Digital Support Handbook

This resource has been developed by the West Sussex local authorities as part of the jointly funded 'West Sussex Digital Support Programme'.

Contents

This resource has been developed by the West Sussex local authorities as part of the jointly funded `West Sussex Digital Support Programme'. All information and references were correct at the time of publishing.

Introduction

This toolkit has been developed to aid local authority economic development officers and countywide economy support partners in encouraging the adoption of digital solutions (technologies and skills), by the county's Start-Up, Micro and Small to Medium-sized Enterprises.

The toolkit is broken down in to five themed sections, each containing:

- Three key areas of technology or applicable digital landscape considerations;
- Examples of the digital topic in action with links to examples or further information; a short glossary of key terms related to that theme - all accompanied by examples/a link so you can explore what a term means in discussion or action - helping you to apply the terminology to the context you are supporting;
- Questions you might want to ask businesses you're working with to help them understand the context and landscape of any digital implementation. These are designed to prompt bigger picture thinking rather than rushing into the latest trend. Follow up questions and key notes are included with many questions to help you to delve deeper and support businesses;
- Four key considerations, be they legal, business strategy or cost implications that are crucial for businesses not to overlook whatever their scale;
- A link to the recorded training session/webinar and associated resources;
- A local business case study relevant to that theme;
- A few additional links to key resources for businesses and colleagues to find out more - a collection of webinars, podcasts, blogs and websites. The links for businesses have been selected to be shared and focus on digestible or action orientated information, while the links for trainees are more contextual or strategic.

All learning content has been selected based on the needs expressed through local strategy and reports (including WSCC Economy Reset Plan, Nov 2020, Coast to Capital LEP Priorities Report - CDI, 2021, and Gatwick Airport Economic Value Report, May 2021). The nationally focussed **Federation of Small Businesses New Horizons Report** "How small firms are navigating the covid-19 crisis" published in May 2020 affirms the areas as being those which businesses may want to embrace and all of this has been distilled through the programme of consultations with WSCC and affiliated partners, facilitated by **always possible** in May 2021.

This resource has been developed by the West Sussex local authorities as part of the jointly funded `West Sussex Digital Support Programme'. All information and references were correct at the time of publishing.

The West Sussex context

There are two intended audiences for this toolkit:

a) **public sector, business and economic partnership professionals who have a frontline role in helping SMEs to thrive.**

b) **economic development and directors who are putting the region on the map, securing inward investment and building capacity for sustainable growth and prosperous industries.**

The toolkit is broken down in to five sections, each covering three key areas of technology or applicable digital landscape considerations.

The common threads between the two are the **focus on West Sussex and its potential, and ensuring the county is on the digital front-foot in the 21st century**. This toolkit is about building knowledge and tackling skills deficits, but also seizing opportunity.

In 2019, there were over 42,000 businesses in West Sussex, though growth has been slower, over the five years leading up to that, than in the South East region overall.

West Sussex is very much a small firm economy with over 70% of businesses employing fewer than five people and 97% being classed as micro or SME. The exception to this is Crawley, which has one of the highest percentages of larger businesses (i.e. employing over 100 staff) in the UK.

When it comes to digital transformation design and strategy, it is the largest businesses that have traditionally had the resources, talent and incentives to innovate and invest. It is also more often the larger businesses that have had capacity to support digital skills programmes, to influence apprenticeship standards, and to build public/private technology partnerships that lobby for specific support.

By focusing on small and growing businesses in this toolkit, we are hopefully adding additional considerations about need and opportunity in digital adoption that can be factored into strategic economic planning.

Business support

There is a range of business support, as well as new investment projects, focused on digital transformation and innovation in West Sussex.

Using this toolkit:
Please see the 'Directory of what's happening in West Sussex' on page 74.

Resilience

In many ways, West Sussex businesses with a significant digital and online operation have seen a boom during the COVID-19 pandemic - in which consumers have been compelled to buy more goods and services online.

However, many of the county's largest sectors or supply chain networks (namely tourism, food & drink production, aviation and hospitality) either simply haven't been able to replicate face-to-face sales in a digital environment or did not have the meaningful digital infrastructure in place with which to rapidly pivot sales channels.

Through the case studies and webinars, our aim is to show some of the breadth and depth of local expertise and how dynamic the local B2B tech eco-system is. There are barriers of access for some businesses – not knowing where to go or who to ask for help – but these could be potentially

overcome through strategic communications, specific network events and targeted subsidy for professional services trade between businesses.

A strategic view might consider investment in inclusive growth - including bringing older, family-run and rural businesses into digital upskilling projects with incentives to upgrade equipment and knowledge that can be sourced from local suppliers.

Using this toolkit:
Please look at the examples and discussion in Section 3 for more information on local networks and expertise, as well as the 'Directory of what's happening in West Sussex' on page 74.

Recruitment

A series of business engagement and research projects, commissioned by West Sussex County Council in 2020, identified significant growth in demand for local businesses in the following digital services:

- Website design and development
- E-commerce; including booking, stock management, transactional and payment systems
- Online marketing and search engine optimisation
- Online networking
- Online security, including data security
- Digital logistics (for example systems are developed and rolled out to manage supply chain, sales and marketing or delivery systems for businesses now operating online)

Recruitment patterns in 2021 confirm that these are amongst the most sought-after skills in new recruits across the county.

A strategic view might consider how to encourage and retain local core expertise in the most in-demand areas as well as incentivising specialists to move into the area and add value to local businesses.

Using this toolkit:
Please look at the examples and discussion in all sections relating to core and emerging knowledge, and the sorts of business decisions being made which are affecting hiring strategies.

Skills

The same insights report as mentioned above identified the following areas as key digital skills gaps in West Sussex, supporting other research from Coast To Capital LEP and the Coastal West Sussex Partnership.

Current digital skills challenges in West Sussex:

- Low average digital skills-base of adult job seekers and low levels of digital literacy
- Lack of capacity for SMEs to fully utilise digital tools for efficiency
- Lack of infrastructure, expertise and access for some rural businesses
- More variety of digital skills packages for people at different points in their student or employment journey needed
- Low average digital skills base of over-50s workforce and entrepreneurs
- Pace of high-tech innovation, and difficulty retaining top digital talent in the area
- Jobs market – and the digital skills demand of jobs – outstripping pace of training

The Government's 'essential digital skills framework' centres on five core areas, which are fast becoming minimum competency requirements for most employment:

- Communicating
- Handling information and content
- Transacting
- Problem solving
- Being safe and legal online

The Lloyds Bank Digital Skills Index looks at average skills level in the UK by different category. The highest scoring groups with full essential digital skills for work are people:

- With degree or higher level education
- Between the ages of 35-54
- Who have access to superfast broadband
- Who have access to tablet and/or home computer
- Who are white
- Who live in the East, South East or London
- Who have a household income of £50k+
- Who have no impairment
- Who are married, or living as married
- Who have a personal income of £25k+
- Who live in a city
- With an AB social grade
- Who own their own home
- Who are self-employed

There is no difference between male and female genders for levels of full range of essential digital skills for work, but more men have no digital skills at all.

Household income is the largest determiner of level of digital skills for work, with only 27% of the population on < £17.5k income having the full range vs 66% of those with a household income of > £50k.

In West Sussex, the ability of businesses to grow through recruitment directly correlates with the talent pool from which they can draw, and the social mobility of the demographics from their recruitment range. Remote working will weaken that tie but may exacerbate inequality and digital exclusion. There are opportunities for economic development, education and community's teams to continue working very closely on these challenges.

Using this toolkit:
Please look at the examples and discussion in Section 2 for more information the impact of geography, connectivity and spaces on growth potential, and section 3 on the in-demand skills being increasingly demanded by businesses.

Section 1 - Helping SMEs grow and commercialise in West Sussex

Contents

Questions for businesses to consider:

- Do you have access to digital expertise that can support your business growth?
- Do you collect and utilise appropriate data for your business' development?
- Are automatic workflows in place for your business to be most efficient?

Introduction

Businesses of all sizes need to consider how they can further grow and be commercially viable. This section covers how a business might use Cloud Technology to help it scale and move beyond a single location for business operations.

The second area is Omnichannel marketing; how a business can trade and present itself consistently in more than one 'place' both digitally and physically.

Thirdly, Data-driven automation is explored e.g. scaling business operations with automated workflows, better decision making and more efficient operations.

Cloud Technology

What it is and what businesses need to know

Cloud technology covers a wide range of possibilities for businesses.

Using **software in the cloud** (web apps) enables a business **access to tools from anywhere, on any device**. Typical cloud technology will enable a business to access their files, run programmes and store / manipulate / retrieve data. **Almost anything you can do on a computer can now be done using cloud technology.** For example:

Cloud software	Where to look
Customer Relationship Management (CRM) - Storing data about interactions with customers, clients, members or beneficiaries.	From free with packages like hubspot.com or zoho.com.
Website - marketing an organisation and collecting data or making sales.	A good brochure website showcasing products or services is likely to cost ~£3k but can vary wildly, and can be done for free with platforms like wordpress.org or wix.com.
Online Bookings / Purchase processes - Selling services or products either standalone (a simple payment or contact form), or integrated with stock management or calendar applications to avoid overselling / automating availability.	Expect to pay circa £1k for e-commerce integration in to an existing website, or use a platform like bigcommerce.co.uk or Woo Commerce on a Wordpress site.
Document creation / editing - Creating letters, spreadsheets, presentations and other 'office' applications	From about £4 per user per month with microsoft.com/microsoft-365 or workspace.google.com.

Questions to ask businesses:

Is your business cloud enabled? Simple options include:

- File Backups / Sharing online (like dropbox.com or Google/One Drive)
- Server based emails (Google Workspace, Microsoft 365 etc)
- Using cloud accounting services (Xero, Quickbooks)
- A website where customers can transact with you (any online platform, shopify etc)

Could any functions of your business be improved for users by making them accessible over the internet? Such services could include:

- Ordering products
- Tracking orders
- Managing a customer account (seeing previous orders, obtaining quotes, updating personal details)

Are you resilient against cyber-attacks?

- Have you considered the Cyber Essentials Programme?

What workflows could be achieved remotely by staff if they were based in the cloud rather than on an office only computer? Cloud enabled workflows include:

- Communicating with customers (using an internet based telephone, Cloud based CRM, Cloud based Emails)
- Order processing (stock management systems, project management software)
- Marketing planning and execution (Cloud-based proofing of artwork, email marketing, social media marketing)

Considerations / resource requirements for businesses

- **Most cloud technologies are operated on a 'subscription' basis** – a business would pay monthly or annually for services rather than buying something 'one off'. This is an ongoing cost, but can be lower cost to a business than having everything on-site.
- **Ensure applications are secure** – use encrypted transfer (the green padlock in browser windows for example) and data that is stored by an application is regularly backed up.
- **Not all systems are compatible with one another** – businesses should try to adopt technologies for wide use, or use Open Source software. Alternatively, businesses need to ensure they can access their data in a common export format that can be imported to another application, so that they retain control over their data.
- **Access professional advice or support when selecting cloud applications.** Many software vendors or service providers will offer free initial consultations as will professionals through local networks like Wired Sussex.

Resources - useful links

For supporting staff

- A 1 hour introduction to Cloud Computing
- Cloud File Sharing Options
- The Gartner Cloud Strategy Cookbook

For businesses

- National Cyber Security Centre
- Webinar (Recording available) on Leveraging digital for organisational resilience
- Cloud Computing Quiz
- Podcast – The Cloud Cast

Glossary

Key term	Examples
Application Programming Interface (API) - An interface that allows a system to access information from another system and integrate this in to their own application.	The Facebook share button, live integration with product delivery couriers (showing a customer where it is in the delivery journey) or showing data plotted on a Google map within a website.
Big Data - A term used to describe data sets which are either too large or too complex to be dealt with using traditional data-processing techniques.	Ads served by Amazon based on what people buy, or the maps that track people's movements to enable autonomous driving.
Cloud Backup - The process of backing up data to a remote, cloud-based server.	Services like livedrive.com are £7 per month per device or Dropbox has additional features starts from free for 2GB of space.
Cloud Sourcing - The act of replacing traditional on-premise IT operations with low-cost cloud-based services.	Moving from a local mail exchange server to Google Workspace or Microsoft 365 - from £4 a month per user. Moving from traditional phones to a VoIP system from £4 per phone per month (dial9.co.uk).
Cloud Enabled - Moving relevant business software and processes 'off-premise' to the cloud – such as moving from an accounts software on a computer, to one accessed through a browser.	Systems like xero.com or sage.com offer cloud-based accounting from £12 per month.

Key term	Examples
Cyber Security - The process of preventing and responding to attacks made on a business via the internet, such as holding files hostage, or obtaining customer data.	Lots of Antivirus and Ransomware protection software exists like Bitdefender (from £40 per year) or AVG which is available from free.
Managed Service Provider (MSP) - An IT services provider offering fully outsourced network, application and system services across a network to clients.	Costs will vary and one directory of service providers is: wiredsussex.com/directory/.
Open Source - A development model in which a product's source code is made openly available to the public. Open source products promote collaborative community development and rapid prototyping. Products may include Word press (website management), OwnCloud (file sharing) and GIMP (image editing software).	Products may include Wordpress.org (website management), OwnCloud.com (File sharing) and GIMP.org (Image editing software).
Software as a Service (SaaS) - A model of cloud computing in which applications (software) are hosted by a company and provided to the user as a service. SaaS applications are typically licensed on a subscription basis and are made available to users over the internet.	These include most online accounting packages like xero.com or sage.com and CRM systems like Hubspot.com or Zoho.com.

Omnichannel marketing

What it is and what businesses need to know

Omnichannel marketing is about providing a **seamless experience**, regardless of channel or device. Customers should be able to engage with a company consistently in a physical store, website, mobile app or through social media. This is about **the branding**, the **values**, the **customer experience** and where possible – the availability of transactions to be made. For example:

Examples	Where to look for guidance
Use the same colours, fonts, icons and visuals across all channels.	See how Disney does it here: blog.hubspot.com/service/omni-channel-experience
A business enables the ability to obtain a quote or make a purchase on any of their channels (by connecting to e-commerce stores, or linking directly to products).	One example of an omnichannel sales platform: msg-life.com/en/insurance-solutions/online-sales/msg-sales/
A business shares personalised but consistent messaging about their products or services; an online customer may want more technical details than one purchasing in-store.	See how Always does it; and find others tips on how to achieve personalised but consistent messaging here: imaginasium.com/blog/marketing-message
Staff are trained equally on answering queries through any of the channels.	See how a business can ensure strong customer service across a variety of channels: superoffice.com/blog/omni-channel-customer-service
Customers understand brand values when interacting with a business through any channel.	See how brands such as Nike and Adidas do it and how businesses can define their brand values to customers: elementsbrandmanagement.co.uk/what-are-brand-values-and-how-they-increase-customr-engagment/

Questions to ask businesses:

Is your website consistent with your social media profiles?

- They do not have to match, but does a customer know it is the same brand?

Do you have a designer creating assets that work across online and offline channels?

- One image will not work for web and large format banners.
- Have you considered accessibility? Does it work for those with visual impairments?

Have you mapped all the channels you are working with and established whether they offer an equal level of service, or whether they should offer a defined level?

- Are you accommodating for omni-shoppers?

What are your Key Performance Indicators for your omnichannel approach?

- Is sales your basis? Or are you considering your marketing reach too?
- A KPI might be lowering your Cost Per Acquisition (see our Digital Marketing section)

Do you review your customer experience?

- Could that be done through mystery shopping
- Do you conduct post-service feedback surveys?

Considerations / resource requirements for businesses

• Do you have design resource - i.e. someone in house or an agency that can help you with your identity across channels? **A good designer will usually cost at least £40per hour outsourced, many can be closer to £70-80.**	• Consider design in-house and use something like canva.com **which is free to start with or you can use the pro version from £10.99 per month.**
• As well as the operations, do you have a marketing expert who can help you to create your strategy - either in-house or from an agency? **A good marketing strategist will cost you £300+ a day to engage.**	• Ensure that all your work across all platforms is accessible. Do not just throw an image everywhere or use colours that look great big but are hard to read on a small device. **You might invest in consultancy to help ensure you're accessible, again from at least £300+ per day for a consultant; usually closer to £500.**

Resources - useful links

For supporting staff

- Harvard Business Review article showing success of Omnichannel retailing
- Webinar for the Chartered Institute of Marketing on Understanding a customers' digital journey
- The Omnichannel podcast
- An extensive report from 2014 by Deloitte for eBay on Omnichannel approaches (More retail than marketing, but some great insights)

For businesses

- A recommended cloud app for creating your graphics consistently
- A good blog summarising this topic
- How to create your omni-channel marketing plan
- Free online course for Omnichannel strategy and management

Glossary

Key term	Examples
Channel - a place or digital location where a customer might interact with a business; such as at a store, on mobile, on social media or a website.	Examples of channels are websites (including social media and video sharing sites), search engines, apps, games and communication tools.
Channel Centric Strategy - a strategy where a business focuses on meeting their specific KPI's and goals.	If a company's goal was to gain more visitors to its website they would centre their strategy around finding ways to achieve this goal.
Cross Channel - a customer focused digital marketing technique which makes activity that spans over a businesses web, mobile, in-store, email, and direct mail content. This provides customers with a consistent experience with a business brand.	Businesses with new or recent campaigns, advertisements or products should post it to all available channels where customers can find them e.g. Instagram, Facebook, in-store posters etc.

