



Data Skills 4 SMEs

PROJECT HANDBOOK

Online orientation and training resources for the skills development in European Small-and Medium-sized Companies (SMEs) for an advanced data management.



HANDBOOK



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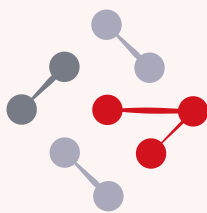
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INTRODUCTION

This Project Handbook intends to describe how online orientation and basic learning for the improvement of data management skills can be arranged in a successful way, adequate to the needs of European SMEs, the very aim of the ERASMUS+ project DataSkills4SMEs (2019-2022). The project bases its elaborations on the pilot implementation of 4 online orientation and training courses, selected, compiled and arranged “by companies for companies”, as first step towards (and before) a structured training approach, to learn in-depth knowledge and practical operations. This orientation and basic learning – arranged for self-organised learning approaches without any tutoring or teaching method – has the purpose to help companies to get a first overview on what are the main thematic aspects, technical features and mostly encountered problems, and tries to offer first hands-on solutions, without going too much into technical details or offering already a structured and tailored approach to learning the details.

This should raise awareness of many companies about their training needs, and is intended to be a good first step towards taking data management skills seriously into account for the single companies. In this way, if the online resources also offer a help to offer a series of “quick fixes” and “fast wins”, then this is an intended positive side effect.

The pilots have been selected, compiled and arranged by 4 SME membership organisations, 3 national ones from Austria (Österreichischer Gewerbeverein ÖGV), Germany (Der Mittelstand. BVMW) and Italy (CONFAPI), as well as one pan-European confederation of SME associations (European entrepreneurs CEA-PME), and has been scientifically analysed and technically supported by the University of Tor Vergata in Rome (Italy), with its Department for Economy and the E-Learning Centre of the same university, called “Scuola IaD”.

01

Project summary



01

Project summary

● 1.1 PROJECT BACKGROUND

The issues that the project tackled have specific transnational relevance. As the EC has already pointed out in 2018, the opportunities brought by the digital revolution had been taken on very slowly by SMEs until the Coronavirus pandemic of 2020-2021. Many of them still found it difficult to know in which technologies to invest and how to manage their digital transformation. In this respect, SMEs have been particularly delaying the integration of digital technologies: only one out of five SMEs in the EU were in 2018 highly digitised, yet they represent over 98% of all businesses in Europe. As European Entrepreneurs CEA-PME we closed in February 2020 the project DigitaliseSME that aimed to foster the digital transformation in European SME, in collaboration with 5 national Digital Innovation Hubs from Germany, Spain, Czech Republic, Romania and The Netherlands, and found indeed a great need for tailor-made support to integrate digital technologies into the production and service delivery processes of SMEs. We also stated during this project the particular lack of skills in data management inside the smaller and mid-sized companies, which always represented the most challenging bottleneck to further technological upgrading. That required more action and innovative, forward-looking approaches to the improvement of digital skills in SMEs. It was a particular combination that with the end of DigitaliseSME (www.digitalise-sme.eu), the project DataSkills4SMEs has been started practically without interruption. And it was even more providential that in the moment of the uptake of DataSkills4SMEs the COVID-19 pandemic broke out and digital skills and solutions were more needed than ever.

Our project proposal added action to the EU's Digitising European Industry Initiative (April 2016), especially to the measure to establish Digital Innovation Hubs (DIH), focussing on the common programme for training and development of skills of SMEs managers and employees. In line with the DIH initiative, we proposed a transnational, open/inclusive model to ensure that human resources have the necessary skills to work with new ICT technologies, and data protection and management issues. In this way, we intended to help companies accomplish their digital transformation. Furthermore, the collaboration with the University of Tor Vergata in Rome as partner providing expert knowledge and competences in terms of methodology and

use of R&D outputs, was in line with the EC conclusions presented in the Study on innovation in Higher education (January 2014, DG Education and Training), in particular:

1. Innovation in higher education stimulates the development of partnerships between higher education institutions and other organisations, especially businesses.
2. Innovations in higher education illustrate well two general key aspects of the innovation process: 'doing new things' and 'doing existing things better'. Data management for SMEs is becoming a crucial issue, especially in the last years since we are experiencing the acceleration of the digital transition, which was further reinforced by the COVID 19 pandemic. The project had the ambition to tackle these challenges and produce significant outcomes through its content and the peculiarity of its partnership.



● **1.2 PROJECT OBJECTIVES**

The project DataSkills4SMEs aimed to provide innovative and forward-looking solutions to digital challenges in training of SMEs staff across Europe. It focused on the up-skilling and re-skilling of employees and the same owners of Small and Medium-Sized enterprises initially from Germany, Austria and Italy, and in the future in the whole EU and beyond, in order to empower them to be ready for the future and resilient in the present.

This need is linked to continuous digital transformation and the need for the SMEs to be updated on new technologies and modern processes. The project was shaped to be an added value for small and medium-sized enterprises, from which they could benefit in terms of Customer Relationship Management, of Online Sales and Digital Marketing, but also for more reliable processes in Cyber Security and a more efficient "Paperless Office" Management.

This was planned to be achieved through guiding and orienting SMEs toward the adoption of innovative learning methods for their staff across Europe, in order to deal properly with advanced data management.



02

Project results
and activities

02

Project results and activities

● 2.1 PROJECT DURATION

The project lasted for 36 months, and it was implemented between December 2019 and November 2022. The activities were articulated as follows:

● 2.2 PROJECT TIMETABLE

WP 2 Cross-sectoral studies

Country reports and analysis of the specific work processes that are affected by technological innovations (M1-6)

Report about SMEs' needs in terms of training (M7-10)

Recommendations for human resources development and training in SMEs in technology and data management (M11-12)

WP 3 Development of the training model and resources

Definition of training delivery modes (M13-18)

Identification of training contents (M13-20)

Development and deployment of a pilot test training programme with (self-) assessment tools (M13-18)

Tests and other evaluation proofs to measure the learning progress of trainees (M18-20)

Development and deployment of a pilot test training module for SME staff and managers (M18-23)

Evaluation of Pilot test training module (M23-M24)

Re-design of delivery model and re-development of training contents and modules for further 3 thematic areas (M25-28)

WP 4 Piloting of the training model and evaluation

Re-piloting 3 new orientation and training modules for SME staff and managers (M29-34)

Orientation videos and webinars for potential users of 3 new modules (M30-33)

Evaluation of new pilot programmes with a survey (M35)

Elaboration of project handbook and sustainability plan.
Final dissemination event (M36)

The transversal work packages WP1 - focussed on project management and coordination - as well as WP5 - for communication and dissemination - have to be added.

● **2.3 PROJECT PARTNERS**

European Entrepreneurs CEA-PME – the European umbrella organisation of national, sectoral or regional business support organisations for SMEs, with 27 members in 33 European countries, representing 2.4 Million companies with more than 20 million employees. Der Mittelstand. BVMW e.V. – the German SME Association member of European Entrepreneurs CEA-PME, representing more than 900.000 companies in Germany together with the Mittelstand Alliance of 36 sectoral and generalist organisations lead by BVMW, and with more than 300 offices in Germany and 65 offices all over the world, maintaining relations with more than 100 countries.

CONFAPI - Confederazione Italiana della Piccola e Media Industria Privata – the Italian SME Association member of European Entrepreneurs CEA-PME, representing more than 116.000 companies in Italy together with 13 sectoral organisations lead by CONFAPI, and with 65 offices all over Italy. ÖGV – Österreichischer Gewerbeverein – the Austrian SME Association member of European Entrepreneurs CEA-PME, representing more than 30.000 companies and self-employed in Austria. Università degli Studi di Roma Tor Vergata – the technical-scientific partner of the project, with its Department for Economy and the E-Learning Centre of the same university, called "Scuola IaD".

● **2.4 PROJECT DESIGN AND IMPLEMENTATION**

According to the Project Proposal, the umbrella confederation of SME associations 'European Entrepreneurs CEA-PME' was in charge of leading the partner consortium of national SME associations like BVMW (D), CONFAPI (I) and ÖGV (A) and the technical-scientific partner University of Tor Vergata, Rome, Scuola IaD (I). A Kick-off meeting was organised and coordinated by European Entrepreneurs CEA-PME on 28th & 29th of Jan 2020 live in Brussels.

