Beginners Guide To Connectivity

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Connectivity, heard about it?

It is fast becoming one of the most widely-used terms within the business community, and with good reason. But do you actually know what it is?

It is easy to be left bamboozled by telecoms jargon, simply because there is so much of it. In order to help you untangle and get to grips with the relevant terminology, we've created this simple guide which will explain all you need to know about connectivity and help you make the right choices for your business.

At the end of the day, choosing the right connectivity solution makes a huge difference to the running of your company, so it's vital that you know what everything is and what it can do.

Think of it as…

a vehicle travelling on a road. The vehicle you choose, the road you decide to drive down, and the cargo you carry will all determine the speeds you can reach.

1. Road type (contended products only):

The speed you can drive at is dependent on who else is using the road at the same time as you. If you're driving down a public highway at rush hour, it's inevitable that you'll hit traffic and have to slow down. However, the same road at a different time could be much quieter, allowing you to travel considerably faster. This relates to a solution's contention ratio, which is the number of other users who are using the same internet connection as you.

2. Vehicle Type:

A vehicle with a small engine (e.g. 1.0 litres) will be far slower and able to carry less weight than a vehicle possessing a large engine such as a supercar, lorry or coach. This relates to the type of cabling and system you use.

3. Cargo:

The more passengers or weight you put into a vehicle, the more strain you put on the engine, meaning the vehicle will travel slower. This relates to your download and upload speeds, which are affected by the volume of users and the data you are using.

ADSL Broadband

What is that?

It is your standard business broadband. ADSL broadband is an easy access, cost-effective solution, perfect for basic web access and email capabilities. However, it is not so suitable if you need to regularly upload large files for web hosting or bandwidth-hungry and time-sensitive applications such as video conferencing.

Think of it as...

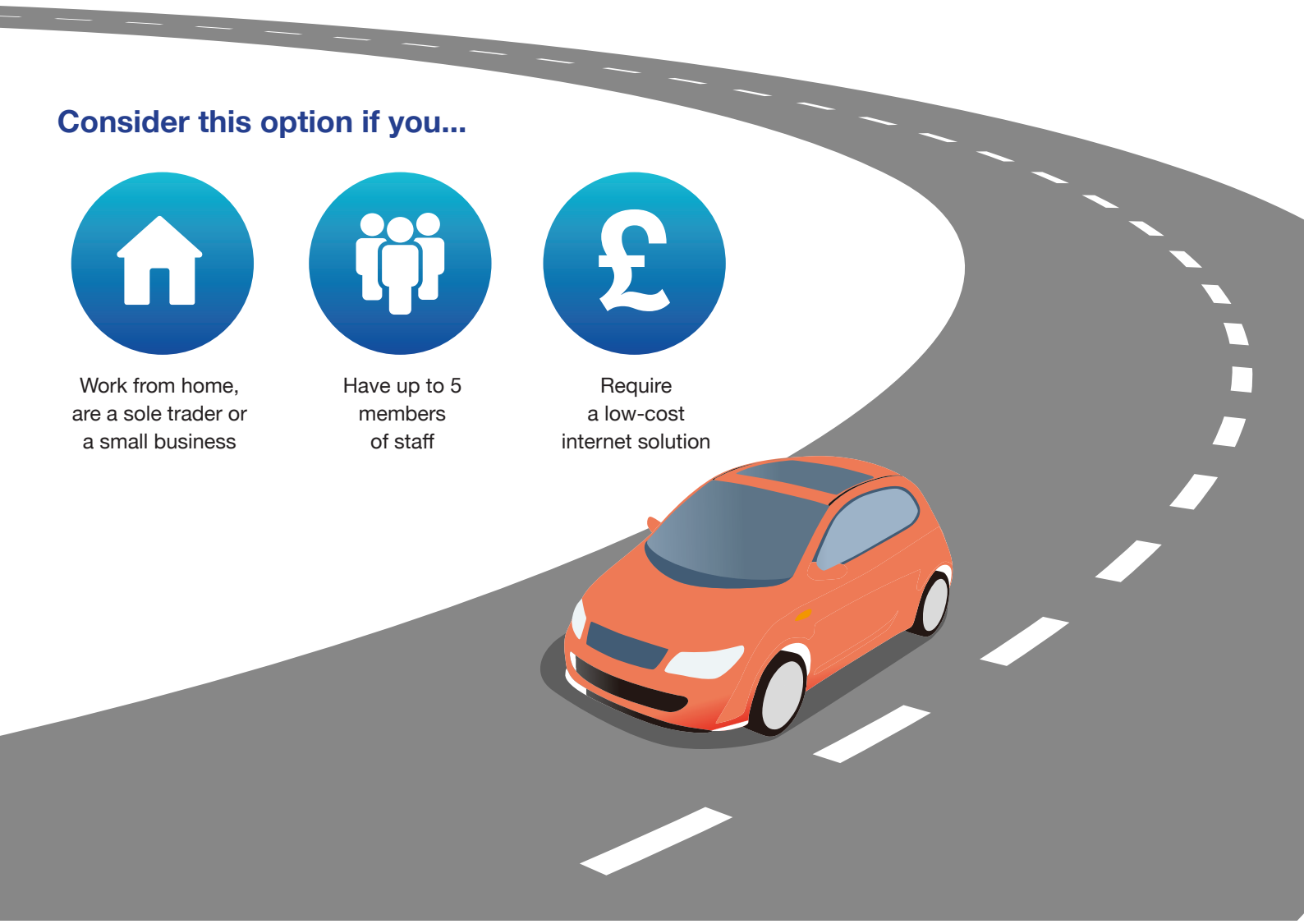
A 1.0 litre compact car on a B-road – the road you are travelling down is single lane, so any traffic you encounter is likely to slow you down. You also don't have much capacity so the more passengers and luggage you have, the slower you will be able to travel. This option is fine if you only want to transport one or two people who don't have much luggage and who aren't bound by time constraints.

