EU4Digital

EU4Digital: supporting digital economy and society in the Eastern Partnership

Setting up mentorship programmes to bridge the gender gap in ICT: a guide for the EU Eastern partner countries

Based on a case-study of Women Go Tech™ mentorship programme

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Partner organizations in the Eastern partner countries

Girls in Tech Armenia

Georgia's Innovation and Technology Agency

Femmes Digitales

Women in ICT Club – Femmes Digitales

Moldovan Association of Information and Communications Technology Companies

<epam>

EPAM

(Women EPAM Training Programme)

#дівчата STEM

Girls in STEM programme by CSR Ukraine

Executive summary

The gender gap in ICT – a low number of women willing or able to find employment in the ICT sector, is becoming an ever more pressing challenge with the progressing digitalization of our economies and societies. Digital technologies nowadays are becoming the backbone of economic and social life. According to the estimates of the United Nations Conference on Trade and Development, the digital economy already represents up to 15.5% of the global GDP – as much as the whole global manufacturing sector. However, not everyone can equally benefit from the opportunities in the digital domain.

Women are in particular missing out from the new employment and economic opportunities created by digital technologies. For example, in the EU in 2019, out of the 8 million ICT specialists, only 18% (or less than 1.5 million) were women, improving only marginally as compared to the 17% share in 2011. Employers are also losing out by not being able to find the talent they look for, while everybody else loses by not being able to access digital products and solutions which were not developed at all or not developed fully due to the missing variety of perspectives and the shortage of talent/skills.

This guide is aimed to help in addressing this challenge. It builds upon the concept of mentorship – a practice to support employee career development and well embedded in the everyday activities of many businesses around the world, extending it to the challenge of the gender gap in ICT. It is also a practical guide – it builds upon the actual field experience of a well-established mentorship programme – Women Go Tech™, which during five years since its inception in 2016 has already motivated thousands of women to explore possibilities in the technology domain and helped hundreds of them to build their own pathways into the technology sector.

The suggestions and recommendations in this document are in particular aimed at organisations willing to kick-start a scalable and high-quality mentorship programme, which can achieve visible impact from the very start. While it discusses in more detail the specific context in the EU Eastern Partnership countries – Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine, most of the lessons learned and all the key guiding principles are applicable to any mentorship programme wherever it is implemented.

Finally, based on an exploratory work with local partners, the guide reports on the key challenges identified for deploying women mentorship programmes in the Eastern partner countries. This notably includes a lack of local donors for supporting such initiatives, while at the same time local actors have limited capacities in acquiring external support. Furthermore, not all interested local actors are likely to have the minimum set of necessary capabilities for managing an initiative at the critical scale as required. Therefore, it is recommended to explore what intermediated support could be provided for the interested and capable local actors, both in helping to acquire the necessary resources as well as providing the steering and administrative support when needed.

A practical way forward could be a selection of local actors possessing a minimum set of capabilities (building upon the criteria of self-assessment tool as attached in the annex) and providing them with the necessary steering, advice and support for deploying pilot programmes in countries where such actors could be identified.

To summarise, the recommended actions include:

1. Introduce concentrated **3-months pilot programme in 2-3** Eastern partner countries, depending on the identification of competent local promoters and based on the programme components explained in this guide (preparatory, kick-off and implementation activities). Suggested target group – working-age women; recommended programme scope - 30-40 mentees.

2. Consider possible **funding sources from existing funds** and donors.

3. Start the programme **no later than beginning of April 2021 with the preliminary kick-off date in September 2021** to use the momentum of active initiatives in the Eastern partner countries and their willingness to proceed with the pilot programmes implementation.

4. Consider **testing of regional cooperation**, such as set-up of regional mentor pool, advisory boards, educational sessions, programme promotion activities, and other actions as appropriate. The scope of regional activities might be extended in later stages.

An initiative to launch mentorship programmes for women in ICT can unlock the potential of digital technology to a large number of women. However, the necessary capacity for reaching a sufficient scale is not yet broadly available in the EU Eastern Partnership countries. An EU-level support initiative could help bridge this gap.

A checklist of key steps for launching a women in ICT mentorship programme

1.	Defining the target group
2.	Defining the thematic scope
3.	Setting the target number of mentors and mentees to be recruited
4.	Defining duration and intensity
5.	Selecting the complementary activities
6.	Estimating the programme budget
7.	Identifying the sources of financing
8.	Estimating the amount of human resources needed
9.	Distributing the tasks between paid staff and volunteers
10.	Identifying communication, technical and logistical requirements
11.	Exploring public partnerships
12.	Exploring business partnerships
13.	Exploring in-kind partnerships explored
14.	Accounting for partnerships restrictions
15.	Preparing a communications plan
16.	Setting-out a communications budget
17.	Setting-out a social media strategy
18.	Utilizing other communication channels as appropriate
19.	Organizing intro session(s)
20.	Carrying out a matching exercise
21.	Setting-up continuous monitoring
22.	Carrying out programme evaluation

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Abbreviations

Eastern partner countries – The six Eastern Neighbourhood countries (Armenia, Azerbaijan, Belarus, Georgia, The Republic of Moldova, Ukraine)

EU – The European Union

GITA – Georgia Innovation and Technology Agency

ICT – Information and Communication Technology

IT – Information Technology

Moldova – The Republic of Moldova

STEM – Science, Technology, Engineering, and Mathematics

1 Introduction – how to use this guide

The gender gap in ICT – a low number of women willing or able to find employment in the ICT sector, is becoming an even more pressing challenge with the progressing digitalization of our economies and societies. Women are losing out by not being able to access the often high quality and interesting jobs, while employers are facing workforce and talent shortages, restricting their ability to deliver the services and products that society needs. Everyone also loses by the fact that the developed digital solutions are not as good or do not cater as well for every member of our societies as they should. In recent years, multiple initiatives have been launched aiming to address this challenge.

One of the recognized ways how women could be supported in accessing employment opportunities in the ICT sector is mentorship – providing role-models, advice and encouragement, to help build individualized pathways into technology-rich jobs. This document aims to provide local actors, in particular within the EU Eastern Partnership countries, a toolbox and a step-by-step guide on how to kick-start a medium-sized (100 or more participants – mentees and mentors) mentorship programme from scratch. It builds upon the experience of designing and launching such a programme – Women Go Tech™ in Lithuania and extending it in Latvia. Women Go Tech™ by the end of 2020 has launched its fifth annual women in ICT mentorship season and over five years since inception helping more than 500 women to build their own pathways into the technology sector.

This guide is organised in the following manner. The next chapter (Chapter 2) shortly discusses the general challenge of the gender gap in ICT, its causes and consequences, moving through recent policy initiatives in the European Union (further in the document – the EU) before discussing more in detail the employment situation (gender gap) of women in the ICT sector in the Eastern partner countries and recent initiatives to address it.

The following chapter (Chapter 3) discusses the concept of mentorship, how is it different from other types of advisory or educational interventions, the benefits of mentorship accruing to mentees, mentors and other stakeholders, the critical success factors for effective mentorship programmes as well as introduces Women Go Tech™ – how it was initiated and grown in scale and reach during the last five years.

The subsequent chapter (Chapter 4) provides detailed step-by-step guidelines, good practice examples and a checklist of key tasks to be carried out when planning, preparing and launching a mentorship programme. This includes such elements as planning the content and the scope of programme, planning and acquisition of resources and kick-starting key programme activities such as publicity campaign, mentee/mentor recruitment and matching as well as programme monitoring and evaluation.

Chapter 5 proposes a generic timetable of activities for a possible roll-out of pilot programmes in the Eastern partner countries. The final chapter (Chapter 6) provides conclusions as to the demand for and feasibility of deploying mentorship programmes in the Eastern partner countries as an initiative that could contribute to reducing the gender gap in ICT. The conclusions confirm potential benefits of such initiative, but also identify a number of challenges and propose ways for addressing them.

The guide also includes an annex with a self-assessment tool for evaluating the readiness of an interested organisation in the capability to design and deliver a mentorship programme as described in the guide.

2 Gender gap in ICT

Digital technologies nowadays are becoming the backbone of economic and social life. Digital economy is estimated to represent from 4.5% to 15.5% of the global (and similarly in European) GDP, depending how broadly it is defined[1]. The importance of the digital sector can best be indicated by the numbers of ICT specialists employed. In 2019, in the EU this number has reached almost 8 million persons (or 4% of all employed persons), increasing nearly by half since 2011 [2]. While there is no comparable official data for the Eastern partner Countries, however, it was estimated in this report (see more below) that there are likely up to 600 thousand ICT specialists in the Eastern partner countries, representing around 2% of all employed persons. Given that the digital transformation is still only in its early stages, the stellar growth of the importance of digital sector is expected only to continue in the foreseeable future.

However, not everyone can equally benefit from this growth. Women, in particular, are missing out from the new employment and economic opportunities created by digital technologies. For example, in the EU in 2019, out of the 8 million ICT specialists, only 18% (or less than 1.5 million) were women, improving only marginally as compared to 17% share in 2011. This has critical negative consequences not only for women, who can't access these high-skilled and well-paid jobs. It also has negative effects for businesses, who can't find qualified employees as well as the societies more in general, with lower economic growth and ultimately higher inequality.

2.1 Causes and consequences

The underlying causes of this gender gap in the technology sector are complex and varied. Some of them can be linked to fewer women willing to work in a male-dominated industry and cultural stereotypes as well as to women's hesitancy to apply for tech-related job roles. Below we will shortly review some of the barriers preventing women's participation in tech.

Implicit bias from early-on

Most people associate science and math fields with being more "male" while humanities and arts fields with "female". Gender stereotypes towards STEM seem to emerge early in childhood, i.e. at the ages of 3-5, persisting further even if there are no real gender performance differences found[3].

Education

The lack of female technical talent can be easily traced back to schools, where fewer girls choose STEM (science, technology, engineering & mathematics) education. Given that gender stereotypes towards STEM emerge from an early age and persist when getting older, this becomes manifested also at school, influenced, in part, also by teachers' perceptions. As a consequence, girls' interest seems to shift by the time they reach secondary education, with STEM-related subjects becoming less and less attractive for them.

Workplace bias

Additional challenges appear within the labour market. There is a persisting misconception that there are no career opportunities for women in tech who do not code or have no ICT or engineering background. Furthermore, a limited pipeline of women ICT specialists can also make them look as an unusual or risky hiring choice. Smaller companies also do not have resources for workplace diversity and inclusion programmes.

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[1] *UNCTAD (2019) Digital Economy report 2019. https://unctad.org/webflyer/digital-economy-report-2019*

[2] *https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT_sector_-_value_added,_employment_and_R%26D*

[3] *McGuire, et. al (2020). STEM gender stereotypes from early childhood through adolescence at informal science centers. Journal of applied developmental psychology, 67, 101109. https://www.sciencedirect.com/science/article/pii/S0193397319300930*

Cumulative effect of stereotypes

The effects of stereotypes within the social and learning environment not only inhibit the educational or labour market choices, but they also have a cumulative effect over time. The perceptions ingrained from a very young age reduce the likelihood that women will choose STEM pathway at school; few of them then enter higher level of professional STEM programmes. Without adequate credentials, they can't enter specialized job roles and are discouraged to apply for non-specialised ones. Ultimately, if they do apply for some of these jobs, the stereotypes may negatively affect their performance during the recruitment process and at work.

Lack of role models

There is often a lack of visible role models to inspire women to study and work in tech-related fields. Showcasing diverse role models can help create new perspectives on women working in the ICT field.

Too critical self-perception

Females tend to undervalue their capacities and display lower levels of perceived abilities. Female students perceive themselves as academically weaker, even though they may outperform their male colleagues, as reported in studies from Germany, Australia, the USA and China[4].

2.2 Policy context and initiatives in the EU

The promotion of equality between women and men is a task for the Union, in all its activities, required by Article 8 of the founding treaty of the EU: "In all its activities, the Union shall aim to eliminate inequalities, and to promote equality, between men and women." Gender equality is a core value of the EU, a fundamental right and key principle of the European Pillar of Social Rights. Addressing the gender equality challenge has been a long-standing policy priority in the EU – ever since the establishment in 1957 of the European Economic Communities (one of the predecessors of the EU)[5]. Despite this, the arrival of the digital age revealed, that inequities entrenched in society may not only remain persistent despite economic and technological progress but unfortunately even be magnified by it.

The expansion of the digital economy calls for more effort to address the persistent gender gap in ICT. Therefore, in 2019, the 27 EU Member States and Norway have signed the **Declaration of commitment on Women in Digital**[6], aiming to increase women's visibility and empowerment in the digital economy and, among other recommendations, emphasizes the usefulness of mentoring schemes. The signatories of the Women in Digital Declaration committed to creating a national strategy and pursue a number of actions to encourage women's participation in digital.

At the European level, a number of concrete actions are being implemented, helping to address the gender gap in ICT. **The European Network for Women in Digital**[7] was launched in 2018 to help girls and women network and collaborate on ideas and experiences in the digital sector. The EU is also committed to closing gender gaps in research and innovation[8]. For example, the **Horizon 2020 programme**[9] helps research organizations and universities to implement gender equality plans. Every year, the **EU Prize for Women Innovators**[10] recognises women who are not just excellent researchers and innovators but successful entrepreneurs too.

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[4] *https://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL_STU(2020)651042*

[5] *European Union Gender Equality Policies Since 1957. Digital Encyclopedia of the European History. https://ehne.fr/en/encyclopedia/themes/gender-and-europe/gender-citizenship-in-europe/european-union-gender-equality-policies-1957*

[6] *https://ec.europa.eu/digital-single-market/en/news/eu-countries-commit-boost-participation-women-digital*

[7] *https://ec.europa.eu/digital-single-market/en/european-network-women-digital*

[8] *http://ec.europa.eu/research/swafs/pdf/pub_gender_equality/closing_gender_gaps_infographics.pdf*

[9] *http://ec.europa.eu/programmes/horizon2020/en/h2020-section/promoting-gender-equality-research-and-innovation*

[10] *https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/prizes/eu-prize-women-innovators_en*

The objective to contribute to reducing the gender gap features prominently also in the external action of the EU. **The Gender Action Plan III**[11] (which follows the **EU Gender Equality Strategy 2020-2025**[12]) will cover activities to be implemented between 2021 and 2025, following the successful implementation of earlier plans adopted in 2010 and 2015. The plan includes a prominent dimension of activities aiming to address the digital divide between men and women and features a specific objective to promote "digital skills for jobs and entrepreneurship while addressing the gender norms and stereotypes that steer women and girls away from technology"[13].

The EU external action, guided by the **EU Global Strategy**[14] and the revised **European Neighbourhood Policy**[15], includes the **Eastern Partnership**[16,17] – a dedicated joint policy initiative which aims to deepen and strengthen relations between the EU, its Member States, and its six Eastern neighbours: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. In view of the future actions as part of the Eastern Partnership, the **Joint Communication on the Eastern Partnership policy beyond 2020**[18] has reiterated the importance of support for digital economy and innovation for the Eastern partner countries, including by addressing the "digital skills gap with particular focus on gender equality and social inclusiveness".

Without any doubt, the European Commission's initiatives can significantly contribute to closing the existing gender gap; however, the effectiveness of EU efforts very much depends on each country's ability to make the necessary actions on the ground. Although many of them face similar gender parity issues, the underlying reasons leading to these issues differ from country to country. Thus, for a solution to be effective it must take country-specific characteristics and factors into the account.

2.3 Situation across the EU and Eastern partner countries

Most of the industries, which require a specialized workforce, in the phase of rapid growth, face shortages of workers with relevant skills. The ICT sector is not an exception, with rapid growth in value added and employment and reports of the difficulties finding workers with adequate level of skills, both in Europe[19] as well as globally[20]. Indeed, in the EU out of 9% of the EU businesses with at least 10 employees, who tried to hire an ICT specialist in 2019, more than half reported to have faced difficulties filling such vacancies[21]. Nevertheless, due to lack of appropriate data estimating precisely the extent of such shortages (i.e. the actual number of such specialists in demand) is still difficult even in developed economies[22].

