Chatbot based Career Guidance

CareerBot Content & Methodology

Report recommending the different LMI and the codesign of the CareerBot demo-version

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Content

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Aim of the CareerBot project

CareerBot partnership seeks to improve the Digital Readiness of the Career Guidance sector by implementing the CareerBot methodology and tool, facilitating blended guidance sessions and to use customised Labour Market Information (LMI) to empower marginalised job seekers. We want to put Career Guidance Practitioners at the centre and assist them – and their organisations - on the path of digitalisation so that they can advise their clients in the best possible way.

With the support of our methodology, job seekers will be able to gather relevant information before and after personal interviews, so that valuable careers services can be used efficiently. Through the "CareerBot project" we propose a pilot that focuses on the role of career guidance, which has become more demanding, and is challenged by the need to adapt more rapidly and flexibly to the new world of work.

The CareerBot project includes 4 main project outcomes:

- The CareerBot Content and Methodology
- The CareerBot Tool
- Blended CareerBot training for Career Guidance Practitioners
- A Transfer Handbook for Implementation with a focus on Organisational Development (OD)

A training event for Career Guidance Officers has been held in Greece to test the CareerBot training and ten Multiplier Events will be organised towards the end of the project to share the learning and engage with all relevant stakeholders to make them aware of the new CareerBot tool and its benefits.

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Background and Context of this report

Report recommending the different LMI to be available through the bot in the different countries, the properties of the data, its provenance and quality assurance.

This final report summarises the work undertaken by the project partnership of the CareerBot project towards the achievement of Project Result 1 (PR1). PR1 focused on the design of the Career Bot chatbot, the identification of sources of Labour Market Intelligence (LMI) at European, national, regional, and local level and the design of the CareerBot, including its character and use. The project was based on a co-design methodology and central to PR1 was the establishment of co-design groups with stakeholders.

In designing Chatbots for Careers Advice and Employment Services it is noted that technology is changing rapidly, particularly with the advances in AI and Natural Language Processing and thus we need to be aware about the current trends and software tools and models available for the Chatbot development. At the same time, it is important to analyse the end user preferences to design an application that is effective and meets the end users' expectations. It is also noted that resources available in the project are limited and that we need to be realistic in what can be achieved with the resources available and the timeframe of the project.

This Report is also the documentation of the Co-design process with careers development and employment experts and practitioners in each partner country. The report focuses on quality assurance measures to ensure that data is reliable and data sources transparent. Understanding and correctly interpreting trends in today's complex and dynamic labour market is challenging. Key to this is how best to make the most of evolving skills intelligence in a rapidly changing world.

Literature review

This report is based on a literature review and desk research undertaken by the project partners as well as online questionnaires and interviews with stakeholders. It should be read in conjunction with report into PR2 - the development of the CareerBot Tool - as the work undertaken in PR1 in identifying data sources and developing conversational flows is closely interlinked with the codesign and development process of the bot.

The literature review was intended primarily as a means of partners gaining an understanding of the development, technology, pedagogy and use of Chatbots. For this purpose, all partners were involved in identifying relevant literature sources and adding them to an online template which as well as providing bibliographic details included a summary of the literature

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source. Obviously search strings varied in different countries and languages but were based around chatbots, education, employment, careers, guidance.

It should be stressed that our aim was not to undertake a systematic literature review, which would be beyond the resources and timeframe of the project, but to contribute to a shared understanding of the potential of chatbots in education, the technologies behind chatbots and the design and development of chatbots. A summary of the literature identified is given in the following section.

Definition of Chatbots

A Chatbot can be described as a digital system that can be interacted with entirely through natural language via text or voice interfaces. Chatbots are intended to automate conversations by simulating a human conversation partner and can be integrated into software, such as online platforms, digital assistants, or be interfaced through messaging services.

There has been a growing interest in using chatbots for career advice, guidance, and counselling in recent years. This is because chatbots can provide immediate and personalized information to users, 24 hours a day. They can also be accessed easily and conveniently, making them a useful tool for individuals who may not have access to other forms of career advice, guidance, and counselling.

In “A Systematic Literature Review on Chatbots in Education Are We There Yet?” Wollny, Schneider, Di Mitri, Weidlich, Rittberger, and Drachsler (2021) examined different frameworks for classifying chatbots. One classification framework is defined through “flow chatbots”, “artificially intelligent chatbots,” “chatbots with integrated speech recognition”, as well as “chatbots with integrated context-data” (Winkler and Soellner, 2018). They say that “by specifying text interfaces as “Button-Based” or “Keyword Recognition-Based” (Smutny and Schreiberova, 2020), text interfaces can be subdivided.” “Text interfaces have advantages for conveying information, and speech interfaces have advantages for affective support.” They also draw attention to the importance of the personality of chatbots deriving “four guidelines helpful in education: positive or neutral emotional expressions, a limited amount of animated or visual graphics, a well-considered gender of the chatbot, and human-like interactions.”

In their conclusions they consider the position of Chatbots on the Gartner hype cycle, suggesting technology around chatbots in education may currently be in the “Innovation Trigger” phase. “This phase is where many expectations are placed on the technology, but the practical in-depth experience is still largely lacking.”

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Outside education

Outside of education, typical applications of chatbots are in customer service (Xu et al., 2017), counselling of hospital patients (Vaidyam et al., 2019), or information services in smart speakers (Ram et al., 2018). Outside of education, typical applications of chatbots are in customer service (Xu et al., 2017), counselling of hospital patients (Vaidyam et al., 2019), or information services in smart speakers (Ram et al., 2018).

Mehault (2021) outlines the advantages of the use of Chatbots from an employer point of view. In an article asserting that the significance of human resource (HR) management lies in its being able to manage human resources for maximum efficiency and being able to plan the operations of the organisation and lead it to success, Jitgosol, Y., Kasemvilas, S., Boonchai, P. 2019 present the design of an HR chatbot that could, they say, improve human resource management, particularly welfare concerns. In the case study, a HR chatbot application designed to answer questions and provide advice on employee welfare help reduce costs within the organization.

Chatbots in education

Wollny, Schneider et al (2021) say "one central element of chatbots is the intent classification, also named the Natural Language Understanding (NLU) component, which is responsible for the sense-making of human input data. Looking at the current advances in chatbot software development, it seems that this technology's goal is to pass the Turing Test (Saygin et al., 2000) one day, which could make chatbots effective educational tools. Therefore, we ask ourselves "Are we there yet? - Will we soon have an autonomous chatbot for every learner?" The December 2022 release of the Chat GPT chatbot application by Open AI has excited much comment and experimentation by educational researchers and developers in this regard. However there remain major concerns: "the creators of such models confess to the difficulty of addressing inappropriate responses that "do not accurately reflect the contents of authoritative external sources" (Birhane and Raji, 2022).

Chatbots incorporate generic language models extracted from large parts of the Internet and enable feedback by limiting themselves to text or voice interfaces. For this reason, they have also been proposed and researched for a variety of applications in education (Winkler and Soellner, 2018). Recent literature reviews on chatbots in education (Winkler and Soellner, 2018; Hobert, 2019a; Hobert and Meyer von Wolff, 2019; Jung et al., 2020; Pérez et al., 2020; Smutny and Schreiberova, 2020; Pérez-Marín, 2021) have reported on such applications as well as design guidelines, evaluation possibilities, and impact of chatbots in education.

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Researchers have pointed to three different pedagogical roles for chatbots in education: a supporting learning role, an assisting role, and a mentoring role (Wollny, Schneider et al, 2021).

Pedro Antonio Tamayo , Ana Herrero , Javier Martín ,Carolina Navarro & José Manuel Tránchez (2020) report that "within the process of progressive digitization of materials and tools for teaching and distance learning of a subject of introduction to Microeconomics (quarterly, in year three of the Degree in Social Work), taught by the authors at the National University of Distance Education (UNED), a virtual assistant in the form of chatbot, or conversational robot, called EconBot, has been designed and made available to students from 2017." Their paper "presents the reasons that led to its adoption, the process of its development, differentiating two phases, its characteristics and functions, the assessment of its usefulness and the role of teachers in the implementation of this type of technological innovation."

