

Defining Net Positive:

A business approach where companies not only aim to reduce their social and environmental footprint, but also actively create positive impacts that contribute to long-term sustainability and the well-being of people and the planet.

In this era of unprecedented global crises such as climate change, cybercrime, and human rights issues, we believe a responsible and proactive contribution to the world is an imperative no organization should overlook.

As an industry, manufacturing has long been at the helm of both innovation and scrutiny for sustainable action. The Net Positive Index, an action-oriented framework for understanding how companies in five industries are pursuing Net Positive, reveals that manufacturing scores 55/100, slightly behind retail and energy & utilities. Yet very few companies are truly Net Positive as no industry scores above 57/100.

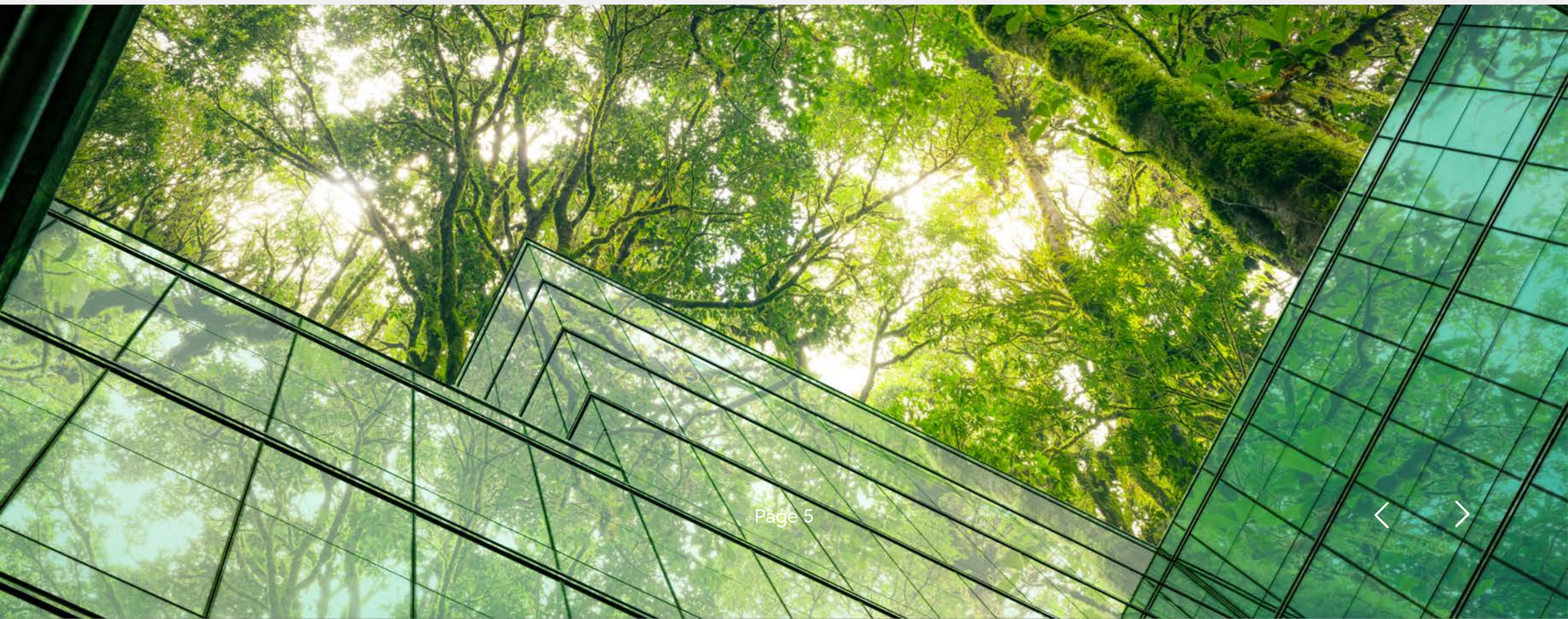
This lack of overall progress is compounded by the fact that many manufacturers still see sustainability as a trade-off, with 53% citing a conflict between sustainability goals and other business priorities. But our research suggests this is a false choice — companies can prioritize profitability and sustainability together. And they must.