The work package 2, first in row on the project timeline, was focused on a cross-sectoral study which has been implemented during the first year of the project. The aim of this work package was to analyse the challenges that SMEs encounter with respect to the digital transformations underway, training needs in digital skills, data management and data protection. This was - at that point in time, with the then recent outbreak of the COVID-19 pandemic in March 2020

- strongly influenced by the urgent need of many companies to recover in a short time their delays in digitalisation and in particular in digital skills development, e.g. for video meetings, online sales and data protection. The results of the research phase have been articulated in country reports, in a document on the training requirements for SMEs and finally providing recommendations for an EU-wide strategy for training of SME staff in technology and data management.

The activities of the third work package envisaged the development of a training model. This phase of the project aimed at providing the learning methodology that underpinned the entire model, defining elicited learning objectives and anticipating outcomes based on the findings of work package 2. This was concretized by the identification of a Virtual Learning Environment as way of delivery for self-organised e-learning based on the Moodle platform, used mainly in University-related e-learning settings.

Given the impossibility in 2020 and 2021 to organise any traditional classroom-based live training sessions, work-based learning experiences or transnational mobilities, the project partners opted for a full-fledged, only online and digital implementation. This made also particularly sense intending to improve digital skills of SMEs.

After the identification of training contents thanks to the survey run at the beginning of project, a first specific pilot training module on online sales and digital marketing was designed. This was also intended by the project partners as a possibility to help the many SMEs in serious difficulties due to the pandemic and losses of sales and markets, as well as a chance to raise more interest by companies.

The decision to opt for a model of self-organised learning meant that any tests or other evaluation evidence to monitor the learning progress were needed. Self-evaluation in this model happens through learning-by-doing, in the sense, when e.g. an online shop has been set up, and first products and services have successfully been sold and delivered, the evidence that skills have been achieved is given, as well as the contrary. In the latter, of course not rare cases, learners have the chance to get aware of their higher training needs.

As the business support organisations united in this project consortium did not want to make unfair competition to their member companies in the sector of professional training providers, they decided to offer - in cases when a learner met its own limits in understanding or when translating theory into practice – the possibility to join then structured professional training and coaching either online or on-site in the interested companies, to the normal market conditions.

In this sense, the project partners understood that DataSkills4SMEs had to offer mainly first orientation and basic understanding of the most important data management-related thematic fields for SMEs, like online sales or cybersecurity, as each learner has different levels of pre-existing knowledge and different learning needs or capacities.

Moreover, the project planned to set-up a training program for DataSkills4SME facilitators, based on the key concepts of communication, analytical thinking, team work, facilitation and negotiation, and finally define guidelines for these DataSkills4SME Facilitators. This part of the project, due to the limitations by COVID-19, and also due to the limited resources of the project, was concentrated on the involvement of already experienced facilitators for the single topics Online sales & Digital marketing, Customer Relationship Management, Cybersecurity and for Paperless Office. These facilitators delivered guidance to the project partners in structuring the “mind-maps” of orientation and training modules, in identifying learning contents and resources (freely available on the internet), and in deploying the online “user experience” of the modules. They furthermore helped in formulating the scripts of 4 orientation videos used to guide interested users to the contents on the Moodle platform first and later on the project platform itself. Finally, these four facilitators from Belgium, Italy, Germany and Austria, helped to run 10 online orientation webinars in English (4), German (3), Italian (2) and French (1).

Thanks to a first pilot test module on Online Sales and Digital Marketing between M13 and M22, and the related evaluation in M22 and M23, the partners learned about many aspects that could and had to be modified and improved in order to better meet the needs of the companies.

The activities of the fourth work package hence envisaged the piloting of the final training model, implemented in three phases from M24 to M34: the involvement of 3 new DataSkills4SME facilitators into the re-design of the online delivery method and the user experience, into the

modified development of contents and finally the re-deployment of these additional 3 pilot orientation and training modules for SME managers and employees. In conjunction with the three pilot modules, the University of Rome Tor Vergata has then performed a final evaluation in order to verify the appropriateness of this final training model. These insights gathered allows now - with this project handbook and the related proposals for a sustainability of the DataSkills3SMEs approach - to enhance the results and make them more transnational and transferable.

● **2.5 PROJECT RESULTS AND LESSONS LEARNED**

The results of the project, are linked to the different phases of implementation, re-design and renewed deployment of orientation and basic training.

The country reports produced until the end of the first year, which were obtained through a survey, have demonstrated that there is a strong need to build capacity, to guide and orient SME staff in the field of Online Sales, Customer Relationship Management tools and Cyber security. The partner added as opportune thematic training area also the advanced digitisation of office processes under the title "paperless office", which was particularly useful during the Covid-19 pandemic where many people had to work more and more from home.

To complete the analysis, we have conducted also 3 online focus groups at the beginning of 2021, talking with over 30 SMEs' staff, which allowed us to identify the opportunities and innovative aspects in guiding to self-organised online learning and how to find out what to learn first.

During the activities under WP3, thanks to the work package's coordinator University of Tor Vergata, and in close collaboration with an Online Sales and Digital Marketing Facilitator and all other partners, we have designed the learning plan (the "mind-map"), and gathered contents and resources in three languages – Italian, German and English (learning pills, videos, reading materials, feedback assessments), for the first pilot orientation course on Online Sales for SME owners and their employees. This has been rounded up by an orientation database and an orientation video, which both guided the interested companies and employees towards a hands-on learning path, tailor-made for different SME needs.

The project partners and business associations BVMW (D), CONFAPI (I), ÖGV (A) and CEA-PME (B/Europe) have been involved in gathering contents and resources for the Online Sales and Digital

Marketing Orientation Course as well as in reaching out to Professional Training Providers who supported the DataSkills4SME project by sharing resources, educational content and join the database to assist the participants during or after the orientation course.

These professional training providers were "Social-B" – UK (The Digital Marketing & Social Media Training Experts), "EVBB" – B/Europe (EVBB – European Association of Institutes for Vocational Training), "INCITE" – A (UBIT-Akademie incite) and "Together Digital"- D, Competence Centre Berlin (Gemeinsam Digital).

Thanks to the coordination of ÖGV of work package 4, and with the assistance and commitment of the whole partner consortium and 3 additional DataSkills4SMEs facilitators, the re-designed new pilot test modules for orientation and basic training on Cybersecurity, CRM and Paperless Office have been launched in April 2022, and are again available in 3 different languages: English, German and Italian.

The two pilot phases had been accompanied by specific evaluation activities conducted by the University of Rome Tor Vergata, in particular, through the launch of a mid-term (in M22/23) and a final (M33/34) questionnaire of evaluation in order to monitor the quality of the Pilot test phases. In November 2021 (M22), the University of Rome Tor Vergata provided a first report with a collection of data and feedback of the Pilot Course "Online Sales and Digital Marketing Orientation" phase (see next chapter), whose results have been used to improve the training programme and make it a more "transnational" and transferable output. In the period between months 24 and 28, all the partners agreed on re-engineering the delivery of the Online Courses, consisting in several changes such as moving the online contents and resources from the e-learning Moodle platform to the official website of DataSkills4SMEs (www.dataskills4smes.eu/) through a Learning Management System. Thanks to the involvement of a professional web marketing and communication expert, the partners paid much more attention to the "user experience", i.e. improving the way how the users (company owners and employees) that "encounter" information about the orientation and training offer in the partners' newsletters, on their websites or in their social media channels – an offer "from companies for companies" – can be attracted and convinced to follow the paths towards the offer on the project website, which they of course do not identify as a well-known product, being a hybrid subject (an "EU-project") without trusted organisations speaking in first person, or trademarks that guarantee a certain service, quality or convenience thanks to the power of their image. In addition to that,

the single steps towards a clear answer to and a fast delivery of what the user is expecting to receive from DataSkills4SMEs must allow to reduce the abandonment of users on the website to a minimum. This “user experience” was one of the most challenging aspect that we found out during the evaluation of the first pilot test in 2021, and thus it required a totally new approach towards the communication and delivery of the training and orientation offer.

During these activities, European Entrepreneurs CEA-PME, working closely with the other partners has made a great effort in promoting and disseminating all four chapters (M28-34).

The material was then shared with targeted training organisations, which provided the necessary input for the final evaluation of the quality of the online courses which was done through the launch of satisfaction questionnaires. The questionnaires for the evaluation of the online courses were closed in September 2022, with the subsequent final evaluation report.



