NEXT – Digital Transformations
for Supporting Next-Generation Labour

Deliverable 2.2

Report on questionnaires of stakeholders

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1 Introduction

This document describes the two questionnaires aimed at discovering the stakeholders' opinion on knowledge and skills required for next-generation digital jobs. Questionnaire 1 is focused on the newest trends in digital transformation of the job market, while Questionnaire 2 is focused on clarifying the soft skills needed for employees to be ready for digital jobs.

The overall aim of this two-stage survey is to confirm that our assumption on the topics for studying materials preparation planned in WP3 as it was presented in the project proposal is correct. Otherwise, updates will be implemented as informed by the results of survey and secondary research.

Both questionnaires used "open-ended questions" with a "storytelling" format. The reason for using this approach is that it allows us to achieve the richness and depth of the information gathered. In particular, open-ended questions invite stakeholders to express themselves freely without being confined to predefined options. The "storytelling" format specifically encourages respondents to narrate their experiences, perspectives, and insights, fostering more comprehensive and detailed responses. We expected that "storytelling" could help stakeholders to provide context around their answers. This is particularly important when dealing with complex or nuanced issues where a simple yes/no or multiple-choice response may not capture the depth of their thoughts. Besides, stakeholders may find open-ended questions more engaging as they allow for a personal touch.

The analysis of the provided answers is presented in the deliverable D2.3 with which this deliverable, D2.2, is logically connected.

The rest of the document is organized in the following way. The second chapter is devoted to the creation and implementation of the questionnaire on the digital job market trends (Questionnaire 1). The third chapter is devoted to the creation and implementation of the questionnaire on soft skills which are requested by the digital jobs market (Questionnaire 2). The fourth chapter concludes the work on the stakeholders' two-stage survey.

1 Questionnaire on the digital job market trends

1.1 Description of the Questionnaire 1

The purpose of the questionnaire on the digital job market trends (Questionnaire 1) is to discover the opinion of the experts working in IT companies on the newest trends in digital transformation of the job market. This is aimed at confirming the topics previously selected for further development of learning materials as a part of the WP3, in particular, Task 3.3 and informing any necessary updates to these topics.

The Questionnaire 1 consists of introductory questions (in particular, affiliation and duration of the work in ICT) and five main questions.

The introductory questions are required for a better understanding of the representativity of the responses. The duration of the work in ICT was offered as a multiple-choice question.

The main questions are open-ended questions to invite experts to disclose answers in the "storytelling" format and use the following text template:

*Are you familiar with the advances in **TOPIC**? If yes, please share your opinion on how it can influence the digital transformation of the job market. Which new jobs can appear on the job market can be requested by the employers with the relation to wider application of this technology? Please give examples to illustrate your answer.*

The template-variable *TOPIC* uses one of four values:

- Artificial Intelligence;
- Extended Reality (XR), Augmented Reality (AR), 3D Visualization;
- Metaverse;
- Blockchain and instruments for information security.

For all topics except topic "Metaverse" an additional question is used: *which new skills can be requested by the employers with the relation to wider application of these technologies?*

Moreover, Questionnaire 1 contains an additional, composite question: *Which other technologies would you consider as game-changers for the next-generation digital job market? Please give examples on new digital jobs and new digital skills to be requested by employers with the relation to these technologies.*

1.2 Implementation of the Questionnaire 1

The Questionnaire 1 form is shown below. This form is available online as a Google Form [1].

NEXT Digital Transformations for Supporting Next-Generation Labour
——
The NEXT project (https://nextstudy.eu/) is a project of the Erasmus+ KA2 Program. The goal of this project is to narrow the existing gap between the rapid pace of digital transformation and the training of specialists from different fields, especially those that are not related to ICT, to let them satisfy the changing requirements of the job market. We ask you as an expert in ICT to share your opinion with us about the newest trends in digital transformation of the job market. Thank you for your help!
——

QUESTIONNAIRE

1. Your name:
_____

2. Your affiliation:
_____

3. How long do you work in the field of ICT?
_____

4. Are you familiar with the advances in **Artificial Intelligence**? If yes, please share your opinion on how it can influence the digital transformation of the job market. Which new jobs can appear on the job market and which new skills can be requested by the employers with the relation to wider application of this technology? Please give examples to illustrate your answer.

_____
_____
_____
_____
_____

5. Are you familiar with the immersive technologies including **Extended Reality** (XR), **Augmented Reality** (AR), **3D Visualization**? If yes, please share your opinion on how it can influence the digital transformation of the job market. Which new jobs can appear on the job market and which new skills can be requested by the employers with the relation to wider application of these technologies? Please give examples to illustrate your answer.

