THE RESILIENCE PLAYBOOK: FUTURE-PROOF YOUR SUPPLY CHAIN

HOW MODULAR SYSTEMS AND LOCAL SUPPORT KEEP PRODUCTION MOVING

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INTRODUCTION

Over the last few years, global events have highlighted just how **vulnerable** many supply chains are.

From fluctuating customer demands to product shortages; production bottlenecks have been widespread, creating endless uncertainty for manufacturers trying to plan for the long-term.

If you've been left feeling like you're continuously playing catch-up, this guide is here to help you **build your resilience** against the ongoing market and supply volatility we're all facing.

Our experts will be focusing on where disruption is happening, what fragile operations look like, and importantly, how you can **pivot from firefighting to proactivity** through modular drive systems and a local service network.

Andy Turner

MANAGING DIRECTOR,
SEW-EURODRIVE UK & IRELAND

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THE PERFECT STORM OF PERSISTENT MANUFACTURING DISRUPTIONS

Author – Andy Turner, Managing Director

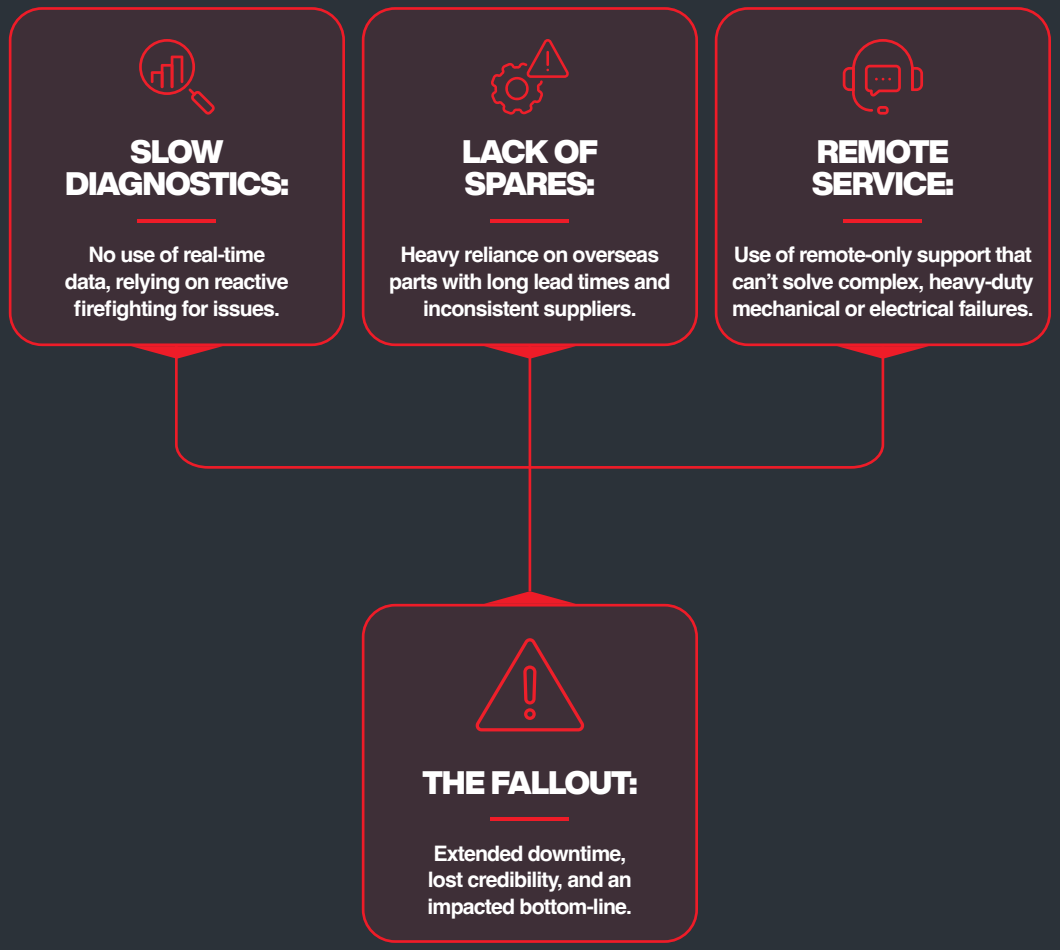
Manufacturers in the UK are facing a new reality where supply chain disruption is the standard, leaving them increasingly exposed to unavoidable delays, shortages and price surges, which in turn leads to unhappy customers.