Consider this option if you...

Work from home, are a sole trader or a small business

Have up to 5 members of staff

Require a low-cost internet solution



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FTTC/FTTP Broadband

What is that?

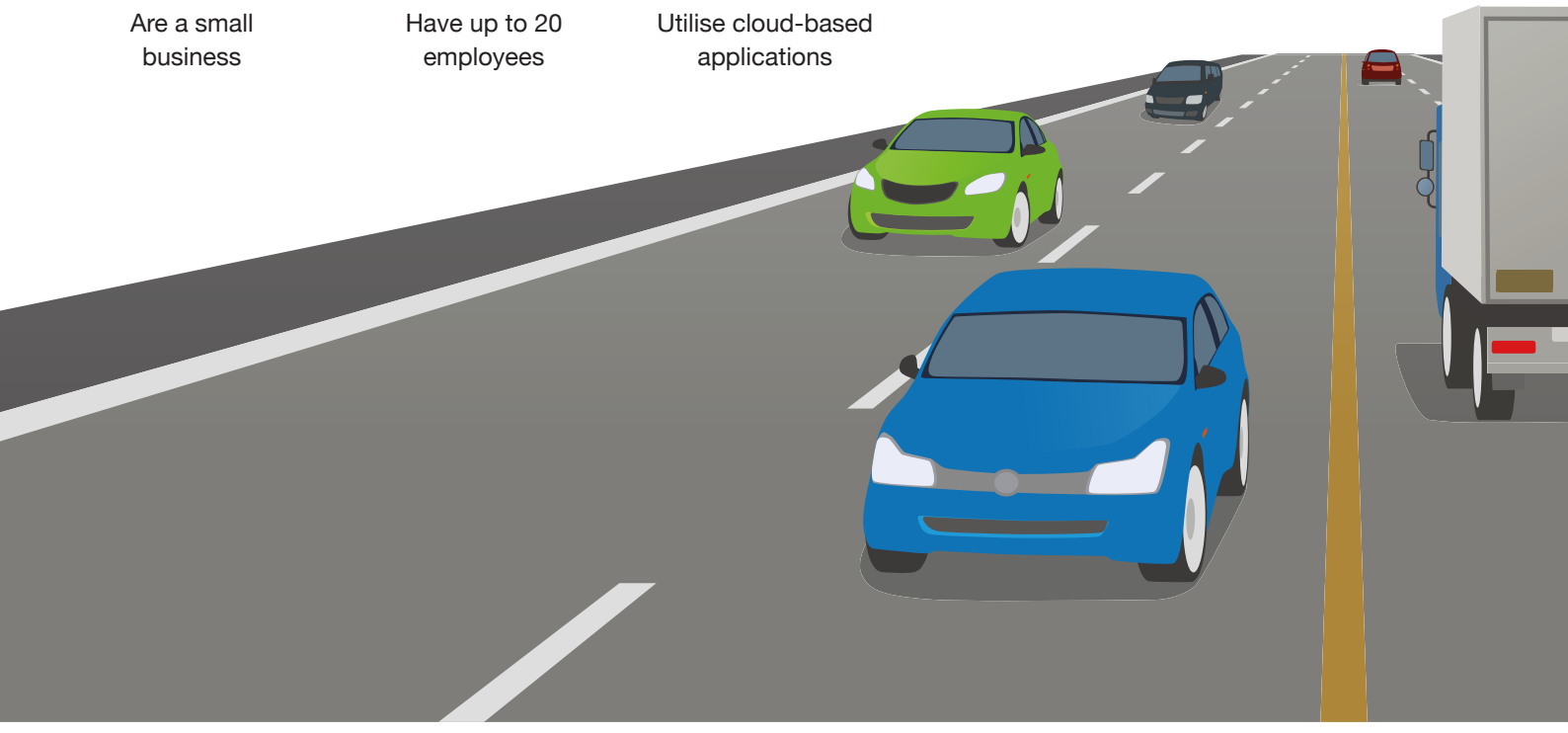
The future of broadband. Fibre-to-the-Cabinet (FTTC) and Fibre-to-the-Premises (FTTP) use fibre-optic cables to provide your broadband connection. These fibre-delivered services are much faster at certain parts of the journey than ADSL connections, and can carry much more data, meaning they're perfect for achieving faster download and upload speeds. However, the services are only available in fibre-enabled areas of the UK.

