



Co-funded by
the European Union



DSSI Training Course

MODULE 5 – E-SERVICES

E-BOOK



DIGITAL SERVICES &
SENIOR'S INCLUSION

Project Introduction

The DSSI consortium acknowledges the importance of facilitating access to the digital service environment and enhancing the inclusion of older people. Nowadays, a high percentage of older people have problems understanding new technologies and making use of them in their daily lives. In addition, this collective lacks the necessary tools and support to upgrade their digital skills and knowledge, which unfortunately further increases the exclusion of older people.

Therefore, DSSI was created with the main goal of defending the rights of older people (low-skilled, living in remote areas, with mobility difficulties, immigrants, etc.) so that they can access information and enjoy their right to participate in everyday society as independent citizens, through digitally active aging.

This will be facilitated by using library networks, as their role is starting to evolve into a hub for digital information and services, due to the accelerated digital transformation of the post-COVID era. In fact, the project is using the wide network of libraries as a digital information hub where senior citizens can acquire basic digital skills and apply their knowledge by searching and accessing the fantastic range of libraries' digital services on health and wellbeing, lifelong learning, cultural and social connectivity and finally e-commerce and e-governance.

Through the training Modules that are created in the DSSI Training Course, older people will be enabled to make full use of the wide range of library services available online and enjoy the benefits of inclusiveness. In addition, through this project, older learners will gain confidence to independently use a range of public and commercial digital services.

Contents

Project Introduction.....	1
Module Summary & Learning Outcomes	3
Introduction.....	5
General Overview.....	5
Objectives of the Module.....	5
Topics	6
Description of the learning outcomes	6
CHAPTER 1: Digital transformation in E-Services	7
1.1 What are E-services?	7
1.2 E-services or NOT E-services?	9
1.3. E-services and taxation	10
1.4. E-Government in the EU	10
1.5. User Experience (UX).....	11
CHAPTER 2: Benefits and challenges.....	14
2.1. Benefits of E-services.....	14
2.2. Challenges of E-services	15
CHAPTER 3: Examples and trends.....	17
3.1 Factors contributing to the growth of E-services	17
3.2 Examples in the public sector.....	19
3.3 Examples in the private sector.....	20
3.4. E-commerce trends.....	21
3.5. Innovation on E-services	23
3.6 Online security and privacy.....	25
Conclusion / Summary	29
Activities of Chapter 1	30
Activities of Chapter 2	32
Activities of Chapter 3	34
Teaching Guidelines.....	37
Setting methodology and design of the online (Self) Assessment Tool	41

Module Summary & Learning Outcomes

Module Name	Communication and Connectivity
No. of Units	3
Topics/Units	<ol style="list-style-type: none"> 1. Digital transformation in E-Services 2. Benefit and challenges 3. Examples and trends
EQF-Level / Education Level	3 or 4
Duration	50 min – 90 min
Learning objectives	<ul style="list-style-type: none"> • Understanding of E-Services. • Develop familiarity in using relevant technologies. • Enable users to navigate electronic platforms where e-services are provided. • Familiarize users with specific e-services. • Educate users about the importance of online security and privacy. • Foster a mindset of continuous learning and adaptation to evolving e-services platforms.
Knowledge	With this module, older adults will know and understand what e-services are and what they are for. They will also acquire knowledge about how to use them and what possibilities each of them has in a person's daily life.
Skills	At the end of this module, older adults will be able to navigate and use electronic platforms and e-services. They will also be able to understand the usefulness and benefits that can be gained from each of the e-services and will become familiar with the whole digital world and the constant evolution of new technologies.
Competence	By the time the adult trainers finish delivering this module to the older learners, they will have the capacity to use everyday services such as online banking, making hospital appointments electronically and accessing the many benefits that e-services now provide us with that we may not be aware of. For example, attending psychological consultations online or



	saving a lot of time doing governmental procedures via the internet.
Further Information/Sources	All the relevant sources that have been used for this module and any further reading material/useful sources that you might think apply (books, articles, websites, etc.)

Introduction

General Overview

E-services have completely changed how we communicate with businesses and the government in the current digital era. E-services are a part of everything we do daily, from online tax filing to online shopping. E-services have completely changed how we communicate with businesses and the government in the current digital era. E-services are a part of everything we do daily, from online tax filing to online shopping.

E-services have acquired a great importance in the private sector, being international trade today impossible to conceive without the internet. However, e-services are also essential for public administrations, automating procedures and processes to provide an easier solution to citizens' problems and expedite administrative work. However, apart from allowing connectivity between people around the world, the internet also entails a number of dangers related to the privacy of users' data.

This module explores the applications that the internet has in services and its role in different sectors, whether in the governmental, commercial or any other field. In addition, it will explain the factors that have caused the rise of e-services, and the main dangers associated with the exposure of personal data on the network.

Objectives of the Module

The objectives of the module are:

- Grasp the concept of E-Services.
- Get comfortable using related technologies.
- Help users navigate online platforms offering e-services.
- Introduce users to specific e-services.
- Teach users about online security and privacy.

- Encourage a mindset of learning and adapting to changing e-services platforms.

Topics

1. Digital transformation in E-Services
2. Benefit and challenges
3. Examples and trends

Description of the learning outcomes

After finishing this module, elderly individuals will be able to use electronic platforms and online services easily. They will also understand the benefits of these services and become familiar with the ever-changing digital world and new technologies. They will have the capacity to use everyday services such as online banking, making hospital appointments electronically and accessing the many benefits that e-services now provide us with that we may not be aware of. For example, attending psychological consultations online or saving a lot of time doing governmental procedures via the internet.