Key term	Examples
Cross Device - the method of targeting customers with cohesive and consistent messages that spans over multiple devices such as, desktop, smartphone, laptop, and tablet.	Online platform services such as Netflix can be used on every device ranging from tablets, phones, desktops and laptops. This makes it easier for customers to access a business at all times.
Customer Experience - the impression customers have of a businesses brand after engaging with that company.	Making sure services are easy to use, accessible and informative creates a positive experience for customers.
Key Performance Indicators (KPI) - a method used to measure the performance of a company such as evaluating if set targets and objectives have been met.	The total number of followers a business may have on Instagram.
Omnishopper - a term used for shoppers who use a multitude of devices, channels and platforms to browse and buy products.	A customer browses a website, visits a store to try on a piece of clothing then leaves and buys their size via the business's mobile app for home delivery.
One to One Marketing Strategy - this is a customer relationship management (CRM) strategy. This centres around personalised interactions with customers.	Achieve this by listening to the customer and understanding what they need, then the most effective services can be offered to directly address these needs.

Data-driven automation/processing

What it is and what businesses need to know

'Data driven' means to **make strategic decisions based on data analysis and interpretation**. Data driven automation is about **using data to trigger certain actions**.

Examples	Where to look for guidance
Someone leaving a product in their basket of an online shop can be emailed a reminder.	blog.adnabu.com/8-data-driven-strategies-to-boost-your-abandoned-cart-email-campaign/
Agricultural environment changes temperature or humidity and the environmental machinery kicks in to re-balance as needed.	sensmax.eu/solutions/temperature-and-humidity-monitoring-for-greenhouses/
Inputting all addresses for deliveries and getting an efficient route planned out for a driver to use.	myrouteonline.com/uk
Planning the number of people needed for a shift based on the volume of people usually served during the relevant hours (usually using data from tills).	freshdesk.com/general/shift-schedule-blog/
Ordering new stock or raw materials when held levels fall below a certain amount.	skubana.com/blog/automated-inventory-management-software

Questions to ask businesses:

What data do you have available?

- Is the data accessible?
- Can you understand what it is telling you?
- Is it connected to other useful data in some way?

Are there any manual processes you can replace with automated decisions?

- Do you manually follow up clients / purchases / non-buyers?

Do you check or clean your data regularly?

- Ensure you remain GDPR compliant if you are storing data about your clients and their purchase history

Do you make use of physical sensors that can help you? Like-

- Environment monitoring
- Automatic counters of people coming in/out
- Driver safety mechanisms that monitor the alertness of your drivers

Do you collect / share data that can make yourself or your team more efficient?

- Mapping efficient routes for deliveries
- Easy ways to add data capture about clients/customers whilst mobile
- Automated stock ordering or tracking when the busiest times for premises are

Do you make use of open or real time data?

- Open data could give you demographic information that informs areas for targeting with direct mail / doorstep sales
- Real time data could tell how well your staff are performing

Considerations / resource requirements for businesses

- Basic use of data for insights is often free to start with (keeping a tally of how many customers come in each hour on a bit of paper).
- Complex processes that use real-time sensor information to trigger physical changes may require specialist support you need to pay for.
- Data privacy laws continue to evolve and are strict - ensure you collect, process and use customer data securely and legally.
- Data-driven decisions and automation processes can be very effective in online marketing terms, especially if you offer transactions on a website - such as triggering emails to customers, tracking average order value etc - it is a good place to start.

Resources - useful links

For supporting staff

- Advances in Smart Environment Monitoring Systems Using IoT and Sensors
- Data Warehouse and Data Lake Comparison
- Modern Data Platform Fundamentals
- Podcast: Data Driven Moment

For businesses

- Simple English explanation of algorithm
- Using marshmallows to explain available vs accessible data
- Data-driven Decision Making e-learning course by PriceWaterhouseCooper
- GDPR Guide

Glossary

Key term	Examples
Application Programming Interface (API) - An interface that allows a system to access information from another system and integrate this in to their own application.	A payment provider connecting with an accounts system. Or an e-commerce store connecting with emailing software.
Data Accessibility - Access to data is critical for the success of a business. Easily accessible data enables businesses to move quickly, focus on the product, and build a data-informed culture where data leads to better decisions and action.	You have a CRM installed on a computer in the office but are out with your first client on site. The data about that client isn't accessible; but if it was in the cloud it would be accessible on your phone out on site.
Algorithm - A set of well-defined instructions in sequence to solve a problem.	A recipe for processing data.
Data Cleansing – Or scrubbing/cleaning is a process of revising data to remove incorrect spellings, duplicate entries, add missing data, and provide consistency. It is required as incorrect data can lead to bad analysis and wrong conclusions.	Experian offer a data cleansing service to businesses.

Key term	Examples
Data Lake - A storage repository that holds a vast amount of raw data in its native format until it is needed. Each data element in a lake is assigned a unique identifier and tagged with a set of extended metadata tags. When a business question arises, the data lake can be queried for relevant data, and that smaller set of data can then be analysed to help answer the question.	London Based Social Shopping App Insights Collection.
Data Warehouse - A system for storing data for analysis and reporting. It is believed to be the main component of business intelligence. Data stored in the warehouse is uploaded from operational systems like sales or marketing.	Enterprise system that combines lots of operations data on customers and user experiences to one searchable storage centre, One option is Amazon Redshift (Starts at $0.32 per hour for a London data warehouse)
Decision Intelligence - A practical domain that includes a wide range of decision-making techniques. It brings both traditional and advanced disciplines together to design, model, align, execute, monitor, and adjust decision models and processes.	A guide to decision intelligence
Open Data - Data that anyone can use and share. It has an open license, is openly accessible, and is both human-readable and machine-readable.	Everyday examples: • Geospatial information (in getting from point A to point B) • Weather data (in deciding how to dress for the day)
Real-time Data - Data that can be created, stored, processed, analysed, and visualised instantly i.e. in milliseconds.	Current and recent incoming calls to a business (volume and duration to monitor performance) such as Cloudtalk.io.

Training webinar: Helping small businesses grow and commercialise in West Sussex

Format
Interview

Purpose
to help council and partnership officers to best diagnose, sign post, refer and design support for small businesses undergoing rapid, and new, digital adoption.

Lucy Paine, always possible facilitator will guide you through the topics below with special guest Ashley Wheeler from HdE Agency.

- The life-cycle of a small business
- The journey from paper to data
- Omnichannel marketing – how a small team can reach big audiences
- Cloud technology – its costs and what it enables
- Data-driven automation / processing
- What small businesses can do with data
- Small business data risks – compliance, privacy, storage
- Support and opportunities in West Sussex

Links (referenced in the webinar)

- Salesforce
- Trello
- Azure
- Dropbox
- Wix
- Weebly
- Shopify
- Business model canvas

Glossary of terms (referenced in the webinar)

SEO - search engine optimization
PPC - pay-per-click

Case study – 63% sales increase

Name	Organisation	Sector	District	No. of staff
Fred Duncannon, owner	Stansted Park Farm Shop	Retail	Chichester	9

Size: small
Customer base: B2C
Primarily within 15 miles of the shop, female, 60, ABC1, health conscious, cooks at home, eats at restaurants.

Sales increased 63% in the year ending January 2021.

Context/narrative

Fred and business partner Sam Edden started the business in 2012 out of the frustration of being unable to source local produce. From humble beginnings in a small hut space, the business moved in to new premises in 2017 with the help of crowd funding and EU Grant Leader funding.

Stansted Park Farm shop currently houses 100 Sussex and Hampshire producers and has its own deli counter, butchery, and production kitchen. When starting out, the digital strategy was basic in purpose; make people aware of the business. Using a website to begin with, Fred then started using Facebook and gradually expanded the businesses social media reach via Twitter and Instagram.

Challenge

As a growing business, **how do you attract customers beyond the immediate locality whilst understanding how to make more local customers consider the shop as a staple of their consumer behaviour?**

The business offered a small range of products online but core business was through the shop itself. Marketing consisted of a weekly newsletter which, although time-consuming, was beginning to build an audience.

During busier times it became a challenge to prioritise the 4-5 hrs per week spent creating a newsletter alongside multiple social media channels however, Fred recognised that it's during the busier times – e.g. new product arrival, seasonal periods etc. that you want more people to hear from you.

The business invested in a social media agency, outsourcing their content to increase reach and refocus staff time on sales. Outsourcing has helped the business understand what work is required to maintain a presence and which platforms or types of content have the greatest impact.

Outcome

Building on a basic digital strategy from day one prepared the business for a quick pivot at the start of the recent pandemic. **More products were added to the website changing its focus to e-commerce** allowing greater customer reach by offering delivery and click-and-collect options. Being a produce business meant the shop could remain open during lockdown periods however the growth in online sales during this period has resulted in average basket sales increasing and a more regular customer base.

The business still outsources much of its social media work however the weekly newsletter remains in-house. **Understanding the tone, conveying the knowledge and passion of the products and their stories is something the business feels is better coming direct from them.**

Outsourcing is expensive but has helped the business understand what is required to build a customer base. Experimenting with multiple platforms and testing a variety of content has meant the business can consider the potential of recruiting a staff member to maintain and grow their presence. With clearer knowledge and confidence of tone/voice, Fred now has dedicated time each week to work on newsletters and using scheduling tools like Hootsuite or Maybe he can plan a week's worth of content in a few hours reducing outsourcing costs over time.

5 key points/themes/takeaways

- **Having a website is a huge asset** but it is important to consider if a full e-commerce site is necessary for your core business.
- **Scheduling tools and outsourcing** can save lots of time. Weigh up the costs of each against time spent and ensure you understand the messages you want to convey to reach your target customers. Trial things at low cost to see what works best for the business.
- **Understand and use your data.** For Stansted Park Farm Shop, the newsletter mailing list coupled with analytics from a variety of social media platforms and increased online sales helped them learn who their customers were, where they were coming from, purchasing behaviours and what content they engaged with most.
- **Good visuals and strong branding** help attract people. Keep things clean and clear and always use good imagery (i.e. well taken photos that can be edited easily).
- **Think carefully about a digital strategy** to maximise return on investment –quality over quantity is important when considering social media as well as the need to respond to questions and comments from your audience – are you equipped to manage the process?

> Agencies are very good at social media but they aren't so good at knowing your core products; for us that's responding to recipe queries or knowing what's in season – so we will try and do that.

Case study – 86% increase in Business Ambassador page views

Name	Organisation	Sector	District	No. of staff
Joanna Godden Communications Manager	Sussex Cancer Fund	Charity	Countywide	2

Size: micro
Audience base: B2B and B2C

Embracing social media increased web traffic and specific page views during 2020-2021.

Context/narrative

Joanna joined the charity around four years ago and became their second paid member of staff looking after marketing and communications along with fundraising and events. The charity had a website when Joanna started but it was old and not particularly suitable/user friendly. The charity has a base in Brighton but covers East and West Sussex giving it a wide reach in terms of audience providing increased opportunities to access supporters and fundraisers and to support more people through its work.

As an organisation largely run by volunteers with no budgets for paid SEO or social media, all work has to be done in-house and needs to have as much impact as possible.

Challenge	Outcome
Increasing the profile of an organisation with a wide remit with zero budget	To support their online presence, Sussex Cancer Fund began using Twitter and Facebook using the analytics from each platform to measure their engagement and reach. **Implementing Google Analytics on their website has also helped them understand the flow of traffic and what people are most interested in when they visit.** Using free tools has helped form the basis of a digital strategy for the organisation who now understand the type of content that people are most likely to engage with. Joanna realised quickly that posts containing images, particularly of those within the Cancer teams, received much more engagement across platforms. **Flurries of activity on social media have also had a direct impact on the numbers of people wanting to raise money for the charity,** indicating that seeing the work in action and real people behind the work is inspirational / motivating. **In line with the strategy the charity are introducing LinkedIn and Instagram recognising that each have a different use and audience and require different content.** Increased platforms and posting have resulted in the need for scheduling support and so the charity have invested in one paid for tool, SmarterQueue, which helps to map out posts for the weeks and months ahead but also supports with ideas for creating evergreen content. As a non-profit organisation they received a discount on this tool which is also available in a free version with some limitations on function. To ensure posts on certain platforms are well designed, Joanna has introduced Canva transforming the way they do social media and marketing. This form of design work would previously have been outsourced which is costly, but the tool can be used to create professional and attractive designs with limited tech know-how.

Challenge	Outcome (continued)
Increasing the profile of an organisation with a wide remit with zero budget	A key focus for Joanna is raising awareness of the charity and its work and the recruitment of business ambassadors to help promote the charity through networking was an early initiative with mixed success prior to lockdown. **The charity found increased home-working and the move of events and networking to online has helped boost numbers of ambassadors for the charity and helped them to work together more closely.** Regular online meet-ups are now in place as part of the ongoing strategy and ambassadors have been provided with tools and resources (including social media post templates) to help them promote the charity's work more easily. Joanna recognises that digital planning is constantly evolving, and she regularly reviews their stats, cross referencing monthly, to understand what is working well, particularly during campaigns.

5 key points/themes/takeaways

- **Utilise free tools to support with digital planning and operations.** Try and test several to find the most suitable for the business.
- **Investigate potential discounts available on paid for services** particularly for non-profit organisations.
- **Use digital planning to support building networks that can support with company goals/aims** e.g. volunteers or ambassadors. Providing them with access to tools or templates can make it easier for them to support your work.
- **Analytics can help small teams save time when planning and creating content** – if target audiences are not engaging it's time to try something different.
- **Use different platforms for different messages** and where possible, keep content focused on story-telling rather than 'asks' or 'sales'.

56% web traffic increase

Web traffic increased 56% January to June 2021

86% increase in page views

Views of Business Ambassador pages up 86% since June 2020.

> Engagement with our posts would treble, quadruple even, if we included images of Nurses or Oncologists alongside new equipment.

Section 2 – Places and spaces: how to benefit from digital transformation

Contents

Questions for businesses to consider

- Where does your business operate and how can your staff access all the information they need?
- Can you embrace the 'Internet of Things' and enable new technologies in your business
- Are you supporting your staff, physically, culturally and mentally to work their best from wherever they are?

Introduction

All businesses are part of a larger eco-system. Government and councils are helping communities and businesses work smarter and cohesively through initiatives that strive to make life easier. This can include collecting considerable data, and the way to enable different places and spaces to benefit from digital transformation is to use this data to make decisions and ensure businesses are well connected to their customers.

This section explores Internet Connectivity (connecting from any place), Smart-City planning and the Internet of Things (being connected and collecting data through intelligent data gathering/processing, enabling businesses to operate activities remotely). In addition, this section covers redesigning the workplace including the physical considerations for a post-covid office and the 'virtual workplace'.

Internet connectivity

What it is and what businesses need to know

This is about **connecting businesses with each other, their customers, and their supply chain**. Internet connectivity also enables **access to cloud technologies and automation** where data is computed in the cloud. Key points to internet connectivity include:

Examples	Where to look for guidance
Access to 'ultrafast' broadband.	cable.co.uk/broadband/guides/ultrafast-broadband/
Access to leased lines for dedicated and high band-width connectivity.	gradwell.com/guides/leased-lines-guide/
Utilising 5G and non-wired internet connectivity.	expertreviews.co.uk/networks/1409841/best-5g-networks

Questions to ask businesses:

Who is your current internet provider?

- Is there a better internet provider that you can change to from your current one? (Based on cost or performance)

What does your work space need the internet for?

- If you do lots of film transfers or video calls do you need a faster connection?
- If you only send and receive some emails and do basic online work - are you paying for something you don't need (like a leased line)

Would your staff be more productive if you had a faster internet connection?

- If they can wait around less, could they get more work done?

Would it benefit your business if your staff could access the internet when they are out and about? Not just when they are in the office?

- Also think about fixed remote locations such as farms, factories and outposts that your business might maintain
- This can often be achieved with a simple business mobile contract with a decent data allowance

Do you use internet connectivity to integrate with your suppliers or clients?

- Often using cloud technologies, you could automatically send or received information with an internet connection

Do you have a backup in case your ISP goes down?

- For example, do you have a 3G/4G/5G router too?
- Or could you use a 'hotspot' from your smartphone?

Is there expertise in your organisation for managing a good internet connection and local computer network?

- If not, do you know where to get support?

Considerations / resource requirements for businesses

- There are online resources that enable you to compare internet providers to ensure that you are getting the best deal for your business. It is worth price checking on a regular basis rather than just accepting price increases. A good business broadband connection can be achieved from about £30 per month.
- Due to Covid and other factors that involve long distance business arrangements, workplaces depend on the internet for communication - you need to have expertise on hand to help staff in offices and when working remotely.
- Investing in good hardware to access your internet connectivity - be it on the road or in an office is advisable. Good smart-phones can cost from about £500, with a good business ready laptop usually more like £600+ - although some devices like Chromebooks can be good for light users and cost as little as £300
- Having a good internet connection is great, but you must ensure you also invest in cyber security and online safety - please read the relevant sections of this toolkit to find out more about these.

