



**D4.2 LEARNING  
EXPERIENCES  
EVALUATION**

**ET***alliance*



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<b>Abstract:</b>	This report presents the evaluation of the new learning experiences developed and piloted during the FTalliance project, namely FT courses and FT residencies. The evaluation of the learning experiences is based on impact assessment framework which focuses on key evaluation dimensions of short-term and long-term impacts. Evaluation dimensions for short-term impacts include: (i) quality and efficacy of new educational experience; (ii) quality and efficacy of partnership development process; (iii) quality and relevance of graduate knowledge, skills and competences; (iv) quality and relevance of educational experience results (i.e., portfolio of prototypes). Evaluation dimensions for long-term impacts include transferability, scalability, innovation/exploitation and employment boosting potential. Based on impact assessment carried out via 14 surveys and 6 roundtables discussions, this report presents results of evaluation and suggests multiple improvements for future FT learning experiences to enhance various short-term and long-term impact dimensions. The report concludes with summary of improvements highlighting priority for actions and recommendations for HEIs, companies and educational policymakers.
<b>Keyword List:</b>	Impact assessment, evaluation dimensions, short-term impacts, long-term impacts, criteria, indicators, FT learning experiences, suggestions for improvement, recommendations for stakeholders

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# Table of Contents

<b>Table of Contents</b>	3
<b>Executive Summary</b>	4
<b>List of Figures</b>	7
<b>List of abbreviations</b>	10
<b>1. Introduction: impact assessment framework</b>	11
<b>2. Results of evaluation of WP2</b>	14
2.1 Short-term impacts evaluation	14
2.2 Long-term impacts evaluation	27
<b>3. Results of evaluation of WP3</b>	41
3.1 Short-term impacts evaluation	42
3.2 Long-term impacts evaluation	49
<b>4. Summary of improvements: priorities and recommendations</b>	62
4.1 Priorities for FT courses	62
4.2 Priorities for FT residencies	65
4.3 Recommendations for future FT learning experience	68
<b>5. Appendix</b>	78
Appendix A: indicators rating for FT courses delivered in WP2	78
Appendix B: indicators rating for FT residencies delivered in WP3	86

## Executive Summary

This report presents the summary of short-term and long-term impacts assessment of the new learning experiences developed and piloted during the FTalliance project, namely FT courses and FT residencies. Both learning experiences are collaborative interdisciplinary multi-stakeholder courses based on industry-academia partnership with major aim to tackle skills mismatches and equip students with relevant competencies for future employment in the FT industry along with boosting creative encounters in FT oriented companies.

The assessment of short-term impacts focuses on four key evaluation dimensions: (i) quality and efficacy of new educational experience; (ii) quality and efficacy of partnership development process; (iii) quality and relevance of graduate knowledge, skills and competences; (iv) quality and relevance of educational experience results (*i.e.*, portfolio of prototypes). Key evaluation dimensions for assessing the long-term impacts include: transferability, scalability, innovation/exploitation and employment boosting potential.

For each evaluation dimension associated with assessment of short-term and long-term impacts, a set of criteria and associated indicators were established and used for reporting of the impact assessment results in this project deliverable. The primary method for data collection was surveys targeting students, HEIs and companies, where developed indicators were assessed using the Likert (1-5) scale and subsequently aggregated into ranking of criteria and evaluation dimensions. The final results/scoring for short-term impacts assessment depicts ranking by majority of respondents/stakeholders (over 50%). In case of significant discrepancy in scoring of indicators or criteria by the majority of stakeholders, the mean value was calculated for aggregation. The results of short-term and long-term impact assessment from surveys were also communicated to and discussed with project partners during interpretation workshops (in the format of roundtable discussions). The results of these workshops helped to identify the suggestions for improvement and priorities for action in order to enhance both short-term and long-term impacts of future FT courses and FT residencies. In total, 14 surveys/questionnaires were carried out and 6 roundtable discussions were organized. More details on the impact assessment framework and evaluation process can be found in chapter 1.

Overall, both FT courses and FT residencies piloted during the FTalliance project performed well with regards to the short-term impact evaluation. In particular, FT courses were ranked '4' on all evaluation dimensions of short-term impacts, except for the quality and relevance of the portfolio of prototypes (*i.e.*, delivered students projects) for boosting creative encounters in FT oriented companies with overall ranking as '3'. For FT residencies, all evaluation dimensions of short-term impacts were ranked as '4 and above', except for the quality and efficacy of the partnership development process with the overall ranking between 3 and 4 by majority of stakeholders.

With regards to long-term impact assessment, FT courses were overall evaluated rather high ('4-5'), except for scalability potential (ranked as '3-4') and few criteria associated with certain evaluation dimensions. In particular, with regards to transferability potential FT courses were scored high (ranking of '4-5') in terms of partners' interest to deliver the same type of courses in the same academic field/level (both in 3-5 and 5-10 years time period). With regards to launching similar type of courses at other academic/professional levels, the partner's interest is ranked higher ('4-5') for the time period of 3-5 years and lower ('3-4') for the longer time period of 5-10 years. Launching similar types of courses in other fields (e.g., design for interiors, lighting, product design etc.) has been assessed as having low likelihood/interest ('1-2') by project partners (both in 3-5 and 5-10 years time period). Scalability potential of FT courses both in terms of involving more HEIs/companies and expanding beyond the European level has been evaluated as moderate ('3-4') both for the time period of 3-5 years and 5-10 years. Innovation potential in terms of the overall ability of FT courses and its results (i.e., portfolio of prototypes) to contribute to disruptive innovations was assessed as high ('4-5'), while the actual usability of results (e.g., opportunity of results assimilation to influence/modify business practices or to be applied for commercialization) was assessed as moderate ('3-4') or high ('4-5') depending on the time horizon for generating long-term impacts - 3-5 years of 5-10 years respectively. Regarding the employment boosting potential, FT courses are highly likely to improve students' opportunity to find employment in the FT industry (ranked as '4-5'), as well as to improve industry capacity to source and recruit talents (which is ranked higher as '4-5' for a longer time period of 5-10 years, in comparison to ranking of '3-4' for 3-5 years).

For long-term impact evaluation of FT residencies, the results are overall of high ranking ('4-5'), except for a few criteria associated with certain evaluation dimensions ranked as '3-4'. In particular, with regards to transferability potential, delivering the same type of course in the same academic field/level, as well as launching similar type of courses at other academic/professional levels is considered highly likely (ranking of '4-5') both in 3-5 and 5-10 years, whereas launching similar types of courses in other fields (e.g., design for interiors, lighting, product design etc.) was ranked as '4-5' in 5-10 years and '3-4' in 3-5 years. Scalability potential of FT residencies is ranked high ('4-5') in terms of involving more HEIs and companies, whereas expanding beyond EU level is ranked as moderate ('3-4') both for 3-5 years and 5-10 years. With regards to innovation/exploitation boosting potential, there is high likelihood (4-5) that FT residencies can contribute to disruptive innovations in the industry and that FT residency results (i.e., portfolio of prototypes) can be assimilated to influence/modify business practices both in 3-5 years and in 5-10 years. At the same time, the usability of results (i.e., using the portfolio of prototypes for real-life industry application/commercialization) was ranked high ('4-5') for 5-10 years and moderate ('3-4') for 3-5 years. The employment boosting potential of FT residencies was ranked as high (4-5), both in terms of improving students' opportunities to find employment in the FT industry and improving the industry's capacity to source and recruit talents both in 3-5 years and in 5-10 years.

Based on results of impact assessment, several suggestions for improvements are discussed for enhancing short-term and long-term impacts of Future FT learning experiences and summarized in Figure 40 and Figure 41. Furthermore, priorities for action and recommendations for HEIs, companies and educational policymakers are proposed. These

recommendations (as summarized in Figure 42) aim to address three major types of challenges experienced by partners in the process of developing and implementing new FT learning experiences (courses and residencies); namely: (i) challenges related to commitment; (ii) challenges related to organizational complexity; and (iii) challenges related to balancing the tension between the required breadth and depth of interdisciplinary curriculum. Complementary effort is required from different actors to overcome these challenges; for instance, both HEIs and companies should commit to establishing project management support services and tools to handle the organizational complexity associated with such FT learning experiences, which requires more/long-term funding from educational policy makers. For detailed descriptions of these complementary recommendations for different types of actors see section 4.3.

# List of Figures

Figure 1 - Impact assessment framework for FT courses and FT residencies

Figure 2 - Evaluation process for FT courses delivered in WP2

Figure 3 - Evaluation process for FT residencies delivered in WP3

Figure 4 - Survey response rate for short-term impacts assessment of WP2

Figure 5 - Summary of short-term impacts assessment of WP2

Figure 6 - Quality and efficacy of new educational experience piloted in WP2

Figure 7 - Quality and relevance of graduate knowledge, skills and competences acquired by students after completing new educational experience piloted in WP2

Figure 8 - Quality and efficacy of partnership development process in developing and implementing new educational experience piloted in WP2

Figure 9 - Quality and relevance of portfolio of prototypes (students projects delivered as result of education experience piloted in WP2) for boosting creative encounters in FT companies

Figure 10 - Comparison of results of short-term impact assessment across three courses piloted in WP2

Figure 11 - Suggestions for short-term impacts improvements for FT courses

Figure 12 - Survey response rate for long-term impacts assessment of WP2

Figure 13 - Transferability potential of the courses piloted in WP2 (results from 1st round of survey)

Figure 14 - Transferability potential of the courses piloted in WP2 (results from 2nd round of survey)

Figure 15 - Scalability potential of the courses piloted in WP2 (results from 1st round of survey)

Figure 16 - Scalability potential of the courses piloted in WP2 (results from 2nd round of survey)

Figure 17 - Innovation/exploitation potential of the courses piloted in WP2 (results from 1st round of survey)

Figure 18 - Innovation/exploitation potential of the courses piloted in WP2 (results from 2nd round of survey)

**Figure 19 - Employment boosting potential of the courses piloted in WP2 (results from 1st round of survey)**

**Figure 20 - Employment boosting potential of the courses piloted in WP2 (results from 2nd round of survey)**

**Figure 21 - Suggestions for long-term impacts improvements for FT courses**

**Figure 22 - Survey response rate for short-term impacts assessment of WP3**

**Figure 23 - Summary of short-term impacts assessment of WP3**

**Figure 24 - Quality and efficacy of new educational experience piloted in WP3**

**Figure 25 - Quality and relevance of graduate knowledge, skills and competences acquired by students after completing new educational experience piloted in WP3**

**Figure 26 - Quality and efficacy of partnership development process in developing and implementing new educational experience piloted in WP3**

**Figure 27 - Quality and relevance of residency program results (based on portfolio of prototypes delivered in WP3) for boosting creative encounters in FT companies**

**Figure 28 - Summary of results of short-term impacts assessment for FT residencies delivered in WP3**

**Figure 29 - Suggestions for short-term impacts improvements for FT residencies**

**Figure 30 - Survey response rate for long-term impacts assessment of WP3**

**Figure 31 - Transferability potential of the residencies piloted in WP3 (results from 1st round of survey)**

**Figure 32 - Transferability potential of the residencies piloted in WP3 (results from 2nd round of survey)**

**Figure 33 - Scalability potential of the residencies piloted in WP3 (results from 1st round of survey)**

**Figure 34 - Scalability potential of the residencies piloted in WP3 (results from 2nd round of survey)**

**Figure 35 - Innovation/exploitation potential of the residencies piloted in WP3 (results from 1st round of survey)**

**Figure 36 - Innovation/exploitation potential of the residencies piloted in WP3 (results from 2nd round of survey)**

**Figure 37 - Employment boosting potential of the residencies piloted in WP3 (results from 1st round of survey)**



**Figure 38 - Employment boosting potential of the residencies piloted in WP3 (results from 2nd round of survey)**

**Figure 39 - Suggestions for long-term impacts improvements for FT residencies**

**Figure 40 - Summary of improvements for enhancing the short-term and long-term impacts of FT courses delivered in WP2 (priority for action are highlighted in bold)**

**Figure 41 - Summary of improvements for enhancing the short-term and long-term impacts of FT residencies delivered in WP3 (priority for action are highlighted in bold)**

