

A man in a blue work uniform and an AR headset is looking at a rugged tablet. The background is a blurred industrial factory floor with robotic arms and lights.

The Connected Workforce

How digitalisation
can drive more
collaborative working.



Connectivity is Key

Even though the Covid-19 pandemic is now behind us, the impact of the crisis continues to ripple through the way we live and work.

Coupled with an ongoing skills shortage, supply chain issues and geopolitical uncertainty, having a connected workforce that is able to work efficiently without compromising on quality has never been more vital.

In this eBook from digital workflow specialists Intoware, we show you how connected working takes advantage of the latest technology to not only improve industrial process efficiencies, but also increase profits and boost productivity.

So, what is connected working?

A connected worker strategy joins legacy systems and new digital technologies such as Cloud, AI, sensors, smart phones, tablets and wearables so front-line industrial workers have the right information they need to do their jobs effectively.

It empowers them by providing step-by-step digital workflow instructions and access to live video, audio and photos which they can share with colleagues back at HQ or even customers elsewhere, to help get problems solved instantly or demonstrate progress and compliance.

[This eBook shares Intoware's insights into the connected workforce and explains what you need to consider for connected working success.](#)

Want To Go Digital ? This Is What You Need To Consider First

The industrial workforce is facing constant challenges, from routine maintenance to ever-changing and evolving compliance and safety regulations.

Digitalisation and the creation of a connected workforce can help overcome many if not all of these challenges. However, it's vital that the process is rolled out in the right way. Here's our checklist of things to consider when getting started:

1) Prioritise Problems

Start by identifying the key challenges within your business that digitalisation can help tackle and prioritise the processes that will deliver maximum value to you. Go out into the field or onto the factory floor and work with your frontline team to help identify the challenges they face and any pinch-points that exist. From there, you can assess which technologies or digital processes can help address each problem.

2) Going Digital

Digitisation (simply putting physical paper-based manuals and ticks lists into a digital format) can help you to streamline key business processes by enabling easy access to real-time data that flows across your business as part of a connected worker strategy, reducing downtime to help maximise performance.

When these digital processes or workflows are then integrated with wearables, Internet of Things (IoT) and AI technologies, it will enhance communication between your managers and frontline workers. These workflows can be accessed anywhere, allowing your team to prioritise and manage daily tasks and audits while also encouraging greater collaboration and problem solving.

3) Unlocking Your Data

By switching to digital workflows, you can build a huge bank of data for audits and use the same information to predict when failures may occur. In most industries, health and safety, compliance and audit checks are frequent and detailed. Unless these processes, such as predictive maintenance, are done digitally, they create a massive volume of paper which is difficult to track and impossible to measure with any degree of accuracy.





4) Embracing Change

The success of your connected worker strategy will hinge on your ability to accept change. When change becomes embedded and proven your team will wonder how they managed before the new connected way of working. But don't be afraid to take some risk, embrace it and learn from it. This isn't just about digitising existing processes; it's about creating entirely new processes to solve a problem.

5) Start Small

Research has suggested that large-scale projects result in faster adoption. However, smaller efforts aimed at "low hanging fruit" are more likely to see measurable benefits that do not cost so much. These smaller projects can then be used as learning exercises and building blocks before scaling up digital solutions, so they are embedded right across your business.

A study in early 2023 of more than 1,900 manufacturing executives and business leaders reported that 89% of respondents say a lack of digitisation of factory processes has a medium to high impact on overall equipment effectiveness (OEE), and 82% acknowledge digitally enabling factory floor workers is a 'high priority'.

While exploration is encouraged, you should always start with a clear focus on process improvements and measurable outcomes, rather than investing in technology for its own sake.



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Initially the staff were hesitant to any change to their existing approach, but they quickly found using WorkfloPlus to have major benefits over the paper-based processes. The great thing about it is that we can build a workflow in five minutes, upload it and try it out there and then. So, it's incredibly easy to test, iterate and improve.