Kumar (2021) discusses educational chatbots (ECs) designed for pedagogical purposes. "These chatbots are strategized to provide personalized learning through the concept of a virtual assistant that replicates humanized conversation. Nevertheless, in the education paradigm, ECs are still novel with challenges in facilitating, deploying, designing, and integrating it as an effective pedagogical tool across multiple fields, and one such area is project-based learning." The chatbots were found to improve learning performance and teamwork and to facilitate collaboration among team members. "Nevertheless, affective-motivational learning outcomes such as perception of learning, need for cognition, motivation, and creative self-efficacy were not influenced by ECs.".

Wollny S, Schneider et al (2021) concluded their review of 74 relevant publications for chatbots' application in education by pointing to three main research challenges: "1) Aligning chatbot evaluations with implementation objectives, 2) Exploring the potential of chatbots for mentoring students, and 3) Exploring and leveraging adaptation capabilities of chatbots."

Smutny P. & Schreiberova P (2020) evaluated 47 educational chatbots "using the Facebook Messenger platform based on the analytic hierarchy process against the quality attributes of teaching, humanity, affect, and accessibility." They found that educational chatbots on the Facebook Messenger platform "vary from the basic level of sending personalized messages to recommending learning content. Results show that chatbots which are part of the instant messaging application are still in its early stages to become artificial intelligence teaching assistants."

Tom (2021) reports on the development of a digital assistant by the UK Open University and called Taylor that is designed to have a dialogue with students who disclose a disability. "A conversation with Taylor has two purposes. The first is for the student to provide information, covering things such as the nature of their disabilities, any assistive technologies they use, and areas where they could require support or adjustments in study. Taylor is an alternative

to the usual process of filling in forms to provide this information. The second purpose is to help each student to better understand what OU study entails and the support that they could benefit from. Students are given some introductory information on key topics, and they can also ask Taylor questions. This is designed to be part of the conversation throughout, with the idea that students can learn from the conversation and give better answers to the questions they are asked."

Bolton College in the UK uses a chatbot called Ada to answer both staff and students' questions about college life (Jisc, 2022). The chatbot is integrated with other platforms used by Bolton College, such as its information management system, which means that the chatbot can provide answers that are specific to any given user. A student, for instance, can get information about their timetable. Meanwhile, a teacher can get information about attendance figures in one of their classes.

Chatbots for Careers Guidance, Counselling and Advice

There is still limited literature on the use of chatbots for Career Counselling, Guidance, and Advice, probably reflecting the limited development of this use case to date.

Zahour et.al (2020) say "this branch of research is just emerging in the scientific community, therefore, in our article, we set up a chatbot in the field of educational and professional guidance which is based on the theory of John Holland and the RIASEC questionnaire in order to determine the dominant type of personality of undergraduate and graduate students that wants to enter the job market."

Attwell, Hughes, Bekiaridis and Percy (2021) report on the development of a careers chatbot (CiCi) that works alongside careers and employability professionals in the UK and its potential for new forms of blended careers support.

Another study examined the use of chatbots for providing career advice, guidance, and counselling to individuals with disabilities. The study found that chatbots can be an effective tool for providing personalized information and support to individuals with disabilities, who may face barriers to accessing other forms of career advice, guidance, and counselling. The study also found that chatbots can help to reduce stigma and discrimination against individuals with disabilities, by providing a safe and confidential space for them to explore their career options.

Overall, the research suggests that chatbots can be a useful tool for providing career advice, guidance, and counselling, particularly to young people and individuals with disabilities. However, it is important to note that chatbots are not a replacement for human career advisers and should be used as part of a broader career advice, guidance, and counselling strategy.

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Generative AI and Careers Guidance

CareerBot incorporates a limited amount of AI, in the form of Natural Language Processing. But since the start of the project, there has been the release of Generative AI, initially through the release of OpenAI's Chat GPT in November 2022. Generative AI, with its ability to create new and original content, has been hailed as a potential game-changer in this field. However, its implementation poses both exciting possibilities and significant challenges that require careful consideration. However, concerns regarding potential biases, lack of human connection, and overreliance on automation necessitate a critical examination of this technology's implications.

The following potential Uses of Generative AI in Careers Guidance have been put forward.

- **Personalized Career Exploration:** AI tools can analyse vast amounts of labour market data, including job descriptions, skills requirements, and salary trends, to generate personalized insights on suitable career paths aligned with individual skills, interests, and aptitudes. This can empower individuals, particularly those unfamiliar with career options, to explore diverse possibilities and make informed decisions (Chen, 2023).

- **Interactive Skill Development:** AI-powered chatbots can simulate real-world career scenarios, providing personalised feedback on job interviews, salary negotiations, and networking interactions (Gauthier, 2023). This fosters practical skills development in a safe and dynamic environment, preparing individuals for actual encounters with confidence (Lee & Kim, 2023).

- **Content Creation and Delivery:** AI tools can generate customized resumes, cover letters, and interview preparation materials tailored to specific job descriptions (Zhang, 2023). This can save time and improve the efficacy of job applications, especially for individuals with limited resources or writing skills (Gauthier, 2023).

- **Data-Driven Career Insights:** AI can analyse trends in job postings, skills requirements, and salary ranges across various industries, providing real-time guidance on in-demand skills, emerging fields, and potential earning trajectories (Chen, 2023; Zhang, 2023). This information empowers individuals to make informed career decisions aligned with market realities and future-proof their skillsets (Gauthier, 2023)

- **Accessible Guidance:** AI-powered tools can offer 24/7 career guidance, overcoming geographical and time constraints (Lee & Kim, 2023). This can be particularly beneficial for individuals in remote locations or with limited access to traditional

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guidance services, ensuring equitable access to career exploration and preparation (Lee & Kim, 2023).

Disadvantages of Generative AI in Careers Guidance:

- **Algorithmic Bias:** AI models trained on biased data can perpetuate discriminatory practices in job recommendations, exacerbating existing inequalities in the labour market (Lee & Kim, 2023). Careful data selection and bias mitigation strategies are crucial to ensure fair and equitable career guidance, considering factors like gender, race, and socioeconomic background (Gauthier, 2023).
- **Lack of Human Connection and Empathy:** While AI can provide valuable information and automate tasks, it cannot replicate the emotional intelligence and nuanced understanding offered by human career advisors (Zhang, 2023). The human element remains essential for fostering trust, empathy, and motivation in the guidance process, providing emotional support and navigating sensitive career transitions (Gauthier, 2023).
- **Overreliance on Automation:** Overdependence on AI tools can hinder individuals' critical thinking and decision-making skills (Zhang, 2023). It is crucial to strike a balance between utilising AI for efficiency and promoting individual agency and self-reflection (Lee & Kim, 2023). Individuals should critically evaluate AI-generated recommendations and develop the skills to make informed choices based on their unique values and aspirations (Gauthier, 2023).
- **Transparency and Explainability:** The "black box" nature of some AI algorithms raises concerns about transparency and explainability (Zhang, 2023). Individuals need to understand the rationale behind AI-generated recommendations to make informed choices and avoid overconfidence in automated results (Chen, 2023). Transparency helps build trust and allows individuals to identify potential biases in the algorithms (Gauthier, 2023).
- **Limited Creativity and Innovation:** While AI can process information and generate text, it currently lacks true creativity and innovative thinking (Gauthier, 2023). Careers guidance should encourage exploration of unique strengths.

The following have been put forward as recommendations for responsible and effective Integration:

- **Develop Ethical Guidelines:** Robust ethical frameworks and clear guidelines for using AI in careers guidance are crucial to ensure responsible development and implementation. These guidelines should address bias, transparency, accountability, and data privacy concerns, prioritizing fairness and equitable access to career opportunities (European Commission, 2023).