**Figure 42 - Recommendations for future FT learning experiences**

## List of abbreviations

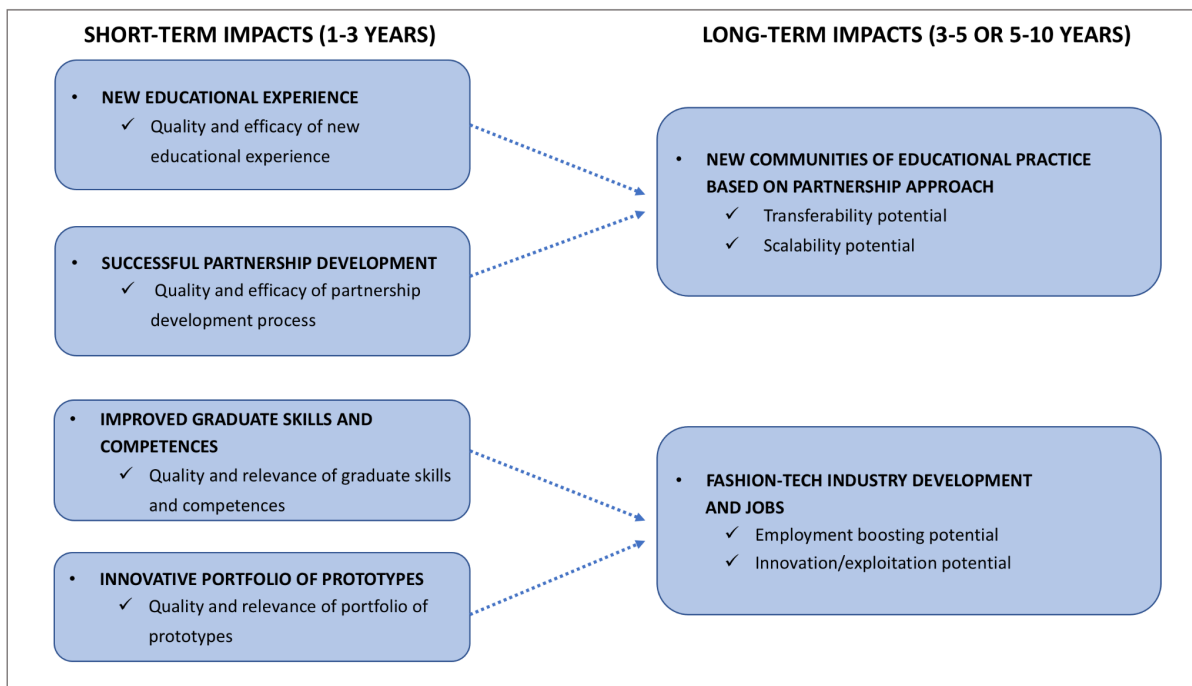
<b>HEIs</b>	Higher Education Institutions
<b>WP</b>	Work Package
<b>POLIMI</b>	The Polytechnic University of Milan
<b>HB</b>	University of Borås
<b>UAL</b>	University of the Arts London
<b>FT</b>	Fashion-Tech

# 1. Introduction: impact assessment framework

This chapter provides an overview of the evaluation framework for short-term and long-term impacts assessment of the new educational experiences developed and piloted during the FTalliance project. In particular, FT courses and FT residencies implemented in WP2 and WP3 respectively were evaluated based on this framework, with results of evaluation presented in chapter 2. For more information regarding each learning experience (e.g., FT courses and FT residencies), please visit respective WP deliverables available at <https://www.fashiontechalliance.eu>.

Figure 1 presents the evaluation framework for impact assessment, including key evaluation dimensions and the associated set of criteria, described in more detail below.

**Figure 1 - Impact assessment framework for FT courses and FT residencies**



Short-term impacts for WP2 and WP3 include:

- New educational experience, *i.e.*, improved learning experience, based on new knowledge co-creation and multidisciplinary exchange, that match FT industry needs (for students and HEIs);
- Successful partnership development, *i.e.*, effective and efficient process of knowledge exchange between HEIs and companies during the development and delivery of new educational experience (for HEIs and companies);
- Improved graduate knowledge, skills and competences relevant for future profession;
- Boosted creativity in FT companies based on an innovative portfolio of prototypes delivered in WP2 and WP3 (for companies).

Long-term impacts for WP2 and WP3 include:

- Establishing new communities of educational practices based on partnership approach (for teachers at HEIs and companies in FT sector);
- Supporting FT industry development and jobs (for companies and students).

Key evaluation dimensions for assessing short-term impacts include:

- Quality and efficacy of new educational experience based on knowledge co-creation and interdisciplinary exchange (*i.e.*, combining design, technology/engineering and management domains);
- Quality and efficacy of partnership development process between HEIs and FT oriented companies in developing and delivering new educational experience.
- Quality and relevance of graduate knowledge, skills and competences for future FT profession.
- Quality and relevance of portfolio of prototypes in WP2 and WP3 for boosting creative encounters/innovation in FT oriented companies.

Key evaluation dimensions for assessing the long-term impacts include:

- Transferability potential (*i.e.*, replication and reusability of the FT courses/FT residencies to other fields and academic level in the long-term);
- Scalability potential (*i.e.*, ability to scale communities of the FT courses/FT residencies by involving more partners and expanding it beyond the European level in the long-term)
- Innovation/exploitation potential (*i.e.*, practical applicability of the FT courses/FT residencies and its results to the industrial real-life context and ability to contribute to innovation in the long-term);
- Employment boosting potential (*i.e.*, ability of the FT courses/FT residencies to improve students' opportunity to find employment in the FT industry, as well as to improve industry's capacity to source and recruit talents in the long-term).

The process and method for impact evaluation of FT courses and FT residencies is summarized in Figure 2 and Figure 3 respectively, with more details presented in the remainder of this chapter.

For each evaluation dimension associated with assessment of short-term and long-term impacts, a set of criteria and associated indicators were established and used for reporting of the impact assessment results in this report. The primary method for data collection was surveys targeting students, HEIs and companies, where developed indicators were assessed using the Likert (1-5) scale. Indicator's ratings from surveys were aggregated across different stakeholder groups when applicable (e.g., HEIs, students and companies) to set the score for each criterion. Criteria grading was finally aggregated to set the cumulative score for each evaluation dimension. It should be noted that results/scoring for short-term impacts assessment depicts ranking by majority of respondents/stakeholders (over 50%). In case of significant discrepancy in scoring of indicators or criteria by the majority of stakeholders, the mean value was calculated for aggregation.

Figure 2 - Evaluation process for FT courses delivered in WP2

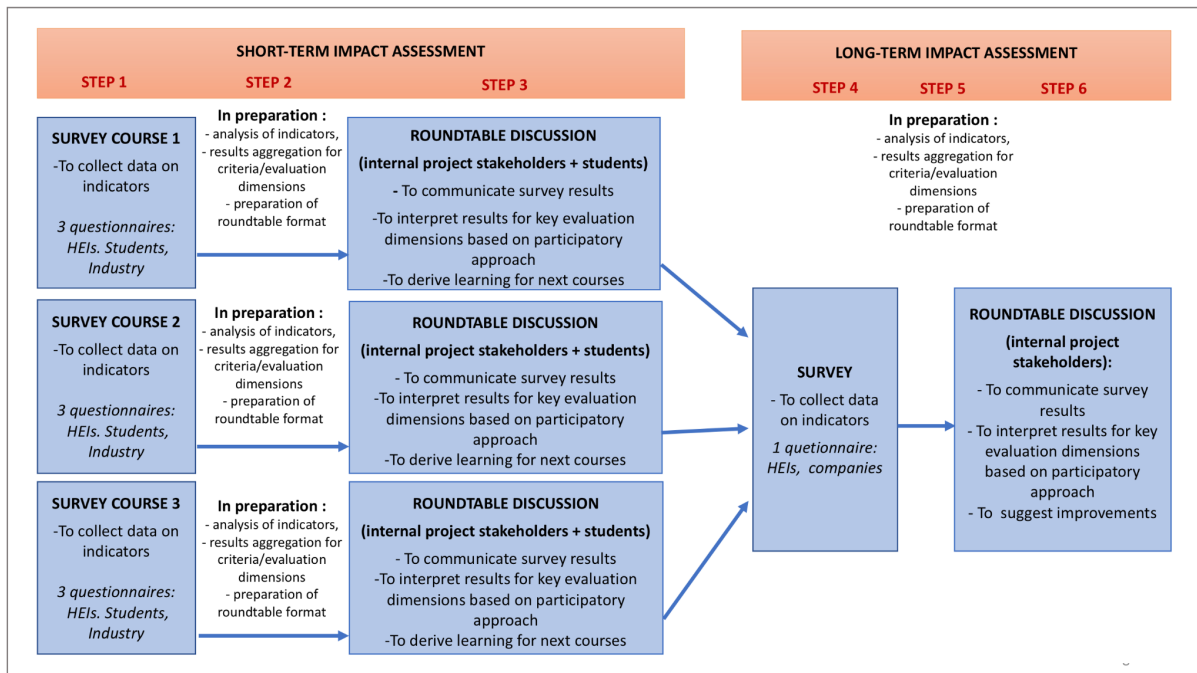
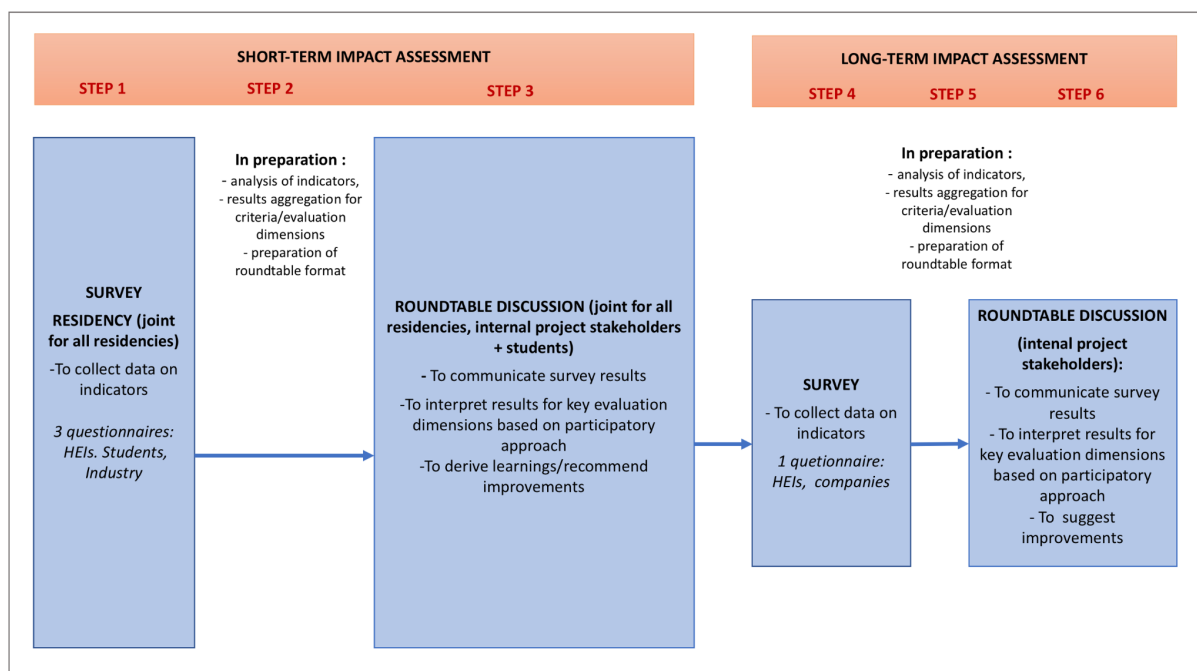


Figure 3 - Evaluation process for FT residencies delivered in WP3



The results of short-term and long-term impact assessment from surveys were also communicated to and discussed with project partners during interpretation workshops (in the format of roundtable discussions). The results of these workshops helped to identify the suggestions for improvement and priorities for action in order to enhance both short-term and long-term impacts of future FT courses and FT residencies.

In particular, for short-term impacts assessment of FT courses, three surveys targeted students, HEIs and companies separately after each FT course (three in total). Thus, 9 surveys were carried out in total for short-term impact assessment of FT courses. To discuss results of short-term impacts assessment from surveys and suggestions for improvements, three roundtables were organized in total (with one roundtable discussion per course).

With regards to short-term impacts assessment of FT residencies, surveys that separately targeted students, HEIs and companies across all FT residencies, instead of distinguishing between different residency programs. After completion of all FT residencies, one roundtable discussion was organized to discuss the results of short-term impacts assessment and suggestions for improvements.

With the purpose of forecasting long-term impacts of FT courses and FT residencies, two rounds of surveys (targeting HEIs and companies jointly) were organized based on the Delphi method. Delphi method implies sharing survey results after the first round of evaluation, while allowing project partners to adjust their responses in the next round. The purpose of using such a method was to reach consensus in forecasting long-term impacts. Afterwards, results of long-term assessment of FT courses and FT residencies were communicated and discussed with project partners at the respective roundtables (including suggestions for improvements). In total, two roundtables were organized for long-term impacts assessment (one roundtable for all FT courses and another one for all FT residencies).

## 2. Results of evaluation of WP2

This chapter presents and discusses the results of the short-term and long-term impacts evaluation of the learning experiences delivered in WP2 (three FT courses) including suggestions for improvements for development and implementation of future FT courses.

### 2.1 Short-term impacts evaluation

Data for short-term impact assessment were collected via 9 surveys (3 surveys per each course piloted in WP2, with each survey targeting different project stakeholders' groups: students, HEIs and companies. Information on survey response rates for short-term impacts assessment is presented in Figure 4.