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**Miles Carrio
Carrio Cabling
Corporation**



Consistency, Compliance and Auditability

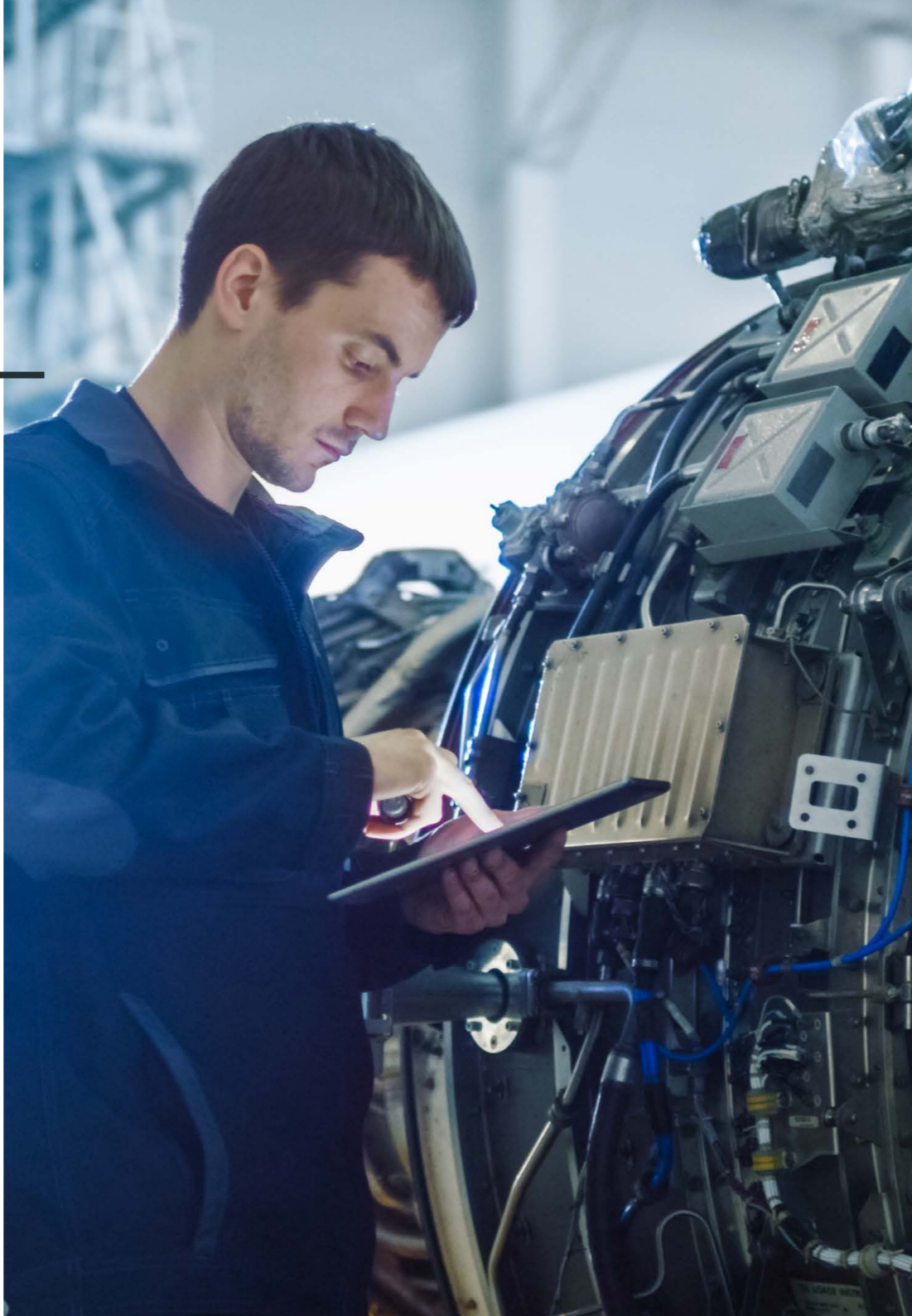
Ensuring your workforce always has the correct work instructions at the right time can be a challenge.

Frontline workers often have complicated, documented procedures to follow, but with pen and paper it's hard to know if they have been completed how they should have been, as there is no audit trail.

Health and safety procedures, compliance and audit checks are often frequent and detailed and, unless these processes are digitised, they create a massive volume of paper which is difficult to track and impossible to measure with any degree of accuracy.

