# Have you isolated your frontline workforce?

PARSABLE

# How to navigate the frontline-focused path to operational excellence in Industry 4.0

Frontline workers carry out critical tasks, troubleshoot issues, and ensure that everything runs smoothly. However, frontline operations can seem like a black box, with inefficiencies and bottlenecks hidden from view, killing productivity, frustrating workers, and putting production at risk. Today, frontline workers are faced with a giant roadblock. That roadblock is digital isolation on the frontline.

## Why?

**Processes have remained on paper:**

many frontline workflows are still stuck in an analogue age. Meanwhile the back-office systems and machines they rely on continue to evolve and become increasingly more digital. The frontline is being left behind.

**Manufacturers have not had the right tools available:**

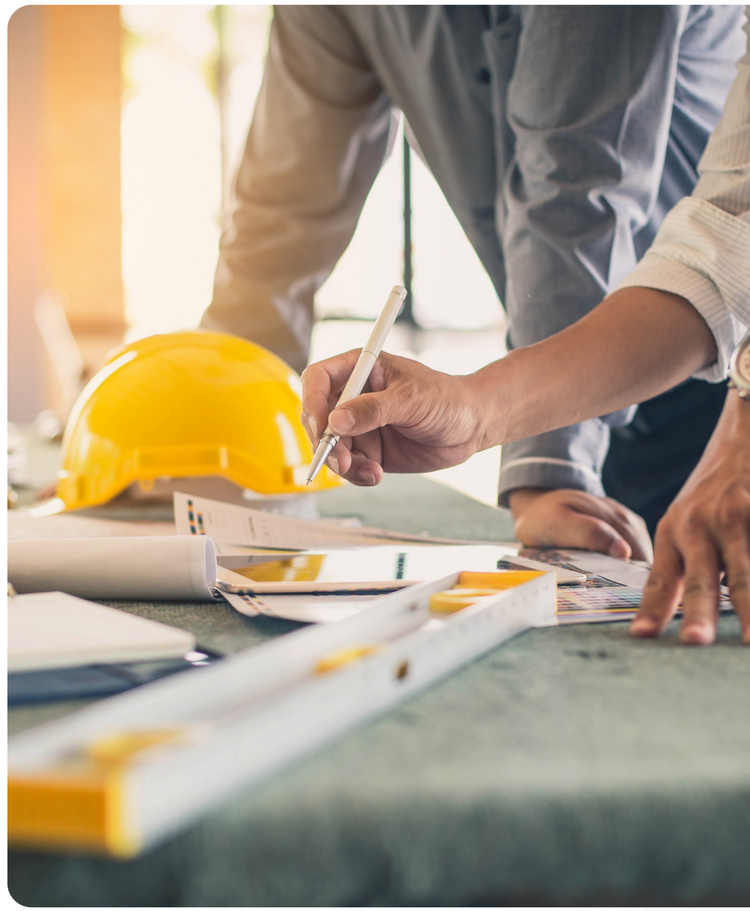
up until recently, there have not been many tools to help digitize frontline operations, this has created dangerous black box conditions for frontline workers and leaders/executives across manufacturing.

**Thinking about digitizing frontline processes is daunting:**

many understand the importance of embracing Industry 4.0 and moving their frontline operations into a more digital era. However, this can seem intimidating at first, especially if you don't know where to start.

**Manufacturing organizations often don't have the resources to tackle this alone:**

your day to day is busy. Tackling something like digitization isn't always at the top of the list when compared to everything else you have to deal with on a regular basis. However not taking action is going to cost more in the long run.



To overcome this, you first need to recognize where you sit within the digital maturity curve for manufacturing and industrial enterprises.

