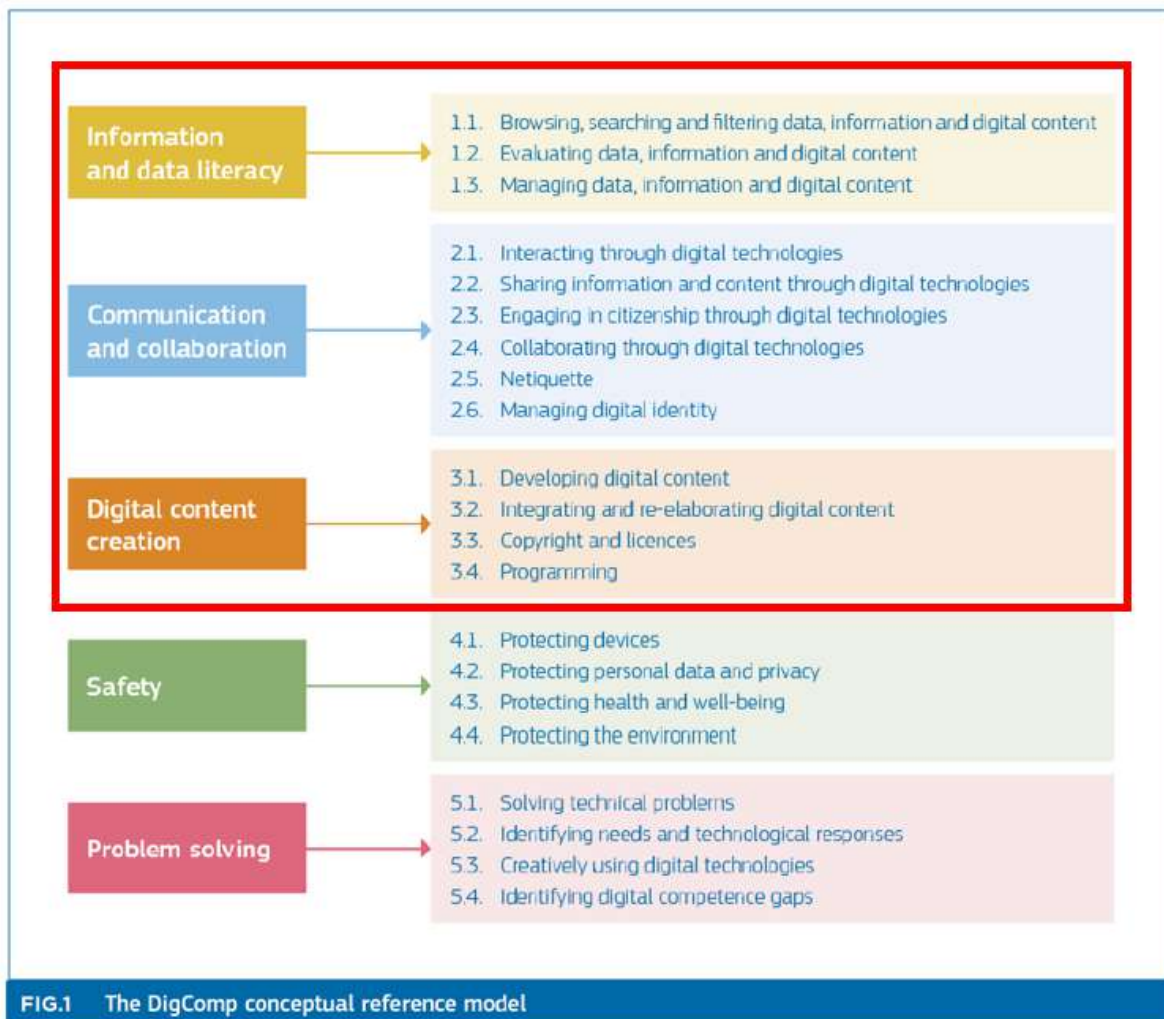1. Introduction

The digital landscape is changing rapidly and it is vital to be able to keep up with the changes but also to know which ones are crucial for the successful inclusion in the workplace, whether as an entrepreneur or an expert in a chosen field. According to the Digital Competence Framework, "*digital competences involve the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society*". Therefore, the aim of this course is to enable the attendees through usage of various tools to achieve the digital skills most needed in today's business environment.

This course will mainly focus on the first three sections of the DigiComp conceptual reference model (as shown on the image below, outlined in red): Information and data literacy, Communication and collaboration and Digital content creation.