Demand can spike and drop in a matter of days, while pressure to maintain uptime and cost margins is forcing operations managers to rethink production, making agility the highest priority.

While it's easy to blame increasingly complex logistics as a reason why we're seeing greater holdups worldwide, much of the disruption actually starts in production, beginning with a lack of necessary components, not enough staff, or even just poor internal communication.

So where do supply chains actually break?

Most factories have a few major pain points.



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WHAT DO FRAGILE OPERATIONS LOOK LIKE?

Author – Stuart Swarbrick, Electronic Sales Manager

Fragile operations are systems that run smoothly under ideal conditions, but splinter when unexpected stress appears.

A fragile set-up has a centralised point of control, where programmable logic controllers (PLCs), variable frequency drives (VFDs), and monitoring technologies are all integrated into a unified cabinet.

While it can be argued a single control point is easier to manage, it also provides a single point of failure on your production line.

This, when paired with a reliance on imported parts and reactive maintenance, creates a system where even a minor fault can halt production entirely.

Resilient set-ups meanwhile take control away from a central cabinet and onto individual motors, with interchangeable components, local servicing, and real-time condition monitoring allowing for flexibility when issues flare up.

WHAT HAPPENS WHEN A DRIVE FAILS DURING PEAK PRODUCTION?

TRADITIONAL SET-UP

- ✕ Delay in diagnosis with no prior oversight
- ✕ Spare parts sourced internationally and prone to shipping delays
- ✕ Remote service team struggling to solve complex issues
- ✕ Extended downtime

MODULAR, LOCALLY SUPPORTED SET-UP

- ✓ Fault identified early and isolated
- ✓ Spare parts sourced locally and sent within a day of being requested
- ✓ On-site engineers available 24/7, just a few hours' drive away
- ✓ Production quickly on track again

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THE ROLE OF MODULAR DRIVE SYSTEMS IN KEEPING FACTORIES RUNNING

Author – James Scott, Condition Monitoring Specialist

Heard of a software-defined factory yet? It describes an environment where manufacturing control is determined by software rather than fixed hardware, swapping complex central control cabinets for flexible technologies like inverters that are installed next to motors - also known as edge computing.

Modular drive systems have a key role in software-defined factories, bridging the gap between software control and physical production, as part of the Industrial Internet of Things (IIoT). They help manufacturers make the move to easily reconfigurable production lines, crucial for meeting efficiency goals while supporting data-driven production that prioritises foresight rather than firefighting.

Decoupling software from hardware helps to minimise downtime too, as repairs can be made to individual modules without stopping the entire production line. When sensors are added, these modules can then be individually monitored for deviations in operating conditions, like excessive vibration or high temperature, flagging issues before wider failures occur.

Two of the biggest benefits of decentralised architecture are scalability and flexibility. When production demands change, or usual product components aren't available, modular drives allow for rapid retooling without changing hardware, improving responsiveness to new product designs or increased volumes.

If you're not sure what this could look like in your factory, digital twins are a useful way of virtually conceptualising production line changes before implementation. You can test drive configurations and see how the move to software dictated production works before you commit completely.

The key takeaway is that when every manufacturer has this software-centric approach in place, it reduces disruption across the entire supply chain.

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WHY A LOCAL SERVICE NETWORK MAKES ALL THE DIFFERENCE

Author – Karl Rigg, Works Manager

While remote support could be perceived as an easier way to resolve issues in your factory, with instant troubleshooting and cost-effective maintenance, solely relying on off-site engineers alone could have a detrimental effect on your production line.

When you choose to use software products and hardware machinery components from a local service network, you can turn days and weeks of downtime into much quicker repair turnarounds.

On-site engineers provide physical support, allowing for rapid responses to breakdowns that remote tools can't address. As well as this, sourcing replacement parts locally cuts out long shipping delays, with fast assembly and easy customisation.