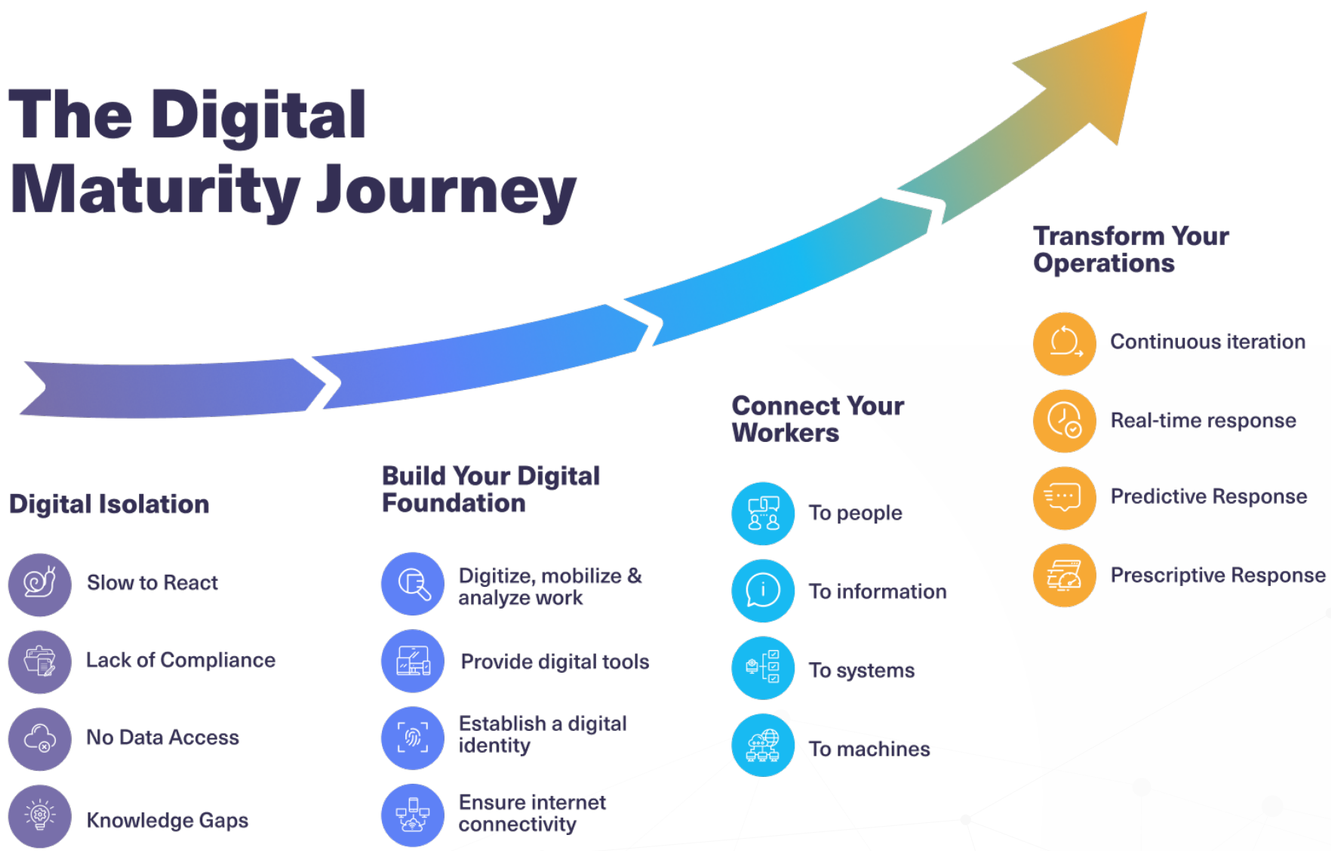
# The Digital Maturity Curve

A **digital maturity curve** is a framework used to measure and assess an organization's digital readiness for connected worker technologies. This framework is used to evaluate a company's level of digital maturity by analyzing its readiness to adopt, implement and fully leverage digital transformation technology on the frontline.

Digital transformation is the integration of digital technologies into all areas of a business, resulting in fundamental changes to how the business operates and delivers value to customers. In manufacturing and industrial settings, digital transformation is essential for remaining competitive, efficient, and sustainable in today's rapidly changing and increasingly digital world.

There are four key phases of digital transformation when it comes to frontline operations.

When companies embrace digital transformation and begin to move along the maturity curve they experience benefits such as:



**Improved efficiency and productivity:**

Digital transformation can help streamline processes and workflows, automate repetitive tasks, and reduce manual errors, resulting in increased efficiency and productivity.

**Improved compliance:**

Digital transformation enables better digital traceability and helps manufacturers track and source data to handle audits, inspections, and compliance to processes.

**Better frontline visibility:**

At times, the frontline and shop floor can feel like a black box. Digital connectivity on the frontline means that supervisors and executives have better visibility into what's working and happening where there has previously been little to no real-time insights.

**Enhanced quality control:**

With the help of digital technologies such as sensors, machine learning, and artificial intelligence, manufacturers can collect and analyze real-time data to identify and address quality issues proactively.

**Greater agility and flexibility:**

Digital transformation enables manufacturers to quickly adapt to changing market demands, customer preferences, and regulatory requirements by leveraging technologies such as cloud computing, data analytics, and automation.

**Improved safety conditions:**

Digital transformation can enhance worker safety by enabling remote monitoring of equipment and workers, providing real-time alerts for potential hazards, and offering virtual training and simulation tools to improve worker skills.