- **Human-in-the-Loop Approach:** AI tools should be employed as supplements, not replacements, for human career advisors. Effective integration involves leveraging AI for specific tasks, such as data analysis and content generation, while reserving complex decision-making, emotional support, and personalised coaching for qualified professionals (Zhang, 2023). This "human-in-the-loop" approach ensures a balance between automation and human expertise, maximizing the benefits of both worlds.
- **Promote Critical Thinking Skills:** Careers guidance should equip individuals with critical thinking skills to assess and interpret AI-generated information. This includes understanding the algorithms, their limitations, and potential biases, fostering informed decision-making and preventing overreliance on automation (Lee & Kim, 2023). Educational programmes and resources can help individuals develop critical thinking skills within the context of career exploration and planning.
- **Continuous Evaluation and Improvement:** The use of AI in careers guidance should be subject to ongoing evaluation and improvement. This includes monitoring for potential biases, assessing the effectiveness of AI tools in achieving desired outcomes, and incorporating feedback from users and stakeholders (Chen, 2023). Regular evaluation ensures ethical and responsible development, adapting to the evolving needs of individuals and the labour market.

Conclusions for the CareerBot project

Clearly the advancement of generative AI poses issues for the ChatBot project. The project does not have the resources to develop a new chatbot based on Generative AI. This does not just result from the time and development effort required but also from the cost of Generative AI applications.

Although a recent release of development tools for Open AI applications makes it much easier to produce Chatbots based on OpenAI GPT4, the cost of these applications is based on tokens for access and use. However, it is apparent that the expectations of potential users, especially among young users, have risen following the release of Chat GPT.

The UK JISC have funded an evaluation of existing AI based applications building on AI. In looking at the Ada chatbot referenced above, they concluded that students were now expecting to be able to use natural language in ‘chatting’ to such applications and decided not to progress with continuing the investigation on Ada. They said “The chatbot approach used in this pilot was based on a ‘traditional’ chatbot…. we saw that further work, by adding in more questions and answers, would be needed to approach a more useful level of response rate. This is a challenging and time-consuming activity and one that we think may well be partially solved by generative AI chatbots, which should be able to answer questions based

on existing documents and information sources without the need for manually curating question sets."

"A generative AI approach completely changes the user experience, so the user can chat to the bot in a very natural way, ask follow-up questions, ask questions in many different ways and always get a fairly natural response. This is very different to the experience with a traditional chatbot, with its much more limited training set. User expectations have therefore shifted, and the approach used in this pilot would no longer match users' view of chatbot capability" (Web, 2023).

They concluded not to proceed with the approach used in this pilot, and to watch chatbot technology over the next few months to decide the next steps. "It is likely that this will be guidance on how to use pre-existing large language model chatbots effectively in institutions rather than us creating a tool, but this will become clearer fairly quickly" (ibid).

The evaluation of CareerBot has been extremely positive both from career guidance practitioners and end users.

Similarly to the work undertaken with the Ada chatbot, (which benefitted from sustainable funding), we would agree with the need to advance the development of chatbots for careers guidance based on Generative AI. But this will require more extensive funding than is available under the CareerBot project. But we hope and believe that CareerBot has shown the potential and hope that our project shows the great potential for future projects in this field.

Green Jobs and Green Skills

There are increasing initiatives and projects around Green Jobs and a seemingly considerable interest from jobs seekers and young people seeking employment in Green Jobs. This is an area which should be included in CareerBot.

However, a prevailing problem is to define just what jobs these are? A Careers Advisor, Anna Sidoti (2023) has addressed the problem of defining Green Jobs:

The definition of a ***green job*** varies. That's part of the problem – we don't know exactly what this Labour Market will look like because it depends on how you define a ***green job***, and there is no international consensus (yet). ***Green Jobs*** can be defined by:

- **Industry** involved in climate transition (for example, energy infrastructure).
- **Occupations** directly involved in climate transition (for example, wind turbine technician).

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- **Skills** required for climate transition, such as sustainable design, energy efficiency or environmental awareness (for example, workers involved in developing, generating, storing, transmitting and distributing energy generated from renewable, net-zero emission sources or "clean energy supply").

The OECD has recommended that there is an international consensus on this. The **International Labour Organization's (ILO)** (2016) broad definition of green employment is ***'green jobs'*** are those involving activities such as community adaptation to climate change, and they nod to decent jobs as well. In the diagram below – ***green jobs*** are the ones in the striped area.

Source: ILO, 2016.

Jobs and Skills Australia released a report in October 2023, entitled 'The Clean Energy Generation: workforce needs for a net zero economy'. Critical green jobs identified in this report are in *engineering* (all fields), *electrical trades*, such as *electricians*, *tele-communications* and *air-conditioning and refrigeration techs.* We need engineers, although not as much as we need environmental scientists. The report also outlines the need for lesser-known careers like *mechanical fitters*, *marine pilots* and *food scientists*. **They anticipate a 40% increase in these roles by 2050,** primarily in regional areas.

The UK's UK Green Jobs taskforce report predicts significant GDP growth and 300,000 new jobs by 2050 linked to green technology. The critical roles identified in the UK are similar to Australia. This report identifies other green jobs required to power the energy

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transition: *construction supply chain jobs*, (planners, architects, engineers, heat pump installers), *hydrogen jobs* (pipe-fitters) and *automotive jobs* (Electric Vehicle mechanics).

The US O*Net service has identified 202 Green Occupations with occupational categories assigned to:

- **Green New & Emerging** — The impact of green economy activities and technologies is sufficient to create the need for unique work and worker requirements, which results in the generation of new occupations.
- **Green Enhanced Skills** — The impact of green economy activities and technologies results in a significant change to the work and worker requirements of an existing O*NET-SOC occupation.
- **Green Increased Demand** — The impact of green economy activities and technologies results in an increase in employment demand, but does not entail significant changes in the work and worker requirements of the occupation.

They have also identified 72 'Green Topics' **with related Green occupations and related Education Programs**

The problem is that it is not really a switch from not Green Jobs to Green jobs but rather that skills are changing, and jobs increasingly involve what might be called Green Skills.

The European Classification of Occupations, Skills and Competences (ESCO, 2022) have developed the European taxonomy of skills and occupations providing a common language on occupations and skills, and also the relationships between them, specifying which skills are essential or optional for a specific occupation. In 2022, they released an updated version of the taxonomy to support the green transition of the labour market.

"As workers need a skill set that can respond to the need of reducing emissions in working practices," "they say, "the Skills / Competences pillar has been enriched with the additional information at skill level to distinguish green skills and knowledge concepts. This means that within the whole dataset of ESCO skills, some can now be filtered as green. ESCO also provides information such as their reusability type and are linked with occupations. All the concepts are translated in 27 languages and are available free of charge in different formats."

https://esco.ec.europa.eu/en/news/green-skills-and-knowledge-concepts-labelling-esco-classification

A total of 571 ESCO skills and knowledge concepts are labelled as green. This includes: 381 skills, 185 knowledge concepts, and 5 transversal skills. The full list of green concepts is available in the ESCO portal. The green concepts aim to cover the activities of the European labour market. As such, skills range within different economic sectors, from energy production and distribution to manufacturing processes, from waste management and pollution standards to auditing and impact assessment, from research to education.

The work from ESCO is valuable, especially in showing the Green Skills are needed in many jobs and occupations and not just the obvious ones. Yet the challenge remains of how to use ESCO's classification system. ESCO have recently published a new report, 'Jobs for the Green Transition, Definitions, Classifications and emerging trends, hoping to deal with the issues of defining Green Jobs and Skills'. The report introduces a novel taxonomy for green jobs based on four pillars: inputs, outputs, processes, and job quality. This taxonomy aims to provide a practical framework for assessing and comparing case studies, supporting policymaking in this area. Furthermore, the report highlights recent strategies and policies, both at the EU and national levels, focusing on skill development for the green transition and addressing social aspects to protect vulnerable groups. It suggests that a more integrated approach, considering the environmental impact of work processes, outputs, and supply chain inputs, is essential for promoting green job creation while phasing out brown jobs.

Not just the Green Transition, but also the rapid changes to labour markets through the introduction of Artificial Intelligence, require a faster and better integrated approach.

On 13 May 2024, The European Commission released versions 1.2 of the ESCO framework. The major changes in this version were as follows:

- **35 occupations**, **42 new skills** and **196 new knowledge concepts have been added to the classification;**

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- **677 alternative labels** are added to new or previous ESCO concepts, together with **96 hidden terms**;
- **18 quality improvements tasks were performed.** Over 12000 concepts have been updated. Improvements range from removing duplicate terms, correction of orphan skills, reallocation of skills and knowledges in the skills hierarchy;
- Improvements on **existing translations** in 8 languages and inclusion of national sign languages.