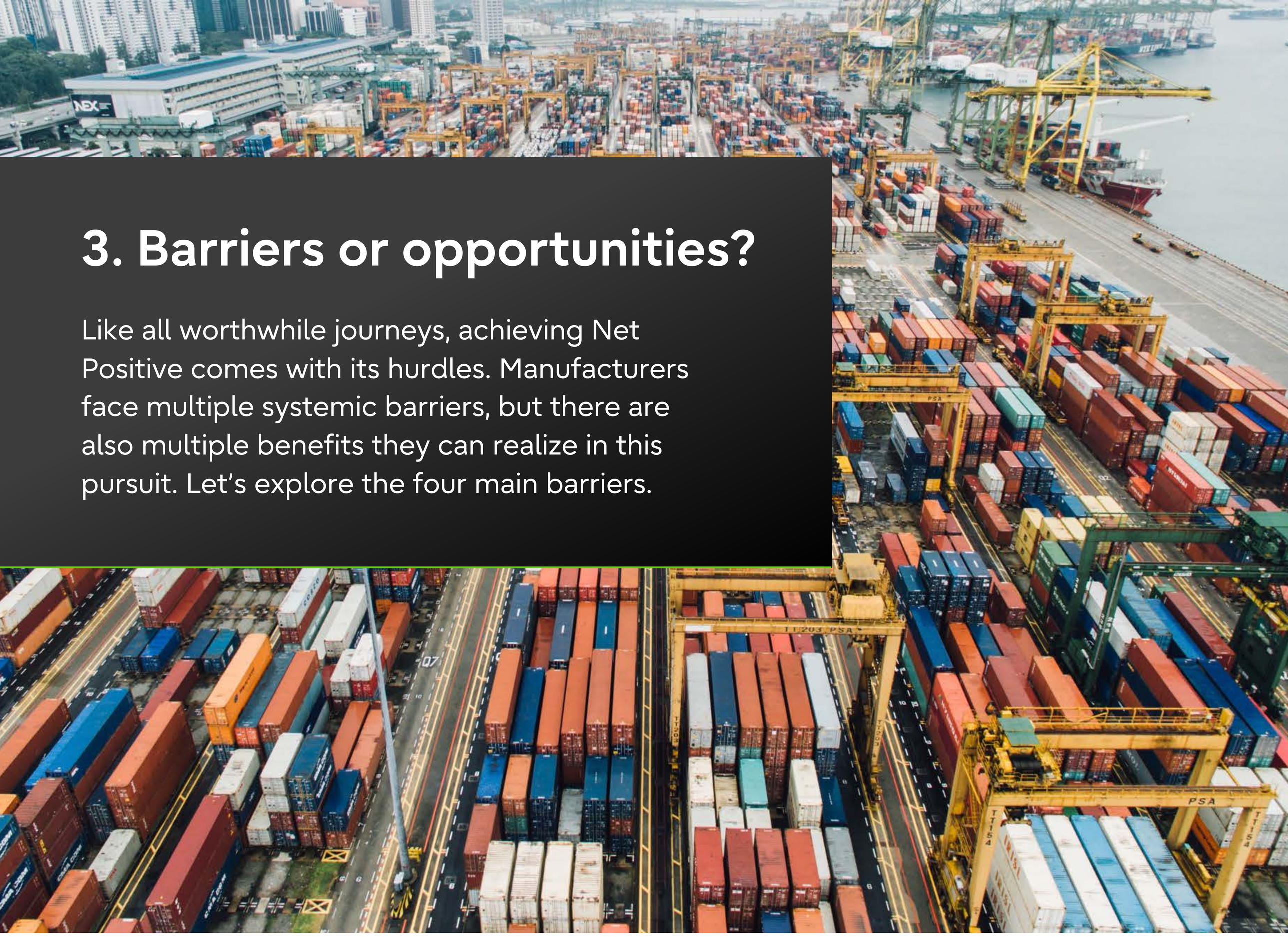
Fujitsu's purpose is to make the world more sustainable by building trust in society through innovation. We recognize success is intrinsically linked to the well-being of your workforce, the prosperity of your partners, and the health of our planet. These are the values that feed into our approach to Sustainable Manufacturing.