_____
_____
_____
_____

6. Are you familiar with the concept of **Metaverse**? If yes, please share your opinion on how it can influence the digital transformation of the job market. Which new jobs can appear on the job market with the relation to this new technology? Please give examples to illustrate your answer.

_____
_____
_____
_____
_____
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_____

7. Are you familiar with **Blockchain** and instruments for **information security**? If yes, please share your opinion on how it can influence the digital transformation of the job market. Which new jobs can appear on the job market and which new skills can be requested by the employers with the relation to wider application of these technological tools? Please give examples to illustrate your answer.

_____
_____
_____
_____
_____

8. Which **other technologies** would you consider as game-changers for the next-generation digital job market? Please give examples on new digital jobs and new digital skills to be requested by employers with the relation to these technologies.

_____
_____
_____
_____
_____

THANK YOU FOR SHARING YOUR OPINION WITH US!
   If you have any further suggestions, please send your response to: sulema.olga@lll.kpi.ua

1.3 Participants of the Survey (Questionnaire 1)

The Questionnaire 1 was offered to experts from IT companies and related organizations. It was distributed through social media channels, WhatsApp, and personal contacts. The first stage of the survey was carried out in December, for two weeks. As a result, we received 20 responses.

The landscape of affiliations of the survey participants is quite wide. The most remarkable organizations whose employees decided to take part in the first stage of our survey are EPAM Systems [2], Lviv IT Cluster [3] and AVYCON company [4].

EPAM Systems is a large-scale IT company. It has 280+ Forbes Global 2000 Customers. The company is present in 50+ countries and regions. EPAM Systems has 54,600+ employees.

Lviv IT Cluster is a large-scale association of IT companies, SMEs and universities working in the field of ICT. The cluster includes 217 members.

AVYCON is a specialized company focusing on such products as cameras, recorders and related hardware which can be used for digital solutions related to digital jobs.

Besides the above-named organizations, one of survey participants works at the Australian company Master Tech Appliance Services [5].

The distribution of the participants' work experience is uniform along the four categories of work experience terms (1-3 years, 3-5 years, 5-10 years and over 10 years) as shown in Fig. 1.
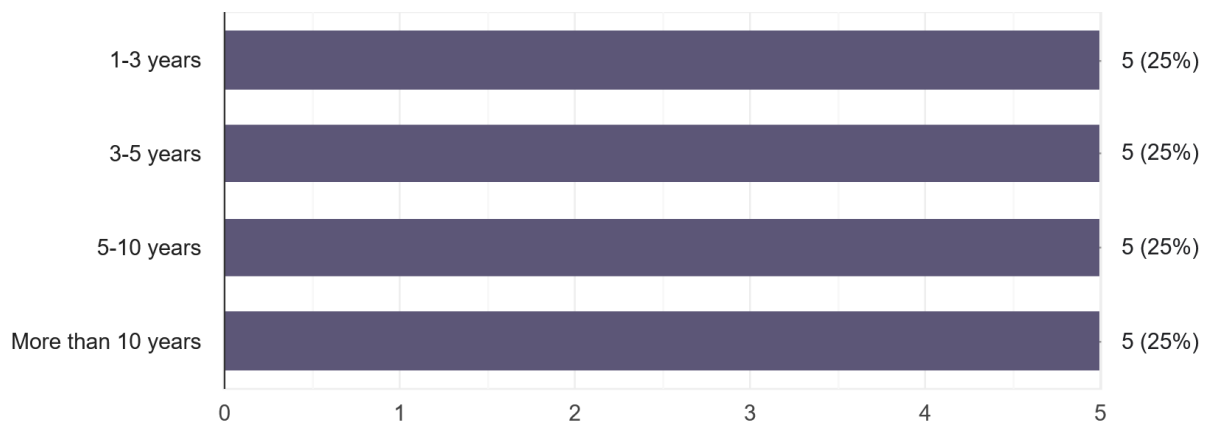

Fig. 1. Questionnaire 1 participants' work experience

The analysis of the provided answers and their impact to the planned learning materials preparation within WP3 are presented in the deliverable D2.3.

2 Questionnaire on soft skills for digital jobs

2.1 Description of the Questionnaire 2

The Questionnaire 2 is the second stage of the survey. The objective of this questionnaire, focusing on soft skills demanded by the digital job market, is to gather insights from IT industry experts regarding the latest requirements stemming from the digital transformation of the job market. The primary goal is to validate the topics previously identified for the ongoing development of learning materials within Work Package 3 (WP3), specifically in Task 3.3.

The Questionnaire 2 consists of four introductory questions (name, company, position, duration of the work in ICT) and four main questions.