Done digitally however, anybody from the worker to the supervisor or auditor can see the characteristics of a check in real-time, the impact it has and provide digital evidence, such as photos, videos or data, to know if it's done correctly – all in a fraction of the time.

By digitising inspection audits, the speed of change is rapid too, as when a change is made to a process it is sent to all users instantly, providing a "single source of truth", it's not sent as a paper trail, so everyone is working off the same version.



A Connected Worker Scenario

At the manufacturing plant, Sarah puts on her wearable device attached to a hard-hat to be allowed access to the site.

Once inside she logs on securely through her device so she can work 'hands-free', receiving tasks from her manager back in the office with easy-to-follow step-by-step instructions that provide her with everything she needs to complete the job.

Sarah walks to the machinery for a routine inspection, having found a faulty component she searches for information on the specific part she needs to pick up from the storeroom.

Before starting the repair, she's given important safety instructions. Since Sarah is a new recruit, she also benefits from a live two-way video call with her supervisor to get valuable hands-free coaching advice.

Sarah also receives photos and videos that help her successfully and safely finish the job. Once completed she updates the system so it's clear who did 'what' and 'when' is shared with her co-workers.

Connected working ensures compliance, safety & efficiency by digitally connecting your workforce.



Tackling The Skills Gap Crisis

It's no secret that many industries are currently in the grips of a global skills gap crisis.

Since the pandemic, the number of people retiring from industry has soared by more than 87,000 people according to Make UK's Skills 2030 report, meaning the more experienced workforce is declining rapidly, leaving a gap in knowledge and expertise.

The same report acknowledges the impact of automation and digitalisation on the industry, stating that six in ten (59%) of manufacturers identify automation as a 'trend that is changing jobs and skills needs for their business'.

Industry needs to be agile in its response, share data quickly and enable collaboration between teams. By digitalising and adopting connected worker strategies featuring assisted reality (AR) and artificial intelligence (AI) you can help protect the knowledge and expertise of retiring staff before it's too late by training both future talent and up-skilling workers.

As experienced staff approach retirement, digitalising their tried and tested processes becomes a strategic tool for capturing and transferring their invaluable knowledge to the incoming tech-savvy generation.

Technology can be used to provide trainees everything they need while learning on the job. Wearables provide an AR environment in which frontline workers can easily use voice commands to watch short training videos, access manuals, view mechanical drawings, look up spare parts and access other materials critical for training. Through this process, knowledge transfer can be achieved far more rapidly, helping to close the skills gap.

Connected worker platforms also appeal to younger frontline workers, who are 'digital natives' they are comfortable with using mobile technology for daily tasks which helps you to retain new talent.