Resources - useful links

For supporting staff

- Removal of the copper phone lines
- Learn more about 5G innovations with this series of webinars
- OECD Report on enhancing access and connectivity to harness digital transformation
- UK Government Policy Paper on Connectivity

For businesses

- The benefits of 5G for business
- For businesses with a poor wired broadband connection there is an option to use a 4G router, one such supplier is: 4g-internet.co.uk (Unlimited data for £40 per month) but most of the mobile networks also offer solutions
- A 17 minute audio programme on how satellites may help rural areas overcome the digital divide from BBC Sounds
- A simple calculator to help you determine how much bandwidth your internet needs to have

Glossary

Key term	Examples
ADSL - Stands for "asymmetric digital subscriber line." This is the standard line used for DSL internet, and means that the upload and download lines are a different size or bandwidth. Usually the download bandwidth is larger, since download speeds are considered to be more important (for most people) than upload speeds.	An ADSL connection may allow download rates of 1.5Mbps, while upload speeds may only reach 256Kbps.
Bandwidth - How much data can be transferred at one time; usually measured in Mbps. Often confused with internet speed.	If you want to stream webinars or other video then you want more bandwidth. Video calls take more bandwidth than sending an email; but if you have lots of people online at the same time then you need to have enough bandwidth available.

Key term	Examples
Bandwidth Throttling - Term used to describe an internet service provider narrowing the amount of bandwidth someone received. For example, if normal internet speed is 7 Mbps, then an internet service provider (ISP) might throttle bandwidth to 3Mbps.	An Internet service provider might throttle the bandwidth of a user only when heavy amounts of data is being downloaded from Netflix or uploaded to other devices via P2P file sharing (e.g., torrent sites). Sometimes, an ISP will throttle all types of traffic for a user after a certain threshold has been reached. It is important that a business has enough data transfer in their package (most are now unlimited).
Broadband - Another term used to describe high speed internet service.	Broadband is regulated by OFCOM in the UK. Follow the link for information on broadband providers' quality of service.
Router - A router directs traffic on a network. In relation to broadband, the router usually (but not always) includes a modem so is responsible for connecting to the internet as well as providing networking in your home or office.	Also called a 'Hub' a router would usually be sent by an internet provider, but custom configured ones are also available which may have advanced features, often starting from £80.
Ethernet - A wired communication standard used to connect devices over a network. Most routers support ethernet cables as well as Wi-Fi. Ethernet can be quicker and more reliable than Wi-Fi, so it is preferable to use a network cable for any device which may require very fast data transfer speeds.	Plugging a computer in to a router via an ethernet cable is usually a more stable and stronger signal than connecting through WiFi.
4/5G - In pure internet connectivity terms; 4G is the fourth generation of mobile internet connectivity which allows people to access the internet almost anywhere in the UK, it is available to 99%+ of the UK population. 5G is the next generation available in an increasing number of towns and cities including Brighton and Worthing.	Check mobile data or broadband connectivity.
Wi-Fi - A standard for connecting devices using radio waves. Usually refers to wireless routers and devices that can interact with such routers.	There are many Wi-Fi 'hotspots' at cafes and airports. Some are free, others may charge a fee. A business may consider offering WiFi to customers so they can interact with them online when on premises, or whilst waiting for a service. Here is a guide to setting this up.
VPN (Virtual Private Network) - A service that protects against eavesdropping. When using a VPN internet traffic is encrypted and routed through a proxy server, making it much more difficult to intercept data. A VPN can also hide a user's identity online as any sites or services accessed when connected to the VPN will see the proxy IP address instead of a broadband connection. Use of a VPN is highly recommended when connecting to an untrusted network (such as a public Wi-Fi hotspot).	There are many providers and they can 'hide' users activity over a network, securing them from anyone trying to intercept signals on an untrusted network. One of many includes Private Internet Access From £2 a month on a yearly deal.

Key term	Examples
Fibre Optics - A type of internet connection that is made up of thin glass fibres to transmit data.	A Fibre Optic Broadband connection is usually considered the best in the UK. Be warned though that some providers only use Fibre to the cabinet - which means users do not benefit from the full advantages. Virgin Media is usually Fibre to the Premises from £32 a month for small businesses.
Internet Service Provider (ISP) - A company that provides internet access.	This includes companies such as BT, Talktalk and Virgin.
VoIP (Voice over Internet Protocol) - A way to talk to someone on the phone using a microphone or web camera over the internet.	Examples include services like Skype or dial9.co.uk. Most large providers now offer VoIP, as traditional phone line services are being phased out by BT from 2026.

Smart City Planning and the Internet of Things (IoT)

What it is and what businesses need to know

Smart cities are all about **developing a networked economy** with a series of **inter-connected services learning from each other and passing along data**. This is often where **'things'** are connected to the internet in order to **communicate and interact**.

Examples	Where to look for guidance and specific examples
Cameras that can detect the collective actions of a crowd to know if a riot or similar emergency situation is arising.	monica-project.eu/portfolio-items/crowd-and-capacity-monitoring/
Public bins have sensors to alert sanitation teams that they are close to needing to be emptied.	overons.kpn/en/kpn-in-the-netherlands/innovation/smart-city
Public lighting is disabled when no one is nearby to save energy.	en.reset.org/blog/tvilight-smart-street-lights-turn-when-nobody-around-04162018
Mobility can be enhanced by redirecting traffic at appropriate times of day based on congestion and usage (such as to a ring road rather than past inhabited areas) and prioritising eco-friendly transportation modes when appropriate (creating a safer environment for cyclists).	bbc.com/future/article/20181212-can-artificial-intelligence-end-traffic-jams
For general business use, internet connected doorbells, CCTV systems, lighting and interactive physical marketing materials can all be controlled remotely.	opusfidelis.com/insights/interactive-physical-marketing-101

Questions to ask businesses:

What is your objective by engaging with the Internet of Things?

- Is it customer experience?
- Is it improving efficiency in the business?
- Is it about expanding your business?

Do you have finance in place to invest in the hardware required?

- Depending on their engagement - from a simple single camera, through to a whole environmental monitoring system, costs can rise and investment is required

How might your business support the development of smart cities?

Do you have in-house or external expertise in IT or technology?

Considerations / resource requirements for businesses

- A specialist in networking would be helpful to any business and you can expect to pay £300-£600 per day for a good consultant. You can find some at Wired Sussex.
- Creating your own network based on the "Internet of Things"will require investment in a range of hardware and software depending on what you are trying to achieve. A simple Internet Connected Security Camera can be bought from £20.
- The ongoing development of 'smart cities' provides an opportunity for the supply chain; providers of consultancy, technology and public engagement services too.
- There is an ongoing debate around the privacy of citizens which you should be aware of when collecting data that you transfer over the internet.

Resources - useful links

For supporting staff

- Internet of Things - Supporting green space development
- Academic Paper on what a Smart City consists of
- Rundown on Smart Cities and how to benefit business
- E-course - Introduction to Smart Cities

For businesses

- An open framework to create a 'web of things' (developer needed)
- A full glossary on Smart Cities
- Podcast - Connecting Cars with Smart Cities
- E-Course - Introduction to the Internet of Things

Glossary

Key term	Examples
Smart City - one that makes optimal use of all the interconnected information available today to better understand and control its operations and optimise the use of limited resources.	asme.org/topics-resources/content/top-10-growing-smart-cities
Internet of Things - the interconnection via the internet of computing devices embedded in everyday objects, enabling them to send and receive data.	i-scoop.eu/internet-of-things-guide/internet-of-things
5G - The evolution from 4G to 5G will be the most profound development of the wireless industry since the transition from analog to digital. This transformation will bring about several new ways of designing networks so that the promise of always-on, high-bandwidth, low latency, massive networks can become reality.	washingtonpost.com/news/innovations/wp/2018/06/05/5g-what-is-it-good-for/
Address of device - An address is used for locating and accessing – "talking to" – a device, a resource or a service.	howtogeek.com/236838/how-to-find-any-devices-ip-address-mac-address-and-other-network-connection-details/

Key term	Examples
BTLE (Bluetooth Low Energy) - A lower-energy consumption version of Bluetooth wireless communications standard, which runs constantly, announcing a device's presence to local sensors and optimizing battery life for the device in question. In IoT, BLE allows for precise location and feature tracking without reduced battery life.	learn.adafruit.com/alltheiot-transports/bluetooth-btle
Cloud - Highly scalable computer storage and memory capabilities located in a data centre that enables flexible and rapid scale-up and scale-down of application resources. Cloud services can be public, private or a hybrid.	equinix.co.uk/solutions/cloud-services
Ecosystem (IoT) - Refers to the multi-layers that go from devices on the edge to the middleware. The data is transported to a place that has applications that can do the processing and analytics.	educba.com/iot-ecosystem/
Edge Device - A type of networking device that connects an internal local area network (LAN) with an external wide area network (WAN) or the Internet.	chooch.ai/computer-vision/what-is-an-edge-device/
Edge Computing - A method of optimising cloud computing systems by performing data processing at the edge of the network, near the source of the data. Edge computing pushes applications, data and computing power (services) away from centralized points to the logical extremes of a network.	stlpartners.com/edge-computing/10-edge-computing-use-case-examples/

Redesigning the workplace

What it is and what businesses need to know

Not every business needs premises. Some can operate purely with technology at its heart. This may **require a slightly different skillset of employees** or a **shift in workplace culture**. It also **opens you up to recruiting talent from anywhere**. A business might be able to work with people who live the other side of the county, country or the world. Every place **can now access the skills and expertise of staff wherever they are based**. Some examples of redesigning the workplace might include:

Examples	Where to look for guidance and specific examples
Developing new sales or customer processes so interactions can take place virtually.	monica-project.eu/portfolio-items/crowd-and-capacity-monitoring/
Re-imaging person specifications to account for new digital literacy skills.	overons.kpn/en/kpn-in-the-netherlands/innovation/smart-city
Developing a remote team culture that allows access to talent from anywhere.	en.reset.org/blog/tvilight-smart-street-lights-turn-when-nobody-around-04162018
Shifting working practices and customer expectations to accommodate a flexible working pattern.	bbc.com/future/article/20181212-can-artificial-intelligence-end-traffic-jams

Questions to ask businesses:

Is there a new technology that other businesses are using that you are not?

- Could you and your staff learn this technology?
- Could this technology enhance your customer staff experience?

What skills do you and your staff possess?

- What may need updating?
- Are staff digitally literate?
- Is there anywhere that you and your staff could learn these skills?

Are there any outside factors that may require you to change your current workplace situation?

- Covid-19 is one that may affect you
- Are you looking to expand your workforce; either in new locations or in the way that outgrows your current offices?

Does your workplace culture need to change?

- Could you better support families? Or those with additional home commitments?
- Do you rely on 'presenteeism' where you need sight of staff at all times?

Considerations / resource requirements for businesses

- A lot of workplaces have had to become remote and adjust to guidelines as a result of Covid-19. Have you made plans to redesign your physical workplaces to accommodate new health and safety needs?
- As well as physical changes, have you made plans to psychologically support staff who may be nervous about returning to work, or who could be supported to continue with their remote lifestyle?
- Strong communication is vital for any change, and to enable remote working. See our cloud technology section for more about enabling online collaboration.
- Take professional advice about how to treat your staff or adjust contracts as needed in your redesigned workplace (packages are available), or one-off **consultants may charge £400+ per day for advice and contract updates.**

Resources - useful links

For supporting staff

- Digital Future Readiness by Deloitte
- Podcast - Designing for change in the workplace
- Harvard Business Review article on co-working spaces
- Webinar on the digital workplace trends of 2021 (Including collaborative apps and bringing HR & IT together)

For businesses

- Designing an inclusive physical workplace
- Creating an inclusive digital workplace
- E-Learning course on Leading Change
- An evolutionary process for your digital workplace

Glossary

Key term	Examples
Audio Visual (AV) Technology - AV technology is typically used in a workplace in many different ways.	AV tech can be used for video/phone conferencing technology, a sound system or displays used through the workplace. A simplest example - a TV on the wall.
Change Management - Refers to tactics used to help smoothly transition a group of employees from a current situation to a new one.	When transitioning from a closed plan workplace to a flexible, activity-based working environment, a business can use change management tactics like clearly outlined guidelines for behaviour and use of workplace resources to make the transition run smoothly. Here is a webinar about leading change.
Digital Workspace - Collaborative, cloud-based tools where teams can work together remotely and/or asynchronously.	Examples include Slack, Google Workspace and Microsoft Teams.
Hot-Desking - Having desks available to staff as and when needed, rather than 'Assigned Desks'. This may be more helpful if a business has a mix of home and office working and needs more space to allow for social distancing.	Some teams might have hot desks for field-based roles, or whole offices might work on a hot-desk basis going forward. If a business does not have office space, it may consider hiring hot desks in co-working spaces.
Flexible Space or Flex-space - Flexible Spaces are settings throughout the workplace designed to support particular employee activities and meet the needs of different styles of work.	See here for design idea examples on how to create a flexible space.

Key term	Examples
Workplace Experience - The overall physical and digital workplace experience workers have that intersects HR, IT, facilities and internal cultures. This includes how well people interact with the tools and spaces provided to them.	Space – the physical surroundings in which employees do their work. Technology – the systems and tools employees use to do their jobs. People – the relationships, policies, and cultural standards that impact how work is done.
Whole Systems Approach - A whole systems approach recognises that no part of the organisation or workplace exists on its own. This means that whenever something is changed in one place, it will affect other parts.	If physical space is reduced this may increase demand on your IT team to support remote network environments (people's home broadband) or on procurement team's jobs of buying office furniture (for the office and those suitable for home workers).
Remote Working - Where staff work away from a designated office environment. It can also apply in principle to staff located in different offices who need to collaborate.	Home workers or those stationed in another country/city to develop a brand there.
Digital Transformation - Is a fairly broad term which includes any business aligning technology, people, and business processes while trying to improve productivity, efficiency and goals, using technology and digital solutions.	Bringing artificial intelligence into a service organisation is a prime example of the power of digital transformation such as AI-powered chatbots.

Training webinar: Places and spaces: how to benefit from digital transformation

Format
3 x interviews

Purpose
to help council and partnership officers to consider the impact of geography, demographics, connectivity and place-making on current digital adoption needs and future opportunities.

These three short interviews with local, regional and national experts will guide you through some big topics providing 'need to know' information on connectivity, internet speeds, capacity, town and city innovations and how small businesses are embracing digital tech to reimagine their workplace.

Interview 1: **Internet connectivity** with Paul North - Head of Regional Sales - City Fibre

Interview 2: **The Internet of Things & Smart City Planning** with Marina Traversari **-** Head of TEAC - Telecom Infra Project

Interview 3: **Redesigning the workplace** with James Dempster - Co-founder - Fox & Bear

Links (referenced in the webinar)

- Rural Broadband Guide
- Gigabit Voucher Scheme
- Starlink
- Nesta
- TWI Global

If you are engaging with businesses from rural areas, support is available from the WSCC Digital Connectivity Team.

Case study – Investment in digital adoption fast-tracked business growth

Name & role	Organisation	Sector	District	No. of staff
Katy Alston Founder	Pinks Parlour	Catering/ hospitality	Arun	9

Size: micro
Customer base: B2C

The decision to invest in digital adoption enabled a genuine dialogue with customers built on trust, which fast-tracked business growth.

Context/narrative

The business started as a one van operation selling vintage ice cream around 16 years ago. Over the last few years, Katy has added two more vehicles to her fleet including a vintage bicycle and two years ago, Pinks Parlour opened its doors in Bogner Regis selling freshly made gelato.

When Katy started with her first van, she did not have a website, and the van was not wrapped with a brand or any contact details. There was no marketing strategy in place and Katy could not understand why people were not booking the van for weddings or events. A few years in to business during a van respray she was asked about contact details for inclusion and decided to begin with just a phone number. This immediately resulted in her first event booking and so Katy looked in to a website.

Challenge	Outcome
Establishing a small mobile business as a brand.	Katy outsourced the website build at great expense listening to and trusting the advice of the company. Upon completion however she realised it was not suitable for the needs of the business and was not something she felt she could use. The changes required were more costly than a rebuild so later down the line, having sought advice from more services and other businesses for recommendations, the new site is operational and effective. Since launching the website, and following a recommendation and introduction to a course, Katy began to explore creating an online presence via social media. This area of work was picked up by Katy's daughter who joined the team following a summer of supporting the business. **Starting out on Facebook the business learned how to use the platform to build a community, quickly understanding that the primary focus of the page was not to sell.** The team used social media to research and understand who their audiences were, what they were interested in and what they might want to engage with content and product wise. **This helped Katy develop her brand which she now understands as being bigger than the sum of the parts of her business i.e. ice cream vans.** The brand represents the owners - who they are and what is important to them; the values of the business. **Social media has enabled a dialogue with customers that is genuine and built on trust** – if customers do not feel they can trust or believe in something (like the story of a business) then they won't buy from them. Katy and the team have learned how to communicate and have the right conversations with their online community and customers and use a ratio when posting – for every 100 posts, only 20 are focused on selling – the rest is about engagement and storytelling.