Another way to look at the mismatch between the supply and demand of ICT specialists (and estimate the potential gap) is to compare the number of graduates within ICT specialization and the number of ICT specialists employed. A recent report, published in 2020 by the European Commission, has revealed that on average across the EU only around 40% of the ICT workforce aged 15-34 has acquired a vocational or higher education qualification in the field of ICT[23]). This may indicate that the educational sector has not been able to prepare the sufficient number of specialized ICT professionals, though alternative explanations are also

[11] *https://ec.europa.eu/international-partnerships/topics/empowering-women-and-girls_en*

[12] *https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en*

[13] *JOIN(2020) 17 final https://ec.europa.eu/international-partnerships/system/files/join-2020-17-final_en.pdf*

[14] *https://eeas.europa.eu/topics/eu-global-strategy_en*

[15] *https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/european-neighbourhood-policy_en*

[16] *https://eeas.europa.eu/diplomatic-network/eastern-partnership/419/eastern-partnership_en*

[17] *https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/eastern-partnership_en*

[18] *JOIN(2020) 7 final https://eeas.europa.eu/sites/eeas/files/1_en_act_part1_v6.pdf*

[19] *https://www.ey.com/en_lt/news/2018/12/digital-skills-shortage-in-europe-poses-risks-for-the-continents-future-growth*

[20] *https://www.weforum.org/reports/the-future-of-jobs-report-2020*

[21] *https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT_specialists_-_statistics_on_hard-to-fill_vacancies_in_enterprises*

[22] *https://euobserver.com/digital/137835*

[23] *Sekmokas, M., Borunsky, L., Horgan, M., Ravet, J., and Nurminen, M. (2020). Workforce skills and innovation diffusion: trends and policy implications. EU Working paper. https://op.europa.eu/en/publication-detail/-/publication/5d231304-a9f6-11ea-bb7a-01aa75ed71a1/language-en*

possible, such as difficulties faced by education systems in providing up-to-date highly specialized industrial skills or the preference of the firms to rely on internal or industry-led training.

Given the gaps in data for estimating the precise level of shortage of ICT specialists, the usual alternative for analysing the potential demand for ICT specialists is looking at the number of such specialists employed in a particular country or territory and its change of time. As was mentioned before, in the EU in 2019 it was estimated that around 4% of all persons employed were working as ICT specialists[24], ranging from 7% in Sweden to 2.1% in Greece. Unfortunately, no such official data is available for the Eastern partner countries. A back-of-envelope estimation suggests that across the Eastern partner countries ICT specialists may represent on average 2% of all persons employed, ranging from 2.4% in Moldova to 1.3% in Georgia[25].

On the other hand, there is an alternative (even if somewhat less precise) way to measure the size of the ICT workforce – the share of persons employed in the ICT sector, which is regularly reported as official statistics by the ILO[26]. Two standard measures are regularly available – a broader one, 'all workers', which include both employees and self-employed, and a narrower one – 'employees', which include only those with a regular employment contract.

As seen from the data provided in Table 1, among the EU Member States selected for comparison[27] and measured in terms of the relative size of employment, Estonia has the largest ICT sector and Romania the smallest. Among the Eastern partner countries; Belarus, Moldova, and Armenia seem to have the relatively largest employment in the ICT sector, similar in relative size to the situation in Romania. In all Eastern partner countries except Azerbaijan, there are relatively few self-employed workers reported to work in the ICT sector.

Table 1: Digital workforce in selected EU and Eastern partner countries, 2019 or latest available

Country	All workers in ICT		Employees in ICT		ICT specialists	
	Number in '000	% of total	Number in '000	% of total	Number in '000	% of total
Bulgaria	99.9	3.1%	96.1	3.3%	101.2	3.1%
Czechia	169.9	3.2%	128.6	2.9%	213.8	4.0%
Estonia	32.3	4.8%	28.7	4.8%	40.4	6.0%
Hungary	132.0	2.9%	106.9	2.7%	152.4	3.4%
Latvia	25.6	2.8%	24.0	3.0%	28.6	3.1%
Lithuania	37.0	2.7%	32.7	2.7%	41.9	3.1%
Poland	430.6	2.6%	325.7	2.5%	510.9	3.1%
Romania	177.6	2.0%	172.5	2.6%	197.3	2.3%
Slovakia	76.6	3.0%	62.0	2.8%	95.6	3.7%

[24] *Eurostat defines ICT specialists as "workers who have the ability to develop, operate and maintain ICT systems, and for whom ICT constitute the main part of their job". The total number of such workers is calculated by adding all workers in occupations where developing, operating, and maintaining ICT systems constitute the main part of the job, in accordance with the international standard classification of occupations (ISCO). The detailed list of occupations included is provided here: https://ec.europa.eu/eurostat/cache/metadata/en/isoc_skslf_esms.htm*

[25] *In the 9 European countries selected for the comparisons in this report, a rather stable ratio (on average around 1:1.164) is observed between the total number of persons employed in the ICT sector and the total number of ICT specialists, as reported by Eurostat. Thus, to estimate the number of ICT specialists in each Eastern partner country, the total number of workers in the ICT sector in each of the countries, as reported by the ILO, is multiplied by this adjustment factor.*

[26] *https://ilostat.ilo.org/*

[27] *The countries selected for comparison are all the EU Member States from central-eastern Europe and were selected due to their more pronounced cultural and economic similarity.*

Country	All workers in ICT		Employees in ICT		ICT specialists	
	Number in '000	% of total	Number in '000	% of total	Number in '000	% of total
Armenia	21.0	2.0%	20.0	3.3%	n/a	2.3% (est.)
Azerbaijan	63.2	1.3%	28.3	1.7%	n/a	1.5% (est.)
Belarus	100.7	2.1%	100.8	2.9%	n/a	2.4% (est.)
Georgia	19.1	1.1%	17.3	2.0%	n/a	1.3% (est.)
Moldova	17.9	2.0%	16.7	2.5%	n/a	2.4% (est.)
Ukraine	280.5	1.7%	247.9	1.8%	n/a	2.0% (est.)

Source: data on workers (including self-employed) and employees (excluding self-employed) working in the ICT sector is sourced from ILOSTAT database; data on ICT specialists in employment is sourced from Eurostat for the European countries and estimated by the authors of this report for the Eastern partner countries.[28]

When measuring the size of the ICT workforce in absolute numbers, it was the largest in Ukraine (280,000 persons employed), followed by Belarus (100,000) and Azerbaijan (63,000, though around 2/3rds of them self-employed). Armenia (21,000), Georgia (19,000) and Moldova (nearly 18,000) had approximately similarly sized ICT workforce.

Table 2: Women in digital workforce in the selected EU and Eastern partner countries, 2019 or latest available

Country	% of women workers in ICT	% of women employees in ICT	% of women among ICT specialists
Bulgaria	35%	35%	28%
Czechia	24%	26%	10%
Estonia	30%	31%	23%
Hungary	25%	27%	11%
Latvia	42%	44%	24%
Lithuania	36%	38%	24%
Poland	28%	34%	14%
Romania	34%	35%	24%
Slovakia	25%	29%	14%
Armenia	38%	40%	n/a
Azerbaijan	59%	27%	n/a
Belarus	36%	n/a	n/a
Georgia	38%	39%	n/a
Moldova	36%	37%	n/a
Ukraine	26%	29%	n/a

Source: data on the share of women workers / employees in ICT sector (the first two columns) is sourced from ILOSTAT database; data on the share of women among ICT specialists is sourced from Eurostat.[29]

[28] *Reading notes: the countries are sorted according to the share of workers in the ICT sector in descending order. ICT sector covers businesses working in publishing, broadcasting, telecommunications, programming, and information service activities as defined in the International Standard Industrial Classification (ISIC). ICT specialists cover occupations such as ICT service managers, ICT technology professionals, ICT technicians, and several ICT manufacturing and sales occupations according to Eurostat methodology. Data on the share of ICT specialists in employment is only available for the EU Member States thus only an estimation is provided for the Eastern partner countries (the methodology of estimation is explained before). The most recent data for Armenia is from 2018; the most recent data for all workers in ICT for Ukraine is from 2017.*

Similarly as for ICT jobs in general, the most precise way to estimate the gender gap in ICT is to calculate the share of women working as ICT specialists (ICT managers, ICT professionals and technicians, ICT sales personnel, and ICT manufacturing workers). This data however currently is only available for the EU Member States and as indicated in Table 2 suggest that in the better-performing selected European countries (like Bulgaria) only up to a quarter of the ICT workforce are women while in worse-performing countries (like Czechia) the share is only around 10%.

Given the lack of data for the Eastern partner countries, the only way to estimate the gender gap in ICT is to analyse the gender gap among all persons (irrespective of their job) working in the ICT sector. As in the previous analysis, two standard measures are useful for that purpose – a broader one, 'all workers', which include self-employed, and a narrower one – 'employees', which include only those with a regular employment contract.

As shown in Figure 2, from the available data it becomes evident, that even when using these two broader measures of ICT employment, which may include workers in such occupations as accounting, marketing, or human resources, there is a clear under-representation of women in ICT – both in the EU and the Eastern partner countries. One notable exception is the relatively large share of women among 'all workers', but a small share among 'employees' in Azerbaijan, indicating that a lot of Azeri women working in the ICT sector declare to be self-employed, but relatively few of them work as regular employees. Finally, other indications of significant gender gaps across countries are the under-representation of women among management positions and the gender pay gap. For example, in the Eastern partner countries, only 20% of women hold leadership positions and they make 43% less than their male counterparts in the workplace[30].

All in all, each of the analysed countries faces significant gender gaps in the ICT sector. It is also very likely that such gaps among ICT professionals are even more pronounced, as the data shows for the EU Member States (though no such data for the Eastern partner countries is available).

Below, short overviews of the situation in each Eastern partner country are provided, highlighting the role of the ICT sector in the economy, the size of ICT employment, and describing recent initiatives to address the challenge of the gender gap in ICT.

2.3.1 Armenia

ICT is the leading industry in Armenia and is a priority industry as stated by the government. According to the Armenian ICT Sector State of Industry 2018 Report[31], the number of actively operating ICT companies reached about 800, showing an unprecedented growth rate of 25% compared to 2017. On the other hand, despite the reported growth in the number of companies, the number of employees actually slightly declined during the decade from 20,600 in 2010 to 20,000 in 2018[32]). However, the women employees share in the ICT sector is quite high: out of more than 20,000 employees working in the ICT sector in 2018, 40% (8,000) were women.

Local organisations have recognized the importance of the issue and thus launched a number of projects to address this gender gap in ICT. One of them is a non-profit organisation **"Girls in Tech Armenia",** which is working on creating a support framework to help women advance their careers in STEM fields. It is a branch

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[29] *Reading notes: the EU countries are sorted according to the share of women among ICT specialists in a descending order; the Eastern partner countries are sorted according to the share of women among all workers in the ICT sector. ICT sector covers persons who work in publishing, broadcasting, telecommunications, programming and information service activities as defined in the International Standard Industrial Classification (ISIC). ICT specialists cover occupations such as ICT service managers, ICT technology professionals, ICT technicians and several ICT manufacturing and sales occupations according to Eurostat methodology. Data on share of women among ICT specialists is only available for EU Member States. In Belarus data on employees by gender is not available. Most recent data on workers in .Armenia is for 2018 and in Ukraine for 2017; most recent data on employees in Georgia and Armenia is for 2018.*

[30] *Global Gender Gap Report 2020. www3.weforum.org/docs/WEF_GGGR_2020.pdf*

[31] *https://www.eif.am/eng/researches/report-on-the-state-of-the-industry/*

[32] *https://ilostat.ilo.org/*

of an international "Girls In Tech" NGO[33], focused on the engagement, education, and empowerment of girls and women who are passionate about technology.

Another organisation, **"The Enterprise Incubator Foundation",** one of the largest technology business incubators and consulting companies in the region, implements multilateral programmes aimed at the development and promotion of the sector, particularly educational and business orientation. In recent years, some of the programmes were aimed especially at promoting women's involvement in the IT sector and entrepreneurship. One of its recent acceleration programmes[34] provides mentoring sessions and workshops for women entrepreneurs.

2.3.2 Azerbaijan

In recent years, the ICT sector has played an increasingly important role in the economic development of Azerbaijan. Recognising the important role of the sector, the government has identified ICT as one of the priority sectors of the national economy and has taken significant steps towards the formation of the information society and knowledge economy in Azerbaijan. According to the ICT innovation and start-up ecosystem study report[35], the ICT sector in Azerbaijan is mainly dominated by the two biggest telecom operators Azercell and Bakcell, which are partially owned by the state. There is a substantial need for private investments and SMEs in ICT, to ensure healthy competition and sustainable growth of the sector.

The total number of workers in the ICT sector was 63,000 in 2019, with nearly 60% (37,000) women. However, the share of women falls rapidly if only regular employees are considered – in the same year out of 28,000 employees only 27% (7,700) were women. While the situation among employees did not change much since 2010, the total number of workers (likely driven by the growing number of self-employed) increased by around 8,000, mostly men, with the share of women among all workers falling from 80% in 2010 to 60% in 2019.

Azerbaijan has paid special attention to women's role in IT with a number of initiatives aiming to increase women's participation in tech. One of them – the **Azerbaijan Women in ICT Club "Femmes Digitales"[36]** has been set-up to be an advocate for women who are currently working in technology companies as well as for those who may work in technology-related roles for businesses in other market sectors. The club has created a mentorship community for stimulating interest in ICT among girls. Each of the club's founders was a mentor in a selected area.

Another initiative, titled **"WoWoman"**[37], focuses on women empowerment and education. One of their first and biggest projects is **"Coding school"**, which aims to attract more women and girls to the IT industry, give them hard skills and tools to financial freedom. Another organisation aiming to close the existing gender gap in the technology sector is **"The Girls Code"** platform. The platform unites more than 1,000 women and so far has held a number of training sessions, programming courses, workshops, and awareness-raising events for girls.

2.3.3 Belarus

According to the report "IT Industry in Belarus: 2017 and beyond"[38], the ICT sector in Belarus by the middle of the decade became an increasingly important economic sector, with high growth rates and strong contribution to the growth of export in services. In terms of employment the number of workers continued to increase – from 97,000 in 2016 towards almost 101,000 in 2019. Even more spectacular growth is seen from data on the number of employees (excluding self-employed), which increased during the same period from 80,000 to

[33] *Girls in Tech (girlsintech.org) is dedicated to eliminating the gender gap in the technology sector. The organization unites more than 60,000 members in 50+ countries around the world hosts various community events from coding boot camps to networking events and mentorship programmes.*

[34] *https://www.eif.am/eng/news/acceleration-empowering-females/*

[35] *https://eufordigital.eu/library/ict-innovation-and-start-up-ecosystems-study-report-2/*

[36] *http://femmesdigitales.az/*

[37] *https://wowoman.org/wowomanis*

[38] *https://eufordigital.eu/library/the-it-industry-in-belarus-2017-and-beyond/*

100,000. This suggested that in 2016 a significant share of ICT sector workers were still self-employed, but by the end of the decade, almost all of them have become regular employees in firms. At the same time and despite these positive developments the number of women employed in the sector actually declined from nearly 41,000 to 38,000.

A Belarusian non-profit **'ProWomen'** aims to educate, inspire, and empower female entrepreneurial leaders. The NGO works with two main topics: starting and developing business and making female expertise more visible in media and the public sphere. The organisation has already implemented a short-term mentorship programme for women in tech and was planning to implement another one, however, the plans were postponed due to the ongoing crisis of COVID-19.

Private sector firms in Belarus also have launched some relevant initiatives. One of them – **EPAM** – a software engineering company, promotes women's involvement in tech by organising panel discussions with popular female role models in the technology sector and promote open dialogue about women in tech through various events and meet-ups, thus making the sector more open to women.

2.3.4 Georgia

According to the 2017 Innovation and Technology in Georgia Annual Report[39], carried out by USAID. ICT sector development and its efficient integration into the global economy is regarded as one of the cornerstones of Georgia's social and economic development and is outlined in various legal and policy documents, including "Georgia 2020" and "EU-Georgia Association Agreement" (AA). According to the ILO[40] data, in 2019 the Georgian ICT sector had a little more than 19,000 workers, a slight decline from more than 21,000 workers in 2017 (earliest data available).

To address this tech gender gap, **Georgia's Innovation and Technology Agency (GITA),** which supervises, coordinates and mediates innovation and technology development in Georgia, has launched initiatives dedicated to women's participation in the tech sector. The organisation implements various events with dedicated keynote speakers as well as organizes a STEM Boot Camp. GITA has also completed a mentorship programme funded by Israel's Agency for International Development Cooperation and UN Women. The programme included a three-day series of webinars with a specific focus on business canvas development and mentoring for women in tech.