Having parts manufacturing sites and service hubs close to your facility means you build a more secure supply chain, all while reducing your downtime and developing better relationships with your chosen hardware and software suppliers.

This moves customer support from a distant transaction into a partnership, strengthening the reliability of your own production.

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RESILIENCE IN PRACTICE

Author - Eoin Garrigan,
Business Development Manager for Ireland

We work in partnership with Rapid International, a leading manufacturer of equipment for the concrete, construction and environmental industries.

With a global customer base, Rapid International needs to ensure consistent service and support wherever its equipment operates, they have chosen SEW-EURODRIVE for our global manufacturing model, where we produce in Europe for Europe, USA for USA and so on.

We supply drive technology for Rapid's standard machinery, which is distributed worldwide, and we also support its bespoke plant machinery across the UK and Ireland.

Using our **17 PRODUCTION PLANTS AND 90 DRIVE TECHNOLOGY CENTRES ACROSS MORE THAN 50 COUNTRIES,** we assemble products close to where they're used, meaning we can easily adapt our offering to suit differing customer needs.

Our service network supports this approach too. In the UK, we operate three service centres alongside our headquarters in Normanton, with engineers based across the UK and Ireland, meaning customers are typically within two hours of an SEW-EURODRIVE engineer.

This proximity allows replacement parts and drives to be dispatched within one working day, allowing issues to be resolved on site quickly, helping to prevent production delays. Outside of the UK, our global presence supports Rapid International's worldwide operations.

Customers can access local SEW-EURODRIVE expertise wherever they are, helping to maintain reliable performance and keep projects running to schedule.

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SIX AREAS OF ACTION SEW-EURODRIVE IS TAKING FOR BETTER SUPPLY CHAIN RESILIENCE

Author – Dr Hans Krattenmacher, Chief Innovation Officer

At SEW-EURODRIVE, market volatility has pushed us to think differently about what we do to increase our resilience. This led us to do an in-depth analysis of our supply chain, to find six key areas of action to strengthen the robustness of our material supply and keep our customers moving no matter what else is going on in the world.

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OUR BIG SIX FOCUSES ARE:

1

INVENTORY MANAGEMENT:

We're expanding our storage capabilities across mechanics and electronics, whilst using state-of-the-art software to monitor risks like natural disasters and other crises in our supply chain. This means we get proactive and early warnings of impacts on parts we need.

2

MULTI-SOURCING STRATEGY:

Our strategic procurement department is building up multi-sourcing strategies for critical components, including identical parts, and parts with the same function, while increasing our expenditure on procurement. This stops over-reliance on a single supplier.

3

ACTIVE SUPPLIER RELATIONSHIPS:

Starting with our procurement department, we're strengthening our relationships with suppliers, building trust, with consistent demand notifications, and long-term order horizons. This cooperation means better forecasts, and increased flexibility.

4

MODULAR PRODUCT SYSTEM:

Our modular system means we can focus on a manageable number of suppliers during development, reducing the complexity of what we produce. Procurement is consistently involved prior to production to increase future delivery capability.

5

PRODUCT REDESIGN:

By purposefully redesigning our products, we are reducing our dependency on single sources. Complexity and effort increase with every redesign, but our modularity means we can manage assembly lines and variants with ease.

6

PRODUCTION MONITORING AND ORDER PROCESSING CENTER:

We constantly monitor our production and orders, to proactively identify potential delays and resolve bottlenecks before they impact on our final products. By tracking our operations in real-time, we make sure we deliver on time for our customers.

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HOW RESILIENT ARE YOUR OPERATIONS?

Take this short self-assessment to see how vulnerable your factory is to supply chain disruptions.

HOW QUICKLY CAN YOU REPLACE A FAILED COMPONENT?	**Minutes or hours**	**Days or weeks**
ARE YOUR CRITICAL PARTS LOCALLY AVAILABLE?	**Yes**	**No**
DO YOU TRACK YOUR INVENTORY IN REAL TIME?	**Yes**	**No**
CAN YOUR PRODUCTION LINE BE RECONFIGURED QUICKLY?	**Yes**	**No**
WHAT'S YOUR MAINTENANCE STRATEGY?	**Yes**	**Time-based or reactive**

If you answered mostly in the second column, your operations are exposed to supply chain risks.

