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Hybrid working:skills for digital transformation

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About this free course

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Contents

Introduction

This course aims to develop the digital transformation skills for hybrid working as an individual or a team rather than focussing on how digital capabilities relate to organisations. For organisations to build digital capabilities it starts with their people having the confidence and competence to develop their skills and behaviours, so that they can make an effective contribution to the organisation.

Digital capabilities are the skills, behaviours and understanding to enable you to thrive in a digital world. Nearly every aspect of your life has a reliance on technology and you need the digital capabilities to use these technologies appropriately and effectively, across a range of platforms, environments and situations, in your personal life and in the workplace.

As the digital transformation of the workplace continues to accelerate and organisations adopt hybrid working practices, employers are focusing on the expected digital capabilities employees should have. Communicating via email and online meeting platforms, creating documents, presentations and spreadsheets, understanding file and data management, and an awareness of online security are some of the key skills.

This free course is part of the Supporting hybrid working and digital transformation collection which focuses on hybrid working – where workers spend some of their time working remotely and some in the employer's workspace.

Learning Outcomes

After studying this course, you should be able to:

- examine your organisation’s current practices and norms around working digitally in hybrid environments (e.g. remote and onsite)
- describe digital responsibility and behaviours, including GDPR, data, network security and digital wellbeing and inclusion
- explore frameworks, tools and technologies for building digital capabilities
- examine how organisations can take responsibility for digital sustainability
- recognise that digital transformation is continuing and consider approaches for planning for digital change.

1 Why digital skills matter

Essential digital skills are a step towards learning lots of other new things. They can improve your confidence to use technology for work, learning and daily life.

Many jobs today require digital skills. You need them even for jobs that do not ask for high levels of qualifications or experience. For example, if you work in a warehouse or a shop you may need to keep digital records of stock.

You also need digital skills every day for shopping, banking, learning, and keeping in touch with family and friends.

National Careers Service (n.d)

Activity 1 Why digital skills matter

10 minutes

Watch the video in which contributors share why digital skills and capabilities matter, the impact of the digital skills shortage and the digital skills organisations require.

Video content is not available in this format.

Now consider the following and add your thoughts in the box below:

- What were the skills they highlighted as being most important?
- How has the digital world evolved?
- What skills do you feel need to be developed by your organisation and yourself?

Provide your answer...

Digital skills for the future are essential not only to ensure organisations thrive, but also for communities and nations to protect future generations. The Well-being of Future Generations (Wales) Act 2015, A Prosperous Wales wellbeing goal, specifically focuses on the skills for the future: 'Encouraging organisations to develop a skilled population, fit for future technological change'.

Activity 2 Skills for the future

20 minutes

Read Section 5 of A journey to a prosperous Wales and then watch the video below, in which Sophie Howe, The Future Generations Commissioner for Wales, explains the skills that will be required for the future.

Video content is not available in this format.

How might your organisation contribute to raising the digital skills for those within it and for future generations?

Add your thoughts in the box below.

Provide your answer...

1.1 Essential functional skills

The Essential Digital Skills Framework for the United Kingdom (Gov.uk, 2018) sets out the digital skills and understanding all adults require to interact in a digital world. There are five categories:

- communicating
- handling information and content
- transacting
- problem solving
- being safe and legal online.

Figure 1 illustrates how these categories relate to each other.

Figure 1 Essential Digital Skills – Framework Diagram (Crown Copyright, Gov.uk, 2018)

Table 1 breaks the categories down further and provides more detailed definitions.

Table 1

Being safe and responsible online and offline	Digital wellbeing, responsibilities when working online – security, privacy and data protection, accessibility, understanding processes and policies, behaviour, and non-digital considerations – e.g. your desk set up, not writing down your password.
Using devices and handling information	Understanding hardware, software, operating systems and applications, and how to manage and store digital information and assets.
Communicating	How to communicate effectively digitally depending on the 'tools' and 'context'
Creating and editing	Developing the skills to create and edit using digital tools, and reflect best practice and guidelines for the creation of digital content and products.
Transacting	The ability to interact with digital forms, systems and payments.
Problem solving	The ability to find solutions and approaches, and use digital tools to assist with this.

Table 2 provides some examples of digital skills and capabilities required in the workplace:

Table 2

Essential basic skills all individuals require	Advanced/specialist skills
• Behaving safely and legally online • Email, instant messaging and virtual meetings • Word processing • Web-based research • Data entry and handling • Using social media/networking • Problem solving • Understanding your digital carbon footprint	• User experience design, and digital design • Coding • Programming, web, and app development • SEO, SEM, and content creation • Data science, analysis, and visualisation • Digital learning and development • Digital project and product management • Digital marketing and social media • Digital leadership capabilities • Digital transformation decision making

Activity 3 How digitally confident are you?

15 minutes

Read the descriptions of the skills and examples in the Essential Digital Skills Framework, which can be accessed via either:

Essential Digital Skills Framework website (we recommend this if you use a screen reader).
Essential Digital Skills Framework interactive PDF.

Then use the polls below to consider how digitally confident you are.

Digital foundation skills

Interactive content is not available in this format.

Communicating

Interactive content is not available in this format.

Handling information and content

Interactive content is not available in this format.

Transacting

Interactive content is not available in this format.

Problem solving

Interactive content is not available in this format.

Being safe and legal online

Interactive content is not available in this format.

Discussion

For those in the workplace, most of the skills given here may be familiar. They draw on the UK Government's Essential Digital Skills Framework document, which this activity is based on.

How confident do you feel about the essential foundation skills that are described within the document? If there are areas you would like to develop the HM Government Skills Toolkit provides resources to help you develop specific skills. Within it is the Learn My Way set of resources that provide basic computer skills training.

1.2 Digital skills for the workplace

The COVID-19 pandemic accelerated the need for both digital transformation, and the ability to develop digital skills and capabilities, as individuals and organisations rapidly moved to new ways of working. Reports suggest that digital transformation has accelerated by about seven years during the height of the pandemic in 2020–21. At the point of the first lockdowns individuals and organisations achieved digital adaption (i.e. implementation of remote-working solutions) in an average of 11 days which pre-COVID may have taken years to implement (McKinsey & company, 2020).

This has changed our ways of working and the associated digital capabilities we need in an unprecedented way, but the pandemic has also widened the digital divide – 'the gap between people who have easy access to the benefits of digital technology and those who don't.' (Centre for Digital Public Services, 2022).

As organisations now adapt to new ways of working post-pandemic, many are permanently adopting a hybrid approach, with more than 80% of workers suggesting they planned to work in this way. Organisations need to plan for the long term, and involve both their staff and external organisations to build digital skills and integrate preventive measures to reduce the digital divide. Leaders need to develop their confidence, curiosity, and understand government and 'industry' strategies, in order to build digital capabilities that lead to effective digital transformation (ONS, 2022).