In 2019, the Business and Technology University, in collaboration with UN Women, has launched a six-month-long vocational education course **"Coding School for women"** who want to study programming free of charge. During the first phase of the project, 30 women from Tbilisi took part and after completing the course successfully found employment in web companies. In the future, it is expected that women from other regions in Georgia will also join the initiative.

2.3.5 Moldova

According to the 2018 ICT Innovation and start-up ecosystems study report[41], contracted by the European Commission, in Moldova ICT is a fast-growing industry with over 1,100 companies launching high-value products for internal and external markets. According to ILO data[42], in 2019 there were nearly 17,000 employees in the ICT sector, 37% of which were women. The ICT & BPO Sector Overview brochure[43] indicates that the ICT sector in Moldova employs in total around 11,000 IT professionals, with a relatively prominent gender gap as only 28% of them are women.

In Moldova, there are more and more emerging initiatives encouraging women to pursue careers in IT. For example, the **"Tech Women Ambassadors"** programme, led by the Tekwill project and designed to facilitate the transfer of knowledge, motivation and experience between IT professionals, as well as to inspire and

[39] *https://www.pmo-bc.com/storage/app/uploads/public/5ce/795/dba/5ce795dba596c190438918.pdf*

[40] *https://ilostat.ilo.org/*

[41] *https://eufordigital.eu/library/ict-innovation-and-start-up-ecosystems-study-report-2/*

[42] *https://ilostat.ilo.org/*

[43] *https://moldovaitpark.md/wp-content/uploads/2019/09/2019_ICT_and_BPO_overview_Brochure.pdf*

encourage the aspirations of women and girls, who want to embrace an ICT career. The programme includes informal monthly events, conferences, socializing sessions, career guidance, mentoring, exchange of experience and other meetings open to girls and women who wish to know, explore and capitalize on professional opportunities in IT. Tekwill project also implemented **"Empowering women in technology"** project providing scholarships for women to attend industry-led ICT training programmes and acquired international certification[44].

Another initiative – **"Girls Go IT"** programme[45] encourages girls and young women to go into the field of technology from a young age, choosing STEM (science, technology, engineering, and mathematics) education path and empowering girls and young women in and through technology to have better future education and employment opportunities. Between 2014 and 2019 it has provided training to 543 girls, in addition in 2018 organised 10 internships and motivated almost 20 of Girls Go It ambassadors to become mentors in a summer camp.

2.3.6 Ukraine

According to N-iX IT industry in Ukraine report for 2019[46], there were more than 4,000 tech companies in Ukraine, serving customers both nationally and increasingly broad, with ICT becoming the third largest services export sector in the country. In terms of employment, according to ILOSTAT in 2019, there were nearly 250,000 employees in the ICT sector, 29% of them women. Employment in ICT sector has been steadily contracting from nearly 290,000 employees in 2013.

The current gender gap issue in the tech sector is receiving more attention in Ukraine and local organizations are addressing this issue. One of them is **"STEM Girls"**, an initiative powered by CSR Ukraine aiming to erase borders for career development in tech for underprivileged youth via improving their digital skills. The organisation also aims to engage girls and is building a community of young people interested in STEM. Over the last three years, STEM Girls launched a number of projects, including a mentorship programme and hackathons for girls and teachers. After the completion of the Girls STEM mentorship programme, 50% of girls' mentees started their careers in STEM (entering STEM study programmes in universities).

[44] *https://www.tekwill.md/news/girls-and-women-in-it-more-and-more-women-are-succeeding-in-this-field-and-stereotypes-about-women-i*

[45] *https://girlsgoit.org/*

[46] *https://s3-eu-west-1.amazonaws.com/new.n-ix.com/uploads/2019/09/26/Software_development_in_Ukraine_2019_2020_IT_industry_market_report.pdf*

3 Closing the gender gap in ICT with mentorship

As seen from the discussion in previous chapters, the gender gap in ICT has multiple drivers appearing at different stages in life. For an ultimate resolution of such broad-based challenges action needs to be taken across all stages in life and combining different types of interventions to reach the necessary cumulative effect in addressing the deep, culturally embedded drivers of gender inequality.

Public policy has a relatively well-defined array of instruments for intervening at an earlier age in one's life, particularly as many of the childcare and education services for children and young people are publicly financed and regulated. More substantial challenges appear when intervention is needed at an older age, particularly after individuals have entered employment.

This is primarily due to the strong autonomy allowed for individuals for pursuing their career goals as well as businesses for organising their activities. Furthermore, older individuals face additional constraints as they have only limited time and financial resources they can dedicate for further learning, as they need to dedicate time to work as well as to their families.

This is where mentorship, as a type of public intervention, can be very useful, given its relatively low demand for time resources and potentially wide reach. Indeed, a recent evidence review carried out suggests that only in the United States (no similar data was identified for the EU) there may be around 5,000 mentoring programmes deployed and simultaneously serve an estimated three million young people[47].

Mentorship has long been regarded as an effective way to develop talent and to enhance professional and personal success. As such, it can significantly contribute to the efforts in reducing barriers for women to enter ICT-related jobs and thus reduce the persistent under-representation of women in tech. Mentoring in particular can serve to expand the understanding of the broad range of different tech roles and careers. It can also provide visible female role models and becomes a source of inspiration for women looking to embrace the opportunities, which the tech world can offer.

3.1 What is mentorship and why is it important

Definitions of mentoring may vary depending on the type and the scope of it, however, the meaning of mentorship is broadly agreed to follow this description:

> *Mentoring is a partnership between two people built on trust. It is a process in which the mentor offers on-going support and developmental opportunities to the mentee. Addressing issues and blockages identified by the mentee, the mentor offers guidance, counselling and support in the form of pragmatic and objective assistance. Both share a common purpose of developing a strong two-way learning relationship.*
>
> *(Jenny Sweeney, quoted by D. Clutterbuck in his book "Everyone Needs A Mentor", 2014).*

It is very important from the beginning to distinguish mentoring from other forms of advice/support, notably coaching and training. Generally, mentoring is based on mutual exchange and has relatively broad objectives aimed at overall personal or professional development, while coaching is more focused on transferring knowledge or expertise to help solve a specific challenge. Furthermore, coaching has some similarities to training as they both have a focused learning outcome. A training relationship is less personal than coaching or mentoring and is more hierarchical, with the trainer being the one who provides the agenda. Overall, both coaching and mentoring are designed to help a person to develop and grow, but they approach it in different ways, with different processes, and often with different intended outcomes.

[47] *DuBois, D. L., Portillo, N., Rhodes, J. E., Silverthorn, N., & Valentine, J. C. (2011). How effective are mentoring programs for youth? A systematic assessment of the evidence. Psychological Science in the Public Interest, 12(2), 57-91. https://www.rhodeslab.org/files/DuBoisetalMeta.pdf*

Table 3: The differences between mentoring, coaching and training

	Mentoring	Coaching	Training
Purpose	Development-driven, taking a more holistic approach to professional development	Performance-driven, designed to improve one's skills in a given area or solve a specific issue	Knowledge or skills-driven, aimed to transfer information or provide place for practice
Relationship	Personal, one-to-one, confidential	One-to-one but more formal and focused on content or skills	One-to-many, impersonal, hierarchical
Agenda	Mentee drives the agenda	Coach and the coachee co-create the coaching agenda	Designed by a trainer
Outcomes	Oriented to overall development, not specific results	Specific and measurable learning outcomes	

Source: developed based on Women Go Tech™ internal sources

The right mentor-mentee relationship is built in a safe and supportive environment where both mentor and mentee can align their expectations, set goals, and achieve them through creative problem-solving. The foundation of mentorship is based on a one-on-one learning relationship between a mentee and an expert in a specific topic or discipline. The main role of mentors is to provide support and guidance in the development of a particular area of interest. Mentoring is a reciprocal and collaborative relationship that most often occurs in an academic or business environment.

There are many different types of mentoring based on the mentoring relationship. Some mentoring relationships occur spontaneously as an informal relationship e.g.: a senior member of an organisation helps a young person to develop his/her career path or guides employees who are new to the organisation. There is also peer mentoring – a relationship between people who are at the same career stage or have a similar experience. Mentorship also has successfully adapted to the online world with emerging e-mentoring initiatives connecting people from different countries and cities.

As mentioned in the introduction, this guidebook builds upon the model and experience of Women Go Tech™ mentorship programme, given stronger geographical, cultural and historical proximity between the newer EU Member States and the Eastern partner countries as compared to countries located in other territories. Examples cited as well often build upon the experiences acquired over the 5 years of operations of Women Go Tech™. Below, the roles of three key interlocutors of any mentorship programme – the mentor, the mentee, and the mentorship programme coordinator are discussed.

The mentor

A mentor is a person who has valuable knowledge and experience and who strongly believes in the power of knowledge-sharing to help others learn and grow. The mentor guides the mentee toward recognising the mentee's strengths and weaknesses and challenges the mentee to identify the course of action s/he needs to take in regard to her/his development. A mentor has to encourage and guide the mentees, but not solve their challenges her/him-self. A mentor should also not use the mentorship programme as a strategy for seeking new employees; she/he should also not become an employment counsellor whose main activity is to support the job-hunting activities of the mentee – job-search or employment support activities are not the primary objective of a mentorship programme. A mentor helps people grow by changing their ways of thinking. By using constructive feedback and active listening, mentors help mentees consider various options, refer to available resources, and facilitate their decision-making as well as critical reflection.

Box 1. The understanding of and a commitment to a mentorship role by the mentors

Mentorship is a practice that is not yet well established or understood in the Central or Eastern European context. With more traditional values as well as more hierarchical and directive business relations, professionals in leadership positions may not always find it natural or comfortable to find her/him-self on much more an advising and supporting role. Thus taking-up the role of a mentor may become a learning experience for the mentor her/him-self. Such challenges may be further compound in a case where a male mentor would be advising a female mentee – where different understanding of gender roles may also come into play.

A good practice in a context where mentorship may not yet be well understood would be to carry out some information or briefing sessions for aspiring mentors to introduce them to this role, warn them of the key things to avoid as well in which cases to take appropriate action when the mentorship relationship is put at risk. In addition, setting up channels of communication, monitoring as well as procedures to be taken in case of unexpected or unfavourable developments would allow identifying and solving them earlier with lesser negative consequences as compared to what may happen if such developments would continue.

Also, a possible and simple practice may be to prepare a short DO's and DON'Ts guide, to be signed by incoming mentors, and in a worst case of a more serious accident this may act as legal proof that all adequate precautions have been taken by mentorship programme organisers.

The mentee

A mentee is someone who has identified a specific area that s/he is willing to learn and improve at with the guidance and help of a mentor. A mentee's responsibility is to be proactive and take ownership of her/his learning and development. A mentee is the driver of the mentoring relationship as it is their growth needs and goals are the focal point for their development and improvement. A mentee enters the mentoring relationship with a specific problem or bottleneck that s/he has identified and is willing to work on with a mentor.

Box 2. Taking up a conscious, proactive and responsible role as a mentee

Similarly as for mentors, mentees may also not always understand well the scope or context of a mentorship programme. They may also sometimes lack the necessary self-direction and critical reflection skills, which forms the backbone of a healthy, balanced and productive mentor-mentee relationship. In addition, some mentees may have explicit or implicit objectives when accessing the programme which do not adequately fit the mentorship concept. This in particular includes two profiles of mentees which should be ideally identified as early as possible:

- Mentees primarily interested in looking for employment opportunities, but not interested or motivated to make it a learning and exploratory experience.
- Mentees who have significant challenges with self-confidence or are emotionally demanding.

Coordinating mentees with these profiles need particular caution and preparation – both on the side of programme coordinator as well as on the side of mentor. While in the first case it would be a waste of time and resources as mentee needs could be easily satisfied by a career counsellor, in the second case it would likely require adequate background as well as readiness on the side of the mentor. In a situation where such mentors are not available or do not have additional capacity, it may be more appropriate to re-direct the aspiring mentee to another programme/initiative which could more adequately address his/her needs.

Finally, to make sure that mentorship leads to the expected outcomes, some precautionary measures should also be taken with regard to the mentee. These could similarly as for mentors be setting-up open and responsive communication channels, DO's and DON'Ts as well as having a clear procedure to take in case of inappropriate behaviour of the mentor.

The coordinator

It is important to realize that the mentoring process is complex, and for any mentorship programme to be successful there needs to be a third-party facilitator – a person or an organisation – who oversees the development and implementation of a programme. Sometimes there is a tendency to assume that if a mentor-mentee match is right, the mentoring relationship will be strong.

The coordinator's role is extremely important when it comes to the longevity and sustainability of a mentorship programme. The main mentoring coordinator's responsibilities include:

- building mentor-mentee pool;
- matching mentors and mentees (matching and re-matching mentoring pairs if needed);
- publicising and promoting the programme (ensuring that there are enough mentors and mentees);
- monitoring relationships (e.g. gathering regular feedback from mentors and mentees);
- providing resources (e.g. training to boost mentoring readiness for both mentors and mentees);
- managing support functions (marketing and recruitment materials and other programme activities).

Having structures and policies provided by the mentoring coordinator increases the potential for positive interactions and enhance the possibility of beneficial outcomes for both mentors and mentees.

Box 3. Successfully managing opportunities and risks

Setting up a mentorship programme and ensuring its sustainability, particularly in a context where the concept of mentorship is not well known or appreciated, requires good preparation and ability to attract adequate resources. At the very centre of a successful set-up of a mentorship programme is the ability, firstly, to create a positive and attractive image of mentoring for partners, mentors and mentees, and, secondly, the ability to manage success during the very first stages of programme implementation.

At the heart of a successful mentorship programme lays the capacity to attract and bring together mentors, mentees and partners, united by common objectives and expectations. If any of these elements is missing – the success and sustainability of the mentorship programme becomes doubtful. For example, the profiles and number of mentors need to be sufficiently attractive for mentees to be willing to apply. Concurrently, if after engaging a significant number of well-known mentors, the applying volume of mentees or their profiles is not to the expected level, this may compromise not only the programme being organized but may leave negative image of mentorship initiatives more generally.

Overcoming the challenge of bringing all actors together is however only one side of the coin. After managing to do it, the coordinator needs to be realistic in estimating the workload and resourceful in managing the whole process of selection, matching, readiness trainings, kick-off, and operations of the programme. This at a minimum requires a qualified team of a size which is corresponding to the ambition and the readiness to go the extra mile given the variability in the workload over the programme cycle.

The mentoring process

The mentoring process goes through a defined framework and is agreed upon by the mentor and the mentee. It begins with developing a relationship, building trust, and then focuses on the mentee's strengths, needs, and goals. In this way, mentorship works as a guide to implement steps towards achieving the jointly established goal. Accountability is one of the key components of the whole process, as it allows ensuring the advancement of mentees' developmental progress and achievement of their goals faster and more efficiently.

Box 4. Challenges collecting regular feedback

While this may not come as a surprise for most dealing with surveying or monitoring responsibilities, one of the main lessons learned by Women Go Tech™ team is the difficulty (and amount of effort required) to ensure mentee responsiveness and collecting feedback from them, especially in a situation when mentorship programme duration is extended and frequency of mentorship meetings or other events is low. Unlike in commercial or employment relations, where parties have a variety of instruments at hand to ensure that pre-agreed commitments at being respected, in the case of a mentorship programme, all this commitment on the mentee side (but also to some extent on the mentor side) is purely voluntary. Thus, programme coordinators need to be creative in finding soft instruments like written agreement, gamification, shaming, automatic reminders, follow-up calls, co-financing, and many other to make sure that mentees remain engaged and respect their earlier commitments.

3.2 Who benefits from mentorship and how?

Mentorship has positive effects for mentees as well as mentors, and it also has an overall positive impact on the ICT sector, the tech community more broadly, and society in general.