03

**Evaluation of the first pilot test
orientation and training module on
Online Sales and Digital Marketing**

03

Evaluation of the first pilot test orientation and training module on Online Sales and Digital Marketing

● 3.1 PILOT COURSE DESIGN

The topic chosen for the pilot course to be delivered in the online platform was **"Online Sales and Digital Marketing Orientation Course"** as it emerged as one of the most relevant topics in the previous orientation survey, but also because the partners identified that Digital Marketing online courses are in high demand among SMEs in the three countries: Germany, Austria and Italy. In order to focus on the most relevant learning needs, the main topic has been divided in 4 sub-topics defined "pillars"; each pillar had its own inner sub-topic structure and specific objectives, as reported in the learning environment:

• **Pillar 1 – Strategy**

This Pillar will provide you with a high-level overview of why you should evaluate on online presence besides your physical presence.

• **Overview, basics of online sales**

Learn about the process of leveraging digital channels to find, engage and connect with prospective buyers. The goal is to build relationships on online platforms and turn connections into offline or online sales conversations.

• **How to align business vs digital strategy**

SMEs should realise that as their company grows, their customer and employee base will too. Therefore, it is crucial that the customer journey feels that the supplier knows them. Learn how to reach out to the supplier through the web, customers service or sales, and align your business and digital strategy.

• **How and how much towards digital initiatives**

Learn how much budget and efforts you should allocate for digital initiatives.

• **Pillar 2 – Reaching new customers**

This Pillar will provide you with some insight into how you, together with your team, will create trust and curiosity to attract new and future customers.

- **What are your company values**

Learn more about how the company values are important in order to create or improve a company culture – not only for your team members, but also their prospects, customers and partners. When team members are aware of the values of a company, it makes it easier for everyone to know how to respond to specific questions, challenges that they might receive.

- **Express the solutions unique value**

Learn how to capture clients' interest within the first couple of minutes. There is of course the general hook on your website, but a hook could change slightly depending of the person you have in a Zoom/Webex/Skype/... call.

- **Who and where are your customers?**

Once you know who your customers are (point d) and your values. You are able to brand your business accordingly.

- **Customer targeting and segmentation**

Once you know who your customers are and your values, you are able to brand your business accordingly. Learn more about customer targeting and segmentation in this chapter.

- **Pillar 3 – Operations**

This Pillar will provide you with tips on how to create true customer experience transformation and gain more insight on how to lower your cost structure, grow your business, and WoW your customers.

- **Back office, Front office (CRM)**

Learn more about why it is crucial to re-align the front and back office at your company and how to do it.

- **Organisation**

Learn more about how to and when necessary to outsource certain parts of your business.

- **Finding the right service provider**

Learn about practical tips and tricks how to successfully find the right service provider.

- **Pillar 4 – Online shop from scratch**

In this Pillar, we will point you to different tools/platforms that you can use in order to build your online store from scratch. If you have an existing website, you could use one of these platforms to facilitate the sale online next to your current website technology.

- **Choose the right online sales channel**

Learn more about how to choose the right online sales channels depending on the product and / or the service you want to sell

- **Website integration**

Learn more about how to build your online shop in combination with your existing website.

For example, you could use WordPress in combination with Shopify for example.

- **Secure payments**

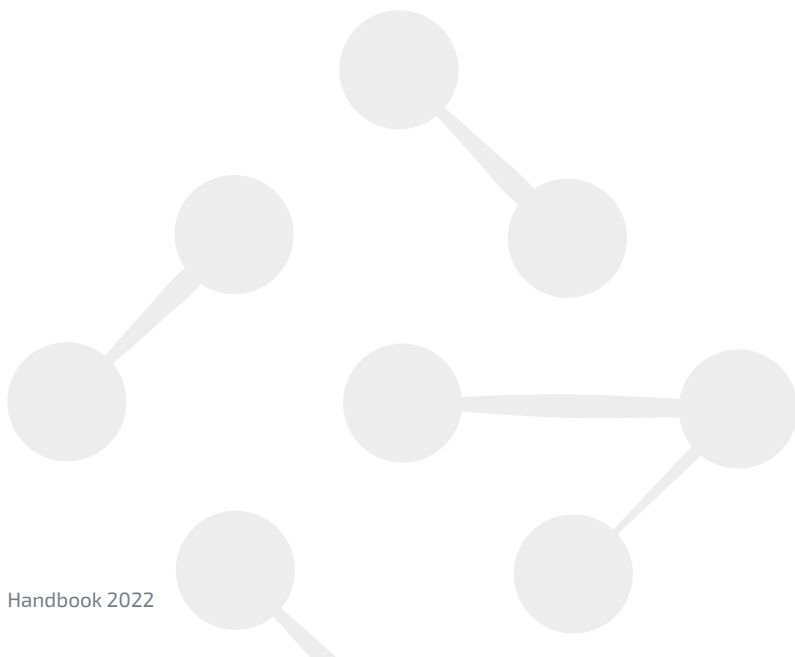
Learn more about the different secure payment options.

- **Shopify, Wixecommerce, Prestashop...**

In order to facilitate access to the learning resources, each pillar was offered in three languages (English, German and Italian), therefore appropriate learning materials (articles, links and video) in each language were selected from the internet and also offered by some learning providers (whose professional profiles and contacts were published in the learning environment); at the end of the learning path a brief evaluation survey for each pillar was set up. It contained the following questions:

1. How useful was this pillar for you?
2. Was there something you have expected to see but you have not found? (If yes, what)
3. What was the most relevant topic or resource to your business?
4. Will you recommend this DataSkills4SMEs Online Orientation Course to your colleagues?

The launch of the pilot course took place in April 2021: employees and owners of SMEs were invited to join the course and participate to the pilot phase through mailing list; in order to boost participation a series of webinars was organized.



● 3.2 PARTICIPATION

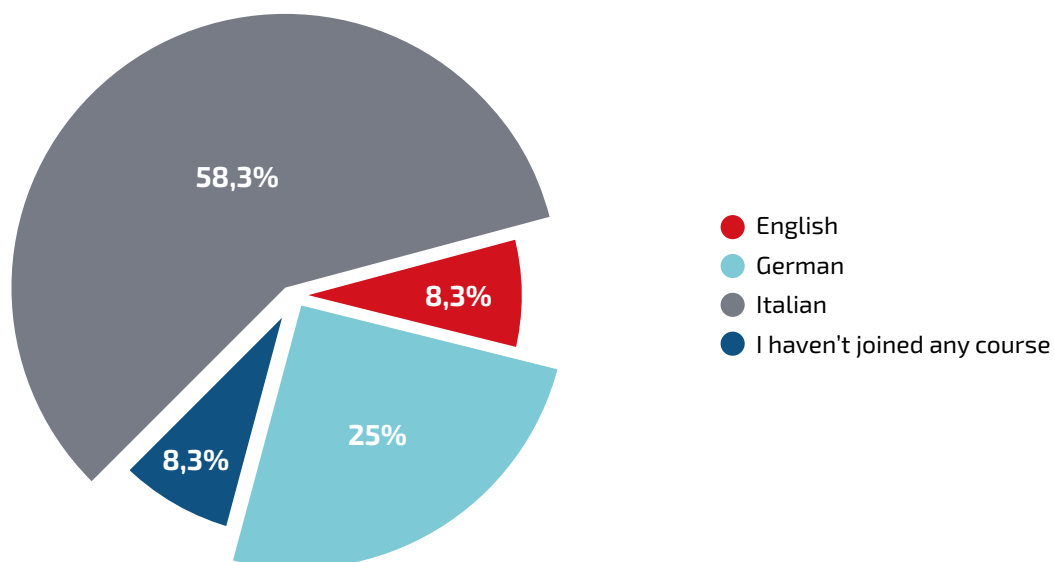
From April to October 2021 a total of 94 users enrolled in the platform; despite the registration and enrolment procedures could not be merged and therefore required a certain number of steps (website – learning platform for registration – confirmation through email – learning platform for enrolment) 91 out of 94 users actually enrolled to at least on course. More precisely:

- **25 users enrolled to the courses in English (21 in Pillar1, 17 in Pillar2, 9 in Pillar3, 9 in Pillar4);**
- **38 users enrolled to the courses in German (31 in Pillar1, 27 in Pillar2, 17 in Pillar3, 17 in Pillar4);**
- **36 users enrolled to the courses in Italian (31 in Pillar1, 32 in Pillar2, 25 in Pillar3, 27 in Pillar4).**

Unfortunately, the completion rate of the final evaluation survey set up at the end of each Pillar resulted very low: out of 91 enrolled users and a total amount of 12 courses (4 pillars for each language) only 7 answers were collected in total, therefore the results could not be taken into account for lack of significance. It was then decided to send a similar survey through email at the end of the pilot phase, in October 2021. The results are summarised in the next paragraph.