Information and data literacy
1.1. Browsing, searching and filtering data, information and digital content
1.2. Evaluating data, information and digital content
1.3. Managing data, information and digital content

Communication and collaboration
2.1. Interacting through digital technologies
2.2. Sharing information and content through digital technologies
2.3. Engaging in citizenship through digital technologies
2.4. Collaborating through digital technologies
2.5. Netiquette
2.6. Managing digital identity

Digital content creation
3.1. Developing digital content
3.2. Integrating and re-elaborating digital content
3.3. Copyright and licences
3.4. Programming

Safety
4.1. Protecting devices
4.2. Protecting personal data and privacy
4.3. Protecting health and well-being
4.4. Protecting the environment

Problem solving
5.1. Solving technical problems
5.2. Identifying needs and technological responses
5.3. Creatively using digital technologies
5.4. Identifying digital competence gaps

FIG.1   The DigComp conceptual reference model

1. *(Council Recommendation on Key Competences for Life-long Learning, 22 May 2018, ST 9009 2018 INIT).*

The concepts will be covered through sections on design thinking as one of the leading examples of non-linear problem solving, digital content creation and introduction to programming.

So, let's dive in!

1.1. Digital skills for entrepreneurship (and everyone else actually)

In this section you will learn about the various digital skills which should be in your business "arsenal" as an entrepreneur but also as an expert in a specific field of work. They are the building blocks of your professional life and you have to master each one based on the needs of your business.

Intro to Digital Skills for Entrepreneurship
Entrepreneurship Center Split

UGDH_Intro digital
skills.pdf

Task exercise:

You are the manager in a medium sized company and during the last board meeting it was decided that you will be leading the implementation of the new CRM application. The existing CRM application is becoming obsolete, but the departments that are using it have become heavily

reliant on it for their day-to-day business. Your task is to prepare a *next steps plan* which outlines how you would approach this implementation using the tools and skills mentioned in the presentation. You should send the plan to the lecturer before the live session. On the live session we will go over the plans and evaluate what could be done differently.

Additional materials:

https://www.coursera.org/learn/leadership-collaboration – Focus especially on the Teamwork and Negotiation modules and the concepts outlined in them, and try to implement them in the task exercise

https://www.mckinsey.com/capabilities/operations/our-insights/secrets-of-successful-change-implementation – article on successful change implementations. Adds to the topic of implementing changes in companies and the reasons they often fail

1.2. Improving online business security

When operating in a digital environment, its important to be able to secure your personal and professional data. This is why online security is becoming a focus point for the large majority of web-based businesses. With the advent of cloud computing, the topic of cybersecurity becomes even more important, because your clients and customers will expect you to keep their data and products safe. This is where cybersecurity planning comes into focus. Below we are giving you several key points which have to be considered when planning a cybersecurity strategy:

1. **Cybersecurity training**

Within your online business, you are responsible for the way security is handled. This is why you should insist on the basic training (i.e. online courses, internal training). Establishing rules of conduct is also vital for everyone to know how they should behave in any given situation. with customer and other important data

2. **Keep your gear "tidy and clean"!**

Keep your software up to date and your machines "clean". This applies to your antivirus software, regular operating system upgrades, web browser etc. It is also important to separate the private elements from business critical machines

3. **Backup is crucial**

Regularly backup all your critical data. Come to think of it, if possible create regular weekly backup of all of your business data. Financial data, invoices, accounts…those are all important and may prove to be very hard to dig up after a crash. Use the cloud here if you can

4. **Secure your Wi-Fi**

This is one of those things that makes all the difference, since all of us have a tendency sometimes to connect to open wireless networks without thinking that somebody might be "listening". Invest in a good VPN, be vary of what you are working on while sitting in coffee shops and you'll be fine

5. **Password and authentication**

One survey on password usage[*] discovered that 4% of people use passwords that contain the name of a pet or a loved one. Change your password every three to six months, use two-factor authentication and be wary of how you use your passwords!

The course listed below is an introductory course which is designed to introduce online security to beginners.

https://learndigital.withgoogle.com/digitalgarage/course/improve-online-security – beginners course, explains the basic concepts (encryption, 2-factor authentication, device control...)

2. Digital sharing & collaboration platforms and their differences

Sharing data and information and using collaboration tools and principles is the backbone of todays digitized world. Digital data sharing can be defined as the ability to distribute the same sets of data resources with multiple users or applications while maintaining data fidelity across all entities consuming the data. Traditionally defined as a concept in the world of academic research, data sharing as a technology has become highly relevant for businesses of all sizes, whether they need to disseminate data across a large, global organization or need to augment internal data with broader market data to gain better insights[*].

Collaboration platforms are applications (software) which enable dislocated teams to cooperate on various business issues, generate new ideas, implement task management, facilitate communication, etc.

In this section, the goal is to learn what are the various collaboration platforms and to asses which one would best fit the need of the project you are working on. Sharing of data through those platforms is normal and to be expected, but it is necessary to take into account the regulations your company has for sharing data through collaboration platforms. In this section you should take into account what you learned in Section 1.2. regarding online security.