Challenge	Outcome (continued)
Establishing a small mobile business as a brand.	More recently the business has ventured on to Instagram but are assessing the impact cautiously understanding that as new technologies and platforms emerge, they will need to adapt accordingly. **Part of their emerging strategy is not to cover all platforms but to focus on 2-3 really well.** Katy currently has two people responsible for social media - one dealing with the story/voice and one dealing with posts and planning. There are themes for content across a year that the whole team can feed in to e.g. team achievements, new creations etc. but **all posts are evaluated using the analytics from platforms to help the business understand what is interesting to their customers – sometimes this doesn't align with what the business thinks is important which is useful insight.** **Katy's decision to invest in digital adoption is one that she feels has made the business what it is – put simply, she feels they may not be where they are now without it.** Katy sought advice from small businesses and connected with experts to help build a brand and a presence, recognising these were not skills that she had in-house. By investing and outsourcing, the team have learned new skills and understand more about how to use tools themselves which over time reduces outsourcing costs rerouting investment in to staff training and development.

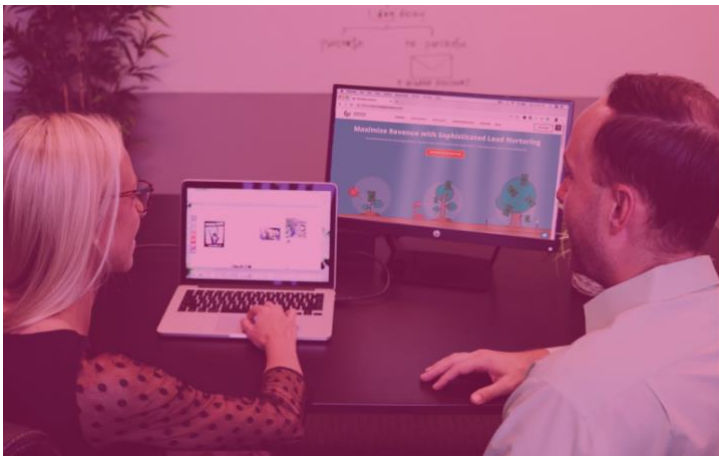
5 key points/themes/takeaways

- **Seek advice from other similar sized businesses and/or networks to find the right product and provider.** Outsourcing services is costly and website builds can be particularly expensive especially if you do not have a reasonable understanding of what would work for your business.
- **Having a content plan for a year incorporating key dates, national/international days or events is important.** Utilise your team and their ideas, achievements, interest etc. and build a content pool to support with posting.
- **Use social media to build a community that engages with who the business is** rather than what it sells or offers – people buy 'why' not 'what'.
- **Having an awareness and understanding of what digital adoption can do is important for any size business** – how will people find you, how can you quickly and efficiently provide services, how can you tell people your story etc.
- **Test and adapt any digital adoption over time and evaluate its impact**. Build in time to research and consider new technologies and services before making changes.

> Social media has made the business what it is now. It has hugely impacted on our growth and helped us build an audience and customer base.

Section 3 – Developing a business eco-system: building local capacity, expertise and skills, and attracting inward investment

Contents



Questions for businesses to consider

- Do you have a process to audit your staff skills and recruit to fill any gaps that may be emerging?
- Are you engaging with peer networks - for learning or business development?
- Have you engaged in all the opportunities available and appropriate to your business for digital marketing?

Introduction

The business world is becoming increasingly collaborative and customers are expecting to engage more through digital means. Businesses need to have the staff and networks in place to embrace digital technology and meet customer needs.

This section explores key digital marketing opportunities (channels, approaches, monitoring and processes). B2b sales, networking and peer engagement (what it is and how it has evolved) and 'Key high growth in-demand skills' including information on digital skills gaps locally.

Digital marketing opportunities

What it is and what businesses need to know

Digital marketing is not just about social media. It is about **using the tools at one's disposal to attract, retain, re-acquire, and support a customer base**. A business may engage in digital marketing by:

Examples	Where to look for guidance and specific examples
Having a professional email set-up (info@yourbusiness.uk).	wpbeginner.com/beginners-guide/how-to-create-a-free-business-email-address-in-5-minutes-step-by-step/
Creating a website.	An article on do-it-yourself website builders - However, we highly recommend approaching a professional agency.
Engaging on social media.	See how Lush and other companies successfully use social media marketing for their companies.
Paying for advertising on search engines.	See here for more information and examples of how to successfully use search engine marketing.
Content Marketing - Create, publish, and distribute content for a target online audience using content marketing.	See here how other companies such as Toyota use content marketing.
Display Advertising - Engaging in digital advertising online to deliver promotional marketing using graphic messages to customers.	See here how companies such as Apple use display advertising.
Email Marketing. Sending commercial messages to customers using email marketing.	See here for further details on how companies such as Buzzfeed use email marketing to successfully promote their online business.
Registering on listing sites – e.g. Google My Business, Trip-Advisor, AirBnB and relevant platforms.	More options are listed on business.com.

Questions to ask businesses: ?

What is your current social media strategy?

- Is it successful / does it need improving?

What digital marketing opportunities are you/ have you been engaging with?

- Have they been successful for your business?

Do you have a website?

- Is it easy to use?
- Is it accessible?
- Do you rank well on search engines?

Are you available on listing sites as appropriate?

- This includes Google My Business
- May include a trades website or local business network website

What are your competitors/ other businesses doing compared to you?

- Is it working well for them? (you might be able to tell if they have a lot more followers / likes / engagement)

Do you know how to access digital marketing expertise locally?

- For example you might look at members of Wired Sussex
- Some groups and professionals might offer free advice consultations

Considerations / resource requirements for businesses

• If you are going to use social media to digitally promote your business, you need to ensure you can stay active and responsive to maintain a good reputation and identity with your audience. **This requires training and capacity for customer support staff.**	• Creating and scheduling content can be time consuming, thus you need to make sure you have allocated the right amount of time to stay digitally engaged - either with in-house or external staff support. **Agency costs can be from £40 per hour, although some 'Virtual Assistants' might also offer this as part of a package for less.**
• Having access to the right software is important both for content creation and for posting to social media. **Consider investing in something like later.com priced from free (then $15 per month for the next tier).**	• Digital marketing is alot more than social media too - consider expertise in display or search advertising, e-mail marketing and how to connect that with your other channels.

Resources - useful links

For supporting staff

- Webinars from the Digital Marketing Institute
- A marketing strategy and activity magazine
- 2021 marketing trends / activities to consider
- Google Ads blog

For businesses

- E-learning course
- Blog on the customer journey
- A blog on digital marketing resources
- Podcast: Marketing School

Glossary

Key term	Examples
Optimisation - The process of improving the marketing efforts of an organisation to maximise desired business outcomes.	A business is not reaching its desired audience, so it evaluates and makes changes to its current strategies, refining targeting and marketing messages.
User Journey - A person's experience during one session of using a website or application, consisting of the series of actions performed to achieve a particular goal.	A customer is in need of a specific product. They use a search engine such as google to find a product that fits their need: they find a specific business website and purchase one of their products.
Organic Search - Results that are calculated strictly algorithmically and not affected by advertiser payments.	A full guide to Search Engine Optimisation - which is all about appearing on organic search results pages.
Paid Search - When search engines such as Google and Bing allow advertisers to show ads on their search engine results page. This works on a per-pay-click model, meaning exactly that-until someone clicks on an ad, a business does not pay.	Find out how to do ads on Google.

Key term	Examples
KPI (Key Performance Indicator) - A method for measuring performance. KPI's evaluate the success of an organisation or of a particular activity in which it engages.	An explanation of 37 potential KPIs.
CPA (Cost Per Acquisition) - An ecommerce marketing metric that measures the aggregate cost to acquire one paying customer on a campaign or channel level. CPA is a vital measurement of ecommerce marketing success.	If a business spends £150 on a campaign and the number of acquisitions attributed to this campaign is 10, this would give the campaign a cost per acquisition of £15.
CPI (Cost Per Impression) - An advertising model where companies pay a specific amount of money each time an advert is displayed.	If an online advertiser pays a website £500 that ultimately generates 150,000 impressions, then the CPM would be £500/150,000 X 1,000 = £3.33.
Engagement Rate - A metric used to gauge the level of engagement generated from created content or a brand campaign.	Total engagement on Facebook would be comprised of the total amount of shares, likes, reactions and comments. In contrast, Instagram's total engagement would be comprised of the total amount of likes and comments.
Remarketing - A way to connect with people who previously interacted with a website or mobile app. It allows a business to strategically position ads in front of these audiences as they browse Google or its partner websites, thus helping increase brand awareness or remind those audiences to make a purchase.	See here for how companies such as Spotify use remarketing
Email Marketing - The use of email within marketing efforts to promote a business's products and services, as well as incentivise customer loyalty.	Define your strategy.

B2B sales, networking and peer engagement

What it is and what businesses need to know

Businesses can **develop their capacity and capabilities** by learning from and contributing to **peer networks**. These networks may become **'networking'** where businesses can attract new customers or investors or attract leads for B2B sales. They may also collaborate and work together on projects.

Examples	Where to look for guidance
Developing a team of associates or suppliers that can extend in-house capacity as and when needed.	This is very typical of service organisations. Traditionally known as 'subcontracting'; an associate team may however be more collaborative than simply contracting out a task. An example is always possible.
Creating ambassadors for work through sharing expertise and quality, and where that ambassador may connect a business with a potential customer.	'Free advice' and relationship development might make advocates out of other people. Here's how.
Direct connections with businesses that may use products or services; either as a customer, wholesaler or distributor.	Some business networking groups focus on making connections between businesses to trade with each other.

Questions to ask businesses:

Who is your target market?

- Could you re-evaluate this to include other businesses if currently selling direct to customers?

Are there any opportunities to collaborate with other businesses?

- Could you cross-sell services?
- Could you enhance your offering with their white-label supply?

What can you bring to a networking table?

- It is always important to embrace networking opportunities with an attitude of 'how can we mutually benefit'? Rather than with a view to make short term sales

Do you participate in opportutnities to learn?

- Could you offer insights to others on a learning programme?
- Could you form a strategic alliance where you can share learning with a partner and collaborate more closely?

Considerations / resource requirements for businesses

• Networking is often considered an important part of business development. **However it can take up a considerable amount of time.**	• You may need to pay for membership to groups. There are many networking groups available like BNI Sussex (around £500 per year) or those linked to other membership organisation like the Federation of Small Businesses (from £147 per year).
• Participation in peer learning networks may also take your time.	• Cultivating a network of associates, partners or white-label suppliers may also take time and may need you to make minimum payments/sales volumes.

Resources - useful links

For supporting staff

- Webinar - The science of B2B sales
- Guide explaining the peer learning group model
- Podcast - The B2B sales show
- Guide to B2B referral marketing

For businesses

- An extensive article on how to network
- Networking tips for freelance creative businesses especially
- Guide to soft-selling
- Networking available through the Sussex Chamber of Commerce

Glossary

Key term	Examples
Speed Networking - A meeting format designed to accelerate business contacts. Speed networking basically involves participants gathering together to exchange information. Participants greet each other in a series of brief exchanges during a set period of time.	See here for an example on a speed networking event.
Referral Networking - A network of individuals and organisations that provide referrals. Referral networks can be a mix of informal and formal agreements. More formal referral networks often include groups of companies within related industries that can work together to provide cross-referrals.	An estate agent may build a network of home staging professionals, mortgage brokers and moving companies.
Strategic Alliance - An agreement between two or more parties to pursue a set of agreed upon objectives needed while remaining independent organisations.	The deal between Starbucks and Barnes&Noble is a classic example of a strategic alliance. Starbucks brews the coffee. Barnes&Noble stocks the books. Both companies do what they do best while sharing the costs of space.
Partner Network - Often used in the technology world. Partners distribute or sell a business's services or product as part of their offering.	Apple have major consultancies as partners to enable businesses to make the most of their products and Google does the same, with 'partner' companies helping you make the most of their products.
Partner Learning - Where peers support each other in learning processes. Peer learning is the acquisition of knowledge and skill through active helping and support among equals in standing or matched companions.	Participate in 'lunch and shares' or provide expert input during webinars or events with peers. It may also be less formal, sharing expertise through answering questions on forums to help those in other industries. This helps establish one as an 'expert' in the topic and may attract business. One example is 6 collaborations around open data.
Soft Selling - An approach that uses more subtle sales language or is based on evaluating the consumer/client needs recommending appropriate services as a result.	In e-commerce terms, an online retailer may recognise when an online shopper has abandoned a shopping cart containing several items. A business may send an email to the shopper to ask if they encountered a problem or if they needed advice.

Key term	Examples
Peer Engagement - A community-based approach to decision making where a business might collaborate with like minded persons.	From C-suite engagement to customers as peers, see here.
White Label Working - A fully supported product or service that's made by one company but sold by another. White label products and services are purchased by the latter company without branding.	Many website and software agencies use the white label services of a consultant which can also apply to products offered. More examples here.
B2B Sales - Selling Business to Business.	This applies where the purchasing party is also a business; this is often used in distribution or wholesale deals where volume sales are made compared to lots of smaller direct to consumer sales. Explore some strategies here.

Key high growth in-demand skills

What it is and what businesses need to know

There are several **skills which are in high demand in the area** and that are **driving growth for businesses**. Attracting and retaining talent is key to a businesses' performance, knowing what skills and people are needed is important for **maximising the utilisation** of every team member ensuring a **positive culture of work**. Such skills include:

Examples	Where to look for guidance
Creative, Digital & IT skills – such as coding, programming and infrastructure management.	learntocodewith.me/posts/tech-skills-in-demand/
Creative thinking skills.	skillsyouneed.com/ps/creative-thinking.html
People management skills.	perkbox.com/uk/platform/recognition/people-management-skills-to-thrive-as-a-manager
Engineering skills.	nesfircroft.com/blog/2019/05/future-engineering-skills-needed
Fintech (Financial Technologists with data analytics skills).	commonslibrary.parliament.uk/research-briefings/cbp-9150/
Scientific exploration skills – for scientists; especially those working in health & life sciences and the environment.	towardsdatascience.com/developing-a-career-as-a-data-scientist-in-the-life-sciences-industry-4025ee386895

Questions to ask businesses:

What technology and digital skills do you need in your business?

- Almost every business could make use of these skills - from mobile app development to Artificial Intelligence there are always opportunities to enhance customer facing platforms or processes

Have you considered a skills audit of your staff?

- Identifying the technology and digital skills gaps will help you to plan your recruitment needs
- If it is not appropriate to have in-house resource, who might you partner with to provide these?

Have you considered utilising university consultancy or graduate placement opportunities?

- These are opportunities to get high talent for short periods of time, usually cost effective (and sometimes free)
- They can also lead to longer term staff for you

Do you map or consider the wider skills people need for your business? Like critical and creative thinking, people management skills or a solutions focussed mindset?

- In-demand skills include these 'soft skills' as well as technical knowledge. Not all tech jobs are about coding

Considerations / resource requirements for businesses

- Hiring people who possess the in-demand and high growth skillsets can be expensive, so local job boards or expert recruitment help can be helpful. **A recruitment consultant may typically charge 15-20% of the first year's salary (so based on a £40k per year job, the cost may be £8,000).**
- A lower cost hire might be a recent graduate, or even student on a placement. They might possess excellent technical skills, and could be a great employee. You should plan however to spend a bit more time supporting them through and helping their transition in to work life.
- Directly employing someone is not the only route to bringing in skillsets which are in-demand. Engaging a contractor, a part-time consultant or agency might bring you the skills you need with the total cost shared with other clients; although per hour you would expect to pay more.
- Really consider the value of bringing in expert HR help when reviewing your workforce skills and making a recruitment plan. Their help could be very cost effective and enable you to achieve goals quicker.

Resources - useful links

For supporting staff

- Video on skills in the fast-paced world
- Inclusive recruitment and retaining quality tech skills information via the Tech Talent Charter
- Research in to the skills shortages of the tech industry in the UK
- More than just skills, BBC Tech Tent Podcast covers all things tech and emerging

For businesses

- University of Derby video on the impact of Industry 4.0 on the future of jobs
- A rundown of the in-demand skills for future jobs
- Access student interns and graduates with the skills you need
- Upskill your employees

Glossary

Key term	Examples
Artificial Intelligence (AI) - The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.	See here for examples of artificial intelligence (AI) skills that are in high demand.
Machine Learning - The study of computer algorithms that improve automatically through experience and by the use of data. It is seen as a part of artificial intelligence.	See here for examples of machine learning skills that are in high demand.
Data Engineering - Responsible for finding trends in data sets and developing algorithms to help make raw data more useful to the enterprise. This IT role usually requires a significant set of technical skills, including a deep knowledge of SQL database design and multiple programming languages.	See here for examples on data engineering skills that are high in-demand.
Data Visualisation - Data visualisation is an interdisciplinary field that deals with the graphic representation of data. It is a particularly efficient way of communicating when the data is numerous as for example a Time Series.	See here for examples on data visualisation skills that are in high demand.

Key term	Examples
Cloud Computing - The practice of using a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or a personal computer.	See here for examples on cloud computing skills that are in high demand.
Internet of Things (IoT) - The Internet of things describes the network of physical objects—a.k.a. "things"—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet.	See here for examples on internet of things skills that are in high demand.
User Interface Design - Or user interface engineering is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximising usability and the user experience.	See here for examples on user interface design skills that are in high demand.
Blockchain - a system in which a record of transactions are maintained across several computers that are linked in a peer-to-peer network.	See here for examples on blockchain skills that are in high demand.
Mobile App Development - is the act or process by which a mobile app is developed for mobile devices, such as personal digital assistants, enterprise digital assistants or mobile phones.	See here for examples on mobile development skills that are in high demand.