3.2.1 Benefits for the mentee

Having guidance, encouragement and support of a trusted and experienced mentor provides a mentee with a wide range of benefits including:

- *Accelerated learning***.** Mentee's learning is accelerated by the mentor's guidance, direction, and a sense of accountability.
- *Access to network & contacts*. Mentees and mentors create a very valuable relationship, and it consequently opens up their networks who otherwise would not be connected. This environment establishes new relationships and expands mentees' network of professional contacts.
- *Constructive feedback*. With regular feedback, a mentee identifies her/his strengths and weaknesses and as a result, enhances performance and professional growth.
- *Improved decision making and problem-solving*. Through active listening and asking guiding questions, mentors equip mentees with cognitive skills that are critical in decision-making and problem-solving.
- *Greater confidence*. Due to the ability to consult a mentor when setting their own career objectives as well as rely on mentor's guidance in pursuing those goals, mentees are stimulated to voice out their ambitions as well as be more self-confident and persistent in pursuing them. Advice by a mentor will often ensure that goals are realistic, even if ambitious and the ability to achieve them always leaves a lasting positive impact on self-esteem.

3.2.2 Benefits for the mentor

A mentor is still commonly viewed just as an advisor in the mentorship relationship, with the mentee assumed to be the main party benefiting from it. However, effective mentorship is actually a two-way relationship, where both parties learn and develop new competencies. Key benefits for the mentor include:

- *Leadership development*. One of the keys to great leadership is a high degree of self-awareness. It is the essence of mentoring experience, as through this relationship a mentor becomes aware of his/her own strengths, weaknesses, and possible skill gap that needs improvement.
- *Networking*. Mentorship programmes include events and seminars for all mentors to learn about mentoring and get to know each other. These activities expand mentors' circles that lead to opportunities for future collaboration.
- *Improved communication and interpersonal skills*. Seeing different situations through the eyes and perception of the mentee, who is likely to have different background and age, makes the mentor rethink his/her assumptions about how things work. In addition, being a mentor often demands advanced communication skills, particularly active listening abilities. Mentoring creates a perfect environment to practice and further improve such communication and interpersonal skills.
- *Recognition*. Mentors may gain more recognition and appreciation from their team members for contributing to the professional development of others and sharing their expertise and guidance.

3.2.3 Benefits for the society

Society benefits from mentoring in many different ways as it builds strong and meaningful relationships among its members. Some of the main positive outcomes stemming from mentoring are:

- *Increased workforce access, equity, and inclusion*. Mentoring serves the underrepresented groups, creating new career opportunities while ensuring a more diverse and inclusive workforce.
- *Positive economic effect.* Mentoring develops better specialists and experts that contribute to economic growth and improved societal wellbeing.
- *Greater interaction and connection between members of society*. Even though we live in an increasingly inter-connected world, at the same time the quality of individual relations deteriorates or becomes superficial. Mentorship creates real and significant connections with people giving a sense of meaning and connectedness with others. It is not uncommon that these relationships continue long after the mentorship programme ends.

Box 5. The impact of mentorship programmes can be real

While it is easy to discount social or volunteer-driven initiatives as playing only a marginal role, nothing can be further from the truth, as testified by the experience of Women Go Tech™ programme. It only needs to achieve a medium-sized scale and retain quality standards so that there is a real impact on the ground.

Just as an example, the number of selected participants in Women GO Tech™ in 2016/2017 season was 45, in 2017/2018 – 71, in 2018/2019 –135, and in 2019/2020 – 170. The numbers may seem small, but it can be compared to the total number of women completing ICT studies: in 2016/2017 in Lithuania 150 women completed vocational or university programmes in ICT; 302 in 2017/2018, and 296 in 2018/2019 (Eurostat, 2020[48]).

Thus, even if still rather modest, the mentorship programme may actually represent more than half of all graduates in the field and more than the total number of women ICT graduates from universities, which were 138 in 2018/2019. Moreover, given that only a part of the graduates actually start an ICT career and not all of them remain in the country, it is quite possible that Women Go Tech™ in 2019 and 2020 helped find employment for up to half of all newly employed young women in the ICT sector in Lithuania.

3.3 Enabling conditions for successful mentorship

There is no magic formula for making mentoring relationships work. However, the effectiveness of mentoring correlates with the quality of the relationship between two parties. There are some key conditions needed for ensuring such quality and the development of a healthy and productive mentoring experience:

- Voluntarism
- Established ground rules and expectations
- Clearly defined mentoring purpose and scope
- Clearly defined mentoring principles
- Pre-training and training
- Matching
- Ongoing support and review

3.3.1 Voluntarism

Mentorship programmes should be voluntary as nobody benefits if they feel forced into it. It is based on a non-remunerated engagement from the side of mentors as well as an absence of undue external pressure or coercion (i.e. making it an obligatory part of an educational programme) for the mentees. Only if both parties are willingly involved in the mentoring process, they can commit to devoting the necessary time and energy.

[48] *https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uoe_grad02&lang=en*

Usually, voluntarism comes from a strong belief in the power of mentorship, and when both mentees and mentors share the same view, they benefit from a mentoring relationship the most.

3.3.2 Established ground rules and expectations

Each mentoring relationship is unique and must be discussed on an individual basis to match the needs of the mentee and the resources the mentor brings to the relationship. The calibration of expectations is essential in building a healthy transformative relationship. It also ensures that the roles of mentor and mentee are defined, and the needs are met. To make the mentoring process more structured and effective, from the start both mentee and mentor should discuss the following questions:

- What is expected from the mentoring relationship by both parties?
- How, when, and where will meetings occur?
- What structure the mentoring meetings will follow?
- How will the progress be measured or reviewed?
- How will the issues occurring in the mentoring process be addressed?
- How and when the mentoring relationship ends?

3.3.3 Clearly defined mentoring purpose and scope

A clear vision of the scope and purpose of mentoring is a crucial step in making any mentoring relationship work. Once a mentor-mentee tandem is formed, they should agree on specific objectives and goals that they will focus on during the mentorship. It not only forms a foundation for the mentoring relationship, but it also helps to define the roles of mentee and mentor.

3.3.4 Clearly defined mentoring principles

Although there are different types of mentoring relationships, there are a few principles that should be relied on for achieving most of the mentorship experience, building upon its unique strengths:

- Mentors act as guides and advisors providing a support structure to bring out the best in people.
- A successful mentorship does not provide a solution to a specific problem, but rather teaches how to solve the problems effectively. Although mentors have vast knowledge and experience in a certain field of work, they also know that they should give space and time for mentees to pursue their own discovery pathways and develop their own solutions.
- Understanding that everyone has different learning styles and finding the one best suited for a particular mentee is crucial.
- Acknowledging that every individual has unique goals and challenges and advice that works for one may not apply to another person.

3.3.5 Adequate pre-training and training

In order to have a successful mentorship programme, mentors and mentees should receive training, so that they understand the basics of mentoring and their roles in the process. Usually, the training is divided into two parts: *pre-training* which occurs prior to the start of the mentorship programme, and *ongoing training* which happens after mentor-mentee matching is done and the mentoring process starts.

Pre-programme training for mentees

Mentoring experience can be seen as an opportunity for growth, but as with any opportunity, preparation is very important. A person who wants to achieve most of the mentoring experience has to be prepared and be ready to seize the opportunity. The main goals of pre-match training for mentees are:

- Cover the basics concepts of mentoring and goal setting.
- Assess a potential mentee for the readiness to commit to a formal mentoring relationship. Being involved in any mentorship programme requires a clear understanding of the goal(s) that they want to achieve as well as the commitment that this relationship requires.
- Teach mentees how to proactively seek for mentor's guidance and support. In mentoring relationships mentees are the ones driving the relationship; this is why they need proactive communication skills as well as the ability to take the process into their own hands.

Pre-programme training for mentors

Mentors should be given some guidance on how to become great at mentoring. Although they may have solid knowledge and skills in their field, some mentors may benefit from soft skills training so they can pass their skills to others more effectively. To cover the essentials of guidance and leadership, at least an informal training session for mentors is recommended. It would smooth the mentoring process and help mentors prepare to share their knowledge and experience in ways their mentees can use and understand best.

The main goal for a training session may include:

- Introduce participants to the programme;
- Explain the objective and scope of the programme;
- Identify the boundaries and expectations of the mentoring relationship;
- Familiarise participants with principles of mentoring (code of conduct, confidentiality);
- Establish roles in the mentoring process (mentor, mentee, and coordinator).

Ongoing training

To help mentor and mentee progression throughout the process, they may benefit from receiving continuous guidance. Educating both parties on how to effectively plan and conduct mentoring meetings, to provide a platform for sharing challenges faced, and provide constructive feedback will help to stay on track.

Also, after the programme's launch, there will be questions arising from both mentors and mentees and they need to be responded to for an effective mentoring process to happen. Training agenda may be based on the feedback received from mentors and mentees and the issues they are facing. Even if mentorship training is designed to cover some general topics of the mentoring process, it is recommended to dedicate some time to discuss the most frequent real-life situations emerging in the mentoring relationships. This will help to react to unforeseen issues or developments and help better achieve programme’s goals.

3.3.6 Successful matching

The success of a mentorship programme will be defined by whether or not a good mentee-mentor match was achieved. That is why it is important to take some time over considering the matching process.

There are a variety of ways mentees can be matched with mentors ranging from mentees selecting their own mentor, or being assigned to one. Each mentorship programme develops its own way of making good matches based on the scope and objectives of the programme, resources available, diversity of mentor/mentee pool and other factors. As a very minimum, for the matching processed these aspects should be considered:

- **Objectivity & confidentiality**. Mentors and mentees should not be closely associated in their professional lives, nor should there be a direct supervisory responsibility to avoid conflict of interest.
- **Rich profiling**. To make the selection and subsequent matching of mentors and mentees more straightforward, it is recommended to ask them to provide some information about their mentoring expectations, requirements, and skills when they register in the programme.

- **Mentees' objectives.** As with most relationships, mentoring relationships will usually have an end goal in mind. The focal point of these relationships is mentees' objectives and goals, as it shows what kind of expertise and skills a mentor has to have so that the objectives of a mentee are realized.

- **Totally compatible match is not a goal.** Pairs should not be chosen because their personalities are compatible. A good match should be based on the needs of the mentee and the skills and expertise of the mentor.

- **Contingency plans for failed matches**. Despite the best efforts, some matches will falter, and a mentor has to be rematched with another mentee (or vice versa). The mismatch usually is discovered early in the relationship and the sooner the mismatch is acknowledged, the easier it is to resolve it. It shows how critical is the role of a mentoring coordinator in giving regular support and not leaving mentoring relationships to their own devices.

3.3.7 Ongoing support and review

In order for a mentorship programme to be successful, mentors and mentees should receive some support and guidance from the programme's coordinator. Making sure that they have access to useful mentoring resources and information is vital for ensuring an effective mentoring process.

Regular follow-ups with mentors and mentees are essential. It helps to ensure that the mentor and mentee are receiving all the support and resources they need along the way. It also provides early identification of a potential mentor-mentee issue and intervention when things begin to go off track.

Regular review of practices and techniques used in the mentoring process is also crucial. Without knowing what factors facilitate or hinder the mentoring process, the programme's coordinator cannot identify best practices and learn from mistakes.

In addition to regular review, mentorship programmes should also go through an extensive evaluation process. The evaluation aims to gather information and demonstrate results showing that the programme is making a difference. Ability to demonstrate positive outcomes and programme's achievements backed by numbers or other data is extremely important for trust-building, recruitment of new mentors and mentees as well as establishing new partnerships. Also, the fact that a mentorship programme can clearly showcase its impact and positive changes through success stories significantly increases the potential to attract necessary funding from private and public sectors.

3.4 Women Go Tech™ programme as an example: first year and beyond

Women Go Tech is the first and only mentorship and counselling programme in Lithuania created for women, aimed at empowering them to discover the tech (ICT and engineering) sector, to help them enter into the sector or advance their careers. In 2020, it has launched its fifth iteration of the programme, each time lasting for six months, during which selected participants who have successfully passed the application process are paired with tech business executives and experts to help them navigate through the many career opportunities available in the tech sector. Alongside regular in-person meetings between mentees and mentors, the programme also includes monthly community gatherings and tech content events, workshops where women can network, share their experiences and learn new skills.

The mentorship programme was co-founded in 2016 by Žydrunė Vitaitė and Paulius Vertelka and executed as a joint initiative between **Vilnius Global Shapers Hub** (an initiative of the World Economic Forum in Davos[49], of which Žydrūnė was a member and a former curator) and Lithuanian ICT sector business association **Infobalt**, of which Paulius at the time was the managing director. The programme was launched under the patronage of the **President of the Republic of Lithuania Dalia Grybauskaitė.**

Furthermore, the first season of the programme was implemented in partnership with **Telia** – one of the leading telecommunications operator in Lithuania as the main partner and further supported by **Delfi** – the

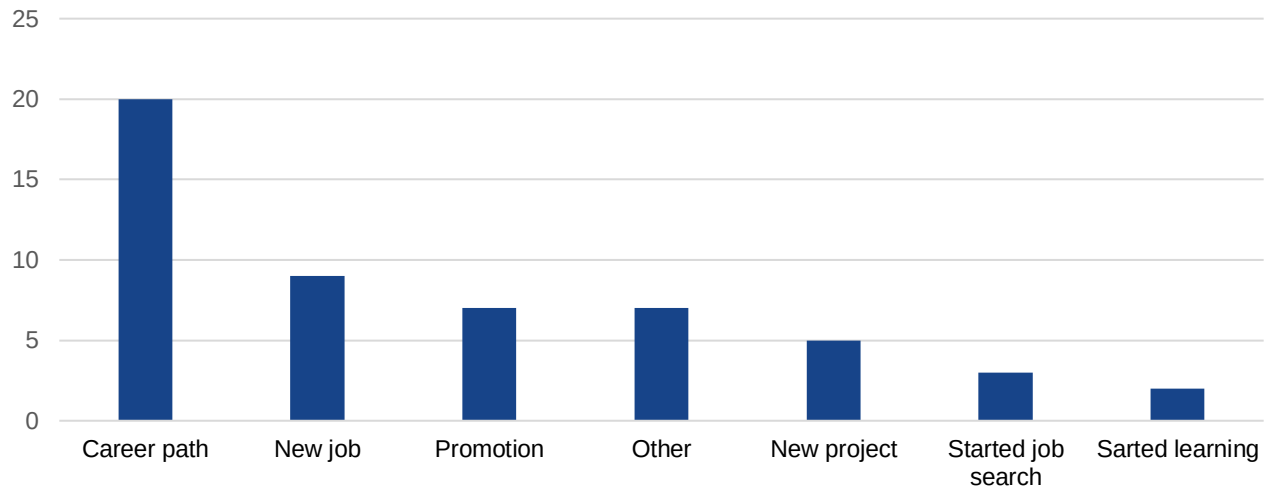
[49] https://globalshapersvilnius.com/

leading online news portal in the Baltic States, **Sapiegos Vilnius Tech Park**, **Transfer Go**, and the **Nordic Council of Ministers Office in Lithuania**. Only the joint work and support by all these institutions together provided sufficient resources for the deployment of the programme during the first year, ensuring its success and helping build the foundations for the continuation and growth of the programme in the subsequent years.

During the first year of the programme, its execution depended primarily on in-kind and volunteer resources. This comprised of a team of around 10 volunteers as well as included several dedicated HR professionals from programme partners to support mentee selection. Infobalt has provided critical administrative and institutional resources, including dedicating some of the working time of several of its employees. Furthermore, political patronage ensured the credibility, partners' financial support – ability to cover essential service and marketing costs, while the partnership with the leading online media platform helped to ensure sufficient visibility and media coverage.

Only by pooling all these resources together, was it possible to receive 251 applications by interested mentees to attend the programme (the original target was 100) as well as engage 32 mentors. The four key and most resource-intensive activities included resource acquisition (as described above), promotional campaign to attract applicants, the selection/matching procedure, as well as the organisation of opening, closing and community events. To give an example, the communication campaign achieved nearly 750,000 views and nearly 23,000 engagements, providing a conversion rate of 100 social media engagements (or around 3,000 views) leading to one application. Ultimately, for nearly half a year, the programme delivered nearly 500 hours of mentoring and training through nearly 1,500 participations in different events.