For higher education institutions (HEIs) it is also useful to consider the heightened digital capabilities and expectations of students alongside those of staff. This is because the experience of the new generation of students compared to previous generations has been different, and is influenced by the use of technology during the pandemic and the focus by government on digital skills within the curriculum. The Welsh Government, Education Wales Digital Competence Framework for schools provides a useful reference to understand the expectations for digital skills to be developed within schools.

When thinking about the digital skills required for hybrid working, focusing on the 'employee experience' from an organisational and individual point of view helps to ensure that the behaviour and the skills to use technology effectively can be considered together, to build the digital capabilities you require.

Some of the key behaviours and skills you may need to consider developing in your organisation to support hybrid working are listed in the table below.

Table 3

Behaviours	Skills
Empathy	Tools and systems
Communication	Collaborating online
Psychological safety and trust	Policies and processes
Collaboration	Data governance
Resilience	Online and offline security
Transparency	Managing information
Curiosity	Writing for digital platforms
Problem solving	Copyright

Team building	Equity, diversity, accessibility and inclusion
Sustainability	Digital sustainability

It is useful to apply a digital lens to these behaviours as a way to think about how digital capabilities should look for you as an individual and in your organisation as a whole. Throughout this course and toolkit, we explore these skills further, and you may find that The Skills Toolkit created by the National Careers Service is a useful additional resource.

Activity 4 Skills for content creation

20 minutes

Watch the video in which Sas Amoah, a Digital Media Producer at The Open University, talks about the importance of digital skills and responsibilities.

Video content is not available in this format.

Drawing on the behaviours and skills in Table 3 above and the notes you made while watching the video, which are the areas you feel your organisation might wish to focus on?

2 The digital divide and inclusion

The digital divide is the gap between people in society who have full access to digital technologies (such as the internet and computers) and those who do not (UK Parliament , 2020).

The pandemic highlighted the issue of the digital divide. During periods of home-schooling there were frequent media reports of children who did not have access to technology to be able to join remote lessons. There were also many people who were not able to shop online due to lack of access to technology, digital capabilities or poor infrastructure – often lack of internet access.

A lack of digital skills and access can have a huge negative impact on a person's life, leading to poorer health outcomes and a lower life expectancy, increased loneliness and social isolation, less access to jobs and education.

It can mean paying more for essentials, financial exclusion, an increased risk of experiencing poverty. People who are digitally excluded also lack a voice and visibility in the modern world, as government services and democracy increasingly move online.

What's more, it's those already at a disadvantage – through age, education, income, disability, or unemployment – who are most likely to be missing out, further widening the social inequality gap.

Good Things Foundation (2021)

The Welsh Government's report on digital inclusion and basic digital skills (gov. wales, 2020) indicates that:

- 60,000 personal internet users (aged 16 or over) can't demonstrate the skill of using a search engine
- 730,000 personal internet users can't demonstrate the skills of managing privacy settings
- 19% of disabled people do not personally use the internet and are therefore deemed digitally excluded
- 76% of social housing tenants have internet access compared to 90% owner occupied.

The Digital inclusion and basic digital skills in Wales: 2019–2020 infographic, which summarises the Welsh Government's Digital inclusion forward look: towards a digital confident Wales strategy, captures the scale of the digital divide in Wales. While some of the numbers may seem low, those in the digital divide are often those that are most vulnerable, excluded from basic inclusion in society or in areas where digital infrastructure is limited.

In the video below, contributors share their insights about digital inclusion, and how to narrow the digital divide.

Video content is not available in this format.

Activity 5 Research the digital divide and inclusion

20 minutes

Gaining an understanding of the digital divide and approaches to closing the gap within your organisation and local community is essential. This is an area that can be overlooked when thinking about inclusion, as there is an assumption that if you are working you already have the basic skills and access to infrastructure. As more people are working in a hybrid manner, requirements for digital inclusion of those working remotely may go unnoticed.

Reflect on the video above. Then do your own research into the digital divide and inclusion, and think about the following questions.

- Do you recognise any of the challenges raised in relation to your own personal circumstances?
- What do you feel organisations should focus on, and how might they do this?

You may wish to use some of the resources below to help with your research.

Digital inclusion forward look: towards a digitally confident Wales (gov.wales)
The digital divide (Good Things Foundation)
Digital Communities Wales (gov.wales)

Inclusive education: knowing what we mean (Wales) (OpenLearn, The Open University)

Provide your answer...

2.1 A framework for building digital capabilities

Many higher education and further education institutions have adopted the Jisc digital capabilities framework, which expresses the essential digital skills every adult should have in the context of the workplace and provides a means of articulating and understanding digital capabilities in an FE/HE setting. The framework states that:

- At an **individual level** we define digital capabilities as those which equip someone to live, learn and work in a digital society.
- At an **organisational level** we need to look beyond the capabilities of individuals and consider the extent to which the culture and infrastructure of an institution enables and motivates digital practices.

(Jisc, n.d).

The framework defines these capabilities as follows.

Table 4

The six elements of the individual digital capability framework are:	The six elements of the organisational digital capability framework are:
• Digital proficiency and productivity (functional skills) • Information, data and media literacies (critical use) • Digital creation, problem solving and innovation (creative production) • Digital communication, collaboration and participation (participation) • Digital learning and development (development) • Digital identity and wellbeing (self-actualising)	• Organisational digital culture • Content and information • Research and innovation • Communication • Learning, teaching and assessment • ICT infrastructure

In the video below, Dr Becki Vickerstaff, Higher Education Senior Consultant at Jisc, explains the Jisc digital capabilities framework.

Video content is not available in this format.

When thinking about a digital capabilities framework, it is important to define the following in order to ensure that you understand the digital skills and behaviours needed for different contexts within your HEI – one size does not fit all!

1. **People:** The group of people who need the skills
2. **Places:** The context in which they need to use the skills
3. **Technology:** The tools and systems that they need the skills to use
4. **Period:** The time frame in which these skills are relevant (Orlik, 2018).

Activity 6 Jisc's framework: how digitally confident are you?

20 minutes

Research the Jisc digital capability framework in more detail. Consider what it means to you as an individual, and how digitally confident and capable you feel you are.

Jisc Digital Capabilities Framework

You may wish to use one of the following tools to help assess your own digital capability:

- If your HEI is a member of Jisc you may have access to the Jisc Discovery Tool which is a self-assessment tool to help you to understand and develop your digital capabilities.
- If your organisation is not a member you may wish to use The Digital Competence Wheel.

Write a summary of how digitally confident and capable you are and identify the areas you would like to develop. Think about which digital skills and behaviours are important in your personal life and in your role within an organisation. If you work in a HEI also consider the digital skills and tools you use, both in order to operate

effectively as an organisation, and the skills to provide the best outcomes for your students.

Discussion

Within The Open University the following approach has been taken to set Jisc's digital capabilities into the OU context. Subject matter experts from across The Open University have collaborated to develop an approach to build and support digital capabilities, through guidance, training, support and processes.

