



How To Unlock The Value —

Making the most of
industrial data insights for
future growth.

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workforce.



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A portrait photograph of a man with brown hair, a beard, and glasses, wearing a black t-shirt.

What Is A Data-Led Digital Transformation?

Digital transformation has been on the agenda for many businesses over the last 5-10 years; while some have had great success, others have found their initiatives simply peter out. Often this is down to implementing tech for tech's sake, without setting clear objectives or even expectations as to what it should deliver.

A data-led digital transformation puts data at the very heart of the digital journey, it both defines where and why the business should look to transform and is responsible for most of the value gained from the transformation, as it brings data analytics, people and business processes all together.

If ever there was a time for businesses to commit to digital transformation - it's right now. Surviving the difficult economic climate brought about by the pandemic and the continuing uncertainty requires the flexibility to manage change. Successful digital transformation allows for quicker, mobile collaborative working - a vital component for the future of work, where the right tools are used to achieve business goals.

Despite this, beginning the digital journey still remains a challenge for many businesses. A recent study by McKinsey & Company found that '**84% of executives agreed innovation was important for their growth, but only 6% were satisfied with their company performance.**' Some confuse innovation with simply creating something new, others don't know how to deliver added value from data or digital transformation.

Getting started on digital transformation can be difficult, many count themselves out from the need to embrace it or they don't know how to select the right tools or approaches because it feels like a large upfront investment is needed. But for those that do take the opportunity to unlock the benefits it provides, by changing how they work and using data to enable better decision-making - it will help them stay ahead of the competition.

So, whether you are looking to start your digital transformation from scratch or wanting to build on existing efforts, digital workflow specialists Intoware have developed this eBook to explain why data needs to lead your strategy and why obtaining the right data is the key to future success.

Learning From The Data Champions

With data-driven digital transformation becoming a question of life or death for many industries, why do so many data initiatives often fail? The key is to establish a culture of using analytics like the data champions, Amazon and Netflix.

Although most companies today recognise how crucial it is to evolve with technology by digitising business processes, putting this into action is often another story entirely. It's often the case that data-driven projects try to be too complex, or fail at the start as certain data may be totally off-limits. Or they may find that project goals change quickly, so they fail to deliver actionable insights.

Many companies would like to emulate the data-driven culture displayed by market leaders like Amazon and Netflix for example, yet they have trouble with data analytics. Data-driven initiatives are often viewed solely from a technical perspective, resulting in situations where businesses often get lost in databases or platforms. Or more importantly still, it's not known if the data gained will lead to any actionable insights as the initiative is not sufficiently aligned with meeting business objectives.

Amazon and Netflix are able to use data in innovative ways not just because they are technically advanced, but also because they've created a 'culture of analytics' so data penetrates every aspect of their business. These companies are champions at transforming insights into data-driven action. Amazon, for example, uses 'big data' to automatically customise the browsing experience for its customers based on their past purchases. While Netflix seeks to directly impact customer behaviour with data-fuelled recommendations and more recently, it has used data to create original content that they are confident their audiences will like, to achieve a great ROI.

These companies succeed as data is in the very fabric of the business, but the reality for many businesses today is that they are simply stuck, relying instead on legacy systems and paper-based processes rather than working in the cloud. To remain competitive, companies must adopt a digital mindset and transform from manual, slow and error-prone processes by implementing new digital ways of working to achieve faster, more reliable methods across the business.



NETFLIX



amazon





“We have access to huge amounts of data, but which data is useful and how do we then connect this data with our overall strategy?”

The Data Paradox

Making Sense Of Data As An Asset

A recent Forrester report states that 'up to 73% of all data collected within the enterprise goes unused', highlighting a growing challenge for businesses. Many businesses are currently racing to extract value but are encumbered by the sheer volume and velocity of the raw data within their organisation and feeling like they have little control over the data landscape within their business.

Unused data represents a major cost to businesses, it needs to be stored and secured without returning any benefit to the business. However, data that is actively analysed and utilised represents an asset. Businesses need to focus on maintaining data that is valuable and shedding data that is not.

So, to answer the question "what data do we need"? Businesses should start by defining their own objectives, from there they can outline the data required to meet those objectives and following that, they can determine the digital processes needed to capture that data in a timely and reliable way >>.