Figure 1: Women Go Tech™ first season outcomes (multiple answer categories possible

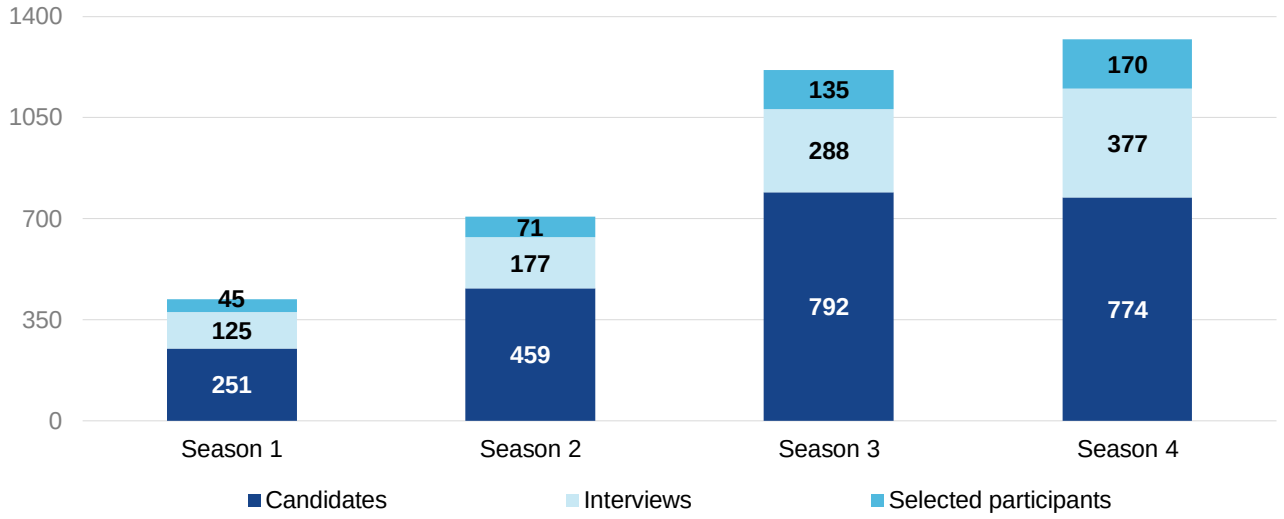


Source: participants' survey right after completion of Women Go Tech™ programme 2016/2017 season[50].

The success of the programme is testified by the growing scale of the programme, particularly its attractiveness for the target audience as testified by the increasing number of applications each year. Starting from around 250 for the first season in 2016-2017, it has reached more than 800 applications during the latest 2019-2020 season. In accordance, the scale of business engagement has also increased, with 13 partners contributing financially during the 2020-2021 season. The impact of the programme is also clear: as a result of four completed mentorship seasons, 42% of former mentees declare getting employed in the TECH sector still during the programme and as much as 70% of former mentees declare the employment one year after they have finished the programme.

[50] *Reading notes: the chart indicates the number of answers received for each of the following answer categories: "Clarified my career pathway"; "Found and started a job/traineeship in TECH"; "Advanced in my career"; "Started to develop a new project"; "Started job search in TECH"; "Started learning in TECH".*

Figure 2: The growth of Women Go Tech™ programme over four seasons between 2015 and 2020: the number of candidates, interviews and selected participants



Source: administrative data from the Women Go Tech™ programme

All in all, the case described above presenting the launch of a relatively large-scale and high-quality mentorship programme from scratch, suggests that a lot of resourcefulness from the founding team is required. They have to bring together the necessary organisational, human and financial capabilities, attract endorsement by opinion leaders, deploy a sizeable communications campaign, execute a large-scale selection process and organise a large number of community events. In particular, this suggests that when aiming for a mentorship programme of a scale of around 50 mentees, there is a clear need for at least several full-time employees and support from either a network of 10-20 volunteers or, if financing is available, numerous external service providers who could provide administrative support for event organisation, communications, and other resource-intensive activities.

Finally, it may be noted that mentorship can also be organised with somewhat lesser resources, aiming for only a small number of applicants and limited, if any at all, selection process. However this, while saving resources, is likely to lead to very adverse effects on overall programme efficacy due to the simple fact that a small pool of applicants would not allow to select the most appropriate participants for the programme. They may lack motivation, time, or general readiness to take the necessary initiative and responsibility to make the best use of the mentors' time made available for them. Such a scenario would very likely ultimately lead to much lower levels of programme impact, i.e. the share of participants who ultimately are able to make the transition and enter the ICT sector.

4 Setting-up a mentorship programme: a step-by-step guide for the Eastern partner countries

Based on the experience acquired implementing Women Go Tech™ as well as exchanges with interested parties from the Eastern partner countries, in this chapter key aspects of setting-up and deploying a mentorship programme are discussed in a detailed manner. It will not provide a one-size-fits-all model, but rather indicate the key aspects which must be considered when designing any mentorship programme and exploring possible parameters and options with regard to each of those aspects.

- The step-by-step guide will cover the main actions needed to be completed when designing and launching a mentorship programme, grouped around three main stages of programme set-up;
- Setting-up programme structure and content (defining focus, scope, and supplementary activities);
- Setting-up resources requirements (financial, human and technical);
- Kick-starting operations (acquisition of partners, participant recruitment, matching and monitoring).

In the following section, each specific activity is described in more detail, highlighting the key actions to be completed, providing practical tips and sharing experience acquired during the implementation of Women Go Tech™ programme.

4.1 Setting-up programme structure and content

The very first consideration when setting up a mentorship programme is to decide on the appropriate scope, target-group and structure of such programmes, as these dimensions define the volume of resources and activities required to deliver the programme. The main questions to be considered at the outset of a setting-up a programme thus include:

- What is the **problem being targeted** and what is (or are) the target group(s) which shall benefit from the initiative?
- What are the **operational objectives** to be achieved by the programme, primarily in terms of the number of participants and programme intensity (i.e. learning hours per participant) and extensity (i.e. over what period those learning hours should be realised)?
- What are the **operational and supportive activities** that need to be deployed to enable the execution of the programme according to the operational objectives?

4.1.1 Defining the focus of the programme

Table 4: To-do checklist

To-do checklist	Prerequisites
1. Defining the target group	Depends on the institutional network you can access
2. Defining thematic scope	Depends on the target group, the market and your network

Defining the focus as well as geographical scope (covered in the next section) are the two most important primary decisions which largely define all the other features of the programme. At the very outset, one needs to consider which the challenge to be addressed is, and which is the target population, which needs to be engaged to address the problem. As seen from chapter 2, challenges with gender inequity start from a very early age. Thus, one can imagine that addressing this challenge may benefit from intervention at very different ages – from early childhood education systems (and even educating parents), through primary, secondary and university education up until working age.

Practical tip 1. Choosing sufficiently mature target group

Career-related mentorship, as an educational instrument, is probably best adapted to individuals which are already of sufficient maturity to consider their educational and career pathways. The earliest age, at which in most European countries school children are required to start making their career pathway decisions is around 14-15 years old (though with some differences across different countries) at the time of transition from lower-secondary towards upper-secondary education. Subsequent decision-point comes at the end of upper-secondary education with the choice of which further institution and which field of study to undertake to prepare for entry in employment. Further decisions relate to choosing where to apply for internship, the choice where to apply for first job, and subsequent career-related decisions.

Intervention at any of these career-decision making points is appropriate and likely required. Thus, the initiator of the mentorship programme must judge, taking in particular into account the accessibility of institutional networks, which of the potential target group may be most accessible, and what kind of solutions can most easily be deployed to address the gender gap in ICT challenge. In other words, the decision depends to a very large extent which of the gatekeeper institutions – schools, universities, industry, or any other are the easiest to access. Depending on the gatekeeper institution, the general target population naturally emerges – for schools it's school-children and/or teachers; for universities – students and/or lecturers; and for industry – workers, potential workers and/or managers.

Taking an example from the Women Go Tech™ programme, the natural network of choice, available to the co-founders, where ICT businesses, accessible via the IT businesses association, which was one of the main institutions behind the initiation of the programme. It helped provide access to the understanding of the business needs, possible partners, and mentors as well as the general credibility of the initiative in their eyes. In addition, Vilnius Global Shapers Hub, the other key institution behind the initiative, had access to a relatively broad network of young urban professionals and the visibility among them available through social media (mainly Facebook), which provided for at least partial access to the ultimate target population of young women which could be willing to make the career transition into the tech sector.

After choosing the target population, it is possible to move to the selection of the thematic focus of the programme. It obviously very much depends on the target population – in relation to 14-15 year olds this may relate to the selection of the study pathway or extra-curriculum activities; for upcoming graduates – selecting the study field; for upcoming university graduates – selection of internships. For individuals, who are already in the labour market, this has to relate to the actual jobs that could be available and accessible for them. In order to make the best use of Women Go Tech™ experience, further in this document it is assumed that the target population is mature individuals in the labour market. This may render some of the examples not fully relevant in case the selected target population is different (i.e. school children). Nevertheless, the overall list of key issues when planning and executing a mentorship programme remains relevant.

The choice of the thematic focus is related to two important aspects – on the one hand, the attractiveness of the domain to be advertised for the target population and, on the other hand, the potential availability of mentors depending on the partnership network available. For example, if the candidate mentors or institutional support for the programme comes from a very specific domain (i.e. specialized large firm or a network of firms or professionals in the domain of cyber-security), then a natural choice would be that specialization where jobs and experts are available. If, on the other hand, there is a lack of clarity or the situation is diverse in terms of available jobs and experts, then setting a broader thematic area(s) may be well justified.

Table 5: Criteria for selecting focus areas

#	Criteria	Purpose and benefits	Do not forget…
1.	Tech market structure	Understanding of industry structure would help to: • Select experts (potential mentors) available in the market; • Match future mostly demanded skills with talent pool development.	• Adaptation to short term and long-term market needs; • Consultancy with market experts.
2.	Expert availability	Experts availability in the market will help to: • Build and update the educational sessions content at highest quality; • Dedicate time for training, consultancy sessions and workshops which are very much needed for quality and success of the programme.	• Diversification of expert background.

As an example, for the first season of Women Go Tech™, there were four broad thematic areas how the applicants could identify their area of interest: IT, engineering, start-up, and general re-qualification interest towards tech industry (which increased to 10 separate tracks in season 5). Out of the 251 applicants of the first season, around 60% belonged to this last category, with 20% of applicants with a targeted interest in IT, with the other two categories receiving 10% of applications each. At the same time, there is a certain risk in focusing on such a very broad theme as requalification towards tech industry, as many of the applicants falling under this category did not have the level of readiness sufficient for a mentorship programme, for example never having looked for any information about IT/tech and/or expecting to receive all the knowledge ready-made without dedicating own time to that cause.

4.1.2 Defining the scope of the programme

Table 6: To-do checklist

To-do checklist	Prerequisites
3. Setting the target number of mentors and mentees to be recruited	Depends on key bottlenecks: • The size of your network, defining the number of mentors you can recruit from it; • Available or acquirable capabilities, which define the scale of operations (i.e. communication campaign and selection) you can feasibly undertake for mentee recruitment.
4. Defining programme duration and intensity	Depends on the time of the year when the programme can be launched and the time-availability of mentors.

After having reflected on the potential focus of the programme in terms of target group and thematic areas, a very much related reflection is required on the expected size of the programme: the planned number of mentees; the planned number of mentors and the target number of applications required to ensure the availability of a sufficient number of mentees with the necessary level of readiness for the programme. In addition, the scope of the programme also critically depends on the intensity (frequency/duration of mentorship sessions) and extensity (the overall duration) of the programme.

It is very likely, that **a key bottleneck** for any such programme will be the **availability to attract mentors** with the relevant skills, experience, and ability to take up the role of a mentor. Unlike for mentees, a public call and subsequent selection of mentors may not be possible to carry out; thus the availability of mentors is critically dependent on either the network of programme initiator or via such network identifying one or several intermediaries who could help identify and approach mentors with the right profile. Thus, evaluating one's own network or discussing with possible intermediaries may help estimate the number of mentors one may recruit.

In a case where IT/tech sector is very small, or due to other reasons the number of potential mentors with the right profile is expected to be small, one may consider extending the search for mentors beyond the immediate geographical territory (city or country of operations). However, acquiring mentors outside one's usual territory of operations carries a number of risks. Firstly, one needs to be able to identify, evaluate, and attract those mentors to dedicate their time. This may be much easier to do within one's city or country as mentors will perceive that they are contributing to their community. However, in case one engages foreigners, their motivation to take part may be lower. There also may be other difficulties such as language barriers, difficulty in building trust without meeting in-person, time-differences or even cultural difference. Such challenges may be smaller if recruited mentors belong to the diaspora of the country where the mentorship programme is being implemented.

Next, depending on the expected number of mentors, one can set the planned number of mentees – which can be slightly higher than the number of mentors to account for the possible interest of some mentors to undertake more than one mentee as well as potential drop-out of mentees from the programme. **One more key bottleneck** to consider is the **volume of resources required to recruit the necessary number of mentees**. While recruitment of mentors depends on available networks and personal relations, the recruitment of mentees, in order to be able to select those with the necessary profile, usually should involve a significant public communications campaign. In addition, with a growing number of applicants, the resources

needed to filter, select and match mentees with mentors grows exponentially. Moreover, if the total target population is small (a network of 50-100 women) than the scope of the programme should also be set adequately.

Practical tip 2. Setting objectives in accordance with the capabilities

Setting programme objectives in terms of the number of mentees to be selected and the required number of applicants to ensure an adequate pool of candidates need to be set being realistic in terms of institutional, human and management capacities available within the organization(s) initiating the programme. Thus, while detailed planning of resources will be discussed separately, the organizers must have personnel or the ability to recruit/access personnel with adequate experience in proportion to the objectives set. If, at the outset, it is relatively clear that only several persons may be available for implementing the programme, its scale then should probably not exceed 10-20 mentees and several dozens of applicants.

As an example, to carry out the selection and interviewing of 250 applicants to select 45 mentees in the first Women Go Tech™ season, a social media campaign had to be organised reaching 750.000 views in around two months' time as well as up to 500 working hours (250 working hours for the first stage of selection; 125 working hours for interviews and another 125 hours for matching), all carried out in a short-time frame of several weeks' time. All in all, preparing and carrying out a selection procedure from 250 candidates to 45 mentees over a period of several weeks, implies a 6.25 FTE workload for 10 working days or, more realistically, up to 20 HR specialists or professionals with equivalent experience, working part-time. On top of this, around 3-4 person team was needed to organize and manage these activities, all carried out and completed over a limited duration of time of around 3 months.

Finally, the decision on the scope of the programme needs to set the **expected duration of the programme and the intensity** of mentorship in terms of recommended meeting frequency and their length. The two parameters are inter-related, as to achieve impact with the programme, if the duration is short, the intensity should be high; while if the duration is long, mentorship meetings can take place less frequently and be of shorter duration. Overall, it would be recommended not to aim for less than 5-6 mentorship meetings, so that a full cycle of planning-implementation-evaluation/new planning could be carried out by the mentor-mentee team. This certainly can be implemented over a shorter or longer period of time, primarily depending on the time availability of the mentor. It is not recommended to extend the programme over summer holidays. Thus, if it is only possible to launch the programme only at the end of winter/early spring (February-March), it probably should not extend beyond mid-June.

4.1.3 Defining the supplementary activities of the programme

Table 7: To-do checklist

To-do checklist	Prerequisites
5. Selecting the complementary activities	The ability to deliver additional events should take into account availability of resources. In general, at least some activities are necessary to ensure a high-quality mentorship experience.

The last element in framing the programme covers the decision on core and supplementary activities to be carried out to support mentees, mentors, and build the visibility of the programme. The basic set of activities include:

1. Opening and/or closing sessions (and their scope);
2. Preparatory trainings for mentees and/or mentors;
3. Supplementary educational and community-building events.

Overall, the longer the duration of the programme, the more important supplementary events may become to keep mentees and mentors engage and to learn from each other.

Practical tip 3. Setting-up a variety of supplementary activities

Consultancy sessions. After the first season implementing the mentorship programme, "Women Go Tech™ team, noticing interest and demand from participants, designed a new type of educational activity called "Consultancy Sessions". These are knowledge-oriented sessions delivered by mentors on specific topics such as "Career in automated and manual testing", "Fundamentals of tech project management", "Knowledge base for front-end development", etc. Experts from various companies would share their knowledge with a pre-selected group of interested mentees (up to 10) depending on their mentorship objectives. Such small groups of mentees helped to build the non-formal atmosphere of communication and encourage curiosity in the topics discussed. Over a period of 6 months, up to 30 sessions can be organized.