Table 5

Capability	This means that we….
Using technology (ICT proficiency)	• use ICT-based tools, devices, applications, software and services confidently, choosing the right tool for the job (ICT proficiency)
Digital communication, collaboration and participation	• communicate effectively, appropriately and respectfully in digital spaces (digital communication) • collaborate effectively in digital teams; we understand the features of different digital tools for collaboration, and understand the range of cultural and social norms for working together (digital collaboration) • participate in, facilitate and build digital networks; we behave safely and ethically in networked environments (digital participation)
Digital creation, problem solving and innovation	• know how to create and design new digital materials e.g. audio, web pages (digital creation) • know how to use digital evidence to solve problems; we collect and collate new evidence and share it, and evaluate its quality (digital research and problem solving) • adopt and develop new digital practices in different settings (digital innovation)
Information, data and media literacy	• know how to find, evaluate, manage, curate, organise and ethically share digital information (information literacy) • use data to inform our decisions: we manage, collate, access and use it, we interpret it, and know how to keep it safe (data literacy) • know how to receive, evaluate and respond to messages in a range of media (text, graphics, video, animation, audio) – and to curate, re-edit and repurpose it, crediting its creators (media literacy)

Digital learning and teaching (digital learning and development)	• participate in and benefit from digital learning opportunities (digital learning) • we support and develop others to teach in digital settings (digital teaching)
Digital identity, wellbeing and sustainability	• develop a positive digital identity, managing our digital reputation (digital identity management) • look after personal health, safety, relationships and work-life balance in digital settings, and act safely and responsibly in digital environments (digital wellbeing) • consider how we can work in a more digitally sustainable way to assist the organisation meet its net zero targets. (Digital sustainability)

Note: The Open University has included digital sustainability as an additional capability, that is not part of the Jisc framework.

Using the Jisc framework

In the video below, Becki Vickerstaff recaps what the framework is, then contributors discuss how it has been used in their organisations so far and areas to consider for the future.

Video content is not available in this format.

Many HEIs and FEIs work with Jisc and other organisations to develop resources to help build digital capabilities. In the video below Becki Vickerstaff explains how the Jisc framework has been used to create digital resources areas to help build digital capabilities of staff and students.

Video content is not available in this format.

Activity 7 Explore the DigiCentre

10 minutes

The University of Wales Trinity Saint David worked with Jisc to create the DigiCentre, their one-stop shop for digital skills needs.

In the video below Sarah Jones, Head of Academic Services, Library and Learning Resources, University of Wales Trinity Saint David, discusses how it can be used and areas to consider.

Video content is not available in this format.

Take some time to explore the DigiCentre. You may also wish to read the Jisc case study about this project:
University of Wales Trinity St David, Building digital capability (jisc.ac.uk).

Consider how you might approach developing resources to raise digital capabilities in your own organisation.

3 Everyday digital skills

Think about the digital skills you use in everyday life from when you get up to when you go to bed, outside of your work environment and the support you have there for using the required technology.

The chances are you figured out how to use a piece of technology or software yourself, or asked a partner/friend/child to tell you how to do something. Thinking about your digital life, what do you actively engage with digitally because it provides a benefit to you?

Activity 8 What activities in your digital life rely on technology?

10 minutes

Draw a mind map of your digital life: put technology in the middle, then surround it with examples of the ways you use technology in everyday life. For example, ordering shopping online, using the sat nav in your car or setting up a new smartphone. What digital skills do you need to use in relation to these activities? List your ideas in the box below.

Provide your answer...

Answer

The image below shows just some of the areas of daily life where technology is used. As you can see, it impacts almost every aspect of our lives.

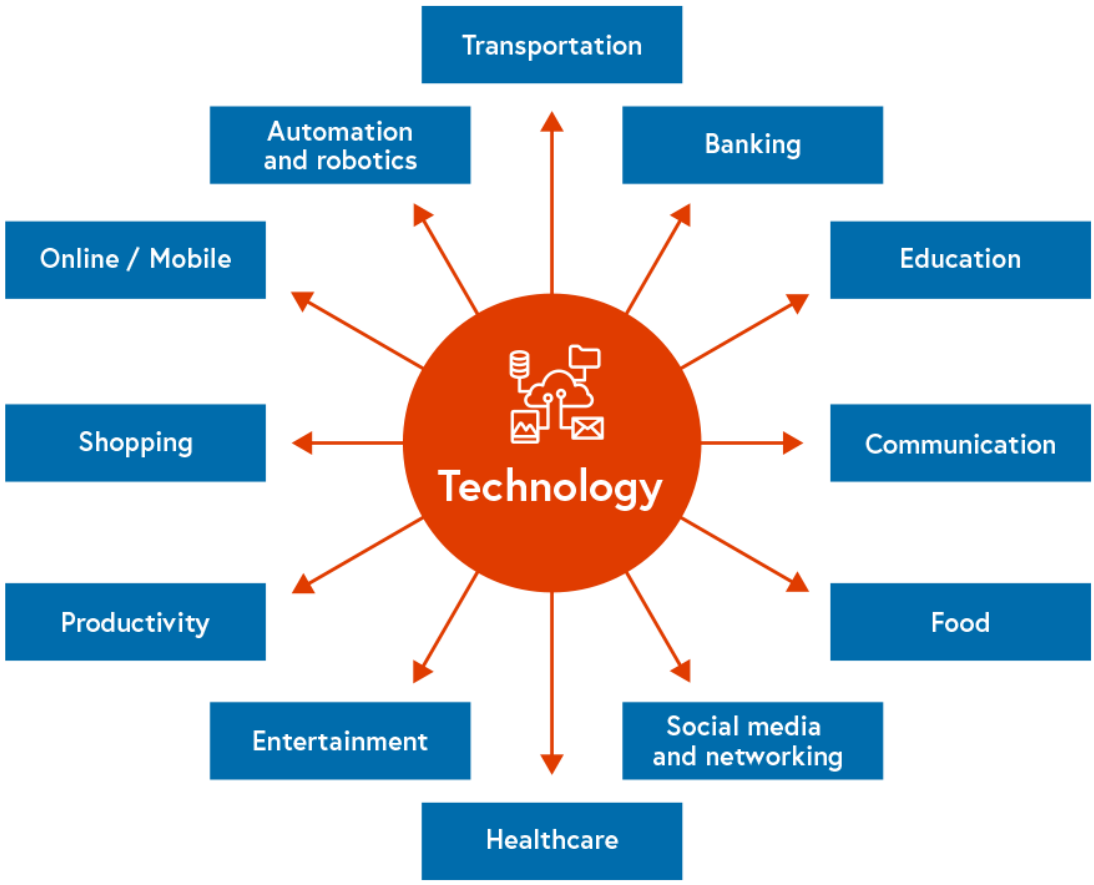

Figure 2 Some of the ways in which technology is used

Activity 9 Understanding skills for the workplace

10 minutes

Look at the articles below and think about how you use these technologies and the digital skills you have in relation to them. As you do so, consider your approach to online safety and security, and personal digital wellbeing.