As part of Fujitsu's Advancing Net Positive Agenda, the Net Positive Index uses two key data sources:

1. **Industry level data — the World Benchmarking Alliance's Social Benchmark dataset and the UN Global Compact database — focusing on five key industries, including manufacturing.**

2. **A business executives' survey of over 1,800 executives representing large companies across 17 countries.**





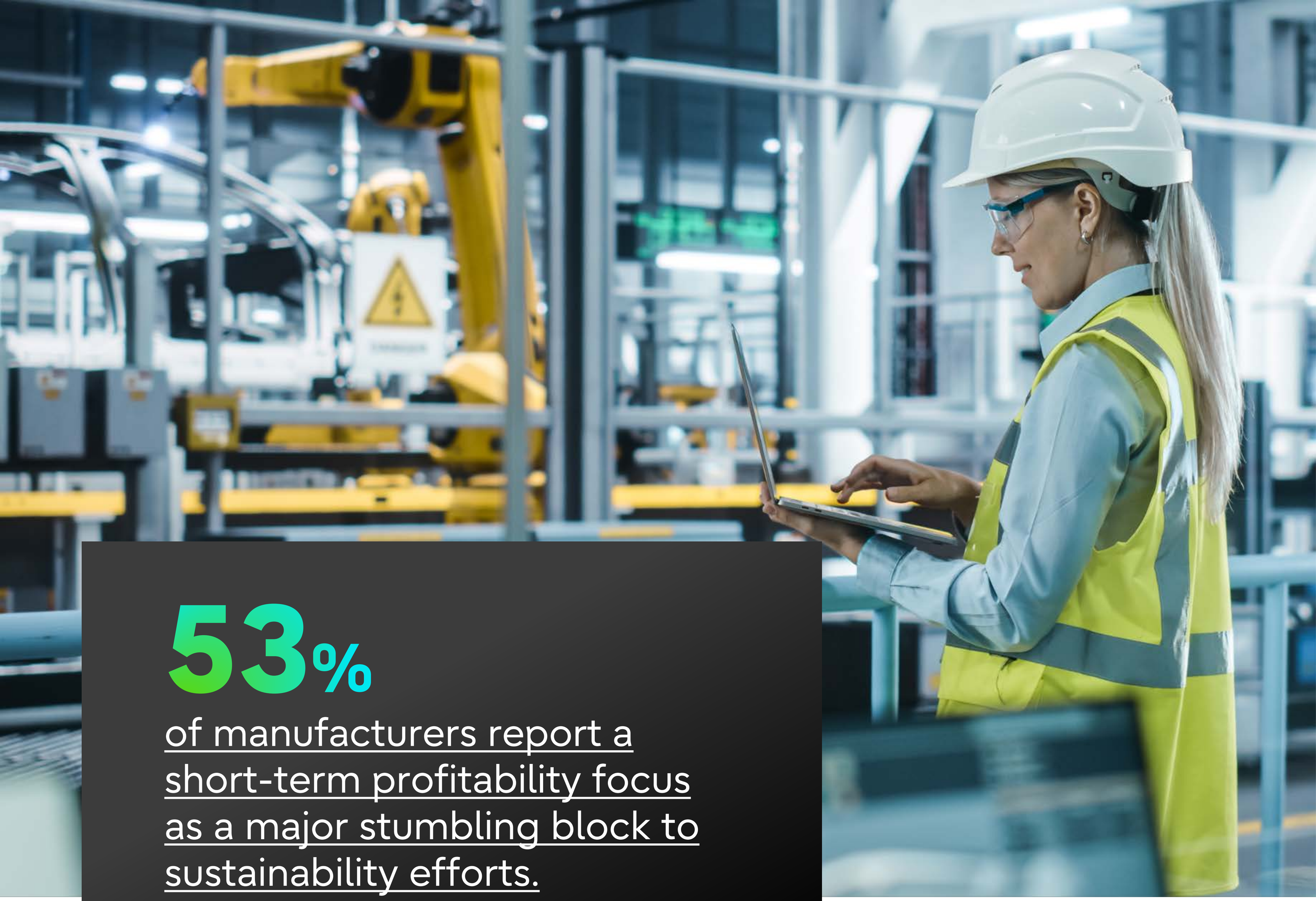
3. Barriers or opportunities?