Partnership with "Build Stuff". "Build Stuff" is a software development conference, created for back-end & full-stack developers, academics, team leads, software architects, product owners, technical project managers. It is the conference attended by ~1000 specialists, very much dominated by male audience. Organizers of the conference have agreed to donate a number of tickets (ticket value is around €300-500) to "Women Go Tech" participants to boost their courage to join the tech community, get knowledge and pitch themselves as candidates to future employers.

At a minimum, it is critical to organize **induction sessions** for mentors and mentees, to introduce them to the scope, logic, and objectives of the mentorship programmes, to help them set adequate expectations, and make sure that those expectations align well between mentees and mentors. If needed, such sessions can also be organized virtually; however, many Women Go Tech™ participants have stressed the importance and value of meeting other community members, thus, if the situation allows, it is recommended to organize them as physical, in-person events.

There are also two types of supplementary activities that may be deployed as part of a mentorship programme: **educational (training) sessions and community events**. Technical skills and knowledge play an important role in the ability of mentees to successfully enter or progress their careers in the tech sector. While mentorship sessions play an important role in facilitating setting the objectives, searching for relevant courses, and meeting referred experts to advance their understanding of a particular topic, mentorship in itself is not meant to provide knowledge or training. Thus, to help mentees in the process and provide some general broad background about the sector and evolving technologies, organizing dedicated educational/training sessions to deliver such understanding is advisable.

Table 8: Educational events

#	Type	Purpose and benefits	Do not forget…
1.	Seminars	Short time lectures and exercises on specific topic to provide knowledge on a given tech subject.	Select the topics in line with the interests of participants and market needs.
2.	Workshops	Practical group sessions followed by individual or group tasks and discussions to boost skills in specific topics.	Require good preparation, experienced facilitators and space for practice.
3.	Consultancy sessions (also see more below)	Question and answer sessions with industry experts from leading tech companies on various tech fields provide very practical knowledge and tips.	Consultancy requires less preparation by experts and more engagement by mentees.
4.	Mentee peer 2 peer learning experiences	Matching two mentees as learning partners for mutual reflection, accountability and motivation.	-
5.	Selection of recommended online courses	Collection and simplification of materials available online help mentees focus on knowledge and shorten the path to learning benefits.	Expert level advice in preparing such materials is helpful.

Finally, another important type of supplementary activity is events focused on **building a community of women in ICT/tech**. Community support, peer to peer encouragement and motivation, making success stories visible, and inspiration to act are of a great importance when building women empowerment

programmes. For example, an opening event (and similarly a closing event) can be an important opportunity to provide the possibility for your mentees and mentors to meet as well as a place to give visibility to all your supporters and partners.

Table 9: Community building events

#	Type	Purpose and benefits	Do not forget…
1.	Inspirational events	Programme opening and closing events are designed to provide an excitement and commitment to ambassadorship of women in technology topic. It also helps build the result focused mindset community highly engaged into the project.	Midterm events might be helpful to boost motivation along the way.
2.	Networking events	Community building and collaboration is boosted by various networking events where mentors meet other mentees and fellow mentors and can expand their professional networks.	-
3.	Other tech events organized by different organizations	Encouragement to participate at other events hosted by industry professionals help women build their networks, pitch themselves to perspective employers and promote women in technology.	Encouragement by Community manager might be helpful in selecting events to participate at.

4.2 Setting-up resource requirements

After setting out the general scope and structure of the mentorship programme one is planning to implement, the next critical step is assessing more precisely the resources required for executing the programme in accordance with the scope and targets sets. The two most important types of resources are financial and human, which can be used to carry out internally or purchase externally the services and expertise required to deliver various programme activities. Furthermore, the need for and availability of additional technical, logistical, and other resources needs to be considered.

4.2.1 Financial resources

Table 10: To-do checklist

To-do checklist	Prerequisites
6. Setting programme budget	The final budget needs to fully correspond to the total expected financing to be acquired and should foresee an amount of financing (5% - 10%) to cover unforeseen expenditure.
7. Identifying the sources of financing	The sources and the expected volume of financing must be set realistically to safeguard from financial shortfalls.

A major challenge all mentorship programmes face is the search for funding and resources that can sustain the programme over time. Ability to gather and effectively use financial resources is critical to the short-term and long-term goals as well as the overall sustainability of the organization implementing the programme as well as the programme itself. Thorough financial planning and resource acquisition is required before the launch of the programme to make sure that promises given to mentors, mentees, and partners can be upheld.

Practical tip 4. Diversification of funding sources

"Women Go Tech™" programme combines a number of different sources of financing to reduce financing risk and ensure sustainability. Strong partnerships with private sector enterprises are established from Season 1 acquiring support from leading national and international technology companies.

In addition, programme participants also contribute by paying a small fee to cover part of the costs.

Furthermore, "Women Go Tech" has been active in applying to various corporate and non-corporate foundations and received support from several of those, including from Google.org foundation, Nordic Council of Ministers, and Coca-Cola foundation – to name a few.

In-kind partnerships are useful in reducing the costs of events organisation, communication, or web development. Such financing strategy allowed "Women Go Tech™" to increase five-fold the scale of the programme from Season 1 as measured in the number of participants.

For dealing with financial resources, two key steps need to be accomplished:

- Setting the total budget required for implementing the programme;
- Planning the sources of funding for acquiring financial resources required for the implementation of the programme.

The first step – estimating the total budget of the programme should be built fully in line with the planning activities described in the previous section. In particular, an estimation of the cost is required for communications campaign, mentee selection, organisation of supplementary events (if any), and general administration.

Table 11: Planning programme financing

#	Planning steps	Purpose and benefits	Do not forget…
1.	Resource assessment and budget building	• To set the level of financing required. • To ensure a high quality programme.	A long term (2-3 year) budget plan might help to align programme goals and ensure sustainability.
2.	Development of adequate and diverse revenue stream	• To ensure availability of financial resources. • To help build financial reserves and ensure programme sustainability over the long-term. • To avoid a lock-in with a single donor. • To build awareness of the programme by keeping the healthy competition between private donors helps.	Single source of funding might start interfering with the goals and objectives of the mentorship programme; therefore, it is recommended to select carefully and define programme and partnership goals clearly.

Next, moving to the second stage of financial planning, it is critical to clearly define where the necessary financial resources will come from. If it becomes evident, that the necessary amount of resources cannot realistically be acquired, then the scale of the programme needs to be adjusted accordingly. Only when resources requirements fully correspond to realistically acquirable resources from clearly establish sources, one can confirm the final frames of the programme. In order for managing well the financial risks, the revenue streams need to be well-diversified.

There are four main external sources of financing:

1. Participant's fee;
2. Public sector support;
3. Private sector partnerships; and
4. In-kind partnerships.

The comparison of the different financing streams is presented in the table below by analysing each funding type's pros and cons. Overall, it is important to note that even if every individual source of financing has its benefits and drawbacks, maximum benefit is achieved only smartly combining different sources allows to achieve the largest scale and impact.

Table 12: Sources of financing: pros and cons

	Participants fee	Public funds	Businesses	In-kind partnerships
Pros	• Fixed fee or monthly payments made by programme participants increase commitment to the programme and relevance of content provided	• Financing may be available from local (city), regional or national governments and international organisations. • National and international financing can often be large-scale providing sufficient financing to run a programme for several years.	• Decision making time is relatively short. • Businesses are often willing to be involved into the programme and contribute to the development of its content. • Partnerships of different sizes are possible ranging from very small to relatively large.	• Valuable when budget optimization is needed. • It is usually easy to find and agree on in-kind contribution in exchange to promotion and advertising.
Cons	• Programme availability is limited to those willing / able to pay. • Funds gathered rarely cover costs of the programme, therefore alternative sources are needed.	• Programme goals often need to be adapted to the objectives of the public fund. • Often long lead times 6-12 months between application and grant decision. • Reporting and accountability requires additional human resources.	• Sales and account management requires additional human resources. • Prolonger negotiation to align objectives is a risk.	• Cover only small and specific types of costs. • Expectation and conditions have to be well defined to avoid low attention from such stakeholders.

4.2.2 Human resources

Table 13: To-do checklist

To-do checklist	Prerequisites
8. Estimating the amount of human resources needed	The required total volume of HR mostly depends on labour-intensive activities, i.e. selection or event organization.
9. Distribution of tasks between paid staff and volunteers	As financing will often not be available to cover all HR needs, recruitment of volunteers for some tasks will likely be needed.

The planning of human resources is intimately linked with the overall planned scope of the programme (how many mentees and mentors there will be, how many events need to be organised) as well as with the planned budget of the initiative – how much financial resources could be dedicated for hiring employees to execute operational activities and manage the programme.

Practical tip 5. Clearly assign team responsibilities

The current structure of the core team of "Women Go Tech™" is the following, clearly representing the key areas of activities required for the implementation of a mentorship programme:

- Advisory board – co-founders and other board members, responsible for programme strategic development, financial sustainability, and representation on the national and international level.
- Programme Director – responsible for the supervision of programme development and execution at the national level as well as stakeholder management.
- Community Manager – community building and development (mentors, mentees, alumni) and internal communication.
- Events Manager – online and offline event management, networking events.
- Communications Manager – external communication and marketing.

The programme is also relying on volunteers who support the selection process and event organisation.

During the very first year of the programme, given resource limitations at the time, the team structure was less formalized. For example, it did not include an official advisory board and only had an unofficial programme director. Also, all the main activities – community management, events management, and communications management were shared among the volunteering staff (as there was no full-time staff) as well as procured or voluntary/in-kind external providers. While such a way to organize activities was inevitable due to resource constraints, it has created very complex and time-intensive management and coordination needs. This brought about multiple complications for the programme, including miss-communication, duplication of work, delays, and ultimately some avoidable challenges in implementation.

Given the limited amount of financing available to cover the costs of a non-profit initiative such as a mentorship programme, its success strongly depends on the ability to attract volunteers, in particular all the mentors and experts who form the backbone of a programme like Women Go Tech™. If all the services of mentors and experts would need to be purchased, the total cost of running such programme would likely double or triple in size. When distributing the tasks between hired staff and volunteers, hired staff should take-up primarily regular/on-going activities, while volunteers should focus on tasks with fluctuating demand in intensity, particularly selection or helping organize large events.

Table 14: The main roles for human resources

#	Role	Area of Responsibility	Do not forget…
1.	Ambassadors	Ambassadorship of the programme and representation in public.	To focus on well-known names with impeccable reputation and good representation skills.
2.	Advisory Board	Strategy development and providing access to important networks.	Commitment for fixed term contract is recommended.
3.	Executive Team	Programme development & execution, operations management.	Structures must be adjusted according to programme scope.
4.	Volunteers (professionals, experts and mentors) or external providers when necessary and availability of financing is assured	Professional mentorship and expert level knowledge provision.	Public representation of such volunteering activities is important for personal branding.
		Hands-on support in events and various initiatives.	Extra resources within the executive team for coordination are helpful.
		Ad-hoc support and advisory for organizational processes – recruitment, content building, sales management, public representations, etc.	Pre-selected pool of professional advisors is recommended to shorten time to response when needed.

Notably, the ability to attract volunteers may be at risk in a situation where all the costs of implementing the programme are to be covered by a public grant. In such a case the willingness of experts to provide mentorship voluntarily may be reduced, or, alternatively, the grant would need to foresee covering the costs of

purchasing their services. At the same time, such a transactional nature of a mentorship programme (when mentors would not be volunteers), may ultimately have negative effects for programme efficacy and long-term sustainability. Therefore, there are important trade-offs to consider and linkages to be aware of between the financing structure of the initiative and the corresponding planning of human resources.

4.2.3 Communications, technical and logistical requirements

Table 15: To-do checklist

To-do checklist	Prerequisites
10. Identifying communication, technical and logistical requirements	Technical barriers may compromise the ability to reach potential participants and their ability to take-part on-line or in-person in the programme, which needs to be accounted for.

In addition to planning the necessary human and financial resources, a reflection on the possibly required technical resources as well as strategies for their sourcing may be useful.

Probably the most critical task is identifying the most appropriate **communication channels.** The success of Women Go Tech™ has primarily relied on the ability to make use of social media and online media for the recruitment of potential applicants to the programme. However, countries differ in terms of which digital media channels are dominant, how popular they are as compared to more traditional media channels, and what is their level of penetration among the target population of the mentorship programme.

Another type of technical resource for consideration is the **availability and quality of internet connections** available in case parts of the programmes need to be delivered on-line. Even in the developed world challenges with internet connectivity often compromise the possibility to carry out a video or even an audio call over distance. In case some activities are carried out online, back-up solutions need to be planned in advance to cater to such situations.

Another related example is the **geographical distance** and the availability of transport for organisation of events or activities which require in-person presence. In case the geographic scope of the programme covers a broader area than can be comfortably travelled in a couple of hours, adaptive measures may be required to ensure equal opportunity of access for participants from all localities. This even may require foreseeing co-financing to cover the accommodation (and possibly travelling) costs for some of the participants.

Practical tip 6. Make full use of online presence

For Women Go Tech™ mentorship programme its online presence and digital media provide the main communication channels for the recruitment of mentees and ensuring programme visibility to its Lithuanian audience. These channels include:

- Facebook – the primary channel of communication and mentee recruitment;
- LinkedIn – the secondary channel of communication and mentee recruitment;
- Website – ensuring the direction of web-search inquiries and acting as depository of the main information about the programme and application links;
- Digital news platforms – provide a communication channel towards the audience outside the social media networks or who do not use social media.

In addition to using digital media channels, the programme also makes use of regular media to support its promotional activities, particularly TV and radio.

4.3 Kick-starting operations

After setting out the parameters of the programmes (focus and scope) as described in the first section of this chapter and estimating the level of resources required for implementing the programme in the pre-set parameters, the project initiator has to proceed with launching the operations. Operations management in

general covers a very broad range of activities – setting-up the (legal) institutional infrastructure, financial and HR management, accounting, administration which apply to any organisation or initiative. Given the limited scope of this guide, the focus of the guidance here will be upon several most critical operations which are more specific, more challenging, or more critical for the success of a mentorship programme. These will include:

- the acquisition of resources through partnerships;
- recruitment of mentees and mentors;
- expectations alignment;
- programme monitoring.

4.3.1 Acquisition of partnerships

Table 16: To-do checklist

To-do checklist	Prerequisites
11. Exploring public partnerships	Primarily aimed at generating credibility and visibility.
12. Exploring business partnerships	Primarily aimed at generating financial and HR resources.
13. Exploring in-kind partnerships	Primarily aimed at reducing the costs of services.
14. Accounting for partnerships restrictions	To assess if any source of financing or any partners restrict any other sources of funding or partnerships.

The acquisition of partnerships is a critical activity area that will allow the sourcing of the majority of resources (financial, human, or in-kind) required for the implementation of the programme. Partnership acquisition strategy should follow the second stage of financial planning where decisions were made as regards the optimal and realistically feasible arrangement of expected revenue streams and their sources. Just to quickly recap, these may be:

- Public-funds and public-sector partnerships
- Private-sector partnerships
- In-kind partnerships

The very first source to consider is the possibility to establish partnerships with public institutions. As described in the previous section, the main type of support from the public sector may be acquired via public funds/funding programmes. These are not considered “partnerships” per se, but it may, in some cases be a useful source of resources. As described before, often the time required to apply and to receive the decision to provide public support can be lengthy, thus when mapping such opportunities one needs to evaluate if the support would come in time and if the support is provided for activities that the planned structure of the programme.
However, there are also other options to engage with the public sector. The most useful one, as testified by Women Go Tech™ experience, is an effort to acquire an endorsement by a high-standing public official of the programme. As described in the previous chapter, the very first season of Women Go Tech™ programme was implemented under the patronage of the President of the Republic of Lithuania. Such an official may a prime-minister or minister or a public official of the regional or municipal (city) government – for example, a Mayor. Patronage helps acquiring other partnerships, may also provide some in-kind contribution (for example access to a public auditorium for some of programme events). Endorsement by well-known and respected public figures will also help with the recruitment of mentees and mentors.