- Which of these skills are ones you also use in the workplace?
- Why do you use them?
- How does this differ in the workplace and your personal life?

List your answers in the box below.

Top 11 Essential Uses of Technology in Everyday Life (javaassignmenthelp.com)
The 7 Main Ways Technology Impacts Your Daily Life – Tech.co
20 internet safety tips and checklist to help families stay safer online | Norton

This course covers online safety and security, and personal digital wellbeing later, but it is useful to start to think about this as you work through each section.

Provide your answer...

4 Developing your digital confidence and curiosity

HEIs by their nature encourage continuous learning and being curious. They tend to have informal and formal approaches to this, often with opportunities to ‘play’.

Building digital capabilities is not just about formal training courses on how to use the tools, but also includes informal learning from others, playing with digital tools and being comfortable with learning from failure. Building a digital-first culture, where organisational leaders lead by example, by focusing on people, embracing technology and having a shared vision that is communicated, encourages digital confidence and curiosity (Slack, 2022).

Activity 10 How digitally confident are you?

5 minutes

Reflect on the questions below, and then place your vote in the poll.

I am happy to try new things.

Interactive content is not available in this format.

I will work out solutions.

Interactive content is not available in this format.

I don’t mind not knowing how to do something.

Interactive content is not available in this format.

Depending on how comfortable you are with ambiguity and your own confidence, developing your digital capabilities (and transformation) will either be an opportunity to have fun and push the limits of what can be done or may be bewildering and scary. Individuals may be afraid they will break something, do something wrong, or lose something. The latter is unlikely these days, as now most organisations use cloud-based services. As long as you are saving your work in the correct place (for example, not on your computer desktop) most things are retrievable and you can usually access previous versions.

Occasionally things do go wrong that are not fixable – and usually this is not your fault! This was my laptop that just stopped working due to a total hardware failure. However, I didn't lose any of my work or files as it was all on the servers – in the cloud – and accessible when I logged onto my new laptop.

Figure 3 A photograph of a broken laptop

Learning from others is an essential part of developing your own digital capabilities. Often someone can help you use a digital tool, giving you insights into the way you approach a task or encourage you to do your own research to enhance your understanding.

If you are reimagining products, processes and systems you may have no idea what is and isn't going to be successful. You will have to learn to have the confidence to develop the mindsets and expectations of the stakeholders while being comfortable with stopping or adapting developments. You may need to draw on the data available and gain input from subject matter experts to make decisions.

More leaders are participating in 'reciprocal mentoring' – which normally involves a junior employee mentoring someone more senior than them, but those in the same roles can also benefit from this approach to consider different approaches to digital tasks and learn from each other.

It is important to acknowledge that the capabilities and skills of individuals will vary. For example, don't assume that younger people are automatically experts in using all types of technology: they might be competent using mobile devices and apps, but not tools for work e.g., Microsoft Office 365 or Google Drive. They may also lack the behavioural experience for working online in the workplace.

Have the confidence to ask questions and share your own experiences within your team or those with specialist skills, to create opportunities to build collaboration and confidence within teams and the organisation.

As you become more digitally competent and confident, share your knowledge and support others. Learn to listen and see what is happening in digital environments. If you are curious and not afraid to admit you don't know how to do something, most people are more than happy to show you. This not only develops your skills but fosters a culture of sharing and trust with those you work with, and encourages those who might be in a junior role or new to the organisation to be more confident in contributing to discussions.

4.1 Case study: fostering a healthy digital culture

The approach taken within one of the short course production teams at The Open University is an example of how to foster a healthy digital culture. Regardless of role, each member brings a different digital skill set that is of equal importance to delivering the product. There is a high level of trust, asking questions, showing others in the team how to approach all tasks and proactive behaviour is a fundamental way of working, to ensure that products can be developed quickly. There is never an assumption that someone

knows how to do something or a mindset of ‘that is someone else’s job’. Everyone is flexible and helps out when required.

Case study: fostering a healthy digital culture?

The table below is an extract from production guidance for course authors who often have never used the online platform to which we deliver. The focus is very much on the skills they already have to build confidence, set expectations and create a safe, open environment to build trust quickly. People are encouraged to ask for help, while being able to access the necessary digital guidance and tools. The aim is to ensure that, when work begins on the online platform, people have developed the capability to understand how to deliver the best course possible.

Table 6

Get to know the platform Sign up for a short course and look around to see how the platform works.	**Write conversationally** Write as though you were talking to someone directly rather than writing an academic paper or textbook.
Tell stories and take the learner on a journey What is the key thing you want the learner to take away and talk about?	**Focus on skills** Write your content around skills that will improve the learners’ employability.
Have a big question and know who your learner is This will help you shape the course in the right direction.	**Flag third-party content early** Identify any third-party content you’d like to use as soon as possible. Don’t assume if it is in an OU course that we can use without clearance.
Plan media early Consider what you want in terms of video, audio, graphics, interactives to allow time for production.	**Vary content and learning types** Use the different step types and media options to give learners variety and keep them engaged.
Think big We love big ideas, and where possible we will find a way to achieve them.	**Ask for help** The team is here to help you, there are no stupid questions.
Be prepared to hear No, but we will work with you to find a solution. The platform does not have the same functionality or approach as our platform. We will always let you know if we feel something is not right, or not possible. This means we say ’No’ a lot but we will try to find a way round it. We are also really strict on word count! **Our aim is to ensure you have fun and deliver the best course possible.**	

4.2 How digitally curious are you?

The following activities give you an opportunity to be curious with a range of tools, and to think about how you approach digital tasks. There are no detailed instructions, which is deliberate.

Activity 11 Explore Freerice

10 minutes

The only instruction for this activity is visit the Freerice site and explore it. NB You do not need to create an account unless you wish to do so.

Freerice

Activity 12 Draw a person

15 minutes

Create a new document in a word processing program (e.g., Microsoft Word, Google Docs, Apple Pages), draw a person, and save the document.

Activity 13 How did you feel?

10 minutes

How did you feel?

1. I wasn't sure how to do this, and didn't do it
2. I wasn't sure how to do this, so I searched/asked for help
3. I wasn't sure what I needed to do, but just played till I worked it out
4. Fine, I worked out what I need to do
5. Fine, I knew what I needed to do

Capture your thoughts on doing these activities and make notes in the box below.

Provide your answer...

Discussion

You may have been very wary of attempting these activities with minimal instructions, and even uncomfortable. Or you may have been very willing to explore. What support did you require? Did you look for guidance? Each of us has different levels of curiosity and confidence when faced with digital tasks – read more about our responses, in the next section.

Developing your confidence

Activities 11 and 12 were designed to allow you to play – there was no right or wrong way of doing them.