Think of it as...

A 4.5 litre vehicle on a dual carriageway – you are driving a 4.5 litre vehicle, which could be a sports car taking one or two people really fast, or a minibus travelling slower but transporting more people. The road you are driving on has two lanes, meaning there is more capacity for cars (users), and less chance of you experiencing congestion and having to slow down because certain parts have a higher speed limit. This vehicle can carry more weight than a compact car due to its superior engine size.

Consider this option if you...

- Are a small business
- Have up to 20 employees
- Utilise cloud-based applications



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Ethernet

What is that?

Unlike ADSL and FTTP/FTTC, which can be affected by other users making big demands on the network, Ethernet is a superfast, private resource that has a huge amount of capacity for online activity, such as downloading and uploading large files. When accompanied by fibre cabling Ethernet over Fibre to the Cabinet (EoFTTC) Ethernet First Mile (EFM) or Fibre Ethernet - it is even faster. Unlike broadband, Ethernet offers guaranteed speeds. Ethernet is a must if you plan to use real-time applications, such as VoIP and video conferencing.

EFM: Think of it as...

A single 2.0 litre hatchback on a private motorway which is pretty nippy, even when filled to capacity.

EoFTTC: Think of it as...

A single 4.5 litre vehicle on a private motorway, such as a sports car, minibus, or a small truck. It will allow you to either travel really fast, take lots of passengers (users) or transport a decent amount of cargo (data) fairly quickly.

FIBRE ETHERNET Think of it as...