● 3.3 1ST PILOT TEST EVALUATION

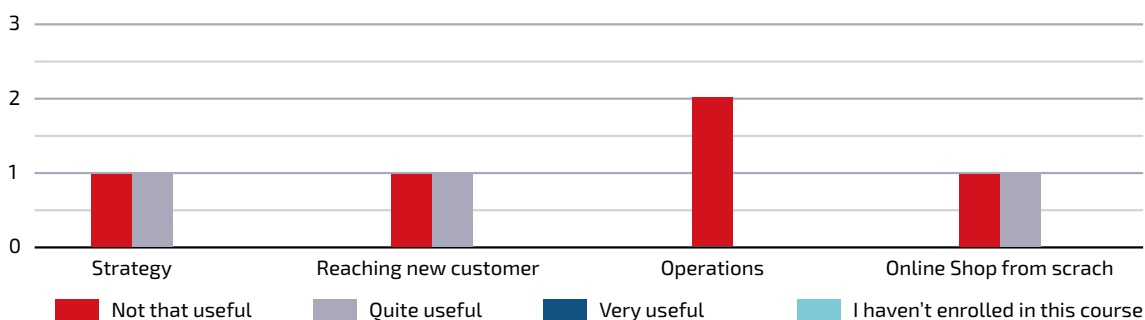
The 25% of users that enrolled to the platform and answered to the pilot evaluation survey, resulted enrolled with the following distribution in the different courses:



Considering that the learning materials selected were different in the three languages, it has been decided not to combine the results related to the usefulness of the courses.

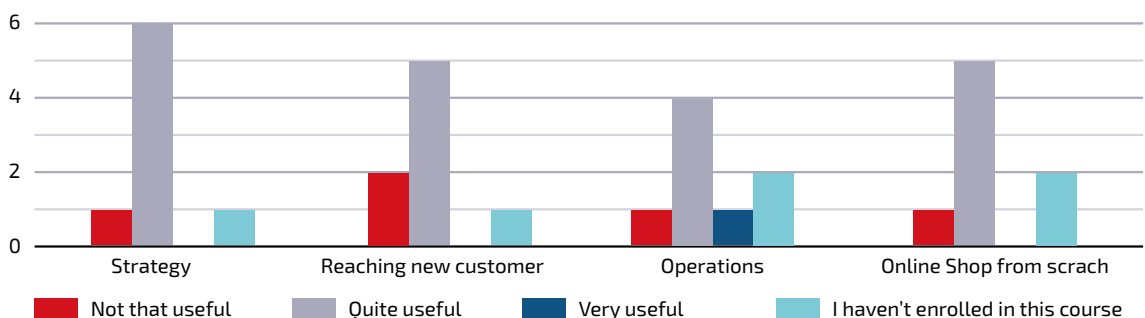
● 3.4 ENGLISH PILLARS – USEFULNESS

The answers related to the English courses, although considering that were just two, showed the need to revise the learning material:



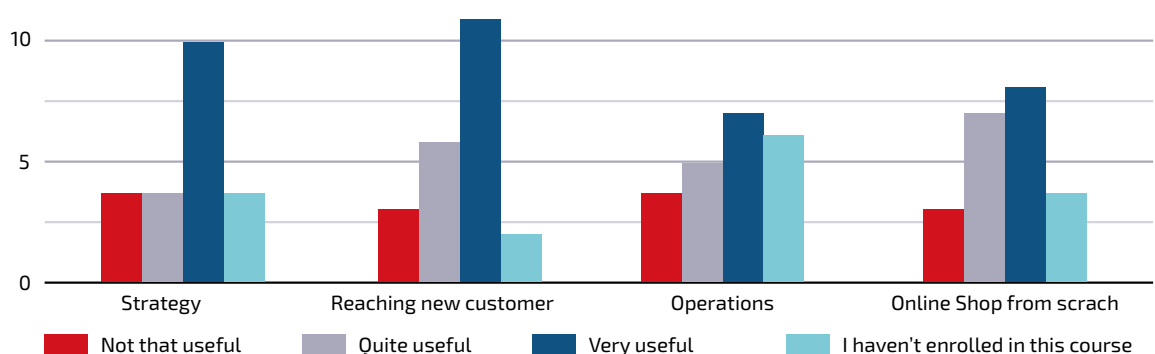
● 3.5 GERMAN PILLARS – USEFULNESS

The answers related to the German courses showed that the learning material chosen for the German Pillars better fulfilled the needs of the respondents:



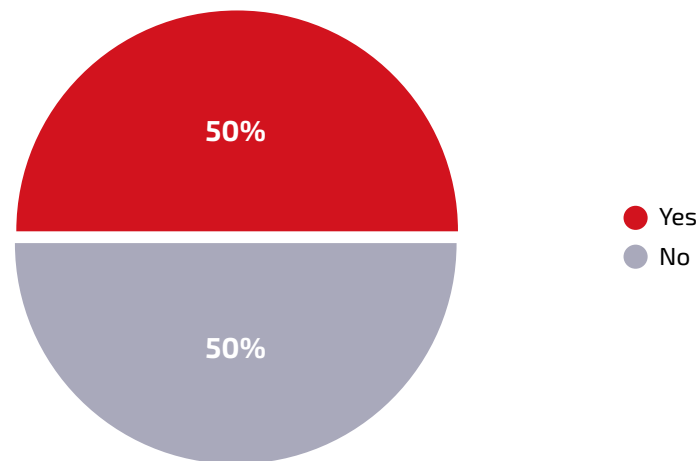
● 3.6 ITALIAN PILLARS – USEFULNESS

According to the answers related to the Italian courses, where a clear satisfaction emerged, the learning material chosen for the Italian Pillars fulfilled the needs of the respondents. Pillar 3 seemed to be a topic of lower interest for the respondents.



● 3.7 EXPECTATIONS

Regarding the expectation over the topic covered by the Pillars, half of the respondents where not completed satisfied by what was offered in the courses:



The analysis of the open answers identified these areas for improvement:

- to provide more in-depth information and regularly updated;
- to provide more concrete indications, tips and strategies that can be directly implemented on the job;
- to clarify what kind of courses are offered in the project;
- to design a clearer path among the resources and the sections of the learning environment;
- to embed learning resources in order to remain in the learning environment (being mainly links to online resources, it is easy to get lost between the learning environment and the original website of the articles provided);
- to provide indication of the resources already accessed;
- to provide a more rigid and clear learning path to be followed.

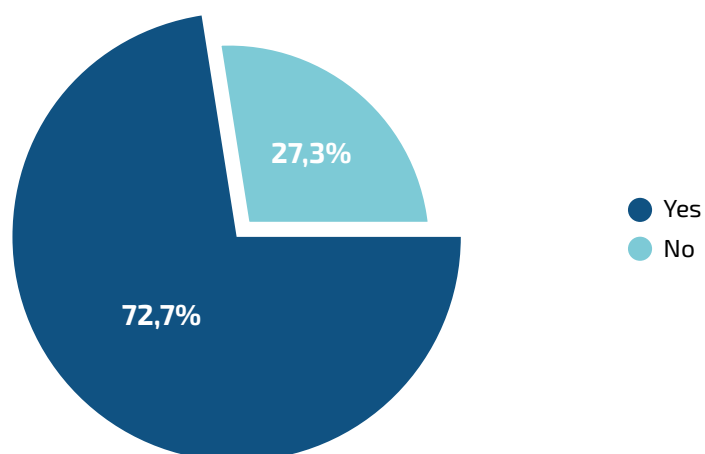
● **3.8 RELEVANCE**

The most relevant topics indicated in the open question were:

- secure payments;
- how to attract new customers;
- how to improve the traffic on online websites;
- digital marketing.

● **3.9 SATISFACTION**

Overall, the pilot course was appreciated by the majority of the respondents.