The Freerice website incorporates play, learning and sustainability. The site is designed to be very easy to use, so much so that they do not provide any guidance on how to use it. If you took the time to explore the menu, you will have seen that you could change the difficulty level, see information on challenges and choose different type of questions.

The game I played was about the meaning of words: this in itself developed my skills in using different words to describe something. To use this skill in future, I could challenge myself to use the alternative meaning I learned during the game, rather than the more familiar word.

A motivating factor to encourage engagement with the game is that it is supporting the United Nations World Food Programme (WFP) and United Nations Sustainable Development Goals (UN SDG) and involvement in this wider purpose may help boost your own wellbeing.

If you signed up an account you can create a group and invite members of your team or organisation to join. Or you can join the Digital Skills group, and use this tool as part of your wellbeing toolkit, for having a break, while continuing to contribute to the UN SDG.

To do this, once logged in go to the menu, select groups, and enter the following code into Join existing group: **!Warning! Open Sans not supportedR5V4ABYR**

Freerice is an educational trivia game that helps you get smarter while making a difference for people around the world. Every question you answer correctly raises 10 grains of rice for the World Food Programme (WFP) to support its work saving and changing lives around the world.

Source: United Nations World Food Programme (n.d)

Drawing a person may have been more challenging, as you first had to decide which program to use, and then even if you use regularly use the word processing features of your chosen program, drawing with it may well have been an unfamiliar task. However, knowing how to insert shapes and text boxes can be useful if you want to add visual representations of information and data to your documents, so this is a digital capability worth developing.

Activities 11 and 12 gave you an opportunity to play, test your confidence, and perhaps learn a new digital skill. Trying things out is often the best way to understand how you learn and develop the capability to search for help and support, to enable you to find answers more efficiently, when you may not be able to reach out to others for help.

5 Understanding your responsibilities

When working digitally you need to understand your responsibilities and behaviours in line with your organisation's requirements and expectations. As you saw from the list earlier in this course it has become more important to have this understanding when hybrid working. Organisations are now more reliant on trusting those working remotely to respect their requirements and to have the capability, tools and environment to do so.

Most HEIs will have guidance and polices to ensure their staff understand the requirements for safety and security, digital governance, accessibility, inclusion and intellectual property. However, working responsibly is more wide-reaching.

Depending on your role, and the products and services you may deliver, there often are a set of formal and informal guidelines that you also need to consider. These can range from organisational brand guidelines, use of systems and tools, and importantly, your digital behaviour, both in terms of how you manage your devices and how you communicate with others.

5.1 Digital wellbeing, safety and security

While many organisations approach digital wellbeing, safety and security as separate entities, it is useful to consider them together, as there are overlaps: safety is inherently linked to wellbeing and security. If you do not feel 'safe', because your digital security is not sufficient, this can affect your wellbeing (see Figure 4).

Figure 4 Being digitally safe

In a more digitally-driven world, our needs and the reliance on technology has meant that our digital life merits consideration as a basic need. Maslow's Hierarchy of Needs, adapted to consider our digital life, provides a useful framework for considering organisational and individual needs. Similarly the !Warning! inherit not supportedWell-being of Future Generations (Wales) Act 2015 seven

wellbeing goals, five ways of working, and the Jisc Digital Wellbeing model take a holistic approach to building digital capabilities and skills, with an emphasis on wellbeing.

Figure 5 Maslow 2.0: digital needs
Source: Chando (2019)

In this course we do not focus on digital wellbeing in detail, but the Hybrid working: wellbeing and inclusion course within this collection has more information about digital wellbeing and safety. The Jisc model for digital wellbeing for individuals is also a useful resource on this topic.

Activity 14 What are your digital security responsibilities in the workplace?

20 minutes

Your responsibilities for digital security within an organisation will vary on your role and the policies, processes and guidance within your organisation. Take some time to explore these within your organisation, consider what you are required to do, and what you actually do. You may wish to list the key responsibilities you have in the free text box below.

Provide your answer...

Answer

It is important to remember that digital wellbeing, safety and security can refer to both online and offline environments. Table 7 presents some simple tips on this subject:

Table 7

Online	Offline
Do you have bitlocker keys for your devices?	Where do you secure your devices when not in use?
How secure is your password? Do you change it regularly? You can check it on: How Secure Is My Password? Does it comply with your organisation's guidance?	Do you lock your computer if you leave your work area? Do you know who to contact if you cannot access your systems or get online?
Does your organisation use Multi-Factor Authentication (MFA) and have you set yours up correctly?	Who can see your screen when working?
Do you consider how you share information both internally and externally? How sensitive is it?	What work matters do you discuss with others?
Do you use passwords on sensitive documents when necessary?	How do you store physical documents?
Do you know what to do if you receive spam emails?	Who do you let use your devices?

The National Cyber Security Centre has further tips for staying secure online and the Learn My Way website has a basic introduction to Online Safety resource that you may wish to explore.

5.2 Digital governance and information security

Some organisations have separate departments to lead digital governance and information security activity. They normally ensure that legal responsibilities, professional and internal standards, processes and strategies are in place. This allows organisations and individuals to develop the behaviours which ensure a consistent approach to operating in a digital environment.

Digital governance and information security can include areas such as:

- GDPR (General Data Protection Regulations)
- information security
- data, information and digital knowledge management
- intellectual property and copyright
- accessibility and inclusion
- digital brands
- communication and content.

Many organisations use the Data Management Association (DAMA) international framework as an approach to data governance and understanding what needs to be considered.

Figure 6 The DAMA-DMBOK data governance wheel

In the video below, Nicola Askham, The Data Governance Coach, explains the framework and considerations for good data governance.

Video content is not available in this format.

Activity 15 Think about what should be within a digital governance framework

15 minutes

This course does not cover all your responsibilities in detail, as these will vary from organisation to organisation: we recommend you spend some time considering what policies, processes and compliance training you are required to do within your HEI or place of work.

Not all organisations have a detailed digital governance framework in place. They may have frameworks and strategy elements of 'digital activity'. A digital governance framework is different to a data governance framework which focuses on the management of data.

Watch the video about the 'The OCED Digital Government Policy Framework' which provides insights into what as an organisation you may wish to consider to support the development of a digital governance framework.

OECD Digital Government Policy Framework

You may wish to make some notes in the free text box below.

Provide your answer...

5.3 General Data Protection Regulations (GDPR)

This is a European data protection law that gives individuals more control over their personal information. For organisations, this means ensuring that there are robust data

privacy policies and processes, which limit how personal data is accessed and what an organisation can do with that data.

It is important to understand that data and information is not restricted to that contained in documents, but it is content that is used in any system, asset or communication that exists digitally or physically.