CHAPTER 1: Digital transformation in E-Services



1.1 What are E-services?

The services provided electronically encompass services delivered via the Internet that, by their nature, are essentially automated and require minimal human intervention, and that are not viable apart from information technology.

Some **examples** are:

1. Supply of video, music, games, lotteries, and other games of chance
 - Downloads of films or broadcasts to PC's, laptops, and phones
 - Online or downloads of games, including remote players.
 - Supply of music, films, betting, broadcasting
 - Jingles, ringtones, and music

2. Website services
 - Self-help website services
 - Automated maintenance and support of sites
 - Hosting of sites

- Internet service providers
- Online data warehousing and memory services
- Banner ad blockers

3. Software services

- Software services provided over the internet (Software as a Service 'Saas') through downloads on cloud-based distribution.
- Downloads of printer and other peripheral drivers
- Firewalls and other filters for computers
- Antivirus software downloads
- Accountancy and anti-virus packages

4. Supply of distance teaching

- Automated Distance learning and teaching
- Automated learning programs over the internet
- Workbooks completed by students online.

5. Provision of text, images, and databases

- Downloads of designs – components, knitting patterns etc.
- E-books (e.g. Amazon Kindle)
- Online banner ads
- Subscriptions to online blogs, journals, or newspapers
- Membership fees to online clubs, journals or dating websites.

- Online marketplaces for goods and services – listings
- Phone or PC download images, screensavers, and photography.
- Downloads of reports, financial analysis or market data and guides
- Data manipulation and calculations via the internet or other electronic networks

1.2 E-services or NOT E-services?

The fact that a service provider and its recipient communicate via email will not, by itself, imply that the service is considered to be provided electronically.

The implementation regulation singles out the following services provided for a consideration as **not being e-services for the VAT regime**:

- Services provided to EU VAT registered businesses.
- Telecoms and broadcasting services
- Physical goods where the ordering is done by the internet or e-mail.
- DVDs, CD-ROMs, CDs, memory sticks etc. for information, games, or books
- Professional advice given via e-mail or the internet.
- Designing covers or contents for eBooks, brochures, and other literature
- Live teaching provided over the internet.
- Offline data services
- Tickets bought for live events, theaters, restaurants etc. purchased through the internet.

It is important to make this distinction. Due to the digitization that the world is experiencing, one might mistakenly conclude that all services that are partially provided through the internet, or where it plays a certain role, such as in communication, are electronic businesses. However, as we have seen, this is not the case, and it is important to establish this differentiation between electronic and

non-electronic services, as important aspects vary, especially taxation.

1.3. E-services and taxation

Electronic services will be subject to taxation in the Member State where the customer is established, whether the customer is a business or professional entity or an individual without such status (end consumer).

There are different examples:

1. Service provided to a business in another member state.

The transaction is subject to taxation in the state where the customer is established or resides, and it is the customer who declares and pays the VAT to their tax authority.

2. Service provided to an end consumer in another member state.

The transaction is subject to taxation in the state where the customer is established or resides, but in this case, it is the business that must declare and pay the VAT.

3. Service provided to a business or end consumer in a non-EU country.

This is a non-taxable transaction, and therefore, no VAT is applied.

1.4. E-Government in the EU

Smart public services, also known as digital public services or eGovernment, refer to the use of technology to provide services to citizens at local, regional, and national levels. They bring many opportunities to both citizens and businesses: students can apply to study abroad, citizens can open bank accounts online, and workers can file taxes with the click of a button.

The EU is working to help public administrations across Europe to make the change to digital so all

citizens can enjoy the benefits of smart public services during the Digital Decade. It is focusing on reducing barriers to public services and ensuring they are accessible across borders.

Actions already taken by the Commission include:

- ensuring European platforms can work together and interact with one another.
- funding large-scale e-participation projects
- encouraging public services, businesses, and citizens to share solutions through the JoinUp platform.
- standardizing electronic health records

Creating the Once-Only Technical System, which connects EU public authorities, so they can exchange official documents and data at the citizen's request, eliminating the need for citizens to provide information to authorities if another authority already holds that information in electronic format (it puts into practice the Once-Only Principle).

One key aspect of digital public services is ensuring we have a secure digital identity. Having a digital identity allows us to prove who we are – or what business we own – to online services.

Some countries, such as Spain, have a Digitization Plan of the public administrations 2021-2025 as a part of a strategy to digitize the Public Administrations, acting in fields like health, justice and employment.

The Plan of digitizing the Public Administrations was born to achieve three **objectives**:

1. Improving the accessibility of public services to the citizens and companies with all the guarantees for the protection of personal data and companies
2. To overcome the digital divides social and territorial governments
3. Enhancing the efficiency of public administrations through the digitization of tractors important areas such as health, justice, or the employment policies, the consular services, or the territorial administration in terms of inclusiveness

1.5. User Experience (UX)

User Experience (UX) refers to how a person feels when interacting with a product, service, or digital platform. This experience covers all aspects of interaction, from navigation and visual appearance, to ease of use and user satisfaction. In other words, it's about how a user feels when using a website, mobile app, or any other digital product.

Why is User Experience important?

- **The complexity of websites has increased:** Today it is increasingly necessary to incorporate more functionalities and content. Faced with this avalanche, it is easy for the user to get lost, not know what to do or even leave the web early. That's why it's key that the user experience works properly.
- **Because we access pages and apps from a lot of different devices:** A very important task of the UX is to harmonize the experience across different desktop and laptop devices and ensure that the system works on all of them. With different types of devices available such as mobile phones, tablets, laptops or computers with giant monitors, this is a big challenge.
- **Because we value accessibility more and more:** Not only making the web available to people with visual problems (for example), but also to those who have a slow internet connection or an old mobile device. The more accessible the content is, the more users can be reached
- **Because users are no longer satisfied with less:** To seduce digital natives, it is no longer enough to create a unique and quality product, the user experience must be unforgettable. Today's generation is a demanding and well-informed one.