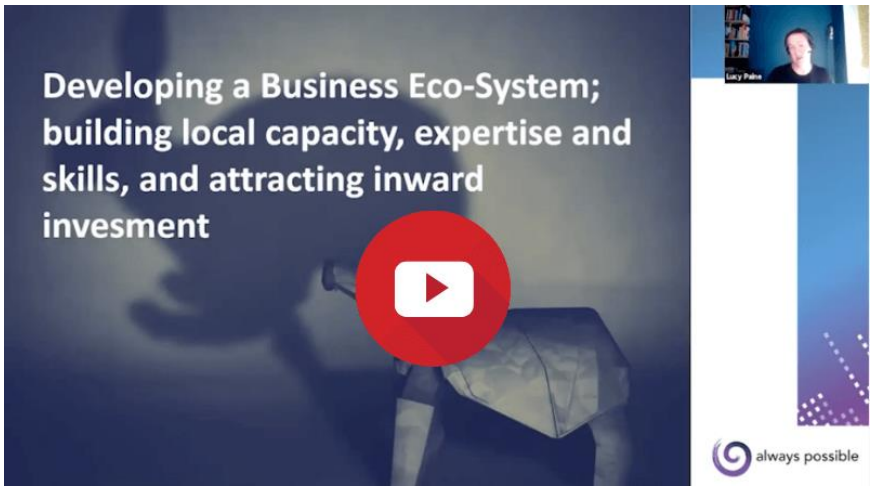
Training webinar: Developing a business eco-system

Format
A panel discussion followed by Q&A

Purpose
to help council and partnership officers to better understand key players, successes, risks, gaps and opportunities in the West Sussex B2B digital offer.

Lucy Paine facilitates a panel discussion with Sussex based digital representatives to consider how businesses are connecting with each other to explore digital adoption.

Jeff Alexander - Chief Executive - Gatwick Diamond Business
Meg Fenn - Design & Marketing Consultant and board member WorthingDigital
Steve Rackley - Co-founder and Director - James Chase & Silicon Brighton
Richard Butcher - Business Growth Adviser - Coast to Capital Growth Hub



Links (referenced in the webinar)

- RISE
- Growth mapper
- DNAsix
- Grow my company
- Get online week
- Fresh Egg
- Freedom Works co-working spaces, Worthing
- Rume 2, Chichester

Case study – digital adoption led to 23% growth

Name & role	Organisation	Sector	District	No. of staff
Richard Freeman Chief Executive	always possible	Professional services	Worthing	9

Size: micro
Customer base: B2B

Thanks to digital adoption, the company has grown by 23% and created 6 new permanent jobs

Context/narrative

As a strategic development company working across multiple sectors, the aim of always possible is to connect the different parts of society – educators, business, culture, public services etc. to explore and build opportunities for collaboration.

Based in Worthing, always possible helps leaders make decisions, plan better, and find focus through co-designed projects with specialisms in evaluation and research, facilitation and 1:1 business support.

The business began in 2015 with a basic website used primarily to sell service, and to build a client base. Online presence was supported through Facebook, Twitter and LinkedIn and with a small staff team, operations could be carried out through email and Google Drive.

With a newly expanded core team of 9 permanent staff, always possible delivers projects across the UK, drawing on a pool of associate experts for building, connecting and sharing knowledge with others.

Challenge	Outcome
How to deliver a series of planned and paid for events during lockdown.	At the beginning of 2020 always possible held contracts to deliver over twenty specialist physical events across the South East, East and Midlands UK, with more planned for the latter part of the year. **The business invested in tools to support project delivery including Monday.Com (a CRM and project management system enabling teams and clients to work collaboratively on project development), Zoom and Miro, an online whiteboard tool.** Having prior experience of online tools for collaboration, the team drew on its network to collectively explore ways to continue event delivery and keep work moving for clients. As early adopters of platforms like Zoom prior to the pandemic, the business had an understanding of how remote meetings and larger scale discussions worked and were well placed to offer support to others. Learning and sharing quickly resulted in leading training sessions for networks, including technology network Tech East, to teach members how to use the platform. **Supporting others to move quickly to make changes, gave always possible an evidence-base of online training efficacy to share with clients.** Collaboration with chambers of commerce, universities, community groups and local authorities has enabled always possible to switch and deliver over 100 events using online platforms in the last 16 months. **A series of webinars called 'How To Turn Physical Events Into Online Experiences' had over 200 attendees.**

Challenge	Outcome (continued)
How to deliver a series of planned and paid for events during lockdown.	The business has since been able to change its offer to clients, boosting income through new services. **It is now possible to provide fully remote or hybrid projects with high quality results and to date, always possible have delivered 10 projects end-to-end without meeting anyone in person.** As a result of digital adoption, the business has been able to expand its network and collaboration opportunities both locally and nationally increasing the impact of its work. In addition, the business has been able to extend the reach its online ideas forum, The Possibility Club, as an additional product available for use in client projects. The forum has supported several online event programmes as a safe follow-up place to share ideas and collaborate on a multitude of topics. Membership numbers have more than doubled in the last six months with over 200 new members being directly referred to the space by other members.

5 key points/themes/takeaways

- **Collaboration is vital for businesses of any size.** Sharing knowledge and learning helps build trust and is as important for an area's economic growth as it is for individual growth.
- **Utilise online tools to extend the reach of your business and diversify your offer** – consider fully remote and hybrid delivery options.
- **Work with others to understand new technologies** – test, learn and share experiences.
- **A mixture of digital tools and platforms needn't be expensive** – Miro, Zoom and Slack all have free versions and Monday.com offers free trial periods.
- **Evidence digital learning to support with bid writing and pitching** – how have you used technology to deliver work, what was the impact and benefit etc.

23% growth

always possible has grown by 23% and created 6 new permanent jobs during the pandemic thanks to its digital adoption

> Learn and share, learn and share!

Section 4 – Future proofing the West Sussex economy: what's next?

Contents

Questions for businesses to consider

- Are you aware of the technologies in late-stage development that could enhance your business quickly?
- Are you equipped to keep your staff and stakeholders safe in a digital world?
- Do you collaborate with customers of suppliers? Might you benefit from automating data sharing in a secure manner?

Introduction

The digital and technological worlds move fast. Businesses aware of evolving opportunities may become early adopters, while others may wait to see how technology matures, becomes affordable or establishes common usage. Digital adoption must happen appropriately for a business. Many may not be considering adoption currently however it is important to have an awareness and understanding of new and emerging technologies included in strategic planning. Customers or suppliers may expect businesses to begin embracing them.

This section explores emerging dominant technologies (including the cloud, GPS enhancements, connectivity and industry 4.0 impacts), as well as online safety and protections (focussed on psychological protections for businesses and safeguarding stakeholders and respecting privacy). Also included is Blockchain and the many applications of this emerging technology (protecting sensitive data, making payments and enabling verifiable provenance or logistics tracking).

Emerging dominant technologies

What it is and what businesses need to know

New technologies are in constant development. Some may **take time to become mainstream** while others **fail to take off at all**. There are some technologies and developments that will be of more interest to businesses, **particularly the ways in which they can positively impact on efficiency and speed**.

Examples	Where to look for guidance
New generation GPS.	See here for more information - rewiresecurity.co.uk/blog/future-of-gps-and-global-positioning-locating
Removal of analogue phone lines.	See here for more information - efax.co.uk/blog/bt-2025-switch-off-how-will-it-impact-you-and-your-business
Touchless / haptic technology.	See here for more information - touchlessai.com/
Battery electric vehicles.	See here for more information - carmagazine.co.uk/electric/ev-car-battery-capacity-tech/

Questions to ask businesses:

Are there any new technologies that other businesses are using that you are not?

- Would these technologies benefit your business
- How would they benefit you?
- Are there any resources available for you and your staff to learn these technologies?

Do you have expertise in-house or from an agency that might help you adopt emerging technologies?

Is there an emerging technology that could really benefit your practice if you embraced it?

Could you attend an event to learn more about emerging technologies that might be relevant to your business?

Considerations / resource requirements for businesses

• Staying up to date with the lastest technologies can be beneficial for your business, as it keeps you in line with competitors or ahead of them.	• Newer technologies can be expensive, so a good business case should be developed.
• New technologies may not uphold their potential from when they are first released either through low adoption rates or their real world application. Beta max anyone?	• Being the first to embrace a new technology may mean inducing fear of using it by staff or customers who are not as adaptable to change; try not to alienate anyone with quick adoption.

Resources - useful links

For supporting staff

- Webinar - 50 Technologies transforming the future
- About the UK's new approach to GPS
- Impact of industry 4.0 on businesses
- Prospects and challenges of Artificial Intelligence report by McKinsey

For businesses

- Guide - 23 technologies to make an impact by 2022
- Can you spot the fake images?
- E-learning on Machine Learning for those keen on the technology side
- How to make a chatbot with chatbot.com

Glossary

Key term	Examples
Artificial Intelligence (AI) - a broad term referring to a wide range of abilities performed by a computer or a robot that resemble natural human skills.	Everyday examples of AI.
Dual-Use Technologies - In politics, diplomacy and export control, "dual-use" refers to technology that can be used for both peaceful and military aims. More generally speaking, dual-use can also refer to any technology which can satisfy more than one goal at any given time.	Common examples of dual-use goods include radio navigation systems (such as GPS).
Chatbots - Automated tools for answering human questions.	Chatbots are used in retail, finance, government agencies, non-profits, and other organisations to respond to frequently asked questions or routine inquiries. Find 15 examples here.
Cloud Computing - The on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data centers available to many users over the Internet.	Examples on cloud computing.
Deep Fakes - Digital images and audio that are artificially altered or manipulated by AI and/or deep learning to make someone do or say something he or she did not actually do or say.	Pictures or videos can be edited to put someone in a compromising position or to have someone make a controversial statement, even though the person did not actually do or say what is shown. Increasingly, it is becoming difficult to distinguish artificially manufactured material from actual videos and images. Multiple examples can be seen here.
5G Networks - The fifth-generation technology standard for broadband cellular networks, which cellular phone companies began deploying worldwide in 2019, and is the planned successor to the 4G networks currently providing connectivity to most current mobile phones.	5G networks are enabling better video streaming, autonomous vehicles, and automated factories. Also aiding homes that require a fast broadband.

Key term	Examples
Data Mining - Techniques that analyse large amounts of information to gain insights, spot trends, or uncover substantive patterns. These approaches are used to help businesses and organisations improve their processes or identify associations that shed light on relevant questions.	Examples on data mining.
Machine Learning - The study of computer algorithms that improve automatically through experience and by the use of data. It is seen as a part of artificial intelligence.	Image recognition, such as using google image search to find the source of the image.
Industry 4.0 - the ongoing automation of traditional manufacturing and industrial practices, using modern smart technology.	Examples of Industry 4.0.

Online safety and protections

What it is and what businesses need to know

The UK's 2021 **Online Safety Bill** will help protect social media users while safeguarding freedom of expression. However, **online safety is a constantly evolving area** and it is not just about social media companies taking responsibility for the posts on their platform.

Online safety requirements include the 2018 measures linked to the processing of data. Emerging technologies within browsers and device software is aimed at helping to protect the privacy of users by restricting the ability to track them across sites or for different data controllers to access information via other platforms without consent or awareness. Future changes and focus on protections will include:

Examples	Where to look for guidance
The Online Safety Bill – new requirements for companies to be responsible for their platforms.	gov.uk/government/publications/draft-online-safety-bill
'Privacy by default' mechanisms within browsers and devices that reduce ability to automatically retarget or collect personalisation data on customers / users.	blog.mozilla.org/en/products/firefox/when-it-comes-to-privacy-default-settings-matter/
More advanced ways to trick employees in to sharing data or open networks to hackers.	itproportal.com/features/the-cognitive-psychological-tricks-hackers-use-to-dupe-users/

Questions for businesses:

Do you have a process for protecting your employees when online?

- Such as firewalls or antivirus
- Or guidance about how to deal with trolls

Do you have any interactions online that could be with children or young people?

- This could include customer chats or emails

What training do you have in place to educate staff about online harms?

- This includes psychological harms (like Cyber Bullying)
- And data security (like unknowingly helping a hacker)

Is there a policy in place to address any concerns for your staff's online behaviour?

- Having a clear HR policy is important

Do you have security systems in place to protect your customers' data (see our Cyber Security Section for more information)

Do you provide a platform or opportunity for cyber bullying to happen?

- This could include open comments, or reviews of staff
- Do you run a customer forum?
- How do you moderate / mitigate potential cyber bullying or trolling?

Considerations / resource requirements for businesses

- Any platforms where the public can interact with you should be regularly monitored - such as customer forums, contact forms or review platforms; which may be costly depending on how many outlets you have.
- Investing in good software to protect business devices is worthwhile - there are many free applications available as well as paid software.
- Ensure you have a good HR adviser in-house or externally who can support the appropriate contracts, policies and disciplinary processes. External consultancy can cost £125 per month for support, or paperwork and advice is available free through membership groups like the Federation of Small Businesses for example.
- If your business does engage with Children or Young People as a matter of course (including those not in direct contact every day such as play equipment hire, entertainers, family-friendly activities/cafe) then ensure a full safeguarding procedure and training is in place.

Resources - useful links

For supporting staff

- UK Government response to Internet Safety Green Paper
- Podcast from the Internet Watch Foundation
- Webinar - Building virtual teams (online teams leadership)
- Advising businesses on non-privacy invading products.

For businesses

- Safeguarding help and training
- Online safety (protecting devices/data) training
- Top tips to share with individuals
- Turn on content filtering in Microsoft windows network or for Apple devices

Glossary

Key term	Examples
Anti-virus Software - Software that attempts to block malicious programs/code/software (called viruses or malware) from harming your computer.	moneysavingexpert.com/broadband-and-tv/free-anti-virus-software/
Firewall - A security system usually made up of hardware and software used to block hackers, viruses, and other malicious threats to your computer.	avg.com/en-gb/business-security
Cyber Bullying - When the Internet, mobile phones or other devices are used to send or post text or images intended to hurt, embarrass or harm another person.	bullying.co.uk/cyberbullying/
GDPR - The General Data Protection Regulation.	ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/
Content Filter - A way of limiting access to material on the internet by examining it before it is shown to the user and deciding whether or not it is acceptable. Often used to restrict access to certain web pages when children are using computers.	opendns.com/home-internet-security/
Cyberstalking - Stalking someone online. May involve harassment however, the victim may be unaware that they are being stalked online.	gov.uk/report-stalker

Key term	Examples
Hacker - Hackers are people who gain unauthorised access to data, remotely, using a computer or mobile device.	forbes.com/sites/daveywinder/2020/02/10/ranked-the-worlds-20-greatest-hackers/
Pharming - (Pronounced 'farming') A method of scamming to obtain personal/private information from users by directing them to false – or 'spoof' – websites that look legitimate in browsers.	us.norton.com/internetsecurity-online-scams-what-is-pharming.html
Troll - Someone posting inflammatory, or off-topic messages in an online community, such as an online discussion forum, chat room, or blog, with the primary intent of provoking readers into an emotional response or of otherwise disrupting normal on-topic discussion.	phys.org/news/2019-02-online-trolling-funny-term-sinister.html

Blockchain

What it is and what businesses need to know

Blockchain is a system in which a record of transactions made is maintained across several computers that are linked in a peer-to-peer network. It ensures each transaction is verifiable and therefore trusted, like a digital ledger that is instantly copied and therefore cannot be hacked or cheated into being changed.

Typically, blockchain is used for cryptocurrency like Bitcoin, but can also be used to transact secure records between organisations – enabling proof of provenance (useful for import/export or food assurance standards). **Creating trusted chains of information enables organisations to work more effectively together and can significantly improve supply chain monitoring for businesses**. Examples of its useful application include:

Examples	Where to look for guidance
Transacting cryptocurrency.	https://marketrealist.com/2017/11/how-to-transact-in-bitcoin-and-other-cryptocurrencies/
Storing sensitive patient data.	imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/research-data-management/data-storage-and-security/storing-sensitive-and-personal-data/
Proving the provenance of a raw material.	sourcingjournal.com/topics/raw-materials/applied-dna-traceability-fashion-brand-protection-intellectual-property-sustainability-280529/
Tracking the delivery of an item from store to customer.	shipbob.com/blog/ecommerce-order-tracking/
Democratic actions – such as voting (among shareholders for example).	investopedia.com/news/how-blockchain-technology-can-prevent-voter-fraud/

Questions to ask businesses:

Will blockchain disrupt or enhance your business strategy?

- Can it be used effectively? Or might it require considerable change in your business that it is not ready for?

Is the purpose of the business application clearly understood and is blockchain the right technology?

- It's a great 'new' technology to embrace, but is the cost too high for the benefits it returns?
- Is there an alternative approach that better integrates with your current systems?

How do you ensure the technology implemented is resilient, scalable, secure and recoverable?

- Do you have the expertise available to effectively manage implementation and maintenance?

Are there opportunities for blockchain technologies to reduce cost or improve customer service for your business?

- This could be part of automating processes, or more cost effectively providing secure transaction verification for customers

Do you need to cooperate with others in order to fully realise the benefits that blockchain can bring?

If you are considering creating a blockchain, have you considered how it would be governed and administered?

- This includes who has access and the type of user identities required.