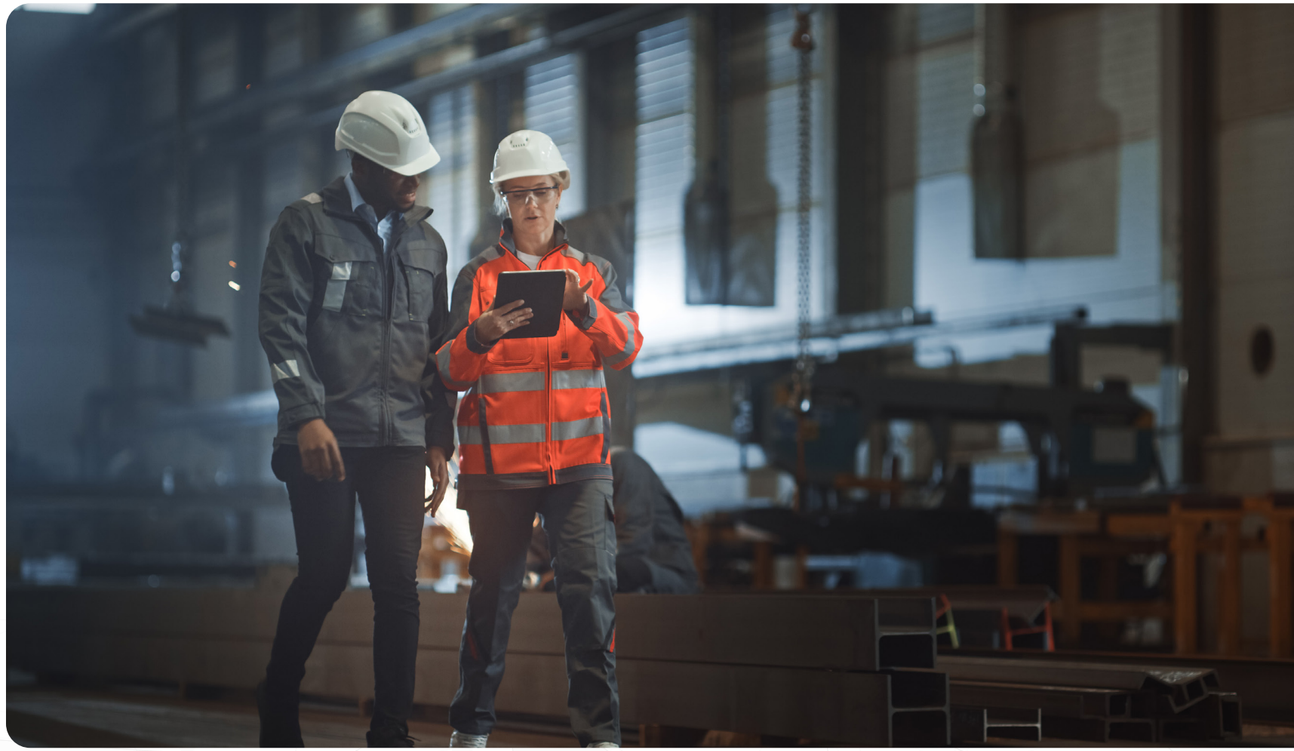
**Sustainable operations:**

Digital transformation can help manufacturers optimize energy consumption, reduce waste, and minimize their environmental footprint by leveraging technologies such as the Internet of Things (IoT), smart grids, and renewable energy sources.

**Improved customer experiences:**

By leveraging digital technologies to improve production quality, manufacturers can offer customers a seamless, personalized, and convenient experience that meets their expectations.

Digital transformation is crucial for manufacturing and industrial settings to remain competitive, efficient, sustainable, and responsive to changing customer demands and market conditions.



# The Dangers of Digital Isolation

If you still rely on paper-based processes and workflows on the frontline, you're more than likely facing major inefficiencies that inhibit your ability to adapt. **You are also putting your frontline teams, and even the organization as a whole, at risk.**

In fact, in Parsable's recent survey of Frontline Workers in Manufacturing, we found that 81% of organizations still use paper-based processes for work.

And even still, 59% of companies hadn't given their frontline workers access to mobile technology to help them do their job better.....and yet 80% of workers had no concerns about using digital tools in the workplace.

Other parts of your operations — like the systems you use and the machines you rely on — are becoming increasingly digital, yet frontline workers in particular are getting left behind. Without on-the-go access to the right information at the right time, people are put at a disadvantage, which puts safety, quality, and efficiency at risk.

This digitally isolating experience that's in place for the frontline is why operations are struggling to adapt. When frontline workers in manufacturing are digitally isolated, meaning they don't have access to digital tools and systems, there are several risks that can arise:

**Reduced efficiency and productivity:**

Workers without access to digital tools may rely on manual processes, which can be time-consuming and prone to errors, leading to reduced efficiency and productivity.

**Limited collaboration and communication:**

Digital tools such as instant messaging, video conferencing, and collaboration software enable workers to communicate and collaborate more effectively. Without these tools, workers may find it difficult to collaborate with colleagues, leading to reduced productivity and quality.

**Inconsistent data collection:**

Digital tools can help workers collect and analyze data more effectively, leading to better decision-making and process optimization. Without access to these tools, workers may collect data inconsistently, leading to inaccurate or incomplete information.

**Increased safety risks:**

Digital tools and platforms can help workers perform tasks safely and efficiently. Without access to these tools, workers may be at a higher risk of injury or illness due to manual processes, inadequate training, or poor working conditions.

**Limited learning and development opportunities:**

Digital tools such as e-learning platforms, virtual reality, and gamification can help workers learn and develop new skills more effectively. Without access to these tools, workers may have limited opportunities for learning and development, leading to reduced job satisfaction and retention.

Digital isolation of frontline workers in manufacturing can lead to reduced efficiency, productivity, quality, and safety, as well as limited learning and development opportunities. It is essential for manufacturing companies to ensure that all workers have access to digital tools and systems to perform their jobs effectively and safely.