The key aspects of the UX experience are:

- **User retention:** A good user experience encourages the retention of these. When users have a positive experience, they return and continue to use a product or service. For example,

social networks have greatly perfected their UX to keep users hooked and coming back again and again.

- **Customer Attraction:** Effective UX can attract new customers. An elegant and easy-to-use website can turn visitors into customers.
- **Improves the Conversion:** An optimized user experience can increase conversion rates. A simple signup form or an unhindered purchasing process can boost conversions.
- **User satisfaction:** User satisfaction is critical to long-term success. When users are happy, they can become brand advocates and recommend the product or service to others.
- **Reduction of Support Costs:** A good UX can reduce support costs by minimizing user queries and problems

CHAPTER 2: Benefits and challenges



2.1. Benefits of E-services

Improved user support

- Faster and more convenient for experienced online users
- Ability to interact when questions arise
- Creates a written record of questions and answers to make follow-up more efficient
- Potential for higher quality answers with links to more detailed information, attached documents, etc.
- Customer can save answers for future reference
- Efficient and detailed incident tracking to ensure satisfactory problem resolution
- User satisfaction of finding their own answers
- Finding useful related information, you might never have inquired about

Better data

- Easier to categorize and track user concerns
- Provide a steady flow of user feedback that can be captured and tracked over time
- Easier to route individual questions/comments so others can “hear” what users are saying, unfiltered and in real time

-

Potential cost savings

- Deflect branch, call center, and email queries
- Ability to handle some questions during off-peak times
- Ability to route questions to lower-cost centers where language fluency is less of an issue (compared to telephone support)
- Ability to outsource certain question types, such as tech support
- Ability to automate answers to routine questions

2.2. Challenges of E-services

A study by the European Public Administration Network showed that, in most cases, the barriers for the digitalization of public administration were:

- Of **organizational** nature - the administrations involved in providing these services have insufficiently prepared human resources and limited financial resources, managing the needs of isolated citizens, based on their own projects, which are not integrated with the initiatives of other public institutions
- Of **legislative** nature - the transposition of electronic services requires multiple modifications and simplifications of normative acts and administrative procedures that underpin these services, a process that requires a unitary approach
- Of **social** nature - the general low degree of digital literacy among potential users, their reticence towards a depersonalized interaction with public administrations and the extension of electronic delivery of public services, lack of confidence in the way personal data are handled by authorities and the low level of awareness on the existence of the option to

electronically access public services, represent the most important barriers to the widespread use of these platforms

- Of **technical** nature – the already developed platforms are not user friendly (intuitive) and do not display all the information searched by users in a unitary manner, and in some cases, they do not use an integrated authorization process (based on a single authentication system).



https://www.canva.com/design/DAGDaA33L3s/KPtVaS9Ae1GwIDexvha2w/edit?utm_content=DAGDaA33L3s&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

Generally, for most of these barriers, EU Member States are considering a number of measures to tackle these difficulties, ranging from widespread training of digital competences and support to the electronic access of public services to legislative changes (including better transposition of European directives into national laws, implementation of the "digital first" principle, etc.), to explore how to integrate new technologies (Artificial Intelligence, blockchain) and ensure more efficient user data management. The variety of solutions under consideration demonstrates not only a good understanding of citizens' needs, but also a commitment to increase performance in delivering public services.

CHAPTER 3: Examples and trends

3.1 Factors contributing to the growth of E-services

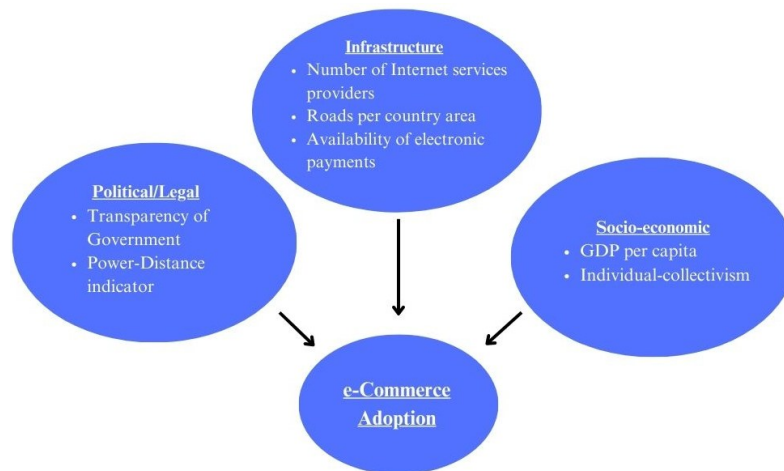
E-services are increasingly accepted and used in both the public and private sectors. There are several factors that have caused this increase in the importance of online processes. In the **public sector**, the factors are:

- **Interoperability and the use of standards:** Reinforcing the use of standards in eGovernment services is crucial for achieving interoperability. This allows different IT systems to work together seamlessly, enhancing the efficiency and effectiveness of public services.
- **Sustainability in the provision of IT-based public services:** Ensuring the long-term sustainability of eServices is essential. Public administrations need to develop and maintain interoperable platforms that can support high-impact applications with massive demand. Sustainable services are those that provide value for money and can be maintained over time.
- **Financial sustainability:** Sustainable eGovernment financing remains a challenge, especially at the local and regional levels. Public administrations should focus on developing business cases before launching new services to ensure that the efforts for change and transformation can be sustained.
- **Promotion of proper and massive use of eServices:** Cities should include the promotion of eServices in their future planning actions. Effective communication strategies targeted at specific services, channels, and user groups can help increase the uptake of eServices. Initiatives such as citizen cards and specific service promotions have shown to be effective in attracting citizens' attention.