Despite the European Commission's statement that "This update cycle of ESCO v1.2 was focused on the green and digital transition, and on skills and occupations linked to the emerging technologies: there would appear to be little change in the green skills and jobs classifications. In discussions with ESCO staff it seems the amount of work on updating v1.1 and especially on ensuring the quality and usefulness of job descriptions and knowledge and skills in eight languages has precluded further development in Green Skills. Therefore at the present time it would appear simpler to link to the O*Net data on Green jobs but to continue to monitor ESCO developments.

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Project Workshop on LMI

The original project plan was to organise a face-to-face workshop to explore in more depth the issues involved in PR1 and PR2. This was not able to be held due to Covid19 and instead the workshop was held online on 17 December 2021. Below is a summary of the workshop proceedings followed by a more in depth consideration of the outcomes regarding the persona and data sources for CareerBot. The sessions are detailed below.

Session 1 - Introduction to chatbots for careers guidance and development

George Bekiaridis explained the background to chatbots, noting that to date their main use had been in sales and marketing although there is a growing interest in their use in education, for instance through the Bob chatbot for careers guidance in France, the Career Chatbot in the UK and the Ada chatbot being implemented in Bolton College in the UK.

It was important to note that there are two broad types of chatbot, scripted chatbots and AI based chatbots, the latter being dynamically generated through external data using APIs.

Graham Attwell led a workshop session on the character of chatbots. All partners presented personas that they had developed around individuals in their target groups. The personas were based on a template which had previously been circulated.

The development and use of Persona

Personas were seen as important for the project partners in better understanding the needs of potential learners, and also in understanding the different foci that the partners brought to the project. In guiding the development of the personas, Graham Attwell wrote a short explanatory note, reproduced below.

Jerome Bruner has contrasted two ways of knowing: the narrative and the scientific. The former seeks to find a good story (which resonates with readers as life-like) while the latter seeks to draw out key concepts and ideas by abstraction and the application of logic. To better know the subjects of our research, namely those seeking opportunities for new jobs, we drew upon narrative as a means of examining actions, intentions, consequences and context.

A good story should be emotionally engaging, capable of application in different contexts and provide a broader framework for understanding generalities, partly because there is a certain looseness of ideas. Generalities in this sense are different from knowledge derived from abstraction: in this case learning and knowledge are the result of multiple intertwining forces: content, context, and community.

Following Brown, in purposeful storytelling people should get the central ideas quickly and stories should communicate ideas holistically, naturally, clearly and facilitate intuitive and interactive communication. Our intention therefore is to supplement analysis through storytelling to enable us to imagine perspectives and share meanings about different educational transitions by conjuring up pictures more conducive to a culture of learning and development than a formal analytical presentation which is more in the form of knowledge transmission.

Personas are fictional characters created to represent the different user types within a targeted demographic, attitude and/or behaviour set that might use a site, brand or product in a similar way (Wikipedia). Personas can be seen as tool or method for design based on storytelling. The term persona is used widely in online and technology applications as well as in advertising, where other terms such as pen portraits may also be used.

Personas are useful in considering the goals, desires, and limitations of users to help to guide decisions about a service, product or interaction space such as features, interactions, and visual design of a website. Personas are most often used as part of a user-centred design process for designing software and are also considered a part of interaction design (IxD), have been used in industrial design and for online marketing purposes.

A user persona is a representation of the goals and behaviour of a real group of users. In most cases, personas are synthesised from data collected from interviews with users. They are captured in a 1-to-2-page description or a diagramme that includes behaviour patterns, goals, skills, attitudes, and environment, with a few fictional personal details to make the persona a realistic character. Personas identify the user motivations, expectations and goals responsible for driving online behaviour, and bring users to life by giving them names, personalities and often a photo. (Calabria, 2004)

Personas can be based on research into users and should not be based purely on the creator's imagination. The use of research helps the creation of several archetypal users that can be used to develop products that deliver positive user experiences. By feeding in real data, the research allows design teams to avoid generating stereotypical users that may bear no relation to the actual user’s reality.

Tina Calabria says: “Introducing personas into your intranet or website project will bring a number of benefits:

- users’ goals and needs become a common point of focus for the team
- the team can concentrate on designing for a manageable set of personas knowing that they represent the needs of many users
- they are relatively quick to develop and replace the need to canvass the whole user community and spend months gathering user requirements

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- they help avoid the trap of building what users ask for rather than what they will actually use
- design efforts can be prioritised based on the personas
- disagreements over design decisions can be sorted out by referring back to the personas
- designs can be constantly evaluated against the personas, reducing the frequency of large and expensive usability tests."

A template was developed for recording the personas. The template has sections for:

- Personal details and background of the persona
- Goals
- Triggers
- I need to know
- I need to feel
- Motivation in seeking employment: Intrinsic
- Motivation in seeking employment: Extrinsic

The personas were presented at an online project meeting, leading to discussion of the needs of the target groups and how the Chatbot could meet those needs.

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Session 2 - Introduction to Labour Market Information

Graham Attwell made a presentation on Using LMI for careers guidance and organised group work around what LMI users need. He said LMI is pivotal to effective careers practice because high quality, impartial, current, expert knowledge about the labour market distinguishes careers support from other types of helping.

A careers practitioner or teacher is likely to use LMI every time they interact with someone seeking help. Questions about course choice, self-employment, how much money could be earned in a particular job, where the local job vacancies can be found, what will the 'hot jobs'

be when they leave education? None of these questions or issues could be addressed without LMI. LMI can help to demystify the world of work and can help individuals achieve their career goals.

LMI provides the knowledge and understanding of how the labour market functions and is crucial for making sense of changing economic circumstances. It can also help when thinking about what the future might hold, so can support career decision making.

LMI could support clients in:

- Broadening horizons
- Exploring options
- Developing Resilience
- Understanding the Changing Labour Market
- Pursuing equity

Practitioners should give LMI as a central part of careers interventions, because it enhances the matching process (at the core of this approach) of clients/learners to the best employment opportunities.

Clients/learners behave rationally and their career decision-making and transition behaviours are both planned and logical.

High quality LMI provided by practitioners as part of career support will stimulate the desired behaviour change in clients/learners (e.g., giving LMI about selection procedures and deadlines for a particular job or training course will result in the client conforming to these requirements).

Session 3 - How we access Labour Market Information

George Bekiaridis presented a demonstration of the UK LMI for All open API (see https://www.lmiforall.org.uk) for accessing Labour Market Information.

LMi for All is funded by the UK Department for Education and provides open access to different data sets, allowing both private and public sector organisations to develop applications and incorporate high quality LMI in their websites. George Bekiaridis explained how APIs work and how this allowed Labour Market Information to be dynamically displayed in chatbots. This was followed by a discussion on possible sources of API in the different partner countries.

Session 4 - The next steps in the project

In summing up the work undertaken in the workshop, Graham Attwell reiterated the need for all the partners to be involved in the next steps of the project. These included identification of further sources of literature for the literature review, the identification of sources of LMI in the different partner countries, as well as further consideration of the needs of the different target groups for the project in partner countries.

Quality assurance measures to ensure that data is reliable

Labour Market data must be easily accessible; available in a simple form, preferably through an open API; and in accordance with the underpinning principles, which include:

- **Ethical:** adherence to the core ethos of equality of opportunity for all and compliance with related legislation.
- **Impartial**: all LMI produced for the guidance/counselling process does not promote one sector, in a competitive manner, as superior to any other, or mask an economic decline.
- **Accessible**: addressing physical limitations as well as the ability to understand particular levels of complexity.
- **Robust:** ensuring reliability, comprehensiveness and currency.
- **Relevant:** to the needs of careers practitioners in their guidance work with clients.

The following checklist provides a guide for project partners in assessing the efficacy and quality of LMI.

Choosing between sources of LMI

Who has produced the LMI?