Considerations / resource requirements for businesses

- The costs of running a network of hardware required for a Blockchain will typically cost hundreds of pounds a month.
- Expertise is required to ensure you have an efficient block chain that works effectively for your needs.
- Security is paramount. Trust is an integral part of blockchain technology. You will need to invest in the expertise, hardware and software required to assure this.
- Is another technology more suited to your needs.

Resources – useful links

For supporting staff

- Video about Blockchain (2 minutes)
- A guide to Blockchain by Amazon
- A strategist's guide to blockchain
- Podcast – The Blockchain Show

For businesses

- A large selection of resources about using Blockchain technologies
- E-learning resources about learning Blockchain from Unicef
- 9 resources and learning courses compiled about Blockchain
- Webinars on various aspects of Blockchain

Glossary

Key term	Examples
Airdrop – A token distribution method used to send cryptocurrency or tokens to wallet addresses.	Sometimes airdrops are used for marketing purposes in exchange for simple tasks like reshares, referrals, or app downloads.
Block Reward – The reward given to a miner after it has successfully hashed a transaction block. Block rewards can be a mixture of coins and transaction fees. The composition depends on the policy used by the cryptocurrency in question, and whether all of the coins have already been successfully mined.	If a block is issued every 10 minutes and someone wants to issue 21 million coins in less than 1 year, the reward per block must be very high (i.e. it will take a lot to mine these).
Confirmation / Block Confirmation – A confirmation means that the network has verified the blockchain transaction. This happens through a process known as mining, in a Proof of Work system (e.g., Bitcoin). Once a transaction is successfully confirmed it theoretically cannot be reversed or double spent. The more confirmations a transaction has, the harder it becomes to perform a double spend attack.	If person A buys bitcoin and then sends one bitcoin to Person B, this transaction will remain "unconfirmed" until the next block is created. Once that block is created and the new transaction is verified and included in that block, the transaction will have one confirmation.
Cryptocurrency – Digital currency that is based on mathematics and uses encryption techniques to regulate the creation of units of currency as well as verifying the transfer of funds. Cryptocurrencies operate independently of a central bank.	Bitcoin, Ethereum and Binance coin are all examples of cryptocurrencies.

Key term	Examples
Digital Identity – An online or networked identity adopted by an individual, organisation, or electronic device.	You create a digital identity when you sign up for an online account and put in your details such as user name, real name, password, birth date etc.
Digital Signature – A code generated by public key encryption and attached to an electronically transmitted document in order to verify the contents of the document.	See here for examples on digital signatures.
Encryption – A process used to combine a document (plaintext) with a shorter string of data referred to as "a key" in order to produce an output (ciphertext). This output can be "decrypted" back into the original plaintext by someone else who has the key.	See here for examples on encryptions.
Know Your Customer (KYC) – A process in which a business must verify the identity and background information (address, financials, etc) of their customers.	Current regulations and laws require banks and other financial institutions to keep and report customers' personal information and transactions. See here.
Private Blockchain – A blockchain or distributed ledger that has a closed network where participants are controlled by a single entity. A private blockchain requires a verification process for new participants. A private blockchain may also limit which individuals are able to participate in consensus of the blockchain network.	Anyone can buy and sell Bitcoin without having their identity revealed. It allows everyone to be treated equally. Read more examples here.

Training webinar: Future proofing the West Sussex economy

Format
A panel discussion followed by Q&A

Purpose
to help council and partnership officers to be on the front-foot with emerging technologies, investment opportunities as well as risks and pain-points.

Lucy Paine introduces a panel discussion on new (and some not so new) technologies with a focus on their potential to alter business practices in the not so distant future.

Martin Cooper - Content Manager, BCS
John Cushing - CEO, MNAI
Sam Taylor - Owner, Bavian Design

Links (referenced in the webinar)

- Oculus
- Python
- Seth Godin on blockchain
- Jumbo

Glossary of terms (referenced in the webinar)

Node - Any system or device connected to a network is also called a node.

Case study – 50% growth in one year

Name & role	Organisation	Sector	District	No. of staff
Joanna Hunter Director & Chief food lover	Piglets Pantry	Catering/ hospitality	Worthing	50

Size: small
Customer base: B2B and B2C
Primarily large corporate clients

An online pivot resulted in a 50% growth during 2020-2021.

Context/narrative

The company has been in operation for 10 years and during that time has built a solid B2B client base within the hospitality and events sector. Before the recent pandemic, the company were regular suppliers of savoury goods to many of the country's largest football and sporting clubs as well as festivals and corporate events.

Joanna's team had no formal digital strategy but did have an existing website equipped with an ecommerce platform - no products were loaded to the site however and it was not connected to any form of payment system. The company's brand was recognisable but, as a B2B company, follows on social media were less important as a source of referral. With a pre-lockdown following of around 100 followers on Instagram and 900 on Facebook, the team acted quickly and were creative and savvy in their use of social media to pivot the business as lockdown began.

Challenge

How do you move from a B2B to an online B2C in a tight timeframe with limited infrastructure?

The journey began as the company took back deliveries from clients who were unable to distribute produce as a result of immediate closure. Piglets Pantry agreed to support clients in redistributing stock by using their existing social media channels to attract customers. Interest was huge in the local area however the company was not equipped to deal with this effectively.

Realising the need and interest in their products, the team decided to complete set up of their online shop. Good local connections in IT meant the team were able to access support and advice to help them get set up quickly and effectively.

Outcome

The online shop helped raise the profile of lesser-known product ranges the company offered (e.g. cakes, sweet treats) as the team launched an Easter Hamper of handpicked and packed sweet and savoury goods. This could be delivered to anywhere and was sold as an 'experience' rather than a product. Following this success, the team introduced an Afternoon Tea Experience in a box and enlisted the help of local people in their networks to support with marketing the product.

Joanna trusted staff to use their existing skills, knowledge and connections to reach out to followers on social media and explore the world of online influencers. Two well known celebrities both locally and nationally photographed themselves with their Afternoon Tea boxes dressed as one might when going out for the occasion, and followers responded. **As of June 2021, Piglets Pantry have just under 42,000 Instagram followers and are about to launch their own TikTok.**

With no digital strategy or business plan that included pivoting or growth of such scale, the team had to learn quickly how to manage increased demand, interest and engagement bought about by social media. The brand is now widely recognised and synonymous with good customer service but this has been a challenge to keep on top of. Social media is very instant and can be hugely impactful in positive ways but dealing with negative comments in a timely manner and visibly is a challenge. For the team, buying in support to help with customer service has been crucial to maintaining their identity as a caring, family run business who pride themselves on providing meaningful experiences for customers.

5 key points/themes/takeaways

- **Understand how you will use your online shop.** If you are known for one product or service more than another, an online shop can be a great way to raise awareness of additional goods and/or test new ideas.
- **Try different social media platforms to find the right audience** but ensure you are able to engage with customers effectively – responding to comments, questions or complaints on platforms is important and can affect how people view a business or service.
- **Building infrastructure for a growing business is vital.** Incorporate a digital strategy that grows with the business and incorporates upskilling/retraining for staff and outsourcing for gaps.
- **Connecting with and building relationships with local services and experts** (e.g. IT services) helps a business stay connected with new trends but can also be invaluable for advice or support.
- **Pivoting a business or service can make many aspects easier** but it is important to consider the additional work required if product shipping is required. Couriers, packaging and storage are key areas to consider and can be costly.

50% growth

Business has grown around 50% in the last year as a result of online pivot

£3 million turnover

£3 million turnover in last year on new product line

+40k followers

Over 40k social media followers

> Our brand has become very big in the last year, we hadn't realised how big the Instagram effect was, so we are much more well recognised now but this wasn't intentional!

Section 5 – Helping growing businesses to compete in global markets

Contents

Questions for businesses to consider

- Can Artificial Intelligence help you hire better?
- Have you implemented cyber security measures to protect your business and its stakeholders?
- Are you engaging in digital transformation that supports sustainability of your business and the environment?

Introduction

Technology can help businesses of all sizes whether supporting SMEs to compete across borders or helping large businesses with global reach. Technology is enabling this reach, and should be especially considered at scale where arguably it can have the most impact on business efficiency and sustainability. This includes companies from elsewhere reaching in to the UK and as such UK companies need to be embracing the global stage in order to compete.

In this section AI driven recruitment is explored (automatically creating job descriptions, screening applicants and analysing job interviews). In addition, Cyber security innovations are covered (the physical and software protections a business needs to be aware of) and digital transformation to utilise sustainable technologies (what transformation is, what considerations are needed, and how to do so sustainably).

AI-Driven recruitment

What is it and what businesses need to know

Artificial Intelligence (AI) can be used to **sift CVs and cover letters based on its programming to identify the right candidates** for a role. It can look for certain phrases or words, **learn writing styles and even preferred phrases** that may be worded slightly differently by a candidate.

Whilst bias can be programmed in, **the principle is that it can avoid unconscious bias present in humans** and track the sentiments and quality of candidates based on hard data. Some examples of how AI can be used in recruitment include:

Examples	Where to look for guidance
Screening initial applications from candidates.	ideal.com/ai-recruiting/
Scanning your job description and comparing to other similar roles to identify any significant differences or discrepancies.	A few products are here
Assess interviews based on word patterns and phrases; determining whether they are similar or complimentary to existing staff choice of words – and therefore a potential team fit.	psycruit.com/blog/using-artificial-intelligence-in-hiring

Questions to ask businesses:

What is your current recruitment process?

- Does it involve any AI programs?

What volume of roles do you often recruit in to?

- Would automating any parts of the process - from job description writing to screening or interviewing reduce your costs?

When you are recruiting, do you know how to get the best applicants?

- If you are not often doing it, then automation might bring low cost expertise

Do you have any expertise in technology driven recruitment practices?

- That may be a hire worth exploring if you do lots of recruitment
- If not, but in-house resource is too expensive, can you locate an agency or consultant to help?

Considerations / resource requirements for businesses

- It is good practice to notify applicants that AI may be used to analyse applications, interviews or any other part of your process. Consider if you are complying with your data processing policies.
- Consider providing the applicant with information about how the AI works and evaluates general characteristics - some may still be questionable of automated technology.
- If buying in AI powered processes, you will need to allocate resource accordingly e.g. time to implement and maintain and/or license the software - often this is a monthly fee (depending on the platform chosen).
- Implementing technology driven recruitment (including AI), may result in the need to recruit new skills sets to your team. A new role could involve someone with technological skills and HR training or, it could be two people collaborating.

Resources - useful links

For supporting staff

- A blog on the value of AI recruitment
- Webinars on AI and ML in recruitment
- Podcast about Recruitment Automation
- A hub of resources from the Chartered Institute of Personnel and Development (CIPD) on Automation, AI and technology

For businesses

- A summary of AI affecting HR
- A blog on the pros and cons of AI recruitment
- E-learning - Intro to AI in HR
- 12 software platforms reviewed for your use

Glossary

Key term	Examples
Algorithm - A process or set of rules to be followed in calculations or other problem-solving operations. Algorithms put predictive analytics to work; applying the insights from the data and putting it into action.	In recruitment, algorithms can tell a computer program exactly what to look for in a candidate's job application and how to decide which applicants show the most promise and which should be disqualified from a search.
Predictive Analysis - The use of machine learning techniques and large historical data to analyse current trends to make predictions about the future.	See here for an example on predictive analysis in recruitment and how to use it.
Programmatic Advertising - The process of automating the decision-making of where ads will display, when, and how much you need to bid to target specific audiences, demographics, and sites. The same process can be applied to job postings.	A candidate may see an ad for a role they are interested in, click that ad, spend a couple of minutes on the page looking at the job description, and learning about the employer, but may not apply for the role on first viewing.
Dynamic Budget Allocation - An auction-based approach used to buy or sell impression-level ad inventory based on real-time competitive bids for the impression.	Wider advice on budgeting for recruitment
Taxonomy - A scheme of classification of related terms. Pertaining to data-driven recruitment, it is a classification and categorisation of job titles, skills, synonyms and common search terms for the job and used as the basis for job matching and classification.	Recruitment platforms with a taxonomy automatically parse job descriptions, full of crazy job titles and buzzwords, and accurately classify the type of job and even level of seniority based on the contents of the ad so the right job seekers can be targeted across the web.
Job Ad Targeting - An automated job classification technology that combines a comprehensive taxonomy of job types, skills, and synonyms with sophisticated natural language processing (NLP) algorithms that parse job descriptions, interpret context and accurately classify job ads to predict performance and create targeted campaigns.	Job ad targeting is making it easier for employers to connect with the right talent and vice versa. A job title of Chief People Person can be identified by the technology to mean Head of HR or Chief Human Resources Officer as other titles for the same sort of role.

Key term	Examples
Performance Based Recruitment Advertising - A data-driven recruitment advertising strategy that uses pay-for-performance advertising technologies such as programmatic job ad campaigns, SEO (Search Engine Optimisation), SEM (Paid Search Engine Marketing), and real-time performance monitoring to increase ad performance and R.O.I. from the recruitment spend.	Used by employers who want to know they are getting what they pay for - although lots of views does not mean lots of applications so careful monitoring is required.
Machine Learning - The ability for a computer to learn without being programmed, build trends in data, and add to algorithms.	An article covering options and programmes to help.
Big Data - Data sets that are so large and complex that traditional data processing software is not adequate to deal with them.	yoh.com/blog/big-data-recruiting-smarter-not-harder

Cyber security innovations

What is it and what businesses need to know

Cybersecurity is of paramount importance to tackle the rise in digital crime. Solid cyber security is needed at every level of business, but especially for **multi-national operations** where an employee could be fooled in to accepting a command from someone they believed was genuine. Some examples of where cyber security can help mitigate or reduce risks include:

Examples	Where to look for guidance
Protecting confidential files – and all files from ransomware.	ncsc.gov.uk/guidance/mitigating-malware-and-ransomware-attacks
Protecting transit of data between countries.	globalsign.com/en/ssl-information-center/what-is-ssl
Re-assuring staff and customers that their data and transaction is safe.	iso.org/isoiec-27001-information-security.html
Protecting Internet of Things devices (such as cameras, photocopiers and sensors).	paloaltonetworks.com/cyberpedia/how-to-secure-iot-devices-in-the-enterprise
Sophisticated phishing or confidence trickery – using multiple channels such as phone, text and email to urge an action be it bank payments, providing personal information or login details.	fsb.org.uk/resources-page/how-to-protect-against-email-phishing-scams.html

Questions to ask businesses:

- **Do you have access to expertise in cyber security that can keep your networks, data and stakeholders safe?**
  - If that is not in-house, then could you work with an agency?
- **Do you have a clear policy and process for how to secure all of your devices?**
  - Do you apply this to any devices supplied by your employees or contractors?
- **Do you process customer payments at all?**
  - Are you following best practices for the processing and storage of payment data?
- **Is there a strategy in place to deal with any attacks on your cyber-presence - be it website, local computer networks or related devices?**

Considerations / resource requirements for businesses

- Consider getting insurance in place to cover you for cyber crimes. Hiscox is just one of many suppliers that could help.
- Expertise in Cyber Security can easily cost £100+ per hour, but many network and business support contract based IT professionals/companies can help at a lower cost.
- Consider training your staff up in Cyber Security basics - how to look out for fraud, attacks on systems, and to avoid downloading malware.
- Ensure you work with a reputable company when building and maintaining a website that collects any customer data - even contact forms as well as e-commerce transactions.

Resources - useful links

For supporting staff

- PWC Research in to Cyber Security priorities for business
- Cyber Security weekly podcast
- National Cyber Security Centre guidance
- UK Gov policy paper on National Cyber Security

For businesses

- Check if your website is secure
- Nominet (the UK Domain registry) advice
- Cyber Essentials Government Backed scheme
- E-Learning - Introduction to Cyber Security

Glossary

Key term	Examples
Bring your own device (BYOD) - An organisation's strategy or policy that allows employees to use their own personal devices for work purposes.	An employee uses their own phone or laptop device to work… UK Government guidance PDF
Phishing - A type of online fraud, where someone tries to trick the victim into revealing sensitive information, such as a username, password, or credit card details by masquerading as a trustworthy entity in electronic communication.	This could be done over the phone, via text messaging or usually via email. Guidance at: ncsc.gov.uk/guidance/phishing
Malicious software – or malware - can be spread between computers and interfere with the operations of computers. It can be destructive, causing system crashes or deleting files, or used to steal personal data. Viruses, worms, Trojans, spyware and ransomware are all types of malware.	Lots of Antivirus software exists like Bitdefender (from £40 per year) or AVG which is available from free
Distributed Denial-of-Service (DDOS) attacks - where more than one, and often thousands, of unique IP addresses are used to flood an internet server with so many requests that they are unable to respond quickly enough. This can cause a server to become overloaded and freeze or crash, making websites and web-based services unavailable.	Some famous attacks listed: cloudflare.com/en-gb/learning/ddos/famous-ddos-attacks/
Online threats - Can take many forms including threats to kill, harm or to commit an offence against a person, group of people or organisation.	Often this is linked to harassment, a guide to dealing with such threats can be found at: thecyberhelpline.com/guides/online-harassment
Cyber-enabled fraud - Fraudsters use the internet to gain sensitive personal information through phishing attempts.	UK Police guidance on Cyber-enabled fraud: actionfraud.police.uk/what-is-fraud
Cyber-dependent crimes - which can only be committed through the use of online devices and where the devices are both the tool to commit the crime and the target of the crime.	A handy piece of legislation is the Computer Misuse Act in existence since 1990.