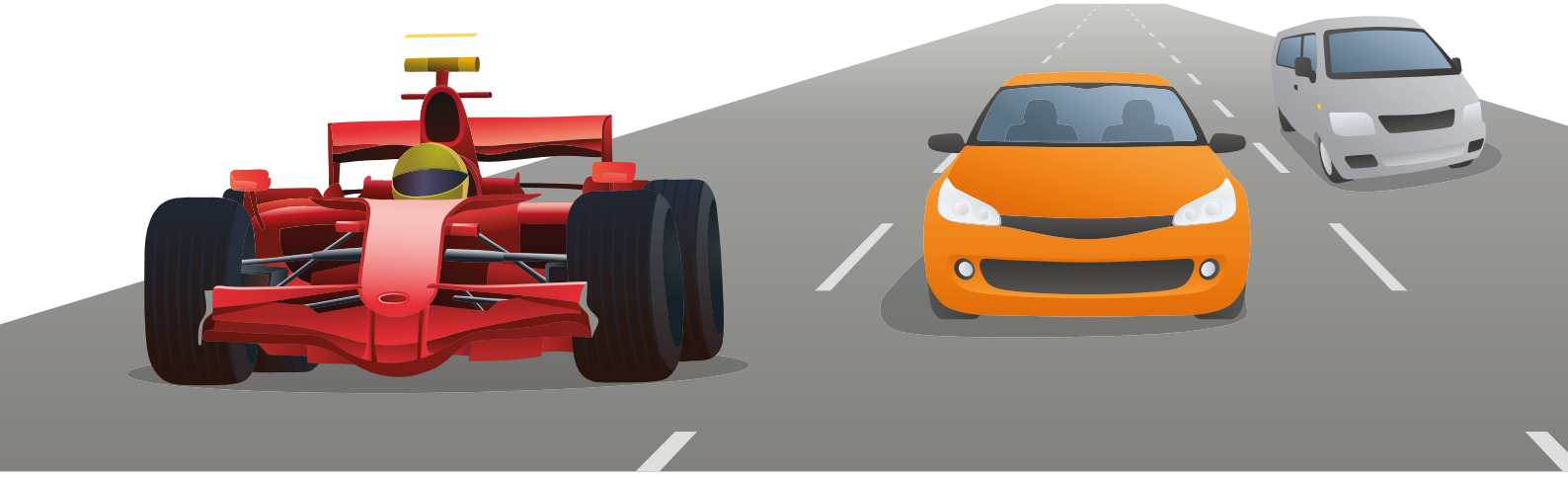
A single 4.5 litre vehicle on a private motorway, such as a sports car, minibus, or a small truck. It will allow you to either travel really fast, take lots of passengers (users) or transport a decent amount of cargo (data) fairly quickly.

Consider this option if you...

Require a superfast and private internet connection

Have more than 20 users

Utilise VoIP and video conferencing



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POINT-TO-POINT Leased Lines

What is that?

A point-to-point leased line is a private circuit that links one of your premises to another, for example a link between two offices or an office and a data centre. It simply routes traffic between the two sites and because you do not share the line with other users, you are provided with a secure way of transferring voice, data and internet traffic.

Think of it as...

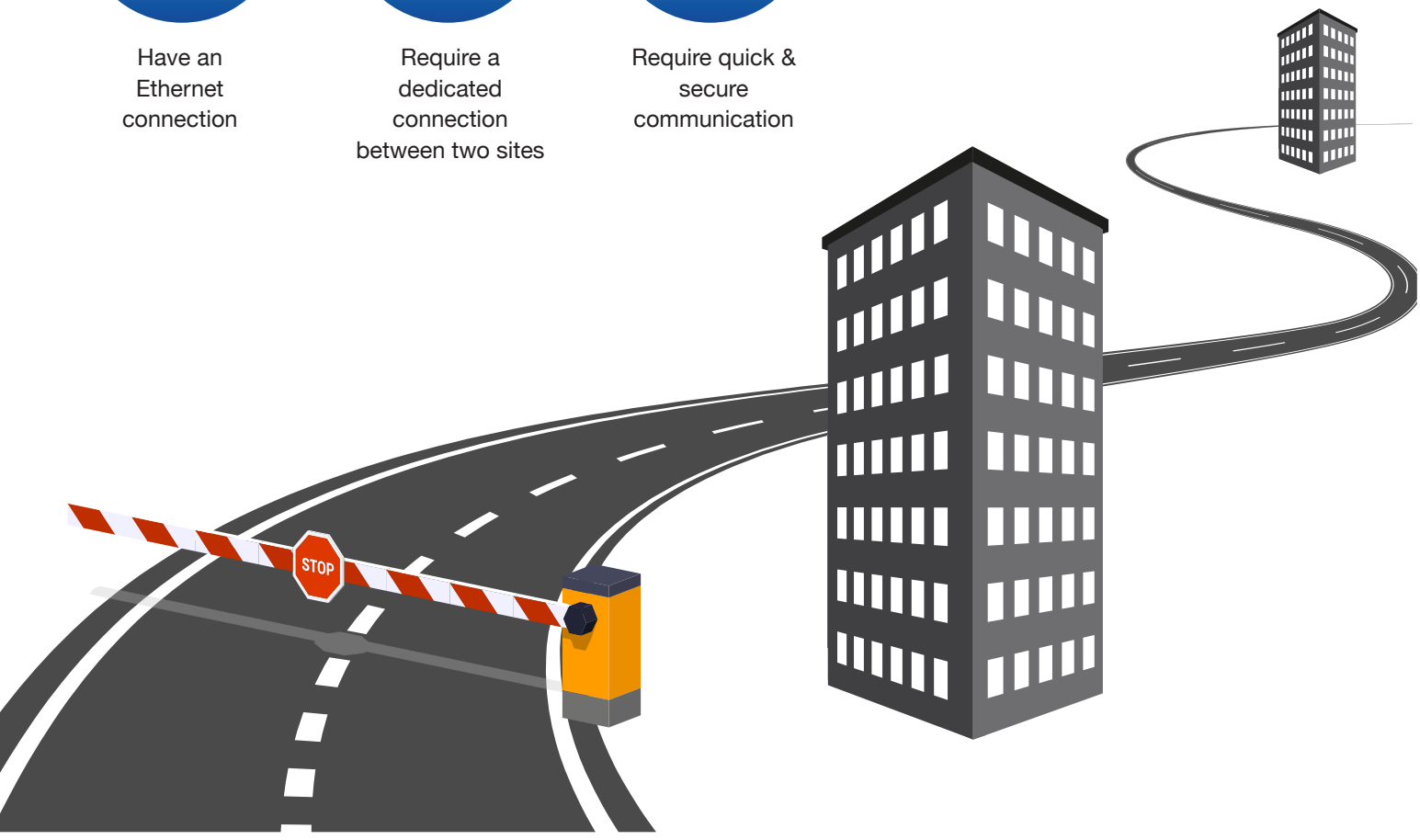
A privately owned road between two destinations - nobody else can drive down it meaning you have an open road to get your destination at a guaranteed speed.