Otherwise, there are other factors to take in account in the **private sector**:

- **Increased Internet Penetration:** The widespread availability of the Internet has enabled more people to access online shopping platforms, leading to a larger customer base for e-Commerce businesses.
- **Mobile Technology:** The rise of smartphones and mobile devices has made it easier for consumers to shop online anytime and anywhere, boosting e-Commerce sales through mobile apps and optimized websites.
- **Convenience and Accessibility:** Online shopping offers convenience and accessibility to a wide range of products and services, allowing customers to make purchases with just a few clicks, which has significantly contributed to the growth of e-Commerce sales.
- **Global Reach:** E-Commerce allows businesses to reach customers beyond their local markets, enabling them to tap into a global customer base and expand their sales opportunities.
- **Personalization and Targeted Marketing:** E-Commerce platforms can leverage data analytics and customer insights to personalize the shopping experience, recommend products based on customer preferences, and target specific customer segments, leading to increased sales.
- **Secure Payment Gateways:** The implementation of secure online payment systems and the use of encryption technologies have increased consumer trust in making online transactions, thereby boosting e-Commerce sales.
- **Logistics and Fulfillment Improvements:** Advances in logistics and fulfillment services have enabled faster delivery times, efficient order processing, and improved customer satisfaction, contributing to the growth of e-Commerce sales.

- **Social media and Influencer Marketing:** The integration of social media platforms for marketing and influencer collaborations have played a significant role in driving traffic to e-Commerce websites and increasing sales through targeted campaigns



https://www.canva.com/design/DAGDacZvN1s/sX6KSDSbyd1eExOgxr9FCg/edit?utm_content=DAGDacZvN1s&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

3.2 Examples in the public sector

The use of E-services in the field of public administrations focuses mainly on **identification**, **authentication** and **electronic signature** through the use of concerted keys for the processing of certificates, both for citizens and companies.

The European Union also has the European Electronic Identity Recognition System - eIDAS, a project that allows European recognition of electronic identities.

ICT is already widely used by government bodies, but eGovernment involves more than just the tools: it involves rethinking organizations and processes, and changing behavior so that public services are delivered more efficiently to people. Implemented well, eGovernment enables citizens, enterprises, and organizations to carry out their interactions with the government more easily, more quickly and at lower cost.

Electronic identification can guarantee the unambiguous identification of a person and ensures the right service is delivered to the person who is really entitled to it, for example for banking purposes. However, the lack of a common legal basis has prevented Member States from recognizing and accepting electronic identification schemes issued in other Member States. The insufficient cross-border interoperability of national schemes prevents citizens and businesses from benefitting fully from a digital EU.



Q&A Digital Identity Regulation Proposal - <https://digital-strategy.ec.europa.eu/en/faqs/qa-digital-identity-regulation-proposal>

3.3 Examples in the private sector

There are a lot of examples of electronic services in the private sector. One of the most important is **online banking**.

Online banking describes the mode of accessing banking services using an electronic device with an internet connection. It operates by allowing customers to access their accounts on a computer or mobile device without having to meet any physical bank attendant. This means that online banking does not include branches in its operations since the customer operates and accesses their accounts remotely. Everybody with a bank account can contact their own bank to get started in the online platform and manage their money, or even create an account in a full online bank.

Video - Internet Banking Explained

[Internet Banking Explained](#)

Another industry in which the internet has become extremely important is commerce. **E-commerce** has become fundamental in today's economy, consisting of the buying, and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. Customers use their own devices to access online stores. They can browse products and services those stores offer and place orders. Platforms that host e-commerce transactions include online marketplaces that sellers sign up for; software as a service (SaaS) tool that let customers rent online store infrastructures; and open source tools that companies manage using their in-house developers.

Video - What is E-Commerce?

[What is E-Commerce?](#)



3.4. E-commerce trends

These are some of the trends will affect online businesses in the coming months and years.

- **Augmented reality enhances the reality of online shopping.**

With this type of technology, shoppers can truly see the item they're shopping for, which helps them make a buying decision. AR really changes the shopping experience in specific industries, such as fashion and home decor because the customer can get a better feel for the item without seeing it in-person.

- **There will be a growing volume of voice search.**

As more homes adopt smart speakers, more consumers will utilize voice search to shop online, order food and organize their lives.

- **On-site personalization uses those insights to create individualized experiences.**

Implementing personalized experiences on-site or in marketing efforts has been shown to have a strong effect on revenue.

- **Big data plays a role in creating personalized experiences.**

Today, many consumers are more aware that ecommerce sites are collecting personal data, which puts them at risk. Because of this, experts have mixed feelings about the benefits of big data and how it affects the personalized shopping experience.

- **More ways to pay.**

Customers have individual needs when it comes to payment methods, but they might cancel a potential sale if they can't pay how they want on an ecommerce website. Offering a wide variety of ways to pay is a good way to increase conversion rates on mobile devices.

- **Sustainability is becoming more important.**

Consumers and businesses alike are becoming more aware of the environment. Because of this, consumers are being more conscious about where they shop and the impact it has on the environment and related effects.