Figure 4 - Survey response rate for short-term impacts assessment of WP2

	Students	HEIs	Companies
POLIMI-led course	82, 6% <i>(38 out of 46 students)</i>	100% <i>(teaching staff from all 5 HEIs participated in survey, 10 respondents in total)</i>	100% <i>(three companies involved in the course participated in survey, 3 respondents in total)</i>
HB-led course	80 % <i>(16 out of 20 students)</i>	100% <i>(teaching staff from all 5 HEIs participated in survey, 8 respondents in total)</i>	100% <i>(two companies involved in the course participated in survey, plus two project partners that attended final presentations, 4 respondents in total)</i>
UAL-led course	41 % <i>(12 out of 29 students)</i>	60% <i>(teaching staff from 3 out of 5 HEIs participated, 5 respondents in total)</i>	0 <sup>1</sup> %

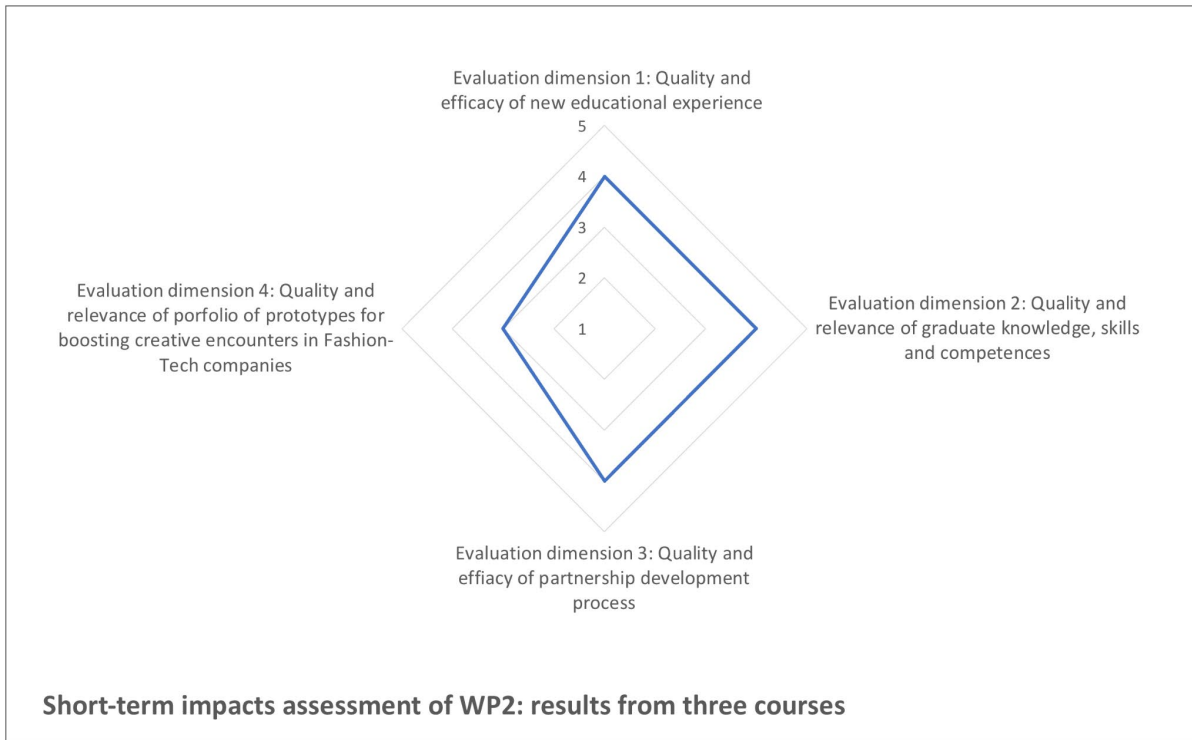
The summary of short-term impacts assessment of courses piloted in WP2 is summarized in Figures 5 - 9, whereas Figure 10 provides a comparison of findings between three implemented courses (at the level of key evaluation dimensions and associated criteria). It should be noted that results in Figures 5 - 10 depict ranking based on the Likert scale from 1 to 5 by majority of stakeholders (HEIs, companies, students), where 1 corresponds to the lowest level of assessment (e.g., not good/well/not satisfied at all) and 5 corresponds to the highest level of assessment (extremely good/well/extremely satisfied). More detailed results with regards to indicator grading associated with each set of criteria can be found in Appendix (see Appendix A).

Overall, all courses delivered in WP2 performed well with regards to the impact evaluation. All evaluation dimensions are ranked as '4', except for the quality and relevance of the portfolio

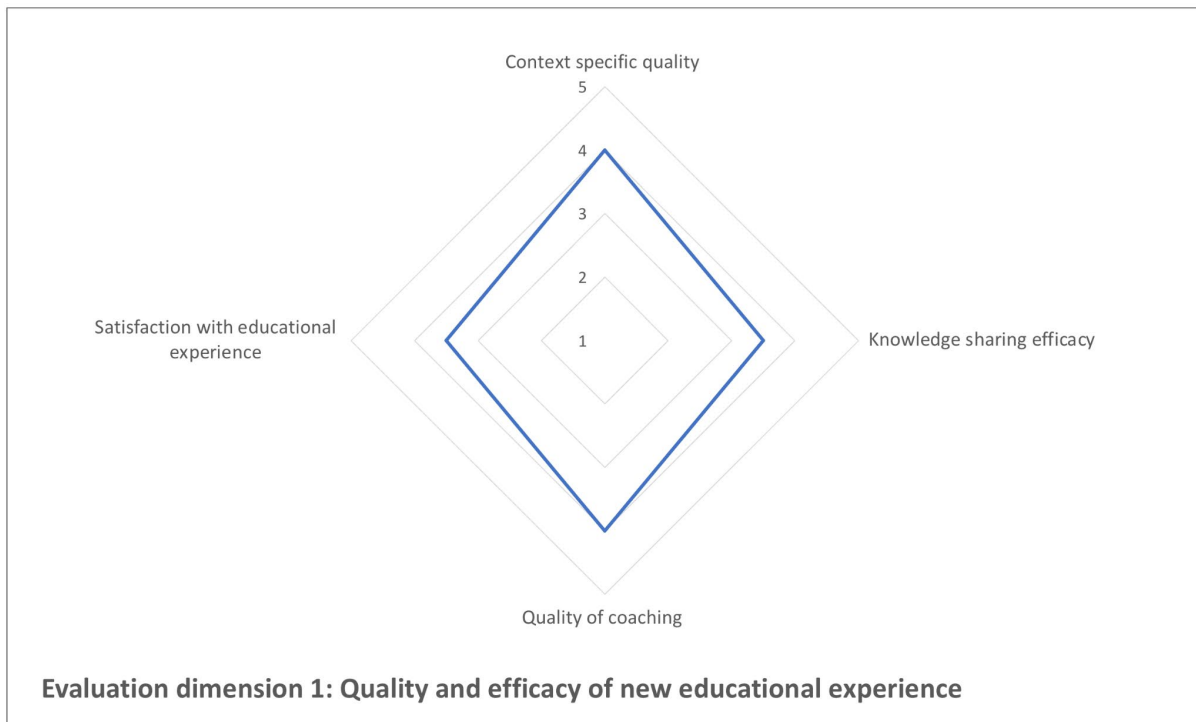
<sup>1</sup> Although UAL involved two companies in their course, impact evaluation survey targeted only internal project partners. The company internal to the project didn't have opportunity to participate in short-term impacts evaluation by answering the survey due to maternity leave of corporate representative. However, the overall reflections with regards to short-term impacts were collected from the company during the roundtable discussion.

of prototypes for boosting creative encounters in FT oriented companies with overall ranking as '3' (Figure 10).

**Figure 5 - Summary of short-term impacts assessment of WP2**

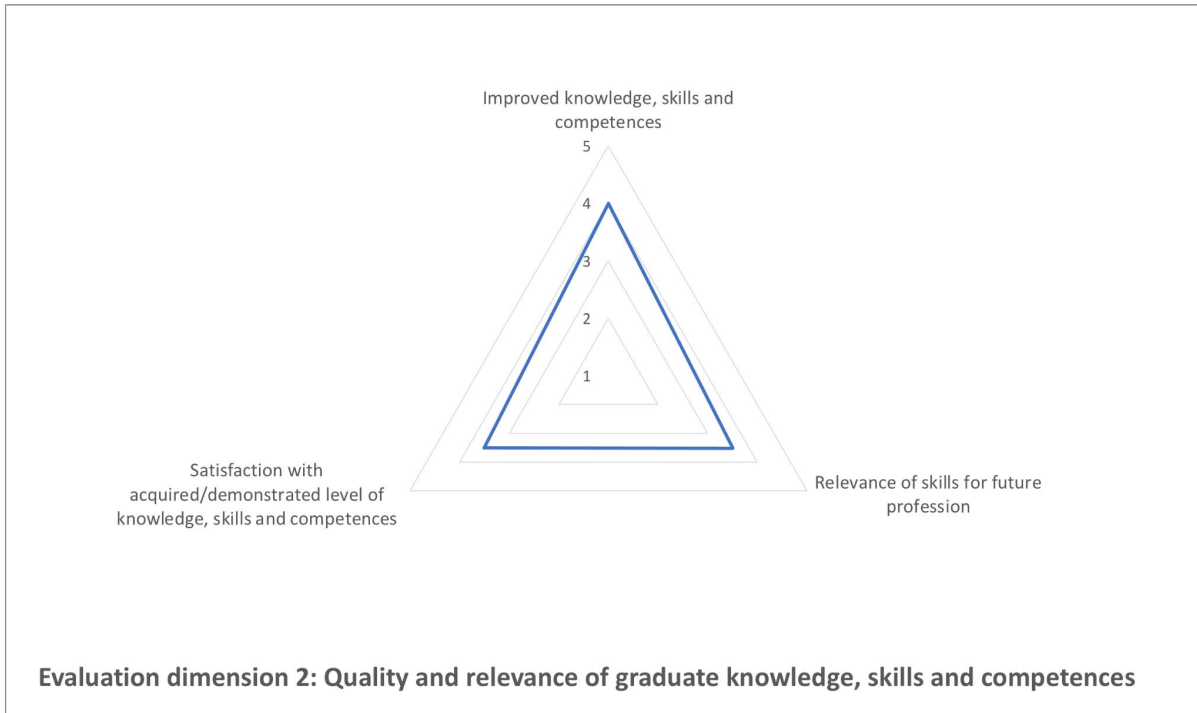


**Figure 6 - Quality and efficacy of new educational experience piloted in WP 2**





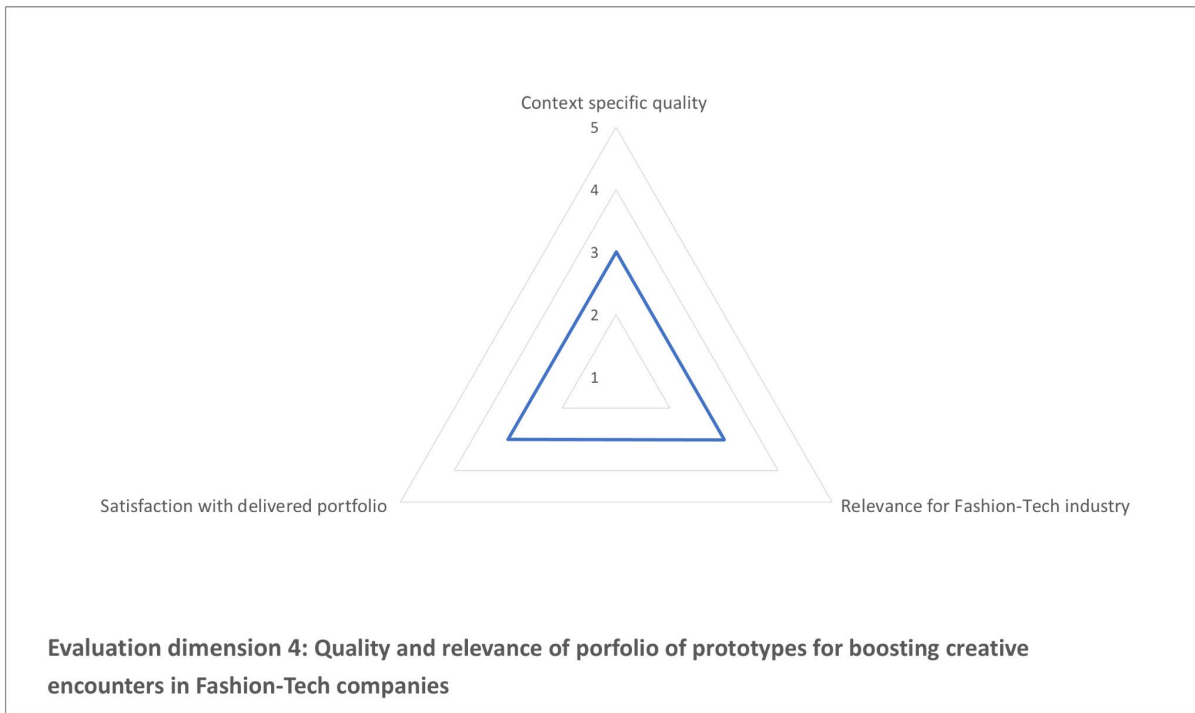
**Figure 7 - Quality and relevance of graduate knowledge, skills and competences acquired by students after completing new educational experience piloted in WP 2**



**Figure 8 - Quality and efficacy of partnership development process in developing and implementing new educational experience piloted in WP2**



**Figure 9 - Quality and relevance of portfolio of prototypes (students projects delivered as result of education experience piloted in WP2) for boosting creative encounters in FT companies**



**Figure 10 - Comparison of results of short-term impact assessment across three courses piloted in WP2**

<p><b>Quality and efficacy of new educational experience (4, 4, 4)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 4, 4, 4</li> <li>• Knowledge sharing efficacy – 4, 3-4, 3-4</li> <li>• Quality of coaching – 4, 4, 4</li> <li>• Satisfaction with educational experience – 4, 3-4, 3-4</li> </ul>	<p><b>Quality and efficacy of partnership development process (4, 4, 4)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 4, 4, 4</li> <li>• Knowledge sharing efficacy - 4, 4, 3</li> <li>• Satisfaction with partnership development process – 4, 4, 4</li> </ul>
<p><b>Quality and relevance of graduate knowledge, skills and competences (4, 4, 3-4)</b></p> <ul style="list-style-type: none"> <li>• Improved knowledge, skills and competences– 4, 4, 4</li> <li>• Relevance of skills for future profession – 4, 3-4, 3-4</li> <li>• Satisfaction with acquired/demonstrated level of knowledge, skills and competences – 3-4, 4, 3-4</li> </ul> <p> <span style="color: red;">■</span> POLIMI led course  <span style="color: blue;">■</span> HB led course  <span style="color: magenta;">■</span> UAL led course         </p>	<p><b>Quality and relevance of portfolio of prototypes for boosting creative encounters in Fashion-Tech companies (3, 3, N/A)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 3, 3, N/A</li> <li>• Relevance for Fashion-Tech industry – 3, 3, N/A</li> <li>• Satisfaction with delivered portfolio – 3, 3-4, N/A</li> </ul>

In Figure 11 suggestions for short-term impacts' improvements for FT courses are summarized (based on three roundtable discussions of results of short-term impacts

assessment with project stakeholders). Key/major suggestions (as expressed by HEIs and companies at the end of roundtable discussions) are highlighted in bold in Figure 11. More detailed discussion of suggested improvements is presented below.