Think about:

- Whether the source of LMI can be regarded as trustworthy.
- What are the aims and objectives of the organisation producing the LMI? Is it promotional (putting a positive spin on particular facts) or excluding facts?
- Whether you have been able to get similar data from more than one source – as this will help you achieve a more balanced and reliable view on of a particular situation.

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How was the LMI collected?

Think about:

- How and why data were collected? (i.e. methodology)
- What is the coverage and degree of detail available?
- Is the data presented reliability?
- How valid is the data?

How is the LMI data disaggregated and classified?

Think about the:

- Relevance and appropriateness of units of measurement.
- Disaggregation of data, particularly geographical boundaries.
- Classification systems applied.
- Comparability of data and consistency over time.
- Analysis in terms of your needs; and
- Relevance to the area in which you are operating.

Is the LMI up-to-date?

Think about:

- When was the research carried out?
- What period does the data relate to?
- When was the LMI published?
- Potential currency and usefulness of data to current situations.
- Timeliness.
- Frequency of update (and when the next data will be available); and
- Where there is any more recent research that either supports or contradicts the data?

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Identification of data sources and discussion with European agencies

Four major sources European sources of data have been identified:

- ESCO
- CEDEFOP
- EUROSTAT
- EURES

Meetings have been had with ESCO, CEDEFOP and EURES.

In addition the US O*Net service provides a wide range of labour market information, which although using American classifications of jobs, has crosswalks to ESCO data and is included in Cedefop data dashboards.

ESCO (European Skills, Competences, Qualifications and Occupations)

ESCO is the European multilingual classification of Skills, Competences and Occupations. ESCO works as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training.

ESCO has an extensive database and well-developed, advanced APIs. These provide access to job title, job descriptions and skill and knowledge requirements in all European languages. These can be integrated into CareerBot through text queries.

The meeting with ESCO focused on recent and future work being undertaken by ESCO, in particular their work in identifying occupations requiring green skills and the nature of those skills, available through API access.

CEDEFOP is responsible for the SKILLS-OVATE database

Skills-OVATE offers detailed information on the jobs and skills employers demand based on online job advertisements (OJAs) in 28 European countries. It is powered by Cedefop's and Eurostat's joint work in the context of the Web Intelligence Hub.

Skills-OVATE provides access to information based on millions of job advertisements collected from thousands of sources, including private job portals, public employment service portals, recruitment agencies, online newspapers and corporate websites.

To show up-to-date labour market and skills trends, Skills-OVATE presents data for the last 4 available quarters and is updated four times a year. Skills-OVATE provides information on occupations, skills and regions based on international classifications: ISCO-08 for occupations, NACE rev. 2 for sectors and NUTS-2 for regions. There are two ways to display information on skills: via ESCO version 1 or O*Net.

At present there is no API available although for research purpose CEDEFOP has provided us with access to the very large 'data lake' on which OVATE skills is based.

Our initial examination concluded that at present we lack the resources to take advantage of this data. But we can download selected CEDEFOP data and integrate this as a resource for CareerBot.

EUROSTAT is the statistical office of the European Union

Working in partnership with Member State statistical offices it publishes extensive data, including Labour Market Data. It also provides access to many of these datasets through APIs. However much of this data is provided for economic forecasting and policy and there are limited data sets which might be appropriate for careers guidance and advice purposes, although this may change through its partnership with CEDEFOP around the OVATE-SKILLS data.

EURES services to jobseekers and employers

The EURES services include:

- Matching of job vacancies and CVs on the EURES portal
- Information and guidance and other support services for workers and employers

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- Access to information on living and working conditions in the EU member states, such as taxation, pensions, health insurance and social security
- Specific support services for frontier workers and employers in cross-border regions
- Support to specific groups in the context of the EURES Targeted Mobility Schemes
- Support to dynamic recruitment events through the European (Online) Job Days platform

For job vacancies EURES is dependent on partnerships with Member State Employment Services. It appears most used in France and Greece at present. EURES has an API but access is restricted to approved governmental organisations. It appears unlikely that the technical partners are able to gain access to the API, however other partners in Employment Services may be able to gain access.

The movement to open data is a dynamic process and in line with this we will continue to monitor developments at European level especially with ESCO.

Identification of national data sources

Following the first workshop, partners searched for sources of national and local LMI. A shared spreadsheet was established for this purpose. To date 30 sources of Labour Market information have been identified, including ten databases. Further research into Open data in Member States suggests that although there is an increasing trend towards the publication of Open Data including API access to many of these data sets, few are focused on Labour Market Information.

APIs are particularly important for developing dynamic chatbots. An API (Application Programming Interface) is a set of rules and protocols that define how two software systems can interact with each other. APIs allow different software systems to communicate with each other and exchange data, allowing them to work together to perform a wider range of tasks.

APIs typically consist of a set of functions or methods that can be called by other software programs. These functions or methods allow the calling program to access specific features or data of the system that provides the API. For example, an API might allow a calling program to retrieve data from a database, or to send a command to a device to perform a specific action.

APIs are used in many different contexts, including web development, mobile app development, and software integration. They are often used to allow different software systems to communicate with each other and exchange data in a standardized way. While we can access links to websites which do not provide API access this will entail moving outside the Bot, a step we do not wish to take.

In the CareerBot project, we are progressing the design and development of Bots for each country based on scripted dialogues.

Consultations with stakeholders

Consultations with stakeholders in Ireland, Austria, Greece and Spain are an ongoing activity until the end of the project. The individuals and organisations selected for consultation come from a variety of different interests:

a) Organisations responsible for employment and for careers guidance

b) Data providers

c) Related and relevant projects

The stakeholder meetings serve the purpose of dissemination of interim project results and consultation over the products in development but also to gather information about relevant and related developments in the partner countries and possible data sources.

All consultations with stakeholders are documented in the projects' dissemination lists.