>> The best means of capturing that data depends on the data itself, the environment it is coming from and the frequency that it needs to be reported. In industrial settings a lot of useful information can be captured from workers inputting data via mobile devices or tablets. If data capture is required, however, from a large number of assets relatively frequently, then equipping those devices with IoT sensors may be more cost-effective. Or if workers need to be hands-free to help mitigate Covid risks during machinery inspections, then using a wearable device such as a head mounted tablet or smart glasses for data capture may be better.

The value from data will not be realised until these data sources are exploited, this often requires a culture shift across the business. The key lies in collaboration, specifically between frontline workers on the factory floor or out in the field and senior managers to ensure that needs are fully understood and met. Senior managers need to listen to frontline workers to understand how new ways of working are impacting them and in turn should explain to frontline workers the benefits of new data-led digital transformation initiatives rather than just issuing them as edicts.

By using data from connected smart devices in this way, companies can improve productivity, cut costs and satisfy compliance needs. Data provides businesses with the ability to gain actionable insights that allows them to keep pace with growing competition, while creating new business opportunities which are all gained from data.



How To Develop A Data Strategy, Some Practical Tips?

A McKinsey report suggests that 'data-driven organisations are 23 times more likely to acquire customers, six times as likely to retain customers and 19 times as likely to be profitable as a result.' Data strategies should be structured to achieve agility in business processes and constantly deliver value. According to PwC, the term data strategy refers to "The basic goal of a data strategy is to create and maintain an enterprise-wide strategy that ensures the adequate protection, quality, value and utilisation of corporate assets." But where do you begin?

1) Your Workforce

It begins with your people, virtually every person in your organisation uses data or could be using data such as your frontline workforce which are at risk from being forgotten when it comes to digital transformation strategies. If you haven't already, it's time to begin discussions with your frontline workers to understand their needs. It doesn't stop here; your leadership team needs to understand why data is important and how it can help meet business objectives too.

2) Assess Your Data

A data assessment helps you to evaluate what to save (i.e. what's of tangible value to your business) and what to remove such as redundant or duplicate files. As part of this assessment, you need to consolidate data from silos, a lot of this comes down to how businesses are organised, with data tied up in business departments it is locked and not shared – so you're not getting the full value out of data.

3) Ensuring Data Quality

When businesses start doing more with data, they often discover that their data isn't fit for its intended purpose. This means cleaning and managing data that is critical to business processes and blending data from many different sources. You will need clear policies on how data is gathered and managed to ensure data doesn't become misinterpreted hampering your efforts. Data quality is a continuous process that requires the entire company to be data driven, to help ensure reliability and accuracy.



4) Data Governance

Data governance is a critical aspect of successful digital transformation. It provides a system for defining who within an organisation has authority and control over data assets and how those data assets may be used. It includes the people, processes and technologies required to manage data assets so they always have value and are trustworthy.

5) Actionable Insights

Your workforce should have access to industrial data insights that are both easy to understand and quick to action, by highlighting a specific problem or opportunity. Any data management process must pinpoint a clear area that needs to be addressed by your workforce in order to become fully effective and to gain real value from the data. This means putting the processes in place to ensure that data insights can be easily shared across the business.

6) Closing The Skill Gap

As digital tech demands new skills, a shortage of analytics talent is becoming apparent. Businesses must have the ability to analyse and understand how data impacts their business, which means up-skilling and attracting new talent.



7) Integrating Artificial Intelligence (AI) / Machine Learning (ML)

Don't rush to AI/ML, focus on the data fundamentals first and once your data capture, quality, movement and analytics have reached a level of maturity, then start to consider AI/ML. But even then, don't look too impatiently for opportunities to "try it out" but instead wait until a business challenge arises where AI/ML is the best fit for meeting that challenge. If you are looking for AI/ML to provide continuous and ongoing benefit then deploy that capability within a MLOps (machine learning operations) framework, that will help ensure that the models are benefiting from and responding to the latest data while providing a level of oversight and consistency over time.

8) Assess Your Data

Data maturity is the degree to which your business is able to rely on and use the data it produces, with companies that are able to use their data to advance their goals being considered to be more data mature, increasing data maturity should be an ongoing aim of the business. But how do you put your data to work?

- 1) They manage data as an asset and have strategies aligned with their business objectives
- 2) Their staff have clear responsibilities when handling data and understand the importance of it

This means having a data literate workforce, find out how...

How To Build A Data-Literate Workforce?

Recent research from the Data Literacy Project revealed 'that while businesses are shifting day-to-day analysis from the experts, they're hitting a wall when finding that only 21% of employees are data-literate, despite 65% claiming they need to read and interpret data on a regular basis. Only 25% of employees felt fully prepared to use data effectively.'