**Figure 11 - Suggestions for short-term impacts improvements for FT courses**

<b>Suggestions for improvements</b>	
<p><i>Quality and efficacy of new educational experiences</i></p> <ul style="list-style-type: none"> <li>Improving theoretical pillars/modules</li> <li><b>Better/more focused practice oriented project brief</b></li> <li>Better HEI's contribution/integration</li> <li><b>Improving interdisciplinary knowledge sharing/exchange</b></li> </ul>	<p><i>Quality and relevance of graduate knowledge, skills and competence</i></p> <ul style="list-style-type: none"> <li>Better knowledge/skills acquisition on how to integrate fashion and tech domains to design innovative and sustainable products, services and business models</li> <li><b>Better alignment of skills and competences with future career prospects in FT field</b></li> </ul>
<p><i>Quality and efficacy of partnership development processes</i></p> <ul style="list-style-type: none"> <li>Better commitment/more perceived responsibility on behalf of partners via better planning and resource allocation</li> <li><b>Better knowledge sharing via improved collaborative course planning</b></li> <li>Providing course structure with shared theory/methodology and customization opportunities to adapt courses to different structures/timings of each HEI</li> <li>Experimenting within more flexible educational formats (elective instead of mandatory courses) to avoid constraints to collaborative learning experience</li> <li><b>Improving company's involvement</b></li> </ul>	<p><i>Quality and relevance of results for boosting creative encounters in FT companies</i></p> <ul style="list-style-type: none"> <li>Better connection to the physical realm of companies (i.e., better fit with real companies needs/challenges/agenda, inclusion of user testings and competitors analysis).</li> <li>More specific/in-depth presentation of multidisciplinary aspects of innovative FT solutions (i.e., portfolio of prototypes) to enhance its applicability/usability within companies</li> </ul>

- Suggested improvements to enhance the quality and efficiency of new educational experience

- **Improving theoretical pillars/modules (better timing, extended contents, more focus on interdisciplinary knowledge sharing/exchange, personalized study paths)**

It was suggested to allocate more time (3 to 4 weeks instead of 2 weeks as originally implemented in the first course led by POLIMI) for completion of theoretical modules. This change has been implemented in two consequent courses led by HB and UAL. This has positively affected on-time completion of the theoretical part by students (i.e., before the start of the challenge-based part of the course) and overall satisfaction with acquired knowledge and skills based on students' feedback.

With regards to extension of theoretical modules, it was suggested to include more contents on textile/fashion technology (including AR/VT, sensors, software programming), more real-life examples of sustainable FT business models, digital

communication to better pitch project idea (e.g., animation, video-making tools), as well as more lessons on 3D modeling, user testing/validation.

Among other suggested improvements are providing learning opportunities to apply theories and associated tools/templates already in the theoretical module, to make students better prepared for completion of tasks in the challenge-based part of the course.

More collaboration among students' peers to facilitate interdisciplinary knowledge sharing was suggested already in the theoretical part of the course. Along with the aforementioned need to better practice the application of different theories and tools to be employed in the challenge-based part of the course, the suggestion to include the synchronous learning experience already in the theoretical part of the course (which so far has been designed only as asynchronous) was discussed. Among the possible formats for such synchronous learning activity are 'flipped' classroom exercises after completion of each theoretical pillar where students work in interdisciplinary groups under guidance of tutors to analyze the real-life FT cases pertaining to design, technology and business management, while applying introduced theories and tools.

To address the issues of knowledge heterogeneity among students and their desire to learn new skills outside the scope of their specialization/beyond educational program in which students are enrolled, it was suggested to develop personalized study/learning paths. In this regard, different theoretical pillars can be made mandatory/optional for different groups of students, depending on knowledge, skills and future career paths to be pursued. To realize such changes would require mapping students current and future desired professional skills to assess and address the competence gap by designing personalized study paths. Future professional skills and differentiated learning in the theoretical part could be also developed by better building on future FT job roles and associated skills sets developed in WP 1.

- **Better/more focused practice-oriented project brief**

The recurring feedback in surveys and roundtable discussions regarding areas of required improvements across all three courses was better and more focused project briefs for the challenge-based part of the course that are better aligned with the real-life problems/challenges experienced by the companies. This in turn will make group projects more connected to the real-life experience of working in the professional context, and thus better prepare students for the future professional occupation. With regards to the HB-led course specifically, it was suggested to provide more precise categories of sustainability challenges to guide students to deliver more tangible and concrete sustainability-oriented FT solutions. In particular, more detailed product, service and process design solutions were expected in the students' projects in addition to the well-developed business management perspective. Better integration of technology-oriented perspectives in the project briefs is required in both POLIMI- and HB-led courses, whereas the business management perspective should be better accounted for in the UAL-led course.

#### - **Better HEI's contribution/integration**

Better contribution/integration is required of institutions in delivering all three courses in terms of the academic tutors' contribution to the theoretical- and challenge-based parts of the course. This would allow development of a more focused project brief where all three FT complementary perspectives (i.e., design, technology and business management) are sufficiently covered, with more detailed specifications of what is expected from the students' group projects. In POLIMI- and HB-led courses the business management and design perspectives were more dominant in comparison to the technology aspects, whereas in the UAL-led course the business management perspective was least developed. In order to better integrate different institutions' contribution to the course in order to realize the true promise of multidisciplinary educational experience, a number of improvements should be implemented with regards to the quality and efficacy of the partnership development process (see dedicated section below).

#### - **Improving interdisciplinary knowledge sharing/exchange**

In addition to facilitating interdisciplinary knowledge sharing/exchange among students already shared in the theoretical part of the course (as mentioned earlier), there is a need to improve interdisciplinary collaboration in the challenge-based part of the course. This includes *improving dialogue and interaction between students and tutors from the companies*, with companies being more proactively involved in different project review stages (tutoring) and offering inspiration sessions for students where insights into specific companies' projects, related challenges and opportunities are discussed. Such inspiration sessions were organized within the HB-led course, although these should be better aligned with the actual project brief that students were working on. With regards to review sessions/tutoring from both academic and corporate partners, it was also suggested to organize less, yet longer and more-in-depth, sessions with more interaction/feedback from academic and company tutors.

Crucial improvements for facilitating interdisciplinary knowledge exchange among students' peers are *better composition of project groups to ensure inclusion of students with design, technology and business management backgrounds across all the teams*. However, ensuring multidisciplinary group composition was often a challenge as academic partners did not manage to enroll the same number of students. Uneven student enrollment was caused by the fact that different HEIs organize their courses under different formats (mandatory vs. voluntary), and difference in official academic calendars between different HEIs. Moreover, courses were organized differently by participating academic partners in terms of number of credits offered, and thus level of examination requirements for passing the course. This affected individual student's commitment and motivation to work within the groups, with those being less motivated not contributing proportionally to the inter-/multidisciplinary team work. Thus, in order to improve interdisciplinary knowledge sharing, there is a need *to better align course calendars, provide courses within the same format and harmonize examination requirements across all HEIs*. Such organizational changes will enable enrollment of a compatible number of well-motivated students with diverse disciplinary backgrounds

from different HEIs, which will allow multidisciplinary team formations and positively affect peer-to-peer learning.

Finally, as one of the approaches to facilitate interdisciplinary knowledge exchange via smoother communication between teammates, some students raised the need to better ensure the English level competence of students admitted to the course. Moreover, better inclusion of peers' feedback on each other's projects was suggested by both students and academic partners.

- Suggested improvements to enhance the quality and relevance of graduate knowledge, skills and competence

- **Better knowledge/skills acquisition on how to integrate fashion and tech domains to design innovative and sustainable products, services and business models**

Based on feedback from surveys and roundtable discussions, this improvement is associated with improvements suggested with regards to enhancing quality and efficacy of new educational experience, such as *improving interdisciplinary knowledge sharing/exchange* (in particular via more companies' participation in tutoring/coaching sessions during the challenge-based part of the course and in final students presentations), *as well as better/more focused practice oriented project brief* aligned with real-life problems and challenges experienced by the companies. Inclusion of additional sessions in the challenge-based part of the course to discuss the level of interdisciplinary approach and team collaboration during project work will further raise students' awareness and understanding on how different perspectives are integrated to design FT products, services and associated business models.

Ensuring and providing evidence of interdisciplinary exchange in the challenge-based part of the course and review sessions is also required, including discussion with students about the level of interdisciplinary approach and team collaboration during project work.

As mentioned earlier, *better HEI's contribution/integration* both in development and implementation of the courses will also contribute to better multi-/interdisciplinary skills acquisition among students as different HEIs have more in-depth competence in different complementary fields (e.g., design, technology, and business management), and thus can provide more in-depth guidance and tutoring for students. Improving the multidisciplinary group formation (also suggested earlier as part of *improving interdisciplinary knowledge sharing/exchange*) will also positively contribute to better knowledge and skills acquisition among students on how to integrate the design, tech and management domains for delivering innovative and sustainable FT solutions (i.e., system of products, services and associated business models).

In addition, to enhance the quality and relevance of acquired/demonstrated knowledge, skills and competences, more critical reflections on sustainability implications of developed FT solutions are required. As reflected by project stakeholders and especially companies, it is important for students to take less technocratic approach (i.e., 'weak' sustainability approach where technology is expected to solve sustainability problems), and instead consider the 'philosophy of

technology' where technology is related to complex societal structures, behavior and norms which might put constraints on positive sustainability changes after technology adoption. For example, students should develop more critical abilities to reflect on how digital technologies influence users' experiences and behavior in the long-term, as well as what ethical/moral dilemmas the technology poses in the decision-making process about design of products, services, processes and business models.

- **Better alignment of skills and competences with future career prospects in FT field**

Although courses were developed following validated education for FT curriculum, more careful consideration of future FT job profiles and skills suggested in WP 1 should be considered in developing and implementing future courses. This would create better awareness and understanding among students of future career paths and enhance their employability potential. Among proposed suggestions is to include additional discussion sessions at the end of the courses (that can be run with help of career development services, if available, at respective HEIs) to help students reflect on the relevance of acquired knowledge, skills and competences for future professions and map possible employment opportunities.

Another suggestion to create a better link to future job roles and skills is to provide a list of possible job roles and relevant professional skills (traditional and new) that courses aim to develop. In particular, deliverable of WP 1 (which identified FT job profiles) can be included and discussed already in the theoretical part of the course clarifying to students what skill sets are tackled in the course (especially in the challenge-based part), and how these can be applied within the professional context and job roles in the FT sector.

Specifically, with regards to entrepreneurial skills and competence development, the need to include more tutoring and feedback sessions on how to prepare and deliver the project pitches was highlighted. This recommendation is in line with earlier mentioned suggestion - to include theoretical content on project pitching, to improve the quality and efficiency of new educational experience.

Moreover, some students provided feedback on the need to set more clear expectations with regards to depth and breadth of the project required to deliver more concrete and industry relevant FT solutions covering design, technology and business management perspectives, which in turn will result in acquisition of more concrete skills and competences relevant for future professions. Achieving better clarity and relevance in project brief formulation could be enabled by implementing suggested improvements regarding quality and efficacy of the partnership development process discussed below (in particular by better knowledge sharing via improved collaborative course planning and improving company involvement).

- *Suggested improvements regarding the quality and efficacy of partnership development process*

- **Better commitment/more perceived responsibility on behalf of partners via better planning and resource allocation**

Better commitment/more perceived responsibility on behalf of project partners has been highlighted as important to better enable the collaborative way of working and to strengthen the academia-industry partnership for delivering high quality courses. To improve the commitment of project partners, a number of suggestions related to better planning and resource allocation were put forward during the roundtable discussions, such as: more clear definition of learning outcomes expected from the courses (including better alignment of these with future career prospects for students); better alignment of expectations regarding each partners' contribution at the very beginning of course planning (including clear allocation of tasks, responsibilities and associated project resources/budgets for its accomplishment); better transparency in terms of each partners contribution during course development and implementation. Implementing these measures would require more time during the course planning/development phase, but will further stimulate *better HEI's contribution/integration*, as required for improving the quality and efficacy of new educational experience.