3.5. Innovation on E-services

New trends are currently developing in the field of e-services, with several very clear examples:

- **IoT** (Internet of Things): The Internet of Things (IoT) is a network of connected objects and devices (i.e., "things") that are equipped with sensors (and other technologies) that allow them to transmit and receive data-to and from other things and systems-. Today, IoT is widely used in industrial configurations (IIoT) and is synonymous with Industry 4.0. The Internet of Things (IoT) is present everywhere, from homes and cities to cars and personal devices. It enables automation in smart homes, efficient energy management in smart grids, urban planning in smart cities and advanced functions in connected cars. In addition, it improves the customer experience in retail and facilitates telehealth. IoT also helps in traffic management, optimizing traffic light synchronization and detecting problems in real time.
- **AI** (Artificial Intelligence): AI has become a general term for applications that perform complex tasks that previously required human intervention, such as online communication with customers. Developers employ artificial intelligence to perform tasks more efficiently than would otherwise be done manually: customer communications, pattern identification, and troubleshooting. Its main benefits are automation, reduction of errors, elimination of repetitive tasks, speed, and availability.

Artificial intelligence in the business sphere covers a wide range of applications, from automation of repetitive processes, such as in manufacturing, to data analysis for strategic decision-making in marketing. Virtual assistants and chatbots improve customer support, while predictive analytics help predict future behaviors and early fraud detection. In addition, AI makes it easy to recognize images in medical and safety applications, and allows you to offer personalized experiences to users, such as product recommendations. It also contributes to content creation, generating images and texts for marketing strategies efficiently.

- **Blockchain:** Blockchain is an immovable and shared ledger that facilitates the process of recording transactions and tracking assets in a business network. An asset can be tangible (a house, a car, cash, land) or intangible (intellectual property, patents, copyrights, brand). Virtually anything of value can be tracked and marketed on a blockchain network, so that risk and costs are reduced for everyone involved. Blockchain is ideal for delivering that information because it provides immediate, shared, and completely transparent information stored in an unchangeable ledger that only network members with permissions can access. A blockchain network can track orders, payments, accounts, production and more. As members share a single vision of the truth, you can see all the details of an end-to-end transaction, which brings greater confidence as well as new opportunities and efficiency. Blockchain can be applied in a wide variety of sectors, including finance, supply chain, healthcare, e-voting and identity management, to provide a secure and transparent way to store and transfer digital data and assets.

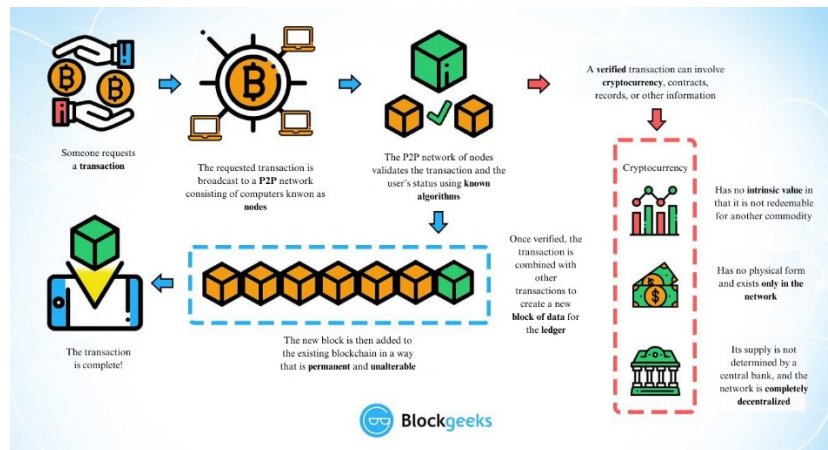


Video - What is AI? - AI Basics

[What is AI? - AI Basics](#)

Article - What is Blockchain used for?

<https://www.santander.com/en/stories/blockchain-used-for>



https://www.canva.com/design/DAGDanu55ns/zF2Td9NQiuulMDYxSn8Dsw/edit?utm_content=DAGDanu55ns&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

3.6 Online security and privacy

Internet security is a term that describes security for activities and transactions made over the internet. It's a particular component of the larger ideas of cybersecurity and computer security, involving topics including browser security, online behavior, and network security. Some of the internet security threats we can encounter include:

- *Phishing*: cyber-attack involving disguised emails
- *Hacking and remote access*: hackers are always looking to exploit a private network or system's vulnerabilities so they can steal confidential information.

- *Malware*: broad term related to viruses, worms, trojans, and other harmful programs that hackers use to cause havoc and steal sensitive information
- *Botnets*: network of computers that have been intentionally infected by malware so they can carry out automated tasks on the internet without the permission or knowledge of the computers' owners

How to protect your data online

- *Enable multifactor authentication*: authentication method that asks users to provide two or more verification methods to access an online account.
- *Use a firewall*: blocks unwanted traffic and can also help to block malicious software from infecting your computer
- *Choose your browser carefully*: a good web browser should be secure and help to protect you from data breaches
- *Create strong passwords*

On the other hand, **online privacy** is the level of privacy protection an individual has while connected to the Internet. It covers the amount of online security available for personal and financial data, communications, and preferences. It stands as a notion that only the user, and the parties they give permission to, should be allowed to access their personal information while traversing the web. Maintaining online privacy is important primarily because it strengthens your personal security against online attacks and scams. Some ways to protect online privacy are:

- *Stop handing over personal information*
- *Use a VPN*

- *Advocate for stronger legislation.*



Your Europe - Data protection and online privacy

https://europa.eu/youreurope/citizens/consumers/internet-telecoms/data-protection-online-privacy/index_en.htm

Example of E-Service in Spain: Cl@ve

One of the most prominent examples of E-service in Spain is the Cl@ve system, an electronic identification platform promoted by the Public Administration to facilitate citizens' access to government electronic services.