## Why care?

Moving teams out of digital isolation can lead to increased productivity, efficiency, quality, safety, agility, and employee satisfaction. Manufacturing leaders who prioritize digital transformation and invest in digital tools and systems such as connected worker technologies can gain a competitive advantage in the market and position their organizations for long-term success.

# What is Connected Worker technology?

To move out of digital isolation, the first step is to understand **connected worker technology and connected worker philosophy,** which involves leveraging digital tools and systems to empower workers, optimize operations, and improve outcomes.

Connected Worker platforms turn paper-based processes into digital processes, and leverage mobile applications to capture data from frontline workers as they complete routine activities on smartphones & tablets.

Leaders of industrial operations use Connected Worker platforms to boost workforce engagement while digitizing, analyzing, and optimizing frontline workflows and processes.

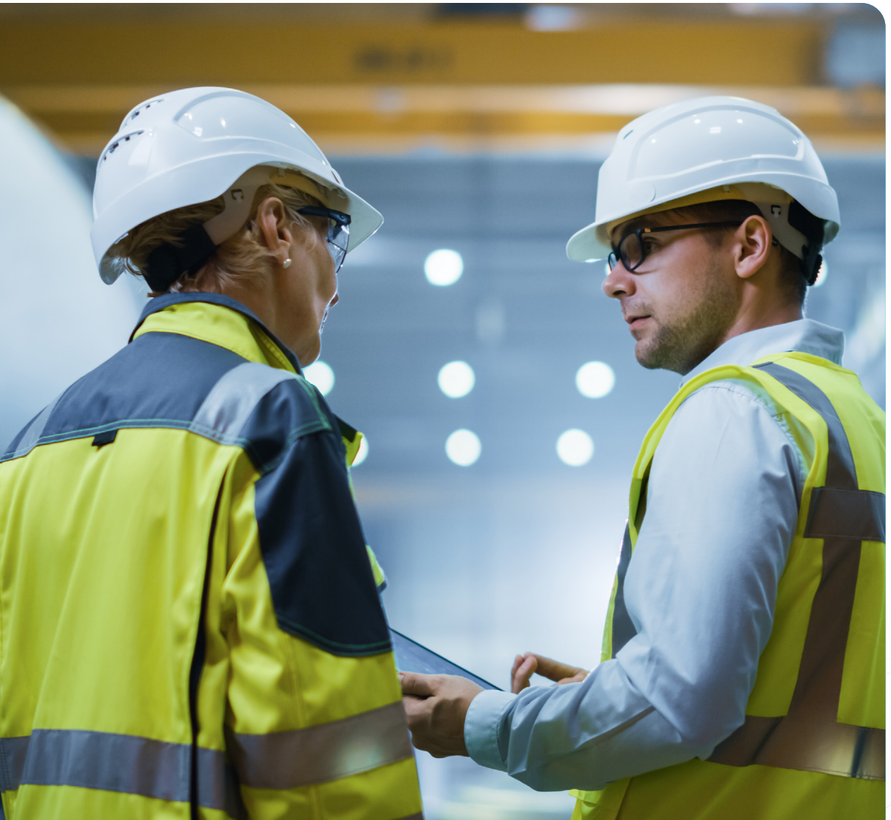
Before getting started, it is important to take actions to set the stage for a strategic shift across your organization or department. This includes evaluating where you sit today on your digital maturity journey.

# Understanding where you are on the Digital Maturity Curve

Connected worker technology is the ideal solution for advancing along the digital maturity curve. However it's important to understand where you currently stand on the curve today.

**Stage 1: Escape Digital Isolation - is my team digitally isolated?**

Digital isolation for the frontline refers to the industry phenomenon in which frontline workers are disproportionately disconnected from the rest of the organization. This includes systems and machines, other frontline workers, functional managers, and executives.



**Teams are slow to react:**

In a digitally isolated environment, teams may not have access to real-time data and analytics that can help them quickly identify and respond to issues. This can lead to delays in problem-solving, reduced productivity, and missed opportunities to improve processes.

**Lack of compliance to processes and procedures:**

Without digital tools and systems to track and monitor compliance, it can be difficult for frontline workers to consistently follow established processes and procedures. This can result in quality issues, safety hazards, and increased risk of regulatory violations.

**Knowledge gaps among newer workers:**

In manufacturing environments, where the workforce is often multi-generational and turnover can be high, there may be a lack of training and knowledge transfer to newer workers. This can lead to mistakes, reduced productivity, and increased risk of safety incidents.

Addressing these challenges may require the implementation of connected worker technology, such as real-time data collection and analysis, digital compliance tracking and reporting, and training and knowledge management tools.

By enabling frontline workers to access the information and tools they need to work more effectively and efficiently, organizations can improve quality, safety, and productivity in digitally isolated manufacturing environments.