- **Better knowledge sharing via improved collaborative course planning**

Better knowledge sharing via improved collaborative course planning (e.g., more meetings and better interaction between academic and corporate partners earlier on in the process of course development) has been highlighted as important to jointly understand and formulate the course expectations with regards to different disciplinary backgrounds, to formulate the learning outcomes for students from different HEIs, and to set more precise guidelines and expectations regarding the project brief, challenge-related activities, and students' project outcomes.

- **Providing course structure with shared theory/methodology and customization opportunities to adapt courses to different structures/timings of each HEI**

Among the challenges to ensuring each partners' participation and contribution to developing and implementing new courses are different academic calendars and structure of existing educational curriculum/mandatory courses in respective HEIs. In order to ensure more HEI's engagement in successfully running the collaborative courses, the need for providing course structures with shared theory/methodology which allow for customization opportunities to existing educational curriculum and courses was discussed in both the surveys and roundtables. Implementing this suggestion will also enable the creation of differentiated/personalized study paths enabling student learning and skills acquisition within fields perceived as desired/relevant.

- **Experimenting within more flexible educational formats (elective instead of mandatory courses) to avoid constraints to collaborative learning experience**

Creating customization templates under shared course theory/methodology might still not fully address the challenge of organizing collaborative student learning



experiences in the challenge-based part of the course which is important for facilitating interdisciplinary knowledge sharing/exchange (which in turn further enables high quality and efficacy of new educational experience). Different academic calendars and examination periods between participating HEIs might still make the same scheduling of the challenge-based part of the course rather problematic for mandatory courses. Thus, it was also suggested to try and implement courses within more flexible educational formats, such as elective/extracurricular courses, to avoid constraints on tutor and student participation from different HEIs.

Nevertheless, running courses in the format of 'electives' poses a challenge of enrolling enough students to create multidisciplinary teams so as to facilitate peer-to-peer learning and interdisciplinary skills acquisition during project work (i.e., knowledge, skills and competences on how to combine fashion and tech domains to deliver innovative and sustainable products, service and business models). Also, additional resources are required to organize elective courses at HEIs and motivate academic tutors' engagement with additional elective courses beyond their direct scope of teaching responsibilities within official curricular courses.

#### - **Improving company's involvement**

According to project partners and students' feedback in both the surveys and roundtables, improving company involvement pertains to *more active commitment of companies during mentoring sessions* in the challenge-based part of the course (so as to provide more detailed feedback on market relevance and feasibility of students' projects). This improvement can be achieved by implementing better knowledge sharing via an improved collaborative course planning, as suggested earlier. For example, a company's involvement in the review sessions in the challenge-based part of the course should be better specified during the course preparations (including clear allocation of company's tasks, responsibilities and associated project resources for its accomplishment).

To make companies more motivated and committed to student tutoring in the challenge-based part of the course, it has been also suggested to *improve companies' involvement in framing project briefs*. This would contribute to better defining and aligning expectations and requirements with regards to project outcomes/portfolio of prototypes to be delivered by students, and thus define a more specific set of expectations on the level of student skills and knowledge development.

Project partners discussed the possibility to *organize the roundtable discussion/workshop with HEIs and companies to define interesting areas for the students' project* early in the process of planning the courses. This can stimulate better commitment/more perceived responsibility on behalf of partners regarding course development and implementation (including tutors' participation in students review sessions), as well as lead to better framing the project briefs in connection to professional reality (i.e., real-life company's needs and challenges).

Some feedback during the roundtable discussion includes the suggestion to initially define the project briefs jointly with companies (via roundtable discussion/workshop),

and after that deciding on the content of theoretical pillars to provide students with relevant knowledge and competences for the challenge-based part of the course. Organization of the course planning with improved company's involvement will enhance the overall quality and efficacy of new educational experience and would enhance the relevance of skills and competence development by students for future profession and employability.

- *Suggested improvements to enhance the quality and relevance of the developed portfolio of prototypes so as to increase its ability to mobilize the knowledge and boost creative encounters in the FT industry*
- **Better connection to the physical realm of the companies (i.e., better fit with real companies needs/challenges/agenda, inclusion of user testings and competitor's analysis)**

Based on the survey feedback and roundtable discussions, a number of improvements with regards to the quality and relevance of the portfolio of prototypes (i.e., delivered student projects) are suggested. Among these is *better connection of delivered students projects to the physical realm of the companies*. For this, a better fit of the project brief with the real-life company agendas/needs/challenges is required. Moreover, it was suggested to better incorporate the user/customer experience testing and market competitor's analysis in the challenge-based part of the course, to develop prototypes relevant for the real-life professional realm of companies. Another discussed improvement to better connect the delivered portfolio of prototypes to the physical realm of companies is to accompany students' final project presentations with a reflective part where implications, limitations and future application potential of the developed portfolio of prototypes is discussed jointly by students, companies and HEIs.

- **More specific/in-depth presentation of multidisciplinary aspects of innovative FT solutions to enhance its applicability/usability within companies**

Better/more in-depth coverage of various multidisciplinary domains, i.e., design, business and engineering/technology is required, with the latter at times being overlooked (particularly in POLIMI- and HB-led courses) due to limited enrollment of students with the respective engineering background. With regards to the HB-led course, more focus on design aspects of innovative products and service offerings was desired based on feedback from HEI's and company's representatives. Overall, to enhance the applicability/usability of the delivered portfolio of prototypes, there is a need to better elaborate on innovative aspects of products and services offerings, details of technology integration, process and business model improvements.

According to corporate project partners, the relevance of the delivered portfolio of prototypes is related to: 1) improved knowledge and awareness of FT business opportunities (as reported by 33% of companies and 75% of companies in the POLIMI- and HB-led courses respectively); 2) improved knowledge mobilization within companies as produced results can be assimilated to influence and modify existing

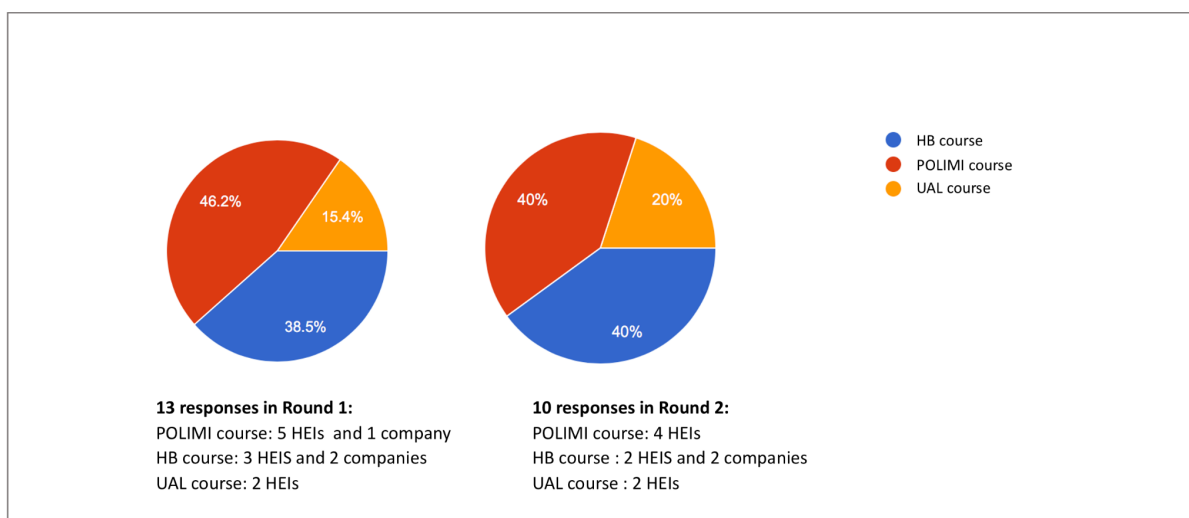
business practices (as reported by 33% of companies in the POLIMI-led course); 3) usability of certain results ready for application in business practices in the future (as reported by 33% of companies in POLIMI-led course).

Clearly, there is a need to develop a more tangible, and more detailed portfolio of prototypes that focus on specific/clearly defined business needs and challenges in order to enhance the relevance in terms of potential application/usability in the FT oriented companies. To achieve such improvements, there is a need for *improved company involvement* in framing project briefs and in providing student feedback during project review sessions. This will help ensure that the challenge-based part of the course is better fit for the real-life business context and that clear expectations are set with regards to students' project components that are of relevance to company's operations and business strategies.

## 2.2 Long-term impacts evaluation

Data for long-term impact assessment were collected via two rounds of a survey based on the Delphi method, each round jointly targeting respondents from HEIs and companies. Information on survey response rate including respondents' roles (HEIs or companies) and participation in delivered courses is presented in Figure 12.

Figure 12 - Survey response rate for long-term impacts assessment of WP2



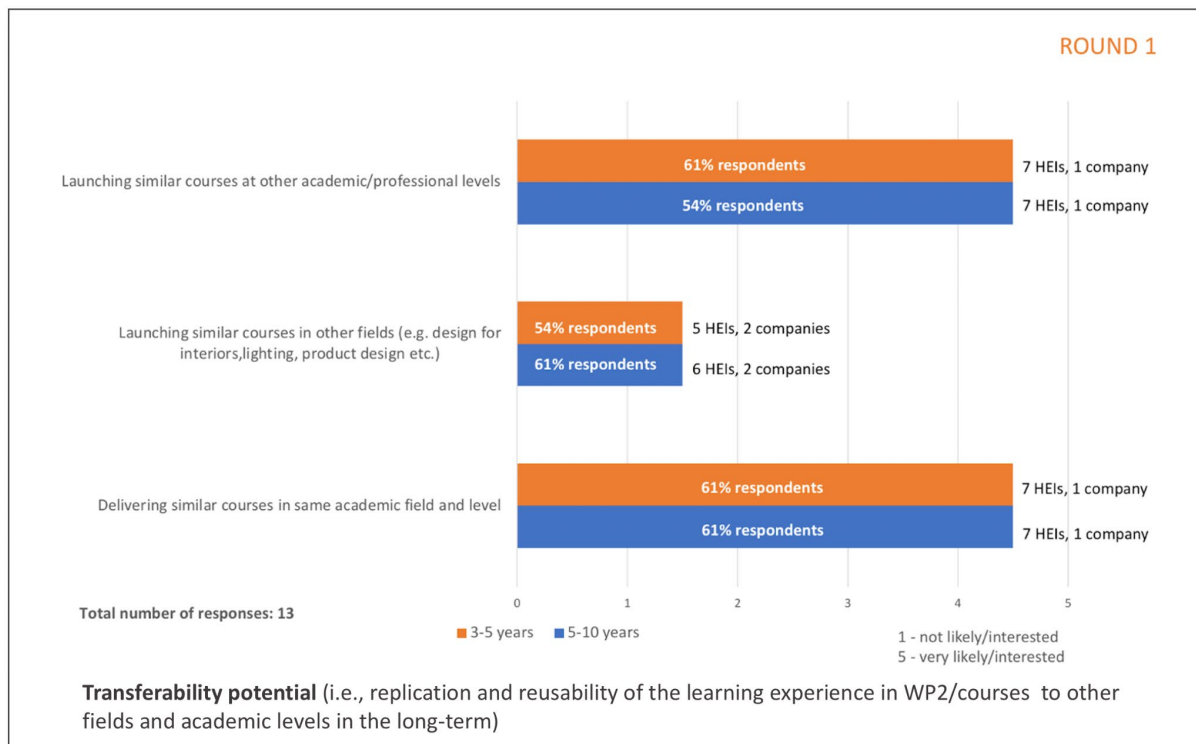
The results of assessments of the transferability potential (*i.e.*, replication and reusability of the FT courses to other fields and academic level in the long-term) in round 1 and round 2 are presented in Figure 13 and Figure 14 respectively.

