White Paper

J&J Air Systems

"The iConn 'Touch' Enabling Digital Change within an Industrial eco-system"

Internet of Things for the Compressed Air industry

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Introduction

Data has been for many years a **‘known’** resource. Business systems have used it for internal and external analysis tools. However, the advent of the Fourth Industrial Revolution (I4.0) and the Internet of Things (IoT) has completely turned the traditional tools on their heads. Organisations are now rallying around this accelerated **‘connected’** phenomenon.

In the initial IoT paper for the compressed air industry we focused on the high level impacts around IoT in the compressed air market and the challenges around new technology implementations; namely the holy trinity of people, process and technology.

This paper will aim to dig deeper around the change efforts required in the people and processes across the industrial eco-system. For experienced change practitioners within large consultancies or even large organisations, the impact of IoT and the information it provides can be high impact.

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Gardner Denver Industrials Group

Simple is powerful

To enable a greater feel and focus for the impact and change required, this paper will draw on the experiences of the author over the last twenty years. The primary focus will use a Small Medium Enterprise (SME) business as the example.

There have been some recent high impact challenges to the way large organisations are developing their ‘Industry 4.0’ mechanisms, and there have also been some high level withdrawals in the digital global market place.

It is a known fact that the **‘industrial revolution’** phases are not short-term affairs. They typically require change over decades – it takes time. We must also take into account the technology change curve. In IoT we have seen a dramatic decrease in the costs of sensors, circuits and communication systems over the last 10 years alone, and a dramatic increase in agile based business development. This in turn creates the perfect ingredients for this wonderful word of **‘disruption’**.

At the heart of all this I4.0 revolution is the SME marketplace. For Gardner Denver it’s a key part of our global route to market for our mission critical compressors and associated systems. The SME is key for continuous product support and instrumental in supporting our end user clients all over the world.

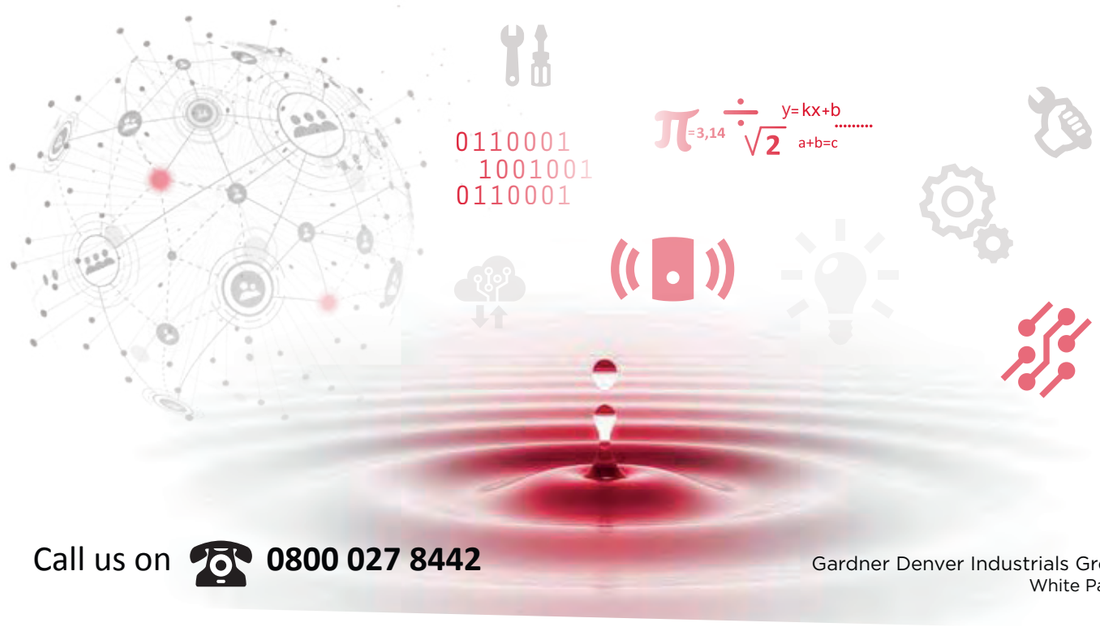
In large scale manufacturing cycles, including compressed air, the SME is a key aspect of the manufacturing supply chain. However, it is becoming clearer that they are struggling to be part of that larger eco-system – of fundamentally understanding what is required of them.

In a recent BDO survey, only 8% have significant understanding of what it means and a staggering 56% have little or no understanding of the term.

For the author, presenting in a recent industrial seminar event in Birmingham UK, it was painfully clear that the SME industrial marketplace feels like it's being ignored by larger organisations chasing the I4.0 grail.

Unfortunately, large-scale organisations that rely on SMEs, sometimes forget their value. So what is really important here? Well the SME is part of the fabled **‘eco-system’.** They are firmly entrenched within the Fourth Industrial Revolution. They feed the market, and are agile to respond to customers' needs, as and when a challenge arises.

It’s also clear within the EU that some countries are really challenging their SMEs and bringing them into the change that is required to enable success.