Data and information can exist in:

- documents, spreadsheets, presentations
- database systems
- content on online learning platforms
- video, audio, image assets
- websites
- emails
- reports
- staff records

The UK GDPR sets out seven key principles:

Table 8

Principle	Article 5(1) requirement
Lawfulness, fairness and transparency	Personal data shall be processed lawfully, fairly and in a transparent manner in relation to individuals
Purpose limitation	Personal data shall be collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall not be considered to be incompatible with the initial purposes
Data minimisation	Personal data shall be adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
Accuracy	Personal data shall be accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay
Storage limitation	Personal data shall be kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer periods insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes subject to implementation of the appropriate technical and organisational measures required by the GDPR in order to safeguard the rights and freedoms of individuals

Integrity and confidentiality (security)	Personal data shall be processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures
Accountability	The controller shall be responsible for, and be able to demonstrate compliance with, these principles (Article 5(2))

Source: Information Commissioner's Office

Note: While there may be a nominated 'controller' who has oversight of GDPR for an organisation, anyone who handles personal data has a responsibility to adhere to the seven Principles as set out through the relevant organisational policies and processes. In most HEIs, you are required to complete GDPR training on an annual basis to ensure that you understand your responsibilities. Check – what is in place in your organisation?

Activity 16 Think about the information and data you handle

15 minutes

How often do you consider GDPR when you handle information and data? Are you confident that, when you do so, your behaviour would meet the requirements of your organisations policies and processes?

The GitLab open-source handbook has a simple approach to help you make informed choices, and they have created the 'SAFE' framework to act as a guide, which includes examples of what to do if unSAFE information is shared and how they reinforce SAFE.

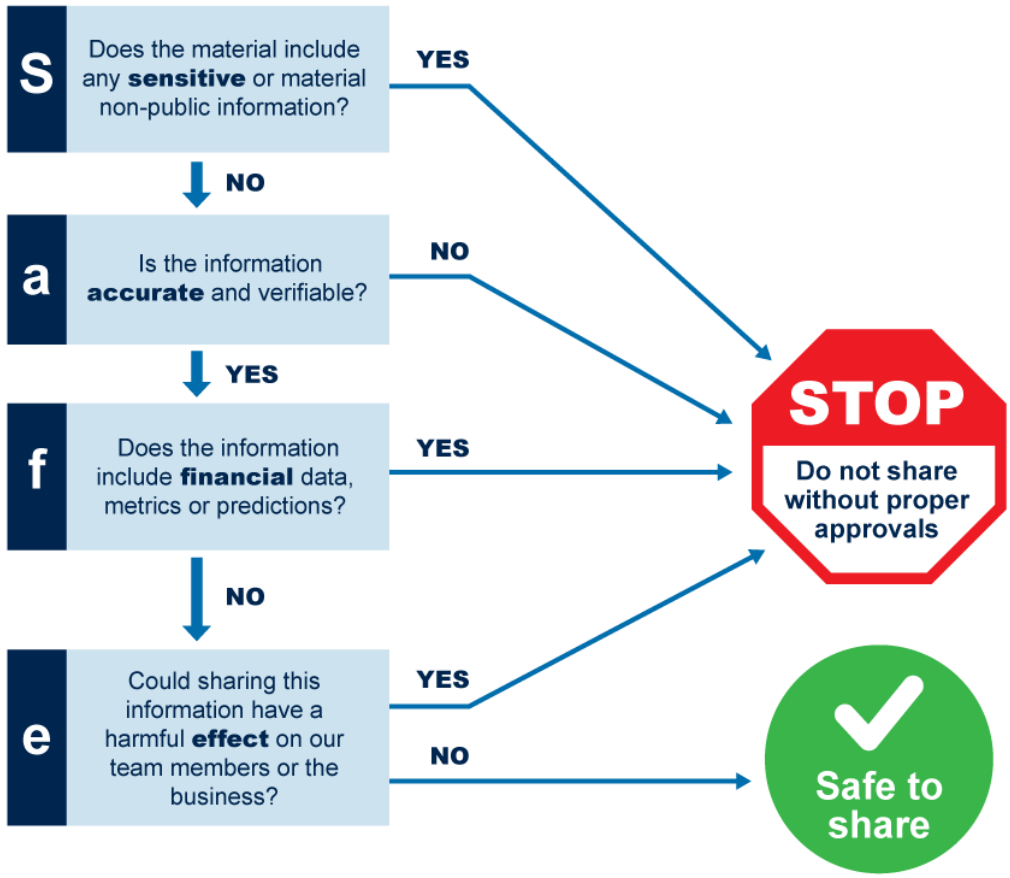

Figure 7 GitLab SAFE framework

Make some notes below. What action if any do you need to take now?

Provide your answer...

5.4 Intellectual property (IP) and copyright

When considering how you handle information and data, you also need to think about intellectual property and copyright. It is a broad topic, but it is important to be aware of your responsibilities and understand the expectations of your organisation.

Intellectual property normally covers:

- the names of your products or brands
- your inventions
- the design or look of your products
- things you write, make or produce.

Intellectual property and your work: What intellectual property is (gov.uk).

Copyright normally covers:

- literary, dramatic musical and artistic work

- software, web content, and databases
- sound and music recordings
- film, television and online broadcasting
- published editions.

Adapted from Copyright, Designs and Patents Act, 1988.

IP and copyright need to be considered from two angles.

1. **Use and sharing of your organisation's information, products, services and content** – your organisation owns the IP and copyright. Therefore, you need to be aware of what you can and cannot share in the public domain. For example, it may be inadvisable to share details about a commercially sensitive innovation project or an extract from a course that you authored – you may not own the rights to do this.
2. **Use of others' materials – when using any 'third party' content** – when using content that is not owned by you or your organisation, you need to check the conditions of use. Some organisations such as NASA provide these clearly on their website, but others are more complicated, as often the 'author' is not the 'owner'. Common issues arise from linking to articles on the web. Although they may be freely available to access, many organisations charge for a concept called 'deeplinking' – which is sending users to a specific page on a website, rather than the homepage. One of the reasons for this is it can lead to a loss of income for the site owner.

Activity 17 Explore intellectual property and copyright further

10 minutes

A basic rule for IP and copyright is that, if you are unsure, always seek advice and permission. Check what guidance and requirements your own organisation has in place. For example, you may have a dedicated page such as the one below from the University of Wales Trinity Saint David.

Copyright Hub | University of Wales Trinity Saint David

If this is an area you are interested in, you may wish to look at these resources.

Patents, trade marks, copyright and designs (gov.uk)

UK Copyright Law fact sheet: The UK Copyright Service

5.5 What is information security?

Information security protects the **confidentiality**, **integrity** and **availability** – often referred to as the 'CIA triad' – of all assets, information and systems, be they digital or physical.

Figure 8 Preferred IT Group (2019)

Below is a brief definition of each element of the triad (based on National Cyber Security Centre, 2021b):

Confidentiality: only authorised personnel in relation to their role should have access to information, to ensure it has not be shared or accessed without permission.

Integrity: information and data needs to be accurate, consistent, and used for its intended purpose. This requires strong non-repudiation and authenticity controls to stop data being modified or destroyed.

Availability: information and data is readily available and there is reliable access to (and use of) information.