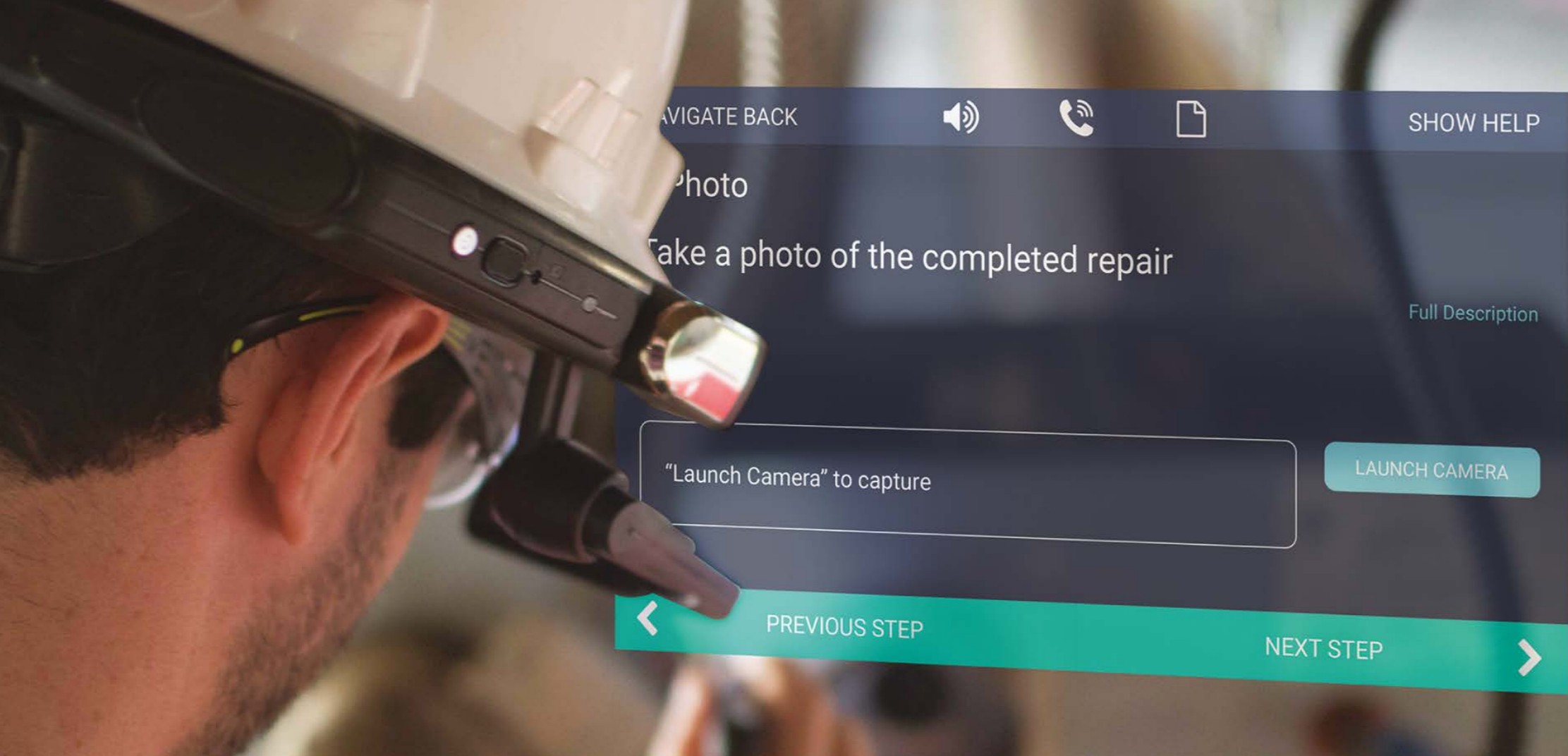
Empowering front-line workers with step-by-step guided work instructions that get the job done safer, quicker and cheaper.



“ **It's opened up our eyes to different ways of working. There's a lot of the older generation in Welsh Water, so WorkfloPlus will help us get their input into the future.** ”

**Cerys Middle
Dwr Cymru
Welsh Water**





“The beauty of Intoware’s WorkfloPlus is that it’s device agnostic. Whether it’s on a mobile, a tablet, a laptop or a wearable device, the technology can be applied allowing for handsfree working or compliance with all systems and procedures from anywhere, any time.

“Users can also utilise remote expert video calling, delivering a full audit trail and automatic reports, and driving productivity “

**Brad Flook
CRO, Intoware**

Stepping Away From Silos

Today’s fast-paced world demands smarter ways of working. Are you finding that established ways of working are stopping you from being fully connected?

Typically, we find data is recorded but stored in paper-based filing systems or in data silos separate from other system. This makes the information difficult to access and pass to where it’s needed, preventing the possibility of better, connected working. So, when a change is required, it is difficult to implement, preventing manufacturing or assembly processes from being fully optimised.

Intoware developed WorkfloPlus to help digitise production processes, in an industry that often relies on spreadsheets, checklists or even paper documents to complete tasks. This may seem fine, but it fails to offer the benefits that can be gained by digitising operations.

Imagine being able to see how long each task really takes; taking photos or videos to record information in real-time; accessing the best-practice work instruction by scanning a barcode or calling for live-help if things need attention – all through a mobile device or wearable headset. While being able to simply and quickly, keep work instructions up to date with the latest industry rules and regulations to ensure compliance, knowing that everyone is working to the new process.

One of our customers, a major pharmaceutical manufacturer, deployed WorkfloPlus with wearable headsets to streamline production change overs. As drug manufacturing requires regular cleaning and changeovers between each batch to ensure industry standards are met, WorkfloPlus ensured the procedure was carried out constantly and quickly to help minimise any “down-time” for greater cost efficiency, while at the same time providing a thorough audit check that a manual ‘tick-list’ could never deliver.