Swiss SME marketplace

Swiss SMEs are in a good position to gradually adapt their business models and international network, according to Switzerland Global Enterprise (S-GE). Today, the difficult currency situation has already led to a high degree of agility and efficiency on the part of Swiss SMEs. Their innovative capabilities, their high amount of industrial value creation, and the broad deployment of technology also puts them in a good position for the Fourth Industrial Revolution.

"Those who don't get onboard with the Fourth Industrial Revolution will be left behind. This not only applies to suppliers from MEM (mechanical, electrical and metal engineering industries) and ICT (IT and communications), but also for all industrial sectors." explains Mr Kueng, S-GE.

Gardner Denver has a strong and successful SME base. It's a model we continue to thrive within so it's fundamentally important that our business development strategy includes our SMEs.

As per all other "product" organisations entering the world of connected devices and services, Gardner Denver's "iConn" platform is our step-change into transforming the way we do business, and more importantly, changing the way our distributors do business. iConn has been designed to be an OPEN IoT platform for compressed air systems and services. Whilst it's a native feature and standard to Gardner Denver's compressed air products, it has been designed to change the compressed air eco-system. The SME is part of that eco-system. The people and process agenda has to embrace digital steps to really transition them and their business.

"We are transitioning from a product orientated world to a service orientated world"

Industrial revolutions take decades, so instead of taking a full on approach to digital everything, iConn has been developed to create stepped sequences, creating an IoT enabled digital experience for our SMEs and end users. This is a huge step change. Gardner Denver and our distributors now have information about every compressor and air circuit enabled by iConn. We have a "client touch point" that has never been seen before. Equally our distributors need to understand what this means for them and how they can enable a truly digital experience for their customers.

The first steps of enabling and creating change are around productivity and efficiencies. Let's use our example of a distributor in the UK. They manage in excess of five hundred compressors and associated systems. To do this they have engineers on the road, in some cases 24/7 to keep the compressed air systems running. When a compressor has a problem, or when the machine fails, the distributor does not know until the customer calls them and requests immediate service. In all cases, the phone call is too late and the machine is in critical fail mode. This in turn creates a challenging customer experience for the distributor and a high-pressure experience for the engineer, the manager and the back office staff being asked to respond to a problem. This poor visibility has many knock-on effects. Its takes a longer term to manage the client and in most cases, two visits to effect a repair.

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The consequences are high

DOWNTIME WARNING

Client

- Poor experience – bad feeling
- Machine downtime – loss of production

iConn takes all of the above into consideration and helps change the distributors understanding of what is going on in the field. However iConn keeps its simple. Why? We need our distributors to understand how much power **"simple"** really means. They are our end users – our **"touch point"** for customer experience. If our brand has a problem, so does our distributor – it's a shared pain.

In its simplest form, just enabling iConn to collect service hours and predictive faults means we fundamentally change our distributor's customer engagement. The whole social digital interaction has changed; it's a fundamental digital experience.

Distributor

- Unknown – no idea of issues
- Inefficient – two visits to repair
- Loss of business – churn
- Staff - morale

It's the IoT space in one of the lowest forms of data, but in the SME space it the biggest change.

Basic data analytics – enabling understanding of product performance in the field. This is the easier step to take but is needed to help you understand your initial business plan. Maintenance routines can be planned based on real-time data. Engineers and technicians can be optimised according to the machine schedules. Downtime can still occur, however, you transition from reactive to proactive. This has high value and you change the whole client experience.

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Now our distributor has deployed iConn. They have moved from unknown to known. They have IoT information that is changing the way they do business and engaging with a customer.

In a recent training session, our SME was training new engineers on iConn when a live predictive alert appeared. This is the first time it had happened; the MD investigated the fault alert with the back-up sensor data and despatched an engineer with the suspect fault data and spares; in turn, he called the client to inform them of the issue and that they were en-route to fix the issue before it became downtime. Without realising it, his actions changed the entire customer experience and his business model. This first step of pro-active leadership created a change in his business, his staff morale increased and his whole client touch point changed. Needless to say the customer was ecstatic about the intervention, the machine was fixed and production continued.

For this distributor, the reality of IoT data, their own intervention and embracing the change required, has greater opportunity. All their contracts are now **digitally** enabled with iConn, service due dates are delivered in real-time and their engineers are optimised based on machine data, not just hunches. It has improved their operation efficiency by 30% and increased service contract renewals by 20%. In turn, their customer, ultimately a Gardner Denver customer, is experiencing an empowered world of digital in simple steps.

Gardner Denver and its SME marketplace are embracing the Fourth Industrial Revolution. We know it takes time. iConn is not just changing our clients' experiences, it's changing the compressed air market. It is OPEN. We can connect any compressor and bring it online, all in one place. For many SMEs and end users it's a proactive digital step in managing the fourth utility.

Global experience truly local service

supplying industries including .....

Aerospace
Agriculture
Automotive
Beveridge
Defence
Engineering (C+M+E)
Food
General Industry
Medical
Pharma

Benefits of proactive real-time monitoring and insight

- Real-time monitoring, alarms & warnings to reduce the risk of downtime
- Browser-based system for monitoring remote sites
- On-time maintenance as required optimising costs and ensuring longer machine life
- Optimal performance with machine parameter and over-time trend analysis
- Enabled for energy efficiency and production optimisation
- J & J Air Systems remote monitoring and efficiency audits as a service option

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