After the 2nd round, the following inference can be made with regards to the transferability potential of FT courses:

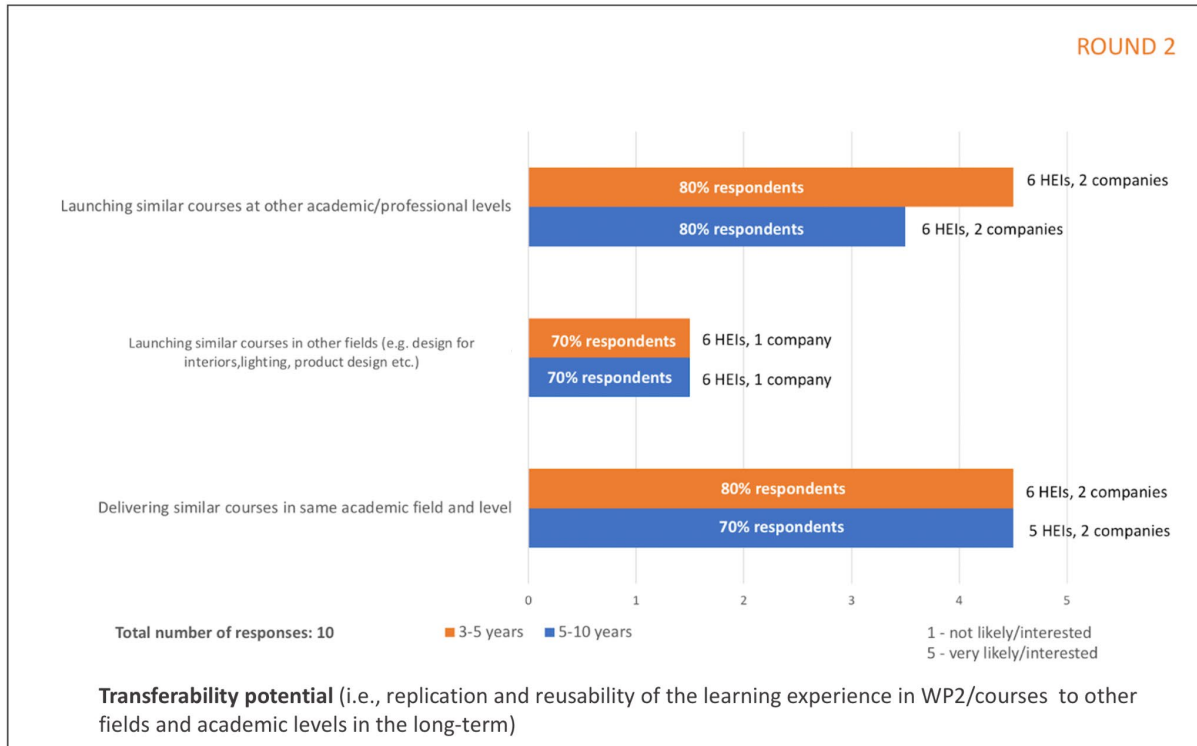
- High likelihood/interest (4-5) in delivering the same type of courses in the same academic field/level (both in 3-5 and in 5-10 years, as rated by 80% and 70% of respondents respectively in round 2);

- Low likelihood/interest (1-2) in launching similar type of courses in other fields (both in 3-5 and in 5-10 years, as rated by 70% of respondents in round 2);
- High likelihood/interest (4-5) in launching similar type of courses at other academic/professional levels in 3-5 years (as rated by 80% of respondents in round 2);
- Moderate likelihood/interest (3-4) in launching similar types of courses at other academic/professional levels in 5-10 years (as rated by 80% of respondents in round 2).

**Figure 13 - Transferability potential of the courses piloted in WP2 (results from 1st round of survey)**



**Figure 14 - Transferability potential of the courses piloted in WP2 (results from 2nd round of survey)**

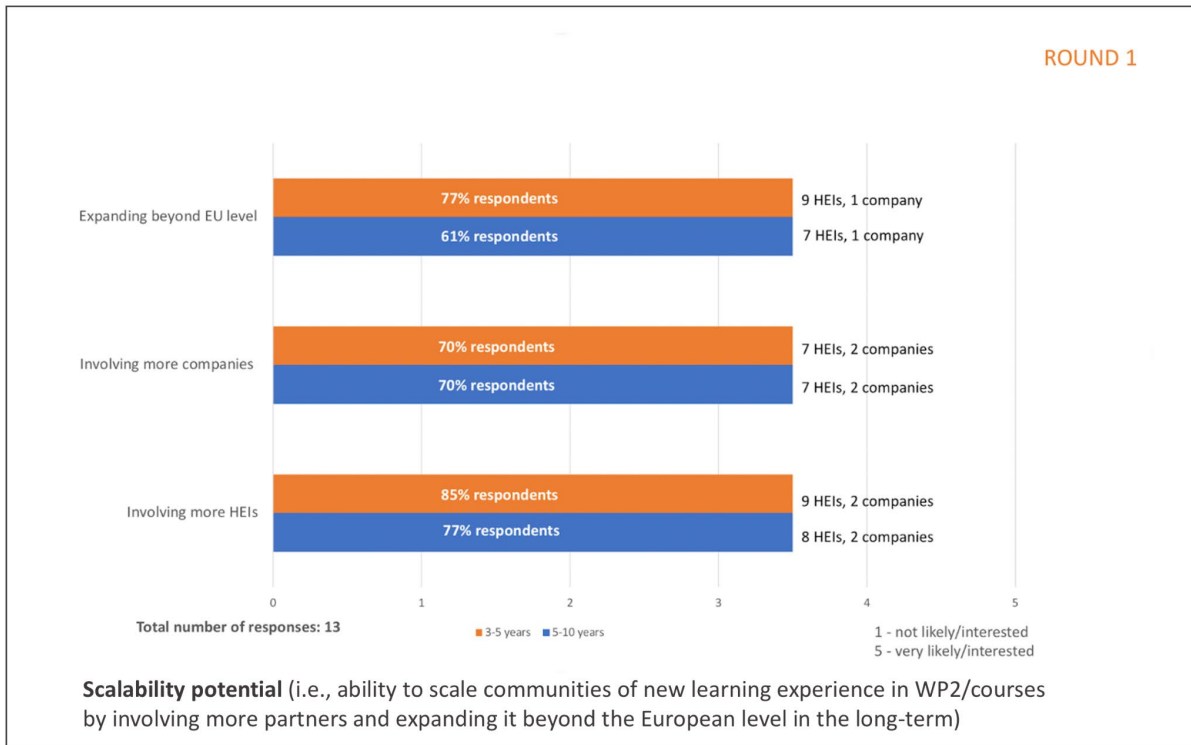


The results of assessments of the scalability potential (*i.e.*, ability to scale communities of the FT courses by involving more partners and expanding it beyond the European level in the long-term) in round 1 and round 2 are presented in Figure 15 and Figure 16 respectively.

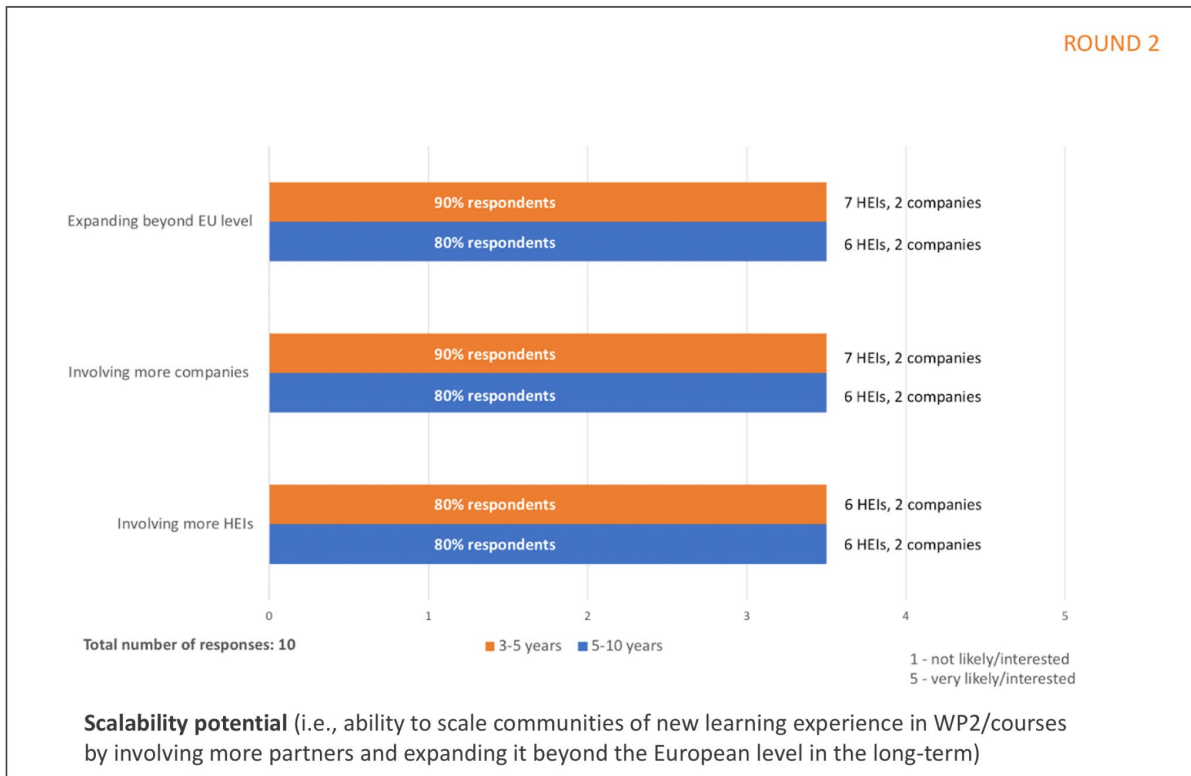
After the 2nd round, the following inference can be made with regards to the scalability potential of FT course:

- Moderate likelihood/interest (3-4) to involve more HEI (both in 3-5 and in 5-10 years, as rated by 80% of respondents in round 2);
- Moderate likelihood/interest (3-4) to involve more companies (both in 3-5 and in 5-10 years, as rated by 90% and 80% respectively in round 2);
- Moderate likelihood/interest (3-4) to expand beyond EU level (both in 3-5 and in 5-10 years, as rated by 90% and 80% respectively in round 2).

**Figure 15 - Scalability potential of the courses piloted in WP2 (results from 1st round of survey)**



**Figure 16 - Scalability potential of the courses piloted in WP2 (results from 2nd round of survey)**

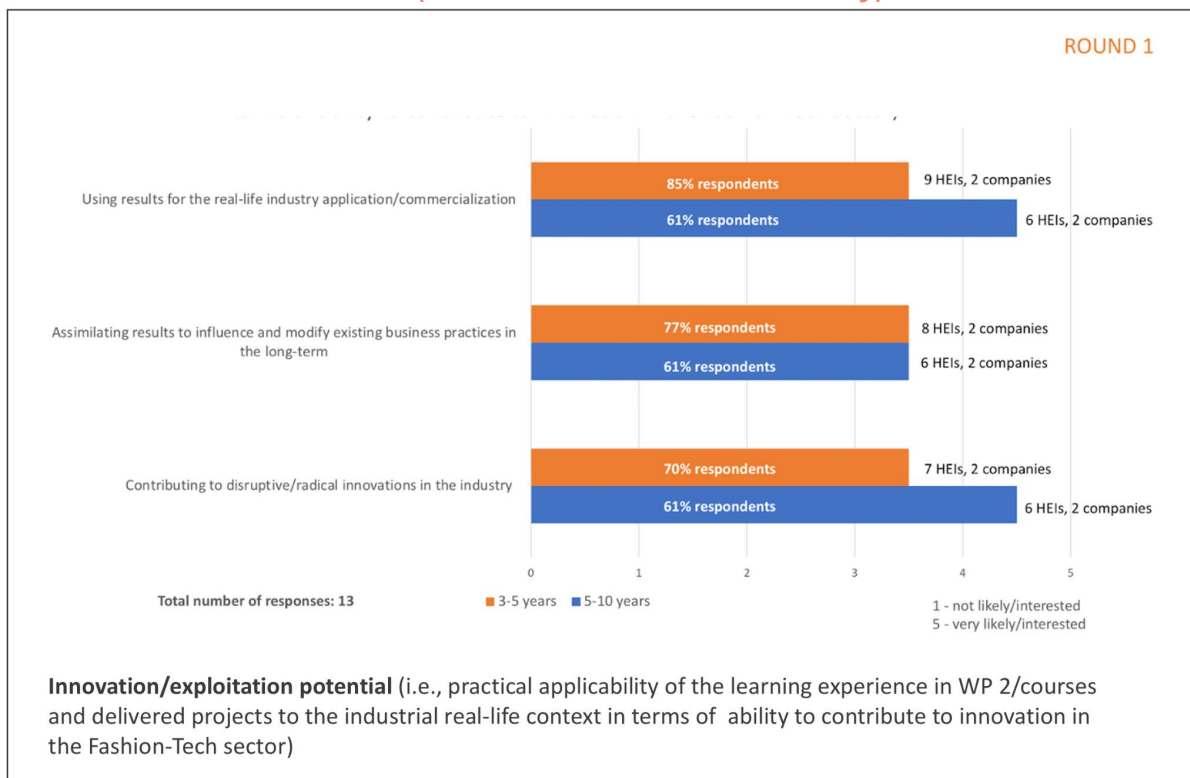


The results of assessments of the innovation/exploitation potential (*i.e.*, practical applicability of the FT courses and its results to the real-life industrial context and ability to contribute to innovation in the long-term ) in round 1 and round 2 are presented in Figure 17 and Figure 18 respectively.