Get in touch with our team to book a free assessment of your current setup.

We'll tell you where the biggest risks lay, what's causing bottlenecks, and how you can adjust your production to strengthen your uptime.

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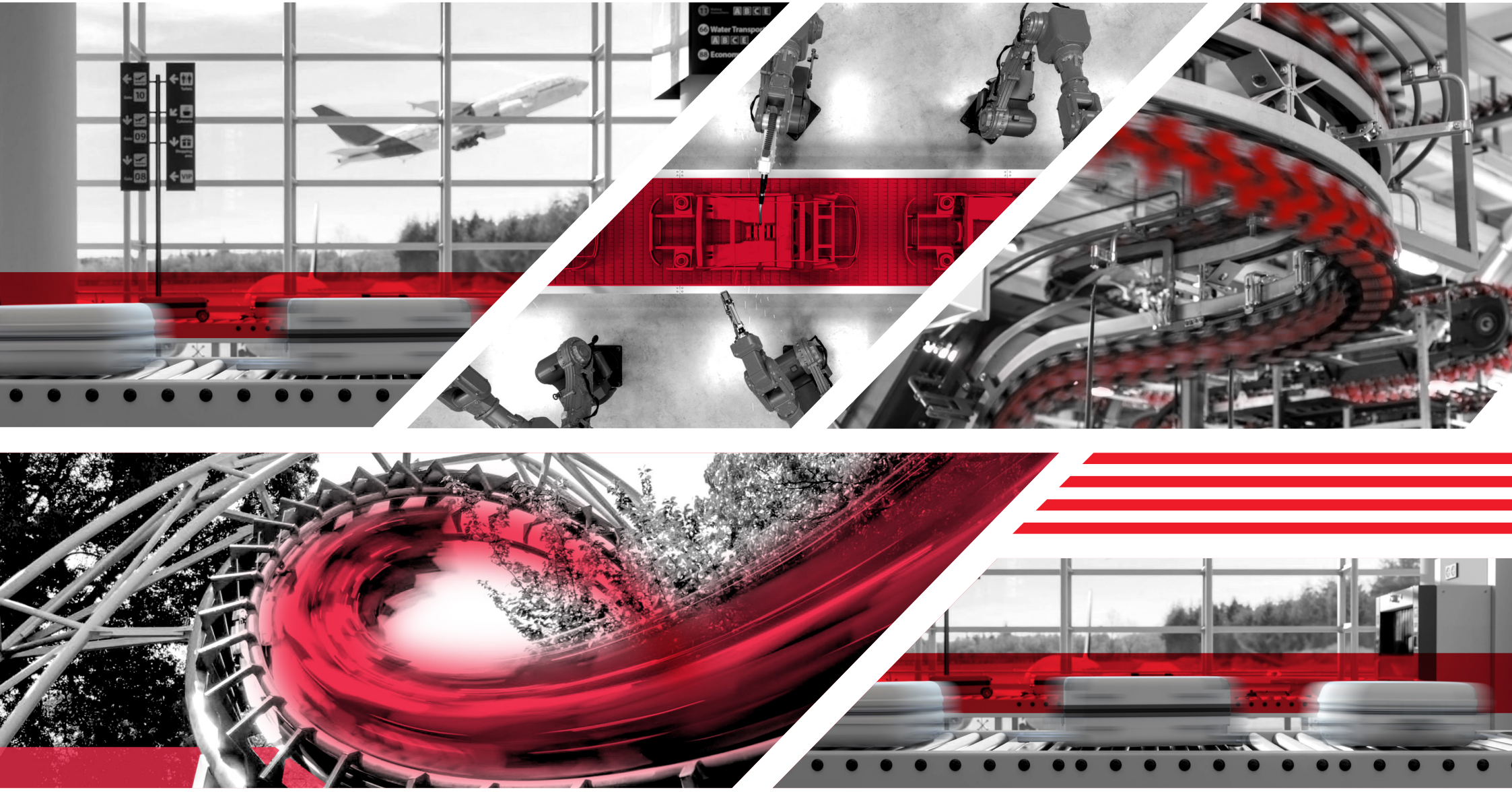

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