Like all worthwhile journeys, achieving Net Positive comes with its hurdles. Manufacturers face multiple systemic barriers, but there are also multiple benefits they can realize in this pursuit. Let's explore the four main barriers.

You can't track what you can't see

Supply chain complexity poses a major obstacle to sustainability for 54% of manufacturers. That's due to a lack of transparency within their value chains, making it difficult to monitor and analyze crucial data on carbon emissions, ethical labor practices, and raw material origins. Improving visibility in these key areas is essential for manufacturers to take meaningful steps toward Net Positive.

Sustainability efforts must be extended beyond the factory walls to encompass the entire supply chain. While 92% of companies now report their direct (Scope 1 and 2) emissions on an annual basis, only a small fraction (4%) are currently disclosing indirect emissions (Scope 3), such as raw material transportation. Accurately capturing this level of information can only be done with advanced technology that goes beyond basic data collection and reporting.



53%

of manufacturers report a short-term profitability focus as a major stumbling block to sustainability efforts.

The cost of short-term constraints

This is why many companies lack dedicated budgets for long-term transformation. For example, using sustainable alternatives like dandelion-based rubber in the tire industry is an aspirational, viable alternative to rubber (providing we industrialize the production process), but oil-based production remains the more profitable option, costing far less.

While upfront investment can make the shift hard to justify, evidence shows companies using technology for sustainability often exceed financial targets. We already have the technology to make manufacturing more sustainable, and those making the leap now will reap financial rewards in the future. Think, fewer regulatory penalties and more good news, stories leading to competitive edge. Most of all, more efficient usage of resources equals less waste — saving costs for the long term.

External change needs to start from within

Almost half (46%) of companies report organizational resistance as a barrier to achieving Net Positive. Leadership teams tend to struggle to align sustainability with business strategy due to a perceived lack of tangible benefits or projected quick wins.

Like many manufacturers, you may be looking at updating legacy equipment. Retrofitting these systems for sustainability can be difficult, but it's necessary. The real limits in digital transformation, however, stem from seeing sustainability goals and other business priorities as mutually exclusive. If clear environmental or social objectives are set in line with operational management to reduce waste or resource scarcity, leaders can become active forces for good while optimizing their business. Plus, you can gain that all-important internal buy-in.

In short, sustainability improvements shouldn't happen in isolation — a Net Positive approach combines changes rather than tackling one issue at a time. Upgrading factory equipment without improving supply chain transparency, for example, limits impact. This is why adopting a holistic approach is so important to creating a comprehensive transformation strategy.

Bridging the skills gap

Skills and labor shortages are well-known issues that manufacturers face today, and workers are likely to feel the strain as a result. As the workforce ages and labor shortages increase, the industry must find ways to make manufacturing more attractive to future generational talent.

Social responsibility is a key factor in a Net Positive approach. One way to protect and advance workers' rights and safety is to capture the mass of generational knowledge on the factory floor using AI Vision. Through monitoring employee behaviors and feeding data changes into an AI model, these insights can be applied to optimize workflows and automate repetitive tasks. In addition, this provides the opportunity to upskill employees into more valuable roles and enhance working conditions. Manufacturing leaders who achieve this will position their organization as an advanced competitor — attracting top talent while filling in the production gaps.

In summary, adopting a Net Positive approach, leveraging new technologies and data-driven insights, and making strategic investments will all help shape your challenges into opportunities, and open new revenue streams.

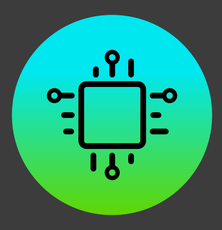
4. The Net Positive pay-off and the role of technology

Technology plays a critical role in helping manufacturers move from commitment to action. Connected technologies such as AI, IoT, and blockchain are key enablers, providing the data and control needed to optimize resource use, reduce waste, and promote accountability.