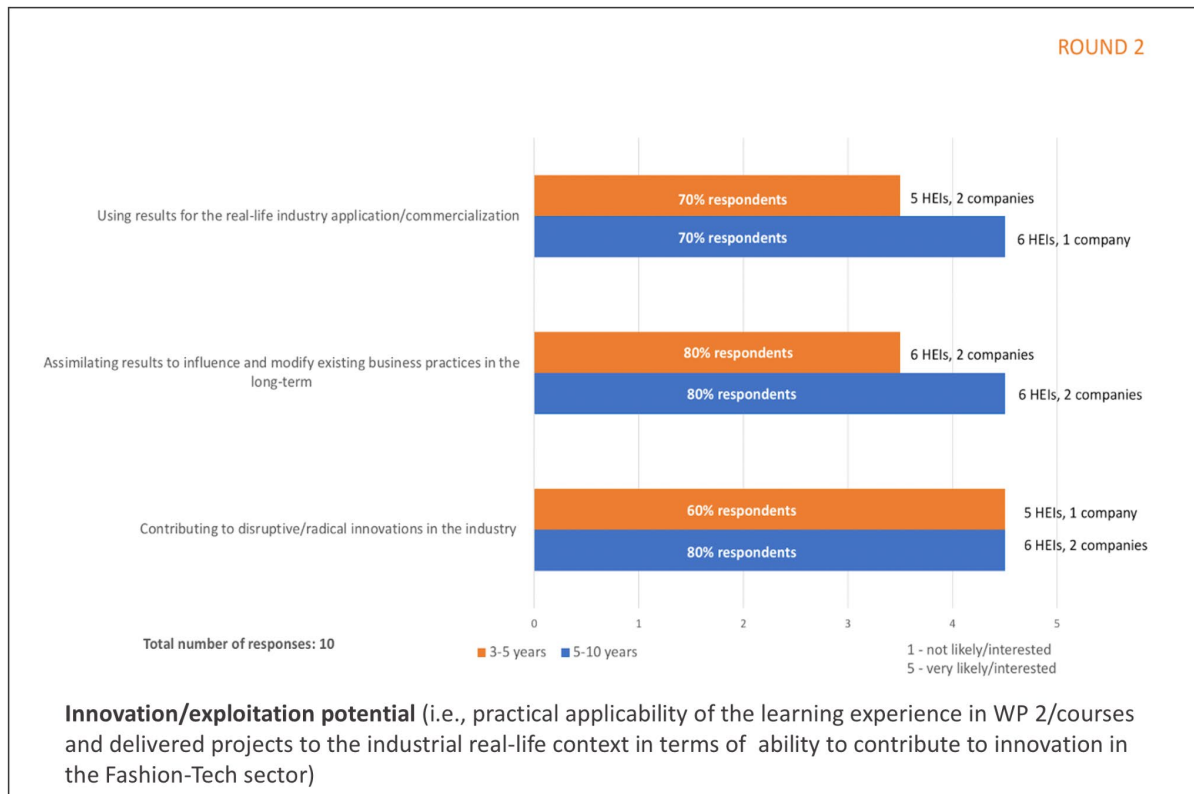
After the 2nd round, the following inference can be made with regards to the innovation/exploitation potential of FT courses:

- High likelihood (4-5) of contributing to disruptive innovations in the industry both in 3-5 and in 5-10 years (as rated by 60% and 80% of respondents in round 2);
- Moderate likelihood (3-4) of assimilating results (*i.e.*, portfolio of prototypes) to influence/modify business practices in 3-5 years (as rated by 80% of respondents in round 2);
- High likelihood (4-5) of assimilating results (*i.e.*, portfolio of prototypes) to influence/modify business practices in 5-10 years (as rated by 80% of respondents in round 2);
- Moderate likelihood (3-4) of using results (*i.e.*, portfolio of prototypes) for real-life industry application/commercialization in 3-5 years (as rated by 70% of respondents in round 2);
- High likelihood (4-5) of using results (*i.e.*, portfolio of prototypes) for real-life industry application/commercialization in 5-10 years (as rated by 70% of respondents in round 2).

**Figure 17 - Innovation/exploitation potential of the courses piloted in WP2 (results from 1st round of survey)**



**Figure 18 - Innovation/exploitation potential of the courses piloted in WP2 (results from 2nd round of survey)**



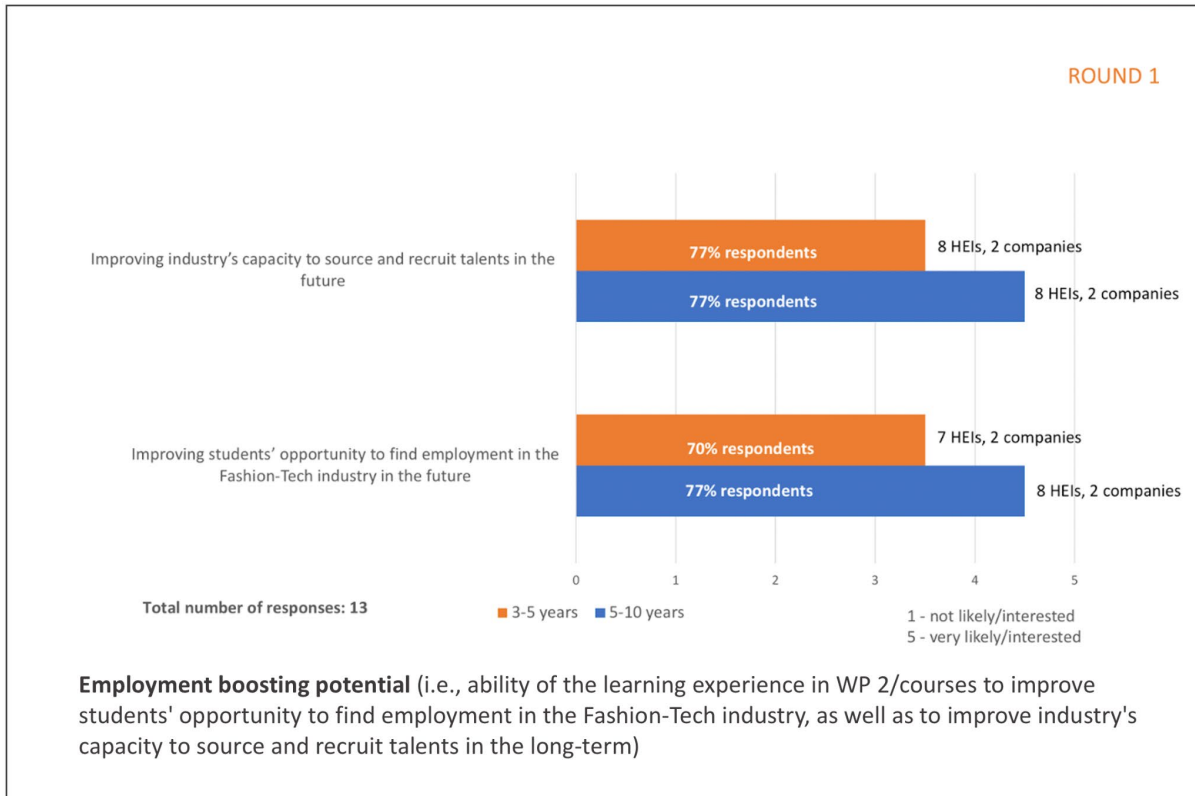
The results of assessments of the employment boosting potential (i.e., ability of the FT courses to improve students’ opportunities to find employment in the FT industry, as well as to improve industry’s capacity to source and recruit talents in the long-term) in round 1 and round 2 are presented in Figure 19 and Figure 20 respectively.

After the 2nd round, the following inference can be made with regards to the employment boosting potential of FT courses:

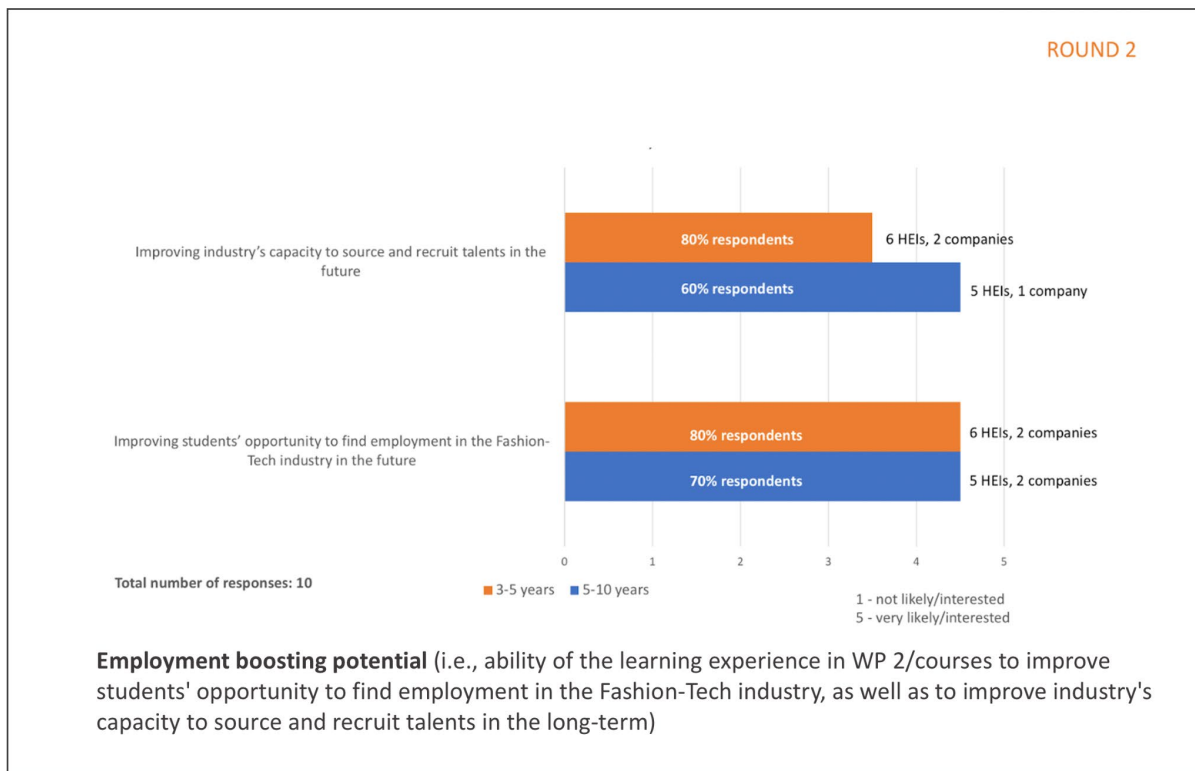
- High likelihood (4-5) that FT courses can improve student opportunities to find employment in the FT industry both in 3-5 years and in 5-10 years (as ranked by 80% and 70% of respondents respectively in round 2);
- Moderate likelihood (3-4) that FT courses can improve industry’s capacity to source and recruit talents in 3-5 years (as ranked by 80% of respondents in round 2);
- High likelihood (4-5) that FT courses can improve industry’s capacity to source and recruit talents in 5-10 years (as ranked by 60% of respondents in round 2).



**Figure 19 - Employment boosting potential of the courses piloted in WP2 (results from 1st round of survey)**



**Figure 20 - Employment boosting potential of the courses piloted in WP2 (results from 2nd round of survey)**



In Figure 21, suggestions for long-term impact improvements are summarized across all three courses piloted in WP2. These suggestions for improvement were identified in the first round of survey for long-term impacts assessments and then ranked by project partners in the second round of the survey. More specifically, project partners were asked to select and rank the top three improvements among suggestions identified in the first round of the survey. Some of the top three improvements can lead to improvements in several dimensions of long-term impacts and are thus highlighted in bold in Figure 21. More detailed discussion of suggestions for long-term impact improvements for FT courses is presented below.

**Figure 21 - Suggestions for long-term impacts improvements for FT courses**

Suggestions for improvement	
<i><b>New communities of educational practice based on partnership approach</b></i>	<i><b>FT industry development and jobs</b></i>
<p><i>Transferability potential</i></p> <ul style="list-style-type: none"> <li>● <b>Improved collaboration with companies</b></li> <li>● <b>Course organization changes</b></li> <li>● More time and compensation for participation</li> <li>● Other improvements/changes (course content changes, consortium changes, course format changes)</li> </ul> <p><i>Scalability potential</i></p> <ul style="list-style-type: none"> <li>● <b>Plan for project sustainability (with focus on collaboration)</b></li> <li>● <b>Improved communication of project results and collaboration benefits</b></li> <li>● Other suggested improvements (e.g., course development/organization and delivery changes)</li> </ul>	<p><i>Innovation/Exploitation potential</i></p> <ul style="list-style-type: none"> <li>● <b>Improved collaboration with companies</b></li> <li>● Implementation plan for portfolio of prototypes</li> <li>● <b>Improved communication of students' project results</b></li> <li>● Other improvements (focus on entrepreneurial skills development)</li> </ul> <p><i>Employment boosting potential</i></p> <ul style="list-style-type: none"> <li>● <b>Improved collaboration with companies</b></li> <li>● <b>Plan for project sustainability (with focus on collaboration)</b></li> <li>● <b>Course organization changes</b></li> <li>● Other improvements (better positioning of courses in respective HEIs)</li> </ul>

- *Suggested improvements for enhanced transferability potential*

- **Improved collaboration with companies**

Among the various suggestions for improvement, survey respondents stressed the need for improved collaboration with companies among the top priorities to enhance transferability (1st priority for 50% of respondents). In order to achieve this, short-term impact improvements associated with the quality and efficacy of the partnership development process should be implemented. The major focus should be on improving companies' involvement in project brief formulation, connecting it and thus the challenge-based part of the course to the physical realm of companies, including their goals and interests. This in turn will make companies more involved in students' tutoring, which has been also highlighted by partners as an important improvement for enhancing the transferability potential (as the very idea of new educational experience is based on academia-industry partnership/knowledge sharing). Better knowledge sharing via collaborative course planning is another relevant prerequisite for transferability as it helps align the expectations, tasks, responsibilities and resource

allocation between academic and corporate partners to ensure their commitment/motivation to running courses jointly in the future.