Codesign and development of the CareerBot Tool

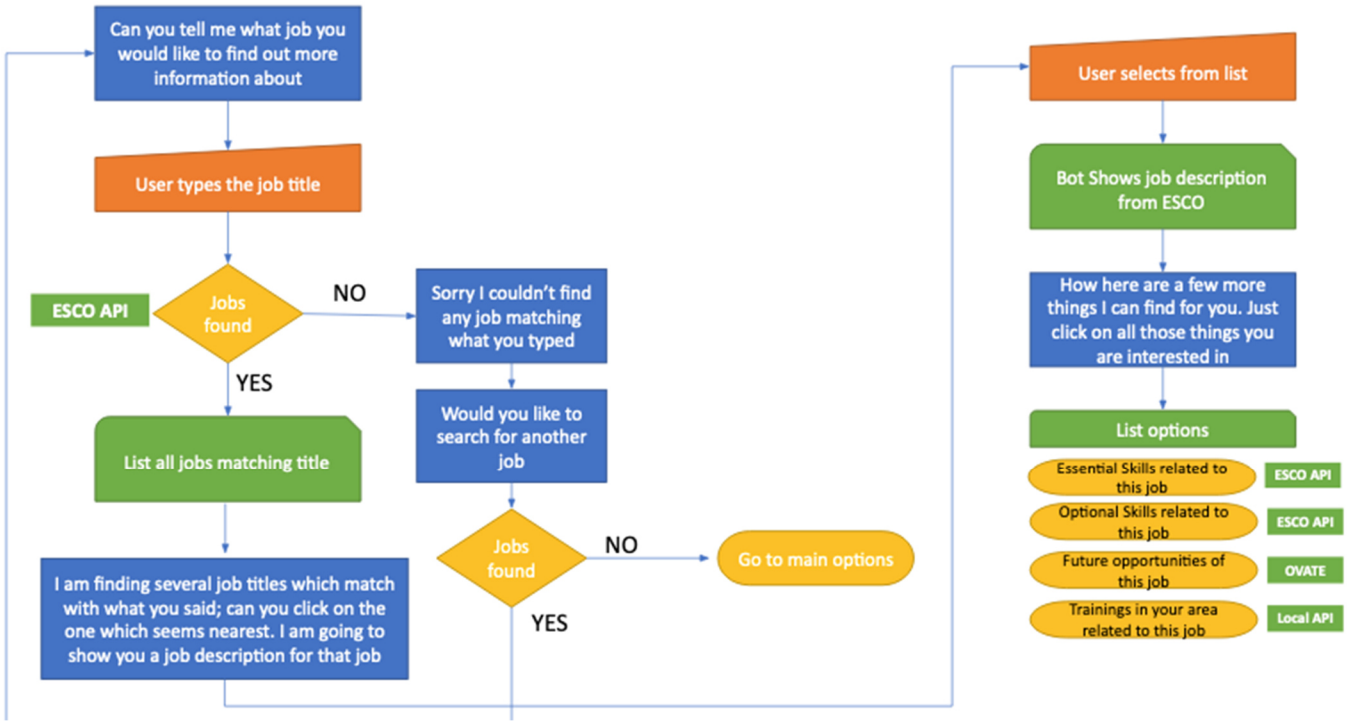
Identification of conversational flows

Graham Attwell and George Bekiaridis introduced the idea of conversational flows to the partnership. They explained that within a scripted chatbot, the conversation must be written in such a way as to elicit a response from the user that the bot can process and reply to. The use of Natural Language Processing (NLP) could assist in allowing the bot to interpret different phrasing of answers, but the conversational flow still required considerable direction. At the same time thought needed to be given to the target users and the conversational language needed to be clear and attractive to the. At the same time there was a limitation in that most users were likely to be accessing the bot through mobile devices with limited screen sizes,

thus imposing a restraint on the amount of text that could comfortably be read in answer to any question.

Development of flows - process and products

The partners were asked to propose conversational flows relevant to their clients while remembering that any dynamic interactions would be dependent on the availability of data sources accessible through APIs. The following diagram was developed as an exemplar of how the flows should be written:



The next stage in the identification of the conversation flows was to agree the flows on which the beta Chatbot would be based. This first version for testing would be in English.

Partners shared the writing of the flows. This was followed by an iterative improvement process with Graham Attwell and George Bekiaridis providing feedback on respective version. The finally agreed flows were then incorporated in the first beta release of the Chatbot.

The following flows have been developed and are incorporated in the beta version of the bot:

Introduction

Information on jobs and skills

- Search job descriptions
- More information

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- See skills and knowledge
- About skills and knowledge

Application and CV

- Cover letter

Job Finder

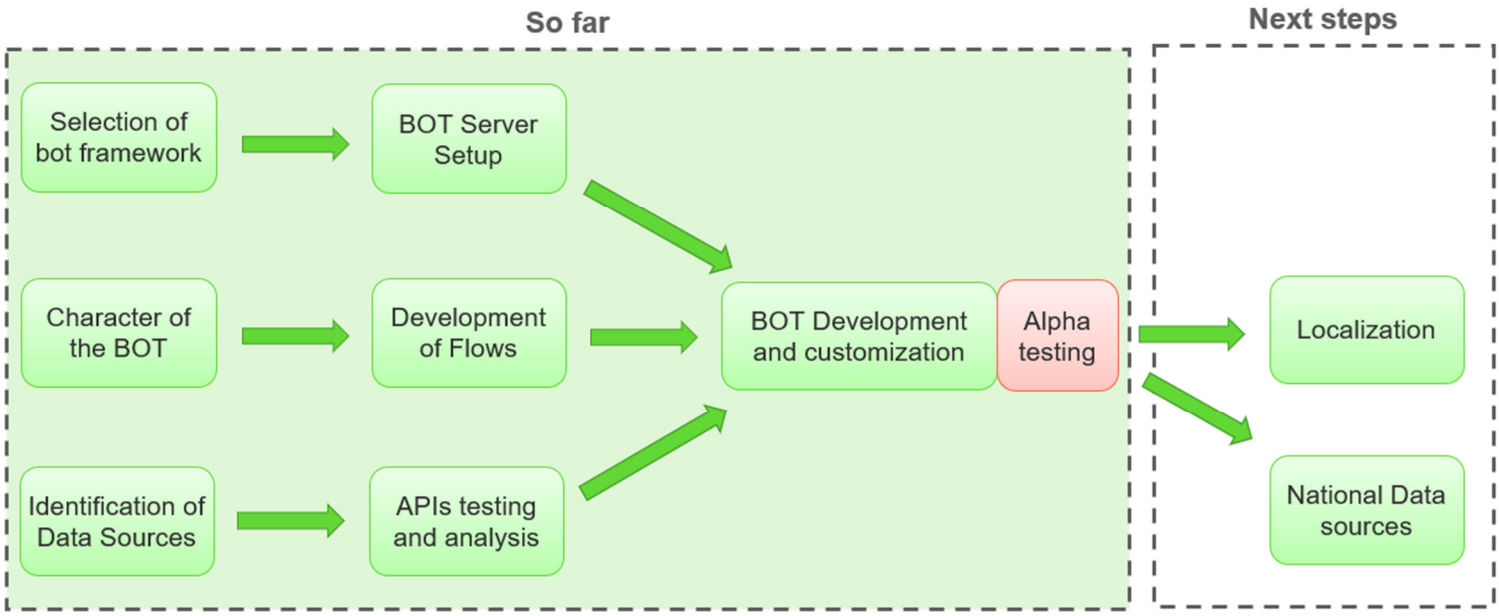
Demand for skills and knowledge in your country

- Most requested skills in your country
- Future employment change
- Future employment growth 2020 -2030
- Future needs (total job openings) by occupation 2020-2030

Contact an advisor (this flow is planned for the near future)

Development of beta of bot

The development of the BOT can be summarized in the following diagram:



Specifically :

Selection of the Bot Framework:

The main factors considered for selecting the bot framework were:

- Programming language
- Platforms and services we needed to integrate with
- Natural language processing (NLP) capabilities
- Cost of using and hosting the bot framework

The selected bot framework has the following features: Based on node.js, is working as web based application, it has NLP capabilities embedded and the cost of using and hosting is within the limits of the project budget available.

Character of the Bot

The character for the bot has been designed to be consistent with its purpose and role as career guide, and thus more engaging and effective for users.

Identification of data sources.

Important aspect of bot's functionality is to present data to the user in an easy and understandable way. For the first version of the bot we identified EU wide data sources like ESCO, OVATE and job search services that have been accessed through APIs (Application Programming Interfaces). In a later phase and when we develop the localised versions of the bot we added more local data sources.

Bot Server setup

The bot "lives" in a special server that supports 3 main functionalities

- Host the bot itself (node.js server)
- Host the web-server which is the is the layer exposed to the end users to access the bot (NGINX)
- Host the NLP (Natural language processing) server

We selected the hosting service that can support all of those services and being in a datacentre in Europe for speed access.

We used DOCKER containers to separate host the different services / functionalities to have better management, upgradability and monitoring.

Codesign processes

Designers and developers worked together to create the bot that is both functional and engaging for users. Collaborative codesign ensured that the bot meets user needs and is easy to use, while also being well-designed and effective.

The main steps in the codesign process were:

1. To develop the initial conversation flows by using a template with specific instructions on how a flow should be designed.
2. To develop a prototype was a working model of the bot that allowed designers and developers to test its functionality and usability.
3. To test the prototype: Once the prototype was completed, it has be tested with users to identify any issues or areas for improvement.
4. To refine the design: Based on user feedback, the design has been refined to address any issues and improve the user experience.
5. Once the design has been refined, the final English version of the bot has been developed.
6. In a last step the bot has been "localised" and is now available in all partner languages.

Initial testing of flows and results of beta piloting

The initial testing of the flows has taken place with staff and clients from the partner organisations. The time period for the testing has been extended allowing for iterative development and testing of the beta version of the Chatbot. An online questionnaire has been developed for collecting feedback on the tests.

The feedback from all partners countries has been collected and analysed, which built the base for the improvement of the English Beta version of the CareerBot.