Cl@ve allows users to securely identify themselves on various public administration portals without needing to remember multiple passwords for each service. This system integrates different authentication methods:

- **Cl@ve PIN:** A one-time code generated in real-time through the mobile application or SMS.
- **Cl@ve Permanente:** A username and password reinforced with a security code sent to the user's phone.
- **Digital Certificate/DNIe:** Use of electronic certificates stored in the DNI or other devices.

Thanks to Cl@ve, citizens can carry out procedures such as income tax declarations, social benefits applications, medical consultations with Social Security, and other services without the need to physically visit an office, promoting the digitalization of public services in Spain

Official link: <https://clave.gob.es>

Conclusion / Summary

The adoption of E-services is expanding considerably and is more prevalent than ever in both the public and private sectors. Moreover, this presence will only increase in the coming years with the digitization of all sectors.

Governments are increasingly incorporating more processes and certificates into the digital sphere, streamlining the procedures that citizens and companies must carry out. Both national governments and European institutions are making efforts to digitize public administrations as much as possible, but the lack of a common legal framework is making it difficult to recognize these elements in countries other than their own, taking into account also that each country has a very different level of development in this area, since some have designed and implemented a clear strategy while others are somewhat behind.

Moreover, in the private sector, E-services are essential to the economy, especially in areas such as banking and commerce. Many sectors today depend almost entirely on connections established through the internet, and companies need to be updated in this regard if they want to be competitive in today's global market, marked by internationalization. The introduction of new technologies such as artificial intelligence, internet of things or blockchain has also revolutionized many sectors in areas such as speed in providing solutions to errors, interconnectivity, safety, automation or decision making.

Citizens cannot be oblivious to electronic processes; they must become familiar with them because current processes require indispensable management and understanding of technology. In addition, this dependence will increase over the years, so to perform such daily actions as asking for an appointment at the doctor, opening a bank account or buying a garment is important to be updated technologically, at least at a minimum level.

Activities of Chapter 1

Questions and quizzes

1. Mark the incorrect answer. Some examples of E-services are...
 - a. Self-help website services
 - b. Automated Distance learning and teaching
 - c. Professional advice given via e-mail or the internet**
 - d. Hosting of sites

2. Electronic services will be subject to taxation in the Member State where the ... is established.
 - a. Customer**
 - b. Employer
 - c. Company
 - d. Government

3. Which actions are taken by the Commission to develop E-Government in the EU?
 - a. Ensuring European platforms can work together and interact with one another
 - b. Funding large-scale e-participation projects
 - c. Standardizing electronic health records
 - d. All the above**

4. Why is accessibility fundamental in website design?
 - a. To limit access to a specific audience

- b. To ensure that content is accessible to a wide range of users, including those with disabilities and technological limitations
- c. To connect with the younger generations
- d. To create more aesthetic and visually appealing websites

Fill the Gaps quiz

The services provided ... encompass services delivered via the Internet that, by their nature, are essentially ... and require minimal ... intervention, and that are not viable apart from ... technology.

electronically / automated / human / information

Match quiz

Service	E-service or not?
<i>Antivirus software downloads</i>	E-service
<i>Downloads of designs</i>	Not E-service
<i>Telecoms and broadcasting services</i>	
<i>Hosting of sites</i>	
<i>Offline data services</i>	

Activities of Chapter 2

Questions and quizzes

1. Which of these is a benefit of E-services?
 - a. Efficient and detailed incident tracking to ensure satisfactory problem resolution
 - b. Provide a steady flow of user feedback that can be captured and tracked over time
 - c. Ability to automate answers to routine questions
 - d. All of the above**

2. Which is not a nature of the challenges of E-services?
 - a. Organizational
 - b. Legislative
 - c. Economic**
 - d. Social

3. The application of electronic services requires, on a legislative level, ...
 - a. Modifications and simplifications of normative acts and administrative procedures**
 - b. Not any action by the legislative institutions
 - c. Establish just a general legal framework
 - d. A non-unitary approach

True/False quiz

1. E-services can lead to cost savings.

True

False

2. EU Member States are not considering any measures to tackle E-services challenges.

True

False

3. E-services are really helpful in terms of problem resolution.

True

False

Fill the Gaps quiz

The general low degree of digital literacy among potential users, their reticence towards a ... interaction with public administrations and the extension of electronic delivery of ... services, lack of ... in the way personal data are handled by authorities and the low level of awareness on the existence of the option to ... access public services, represent the most important barriers to the widespread use of these platforms.

depersonalized / public / confidence / electronically

Activities of Chapter 3

Questions and quizzes

1. Which factors have contributed to the rise of E-services?
 - a. Financial sustainability
 - b. Increased Internet Penetration
 - c. All of them**
 - d. Personalization and Targeted Marketing

2. Select the use of the E-services in the public sector.
 - a. Authentication
 - b. Identification
 - c. None
 - d. A and B**

3. What has prevented EU Member States from recognizing and accepting electronic identification schemes issued in other Member States?
 - a. The insufficient resources invested
 - b. The lack of a common legal basis**
 - c. The lack of technological development in Europe
 - d. The influence of external factors

4. Which element is becoming more important in E-commerce for companies and consumers?
 - a. Aesthetic
 - b. Traditionality
 - c. Sustainability**
 - d. Depersonalization

5. The term “internet security” ...

- a. **Describes security for activities and transactions made over the internet**
- b. Is the level of privacy protection an individual has while connected to the Internet
- c. Covers the amount of online security available for personal and financial data
- d. Blocks unwanted traffic and can also help to block malicious software from infecting your computer

True/False quiz

1. E-services are only related to the public sector and the administration.

True

False

2. Customers might cancel a potential sale if they can't pay how they want on an ecommerce website.

True

False

3. Enable multifactor authentication is a way to protect your data online.

True

False

Match quiz

Match the factors contributing to the growth of E-services with the correct sector.