The primary focus of information security is to ensure that organisations and individuals operate securely, with minimal disruption to work processes. Achieving this means aiming to reduce the risk of security incidents, which include the theft of, tampering with, or deletion of information and data. Most organisations will have an information security policy that provides guidance on using IT and digital assets safely.

Common security threats

Poorly secured systems – which increase the risk of attacks from third parties or misuse, either intentionally or unintentionally by individuals within an organisation.

Social media and email attacks – where accounts are hacked, or emails trick users into an action that compromises security.

Malware – software that disrupts, damages, or gains unauthorized access to a computer system.

Malware on endpoints – (the devices you use, e.g. laptops, tablets and mobile phones) can be threatened in various ways, and traditional antivirus software is not often sufficient to block those threats. While organisations can take steps to reduce the risks on organisational owned devices, when people use their own devices for work, organisational control is limited.

Lack of encryption – using encryption processes to access devices can help prevent the loss of data or corruption of equipment.

Security misconfiguration – ensuring that all technology platforms and tools, including web-based tools are configured and updated correctly is essential. While many configurations and updates are automatic, some rely on individuals to do the updates, and it is important that they understand how to do this (Imperva, n.d).

Cyber security

Cyber security is how individuals and organisations reduce the risk of a cyber attack. The main focus is to protect devices and services from theft or damage. Whereas information security aims to protect both digital and physical information, cyber security only focuses on digital protection (National Cyber Security Centre, n.d).

Activity 18 Find out more about information security and cyber security

Time: as long as you've got

These are complex areas to cover, and it is recommended that you do further investigation into your organisation's approach and policy in these areas. A good place to start is:

Information Security guidance from the Information Commissioner's Office

What is Cyber Security from the National Cyber Security Centre

Or you might like to study the OpenLearn Course – Introduction to cyber security

5.6 Data, information and digital knowledge management

As well as the security of our systems, we also need to think about the security of the information we have, how we protect it and how we share it.

It is important to understand that data and information is not restricted to just documents, but it is content that is used in any system, asset or communication that exists digitally or physically.

Information is normally grouped into the following classifications: unclassified, internal, confidential. You should understand your responsibilities for how you handle information and data within these areas, which are part of the Information Classification Software for ISO 27001.

Table 9

Unclassified	Internal only	Confidential
The information is not particularly valuable, nor is the organisation required to protect it. It can be accessed by anyone for any purpose, including release to the public or clients. It may include press releases, job vacancies, and so on.	The information has value internally and may have some value to competitors. It may be distributed freely to anyone within the organisation. It may include internal memos, employment data, contract information, and so on.	The information has significant value and there may be legal requirements for its protection. Access is limited to designated roles or tiers within the organisation. It may include intellectual property, customer payment details, long-term strategic planning, and so on.

Source: IT Governance (n.d)

Information therefore has value: it is essential, then, that you understand digital knowledge management. Digital knowledge management is the process for identifying, capturing, organising, storing, and sharing digital information effectively so that it is easily accessible for all those who require access. The right metadata (data about the data) is also needed to enable computer-automated tools to access – or search – the assets.

In the video Nicola Askham, The Data Governance Coach, explains what is meant by data management, and the consideration for managing data.

Video content is not available in this format.

Digital knowledge management

Digital Knowledge Management (DKM) is a key digital capability, which is integrated throughout the Jisc Digital Capabilities framework. DKM is the process of identifying, collecting, documenting, organising and storing digital information and knowledge so that everyone, including computer-automated systems, can find and access the information with ease. Increasingly, it covers how the digital tools and systems within your organisation are connected and 'talk' to each other, and how they are used.

At an organisational level there will be specialists who understand and design workflows, develop technology and produce policies and guidelines to support everybody. However, everyone in an organisation needs to have an understanding of the behaviour required to manage knowledge effectively.

At a basic level this includes:

- saving files to the correct location
- not keeping files on your own hard drives
- backing up files regularly
- not duplicating copies of files, and saving them in more than one place
- adding correct file names and metadata.

Managing your digital world effectively is probably the most useful digital capability you can learn. The acceleration in collaboration tools and ‘machine learning’ applications and systems requires better digital knowledge management, so that organisations and individuals can thrive in a digital world.

Activity 19 How do you manage digital media assets?

20 minutes

Many HEIs are starting to create more digital media assets such as audio and videos. As you watch the video below, in which Jonathan Morgan, CEO Object Matrix Ltd, shares how Object Matrix manages data and digital media assets, and their security and governance, consider how your organisation manages digital media assets.

Video content is not available in this format.

Then take some time to familiarise yourself with your own organisation’s policies and guidance for managing data.

You may wish to make notes in the box below.

Provide your answer...

6 Digital futures: digital transformation

Digital transformation accelerated during the pandemic:

According to a new McKinsey Global Survey of executives, their companies have accelerated the digitization of their customer and supply-chain interactions and of their internal operations by three to four years. And the share of digital or digitally enabled products in their portfolios has accelerated by a shocking seven years

Source: COVID-19 digital transformation & technology, McKinsey

Digital transformation is how organisations implement business models that consider and leverage the development of technology. It aims to enhance the capability of its people and develop processes to ensure it can succeed in the future.

This rapid acceleration has seen companies introduce temporary solutions that are now embedded and evolving to meet the need for new ways of working. For organisations and individuals this will require the resilience to continue to work with uncertainty and learn new skills as new technology is adopted.

Some key themes organisations are considering for the future include:

- automation of business processes – machine learning and artificial intelligence (AI)
- cloud computing
- use of data to drive decision making
- attracting talent with the right digital capabilities
- zero-trust approach to security
- how the metaverse will develop
- sustainability – reaching net-zero, and carbon footprints.

In the video contributors explain what organisations need to consider for digital transformation and the digital capabilities required for the future:

Video content is not available in this format.

We are frequently hearing the term ‘the 4th Industrial revolution’. In the following video, Jessica Leigh Jones MBE, Chief Executive Officer of iungo Solutions briefly explains what this means.

Video content is not available in this format.

Activity 20 What is driving digital transformation?

15 minutes

Read
!Warning! inherit not supportedThe 5 great shifts driving digital transformation (digileaders.com) ,which explores some of the areas that leaders of organisations need to consider, and The New Reality group’s research themes and then use the infographic from it to think about what is needed to enable digital transformation in your organisation.

Which steps seem appropriate or most relevant in your context?

Figure 9 Source: The New Reality (n.d)

Activity 21 Explore what digital transformation for HEIs might involve

15 minutes

Explore the resources below:

Leading the digital transformation of higher education, The Campus Learn, Share, Connect (timeshighereducation.com)

Dx: Digital Transformation of Higher Education | EDUCAUSE

Consider the Three Ds When Talking about Digital Transformation | EDUCAUSE

Educause suggest the three Ds in the image below. Where do you feel your HEI is in its journey to digital transformation?

Interactive content is not available in this format.