This process and the outcomes of the testing phase are described in the **PR2 Report "CareerBot Tool, Codesign and development of the CareerBot"**, which is available on the website: https://careerbot.eu/results/

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Development of national specifications for data and flows and enhancement of bots

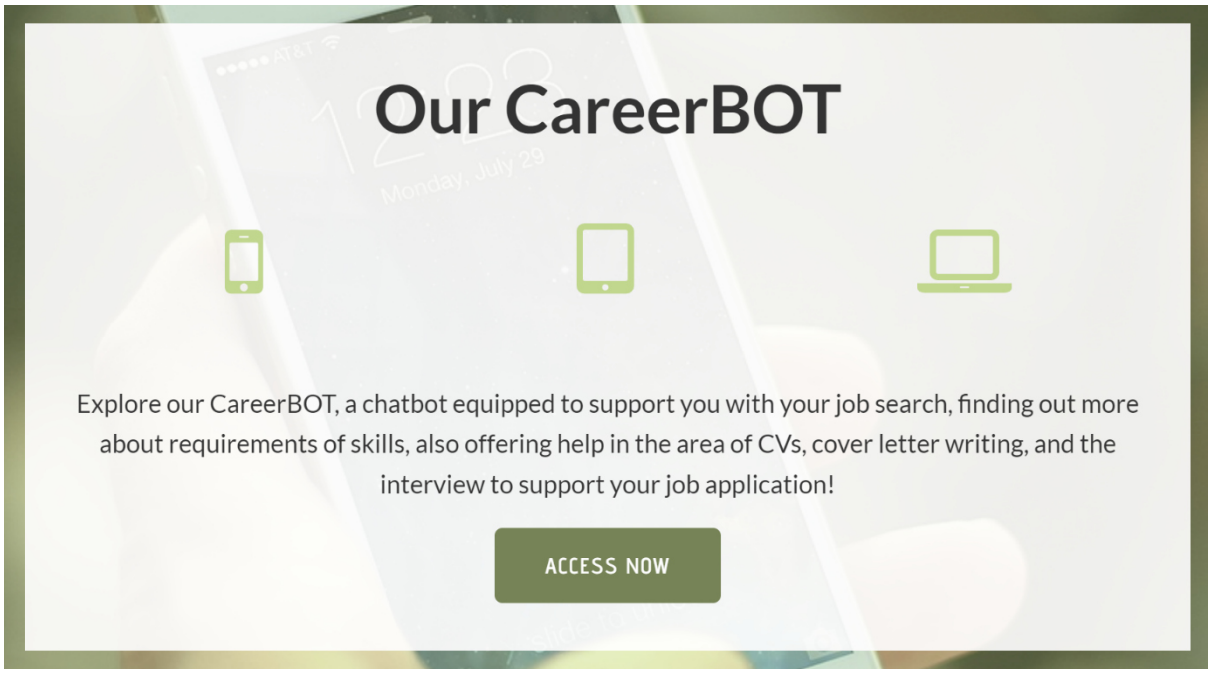
Following the development of the beta of the bot and the testing and feedback, the next stages involved the development of national versions of the Chatbot. This work was almost finalised by end of March 2024, but smaller adaptations are ongoing till end of the project in August 2024.

National versions required localisation, not just translation, but also in terms of cultural adaptation, especially for the different groups targeted by the project in partner countries. Secondly the national versions incorporated new conversational flows utilising national data sets where available.

More information on details of the development process is provided in the PR2 Report "CareerBot Tool, Codesign and development of the CareerBot", which is available on the website: https://careerbot.eu/results/

This process resulted in the release of version 7 of the Chatbot in German, Greek and Spanish languages, in addition to an enhanced English language version.

https://careerbot.eu/bot/bot.html



Annexes

A1 – Stakeholder consultations in all partner countries

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CareerBot Stakeholder Consultations

Partner	Stakeholder	Name	Topic / Purpose	Outcome
Hafelekar	3s Unternehmensberatung GmbH	Claudia Plaimauer	Expert for ESCO, Skills OVATE, EURES and automated Career Counselling in Austria	Discussion of the following topics with Ms. Plaimauer: 1) information on job-profiles, 2) CV writing and tips, and 3)job databases for job search including opportunities offered by ESCO, Skills OVATE, EURES and national bodies. Further discussed was what content is available via API. Outcome of the meetings: We received concrete information on the following topics: (1) occupational information systems that provide relevance or structural information to generate "lean" skills lists (O*Net, AMS-BIS, ESCO); (2) data exports from BIS: here 3s can support us, but no access via API is possible; (3) Contacts re Textkernel: The Big Data platform "Jobfeed" already captures an estimated 95-97% of the Austrian online job market. However, you need a paid license to use it. 3s will be invited to the second Multiplier Event taking place in Vienna in July 2024.
Hafelekar	whatchado	Oliver Eger	Integration of videos showcasing various professions.	Discussion with Mr. Eger and his team how to integrate whatchado Videos in the CareerBot, section 1) information on job-profiles (DE version); Hafelekar and TSD are already working on the concrete integration of the videos into the local DE version of CareerBot: Outcome: The collaboration sounded very promising but there is no mapping with the ESCO or OVATE database, because the structure is based on a categorization of the BIC. Therefore we decided to use the CareerBot website to link to whatchado: Link zur Website unter Kontaktpunkte: https://www.whatchado.com/de Link zu den Videostories unter Videothek: https://www.whatchado.com/de/stories
Hafelekar	Arbeitsmarktservice (AMS) - Abteilung Arbeitsmarktforschung und Berufsinformation (ABI)	René Sturm	Collaboration for dissemination of project results	René Sturm showed great interest in the project and offered to publish the results on various AMS platforms. Mr. Sturm established a contact to the department who developed the AMS Berufsinfomat. See next entry.
Hafelekar	Arbeitsmarktservice (AMS) and OeAD	René Sturm Ernst Gesslbauer	Participation in Forum 2024 Bildung und Arbeitsmarkt - presentation of the CareerBot	Forum 2024 Bildung und Arbeitsmarkt with the title „Digitale Horizonte: Wie Technologie und KI die beruflichen Lern- und Beratungsprozesse beeinflussen“ took place on 28th May 2024. Paul Schober (Hafelekar) presented the CareerBot to around 300 experts.

Hafelekar	Arbeitsmarktservice (AMS) - Bundesgeschäftsstelle, Fachbereichsleiter Berufsinfo und Forschung	Thomas Mader	Participation in the 2nd Multiplier Event of the CareerBot project	AMS, Thomas Mader, and Hafelekar organised the 2nd Multiplier Event in Austria to present and to discuss the AMS Berufsinfomat and the CareerBot on 17th July 2024. This was a great opportunity to compare two different bot solutions and discuss the pros and cons. We reached out to 38 educational and career counselling experts as well as decision makers.
Hafelekar	ibis acam Bildungs GmbH - Leitung strategische Contententwicklung und internationale Projekte	Evelin Graf	Participation in the 2nd Multiplier Event of the CareerBot project	Ibis Acam actively participated in the second Multiplier Event on 17th July 2024 and is interested in future cooperations with Hafelekar regarding new projects in the field of AI.
TSD	Arbeitsmarktservice Tirol	Alfred Lercher	Short oral information about CareerBot	Information about the project and organisation of 1st Multiplier Event
TSD	Arbeitsmarktservice Tirol	Sabine Platzer-Werlberger	Short oral information about CareerBot	Ms. Platzer-Werlberger invited us for an personal meeting to hear more about CareerBot. Ms. Platzer-Werlberger is presently temorarily the head of AMS Tirol.
TSD	Arbeitsmarktservice Tirol	Philipp Seirer-Baumgartner	Short oral information about CareerBot	Open for a followup meeting after formal contact with head of AMS Tirol.
TSD	AMG Tirol	Cornelia Passer	Short oral information about CareerBot	Ms. Passer is an experienced career counselor and i leading a team of counselors and is interestedin an excange.
TSD	KARBON Consulting	Sonja Karbon	Short oral information about CareerBot	Ms. Karbon is leadpartner in Erasmus project https://occay.eu/ The project - an Online Career Counselling Academy - adresses also career counsellors. Ms. Karbon tested our bot, gave feedback and is open for further exchange.
TSD	ZeMiT	Michaela Nindl, Somi Jochum	Information about the project per Email, personal communication	ZeMit works extensively with migrants, also with asylum seekers after the leave TSD, when the get refugee status and access to labour market. ZeMiT is active in competence evaluation and a welcopming partner for diseminating our results. They tested the bot.
TSD	innovia	Daniela Dupor	participaction in the 2nd Training Event of the CareerBOT project	Daniela Dupor informed her whole team about the CareerBOT. innovia works in the field of career guidance, therefore they will try to use the CareerBOT in practise with the clients.
TSD	AMS	Manela Stampfl	participaction in the 2nd Training Event of the CareerBOT project	Manuela Stampfl tranferd all manuscripts and knowledge to her team how to work with the CareerBot.
TSD	Rotes Kreuz	Samir Alswid	participaction in the 2nd Training Event of the CareerBOT project	Alswird informed her whole team about the CareerBOT.Rotes Kreuz works in the field of migrant guidance and first aid.