**Checklist**

- ☐ My frontline processes and SOPs are primarily on paper
- ☐ My team struggles to collaborate in a timely manner on inefficiencies and problems when they arise
- ☐ I have little to no data on frontline operations
- ☐ I have minimal visibility into what is going right vs wrong on the frontline
- ☐ When I do get visibility there is a notable time delay when it comes to resolution of inefficiencies
- ☐ There is a lack of compliance for frontline workflows and processes
- ☐ It is difficult for me to track adherence to new procedures
- ☐ I do not feel like my processes are audit-proof or traceable
- ☐ When new hires come on board, it takes a long time to get them up to speed
- ☐ I worry about some of my more experienced personnel retiring/aging out and taking years of tribal knowledge with them

Much of this list, although not comprehensive, can be summarized into three key buckets that often define a digitally isolated experience for the frontline workforce.

# Understanding where you are on the Digital Maturity Curve

### Stage 2: Build Your Digital Foundation - is my digital foundation ready?

You may have already begun the process of moving your frontline out of digital isolation. It's important to understand if you're currently in the phase of readying your digital foundation or if your digital foundation is ready for connected frontline work.

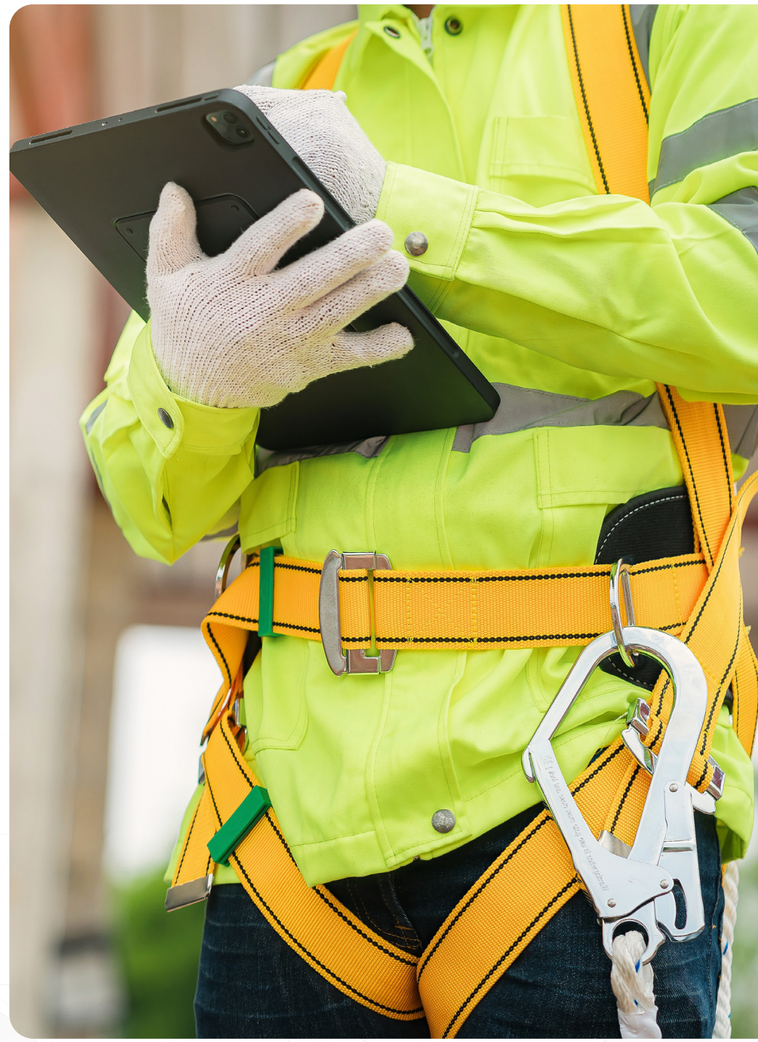
The first step in this journey is to make frontline work both digital and optimized for the use of smartphones and tablets. It's not enough to make work digital, it must be optimized for a modern-day, consumer-like mobile experience.

Start simple with forms, checklists, audits, and inspections across quality, EHSS, production, and maintenance.

Implementing technology is more about changing behavior than it is about the technology itself. Start simple with an intuitive mobile experience to drive rapid adoption across multiple sites. And because you're using smart mobile technology, you'll be streamlining data collection in the process.

### Checklist

- ☐ My frontline processes and workflows have been converted into digitized checklists, audits, and inspections
- ☐ My team has the ability to validate data at the time when it is entered
- ☐ My team has the ability to take pictures/photos to documents issues/problems/deviances
- ☐ My team has the ability to embed multimedia into SOPs
- ☐ My team has been enabled and armed with Mobile Devices in which to use to complete and track frontline work
- ☐ My workforce has been set up with Digital Identities
- ☐ There is Internet Connectivity for the frontline



# Understanding where you are on the Digital Maturity Curve

### Stage 3: Connect Your Workers - are my workers connected?

After you've built your digital foundation and have enabled frontline workers with the mobile technology they need to digitally complete their tasks while on the go, you can turn them into connected workers.

Connected workers are empowered to make the best decisions in-the-moment by seamlessly accessing the information they need when they need it through connections to people, systems, and machines.