Additional resources:

https://academy.miro.com/learn/learning-path/miro-essentials – learning the essentials of Miro whiteboarding

https://academy.miro.com/learn/learning-path/mapping-and-diagramming-in-miro – learning how to properly map and diagram business processes is extremely important. This tutorial will explain how its done

https://slack.com/help/articles/360059976673-Slack-video-tutorials – using an encrypted channel for daily communication is a must

https://www.youtube.com/watch?v=xky48zyL9iA&ab_channel=Trello – Getting started with Trello series shows you how to start using Trello for work activity tracking

https://help.figma.com/hc/en-us/sections/4405269443991-Figma-for-Beginners-tutorial-4-parts- – Figma tutorials is a 4-part series that teaches you the basics of working in Figma through the design of a social media app

*https://www.snowflake.com/guides/what-data-sharing

Task exercise:

After you go through the materials above, its time to connect the dots. Choose your own project; it can be anything from a business plan, to a selected process re-definition or a new app prototype and do the following:

- Open a Miro board, and insert all of the materials you need for your project. Add ll of your teammates to the board

- Create a Figma Starter account and create a product prototype. Include some teammates and show them what you have done

- Create a Slack account which you will use for your meetings with the team (your team is scattered: part of it is in Malaga, part in Split and part in Stuttgart)

- Create a Trello board to keep up with all the tasks you created

- <u>Send the review to the course lecturer with a short overview of the usability of the tools and explain what you found most challenging</u>

Should you have any problems with the completion of this task, do not hesitate to contact the course lecturer.

2. Workshop – Design thinking

One of the most effective ways to foster innovation and enable creation of quality solution in any business is design thinking. It is primarily focused on the customer, the user of your product whether you are a developer developing an application, an architect solving a complex design problem, or are struggling with an uncommon problem and need an out of the box solution.

So what is design thinking?

Design thinking is an innovation and problem solving approach that differs from other approaches because it focuses on solutions to a problem instead of focusing on the problem itself. Also, it turns its focus on the real people, putting them at the center of the development process. This enables you, the solution designer, to create products that are better in tune with your users. This kind of solution development is called *human centered design*.

Human centered design has four stages: clarify, ideate, develop, implement (Interaction Design Foundation divides the process in five stages. You can analyse both approaches on the links given at the end of the section).

1. **Clarify** – this phase is dedicated to user research and assessing what the customers really need. During this phase you should not only analyse the needs, but also analyse the pain points of the future clients, which requires empathy
2. **Ideate** – in this phase your goal is to to generate several ideas which can be tested. Here you should use different ideation methods, to avoid general solution assumptions
3. **Develop** – you can view this phase as a clay figurine of sorts, which you create out of combining and blending all of the ideas and possible solutions from the Ideate phase. The goal is to get a prototype that could be ready for implementation
4. **Implement** – this is the final phase, and as the name suggests, during this phase you implement the developed prototype. However, since users' needs are evolving, the same happens to your prototype. Just remember to keep the human (users') needs at the centre of each implementation cycle!

In this section we will have a live workshop in which we will go over the whole process. The task exercise is intended for you to try and go over the process on your own, while the workshop is here to show you step by step how the process goes. Additional materials will help you learn more about the design thinking process.

Task exercise:

You're part of a company that's trying to improve your market share in a specific region (the company main business can be anything from a streetwear company to a bank, it's your choice).

However, since our company has very little market share in that region, and you are relatively unknown in that geographic region, you'll have to come up with new strategies on how to improve. You've decided that for the most part you will use design thinking and its five stages to try and understand the customers in that area but also provide the team a break from standard thinking patterns.

Your job is to:

- Analyse the customers' needs

- State users' needs and problems

- Ideate – create new ideas and challenge assumptions

- Prototype (Develop) – create new solutions

- Testing (Implement) – this part of the process will in your case be unattainable, but you can still try and do a mock implementation based on the explanation on the workshop

Key part in this exercise is that you <u>must create at least three types of personas</u>, fictional users based on your market analysis. Remember, they are fictional, but they will represent the main focus groups of your products, and they will be key in creating the strategy for that region.

Additional materials:

https://www.interaction-design.org/literature/topics/design-thinking

https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process – here you can find the stages of the process, use freely the links provided within the article for examples and ideas

https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them – persona types breakdown. This will be useful to you in business setting moving on

Food for thought:

https://hbr.org/2018/09/why-design-thinking-works

3. What is digital content

Digital content is any content that exist in digital form such as: audio-video, blog post, social media posts, articles, images, e-books, just to name a few. Creating digital content often includes a blend of all of the listed forms in many cases with brand specific messaging (such as social media posts). In this section you will learn about digital content creation, digital marketing and we will have a live workshop on the topic of content creation.