The main questions are open-ended questions type to invite experts to disclose answers in the "storytelling" format and are focused on gathering the information regarding the impact of three issues potentially related to a digital job, namely mental health issues, ethics issues, and security issues. The following information is asked to be reflected on by the IT experts' answers:

- *Opinions regarding the possible impact of 'digital' jobs on employee's mental health;*
- *Soft skills that an employee should have to minimize the of 'digital' jobs on employee's mental health;*
- *Opinions regarding potential ethics issues in 'digital' communication and collaboration;*
- *Soft skills that an employee should have to minimize the impact of ethics issues;*
- *Opinions regarding personal data protection and security risks in 'digital' environments;*
- *Soft skills that an employee should have to feel secure on personal data protection matter;*
- *Other suggestions on the soft skills of the next-generation employees which can help them to feel comfortable and secure while working fully 'digitally'.*

2.2 Structure of the Questionnaire 2

The Questionnaire 2 form is shown below. This form is available online as a Google Form [2].

NEXT Digital Transformations for Supporting Next-Generation Labour
_____

The NEXT project (https://nextstudy.eu/) is a project of the Erasmus+ KA2 Program. The goal of this project is to narrow the existing gap between the rapid pace of digital transformation and the training of specialists from different fields, especially those that are not related to ICT, to let them satisfy the changing requirements of the job market. We ask you as an expert in ICT to share your opinion with us about the newest trends in digital transformation of the job market. Thank you for your help!
_____

QUESTIONNAIRE

1. Your name:
_____

2. Your company:
_____

3. Your position:
_____

4. How long do you work in the field of ICT?
_____

5. What is your opinion regarding the possible impact of 'digital' jobs on employee's **mental health**? Which soft skills an employee should have to minimize this impact?

_____
_____
_____
_____
_____

6. What is your opinion regarding potential **ethics issues** in 'digital' communication and collaboration? Which soft skills an employee should have to minimize the impact of such issues?

_____
_____
_____
_____
_____
_____

7. What is your opinion regarding **personal data protection** and security risks in 'digital' environments? Which soft skills an employee should have to feel secure on this matter?

_____
_____
_____
_____
_____
_____
_____

8. Do you have any **other suggestions on the soft skills** of the next-generation employees which can help them to feel comfortable and secure while working fully 'digitally'?

_____
_____
_____
_____
_____

THANK YOU FOR SHARING YOUR OPINION WITH US!
If you have any further suggestions, please send your response to: sulema.olga@lll.kpi.ua

2.3 Participants of the Survey (Questionnaire 2)

The Questionnaire 2 was offered to experts from IT companies and related organizations. It was distributed through social media channels, WhatsApp, and personal contacts. The second stage of the survey was carried out in January, for two weeks. As a result, we received 21 responses.

In the Questionnaire 2, we directly asked the company name and the position.

Among the organizations whose employees decided to participate the second stage of the survey are EPAM Systems [2], Sigma Software [7], ESET [8], and Fidelity Investments [9].

Sigma Software is a large-scale company which has 42 offices in 19 countries. Its staff includes 2000+ employees. The company is among the World's Top 100 outsourcing providers.

ESET is a software company specializing in cybersecurity. ESET manufactures security products in Europe, delivering security software to over 200 countries and territories globally. Its software is translated into more than 30 languages.

Fidelity Investments is a multinational financial services corporation that offers financial planning and advice, retirement plans, wealth management services, trading and brokerage services. All these services are based on using software offered to customers as advanced digital instruments. The survey was answered by the Irish branch of the company [10].