Workers and systems are updated in real time through the worker's ability to automatically push data to or pull data from various systems of record like ERP, CMMS, MES, IoT, and more. Collaboration is facilitated through embedded collaboration and workflows are triggered automatically.

Because the technology is already adopted and the behaviors are already instilled, the improvements in this phase require less change management. Instead, the focus is on driving improvements and eliminating non-value added activities throughout every workflow in every factory. Real-time updates to and from the frontline is the only way to make your operations agile.

#### Checklist

- ☐ I have enabled bi-directional integrations with business critical systems
- ☐ I have automatic real-time updates for people and systems
- ☐ There is complete digital orchestration of frontline activities and workflows

### Stage 4: Experience Transformed Operations - am I able to transform my operations?

If you are already here, you likely already have Connected Worker technology in place for the frontline.

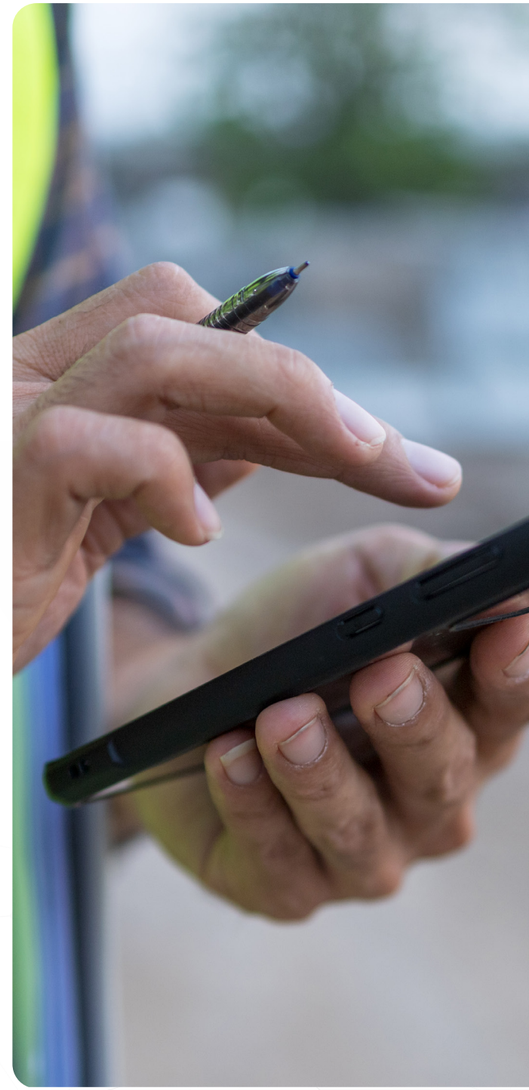
The Connected Worker strategy combined with the new granular data points is the buy-in for practical transformation within a broader digital strategy.

Digital Twin combined with Artificial Intelligence taking input from IoT sensors, historical data, intelligent production and warehousing systems, and more come together to determine the optimized task for the work to perform with all known outcomes and responses to potential issues mapped out. The Worker is made aware of the task, receives all information needed to safely and efficiently complete the task, while the data surrounding the completion of the task and the impact of the task are fed back to the appropriate systems.

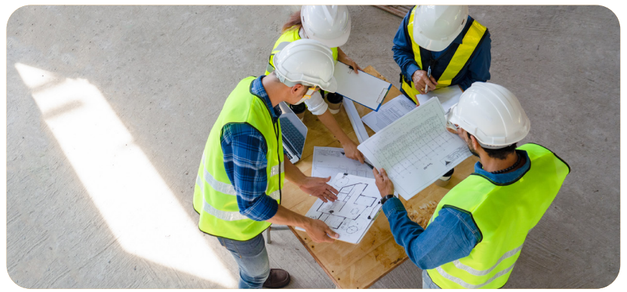
The future of work is not standard work. The future of work for the frontline workforce is optimized work. Optimized work requires workers to be connected.

#### Checklist

- ☐ There is complete implementation of critical Smart Factory components
- ☐ I leverage an optimized approach to frontline processes and workflows



# Benefits of Advancing Along the Curve

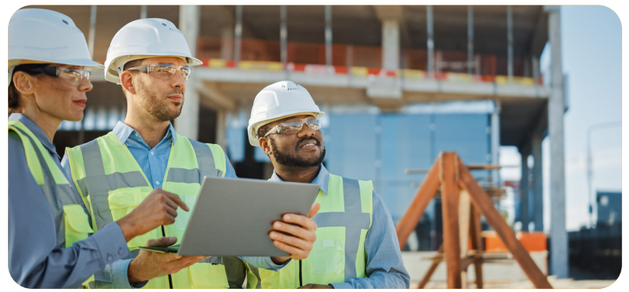


**Pre-Connected Worker:**

Before leveraging Parsable's Connected Worker solution, Georgia Pacific (GP) faced a number of challenges:

- This included fluctuations across sites directly affecting profitability. Site equipment and machinery differed widely and GP's retirement-aged workforce was departing with vast amounts of tacit knowledge and no way to transfer it to new talent.

- GP also lacked standardized maintenance procedures across its corrugated facilities. Procedures were outdated and not optimized or documented which were leading to unplanned downtime.