Public sector

Private sector

- Promotion of proper and massive use of eServices
- Increased Internet Penetration
- Personalization and Targeted Marketing
- Interoperability and the use of standards
- Secure Payment Gateways

Match the sentences with the correspondent innovation in E-services.

IoT

AI

Blockchain

- Its application in smart contracts allows automatic execution of agreements without the need for intermediaries
- Its sensors in smart cities can help monitor and manage urban infrastructure more effectively
- Automates tasks and makes data-driven decisions
- It connects devices to collect and share data, improving efficiency and convenience
- It is used in anomaly detection to identify unusual patterns in large data sets
- Provides greater security and transparency compared to centralized systems

Teaching Guidelines

Recommended Time	Learning Activities/Advice for Trainer	Materials	Resource
45 min.	<ol style="list-style-type: none"> 1. Welcoming the learners 2. Icebreaker – Presentation of trainer and learners: 3. Rules of the training session – agree the rules everyone should respect during the training (phones on silent, ask questions, no question is silly, be constructive, it is OK to disagree with others, disagreement is not to be taken personally or as an attack, have fun and enjoy yourself etc.), write them on a Flipchart paper and ask everyone to sign. 4. Learning objectives and competencies: present the slide with the Learning Objectives and Competencies 	<ol style="list-style-type: none"> 1. A welcoming flipchart paper/ slide 2. Flipchart paper and Markers 3. Slides x to y 	Introduction – Learning Objectives
15 min	<p>What are E-Services?</p> <p>Begin by explaining the concept of E-Services. Use examples to illustrate different types of E-Services and their importance in today's digital world.</p>	<p>Video-projector:</p> <p>To display slides and any multimedia content related to E-Services.</p>	Chapter 1 Subchapter 1.1.

<p>30 min</p>	<p>1. Explain the VAT rules for electronic services within the EU. Highlight the principle that electronic services are taxed in the Member State where the customer is established, whether they are a business, a professional entity, or an individual end consumer.</p> <p>2. Provide different examples to illustrate these rules.</p> <p>3. Use real-life scenarios and case studies to demonstrate the application of VAT rules on electronic services. Engage participants in discussions and problem-solving activities to reinforce learning.</p>	<p>Video-projector:</p> <p>To display relevant slides and multimedia content.</p>	<p>Chapter 1 Subchapter 1.3.</p>
<p>30 min</p>	<p>1. Introduce the concept of smart public services (eGovernment). Explain how technology is used to provide services to citizens. Use slides to illustrate the benefits and examples of smart public services.</p> <p>2. Group activity: Divide the participants into small groups: Each group will be assigned a case study related to smart public services. The case studies can include examples such as:</p> <ul style="list-style-type: none"> - Applying to study abroad - Opening bank accounts online 	<p>1. Flipchart paper and Markers: For group activities and presentations.</p> <p>2. Internet Access: For research and accessing online resources.</p>	<p>Chapter 1 Subchapter 1.4</p>

	<p>- Filing taxes online</p> <p>3. Each group will present their case study to the class, highlighting key points and discussing the benefits and challenges of the digital service.</p>		
30 min	<p>1. Divide the participants into small groups: Each group will focus on one specific benefit of E-Services</p> <p>2. Each group will present their findings on the benefits of E-Services to the class.</p> <p>3. Transition to Challenges: Facilitate a discussion on the challenges of implementing E-Services based on the provided content.</p>	<p>1. Flipchart paper and Markers: For group activities and presentations.</p> <p>2. Internet Access: For research and accessing online resources.</p>	<p>Chapter 2 → Subchapters 2.1. 2.2</p>
30 min	<p>1. Divide participants into small groups</p> <p>2. Each group will focus on one specific internet security threat:</p> <ul style="list-style-type: none"> - phishing - hacking - botnets <p>3. Each group will present their findings on the assigned internet security threat. Focus on key points and recommendations for protecting against these threats.</p>	<p>1. Flipchart paper and Markers: For group activities and presentations.</p> <p>2. Internet Access: For research and accessing online resources.</p>	<p>Chapter 3 → Subchapters 3.6</p>
30 min	<p>1. Divide the participants into small groups</p> <p>2. Each group will focus on one specific example of E-services in the private sector:</p> <ul style="list-style-type: none"> - Online banking - e-commerce 	<p>1. Flipchart paper and Markers: For group activities and presentations.</p> <p>2. Internet Access:</p>	<p>Chapter 3 → Subchapters 3.2, 3.1</p>



	<p>3. Each group will present their findings on examples of E-services in the public sector. The same for the private sector</p>	<p>For research and accessing online resources.</p>	
--	--	---	--

Setting methodology and design of the online (Self) Assessment Tool

The DSSI online (Self)-Assessment Tool

Assessment Methodology

The DSSI Course is an online Training Course through an OER Learning Platform. Thanks to evaluation tools, the learners will follow custom-made modular training reflecting their level of qualification. All training contents have a modular structure. This non-formal learning method assures flexibility and easy access for the trainees in acquiring new high-quality knowledge, skills, and competencies.

1. Self-Assessment Test

It is suggested that with the completion of each DSSI Training Module, the participant will be able to follow a self-assessment tool that will provide online evaluation and evidence of the participants' acquired skills and improvement.

- **Each Module Assessment Test includes 10 questions** in the form of multiple choices. The assessment tool will have the form of an interactive questionnaire, which will assess the participant's performance in each Module separately and it will provide a **% score**:
- If the score for the Module is **0 – 50 %** a text will appear saying that the learner has not achieved the learning outcomes of the module and we strongly recommend that he/ she does not proceed to the next Module, but he/she revisits this Module,
- If the score for the Module is **51– 100 %** a text will appear saying that the learner has acquired the basic knowledge of this Module, and he/she can proceed to the next Module.