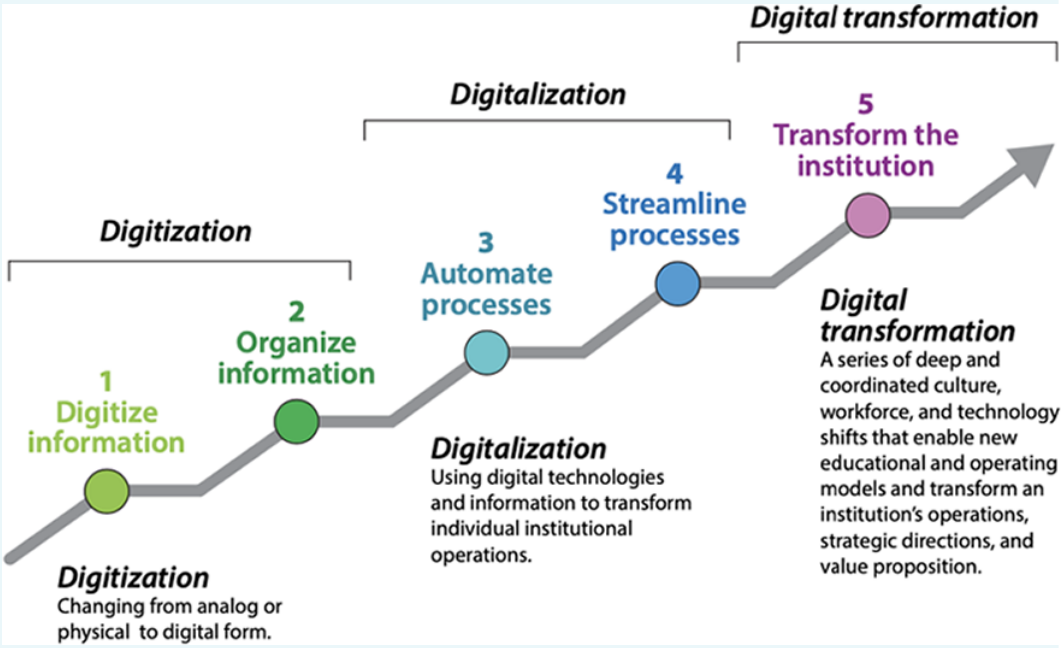

Figure 10 Digital transformation

Digital transformation has to be considered in the wider context of organisational development and the environment you are operating in, including reducing carbon emissions to reach net-zero by 2050.

6.1 Exploring your digital carbon footprint

Sustainability is now essential, and part of the digital transformation that organisations need to consider. In this section we consider what HEIs can do to manage their carbon footprint.

'IT is often one of the biggest contributors to an education institution's own carbon footprint, with one UK college attributing 20% of its emissions to IT alone.' (Exploring digital carbon footprints, Jisc, 2022). Reducing digital carbon footprints whether those of organisations or individuals will become a priority as HEIs have committed to get to net zero by 2050 or before.

The Exploring digital carbon footprints report from Jisc focuses on source and impact of four key areas: procurement, on-premises IT, cloud technologies and remote working, which we recommend you read outside of this course due to its length.

In the video below Scott Stonham, the author of the report, provides an overview of the key areas of the report.

Video content is not available in this format.

You may wish to read the following articles on OpenLearn by Scott Stonham that provide further insights:

- Reducing the digital carbon footprint of the cloud
- Reducing the carbon footprint of on-premises IT
- How we can all tackle our digital carbon footprints
- Reducing digital carbon footprint through responsible procurement
- Digital carbon footprints and remote working
- How can corporations reduce digital carbon footprints
- What is a digital carbon footprint?

The strategy for reducing your digital carbon footprint needs to be considered alongside all elements of organisational development. If this is an area you have an interest in we would recommend you review the Hybrid working: Organisational development course within this collection.

As organisations adopt more sustainable practices, you as an individual need to be open to new ways of working, and commit to changes you can make both in your professional and personal lives.

Digital carbon emissions can be difficult to visualise as how often do you think about what is involved for technology to exist? When you talk about cloud computing what image comes to mind?

At a basic level the cause of the rising digital carbon footprint is due to:

- manufacturing and shipping of parts and products
- powering and cooling of technologies infrastructures
- disposal of electronic waste (e-waste)
- behaviour of consumers.

Manufacturing processes are not always sustainable, data centres (the cloud – the physical servers that store and process data) consume energy continually and require cooling ventilation. Electronic devices require energy to run, and e-waste can be difficult to recycle due to the non-renewable resources within products.

Activity 22 Reducing your digital data carbon footprint

10 minutes

The amount of digital data within organisations grows daily, and managing this is challenging. While organisations will have policies, processes and automated systems to try to help reduce redundant data, some of these are dependent on individuals to manage digital data responsibly.

In the video below Scott shares insights into how digital data impacts digital carbon footprints and the measures organisations and individuals can take. As you watch, make notes on areas you believe could be easily adopted, and commit to changes you can make as an individual.

Video content is not available in this format.

The Exploring Digital Carbon report includes simple tips that can help reduce carbon footprint and tools to help understand your emissions, including the following.

- Consider how much you are using your smartphone (the average usage is 2.5 hours day).
- Reduce the brightness of your monitor.
- Turn off devices, even in ‘stand-by mode’.

- Reduce the use of email – read the article ‘ The hidden cost of your emails on the planet’
- Simplify email signatures – remove unnecessary images.
- Delete electronic files and emails you no longer need and empty your deleted items folders.
- Download instead of stream audio and video.
- Unsubscribe from enewsletters you no longer want to receive.
- Extend the life of your products – do you really need the latest model? Think of the four Rs: reduce, repair, reuse, recycle.

In this video Scott provides further tips and advice on how you can reduce your digital carbon footprint.

Video content is not available in this format.

Conclusion

Developing digital skills, capabilities and behaviours, both as an individual and as an organisation, is a continual process as technology and ways of working evolve. Our reliance on technology is essential to live and work.

As your confidence and competence grow you will be able to make more informed decisions and use technology responsibly and sustainably to your advantage, to ensure that your organisation's needs and the needs of your employees, students and the wider community can be met in a digital world.

Digital in Wales: an opportunity

At the start of this course we asked you to read A journey to a prosperous Wales – Section 5 Skills for the future.

Wales is considered one of the most advanced countries in the world for its innovative approach to sustainability through the Well-being of Future Generations (Wales) Act 2015, and its digital strategy clearly sets out what is required to develop the skills and infrastructure for the future.

Drawing on the notes you have made throughout this course, and reviewing the Digital Strategy for Wales, reflect on what you think HEIs need to focus on for the future to build digital capabilities and ensure that their digital transformation will support the wellbeing of future generations.

This course is part of the Supporting hybrid working and digital transformation collection, which you may wish to explore further.

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Acknowledgements

This free course was written by Esther Spring, with support from Jo Parker.

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