**Implementation:**

- Parsable provided standard and clear digital work instructions across Operator Basic Care, for Startup, Shutdown and Centerlining Audit – across corrugated sites.

- Parsable and GP worked together to document and share best practices, eliminate procedural mistakes and level up the workforce's skill set for improved efficiency and reduced variability.

**Results:**

- $45 Million in gross margin contribution due to 6% improvement in OEE

- 25% reduction in downtime during centerline audit process

Faster and more reliable training and certification of new employees

# Challenges to Advancing Along the Curve

At this point, you may feel sold on the advantages of moving your frontline out of isolation and leveraging connected worker technology. However, this often comes with challenges.

**Limited budgets and resources:**

Connected worker technology often requires significant investment in hardware, software, and infrastructure, which can be a barrier for organizations with limited budgets and resources. In addition, ongoing maintenance and support can also be costly.

**Resistance to change:**

People may be resistant to change, particularly if they are accustomed to traditional methods of working. This can make it challenging to get buy-in from workers and stakeholders for new technologies and processes.

**Legacy systems and infrastructure:**

Many organizations have legacy systems and infrastructure that may not be compatible with modern connected worker technology. This can make it difficult to integrate new technologies and achieve interoperability.

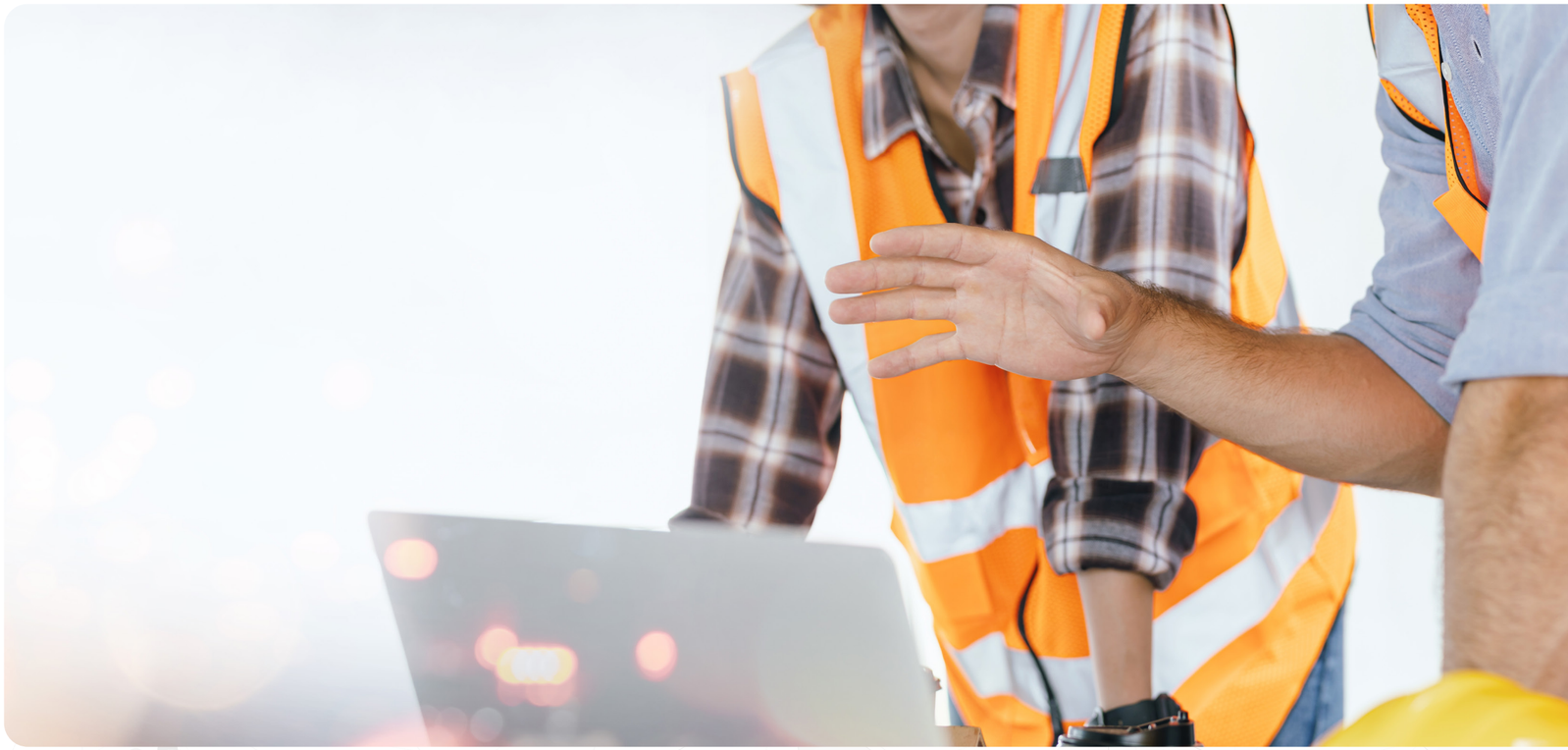
**Skills gaps and training needs:**

Connected worker technology may require specialized skills and knowledge that workers and IT staff may not possess. In addition, training may be required to ensure that workers are able to use new technologies effectively and safely.