04

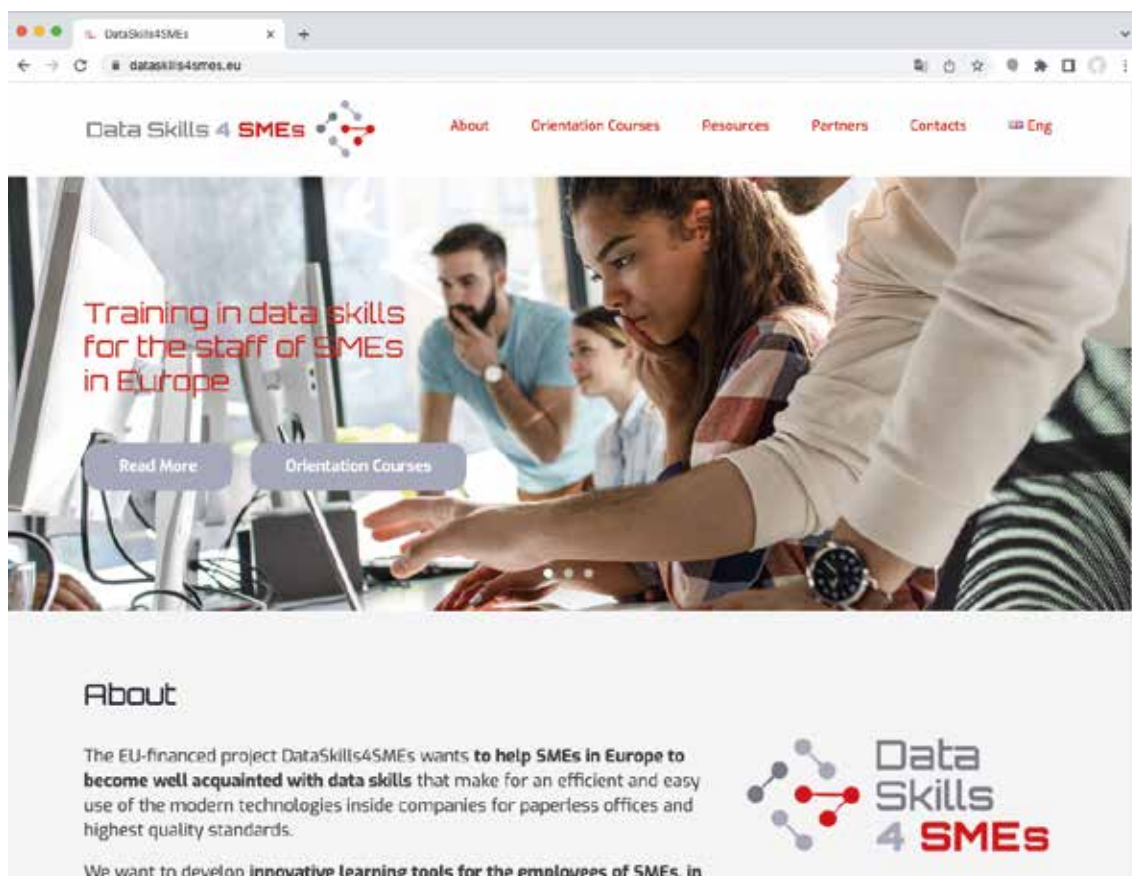
**Process of Re-design of the
platform used for the delivery of
orientation and training modules**

04

Process of Re-design of the platform used for the delivery of orientation and training modules

4.1 OVERVIEW

After completing the research on the needs by the target group and subsequently analysing the structure and contents of the first pilot course, the project team discussed and decided about the use of the learning platform. The e-Learning system chosen for the first pilot test was Moodle, a platform used by over 100.000 education providers, that allowed a structuring of the content which was initially adaptable to the project's needs. In coordination with the partners, the University of Tor Vergata had set up the structure of the first course to launch it for the target group soon after.





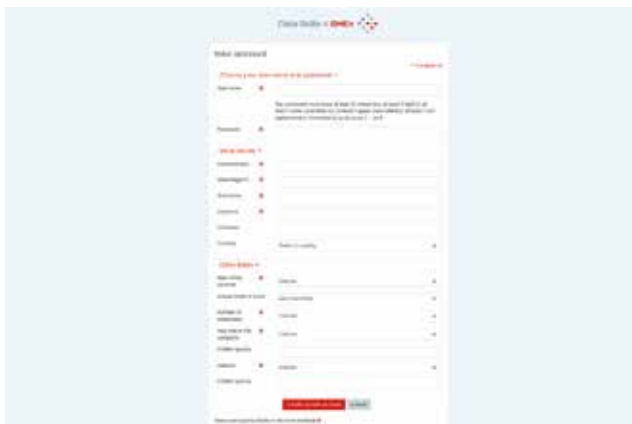
Login page/1

Login process with registration and necessary agreements on privacy policy and cookie statements.



Login page/2 (privacy policy, cookie statement needed)

The login process begins with registration and is followed by the required consent to cookie statement and privacy policy.



Login page/3 (picture reduced to fit the slide)

In order to know who was actually completing the courses and to be able to create the evaluations required for the project in a scientifically sound manner, we also needed data from the platform users. The request for this data follows immediately the login process.

In the following weeks it became clear, that several problems based on the technicalities of the Moodle platform made it difficult for our target group, users from small and mid-size enterprises, to navigate the content, therefore hindering the success of the pilot course. Specifically, five factors made it necessary to rethink the setup and use of the Moodle eLearning system:

- The contents could not be embedded into the projects website. This resulted in users being sent away to the Moodle platform as an external tool, leading to losing a certain percentage of users. It became clear, that the target group had high expectations on the consistency of an online learning module.

- The obligatory registration posed a hurdle for users. In order to know who was actually completing the courses, it was necessary to gather certain data from the users, like company size, position in the company, sector and several more. On Moodle, this had to be set up as a registration form for each user. It became clear that this posed a big hurdle for users, as they were less willing to give out data than expected and shied away from going through the registration process. Users therefore did not have the opportunity to gather an overview of the course's contents. (See illustration above). It was thus necessary to restructure the user journey.
- The separation between the different languages could not be organized well enough for a satisfying users experience. The platform didn't account for several setups, as needed in order to display the course contents in the projects three languages English, Italian and German. This led to users being confronted in various moments with different languages which were not their own, leading to an additional hurdle for users to get to the modules content.
- The lack of proper role management on the platform made it difficult for the project team to edit content. There was a necessity to have the University of Rome edit every change to the content necessary, as this institution was administrating the account. This led to a process of editing that was too time consuming and made the management of the course much less agile.
- The layout of the courses and modules could not be arranged in a visually appealing manner and was not conducive towards the goals of the project. The separation between each of the modules lead to the fact that some of them were left out. A more streamlined approach, that guides the users through every part of the course would have been helpful. Moreover, user could not be guided toward the evaluation questionnaire. This part had to be organized in a separate section and was therefore not visible enough for the users. The need for more feedback from the target group made a change of platform necessary.

The findings after the first feedback round resulted in a new set of requirements for the learning platform. The requirements were documented (copy below) and agreed among the consortium

● **4.2 PROPOSAL FOR RE-ORGANISING THE USER EXPERIENCE: FROM THE ORIENTATION VIDEO TO THE LANDING PAGE - REQUIREMENTS FOR A NEW DATASKILLS4SMES LEARNING ENVIRONMENT**

After the experience and the feedback collected from the previous video and the actual landing page (Online Sales & Digital Marketing Orientation Course), we created a draft proposal for re-organising the whole "customer journey". In order to do that, we want to define three main

points: the new videos, the landing page and the orientation courses.

a. Video

Because the videos will be created by different providers, it is crucial to have coherence between them. We needed to be made sure that there was, for a better user friendliness and the identification of the "product" (or the "service") via a trademark, consistency among the message, the visual identity of the project, the format and the length of all of them. We agreed to the following common terms:

- only one video for each topic
- duration of the video is around 1:30 min.
- video in three versions, one for each language
- it will not have a person talking, like in the first orientation video, but just animation
- make sure the message from the video is about orientation to learn / train digital skills. A clear idea of what to learn first and what to learn later. Not about the importance of the single subjects like paperless office, CRM, or cybersecurity themselves.
- DS4SMEs' Corporate image should be respected
- at the end a link to the landing page of the topic
- no logos as today, except the project logo

b. Landing page "Online Sales & Digital Marketing Orientation Course"

Thinking of the user who would have seen the video on YouTube and lands on the web, we decided to make some modifications in order to display easily the main content that the people will expect.