One of the greatest challenges for businesses is not capturing data, but turning data into actionable insights that empower employees to make more informed decisions, improve productivity and drive competitive advantage.

If you are to succeed, business managers must enable their employees to become more confident and comfortable in using data insights to make decisions. While most businesses understand the opportunity of data, recent research has suggested a gap is emerging between business aspirations and their employee's ability to work with data. This means that they must focus on these three key areas:

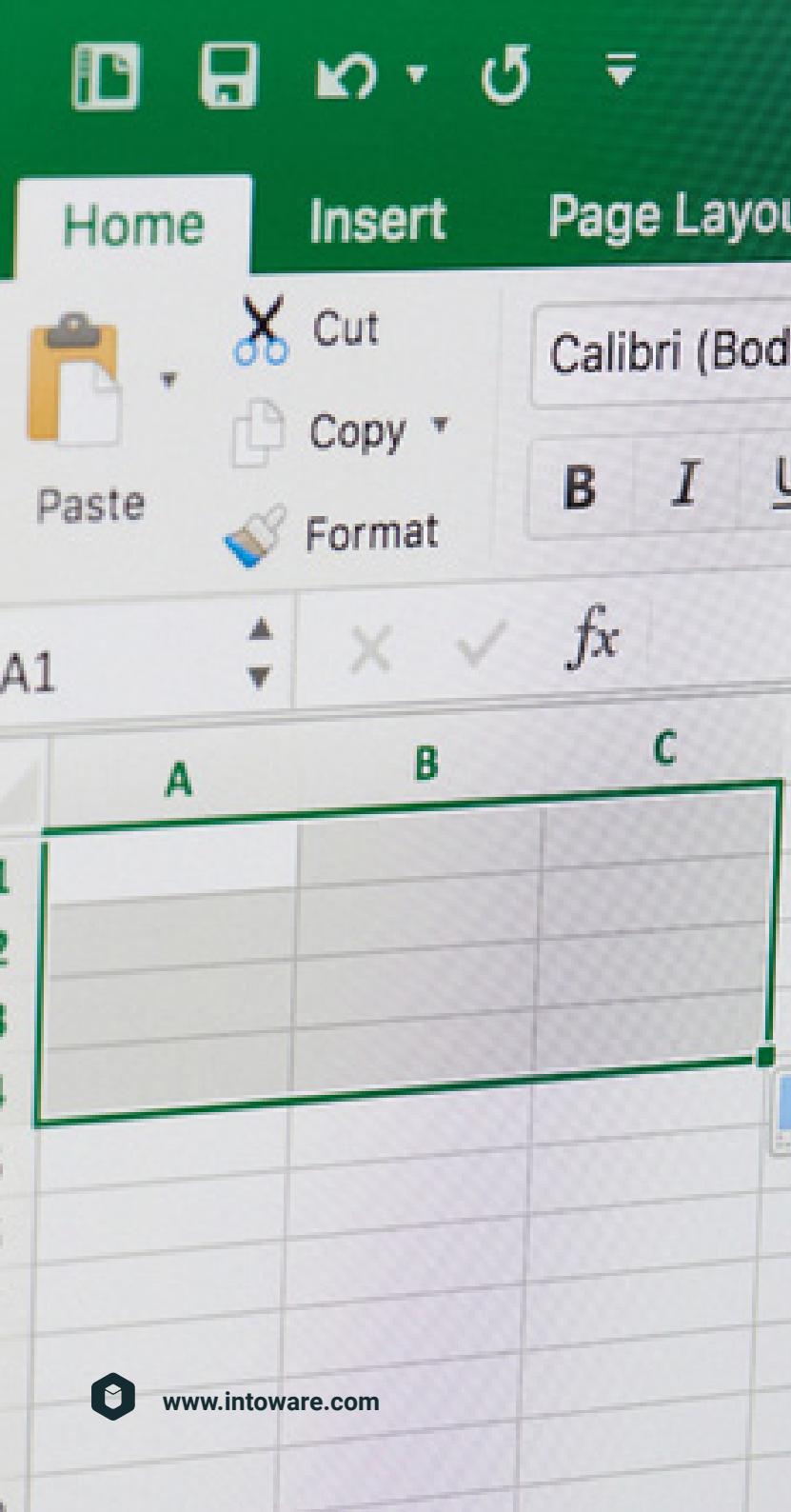
1. Assess your employees' levels of data literacy
2. Provide employees with the right technology, processes and methodologies to enable them to meet business goals.
3. Define the data that employees need to access to be productive and manage governance

As the use of data continues to transform, so must the ability of your workforce to make the most of these new opportunities. Therefore, the data tools for all roles should be regularly reassessed to ensure that they continue to deliver against your needs. Data literacy training should not be approached as a tick-box exercise, but instead be incorporated in your corporate training and onboarding.

