

# Superfast Business Wales



SECTOR GUIDE

# Advanced Materials and Manufacturing



Llywodraeth Cymru  
Welsh Government



## Contents

How can the technology help manufacturers? .....	4
Getting started .....	6
What benefits can you expect? .....	8
Top Tips .....	10
Contact details .....	12

## Smoother with superfast

The emergence of superfast broadband is making it possible for manufacturing businesses to innovate and collaborate more than ever before.

The result will be a far smoother business, able to produce items to order more easily than before and to communicate more effectively and automatically with the supply chain. Cloud technologies can eliminate duplication of information and even clashes as different versions of the same data are eliminated. Instant communication with suppliers can generate component orders immediately there is demand from an end client. Some of your workforce will be able to work remotely and you may want to consider outsourcing some of the peripheral tasks without hitting your main operations.

It starts with a superfast broadband connection, which offers many advantages over the old way of working.

# How can the technology help manufacturers?

Broadband is essential for most industries and manufacturing is no exception. And it's improving. Superfast broadband offers huge advantages to manufacturers. Put simply, the speed at which connections are possible within a single building – usually called a Local Area Network (LAN) – is now available externally, whether to the Internet or to other sites.

The practical advantages are many. Larger companies could benefit from cloud based enterprise resource planning (ERP) systems which include all financials, materials and a great deal else. This also works for manufacturing resource planning (MRP), a version of ERP with a specific focus on materials and outputs for the manufacturing process.

Collaboration is also easier. Consider technical drawing. Put something down on a tablet (or just photograph a pen drawing with a smart device) and it can be on the network for everyone to share and annotate immediately.



This can apply just as easily to collaborating companies as it can to your internal network. You can share all sorts of information and files with your supply chain and customers; people can self-serve with product and delivery updates because the whole process can be joined up with smarter technology. This saves person hours and adds to productivity.



Consider also the essential services that underpin the manufacturing processes. Accounts, HR and payroll, the marketing function. These no longer need to be held on site. In the past this may have been desirable because they needed to be on hand to speak to the product developers or question people about the financials. With up to date information and images updated the whole time through a superfast broadband connection the professionals behind these functions can work anywhere. This has led some companies to outsource to a specialist, who can now allow access to their systems and function as if they were part of your business rather than a supplier.

# Getting started

The technologies available to set businesses on the journey of superfast broadband are many. They include:

- **Document management**

Speed up logistics with each docket and requisition order handled electronically. Sign orders and receipts electronically and retrieve them easily through search technology. Accept and issue orders automatically as invoices and dockets enter a system and those of the supply chain automatically and immediately, even if the partners are in a different country.

- **Enterprise resource planning**

Increasingly this can be stored in the cloud by a third party. Implementing and maintaining such systems is a specialist job – so once it's in the cloud rather than on-premise, and available constantly through a superfast connection, a business can think about getting a specialist to take care of it while resources are deployed on a business' core tasks.

- **Mobile working**

Smart devices are all but universal now and Internet connections are widespread. If a company's infrastructure is superfast then its personnel can be allowed access to many of its systems from a remote location. This opens up two avenues immediately: staff might want to work from home if they're in support areas, or they might be able to work in the field. Consider the sales rep going out and taking orders in real time with the information entering the systems immediately, ordering up the components and starting the manufacturing process before the rep is back in the car.



- **Innovation**

Communication is important if innovation is to happen and instantaneous communication across a fast connection makes this possible. Document sharing and screen sharing means everyone on a Voice over IP conference call can share a design or spreadsheet at the same time and it can be discussed by voice, video or text. This can eliminate the need for lengthy meetings as well as cut out travelling time and costs.

## What benefits can you expect?



Adoption of this technology, as long as it is applied sensibly and well, will offer a business genuine competitive edge. This will come in a number of forms:

- **Costs will go down** not only as you automate but as you put more elements of your business into the cloud. Turning your software from a package you buy as a one-off to an “as a Service” model, which you can do with infrastructure as well, takes the pressure off your capital expenditure and allows you to spend only on what you use as operational expenditure. Financial staff tend to like this. This goes for office productivity as much as it does for manufacturing-specific software.
- **A simplified supply chain** with immediate orders is an efficient one. It will allow faster delivery of product and less time (and money) spent storing goods. Some manufacturers have gone as far as to refer to “virtual manufacturing” as all of the resources and people necessary are assembled in the cloud.



- **Information on financials and manufacturing processes** will be available on whichever device a business wishes to use – phone, tablet, laptop – given the right connection, apps and, of course, security levels. This revolutionises reporting and allows for a lot more at-a-glance support for decision making based on immediate information rather than data that might be a couple of days old.



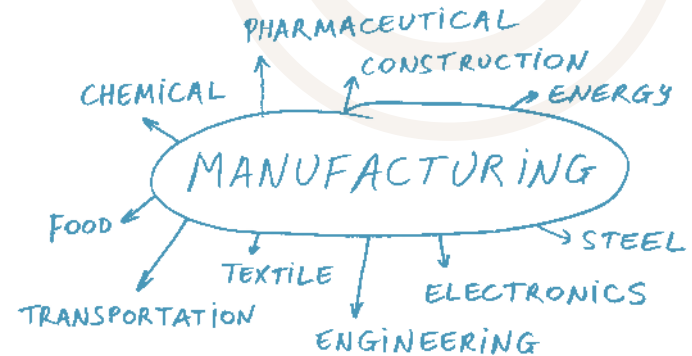


## Top Tips

**Take full advantage** of the business information now available on a superfast connection. The right software will analyse it and give you excellent insight into what's actually going on in your manufacturing process and how it relates to your supply chain.

**Check all costs** – different service providers will have different offerings and it's important to be certain about what is included. Are there limits and ceilings on the data you can use?

**Check your colleagues' connections** – true though it is that superfast broadband will enable retrieval all of data and apps remotely, if your workers are in a poor reception area and unable to get a 4G or 3G signal (and can't get to a WiFi hotspot), there could be an issue. Find out where they're going to be and plan accordingly.



**Check that all** of the internal networking equipment is up to date. There is nothing more frustrating than an engineer suggesting the incoming broadband is among the fastest when ageing internal routers and extenders are carrying data around as if it were 20 years ago.

**If a cloud provider** is to be engaged, ask the awkward questions: does their contract include software updates, security, backup? If not, feel free to shop around!



## Superfast Business Wales

To complement the roll-out of superfast broadband across Wales, you can access advice on what you can do once it's available to you, and what you can do in the meantime, to ensure your business gets the most from superfast broadband.

- Grow your business
- Boost productivity
- Increase efficiency
- Cut your costs
- Increase profitability

For more information and to download your FREE 'How to...' Guides visit:

[www.business.wales.gov.uk/superfastbusinesswales](http://www.business.wales.gov.uk/superfastbusinesswales)

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