2. The DSSI Assessment Questionnaire.

This assessment questionnaire will be available to learners after the completion of the DSSI 5 Module Training Course. The questionnaire will be an **online interactive self-assessment tool**, which will also be able to work offline as part of the DSSI e-books series, for a face to training or training in a blended

environment.

MODULE NUMBER TO WHICH QUESTION REFERS	LEARNING OUTCOME (LO) TO WHICH QUESTION REFERS	QUESTION	POSSIBLE ANSWERS/ Multiple Choice
5	Chapter 1	What are e-services?	<p>A) Services delivered through traditional postal mail</p> <p>B) Services provided electronically via the Internet, which are automated and require minimal human intervention</p> <p>C) Face-to-face customer service interactions</p> <p>D) Services delivered exclusively through television broadcasts</p>
5	Chapter 1	Which of the following is an example of a website service provided electronically?	<p>A) Physical delivery of CDs</p> <p>B) Automated maintenance and support of websites</p> <p>C) In-person customer service</p> <p>D) Telephone banking services</p>
5	Chapter 1	Which of these services is NOT considered an e-service for VAT purposes?	<p>A) Online data warehousing and memory services</p> <p>B) Downloads of e-books</p>

			<p>C) Physical goods ordered via the internet.</p> <p>D) Automated distance learning programs</p>
5	Chapter 1	In which situation is VAT applied to the state where the customer resides, and the business must declare and pay it?	<p>A) When a service is provided to a business in another member state</p> <p>B) When a service is provided to an end consumer in another member state</p> <p>C) When a service is provided to a business or end consumer in a non-EU country</p> <p>D) When a service is provided to a local business within the same state</p>
5	Chapter 1	Which of the following actions has the EU Commission taken to promote eGovernment?	<p>A) Standardizing physical mail delivery</p> <p>B) Ensuring European platforms can work together and interact with one another</p> <p>C) Limiting the use of digital identities</p> <p>D) Reducing funding for e-participation projects</p>
5	Chapter 1	Why is User Experience (UX) important in the context of e-services?	<p>A) It complicates the user interface</p> <p>B) It decreases user satisfaction</p>

			<p>C) It ensures that the system works on all devices and improves user retention</p> <p>D) It reduces the number of available services</p>
5	Chapter 2	Which of the following is a benefit of e-services?	<p>A) Increased need for in-person support</p> <p>B) Slower response times for user queries</p> <p>C) Potential for higher quality answers with links to detailed information</p> <p>D) Less efficient incident tracking</p>
5	Chapter 2	What is a major organizational barrier to the digitalization of public administration according to the European Public Administration Network study?	<p>A) Lack of internet access</p> <p>B) Insufficient human and financial resources</p> <p>C) High digital literacy among potential users</p> <p>D) Excessive integration with other public institutions</p>
5	Chapter 3	What is an example of e-services in the public sector?	<p>A) Traditional postal services</p> <p>B) Online banking</p> <p>C) Electronic identification systems like eIDAS</p> <p>D) Physical retail stores</p>
5	Chapter 3	Which technology is used to enhance	<p>A) Voice search</p>

		the reality of online shopping in e-commerce?	<p>B) Augmented reality</p> <p>C) Traditional cash registers</p> <p>D) Analog telephones</p>
--	--	---	---

-The **Drop-Down Analytical Score** will refer to the scores achieved for the individual Modules.

For each Module:

+ When the score is 0 – 50%, a text will appear saying that according to the score, the learner is not yet familiarized with the contents of the Module, and we recommend a revision of the Module.

+ When the score is 51 – 100% a text will appear stating that the score suggests that the learner has a good understanding of the Modules and its concept.

-When the learner concludes all 6 Modules and their assessments, an **Overall Score is calculated automatically**.

The Overall Score will have the following suggested evaluation.

SCORE	LEVEL	WHAT DOES IT SAY?
80-100 %	EXCELLENT	Well done! Your knowledge is of a very high level. You can be proud of yourself. Digital Skills is a sector that you know quite well. Visit the Dropdown analytical score and familiarize yourself with the score that you achieved from each of the Modules. You may want to revisit the areas in which you might have made minor mistakes!
50-80 %	AVERAGE	Good job! Your knowledge is at a good level. Just a bit more exercise and you will become proficient in Digital Skills. Visit the Drop-down analytical score for details on individual Modules. Keep trying and revisiting the Modules you are not that familiar with, to reach the EXCELLENT score.

0-50 %	LOW	We advise you to revisit and repeat your efforts! We know that if you insist you will manage more! Visit the Dropdown analytical score for details on individual Modules. Invest some extra time in reading and obtaining some more information about Digital Skills by returning to the training modules! When you take this test next, you will reach a score of 100%!
--------	------------	--

The interactive assessment tool will provide an evaluation of skills acquired and knowledge gained and will offer results and targeted evaluation.

It will be possible to:

- offer customized advice on action for improvements,
- offer direct links to specific areas of the Training Course and

3. An Improvement Self-Assessment Question will be available to be answered at the end of each module.

To obtain the quality and success of the vocational training offered, the proposal is to add a question of self-evaluation, allowing users to assess their progress after consulting the modules by comparing their acquired knowledge with their starting point.

With the completion of each module, the user will be presented with the following question:

Please rate the improvement of your knowledge on the subject. (corresponding Module Title), because of the completion of the above module.

0%, 25%, 50%, 75%, 100%



Co-funded by
the European Union





Co-funded by
the European Union