CIS	SAE (employment service) Salobrena	Pedro Navarro Rull	Information about the project and possible future collaboration	We met for a short presentation and evaluation on how we could proceed in regards to future possible collaboration with the employment service.
CIS	Fundación CENTRA (Seville)	Tristan Pertinez Blasco	Information about the project and possible future collaboration	We met for a presentation and evaluation on how we could proceed in regards to future possible collaboration with the employment service.
CIS	Fundación TAS	Maria Jose Perez Rodriguez, Maria Jose Velazquez Carranza; Sole Tugues Sambola; Manuela Olivarez Pérez (Gerente)	Piloting an promotion of the project; letter of support	They will use the project within their organisation, also provided us letter of support.
CIS	Asociación Arrabal AID	Juan Francisco Ruiz Jímenez; Estefania León Rodríguez	Piloting an promotion of the project; Multiplier Event	They will promote the CareerBot to their collegues, as arrabal has a high number of users.
CIS	Asociación Caminos	Paloma Beltran Valdivieso, Carmen Lancha Montes	Piloting an promotion of the project	They will use the CareerBot with their volunteers and Youth trainings and interventions.
CIS	Servicio Andaluz de Empleo in Almunecar	Maria del Carmen Fernandez Fernandez	Piloting an promotion of the project	She will promote to her collegues in Almunecar and other offices of the SAE in the province of Granada.
CIS	Mancomunidad de Municipios costa Tropical Almunecar	Encarnación Bonet Salado, Esther M. Ruiz Díaz	Piloting an promotion of the project	They will promote the CareerBot to their collegues in the district administration of Almunecar.
CIS	I.E.S María Zambrano, Torre del Mar	Staff	Multiplier Event	They aim to use the bot and the videos for the professional orientation of young people.
CIS	CADE Vélez-Málaga, Andalucia Emprende	Antonia Villamuela Fernández, Gloria Lopez Cazorla	Multiplier Event and letter of support	They aim to use the bot and the videos for the professional orientation of their participants, already requested another training for 28.6.24.
CIS	Asociación Creacciona Innovación y Emprendimiento	Maria Luque Fernandez	Multiplier Event	They aim to use the materials and the bot for their professional counselling.
CIS	Asociación Alef Sevilla	Maria Jiménez Borja	Presentation and letter of support	They are interested in the Bot for their professional orientation.
CIS	I.E.S. Emilio Munoz, Cogollos de la Vega, Granada	Nicole Hämmerle, Carolina de la Cruz Garcia	Presentation	They aim to promote it to their collegues to use it for professional orientation in their boarding school.
ACP	EURES Greece	Maria Flaka	Information about the project and access to EURES API	We informed Mrs Flaka about the project and we discussed the posibillities to get access to EURES API. She shown interest about the project but the process to get access to EURES API is very complicated so we agreed to check again in the future.
ACP	Greek Public Employment Service	George Kirlis	Information about the project and possible future collaboration	We presented the project and the Bot to Mr Kirlis and we agreed to pronoted it when the Greek version will be available.

ACP	Social Empowerment NGO	Niki Valsami	Presentation and letter of support	They aim to promote it among vulnerable groups they are working with and among counselors
ACP	ERGON VET	Margarita Defingou	Presentation and letter of support	They aim to promote it among their teachers and students
ACP	EUROERGASIAKI VET	Poly Vlachou	Piloting, Presentation and letter of support	They aim to promote it among their teachers and students
ACP	Second Chance School of Syros	Anastasia Argyropoulou	Piloting an promotion of the project	They aim to promote it among their teachers and students
ACP	Community Center of Sapes	Babis Kougiouroukis	Promotion of the project and possible future collaboration	They are interested to use the Bot as part of the services they are offering in local community.
BJC	EURES Ireland	European Labour Authority	Access EURES API	To get access to the EURES Job Vacancies API, your organisation must be admitted to the EURES network in Ireland. For further information please contact EURES IE: www.euresireland.ie Some of the requires to be admitted are to share all the Job Vacancies published by the organisation, as well as the profile/CV of all the Job Seekers, which we are not able to share in a common platform at the moment.
BJC	SOLAS Ireland	Education & Training courses	Access to E&T offer in Ireland	SOLAS IT team advised that you could use the API, the widget plugin or the widget's API jquery functions. All are documented here: George and Graham have already access it. https://widget.fetchcourses.ie/
BJC	City of Dublin Education and Training Board	Una Mulgreen and Mary Hickie	Participation in the 1st Multiplier Event Hosted by the BJC	They tested the CareerBot tool and gathered information on the project
BJC	Irish National Organisation of the Unemployed	John Farrell	Participation in the 1st Multiplier Event Hosted by the BJC	Tested the tool and circulated the project training in Ireland within their network and published updates in their E-Bulletin
BJC	Central Remidial Clinic	Pamela Ryan	Participation in the 1st Multiplier Event Hosted by the BJC	They brought programme participants to attend the Multiplier event, tested the tool and hope to use it with their clients
BJC	WEE project participants	Jobseekers	Participation in the 1st Multiplier Event Hosted by the BJC	They tested the tool and attended the multiplier event, they are job seekers who took part in a BJC run initiative in collabroation with JP Morgan
BJC	Jobiri	Claudio Sponcioni CEO at Jobiri, platform designed for job seekers and guidance practitioners based in Italy	Participation in the 1st Multiplier Event Hosted by the BJC	Tested the tool and gathered information on the project
BJC	Specialisterne	Disha Mandalia and Susan Cullen	Participated in the External Piloting run by the BJC and provided Expression of Support Letter	Tested the tool with clients and shared the project with staff in their organisation
BJC	Dublin Northwest Partnership	Deirdre keenan, Ger Moore and Patricia Burke	Participated in the External Piloting run by the BJC, awaiting Expression of Support Letter	Participated in the piloting and gathered information on the project to share with staff

BJC	South Dublin County Partnership	Celine Blount Ntibimenya and Donna Flanagan	Participated in the External Piloting run by the BJC awaiting expression of support.	Participated in the piloting and gathered information on the project to share with staff
BJC	North Side Partnership	Tara Neary	Participated in the External Piloting run by the BJC, awaiting Expression of Support Letter	Participated in the piloting and gathered information on the project to share with staff
BJC	agens-berlin	Badre Lammaghi	Guidance practioner working in Berlin and engaged in Digital Empowher EU project with the BJC	Used the tool with clients and will share the tool within his networks through various presentations
BJC	Invest in Your Future participants (programme run by CDETB)	VET students	The students tested the tool under the guidance of Martina Keogh (Training Coordinator at BJC)	Tested the tool and acted as experience with client for BJC staff
BJC	Dublin Adult Learning Centre	Veronica Brogan	Met 1-1 with BJC staff member to receive instructions and guidance on using the tool with clients with the aim to use it in her own organisation.	Received information on the tool and aims to test it within her own organisaiton.
BJC	Careers Portal	Bernadette Walsh	Met with BJC staff to establish synergies between the CareerBot project and Career's Portal including future collaborations.	Met online during the early phases of tool development and collaborates with the BJC on innovative guidance solutions.
BJC	MetropolisNet	Elena Grilli (managing director)	Project lead and partner in complimentary projects that have integrated the outcomes of the testing of CareerBot and provider of letter of Support in Germany.	Supports the tool and will support the consortium in sharing the tool in Germany and through related projects and content.
BJC	Community Centre (Ballymun East)	Andrea McGann (Community Employment Superviser)	Received guidance from BJC staff on the use of the tool and helps it to support participants in the CE Scheme .	Share the project results with Jobseekers and other Community Employment Supervisors.