- Automatic detection of the browser's language if someone from Germany sees the video in German, and click on the web, will land on a page in English. This has an easy solution, the translation plugin of the web has an option on the settings to detect the language of the browser, so it will display the same language as the user browser, if it is any of the languages translated, if it is another (as Spanish or French) it will be displayed in English as the default language.
- Questionnaire: As the users land on the page because they are expecting some orientation, we have to offer a questionnaire that will bring them some insight. We should rethink the questions and the answers, as well, as the functionality of the questionnaire.

c. Orientation Courses

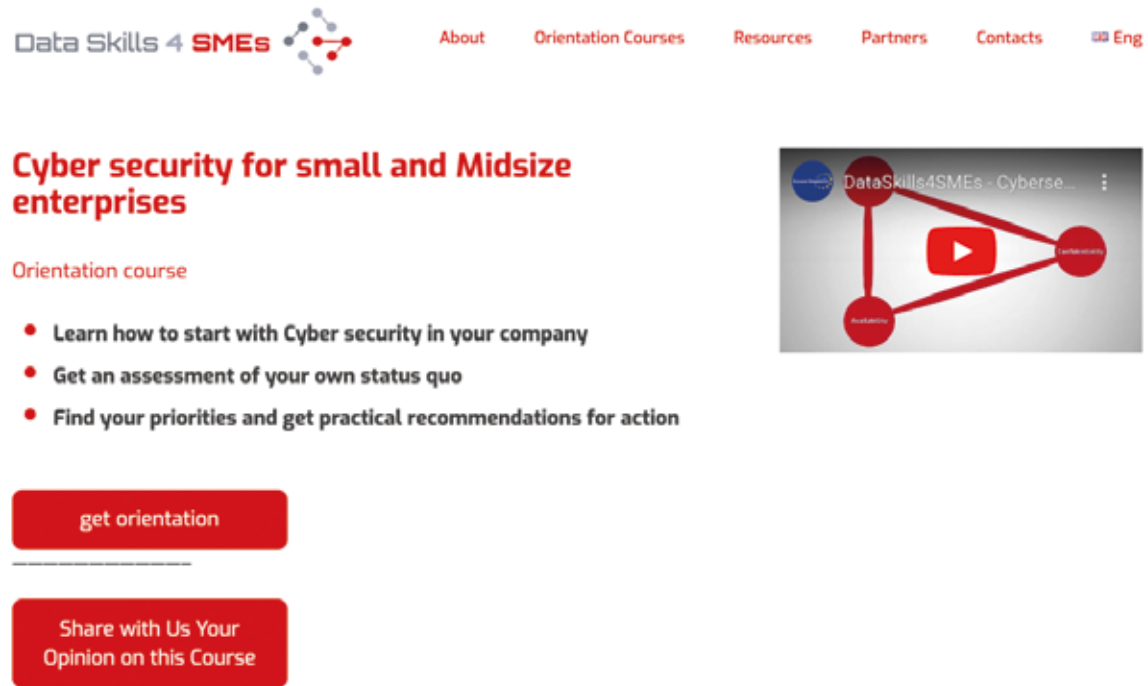
The users that land on this page search for orientation on the topic that interested her or him. The path from the moment that he or she lands on the page until they start a course has many steps.

- Moodle – that showed the first pilot test with online sales in 2021 – was probably not the most suitable solution for this project. It is confusing for the user to be sent to another page when they want to see the courses. In terms of SEO, it would be better for us to keep the users on our own domain, and not on a third-party website. There is no direct access to Moodle, neither from the menu nor from the landing page, until you submit the questionnaire, which is inconvenient when you want to login into any course for the second time.
- We decided to have the courses directly on the same landing page for each topic, so it will be easier and more appealing for the users.
- We decided to display a variety of courses in a grid format where it will show an image, title and short description of a selection of courses (from 6 to 9).
- Because it was important for the project to collect the emails of the users, it was necessary to make them register at a certain point, allowing them only in this way to see the full courses. On the other hand, many users will not give their data before seeing the real content. We propose to allow the user to see 3-4 resources without registration, and after this invite them to subscribe to be available to see more.

● 4,3 CUSTOM JOURNEY MOCKUP PROPOSAL FROM VIDEO TO THE CONTENT

1-Landing page:

By clicking in "Get orientation" it drives you to the section bellow with the courses in a grid. Bellow them are the questionnaire.



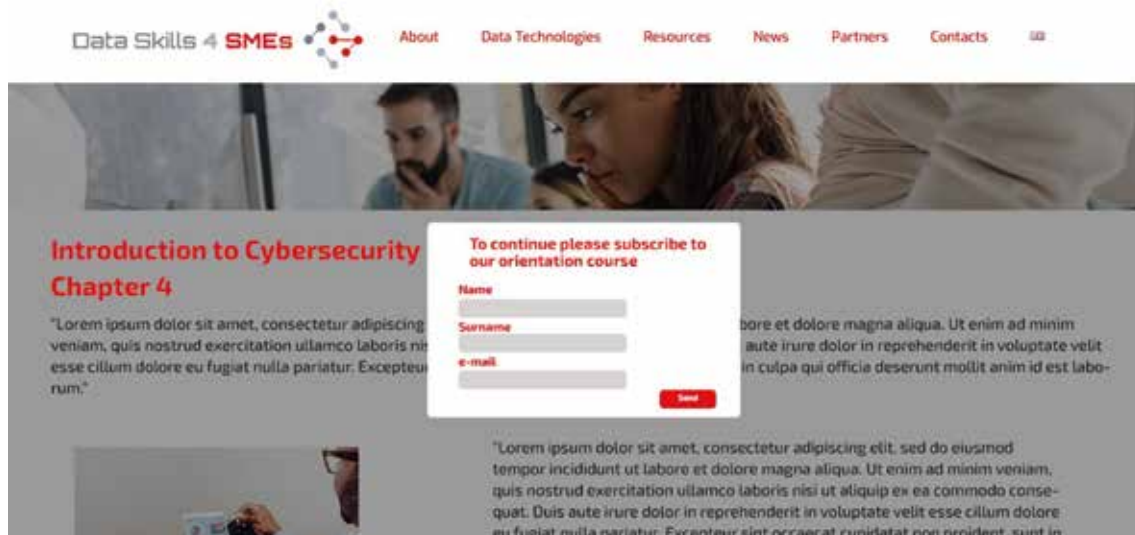
Cyber security for small and Midsize enterprises

Orientation course



2-Registration form

After having seen 3-4 courses/chapters, a pop-up is displayed for subscription.



3-Content of the course and Rate us pop-up:

After having seen 3-4 courses/chapters, a pop-up is displayed for subscription.



Based on the analysis and the agreement on the above mentioned requirements, an alternative method was developed in order to optimize the user experience and yield more results in terms of the projects goals. With the help of a web development and online marketing expert, the orientation courses were built into the project website of DataSkills4SMEs. Now, there was a clear landing page per topic and language, that gave a brief introduction, played an explanatory video and had a clear call-to-action towards taking the orientation courses. Also, the courses and their modules were immediately visible on the same page and it was not necessary anymore

the go through a lengthy registration process. Instead, users could start the first module and would only be asked to register with a minimal amount of data given after it was completed. The new system showed users additionally their progress on which modules had been completed already. Overall, this meant a more streamlined process in order to eliminate the pain points in the user journey previously detected.