Consider this option if you...

Have an Ethernet connection

Require a dedicated connection between two sites

Require quick & secure communication



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MANAGED INTERNET ACCESS (MIA)

What is that?

A managed internet access is a dedicated internet connection (normally over copper, fibre or Ethernet circuits) that is fully managed by a provider. This means that internet access is proactively monitored, unlike a traditional broadband connection, and in the event of a problem, the provider will fix and resolve the issue quickly.

Think of it as...

Your own toll road with a dedicated breakdown service - it leads directly to the World Wide Web and includes a breakdown service, meaning help is always on hand to get you back on the road with minimum disruption.

Consider this option if you...

- Have an Ethernet connection
- Have a business dependent on the internet
- Require a managed internet connection

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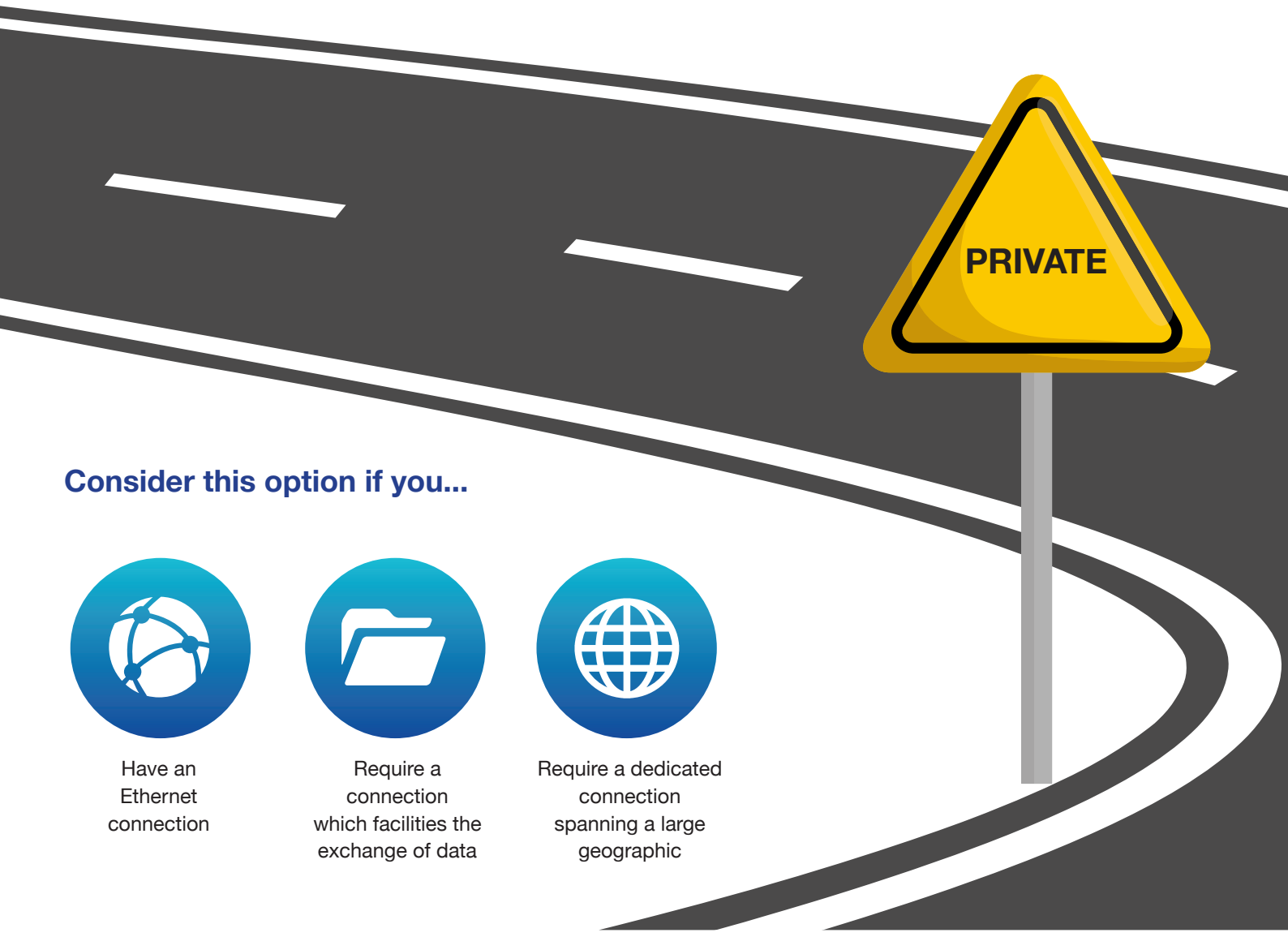
WIDE AREA NETWORK (WAN)