It’s through Fujitsu’s real-world understanding of the manufacturing sector that we’ve developed a suite of progressive solutions:

AI-powered analytics provides predictive maintenance to help extend equipment lifespan while reducing energy consumption. It can also capture behavior and digitize factory floor knowledge to optimize operations. It’s that visibility of data which makes for more informed changes. So, instead of choosing a benchmarked percentage for improving production efficiency, you rely on accurate reports that are unique to your business.

Blockchain provides real-time traceability for material sourcing and emissions tracking through auditable records. This, in turn, will help enhance cross-industry collaboration and compliance, via shared sustainability frameworks to accelerate progress through ethical co-investment.



Automation and robotics help balance efficiency and ethical labor practices. When used for positive outcomes and the well-being of workers, these technologies not only streamline operations to quicken output, but can also improve worker safety and free employees to focus on higher-value tasks.

Digital twins and simulation technology give manufacturers better tools to test and optimize processes before implementation. Organizations can start small, using sustainable materials in niche products before scaling to see the real-world impact. A phased approach to modernization will ease the transition and decrease risk.

5. Fujitsu as a partner for success

Fujitsu's leadership in sustainable technology solutions demonstrates how innovation can align environmental, societal, and business goals. Along with our wide-ranging portfolio of intelligent manufacturing solutions, we have a proven track record of hands-on manufacturing experience. Because technology alone is not enough; true sustainability transformation requires a holistic approach with strategic guidance. And we bring the knowledge and skills needed to optimize your manufacturing business, end to end.

The power of these technologies is evident in the results they deliver. For example, AB InBev, the world's largest brewer, partnered with Fujitsu to implement a blockchain-based solution for enhancing transparency in their barley supply chain. This initiative not only improved their environmental reporting capabilities, but also strengthened relationships with farmers and opened up new possibilities for sustainable brewing practices.

6. Next steps: Embracing Net Positive with Fujitsu

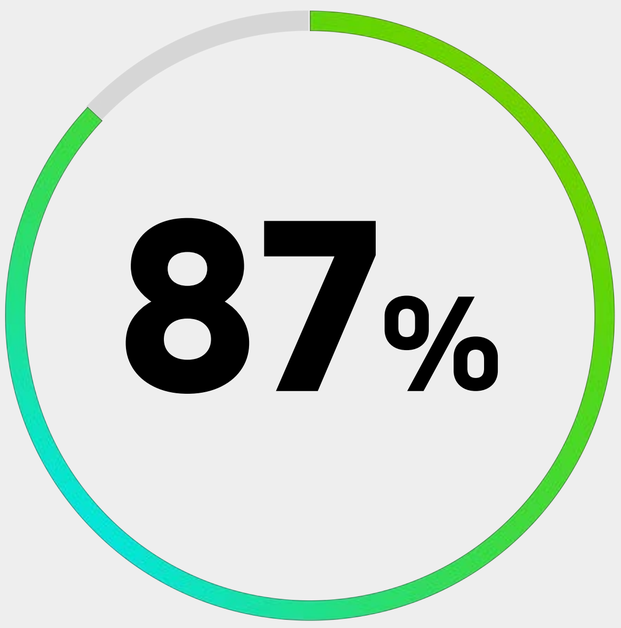
Starting the journey towards sustainable manufacturing is not just about compliance or risk mitigation — it's about seizing opportunities for innovation, efficiency, and growth.

For manufacturers looking to accelerate their Net Positive transformation, we recommend taking these immediate steps:

Assess and measure:
Work with the right partner to conduct sustainability impact assessments across operations and supply chains.

Invest in technology:
Implement real-time monitoring and AI-driven tech to harness sustainability and efficiency insights.

Align business and sustainability goals:
Move from an ESG mindset focused on minimalization to a proactive Net Positive strategy.



of companies already recognize the benefits of a Net Positive strategy — **the time to act is now.**

Ready to become a Net Positive business?

Assess your progress: Benchmark your organization against industry peers with our easy to use assessment tool.

Get expert help: Contact us to discuss your Net Positive journey with Fujitsu Uvance Sustainable Manufacturing.

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