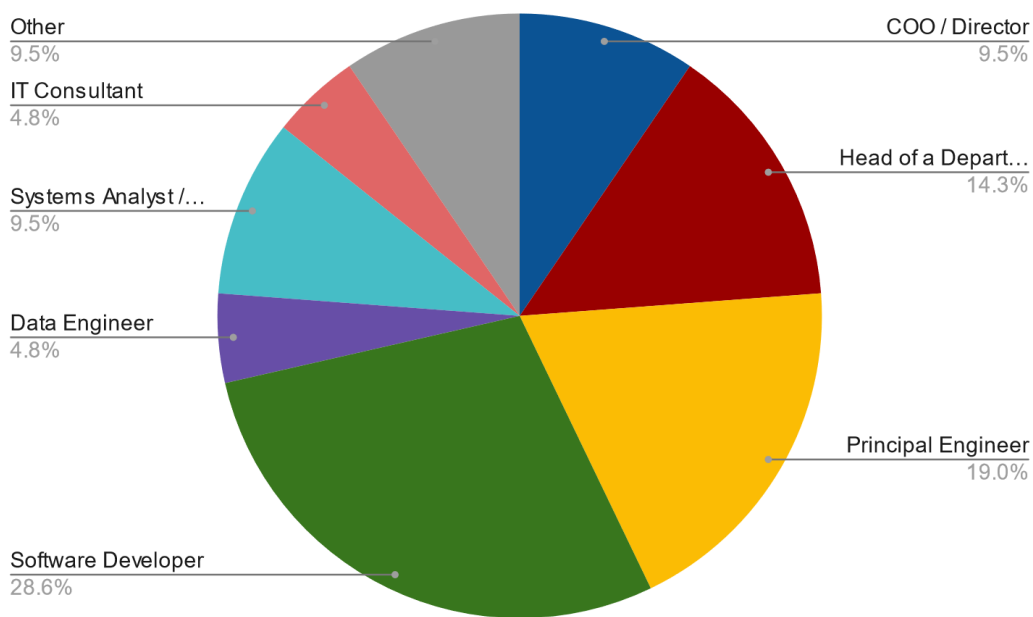The scope of participants' positions is illustrated by Fig. 2.

Fig. 2. Questionnaire 2 participants' positions

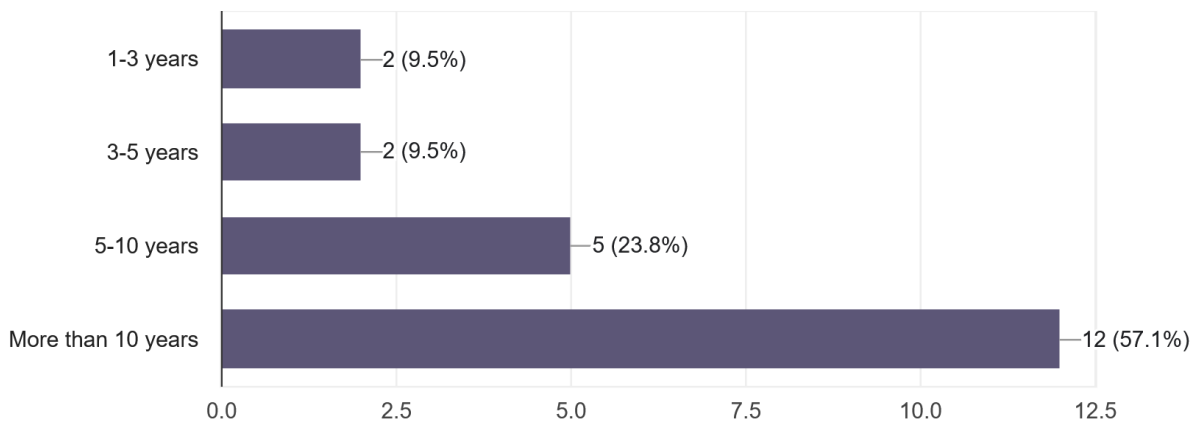The distribution of the participants' work experience is shown on Fig. 3.

Fig. 3. Questionnaire 2 participants' work experience

The analysis of the provided answers and their impact to the planned learning materials preparation within WP3 are presented in the deliverable D2.3.

3 Conclusions

This document presented the two-stage survey aimed at discovering opinions of IT experts and other stakeholders on both the newest trends on the digital job market and soft skills needed for employees to help them to overcome potential issues such as mental health issues, ethics and security issues related to digital jobs.

The survey included two questionnaires based on open-ended questions and fostering more comprehensive and detailed responses.

The participants of both stages of the survey represent different categories of employees in terms of their work experience and positions. Some of them work for worldwide known companies such as EPAM Systems, Sigma Software and ESET. All these factors allow us to conclude that the survey is representative and its results in conjunction with the secondary research performed (and presented in D2.1) can be used to inform the topics for the learning materials aimed at supporting the next generation digital labour.

4 References

[1] NEXT Project – Questionnaire 1, https://forms.gle/Jh4CCAKP5D11Phsw9
[2] EPAM Systems, https://www.epam.com/
[3] Lviv IT Cluster, https://itcluster.lviv.ua/en/
[4] AVYCON, https://www.avycon.com/
[5] Master Tech Appliance Services, https://master-tech.com.au/
[6] NEXT Project – Questionnaire 2, https://forms.gle/riRTyQ1ZFp889wcv9
[7] Sigma Software, https://sigma.software/
[8] ESET, https://www.eset.com/int/about/
[9] Fidelity Investments, https://www.fidelity.com/
[10] Irish branch of Fidelity Investments, https://www.fidelityinvestments.ie/

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