Another, probably most important kind of partnerships to be explored is business partnerships. Please note, that potential business partners are often privately-owned enterprises, but in some cases, they could also include publicly-owned enterprises (i.e. publicly or semi-publicly owned telecom companies). Such partnerships ideally are sought through the existing network of contacts or, if a partnerships/endorsement by a

public sector official was already achieved – it could be reached out through the reference of such an official. Large organizations (especially multi-national corporations) often have a regular budget set-aside for public relations, corporate social responsibility, or HR purposes to advertise the enterprise as an attractive employer. When reaching out to enterprises, such regular funding programmes could be targeted, offering for the enterprises to become a partner/sponsor of the initiative. Such enterprises, in addition to providing financial resources, can also, in addition, provide in-kind support, in particular, access to their venues for events or dedicating some of the time of their HR specialists, for example, to help with mentee selection. It is advisable to primarily target enterprises working in the ICT sector or at least hiring a significant number of ICT specialists.

Finally, the third type of partnerships to be explored is partnerships for in-kind support or discounted provision of services. These partnerships would more regularly target non-ICT enterprises, given that they need to have or produce services or products that are being sought for. Such organizations are again best approached via an existing network of contacts or word-of-mouth and can cover any domain as required for the operations of a mentorship programme – communications, accounting, audio-visual production, transport, accommodation, food services, media, etc.

Practical tip 7. Aim for diversity of partnerships

For Women Go Tech™ mentorship programme, for each of its seasons has acquired a number of different partnerships to pool the resources necessary for programme implementation:

- Main partner(s): the main (largest) sponsors of the programme providing financial support;
- Sponsors: the other (lesser) sponsors of the programme providing financial support;
- Media: a partnership with one of the main media platforms providing reduced or free of charge promotion and/or dedicated news coverage of the programme;
- Audio-visual production: a partnership providing pro-bono or discounted production of audio-visual products (videos, print, leaflets, graphic design, etc.);
- Web presence: a partnership with an IT company providing pro-bono or discounted IT services such as website design or management;
- Public relations: a partnership with a PR agency, providing pro-bono or discounted communication and PR services (press releases, social media content, etc.);
- Venue: a partnership providing pro-bono or discounted access to its venue(s) for organizing events. Such a partner can be a public institution such as a school or university.

Finally, an important consideration when searching for partnerships is to make sure, that any public support received (especially those received from public funds) do not impose restrictions on the acquisition of additional external financing or income-generation activities. For example, the European Union programmes sometimes use such restrictions, considering that additional financing acquired to cover activities that should have been covered by such financing may be considered as profit-generating activities and thus result in a reduction of the volume of a grant provided in proportion to additional income generated. Also, when acquiring private partners it needs to be made sure that several companies competing in the same market are not invited to become partners at the same time.

4.3.2 Communications and mentee / mentor recruitment

Table 17: To-do checklist

To-do checklist	Prerequisites
15. Preparing a communications plan	The plan must correspond in scale to programme objective.
16. Setting-out a communications budget	The budget must be draft in relation to communications plan.
17. Setting-out a social media strategy	Social media strategy must be set-out in accordance to programme objectives and adapted to the target population.
18. Utilizing other communication channels as appropriate	Make full use of more traditional communication channels – online media portals, TV, radio, periodicals and print.

The launch of the participants' recruitment campaign is a critical stage with which programme enters into full-scale operations. As mentioned earlier, while one can recruit mentors (especially if the targeted number of mentors is not very large) via an existing network of contacts, the requirement of mentees in most cases requires a public communications campaign which can extend over weeks and months in duration. Such a campaign must be planned in advance, particularly setting-out its duration and application deadlines as well as planning in advance all the communication activities and the resources required to implement those communication activities. The following descriptions will primarily be focused on communication activities via social media; as such communication can be best monitored in terms of its outreach ("views") and impact ("engagements"), however other communication channels (print, TV, radio, online news platforms) should also be utilized for maximum impact and maximally increasing the chances that programme objectives will be achieved.

Table 18: Planning a communications campaign

#	Step	Description
1.	Clearly defined target audience	Determining the right target audience(s) for a mentorship programme is a crucial step in setting a communications and marketing plan. It has to be clear to which audiences you are speaking to and what actions are expected from them.
2.	Defined positioning of the programme	Positioning refers to how a mentorship programme chooses to portray itself within its external and internal environment. Clear mission statement and commitment helps to raise awareness and attract the potential participants as well as the supporters to the programme. Positioning match to local context is a key to success of the programme therefore should be well thought through.
3.	Selected communication channels	Depending on Step 1 and Step 2, communication channels shall be selected based on the goals of the programme (number of candidates, targets for publicity) and match the budget available.
4.	Performance review and development	Monitoring of communication campaigns and its match to goals and targets (such as number of candidates applied, number of viewers, mentions per category, etc.) is essential to identify any deviations from plans and implement adjustments when it's still not too late.

Suggestions for an effective communications campaign are the following:

- Involve as many stakeholders as possible – mentors, mentee, alumni (in future programs), partners.
- Use similar vocabulary and communicate it to your stakeholders – mentors, mentees, so that communication achieves maximum impact.
- Diversify the content – social media, TV and Radio, printed press, podcasts – all of it require diversified messages and targeted content but can help achieve a larger and more diverse audience.

- Stick to the goals of the programme – would it be women empowerment, representation of opportunities in tech, or success stories of requalification, the effective communication campaign is the one that helps an organisation achieve the goal at maximum effectiveness.

The scale and duration of communications campaign to recruit mentees stem primarily from programme objectives, i.e. how many mentees the programme ultimately plans to recruit. The number of mentees to be selected should also correspond to the planned number of available mentors. In addition, in case there is a need to recruit additional mentors, this may also be covered as part of the communications campaign. Overall, when planning the scale of the communications campaign, one start from the expected number of mentees and mentors, then calculating the number of applications needed to select only those mentees that have the necessary profile and then calculating the approximate level of outreach (number of views, number of engagements) required to generate the necessary number of applications. As described in the previous chapter, for the first Women Go Tech™ season, these so-called conversion rates from views and engagements into applications were correspondingly 3000:1 for views (3000 views bringing one application) and 100:1 for engagements (100 engagements bringing one application).

Practical tip 8. Pursue multi-channel communications activities

Women Go Tech™ provides a good example of utilizing multi-channel communication activities. Its core platform for communications has been selected to be Facebook given the popularity of this social media network among the target population – young professionals living and working in Lithuania. The critical role of this media channel for outreach and mentee recruitment is indicated by the levels of social media exposure and engagement is aimed-at and being achieved. However, other social media channels such as Instagram, LinkedIn and Twitter, own website and a blog are also utilized.

As mentioned before, for the very first season of the programme, to generate 251 applications required to implement communication activities reaching 750,000 views, 90,000 video views, and 23,000 engagements. Such activities included the development of audio-visual content (promotional movies), regular social media posts (158 posts were published over a period of around two months – or nearly 3 posts per day) as well as sharing posts through the networks of co-founders of the initiative as well as Infobalt association and Vilnius Global Shapers Hub and its members' social media accounts.

Furthermore, the communications campaign should not be restricted only to social media – it should also make use of other media channels. For example, first Women Go Tech™ season apart from social media also included communication and coverage via the leading Lithuanian online media platform "Delfi", as well as press releases and journalist outreach resulting in a total of 77 mentions in main media portals. Furthermore, communication was also delivered via dedicated Radio and TV interviews, for example, a "Good morning" programme of a popular TV channel.

As mentioned earlier, the number of mentees to be recruited should then be multiplied by at least a factor of 2 (i.e. a number double the size of the expected number of mentees) to reach the number of applications that should be received. It is very important to have a pool of applicants larger than the final pool of mentees to be able to select only those mentees that have the profile and motivation needed for the programme. For example, some potential applicants may not understand at all the purpose of the programme, or may want to participate not due to interest in the ICT sector but rather be able to boost their profile or may simply apply as at that moment they have time available and did not think of any other interesting activities to pursue. The ability to select only motivated and mindful applicants is critical to make sure the efficacy of the programme. If many of the mentees do not even want to get a job in ICT, the outcome indicators (such as the number of mentees who found an ICT/tech job) would likely be correspondingly low.

A final stage of mentee recruitment is selection, which as mentioned before may be a resource-intensive activity. Selection criteria must be prepared in advance, possibly with the help of HR specialists, some of whom can be provided by programme partners. Depending on the number of applicants and resources available, selection can be carried out in one stage or several stages.

4.3.3 Expectations alignment and mentee-mentor matching

Table 19: To-do checklist

To-do checklist	Prerequisites
19. Organizing intro session(s)	Participant's expectations should be aligned with programme structure, objectives and activities.
20. Carrying out a matching exercise	A good match between a mentor and mentee is critical for the success and impact of the programme.

After ensuring all the preparatory activities and the recruitment (attraction and selection) of mentorship programme participants (mentors and mentees) is completed, the very final preparatory activity, before mentorship sessions can begin, is the preparation of both mentees and mentors to work together. This in particular is required to align the expectations and set the code of conduct for the mentorship relationship. This can be done by organising dedicated preparatory/introductory sessions, organised as virtual or physical events and aimed at introducing objectives, explain the process and set the requirements for code-of-conduct for successful participation in the mentorship programme.

Table 20: Suggested scope and content for expectations alignment session(s)

	Mentor	Mentee
Areas of focus	• Alignment of expectations towards the role within the context of the program[51] • Measures of success for the program (success case definitions and roadmap to achieve it)	• Alignment of expectations towards the role within the program and clear boundaries in communication with mentors • Introduction of the mentor role and its differences from other types of consultancy sources • Introduction of criteria for Alumni status
	• Time dedication and agreement of minimum engagement requirements (best if agreed in advance via written consent, GDPR compliance if applicable)	
	• Introduction of Code of Conduct	
	• Introduction of internal communication channels	
Tools to provide	• Mentor guidebook, timeline for the programme	• Mentee guidebook, timeline for the programme, FAQs
	• Literature on mentorship skills building, coaching	• Templates for personal goal setting and career building
	• Guidebook for external communication and representation (DOs and DON'ts)	
Optional activities	• Trainings to advance mentorship skills to diverse level of tech experts • Experience sharing sessions with senior mentors	• Success story / role model introductions • Peer to peer learning assignments to advance reflection within individuals of similar interests/areas of experience

In addition to the general alignment of expectations via general training session(s), mentee and mentor expectations must also be aligned in terms of what mentor profile mentee is seeking and correspondingly what kind of profile and interests the mentee should have so that the mentor could be able and willing to mentor such a candidate. Such a mentee-mentor match depends not only on objective features (i.e. sector and topics of interest for the mentorship) but also on more subjective and personal features of both mentees and mentors. For example, mentees may be comfortable only to work with a female mentor; likewise, a

[51] *Guiding Article 1: https://hbr.org/2015/01/the-art-of-giving-and-receiving-advice*

mentor may be comfortable only for working with more junior or, alternatively, mentees who already have some relevant experience. The general guidelines on how to achieve a good match were described in chapter 3.

Practical tip 9. Prepare well for the Mentee-mentor matching process

The matching process is the ultimate critical stage in ensuring that mentorship programme will reach its objectives. If an adequate match between mentor and mentee is not achieved, the mentee will not be interested to take part – either will participate only superficially or may altogether drop-out of the programme. The same holds for the mentor – if mentee requires advice for a field of expertise that is very different from the one where the mentor specializes, the mentor will not be able to provide such advice nor the mentor will be interested in building a genuine mentorship relationship.

The matching process should start at the final stage of mentee selection, to take into account general profiles of mentors (for example, the number of mentors available who specialize in IT field) and accordingly adjust the number of selected mentees who are interested in exploring this field. There may be cases where a potential applicant has a very rich profile and has shown strong motivation, but her field of interest is very different from those declared by the mentors. Recruitment of such a mentee to the programme and assigning her to one of the mentors can only be done if an explicit agreement has been acquired for such a match from both the aspiring mentee and the selected mentor.

To enable an effective matching process, necessary information needs to be collected from both mentees (i.e. their motivation, their background, their area of interest) as well as from mentors. This can be done during the application phase (for example application has obligatory fields to be filled-in). Alternatively, some of this information can be acquired from mentees during the selection process (for example when interviews are carried out) and similar via e-mail requests or interviews with mentors.

4.3.4 Monitoring and evaluation

Table 21: To-do checklist

To-do checklist	Prerequisites
21. Setting-up continuous monitoring	To monitor satisfaction and identify problems in advance
22. Carrying out programme evaluation	To assess if program objectives have been reached

The responsibility of the programme coordinator does not end with the start of mentorship sessions. For example, throughout the programme duration mentees and mentors should be provided with practical tips and guidance on how to maintain a healthy relationship and sustain mentorship commitment over time. Furthermore, depending on the scope of the programme, as decided at the very start of planning the initiative, educational or community sessions may need to be organized. Finally, the satisfaction of mentees with the programme needs to be monitored. Therefore, to ensure that all the planned activities are implemented as expected and achieve their intended impact, continuous monitoring is needed for on-going activities during the programme. In addition, programme evaluation after its end needs to be carried out to evaluate if and to what extent initial objectives have been achieved and what outcomes the programme had on its participants.

Table 22: Monitoring activities

#	Process	Purpose and benefits	Do not forget…
1.	Feedback gathering	• Quality review of mentor performance and mentee engagement as well as content of the programme	• Feedback analysis should be done at least once per season
2.	Monitoring of performance	• Performance of the programme shall be measured to focus resources on most important and result driven processes • Tracking of participation at events, and the total hours spent to allows estimating their influence on outcomes	• Tracking system shall be matched with goals of the programme and agreed in advance with participants
3.	Activity alignment with Code of Conduct	• Resolution of violation cases according to well defined procedures is helpful	• Written consent to Code of Conduct is recommended
4.	Internal communication	• Timely communication of events and activities	• The programme might become quite intensive for participants, it's important to set expectations right and communicate in advance

Programme monitoring must be fully aligned with both the programme objectives (KPIs) as well as programme activities. For example, if the programme activities include both mentorship and educational sessions, it should collect information on both. It must also be kept in mind that monitoring activities can require additional resources and expertise which need to be planned in advance.

Practical tip 10. Use digital tools for collecting feedback during and after the programme

The easiest way to collect regular feedback from programme participants both during as well as after the end of the programme is to use online questionnaires. The list of questions should ideally be set-up in advance and remain unchanged (unless absolutely necessary or mistakes have been found) throughout the whole period of monitoring. Two main types of information are of particular interest to the coordinator of a mentorship programme.

Firstly, over the whole duration of the mentorship programme, it is very useful to collect feedback from mentees with regard to satisfaction with the programme, satisfaction with their mentor as well as to report any challenges faced. Such monitoring allows to identify any shortcomings of the programmes and finding out about such shortcomings early on allows taking corrective action to ensure that their negative impact on programme objectives is minimized. Such feedback collection can be carried out after each mentoring session/event and/or at regular intervals (every 2 or every 4 weeks). As mentioned in chapter 3, making sure that all mentees regularly respond to such surveys is not an easy task and may require additional resources and follow-up.

Secondly, given that the objectives of mentorship programmes are usually to help women start and advance their career, evaluating the impact of the programme can only be done if relevant information is collected after the programme has ended. It is recommended to carry out at least two waves of data collection to evaluate the impact of the programme – the first one right after the programme has end and the second one after a certain period of time (for example 6 months) to allow some time for the programme effects to become visible, given that finding a job or advancing one's career may take quite some time even if all the necessary actions have been taken.

5 A roadmap for women mentorship programmes kick-off in the Eastern partner countries

As a conclusion of the introduced guidelines and recommendations in this guide, an initial roadmap (activities and timeline) for mentorship programmes set-up is presented in table below. The roadmap is focused on the short term (circa 3 months) and medium scope (up to 100 participants, counting mentees and mentors together) programmes for working-age women.

The roadmap represents the full scope of potential programme activities and timeline. However, it is not the only possible way to organize such programmes. Thus, adaption based on each country selected approach and local specifics should be applied.