Once in place, it should be kept up-to-date to help reflect the evolving use of data in your business. Data literacy should be a compulsory part of all employees' learning and development and be measured in their reviews to ensure that they continue to create the greatest value from data. Since the most powerful asset for your business when it comes to creating value from data is your people.

But old habits are often hard to break, particularly when it comes to letting go of outdated methods...





Old Excel Habits Die Hard

Sending paperwork by post or fax are just a few of the outdated processes that are going by the wayside. But somehow the use of stand-alone Excel spreadsheets for process and resource planning remains. Spreadsheets are typically used alongside paper-based processes such as tick-lists and notebooks. But without a transparent and flexible way to collaborate, it's impossible to stay on top of issues that may impact your business. This results in common problems such as either losing or using out-of-date spreadsheets, here is a typical scenario:

- 1) A person is tasked with producing some metrics
- 2) They find the sources of the raw data they need and then manually collect that data and enter it into their new spreadsheet
- 3) They then repeat this next month and the following month and so on - a manual extract, load, transform process is born
- 4) Most likely that process is not documented and resides in the mind of one or two people
- 5) More requirements are added, the complexity of the data transformation increases, macros are added to perform part of the transformation
- 6) Over time the spreadsheet gets larger, which makes it harder to work with as Excel creaks under the load, so users experience significant delays for every tab they open or after entering new data
- 7) Eventually one of two things happen:
 - (i) The spreadsheet owner moves on and someone else becomes responsible for maintaining it, without being confident that they are exactly replicating the process followed by the originator
 - (ii) The spreadsheet becomes unusable due to the volume of data that it holds, new work is required to remove and archive some of the data (probably in a different spreadsheet)

All this makes hard work of resource planning, using spreadsheets can be laborious, manually creating settings and duplicating data to calculate resources all takes time. Collaboration can become chaotic as spreadsheets aren't designed for team use, when shared with people simultaneously, they have no idea what additions are made by others.

There are many ways to be more strategic with your data and make things easier for your business to collaborate. So, what's the solution...?

So, What's The Solution?

There's much more to data strategies than simply automating time-consuming tasks. By using the power of real-time data and the cloud, you can make a difference to both the efficiency, speed, effectiveness and transparency of your operations.

Many frontline workers know the frustration of tedious repetitive tasks, whether it's doing audits, filling out work reports or manually repackaging and sending on information, every industrial business is familiar with the challenge of inefficient processes. Digital workflow software can take the complexity, cost and effort out of paper-based work by automating daily tasks so they are followed quickly and accurately. This matters as businesses are looking to streamline processes, to help drive efficiencies and reduce costs.

WorkfloPlus from Intoware has been developed to turn existing workflows and procedures into digital work instructions that are followed by frontline workers using smartphones, tablets or wearable devices featuring assisted reality technology. In doing so it ensures that each process is executed correctly, audited and provides the necessary data analytics to ensure compliance – ideal for highly regulated industries.

A Single Source Of Truth

The speed of change with WorkfloPlus is rapid too, a change to the business process 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. This means it's easier to schedule downtime and manage production demands as things change. But if you're relying on spreadsheets or written notes, this change could take many hours and be inconsistent.

Harnessing The Power Of Analytics

If you are overwhelmed by the data volumes you are generating and you may struggle to consolidate data to get a single view of individual operations or overall business performance. With WorkfloPlus you can harness the power of analytics to observe and optimise the performance of your processes as well as your people. Most businesses begin their digital journey by digitising paper-based processes; however some do this without giving enough thought to broader business needs. For example, if you digitise a quality check, but then still need manual inputs into a system of record then you have failed to deliver 'end-to-end' process optimisation.

Being able to identify challenges accurately and having the ability to make this data accessible and visible to those who make decisions is the first step to solving problems. Having overcome the challenge of collecting accurate data from equipment, businesses have instant visibility into performance. Even if they choose to do nothing more than monitor the stream of data coming, there is immediate value to be had.

A forward-thinking manufacturer that is using data analytics to make a step-change in its quality control procedures in Rimstock, this is their story...