Taking A Granular View

It’s about more than just efficiencies, it’s about gaining a granular view into operations. Connected working provides access to better supporting information for strategic decision making. By taking data from various sources, your workers can analyse information to help predict failures based on historical trends which makes a huge difference when it comes to limiting unscheduled downtime. This generates cost savings as it means you can quickly react to fluctuating demand, plant shutdowns and implement preventative maintenance to anticipate problems before they even happen.

If the challenge for connected working is accessing the data itself. Investing in connected worker technologies helps overcome this barrier, empowering both workers and the company.

What's It Worth?

Deciding on the right metrics to measure connected working can be a challenge as it is a core component that looks different for every company. There are no universal KPIs.

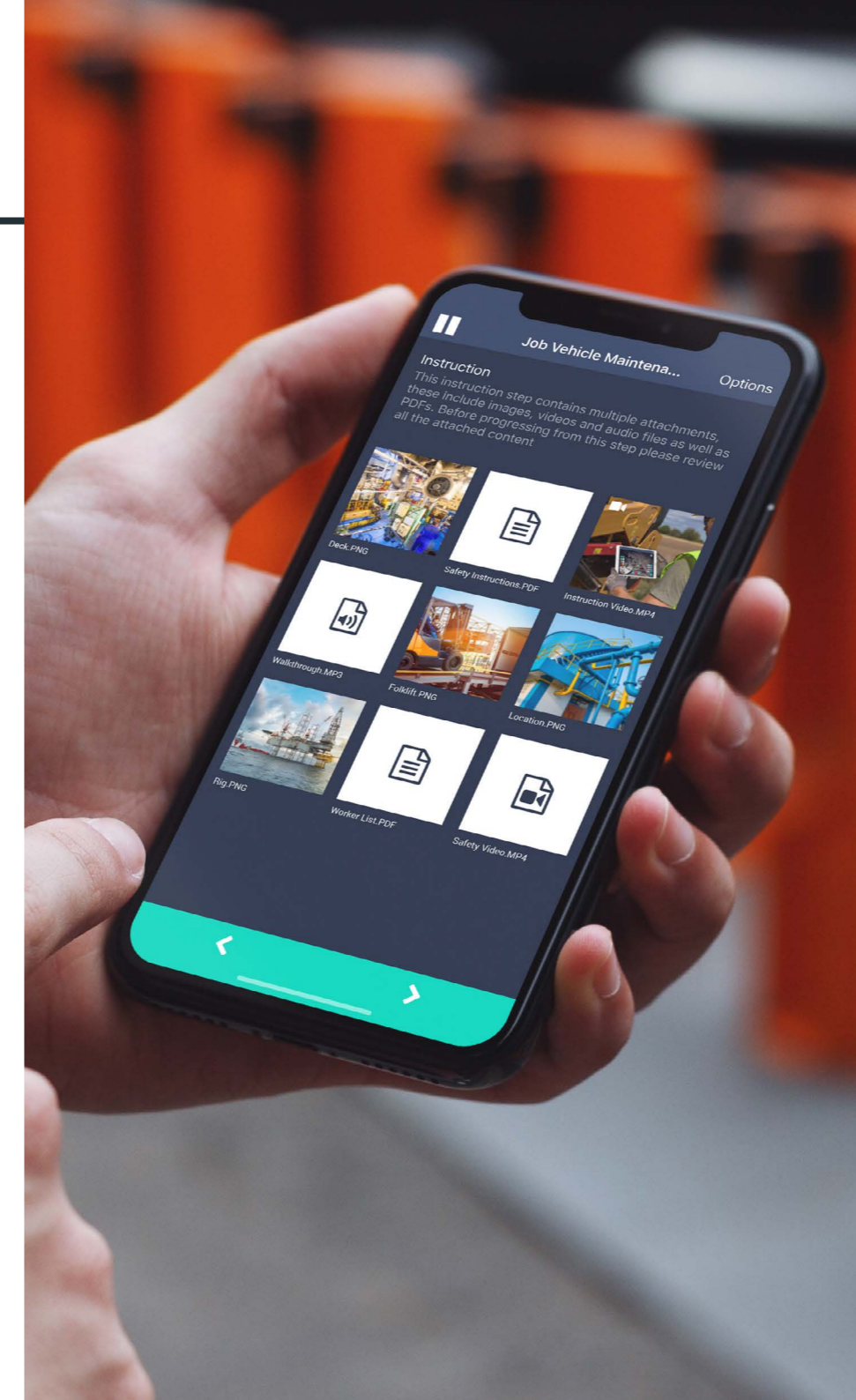
It often demands a culture change too, where there may be fear and resistance to adopting new technologies that are focused on measuring performance. This means it's important that the process of digitalisation starts with the workers themselves, engaging them in the process to ensure they are comfortable with adopting the technical solutions being created.