**The need for connected worker technology with a team of experts that can guide you along the curve:**

Implementing connected worker technology can be complex and time-consuming, requiring a team of experts with experience in deploying similar solutions. Having such a team can help ensure that the technology is implemented effectively and that the organization can derive maximum benefit from it.

Despite these challenges, the potential benefits of connected worker technology, such as increased productivity, safety, and efficiency, can make it a worthwhile investment for organizations. It is important to carefully evaluate the costs and benefits of any technology implementation and to plan for effective change management and training to address any resistance or skills gaps.



# How to evaluate Connected Worker Technology as a solution

When evaluating connected worker technology, there are several factors to consider to ensure that the technology is a good fit for your organization's needs. Here are some key considerations:

**Quality and breadth of data:**

Connected Worker platforms are only as good as the data capabilities behind them. These data points highlight the variables that impact operational results. Variables like who did what, when, and how, which contextualizes the results unlike ever before. Using these new data points, manufacturers can uncover insights into inherent inefficiencies that impact their frontline workflows & processes. But without action, insights are just fun facts. That's why Parsable provides a suite of tools that help the industrial workforce take action.

**Scope of resources from provider:**

This is your opportunity to ask hard questions about the level of support you can expert from your provider. Remember, advancing along the digital maturity curve requires a partnership, and oftentimes a guide.

**Use cases:**

Identify specific use cases and business processes that can benefit from connected worker technology. Consider factors such as the type of work being performed, the level of collaboration required, and the safety and compliance requirements.

**Integrations:**

Evaluate how the connected worker technology will integrate with your existing systems and infrastructure. This includes compatibility with legacy systems, data exchange capabilities, and ease of deployment.

**Security:**

Consider the security implications of the connected worker technology, including data privacy, access control, and protection against cyber threats. Ensure that the technology meets your organization's security requirements and standards.

**Usability:**

Evaluate the user interface and user experience of the technology to ensure that it is intuitive and easy to use for workers. Consider factors such as the availability of training and support, as well as the ability to customize the technology to meet specific needs.

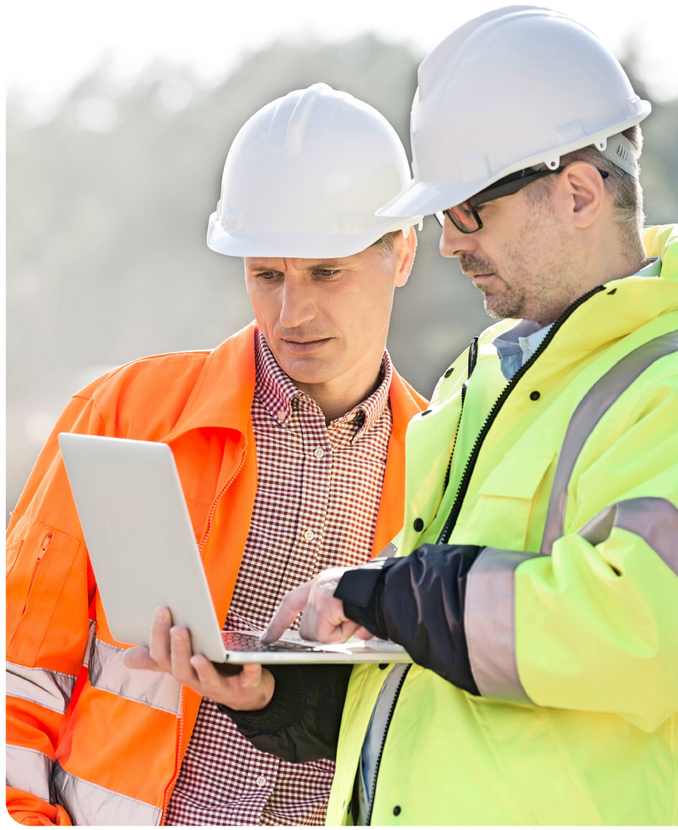
**Scalability:**

Consider the ability of the technology to scale to meet the needs of your organization as it grows and evolves. This includes the ability to add new users, devices, and use cases as needed.

**ROI:**

Consider the potential return on investment of the technology, including the potential benefits such as increased productivity, safety, and efficiency, as well as the potential cost savings.

By carefully evaluating these factors, organizations can identify connected worker technology solutions that are well-suited to their needs and can deliver significant value. The key is to look for a provider of Connected Worker technology that puts the people first.



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Parsable (www.parsable.com) helps leaders at the world's largest industrial companies unlock the big data and insights needed to improve their frontline operations and build a more sustainable future. Leading manufacturers rely on Parsable's Connected Worker® platform every day to track millions of data points from their frontline operations, and leverage unprecedented visibility to optimize productivity and drive ROI. Parsable is headquartered in San Francisco with presence throughout North America and Europe.

## Contact:

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