SECTOR GUIDE

Construction

Contents

The construction industry is all about communication

This might involve communicating with suppliers and logistics companies or sharing and editing complex drawings and documents; it could involve interfacing with finance companies and general client management.

A great many parties have to come together and exchange information and this can be expedited through a superfast broadband connection. It makes for a faster business and a better experience all round and removes a lot of physical barriers for the back office functions.

Using a superfast broadband connection will join up your business internally, smooth links with partners and clients and enable increased productivity and profits. It starts by upgrading your connection.

The opportunity

The steps in construction that happen off site are numerous. A client commissions an architect to draw a plan. The architect and client commission a building firm. The firm engages skilled labourers and sources suppliers. The suppliers liaise with logistics firms to get the goods to the site. A project manager oversees and supervises the build.

In spite of the straightforwardness of this list, there is room for errors to creep in, many of which could be addressed with better technology. For example:

• An architect's plans may be subject to modification. As long as absolutely everybody has the up to date version, it will work; if one party has a different version there can be difficulties.

• The building firm has to be 100% positive that it's ordering up the right materials, and they need to arrive on site on time or there needs to be as much notice as possible if further planning is necessary.

• Scheduling needs to happen around this, and everybody needs to be on the same timetable.

• Money has to move around to make all of this happen on time.

Any of these things can go wrong. Sometimes a delivery will be delayed by adverse weather — this cannot be overcome, but technology can help in a number of other areas:

• Plans and logistics can be built into an overall workflow programme shared by everyone on the project. Stored in the cloud, everyone will have sight of all stages of the progress.

• Construction firms can check into the supplier's workflow and ensure their materials are on the way. This should be no more complicated than tracking a parcel online, for example.

• Shared calendars on smart devices can also be stored online so that there is always one version of who's supposed to be doing what.

The technologies that can help

Any project management system will help any complex task in which different people have to deliver different components at a different time. The construction industry has its own tailored version of this technology, called Building Information Modelling (BIM).

This is a system that generates and manages digital representations of the characteristics of a building. The concept has been around for some 40 years but only with superfast broadband can everybody on the project link to the same file and be certain they haven't accidentally picked up an older version, one of the perils of keeping copies on individual computers or paper.

BIM goes further than paper ever could even without the sharing element, and also further than older computer-aided design (CAD). CAD works well for architects working alone but BIM adds the project management element. It will work in 3D and take account of services coming into a building and other parts of the project.

Better still, the UK government promotes a BIM standard so they should be interoperable; in 2015 the National Building Association, owned by the Royal Institute of British Architects (RIBA) said that in 2010 BIM adoption was at 13% but by 2014 it was up to 48% - these are the most recent figures available.
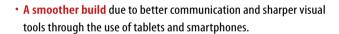
There are other technologies available which are not specific to building but which will help a construction business:

- **Voice over internet protocol (VoIP)** will save money on calls. Many VoIP systems will also allow video conferencing at no extra cost – consider taking a smartphone onto the building site and physically showing the architect or other advisor a snag. Documents and even desktop screens can be shared from many of these programmes for increased collaboration.
- **Radio frequency identification (RFID)** can help track physical items during the construction process and the right central database will keep a manager up to date with exactly where everything is.
- **Mobile technology** means the connection can be extended to remote sites, field workers and the building site itself. Connection speed will depend on the connection available at the remote sites.

Find your competitive edge

A lot of businesses are adopting these technologies in order to be more competitive. The benefits include:

- **A smoother build** due to better communication and sharper visual tools through the use of tablets and smartphones.

- **Easier tracking of materials** as builders' systems interface with those of their suppliers for tracking and automatic placement of orders and docketing.

- **Less time wasted on meetings** as video conferencing takes their place over time – not in every case but some meetings can be eliminated when face to face presence isn't necessary.

- **A guarantee** that everybody is working to the same timetable and from the same 3D plans through an implementation of BIM.

- **Smoother payments and financial transactions** through Internet banking and an Internet-based accounting software suite.

Top Tips

Superfast broadband is just the connection.
To get the most out of it, consider the following:

Whoever is leading the build is likely to dictate which system is in use, how to submit invoices and so forth – ideally this needs to be handled diplomatically as there can be tension when one party instructs the others to replace their existing system. BIM is mostly interchangeable but not everyone will be using it. The people issues are likely to be more of a challenge than the technical.

Your site may not have Internet connections built in so you will need to make other provision. 4G networks can often be received through a mobile phone or an adapter called a dongle, and they can be set up to provide a temporary wireless network.

Before automating, look at your supply chain and consider whether it can be simplified. Technology is a great help for speeding up a process but speeding up a broken process is no substitute for improving it overall.

Broaden your reach: if you're using superfast broadband you're no longer exclusively dependent on local suppliers and contractors. You can survey as much of the world's market as you wish.

If you're using a hosted system, in other words a system resident in the cloud rather than on your own computers, make sure your cloud partner has backup and other protections in the service level agreement. If it's not in writing you can't afford to assume, for example, that you're protected from a computer virus or that there is a second copy of your data in case the first is damaged.

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
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