Start by asking yourself some questions, the indicators that measure the success of connected working as part of broader digitalisation strategy are as follows:

1. **How fast are changes taking place within your company as a result of the deployment?**
2. **Are barriers between different departments being removed for more productive working?** Collaboration between the more functional areas of the business must be facilitated.
3. **Is your digital strategy aligned with your overall organisational strategy?** You have to align your objectives for each department with the overall organisational strategy.
4. **How is new talent and training managed?** You must constantly innovate with continuous training.
5. **Is your company's culture in tune with the connected working strategy?** This is about empowering people to find new ways for working by challenging old routines.

To measure success these KPI's need to be divided into small projects specific to them, as a contributor towards the long-term goal of achieving end-to-end digitalisation.

In our experience, having started small we are now seeing many Intoware clients piloting their connected worker strategies by first learning and refining further onsite before they scale-up to deploy right across the business.



WorkfloPlus - Digital Work Instructions That Replaces Paper For Good

With WorkfloPlus you can quickly convert existing paper based and human processes into easy to follow, step-by-step digital work instructions accessible via desktop, mobile and wearable devices to enable connected working.

We believe that your digital transformation journey can be accelerated by empowering the connected worker through using mobile technology that they use in everyday life. It drives proven productivity gains, connectivity with simplicity without compromising on risk or health and safety, giving full accountability.

By using digital workflows to replace paper processes you gain greater insight for data driven analysis. It also ensures jobs are standardised, repeatable and right first time, every time.



The Future Of Work Is Changing, You Must Adapt To Thrive

Connected working allows human based operations to be combined with machine learning, AI and big data, creating a powerful component in your company's digital vision.

The efficiencies that connected worker platforms enable means that your workers can complete their jobs in a shorter time to a higher quality. By providing the right data when it's required, you can reduce the time needed to make key decisions. This allows workers to determine what is needed and what actions should be taken to help solve problems as they arise.

Connected working also supports the safety of frontline industrial workers. It helps reduce the opportunity for unproductive work, avoids bottlenecks on the assembly line and mechanical failures on site by placing more emphasis on preventative maintenance which all contribute to increasing output and cost efficiencies.

It enhances onboarding and upskilling, improving the overall effectiveness of your workers to help ensure that they can access the data they need at the right time. As workers are more able to understand and adapt to changing circumstances, it will help them navigate new challenges.

In an ever-evolving world, with new challenges and opportunities around every corner, connected working allows businesses to adapt to a more changeable future so they can thrive.

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“The way businesses and the workforce operate was drastically transformed during the global pandemic.

“As a result, more and more businesses are becoming aware of the value of a truly connected workforce that has access to the latest technology at their fingertips, driving efficiency and productivity while also ensuring compliance with industry rules and regulations.

“Digitalisation is also enabling decision makers to gather a wealth of data about their business and how it operates, that couldn't have been imagined just a decade ago without reams of forms and reports – usually on paper!

“We're seeing so many of our customers reaping the rewards of having a more digital, connected workforce, transforming their businesses and improving metrics across the board.”

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Keith Tilley
CEO, Intoware



Here at Intoware we have a simple mission, to partner with our customers to provide digital solutions that transform their workforce & enable continuous improvement.

Feeling inspired by what you read? Don't hesitate to get in touch at hello@intoware.com

Or visit our website at www.intoware.com



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