Key term	Examples
Cyber-enabled crimes - traditional crimes which can be increased in scale by using computers.	Any crime committed at larger scale thanks to computers - like automatically sending phishing texts/emails, or slandering people/organisations with computer generated reviews and blog posts across the internet.
Pentest - Short for penetration test. An authorised test of a computer network or system designed to look for security weaknesses so that they can be fixed.	A detailed guide to testing: softwaretestinghelp.com/penetration-testing-guide/
PCI-DSS - Payment Card Industry Data Security Standard.	This is usually managed by your website supplier, hosting supplier and/or your card payment supplier. A guide: stripe.com/gb/guides/pci-compliance

Digital transformation to utilise sustainable technologies

What is it and what businesses need to know

Digital technologies in all forms (data, AI, new hardware and blockchain) can help businesses become more sustainable. Sustainability in economic terms (cost savings or generating more revenue from existing assets) and in planetary terms – where a business's operations can affect the environment as little as possible. **This is especially important in an increasingly competitive and globalised market**. Some examples include:

Examples	Where to look for guidance
AI aiding with disaster response.	weforum.org/agenda/2020/01/natural-disasters-resilience-relief-artificial-intelligence-ai-mckinsey/
AI reducing air pollution, making renewable energy more affordable, and helping to make buildings more energy-efficient.	jdsupra.com/legalnews/why-digital-transformation-can-take-33879/
Using data analytics for predictive/proactive maintenance of machines that extend their lifespan.	researchgate.net/publication/312004126_Big_Data_Analytics_for_Predictive_Maintenance_Strategies
Using and renewable energy capture to power offices.	ucsusa.org/resources/benefits-renewable-energy-use
Using IoT devices to help with gathering data to monitor activity or environments.	thalesgroup.com/en/markets/digital-identity-and-security/iot/magazine/five-ways-iot-helping-environment
Making processes more efficient and much more cost effective (such as better targeted advertising or using AI to screen large numbers of job applicants).	forbes.com/sites/bernardmarr/2020/08/24/7-successful-ways-to-use-artificial-intelligence-to-improve-your-business-processes/

Questions to ask businesses:

What business processes could be improved with a digital transformation?

- This is a marked improvement; a substantial change - not like typing letters instead of writing - although the creation of letters using Voice transcription is an enhancement, combined with AI to add context and improve vocal translation.

Have you considered your environmental impact of using technology?

- It may use considerable energy, whereby carbon offsetting could be important?
- It may be advantageous and help reduce travel (especially flights) or printing.

Do any of your products or the materials you utilise, come from or contribute to the circular economy?

- Consider maximising assets as a good business strategy
- Would materials made from recycled material be appropriate for you?
- Do you need to upgrade a computer every year? Or could you recycle them?

Do you capture renewable energy or use renewable resources to power your home/office?

- It is better to prevent carbon contributions than to offset against them.

Are you using appropriately captured data to inform your business decisions - including when automotive vehicles and machinery should be repaired or replaced?

- Simple technology that tracks usage through to sensors that detect any faults are available

Are you planning a transformation project? If so… ?

- Have you agreed what the success factors are?
- Do you have buy-in from all stakeholders?
- Have you allocated the right amount of resources to support its success?

Considerations / resource requirements for businesses

• Digital transformation takes time and effort. You must allow enough time for a culture change to take place and for staff to adopt new processes and ways of working that are supported by technology.	• Consider whether the digital transformation is right for your business and staff – what is the morale impact if your changes lead to job losses.
• Utilising technology to aid your sustainability may incur a cost to use it. Offsetting your carbon could cost from £5 per employee per month.	• Do you have the expertise to manage a truly transformational programme? Consider bringing in a change consultant or contractor to help support any migrations and technology adoptions.

Resources - useful links

For supporting staff

- Technology and sustainability - a blog
- Webinar slides on Smart technology uses in sustainable development
- The UK government's Greening government - sustainable technology strategy 2020 policy paper
- UK Gov policy paper on National Cyber Security
- Also read the 2021 National AI Strategy from UK government

For businesses

- A theoretical paper on how AI will change the future of marketing (one way technology transformation is changing work)
- E-learning course - an Introduction to the Circular Economy
- Information about technology advocates at the Mozilla Foundation. 'Mozillians' have formed a community of practice from social tech entrepreneurs to designers
- Video from an event on AI for Sustainability

Glossary

Key term	Examples
AI (Artificial Intelligence) - Artificial intelligence enables computers and machines to mimic the perception, learning, problem-solving, and decision-making capabilities of the human mind.	A report by PWC on sustainable futures
Community of practice - A group of people who share a discipline or work focus. This community allows them to work together on best practice. It also lets them showcase ongoing work and solve common problems together.	A famous example of a community of practice within an organisation is that which developed around the Xerox customer service representatives who repaired the machines in the field. These Xerox reps began exchanging repair tips and tricks in informal meetings over breakfast or lunch. More examples and an explanation here
Transformation - A marked change in form, nature or appearance.	Digital transformation therefore may aid the marked change in a business process or approach to certain tasks. Some success stories here

Key term	Examples
Evaluation research - A set of methods used to test whether a design meets user needs and is easy to access and use.	Such as usability testing. More examples here
Business model - The underlying structure of how a company creates, delivers and captures value. In its most simplistic form, it is how a business makes money.	10 examples are here
Carbon offsetting - Reducing emissions of greenhouse gases by purchasing credits through emissions reduction projects or carbon trading schemes or 'planting trees'.	One provider of carbon offsetting
Circular economy - An alternative to a traditional linear economy ('make, use, dispose') in which resources are kept in use for as long as possible. The maximum value is extracted from them whilst in use, and then products and materials are recovered and regenerated at the end of each service life.	10 examples are here
Green Computing - The environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste.	5 ways to practice green computing
Ethical or sustainable investment - Investment in activities that have a positive social and/or environmental impact. It includes screening positive characteristics in, or negative characteristics out, of an investment option. It can also include using assessment criteria like environmental, social and governance criteria or strategic sustainability criteria.	How to invest ethically
Value proposition - A promise of value to be delivered, applied to products, services or an entire organisation. For a growing number of organisations, sustainability is an important aspect of their value proposition.	Summarising research and giving a helpful overview

Training webinar: Helping growing businesses compete in further reaching markets

Format
3 x interviews

Purpose
to help council and partnership officers to best diagnose, sign-post, refer and design support for large corporates, multinationals and scaling businesses undergoing rapid, and new, digital adoption.

These three short interviews with local and national experts will guide you through some big topics providing 'need to know' information on protecting data, implementing digital technology in the workplace and taking steps to sustainable work practices.

Interview 1: **Sustainability** with Peter Keevill - entrepreneur in residence, SETSquared

Interview 2: **Keeping everything secure** with Martin Cooper - Content Manager, BCS

Interview 3: **Automating the workplace** with Steve Rackley, Co founder, James Chase

Links (referenced in videos)

- Slack

Glossary of terms (referenced in videos)

Phishing - a form of fraud in which an attacker masquerades as a reputable entity or person in email or other forms of communication.

Case study – using analytics to improve recruitment and increase return on investment

Name & role	Organisation	Sector	District	No. of staff
Craig Wilson, Commercial Director	Eezehaul Logistics	Distribution/ logistics	Crawley	100

Size: medium
Customer base: B2B and B2C

Harnessing analytics to improve targeting in recruitment and ROI

Context/narrative

The business started life as a one man, one van service in 1998 and over the last twenty years, has grown in to a 100 staff team operation with an 80,000 sq. ft warehouse, running fifty vehicles a day across the country. Specialising in overnight distribution palette freight and part of The Palette Network (TPN), the business prides itself on its loyal customer base gained through high level customer service. Whilst the Eezehaul website has been through many iterations in the last few years, the company have always recognised the importance of an online presence and believe that having a clear digital strategy is crucial for future proofing the business.

Challenge

Supporting future growth plans by expanding and improving the reach of the business to potential new customers and employees.

Outcome

Distribution and logistics as an industry has seen huge advancements in technology within the last decade, from warehouse automation to robotics to cloud-based services and processes. Recognising these advancements and the increased awareness and expectation from customers, **Eezehaul have spent the last five years investing in a new website and digital infrastructure team to support this area of work.**

As a subsidiary of TPN, Eezehaul have use of a global digital system that connects depots and processes around the world providing distributors with full visibility, traceability, and accountability of and for a consignment that ultimately benefits the end user, the customer. This access enhances the company's customer service reputation and helps support collaborative working nationally and internationally.

Alongside this system, **the business has invested in a cloud-based storage system that helps with security and streamlining processes and have adopted social media as a means of communication leading to a greater understanding of audiences connecting and engaging with their services.** The initial outlay costs of this are acknowledged (staffing, training, software etc.) however through planning, the business can see the return on investment will outweigh this time and cost.

The industry has seen a huge increase in volume in the last 18 months with more services switching to online sales. For Eezehaul, this has meant no furloughing of staff and a focus on the future. In the last 15 months, Eezehaul's use of social media has been honed, strategically timed, and targeted across various platforms to ensure maximum engagement and return. Using analytics from posting over a period, the business now understands the best times to engage with core parts of its audience and where, as well as understanding the differences between content and messaging relating to branding/marketing or PR, and that relating to recruitment/growth or innovation.

Challenge	Outcome (continued)
Supporting future growth plans by expanding and improving the reach of the business to potential new customers and employees.	A huge operational element of any logistics company is planning and forecasting and **Eezehaul have applied this to their digital development by ensuring staff are in place to manage content on platforms** – being responsive, dealing with questions, comments or complaints quickly etc. The business uses Facebook, Twitter and LinkedIn and now understands how to better use each to reach the intended audience. Maintaining a good online presence is something that is being tested in the digital strategy currently as Eezehaul look to address the local impact of the national labour shortage of drivers. **The analytics team are able to look through data from their online platforms specifically relating to recruitment, skills or general employment and build a picture of the type of person who may be looking at such posts, and when, so they can better target vacancy related content.** They can also consider what other forms of messaging may appeal to someone looking for work or to another business for potential collaboration - sharing information on the business's environmental policies or waste recycling initiatives for example could all help in securing future talent and/or work. The impact of new technology and approaches is also being tested by the business through an ePod system. This captures data from customers and staff members allowing the business to measure and listen to the impact these have on areas such as efficiency and cost. Craig states that he and the business see everything as evolutionary; they are continually learning and understanding what new developments could mean for the business and the services it provides. It is important to not just 'keep up with' new technologies but to try and be ahead and always consider where the next opportunity may come from.

5 key points/themes/takeaways

- **Consider the cost implications of investing in new technologies** or a digital infrastructure and compare against the potential return.
- **When working with larger teams, listen to and understand the challenges or blockages to specific areas of work or processes** – explore cloud-based systems or communication tools that could reduce these problems and increase productivity.
- **Test and evaluate the impact of adoption with staff and customers** – who is benefitting (if at all) and how?
- **Build in time for planning that focuses on operations and strategy** – consider innovations and advancements in tech that affect your sector and how these could support your operations.
- **Measure and utilise time saved through digital adoption for additional future planning.**

> Everyone is busy and so It's easy to just focus on the day-to-day busy, but you have to have a future focus too - planning is crucial for the business both in terms of operations and what's happening in the months and years ahead.

Directory of what's happening in West Sussex

Brighton Meetup groups for different digital disciplines. West Sussex businesses welcome - hub.siliconbrighton.com/topics

BRITE Innovation support programme from Plus X and University of Brighton is open to any businesses in Coast To Capital region with innovation products to take to market, with mentoring and access to expertise - briteinnovation.co.uk/

Colonnade House, Worthing - colonnadehouse.co.uk

C2C Digital Growth Champions - c2cbusiness.org.uk/business-support/growth-champions

Digital Catapult Centre in Brighton is for the benefit of whole Coast To Capital region. Expertise, some funding and collaborations for private and public sector – focused on creative industries and retail - digicatapult.org.uk/regional-centres/brighton

DNASix diagnostic service - dnasix.com/

DRIVA 'arts DRIVA' project resources from University of Brighton for Coast To Capital area; focused on using big data for commercialisation, innovation and creative thinking - drivaartsdriva.com/resources

Gatwick Diamond Business experts programme, including access to experts in IT support and digital services - gatwickdiamondbusiness.com/96-diamond-experts.html

Innovation South Virtual Campus project, led locally by University of Chichester, is offering free courses to help plug business digital skills gaps - chi.ac.uk/news/university-launches-free-courses-help-businesses-fill-digital-skills-gap

METALL tech and engineering group in West Sussex, South Surrey and Gatwick Diamond - metall.org.uk/

Profiles of digital design, data and innovation experts from Coast To Capital area (and beyond) who took part in DRIVA project - drivaartsdriva.com/profiles

RISE (Research in Sussex Excellence) innovation support to West Sussex businesses delivered by the Universities of Brighton and Sussex rise-innovation.uk/

Rural broadband voucher scheme - westsussex.gov.uk/

Sussex Innovation Centre (SINC) - sinc.co.uk

Area In Action SME suppliers of digital and other services across Sussex - areainaction.co.uk/lots/supplierslist

SussexDigital - sussex.digital/

The Business Hot House (University Chichester) - chi.ac.uk/business-services/business-hothouse

The_Track creative Digital Hub, Bognor Regis creative digital coworking space - thetrackbr.co.uk/

WSCC Apprenticeship Levy Transfer - www.westsussex.gov.uk/

West Sussex 'Full Fibre' programme sets out plan to put the county on the front-foot in terms of fast digital connectivity in all urban, rural and coastal regions - www2.westsussex.gov.uk/ds/edd/cab14_19-20backpaperB.pdf

Wired Sussex directory of members. No West Sussex filter, but can search by keywords - wiredsussex.com/directory/

WorthingDigital upcoming events - meetup.com/worthingdigital/

In the **pipeline**

Digital Sussex - Rural Connectivity Programme - Digital Spine & Brighton Link Combined Scheme (RCP) will deliver an additional new build digital infrastructure. This will immediately accelerate the deployment of fibre and support 5G technologies directly into the heart of rural Mid Sussex communities.

Plans for the **'Crawley Fusion Centre'**, to be delivered in partnership between Coast to Capital, Thales and Crawley Borough Council, to establish the Gatwick Diamond's first Innovation Centre which will help to increase the diversity of the economy, serving Crawley's advanced engineering business cluster. manorroyal.org/assets/

Plans developing for home **'Decarbonisation Academy'** across Coast To Capital area - coast2capital.org.uk/

Plans developing for **Institute of Technology in Crawley** with partnership between Chichester College Group, NESCOT and Universities of Brighton and Sussex - crawley.ac.uk/news/

Proposal for **'Project Newton'**, a science and tech park in Burgess Hill - midsussex.gov.uk/

Research and Innovation Fibre Ring. A joint project delivered by Brighton Hove City Council, Mid Sussex District Council and Digital Catapult, to build a resilient fibre loop to create a digital- and 5G innovation infrastructure in Brighton. Benefits will be focused on SME growth and innovation, with consequent impact on productivity, jobs and post-19 recovery. - wiredsussex.com/blogpost/

Sussex Business & Intellectual Property Centre (operating across West Sussex libraries) linked to Jubilee Library Brighton, the regional hub - bl.uk/business-and-ip-centre/national-network

The **Horsham Enterprise Park Digital Link**. Digital connectivity is a significant factor underpinning economic recovery and this proposal will facilitate the delivery of high value employment in Horsham - coast2capital.org.uk/projects/

West Sussex Councils' Digital Support programme (to be delivered to businesses in Autumn 2021)

Glossary of all terms used

Key term (click on the colour-coded dot, key below, to see examples within each section)

- Helping SMEs grow and commercialise in West Sussex
- People and spaces: how to benefit from digital transformation
- Developing a business eco-system
- Future proofing the West Sussex economy: what's next?
- Helping growing businesses compete in further reaching markets

Address of device - An address is used for locating and accessing – "talking to" – a device, a resource or service.

Airdrop - A token distribution method used to send cryptocurrency or tokens to wallet addresses.

ADSL - Stands for "asymmetric digital subscriber line." This is the standard line used for DSL internet, and means that the upload and download lines are a different size or bandwidth. Usually the download bandwidth is larger, since download speeds are considered to be more important (for most people) than upload speeds.

Algorithm - An algorithm is a set of well-defined instructions in sequence to solve a problem.

Anti-virus Software - Software that attempts to block malicious programs/code/software (called viruses or malware) from harming your computer.

Application Programming Interface (API) - An application programming interface (API) is one that allows a system to access information from another system and integrate this in to their own application.

Artificial Intelligence (AI) - The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

Audio Visual (AV) Technology - AV technology is typically used in a workplace in many different ways.

Bandwidth - How much data can be transferred at one time; usually measured in Mbps. Often confused with internet speed.

Bandwidth Throttling - Term used to describe an internet service provider narrowing the amount of bandwidth someone received. For example, if your normal internet speed is 7 Mbps, then your internet service provider might throttle your bandwidth to 3Mbps.

Big Data - A term used to describe data sets which are either too large or too complex to be dealt with using traditional data-processing techniques.