Table 23: A roadmap for women mentorship programmes kick-off

#	Activities		Programme set-up activities						Programme implementation activities for the first months	
			Month -6	Month -5	Month -4	Month -3	Month -2	Month -1	Month 1 Kick-off	Month 2
1.	PROGRAMME STRUCTURE AND CONTENT	Programme structure	Defining target group / audience							
			Defining tech tracks / job positions to focus on							
			Defining scope of mentorship							
		Programme content		Defining educational sessions	Selecting content experts	Selecting content activities				
		Comments	• *Considering regional networking to promote open job vacancies, e.g. freelancing opportunities*							
2.	RESOURCE ALLOCATION	Financial Resources: Enterprises	Defining value proposition for enterprises, preparing a pitch deck	Performing active sales, looking for the partners			Signing contracts and onboarding partners			
		Financial Resources: Funds and donations	Defining funds and donors to reach out to	Sending applications to funds / donors						
		Financial Resources: participation fee				Defining value proposition to mentees and pricing strategy		Executing refund policy		
		Financial Resources: in-kind				Selecting in-kind partners: events' locations	Selecting in-kind partners: food, beverages for events			
		Human Resources	Selecting and onboarding core team	Selecting & onboarding volunteers (long-mid-term)			Selecting volunteers (short term)	Onboarding volunteers (short term)		
		Technical Resources	Defining Brand Identity	Launching Website and Social media	Defining media partners for communication campaigns					
		Comments	• *Considering involving the most dedicated mentors to a core team, advisory board*							

#	Activities		Programme set-up activities						Programme implementation activities for the first months	
			Month -6	Month -5	Month -4	Month -3	Month -2	Month -1	Month 1 Kick-off	Month 2
			• *Differentiating the network of private partners to have the market well represented. Do not limiting oneself to one enterprise as a partner.* • *Defining value-proposition with partners (in particular with enterprises), asking for their opinion and needs* • *Considering establishment of refund policy - if programme is paid by participants, there might be a portion of those in need for financial support, therefore fees might be covered by organizers or partners for most motivated participants* • *Bringing partners to public events, presentations* • *Creating strong and unique programme branding*							
3.	**PARTNERSHIP BUILDING**	Partnership building	Identifying and selecting programme ambassadors	Selection partnerships for content activities (if applicable)						
		Comments	• *Building strong network of women and men who support/promote the programme*							
4.	**OPERATIONS**	Mentor & Mentee Acquisition and Selection			Selecting Mentors			Preparing and launching communication campaign for Mentees	Selecting Mentees	
		Onboarding							Organizing Mentee and Mentor onboarding events	
		Matching					Preparing for the Mentor-Mentee matching		Matching Mentors and Mentee	
		Events execution							Preparing for Opening event	Opening Event
		Initial feedback gathering						Preparing feedback flow for the programme		Gathering initial feedback from programme participants and partners
		Comments	• *Defining clear selection criteria for mentors, e.g. leader, specific tech track specialist, mentors' number per one company, other* • *Promoting involved / selected mentors publicly, making public interviews to attract more mentors and mentees* • *Running communication campaign*							

6 Conclusion and next steps

The challenge of the gender gap in ICT, as described in this guide, is clear and universal across the European and the Eastern partner countries. Women Go TechTM programme has showcased in a very clear way how this can be implemented in practice. This guide clearly shows that this success story can be repeated as well as how it can be done. It highlights the importance of bringing different participants and stakeholders together, the need for ambition but also the need for balancing this ambition with resources available, and most importantly delivering the right framework conditions enabling quality experience for both mentees and mentors.

The underlying context in all Eastern partner countries suggests that there is a demand for such initiatives – testified both by the evident gender gaps in ICT, the remaining ICT sector expansion potential, as well as local partner organizations recognizing the challenge and willing to start mentorship initiatives. However, despite a number of local initiatives already present on the ground, the current scale and impact of such initiatives are by far insufficient. As consultations with local partner organisations have shown (using the self-assessment tool provided in the annex), the availability of local donors for supporting such initiatives is limited, while at the same time local actors have limited capacities in acquiring external support.

It thus should be explored what intermediated support could be provided for such local actors, both in helping to acquire the necessary resources as well as providing the steering and administrative support when needed. A practical way forward could be a selection of local actors possessing a minimum set of capabilities (building upon the criteria of self-assessment tool) and providing them with the necessary steering, advice, and support for deploying pilot programmes in countries where such actors could be identified.

It may also be worthwhile to consider the possibility of setting up a regional programme as well as a common pool of resources (financial support, mentors, and programme advisors). This in particular could build upon the expert and mentorship resources already available in the EU, such as the ones brought together in Lithuania, Latvia, and other Nordic countries as part of the activities of Women Go TechTM programme. It could not only contribute to an easier and more scalable roll-out of mentorship programmes in the Eastern partner region, but also promote industry and third sector collaboration within the Eastern partner region and between the Eastern partner and the EU.

It can be concluded that consolidated mentorship programmes, when reaching an adequate scale and quality, can contribute significantly in reducing the gender gap in ICT. However, reaching such scale and quality is fraught with some challenges, particularly due to often limited capabilities of the third sector actors or associated structures which are in general positioned the best for deploying such programmes in a sustainable manner. Nevertheless, such challenges could be surpassed if building upon existing know-how, cross-country collaboration, and access to some donor financing for piloting and kick-off actions.

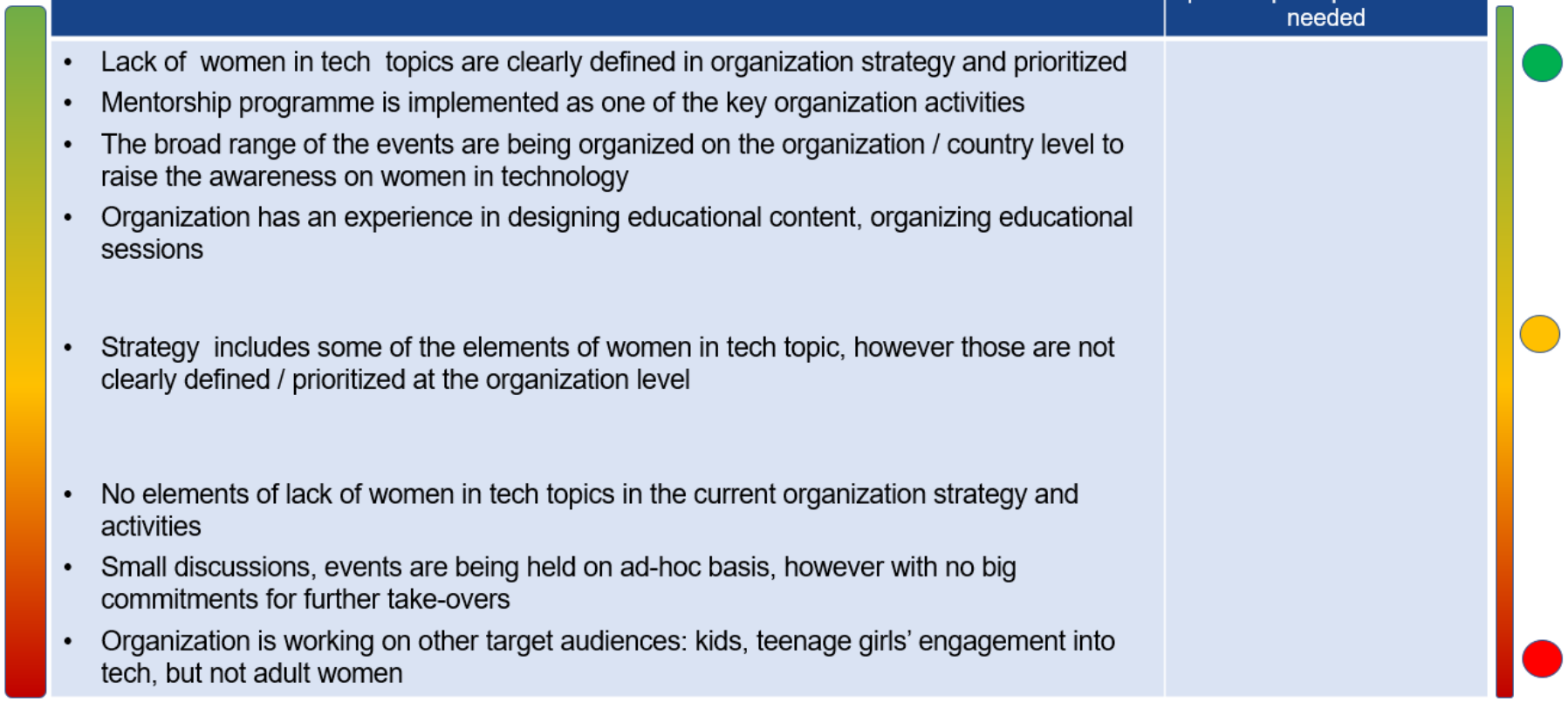
To summarise the above conclusions, the following next steps are recommended:

1. Introduce concentrated **3-months pilot programme in 2-3** Eastern partner countries, depending on the identification of competent local promoters and based on the programme components explained in this guide (preparatory, kick-off, and implementation activities). Suggested target group - working age women; recommended programme scope - 30-40 mentees.
2. Consider possible **funding sources from existing funds** and donors.
3. Start the programme **no later than beginning of April 2021 with the preliminary kick-off date in September 2021** to use the momentum of active initiatives in the Eastern partner countries and their willingness to proceed with the pilot programmes implementation.
4. Consider **testing of regional cooperation**, such as the set-up of regional mentor pool, advisory boards, educational sessions, programme promotion activities, and other actions as appropriate. The scope of regional activities might be extended in later stages.

Annex 1. Self-assessment for organisation readiness to implement mentorship programmes

LOCAL MARKET READINESS Women empowerment in technology industry is getting more attention in the market, there is an increasing competition for tech talent	Please evaluate market readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Companies are facing the challenge to hire women tech talents • Companies are facing the challenge to hire tech talents • Women empowerment in tech is an important topic on a national level	
• There are overall challenges in hiring tech talent, but women inclusion into technology sector is not seen as a challenge	
• There are no other women mentorship programmes in the market • Tech companies have low awareness on diversity and inclusion agenda • Low number of women in technology is not seen as problem	

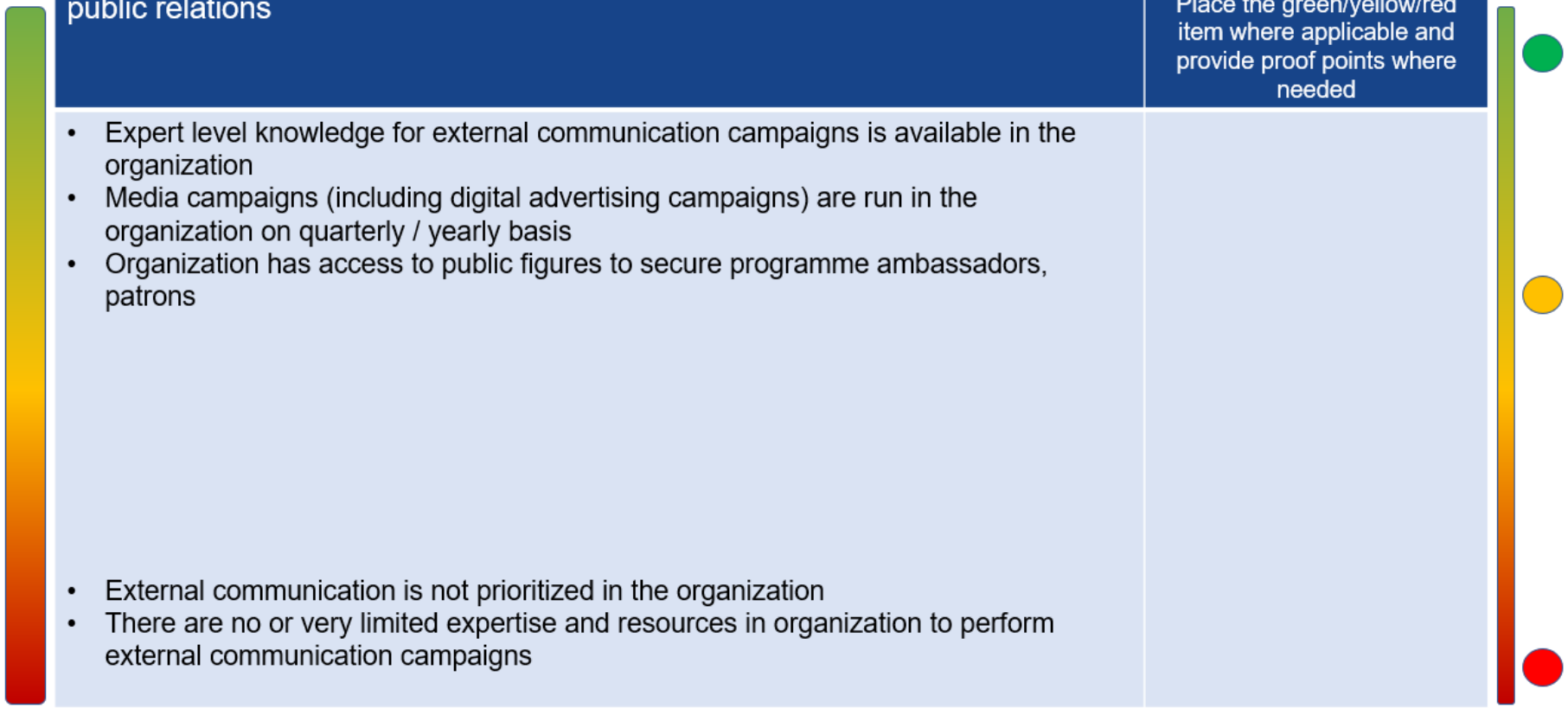
ORGANIZATIONAL READINESS: STRATEGY The strategy of organization is in line with adult women re-skilling and inclusion into technology industry	Please evaluate market readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Lack of women in tech topics are clearly defined in organization strategy and prioritized • Mentorship programme is implemented as one of the key organization activities • The broad range of the events are being organized on the organization / country level to raise the awareness on women in technology • Organization has an experience in designing educational content, organizing educational sessions	
• Strategy includes some of the elements of women in tech topic, however those are not clearly defined / prioritized at the organization level	
• No elements of lack of women in tech topics in the current organization strategy and activities • Small discussions, events are being held on ad-hoc basis, however with no big commitments for further take-overs • Organization is working on other target audiences: kids, teenage girls' engagement into tech, but not adult women	



ORGANIZATIONAL READINESS: HUMAN RESOURCES The organization has human resources to build mentorship programme, organize events and engage into multi-stakeholder relations	Please evaluate market readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Organization has a skilled and dedicated team (min. 1-3 FTEs) to organize long term mentorship programme • Organization has sufficient pool (min. 50) of mentors-volunteers from technology industry ready to participate in mentorship programme • Organization has a well-established connections with technology companies to source mentors, experts, ambassadors.	
• Organization has human resources that could be focused on new programme development and management	
• Organization does not have a dedicated team to organize long term programme • Organization does not run any type of mentorship programmes • Organization does not have a well-established network of potential technology mentors, experts	

ORGANIZATION READINESS: FINANCIAL RESOURCES Organization has funding secured for mentorship programme organization or has a capacity to source funding from business, governmental or any other type of partnerships	Please evaluate organization readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Organization has funding available to organize mentorship programme • Organization has reliable partnerships needed to raise financial resources for women mentorship programme • Target audience is ready / willing to pay participation fees for the programme or are used to pay similar fees	
• Organization has capacity (sales knowledge and human resources) to raise financial support to start mentorship programme (private/public funds) • Only small fees might be collected from target audience as participation fee	
• Organization does not have budget available to organize mentorship programme • Organization does not have skillset needed to raise financial support from enterprise, governmental or other type of funds • Financial capabilities of participants would not allow to collect funds from programme fee	

ORGANIZATION READINESS: EXTERNAL COMMUNICATION Organization has skills to plan and execute media campaigns and manage public relations	Please evaluate organization readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Expert level knowledge for external communication campaigns is available in the organization • Media campaigns (including digital advertising campaigns) are run in the organization on quarterly / yearly basis • Organization has access to public figures to secure programme ambassadors, patrons	
• External communication is not prioritized in the organization • There are no or very limited expertise and resources in organization to perform external communication campaigns	



READINESS FOR SYNERGIES WITH REGIONAL / INTERNATIONAL PROGRAMMES Target audience is ready to participate in programme where content (written and verbal) is run in English. Organization staff is ready to work with international partners, international mentors / mentees, exchange opportunities, other.	Please evaluate organization readiness Place the green/yellow/red item where applicable and provide proof points where needed
• Target audience understands and speaks English language • Organization staff speaks English confidently and are ready to work in multi-national environment	
• Recruitment for English literate staff would be needed for organization	
• Requirement for English proficiency would significantly limit number of participants engaged into the programme • Organizations does not have staff able to work with international partners, mentors	