Online Sales and Digital Marketing for small and Midsize enterprises

Orientation course

- Learn how to start with digital marketing in your company
- Discover how to open an online shop
- Find your priorities and get practical recommendations for action



get orientation

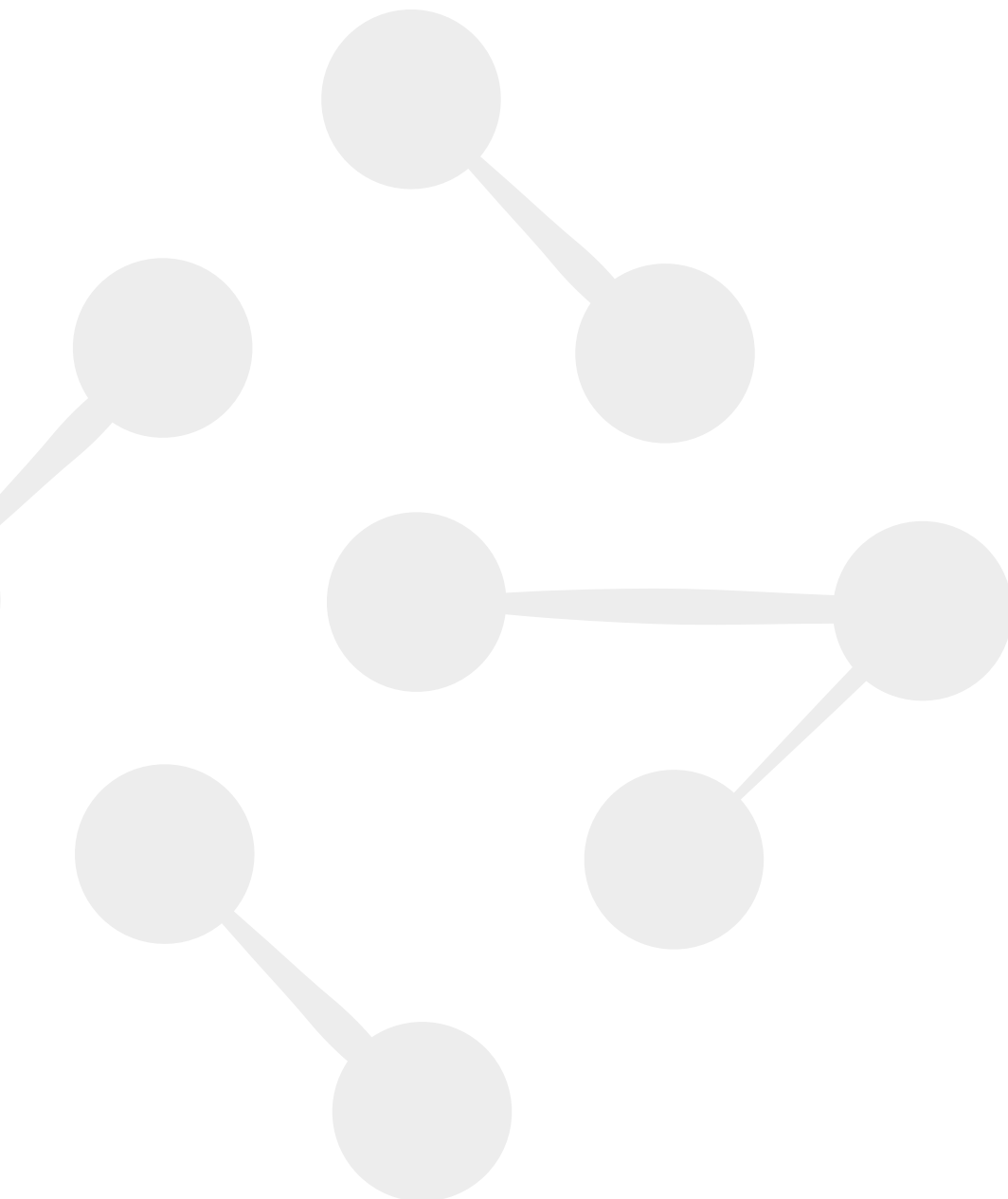
Share with Us Your
Opinion on this Course

Digital Marketing and Online Sales for small and Midsize enterprises

Orientation course



Another point of discussions in the project team was that we were pursuing the thesis that access to information and completion of a course do not exactly meet the expectations of SME owners or employees. The new approach of presenting our orientation and training content on the website tried to address this fact, but still shows clear signs of training. We have tried to remove the limitation of training without eliminating it completely.



05

Final Evaluation Report

● 5.1 REPORT

The survey has been designed to evaluate needs, effectiveness and success of the online orientation and training programme devoted to the digitalization of SMEs. For that a reason, the survey was designed in three main blocks (28 questions):

1. Identification and measurement of needs and skills before joining the program.
2. Effectiveness of the training program in terms of acquired competencies, better understanding and customer satisfaction.
3. Suggestions for improving the training program.

The number of enrolled people to the second batch of pilot test orientation and training modules was 45 individuals, 32 of whom participated to the survey. Accordingly, the response rate was 71%. Italian users showed the highest response rate.

This allowed to obtain a coherent picture. In particular:

1. Before joining the program, entrepreneurs claimed to have a low level of competencies and skills with respect to the digitalisation of their firms and in general on the topic. However, they were interested in acquiring more knowledge. Under this point of view, the project met their needs.
2. Needs are different among the language groups of respondents: Italians ask for cybersecurity, German speakers for CRM and English speaking users for Online sales.
3. The respondents were heterogeneous concerning training effectiveness. Italians showed a certain dissatisfaction, as they do not feel to have acquired a remarkable level of further competence. More positive were English and German speaking users.
4. By looking at the entire survey answers, respondents are, in majority, positive about the courses. Hence, the basic commitment – to provide a training programme focusing on digitalisation – has been fulfilled.
5. Answers were positive, on average 65% of respondents, when we measure satisfaction with contents and resources; under this point of view, it is a valuable result.
6. Entrepreneurs were particularly positive on the “change of mind” that the training implies.

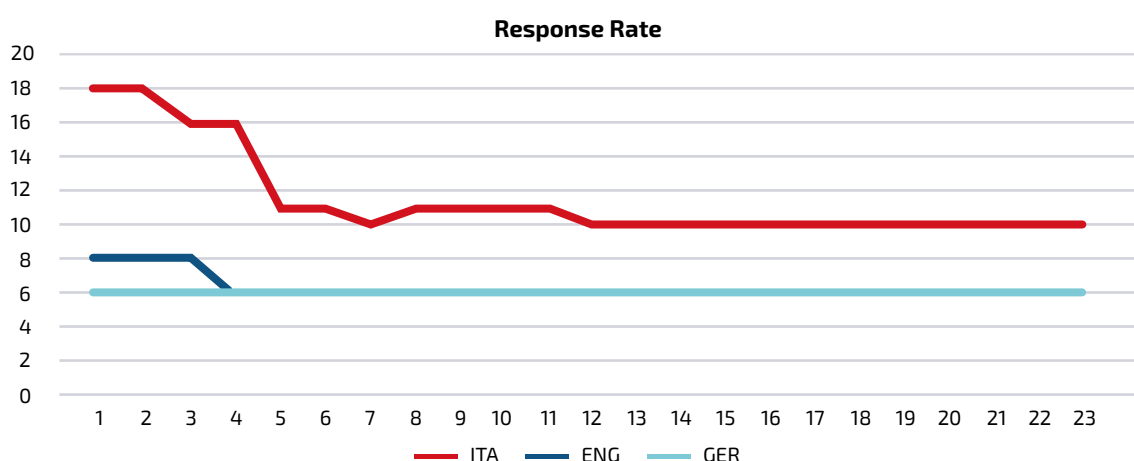
They gained awareness in the importance of digitalisation for their firms and in acquiring new skills and competences in this field.

7. The last part of the survey is encouraging for what regards a follow up to this project. Entrepreneurs recognize that they and their employees need to get more skilled in digitalisation and that the training program was beneficial in this sense. Critical points must be searched in an even better course design and in the delivery. The online platform did not get a very high consensus; it is likely that a more efficient design (courses length, more interaction among teacher and learners, more tailored contents) would contribute to reach even better results.

The overall picture shows an encouraging outcome: the project met the main challenge: to raise awareness of entrepreneurs and employees about the benefits of digitalisation, allowed them to acquire basic skills and made them ready for a more in-depth training process. There are some shadows concerning the online platform and a fine tuning of the courses but, being a first prototype, results are promising.

● 5.2 INTRODUCTION

In describing data, we have to underline the high response rate, 71% of enrolled people. Among the questionnaires in the three languages, the Italian speaking respondents showed the higher response rate. However, the rate depends heavily on the question; there is a large variety of respondents numbers, both among languages and within each questionnaire.



In general, the response rate declines steadily after the fourth question. This means that the respondents lose interest in a fast way. It is likely they are not really interested in providing a reliable feedback.

● 5.3 MAIN RESULTS

As said, the response rate is concentrated in the first three/four answers in general. This is rather common in survey analysis, where the respondent's interest is mainly concentrated on the beginning of the questionnaire. The first part of questionnaire is devoted to assess respondents background and needs. About the latter, 14 chose the Cybersecurity (about 50%), the most attended course among learners. This is a first strong result: entrepreneurs were particularly concerned about hacking, digital frauds and the weakness of their digital equipment and related working processes.

The training programme was, in general, successful at fostering the learners' knowledge and awareness of the digital world. Ten respondents declared that, at the end of the course, their competencies were good and eight very good. Italians seemed a little less satisfied, as we will see in the next section: seven learners claimed to have still a low level of competencies. Moreover, the majority of learners claimed that they were satisfied about contents and acquired knowledge (nearly 60% of learners agreed on the question concerning their knowledge at the end of the courses).