Content Creation 101 – What is it actually?

Content creation is at its core, the creation or sharing of information or media for the consummation of specific audiences. One might call it digital marketing material and they wouldn't be off point. Examples of the content could be blog posts, TikTok posts, Instagram videos/posts/reels, podcasts, native articles, etc. In general, the end goal of the content is to promote (sell) an idea or a product, which would generate a profitable user/customer reaction.

The key tenet of great content creation is being able to understand what your audience needs. This is why the whole process starts with firstly analysing your audience. Go over the points below to get a broad picture of the process, but be sure to go over the additional resources at the end of the section.

1. **What am I promoting?**

First, you need to understand what it is that you are promoting. It seems easy, but understanding the product and the client is the first step to a successful and quality content creation. What is the brand I represents, what does it stand for, what is their culture, who are the people behind the brand…Those are all the key questions you need answered before delwing in further research

2. **Audience – who are they?**

Who is your audience? Where are they located? Age groups? What do they care about (or don't care)? Statistics are vital, because they lay the groundwork for the planning of your content creation. As with any product, you need to know who you are promoting the product to

3. **Is there competition? What do they do and how?**

You need to know who your competition is and how they are approaching their customers through digital channels. Are they focusing on blogs, podcasts or something else? This will help you in your approach when shaping the content

4. **Develop content distribution plan**

Knowing when to approach your audience is one of the key moments in content distribution. If your target audience is online mostly during the morning when riding on the train, there is no use targeting them at eight o'clock in the evening, because they wont see your content.

5. **Monitoring and tracking your content**

Defining the metrics for your content is necessary to be able to follow traction, but also to pivot if necessary. Some of the metrics to be followed are: engagement and traffic, social media traction, conversions (what good is a campaign if there's no sales, right?). Be on top of every metric you defined as important and be ready to change things of necessary

Additional resources:

https://learndigital.withgoogle.com/digitalgarage/course/digital-marketing – creating content is great, but to make a difference you need to know how to establish your online presence. This course will cover everything from online brand presence and marketing, social media to Google search and analytics

Marketing with TikTok specialization – this 3-part course will help you understand if TikTok is in fact the right tool for your business through understanding TikTok and its users, marketing on TikTok and advertising.

4. Introduction to programming

Programming at its core enables humans to tell a computer (in a language a computer can understand) to perform a task to solve a problem. In today's world it's impossible to imagine anything done on a computer without some form of programming behind the applications we use. Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms.

But, if you've never tried programming, it can be a little daunting to start. So many languages, tools and options can be scary. This is why we prepared a quick guide on how to start with programming:

1. **Why do I want to learn to program** – you might want to start a new hobby, or be better prepared for the job market when you leave college. Or make a side hustle. Whatever the reason, it guarantees to open new opportunities at the start of your career
2. **What I want to program** – you should define early on what you want to work on, so you don't lose time and dive right in. Do you like gaming? Do you have an idea for a great new app? You want to crunch data and need a way to present them in a new way? Great, go for it! The goal is to have an idea what you want to do, so that the next part can be easier
3. **Picking the right tools** – many new programmers do something called language hopping. They start with one language, then see a recommendation for a new one, and start working with it. In order to truly learn the craft you need to know the tools you are using. When you learn how to do things with one tool, using a different tool to do the same thing will eventually be easy. Pick one language/IDE and stick with it
4. **Start your first project** – as with everything else you just have to start! After you picked the language and the tools, try creating a few Hello World! equivalents. Open a GitHub account, and keep track of everything you do. Language terminology isn't easy, and it will take some time getting used to, but the important thing is to keep going and not give up

In this section, our goal is to give you a high-level overview of what programming is and to let you learn the basics of computer science and programming. The courses listed below will provide you with the necessary tools to start your programming journey.

If you need any assistance or would like to learn more feel free to contact us.

Additional materials:

https://learndigital.withgoogle.com/digitalgarage/course/basics-code – beginner course that explains the basics of programming and programming languages. We recommend starting with this course to get a broad image of programming

https://www.youtube.com/watch?v=zOjov-2OZ0E&ab_channel=freeCodeCamp.org – this course offers the basics of computer science and concepts like variables, statements, functions, data structures…This course is designed to pull you in deeper into programming and computer science

https://www.youtube.com/watch?v=hDzgO2FB_ms&ab_channel=freeCodeCamp.org – building a no-code application course that covers the basics. No-code has gained significant traction for a reason, mostly because it can help you build your application much faster than conventional development would. However, it has its limitations, which you will also see in this video