Real-Time Reporting From Rimstock



Britain's leading alloy wheel manufacturer **Rimstock**, designs, manufactures and supplies to some of the world's most prestigious auto marques including Lotus, BMW and McLaren. Having recently joined the manufacturer as its new Operations Manager, Mike Wise knew that its paper-based approach to audits and compliance needed reviewing. Returns and the associated costs had been escalating thanks to damage from third party fitters, this created added pressure as each returned alloy wheel had to either be reworked or manufactured incurring further costs.

Having spearheaded digitisation projects previously with **WorkfloPlus**, Rimstock's Operations Manager, Mike Wise aimed to use this digital 'tool' once again to prove beyond doubt its products are always defect free when leaving the plant. It would also provide the quantifiable data needed for **Rimstock**'s failure mode effects analysis (FMEA), where paint line characteristics for example, are measured to improve its production processes by looking at where any failures occur to ensure the highest quality standards.

Previously, audits were completed manually using check sheets that were then filed by its quality control technicians. The problem with this was that these lists could be easily misplaced or damaged as they would often be filed the next day. This meant that when it came to large external audits, it could take a couple of weeks for staff to manually check for these types of errors or risk not being able to supply at all.

Rimstock's technicians quickly found **WorkfloPlus** easy to operate for routine quality audits, simply following the work instructions on the tablet to complete the audits step-by-step, it's currently used for 15-20 workflows a week and can be easily updated as new parts come online.

Since deploying **WorkfloPlus**, Rimstock has been able to achieve a low return rate of just 9,000 parts per million, so the impact of digitising is easily measured. **WorkfloPlus** had proved itself in terms of financial ROI, compliance and operational efficiencies thanks to improved quality controls and real-time data reporting. But most importantly, it helped the manufacturer improve relationships with its customers, major OEMs.



RIMSTOCK



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Getting Tangible Business Outcomes From Data

Data coupled with digital technologies provides insights and enables businesses to achieve their goals faster and more effectively - here's some great ROI examples:-

The Goal

An escalator manufacturer connected a million of its elevator and escalator products to the internet to increase quality of service, reduce downtime and disrupt an entire industry. Through digitalisation, the company optimised its service offering by having fewer engineers looking after a greater number of machines - so they can do more with less. Not only are its machines now less likely to fail unexpectedly, the positive impacts are being felt by customers - facilities managers now have access to real-time data regarding performance across multiple sites, the passengers and of course, the digitally-enabled field service engineers who look after these assets.

The Goal

To increase efficiency, flexibility and agility in production processes for a leading bus and truck manufacturer. Its teams worked on developing a digital thread across multiple business areas:- design, manufacturing and quality control. By having a 'single source of truth' from upstream and downstream operations the manufacturer can now quickly respond to changing customer needs and custom configure products.

The Goal

High speed analytics in Formula 1 for competitive edge. During a race McLaren's two-year-old Mercedes produces about 750 million numbers, from 120 sensors in real-time. The data is sent to the garage, then the factory where the car evolves every two weeks. Between races it becomes faster as things are added, but the information is also analysed and tactics developed to help beat the competition.

Conclusion - The Right Data Strategy Means Opportunity

So, data really does matter, regardless of the company size or industry sector, in fact data is your biggest asset, alongside your products, services and people.

If you are in a position where you understand your business challenges, it's never too late to begin. But, if you already have a strategy in place, now coming out of the latest lockdown is a good time to review it too, as we all must adjust to the economic uncertainty ahead. As you use data to make smarter decisions, by optimising your business processes, it will significantly improve your decision making, mitigate risks and produce valuable insights about your operations – which all impacts on your bottom line.

Thanks to data, it's easier than ever to make these improvements and adapt to new challenges. But this is only possible by having a forward-thinking approach, which means placing data at the very centre of your business, so that data knowledge sharing is the norm and being strategic with how you use this information to create new business growth.

In the words of the former US president, Bill Clinton "**The price of doing the same old thing is far higher than the price of change.**" Can you afford to be complacent when it comes to unlocking the value in your data?



Intoware was founded with a vision to be the first-choice partner for the connected workforce. Although the way we work has already been changed by industry 4.0 technologies, including cloud computing, the Internet of things and augmented reality, billions of business-critical tasks are still manual or paper-based. These processes are difficult to audit, can be easily lost or damaged and are very inefficient and tough to analyse. Our platform WorkfloPlus has been designed to improve efficiency and provide real data insights to accelerate your business performance.

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

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