Still with a very good outcome the questions related to the understanding of the importance of the topics offered (questions 12 and 13). In particular, the latter asked to workers whether the attended course(s) helped them to acquire or strengthen their knowledge and fundamental skills. In this case, learners agree for 40% and strongly agree for a further 25%.

Questions 14, 15 and 16 assessed the self-confidence of respondents after the course, along several dimensions (organisational skills, self-evaluation, information process). Also in this case, learners show a good level of satisfaction. On average, over the three questions, more than 50% claims that their confidence and information was improved after the course and that this would have had a positive impact on company's organisation.

Question 18 was devoted to provide a final word on the benefits of the attended course: "(the course) strengthened my ability to acquire information and develop my own ideas?". In this case, also more than 50% of respondents agreed. 35% were neutral. The rest disagreed.

The last part of the questionnaire pointed to the evaluation of the training programme and its contents: contents and materials have been recognized as helpful and coherent with the course's goal (question 21), as well as the overall satisfaction about courses and future implementation of the training programme.

06

Conclusions, Outlook and Sustainability

Conclusions, Outlook and Sustainability

● 6.1 FINAL CONSIDERATIONS

The EU-financed project DataSkills4SMEs, aimed at helping European SMEs to strengthen their capabilities in data management skills in order to make companies able to easily and efficiently use digital technologies.

The final evaluation of the second batch of pilot tests in 2022 shows a lower participation level as the first pilot test in 2021: during the first test 94 users subscribed during the period April-November 2021, out of 1.351 users visiting the website (6,95%). During the second batch of pilot test modules published from April to September 2022, the website had 9.687 visitors but only 86 of them registered (0,88%). This is most probably due to a higher readiness in spring 2021 to use online offers, while in the majority of European countries were still lockdown and health safety measures in place that made many companies work in home-office and reduce their live presence/meetings. In addition, during the first pilot test the learning content could only be accessed after registration, while in the second batch of pilots the users could verify a part of content without registration. This resulted in a much lower turnout in registrations to the site. Taking this observation into account, the mostly positive answers are anyway encouraging. They allow to conclude that DataSkills4SMEs offered a clear path towards how to **kick-start the improvement processes for digital skills in small and mid-sized companies:**

1. Identify for priority topics like cybersecurity, online sales, digital marketing, paperless office or customer relationship management, and attract company owners and SME employees to join the online offer;
2. Orientate them in what is most important to learn, give them first basic knowledge and information, contemporarily offering quick fixes and fast wins, in a self-organised learning environment;
3. And finally guide them towards higher levels of know-how, structured training offers and personalised coaching.

Based on this innovative and light approach to improving Digital Skills of SME owners and employees, the DataSkills4SMEs learning platform as it is today allows to imagine 4 projection lines for the future:

1. The acquired skills can be applied in the training centres of affiliated partners, including German, Austrian and Italian entrepreneurs' associations that offer tailored services to SMEs, support SMEs in finding EU funds and organize training courses for senior executives, entrepreneurs and SMEs' employees. As a matter of fact, during the project implementation, one of the training centres associated to CONFAPI has already taken advantage of the platform, by offering a tailored training course to an associated company, continuing the training started within DataSkills4SMEs.
2. As a second option, partners can use the platform as starting point to apply for new calls for proposals within Erasmus Plus (one of the pillars of 2021-2027 Erasmus Plus is the digitisation) or the "Digital Europe Programme", as well as for other European Commission's initiatives. The 2021-2027 Action Plan for Digital Education outlines the European Commission's vision for high-quality, inclusive and accessible digital education on our continent. The plan intends to strengthen cooperation at European level in order to support the adaptation of education and training systems in the digital age. New projects – under Erasmus Plus – can use our platform as a starting point for new projects and incorporate it. Partners of DataSkills4SMEs have already started to evaluate new calls where the platform can represent a starting point to develop new projects ideas, for example adding new topics and thematic priority areas for SMEs, like AI, Blockchain, IoT and Advanced Manufacturing.
3. Third, the project's services can be made available to European Digital Innovation Hubs (EDIHs), one-stop shops supporting companies to face digital challenges and become more competitive as well as for national digital innovation hubs. By providing access to technical expertise and testing, as well as the possibility to 'test before invest', EDIHs support companies to improve business/production processes, products, or services using digital technologies. They also provide innovation services, such as financing advice, training, and skills development that are central to a successful digital transformation. Environmental issues are also taken into account, in particular with regard to the use of digital technologies for sustainability and circularity. Through the Digital Transformation Accelerator (DTA), project partners can verify which EDIHs focus on project themes in order to implement

and use them in the future. Two project partners - CONFAPI and BVMW – have their own DIHs and are also members of a European Digital Innovation Hub and they will promote the platform within the network of DIHs and EDIHs. E.g. the CONFAPI Digital Innovation Hub supports SMEs in the development of innovation projects, by using highly qualified staff, technology suppliers (recognized by the Italian Ministry of Economic Development as partners of CONFAPI's DIH), academic and institutional partners at regional, national and European level. This Italian DIH also supports SMEs in assessing their innovation level and digital maturity, and helps companies to define activities which can facilitate their innovation and digital transformation. One of the activities is the introduction and use of digital technologies with a view to Industry 4.0. Currently, CONFAPI is also partner of an EDIH, named MicroCyber, which is focused on cybersecurity and, of course, it will promote the output of DataSkills4SMEs within this new project. A similar approach has been adopted by BVMW in its DIH "Mittelstand-Digital" in Berlin, paying a particular attention to many practical, hands-on training and information offers, similar to those offered on DataSkills4SMEs, provided e.g. in form of short "video-pills" of 1-3 minutes max. in German, or making available a database of experts that can individually support SMEs in different regions. DataSkills4SMEs and its services could be also used by a specific figure active in DIH's, i.e. the Innovation Manager (IM), a point of contact between SMEs and public bodies to support digital innovation processes. The IM often acts as an intermediary between innovation hubs and SMEs themselves for services' provision.

4. Moreover, the DataSkills4SMEs partner organisations could be establish partnerships in single countries with professional training providers offering re- and upskilling in the field of digital skills, which could use the platform as an entrance point, first aid for SMEs, self-assessment tool and sales funnel to guide potential clients to their own offers in training digital skills.

All these solutions bear financial sustainability too, as they either involve a business model based on involvement in marketing strategies of professional training providers (1 and 4), or are appropriate to be financially supported by public programmes supporting digitalisation of SMEs (2 and 3).

To conclude, SMEs might exchange best practices, knowledge, business models through this platform, and will automatically be part of a community of people who share common

strategies and behaviours. In the long run, SMEs can use the platform's accumulated experience to implement educational structures. Managers and employees could constantly be updated in skills and competences, with particular focus on digitalisation and sustainability.

The challenges of our time demands innovative ways of business and educational practices in order to cope with the real market demands and the need of new skills and knowledge that employees have to acquire, develop and apply in their job. Thus, DataSkills4SMEs tries to bridge the gap, presenting solutions to the current needs of firms, and offers the right tools to enter the path towards the twin transition.

NOTES

[illegible]



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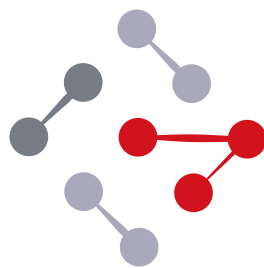
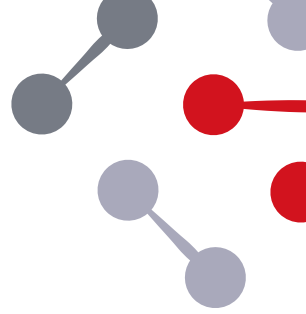
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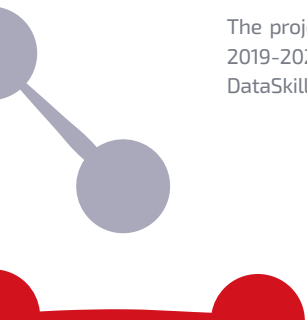
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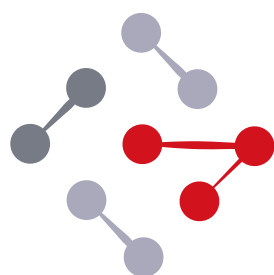


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Data Skills 4 **SMEs**



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