What is that?

WANs are used by businesses that want to link and facilitate the exchange of data between computers at two or more sites (data centres, disaster recovery sites or at home). They are usually private and enable effective internal communication by allowing workers remote access to data. The Internet could be described as the biggest WAN in the world.

Think of it as...

A private road network – connecting all your offices, data centres and home workers and bringing them closer together. It is controlled by border police at points where it interconnects with the rest of the world, preventing thieves and criminals stealing important data.



Consider this option if you...

Have an Ethernet connection

Require a connection which facilities the exchange of data

Require a dedicated connection spanning a large geographic

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Some More **Jargon...**

Network

All the internet-related services you invest in, be they broadband or VoIP, are all connected and provided to you through the network.

Latency

The speed of your network, in other words, its 'delays'. 'Low latency' will have short delays and process information quickly. 'High latency' will have longer delays and process information more slowly.

Jitter

Jitter causes information to arrive at its intended destination at different times. This data takes time to get back in order, so it causes slow responsiveness, frozen image during video, or broken speech during VoIP calls or video conferencing.

Cloud-based business applications

A cloud-based application (or app) is an application programme that functions in the cloud (an online/ central storage and information processing facility). The services are usually hosted in a data centre that allows users to access the service from any device connected to the internet. Microsoft Office 365, SharePoint and iCloud are arguably the most widely-recognised examples.

Packet Loss

This term describes the loss of packets of information when the network gets congested. These losses will sometimes prevent web pages from fully loading and create intermittent gaps in the audio during a video or VoIP call.

Download speed

The rate at which data can be received via the internet. Usually the higher the download speed, the smoother actions like receiving emails and web browsing will be.

Upload speed

Unsurprisingly, the opposite to download speed. This is the speed at which data (such as design files, photographs, and videos) is uploaded to the internet. A high upload speed is particularly important when uploading data

Contention ratio

Simply means 'sharing'. It refers to the maximum number of businesses sharing a connection (bandwidth). If you have a contention ratio of 20:1, for example, this means you will share the connection with 19 other businesses and will get an equal proportion of the speed you signed up for. The lower the contention ratio, the better the service to a website.

VoIP

Voice over Internet Protocol (VoIP) is a method of transmitting voice calls over the internet and is much cheaper than traditional calls. Communication can be done by plugging a phone system into an internet line, or through a computer via software like Skype.

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Questions? Call our expert team on **0800 011 6559**