Blockchain - a system in which a record of transactions are maintained across several computers that are linked in a peer-to-peer network.

Block Reward - The reward given to a miner after it has successfully hashed a transaction block. Block rewards can be a mixture of coins and transaction fees. The composition depends on the policy used by the cryptocurrency in question, and whether all of the coins have already been successfully mined.

Bring your own device (BYOD) - An organisation's strategy or policy that allows employees to use their own personal devices for work purposes.

Broadband - Another term used to describe high speed internet service.

BTLE (Bluetooth Low Energy) - A lower-energy consumption version of Bluetooth wireless communications standard, which runs constantly, announcing a device's presence to local sensors and optimizing battery life for the device in question. In IoT, BLE allows for precise location and feature tracking without reduced battery life.

Business model - The underlying structure of how a company creates, delivers and captures value. In its most simplistic form, it is how a business makes money.

B2B Sales - Selling Business to Business.

Carbon offsetting - Reducing emissions of greenhouse gases by purchasing credits through emissions reduction projects or carbon trading schemes or 'planting trees'.

Change Management - Refers to tactics used to help smoothly transition a group of employees from a current situation to a new one.

Channel - a place or digital location where a customer might interact with you; such as at a store, on mobile, on social media or your website.

Channel Centric Strategy - a strategy where you focus on meeting your specific KPI's and goals.

Chatbots - automated tools for answering human questions.

Circular economy - An alternative to a traditional linear economy ('make, use, dispose') in which resources are kept in use for as long as possible. The maximum value is extracted from them whilst in use, and then products and materials are recovered and regenerated at the end of each service life.

Cloud - Highly scalable computer storage and memory capabilities located in a data center that enables flexible and rapid scale-up and scale-down of application resources. Cloud services can be public, private or a hybrid.

Cloud Backup - The process of backing up data to a remote, cloud-based server.

Cloud Computing - The practice of using a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or a personal computer.

Cloud Enabled - Moving relevant business software and processes 'off-premise' to the cloud – such as moving from an accounts software on a computer, to one accessed through a browser.

Cloud Sourcing - The act of replacing traditional on-premise IT operations with low-cost cloud-based services.

Community of practice - group of people who share a discipline or work focus. This community allows them to work together on best practice. It also lets them showcase ongoing work and solve common problems together.

Confirmation / Block Confirmation - A confirmation means that the network has verified the blockchain transaction. This happens through a process known as mining, in a Proof of Work system (e.g., Bitcoin). Once a transaction is successfully confirmed it theoretically cannot be reversed or double spent. The more confirmations a transaction has, the harder it becomes to perform a double spend attack.

Content Filter - way of limiting access to material on the internet by examining it before it is shown to the user and deciding whether or not it is acceptable. Often used to restrict access to certain web pages when children are using computers.

CPA (Cost Per Acquisition) - An ecommerce marketing metric that measures the aggregate cost to acquire one paying customer on a campaign or channel level. CPA is a vital measurement of ecommerce marketing success.

CPI (Cost Per Impression) - An advertising model where companies pay a specific amount of money each time an advert is displayed.

Cross Channel - a customer focused digital marketing technique which makes activity that spans over your web, mobile, in-store, email, and direct mail content. This provides customers with a consistent experience with your brand.

Cryptocurrency - Digital currency that is based on mathematics and uses encryption techniques to regulate the creation of units of currency as well as verifying the transfer of funds. Cryptocurrencies operate independently of a central bank.

Customer Experience - the impression your customers have of your brand after engaging with your company.

Cyber Bullying - When the Internet, mobile phones or other devices are used to send or post text or images intended to hurt or embarrass or harm another person.

Cyber-enabled crimes - traditional crimes which can be increased in scale by using computers.

Cyber-enabled fraud - Fraudsters use the internet to gain sensitive personal information through phishing attempts.

Cyber Security - The process of preventing and responding to attacks made on your business via the internet, such as holding your files hostage, or obtaining data you hold.

Cyberstalking- Stalking someone online. May involve harassment but the victim may be unaware that they are being stalked online.

Data Accessibility - Access to data is critical for the success of your business. Easily accessible data enables you to move quickly, focus on the product, and build a data-informed culture where data leads to better decisions and action.

Data Cleansing - Data Cleansing/Scrubbing/Cleaning is a process of revising data to remove incorrect spellings, duplicate entries, adding missing data, and providing consistency. It is required as incorrect data can lead to bad analysis and wrong conclusions.

Data Engineering - Responsible for finding trends in data sets and developing algorithms to help make raw data more useful to the enterprise. This IT role usually requires a significant set of technical skills, including a deep knowledge of SQL database design and multiple programming languages.

Data Lake - A data lake is a storage repository that holds a vast amount of raw data in its native format until it is needed. Each data element in a lake is assigned a unique identifier and tagged with a set of extended metadata tags. When a business question arises, the data lake can be queried for relevant data, and that smaller set of data can then be analyzed to help answer the question.

Data Mining - Techniques that analyze large amounts of information to gain insights, spot trends, or uncover substantive patterns. These approaches are used to help businesses and organizations improve their processes or identify associations that shed light on relevant questions.

Data Visualisation - Data visualisation is an interdisciplinary field that deals with the graphic representation of data. It is a particularly efficient way of communicating when the data is numerous as for example a Time Series.

Deep Fakes - Digital images and audio that are artificially altered or manipulated by AI and/or deep learning to make someone do or say something he or she did not actually do or say.

Decision Intelligence - Decision intelligence is a practical domain that includes a wide range of decision-making techniques. It brings both traditional and advanced disciplines together to design, model, align, execute, monitor, and adjust decision models and processes.

Digital Signature - A code generated by public key encryption and attached to an electronically transmitted document in order to verify the contents of the document.

Digital Transformation - Is a fairly broad term which includes any business aligning technology, people, and business processes while trying to improve productivity, efficiency and goals, using technology and digital solutions.

Digital Workspace - Collaborative, cloud based tools where teams can work together remotely and/or asynchronously.

Distributed Denial-of-Service (DDOS) attacks - where more than one, and often thousands, of unique IP addresses are used to flood an internet server with so many requests that they are unable to respond quickly enough. This can cause a server to become overloaded and freeze or crash, making websites and web-based services unavailable.

Dual-Use Technologies - In politics, diplomacy and export control, "dual-use" refers to technology that can be used for both peaceful and military aims. More generally speaking, dual-use can also refer to any technology which can satisfy more than one goal at any given time.

Dynamic Budget Allocation - An auction-based approach used to buy or sell impression-level ad inventory based on real-time competitive bids for the impression.

Ethernet - A wired communication standard used to connect devices over a network. Most routers support ethernet cables as well as Wi-Fi. Ethernet can be quicker and more reliable than Wi-Fi, so it's preferable to use a network cable for any device which may require very fast data transfer speeds.

Ecosystem (IoT) - Refers to the multi-layers that go from devices on the edge to the middleware. The data is transported to a place that has applications that can do the processing and analytics.

Edge Computing - A method of optimizing cloud computing systems by performing data processing at the edge of the network, near the source of the data. Edge computing pushes applications, data and computing power (services) away from centralized points to the logical extremes of a network.

Edge Device - A type of networking device that connects an internal local area network (LAN) with an external wide area network (WAN) or the Internet.

Email Marketing - The use of email within your marketing efforts to promote a business's products and services, as well as incentivize customer loyalty.

Encryption - A process used to combine a document (plaintext) with a shorter string of data referred to as "a key" in order to produce an output (ciphertext). This output can be "decrypted" back into the original plaintext by someone else who has the key.

Engagement Rate - A metric used to gauge the level of engagement generated from created content or a brand campaign.

Ethical or sustainable investment - Investment in activities that have a positive social and/or environmental impact. It includes screening positive characteristics in, or negative characteristics out, of an investment option. It can also include using assessment criteria like environmental, social and governance criteria or strategic sustainability criteria.

Evaluation Research - A set of methods used to test whether a design meets user needs and is easy to access and use.

Fibre Optics - A type of internet connection that is made up of thin glass fibers to transmit data.

Firewall - A security system usually made up of hardware and software used to block hackers, viruses, and other malicious threats to your computer.

Flexible Space or Flex-space - Flexible Spaces are settings throughout the workplace designed to support particular employee activities and meet the needs of different styles of work.

Green Computing - The environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste.

Hacker - Hackers are people who gain unauthorised access to data, remotely, using a computer or mobile device.

Hot-Desking - Having desks available to staff as and when needed, rather than 'Assigned Desks'. This may be more helpful if you have a mix of home and office working and need more space to allow for social distancing.

Industry 4.0 - the ongoing automation of traditional manufacturing and industrial practices, using modern smart technology.

Internet of Things - the interconnection via the internet of computing devices embedded in everyday objects, enabling them to send and receive data.

Internet Service Provider - A company that provides internet access.

Job Ad Targeting - An automated job classification technology that combines a comprehensive taxonomy of job types, skills, and synonyms with sophisticated natural language processing (NLP) algorithms that parse job descriptions, interpret the context and accurately classify job ads to predict performance and create targeted campaigns.

Know Your Customer (KYC) - A process in which a business must verify the identity and background information (address, financials, etc) of their customers.

KPI (Key Performance Indicator) - A method for measuring performance. KPI's evaluate the success of an organization or of a particular activity in which it engages.

Machine Learning - The study of computer algorithms that improve automatically through experience and by the use of data. It is seen as a part of artificial intelligence.

Malicious software – or malware - can be spread between computers and interfere with the operations of computers. It can be destructive, causing system crashes or deleting files, or used to steal personal data. Viruses, worms, Trojans, spyware and ransomware are all types of malware.

Managed Service Provider (MSP) - A managed services provider (MSP) is an IT services provider that provides fully outsourced network, application, and system services across a network to clients.

Mobile Development - Mobile app development is the act or process by which a mobile app is developed for mobile devices, such as personal digital assistants, enterprise digital assistants or mobile phones.

Node - Any system or device connected to a network is also called a node. For example, if a network connects a file server, five computers, and two printers, there are eight nodes on the network. Each device on the network has a network address which uniquely identifies each device. This helps keep track of where data is being transferred to and from on the network.

Omnishopper - a term used for shoppers who use a multitude of devices, channels and platforms to browse and buy products.

One to One Marketing Strategy - this is a customer relationship management (CRM) strategy. This centres around personalised interactions with your customers.

Online threats - Can take many forms including threats to kill, harm or to commit an offence against a person, group of people or organisation.

Open Data - Open data is data anyone can use and share. It has an open license, is openly accessible, and is both human-readable and machine-readable.

Open Source - Open Source is a development model in which a product's source code is made openly available to the public. Open source products promote collaborative community development and rapid prototyping. Products may include Wordpress (website management), OwnCloud (File sharing) and GIMP (Image editing software).

Optimization - The process of improving the marketing efforts of an organization in an effort to maximize the desired business outcomes.

Organic Search - The results which are calculated strictly algorithmically and not affected by advertiser payments.

Paid Search - When search engines such as Google and Bing allow advertisers to show ads on their search engine results page. This works on a per-pay-click model, meaning you do exactly that- until someone clicks on your ad, you do not pay.

Partner Learning - Where peers support each other in learning processes. Peer learning is the acquisition of knowledge and skill through active helping and support among peers who are equals in standing or matched companions.

Partner Network - Often used in the technology world. Partners distribute or sell your services or product as part of their offering.

PPC - Pay-per-click, is a model of internet marketing in which advertisers pay a fee each time one of their ads is clicked.

PCI-DSS - Payment Card Industry Data Security Standard.

Pentest - Short for penetration test. An authorised test of a computer network or system designed to look for security weaknesses so that they can be fixed.

Peer Engagement - A community-based approach to decision making where you might collaborate with like minded persons.

Performance Based Recruitment Advertising - A data-driven recruitment advertising strategy that uses pay-for-performance advertising technologies such as programmatic job ad campaigns, SEO (Search Engine Optimisation), SEM (Paid Search Engine Marketing), and real-time performance monitoring to increase ad performance and R.O.I. from the recruitment spend.

Pharming - Pronounced 'farming', this is a method by which scammers try to get personal/private information from users by directing them to false – or 'spoof' – websites which look legitimate in your browser.

Phishing - a form of fraud in which an attacker masquerades as a reputable entity or person in email or other forms of communication. Attackers will commonly use phishing emails to distribute malicious links or attachments that can perform a variety of functions. Some will extract login credentials or account information from victims. Deceptive phishing is popular with cybercriminals, as it is far easier to trick someone into clicking a malicious link in a seemingly legitimate phishing email than it is to break through a computer's defenses.

Predictive Analysis - The use of machine learning techniques and large historical data to analyze current trends to make predictions about the future.

Private Blockchain - A blockchain or distributed ledger that has a closed network where participants are controlled by a single entity. A private blockchain requires a verification process for new participants. A private blockchain may also limit which individuals are able to participate in consensus of the blockchain network.

Programmatic Advertising - The process of automating the decision-making of where ads will display, when, and how much you need to bid to target specific audiences, demographics, and sites. The same process can be applied to job postings.

Real-time Data - The data that can be created, stored, processed, analyzed, and visualized instantly i.e. in milliseconds, is known as real-time data.

Referral Networking - A network of individuals and organisations that provide referrals. Referral networks can be a mix of informal and formal agreements. More formal referral networks often include groups of companies within related industries that can work together to provide cross-referrals.

Remarketing - A way to connect with people who previously interacted with your website or mobile app. It allows you to strategically position your ads in front of these audiences as they browse Google or its partner websites, thus helping you increase your brand awareness or remind those audiences to make a purchase.

Remote Working - Where staff work away from a designated office environment. It can also apply in principle to staff located in different offices who need to collaborate.

Router - A router directs traffic on a network. In relation to broadband, the router usually (but not always) includes a modem so is responsible for connecting to the internet as well as providing networking in your home or office.

SEO - Search engine optimisation, is the process of improving a site to increase its visibility when people search for products or services related to a business in Google, Bing, and other search engines.

Smart City - one that makes optimal use of all the interconnected information available today to better understand and control its operations and optimise the use of limited resources.

Social Grade - Soft Selling - An approach that uses more subtle sales language, or is based on evaluating the consumer/clients needs and recommending. See classifications here.

Soft Selling - An approach that uses more subtle sales language, or is based on evaluating the consumer/clients needs and recommending appropriate services as a result.

Software as a Service (SaaS) - Software as a service (SaaS), is a model of cloud computing in which applications (software) are hosted by a company and provided to the user as a service. SaaS applications are typically licensed on a subscription basis and are made available to users over the internet. These include most online accounting packages and CRM systems like Hubspot or Zoho.

Speed Networking - A meeting format designed to accelerate business contacts. Speed networking basically involves participants gathering together to exchange information. Participants greet each other in a series of brief exchanges during a set period of time.

Strategic Alliance - An agreement between two or more parties to pursue a set of agreed upon objectives needed while remaining independent organisations.

Taxonomy - A scheme of classification of related terms. Pertaining to data-driven recruitment, it is a classification and categorization of job titles, skills, synonyms and common search terms for the job and used as the basis for job matching and classification.

Transformation - A marked change in form, nature or appearance.

Troll - Someone who posts inflammatory, or off-topic messages in an online community, such as an online discussion forum, chat room, or blog, with the primary intent of provoking readers into an emotional response or of otherwise disrupting normal on-topic discussion.

User Interface Design - User interface design or user interface engineering is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing usability and the user experience.

User Journey - A person's experience during one session of using a website or application, consisting of the series of actions performed to achieve a particular goal.

Value Proposition - A promise of value to be delivered, applied to products, services or an entire organisation. For a growing number of organisations, sustainability is an important aspect of their value proposition.

VoIP (Voice over Internet Protocol) - A way to talk to someone on the phone using a microphone or web camera over the internet.

VPN (Virtual Private Network) - A service that protects against eavesdropping. When using a VPN internet traffic is encrypted and routed through a proxy server, making it much more difficult to intercept data. A VPN can also hide your identity online as any sites or services accessed when connected to the VPN will see the proxy IP address instead of your broadband connection. Use of a VPN is highly recommended when connecting to an untrusted network (such as a public Wi-Fi hotspot).

White Label Working - A fully supported product or service that's made by one company but sold by another. White label products and services are purchased by the latter company without branding.

Wi-Fi - A standard for connecting devices using radio waves. Usually refers to wireless routers and devices that can interact with such routers.

Whole Systems Approach - A whole systems approach recognises that no part of the organisation or workplace exists on its own. This means that whenever something is changed in one place, it will affect other parts.

Workplace Experience - The overall physical and digital workplace experience workers have that intersects HR, IT, facilities and internal cultures. This includes how well people interact with the tools and spaces provided to them.

4/5G - In pure internet connectivity terms; 4G is the fourth generation of mobile internet connectivity which allows people to access the internet almost anywhere in the UK, it is available to 99%+ of the UK population. 5G is the next generation available in an increasing number of towns and cities including Brighton.

5G - The evolution from LTE to 5G will be the most profound development on the wireless industry since the transition from analog to digital. This transformation will bring about several new ways of designing networks so that the promise of always-on, high-bandwidth, low latency, massive networks can become reality.

5G Networks - The fifth generation technology standard for broadband cellular networks, which cellular phone companies began deploying worldwide in 2019, and is the planned successor to the 4G networks which provide connectivity to most current mobile phones.