The particularly highlighted measure to strengthen the partnership development process for transferability is organization of the workshop between HEIs and companies earlier on in the process of course development to formulate more specific practice-oriented project briefs (that are better aligned with the agendas/needs/challenges of the companies and set clear expectations with regards to the depth and breadth of project deliverables relevant to the real-life professional context and market opportunities).

During roundtable discussion, collaboration with a more diverse pool of companies for replicating future educational experiences has been advised for replicating but also scaling future courses. However, the risk of increased organizational complexity and less motivation/commitment on behalf of individual companies might become a problem. In order to balance the opportunities and risks of increasing and diversifying the number of collaborating companies, gradual/step-by-step increase in the number of partners should be considered, including discussions of pros and cons between companies and HEIs prior to and after collaborative learning experiences.

#### - **Course organization changes**

Course organization changes related to its planning and delivery were ranked as the second priority for transferability by 50% of respondents. Suggested measures with regards to collaborative course planning and delivery are associated with short-term impact improvements regarding the quality and efficacy of the partnership development process. In particular, the discussed needs for *better alignment of course curriculum and academic calendars between different HEIs*, as well as the *need for clear definition of each HEI's input* for enhancing transferability is associated with: 1) better knowledge sharing via improved collaborative course planning, 2) providing course structure with shared theory/methodology and customization opportunities to adapt courses to different structures/timings of each HEI, and 3) experimenting within more flexible educational formats (elective instead of mandatory courses) to avoid constraints to collaborative learning experiences.

Additional improvements for transferability beyond those related to partnership development are: 1) *less bureaucracy/more clear procedure at the HEIs level in organizing the courses* (as no clear process exist on how to organize multidisciplinary learning experience that include students registered at different academic institutions); 2) *better positioning and marketing of course at respective HEIs* to ensure sufficient and equal enrollment of students with different backgrounds for enabling multidisciplinary knowledge exchange; 3) *comprehensive support for digital delivery* (including assistance/resources required for creating the digital educational platform where students from all HEIs can be included and able to access learning activities and materials, 4) *clear set of guidelines, updated materials and resources for replication*, including a website, which provides 3-10 years access to all the knowledge generated during the project.

#### - **More time and compensation for participation**

More time and compensation for participation was ranked as the third priority for improvement (by 40% of respondents) to increase the transferability potential of delivered courses. In particular, finding the way to recognize or compensate for teachers' involvement if the course duration/teacher's participation cannot be reduced was mentioned as important (especially in case when courses are implemented under different formats and have various number of credits at different HEIs). In addition, allocating more time for the company's involvement in developing and delivering the courses is expected for successfully replicating the courses in the future. These improvements for transferability are associated with previously mentioned better planning and resource allocation to enable more commitment/perceived responsibility among partners (as discussed in short-term impact improvements regarding the quality and efficacy of partnership development process).

- **Other improvements/changes (e.g., course content, consortium and course format changes)**

Among other improvements for transferability are *course content changes*, including adjustments to course contents depending on academic level/degree/field targeted for replicability, as well as further systematization of theoretical knowledge and challenge-based activities to support the development of soft, transversal, social and intercultural skills among students. *Consortium changes* in terms of different composition of academic and company partners preparing and delivering future courses might be required depending on academic level/degree/field targeted for course replicability. Although diversity of partners in the consortium that delivers the course is an advantage for multi-/interdisciplinary learning experiences, the possibility to reduce the number of partners who implement a single course was discussed, to reduce the overall complexity of course organization in the future (e.g., alignment of course curriculum and academic calendars). To succeed in replicating developed courses, some participants mentioned the need for *course format changes* (i.e., delivering courses on-site instead of digitally which would require student/teacher mobilities across locations, and reducing the overall duration of the course).

● *Suggested improvements for enhanced scalability potential*

- **Plan for project sustainability (with focus on collaboration)**

Sustainability plan for FTalliance beyond the project end is ranked as the highest priority (by 50% of respondents) for scaling the communities of new learning experience delivered in WP2 (i.e., involving more partners and expanding course implementation beyond the European level in the long-term). As part of this plan, partners pointed towards the need to define a *clear strategy for strengthening existing and establishing new collaborative partnerships* to succeed in similar course development and implementation within EU and beyond. In particular, there is a need for establishing a *step-by-step process to decide within the existing consortium what additional partners to include* depending on level/degree/field area targeted for future course replication and scaling.

Deciding on *incentives for partners enrollment in future collaborations* is of another concern for scaling. For smaller companies' participation can be motivated by joint co-

creation of innovation in specific topical areas which might require narrowing the scope of the challenge/project brief to be addressed in students' projects. For larger companies, incentive for joining communities of new education practices might lie in access to future talents/training students to join specific job roles that are currently missing/underdeveloped within respective organizations.

- **Improved communication of project results and collaboration benefits**

Improved communication was ranked as the second and third priority for enhancing scalability potential by 50% and 40% of respondents correspondingly. This includes better and more targeted communication of the project results towards external HEIs and companies, including tailored communication of benefits and opportunities of collaboration for potential partners. For instance, informing potential partners (via e.g., leaflets and presentations) about project outcomes with focus on particular skill sets development targeted by courses and how it relates to current and future job profiles, market needs, and innovation opportunities would motivate new HEIs and companies to join, and thus scale communities of new learning experience. Providing this information for potential partners to enhance the scalability requires implementation of suggested short-term impact improvements associated with the quality and relevance of graduate knowledge, skills and competence (in particular, see the earlier mentioned suggestion for *better alignment of skills and competences with future career prospects in FT field*).

Improved communication of skills development as potential collaboration benefits can be organized in the format of joint discussion sessions and events with HEIs, students and companies (who participated and are interested to participate in future courses) to further reflect on and communicate the new skills and competences acquired after course completion.

- **Other suggested improvements (e.g., course organization and delivery changes)**

Among other improvements for scalability are changes related to course organization and delivery that align with earlier suggested short-term impact improvements related to the quality and efficacy of the partnership development process.

Regarding the course organization changes, partners highlighted the need to *allocate more time and efforts for pre-planning sessions* to level the expectations and agree on roles and responsibilities with regards to commitment/participation, course curriculum, format and scheduling (e.g., students learning outcomes, number of credits, examination requirements, and academic calendars, which differ between different HEIs). Moreover, there is a need for a *process that allows partners to agree on relevant challenge formulation* to motivate existing and new partners' participation. This process could be implemented in the form of organizing a roundtable discussion/workshop (or a series of them) between HEIs and companies to define interesting and relevant areas of challenges (as perceived by partners) to be tackled in students' projects. Such a roundtable/workshop has also been mentioned earlier as a measure to improve company involvement for enhancing the quality and efficacy of the partnership development process.

Regarding course delivery changes, the *provision of blended delivery models* (i.e., well-elaborated course structure with shared and customizable theoretical and methodological tools to adapt to different study curriculum, learning objectives, assessment methods and academic calendars) would increase HEI's participation in future courses. Furthermore, offering future courses in the format of elective/freestanding courses can also positively contribute to decreasing organizational complexity and thus enable more partners to take part in implementing new educational experiences in the long-term.

- *Suggested improvements for better innovation/exploitation potential*

- **Improved collaboration with companies**

To enhance the potential of courses and portfolio of prototypes (developed as part of student projects) to contribute to FT innovation, with generated results to be perceived as relevant for real-life commercial application/exploitation, improved collaboration with companies was ranked as the first priority by 70% of respondents. This includes *seeking closer collaboration with industry to better communicate potential benefits of engaging with such courses* (e.g., addressing emerging market needs, developing relevant skills set, establishing relationships and gaining access to future talents). Especially, *closer partnerships with companies that produce new technology applications (i.e., innovation) in the fashion and textile industry* in the future courses is advised.

Improving the partnership development process between HEIs and companies during course development and implementation is another important prerequisite for better innovation/exploitation potential of student project outputs. This includes *better connection of the challenge-based part of the course to the physical realm of the companies by better involving companies in course planning and project brief formulation* (i.e., aligning it with real companies' needs/challenges/agendas). In particular, *creation of the collaboration model (i.e., process for matchmaking) and associated digital tools (open noticeboards) for defining interesting/relevant course topics for all partners* to be addressed in the challenge-based part of the learning experience is suggested.

Regarding the course planning, there is a need *to develop a joint understanding between HEIs and companies about what course goals and project outputs are viewed as relevant/innovative* (e.g., to what extent companies' value speculative transformative thinking or less radical-yet ready for market solutions when it comes to innovation potential). Moreover, it is important to jointly agree between companies and HEIs on *what aspects of a portfolio of prototypes should be detailed at what level*.

Implementing the aforementioned improvements regarding the partnership development process will enable another suggested improvement of *better company's involvement in student's tutoring sessions* (e.g., at mid-term reviews and final presentation) to provide feedback important for enhancing innovation/exploitation potential of the final project outputs in the long-term. In particular, the company's

feedback should focus on market applicability of developed innovative solutions, highlighting limitations of the proofs of concepts and discussing how these can be overcome.

- **Implementation plan for portfolio of prototypes**

Development of a clear implementation plan including nudging and incubation activities was ranked as the second priority (by 70% of respondents) for enhancing innovation/exploitation potential of student project results in the long-term. In particular, to provide the opportunity for the real-life tests/pilot projects to be able to quickly iterate ideas and measure impacts is recognized as important for increasing the market readiness of delivered student projects.

In addition, to enable development of a tangible portfolio of prototypes that can be used/applied in the real-life professional context in the long-term, project partners stressed the opportunity to better connect learning experiences of WP2 and WP3. In particular, selected students' projects (i.e., proofs of concepts with its limitations and opportunities) delivered in courses can be a starting point for implementation planning towards more tangible prototypes in FT residency projects.

- **Improved communication of students' project results**

Another suggested improvement for enhancing the innovation/exploitation potential is the improved communication/dissemination of student project results (ranked as the third priority for improvement by 60% of respondents). In particular, project participants stressed the need for a clear communication strategy and improved (more targeted and continuous) dissemination activities beyond academia (towards industry and potential users). For example, showcasing students' project results at technology events/conferences (e.g., at Ars Electronica Center) can enhance innovation/exploitation in the long-term.

At the roundtable discussion about long-term impacts, companies further suggested to specify and explicitly communicate assessment of implementation as a clear part of course plan/learning objective that can be organized as a joint reflection session among students, HEIs and companies (additionally including external partners to project consortium).

- **Other improvements (focus on entrepreneurial skills development)**

Among other mentioned improvements for enhanced innovation/exploitation potential are changes to the course contents, with regards to increasing focus on entrepreneurial knowledge and skills development among students. This would enable students' abilities to further refine and implement their innovative ideas (generated during the course) in the long-term via launching their own start-ups.

● *Suggested improvements for employment boosting potential*

- **Improved collaboration with companies**

To enhance employment boosting potential by creating courses that better match job market needs, improved collaboration between academia and industry was ranked as the first priority by 50% of respondents. In particular, project partners stressed the need for the *joint review and definition of relevant skill sets and associated job descriptions* that future courses will offer to students. Once defined, clear communication of these to potential partners and learners will also enhance the transferability and scalability potential.

In addition, project partners suggested *organization of 'career days' or other events open for industry participation* at the end of the courses, where students can showcase their projects and communicate to future employers the newly acquired skills and competences. The idea of "test running applications" at the end of the course was also suggested, where companies can engage in providing students with feedback on how well their profile (i.e., CV, motivation letter, project portfolio) could potentially match the company's requirements.

Earlier suggested collaboration models (i.e., process for matchmaking) and associated digital tools (open noticeboards) for defining interesting/relevant course topics between companies and HEIs can also be made open for students. In this way students can make better planning and well-informed decisions with regards to what courses to undertake, and with which companies to collaborate in the future (e.g., by engaging in FT residency projects), so as to increase their future success in finding employment in the FT industry.

Improved collaboration with companies for better employment boosting potential can be further enabled by aligning learning experience of WP2 and WP3, with WP3 FT residencies being focused on further implementation planning of proofs of concepts. If successful, potential employment opportunities for well-performed students can be offered.

- **Plan for project sustainability (with focus on collaboration)**

To enhance employment boosting potential, a *plan for project sustainability that defines the process of expanding the network of companies and becoming recognisable as a point of reference for training professionals in the FT sector* was ranked as the second priority by 50% of respondents. In addition, a *joint plan for future course delivery among companies and HEIs* was recognized as important to reduce the risk of courses becoming sporadic and unstructured learning experiences in the future, thus unable to deliver required training and create employment opportunities. These improvements are in line with the earlier mentioned plan for project sustainability suggested by project partners to enhance the scalability potential of delivered courses.

Making the course recognizable among potential employers might require awarding successful students with certification. For this, better understanding is required of what certification (with regards to what knowledge, skills and competences) will be valued in the industry. Earlier discussed short-term impact improvements associated with better alignment of skills and competences with future career prospects in FT field (as part of improving the quality and relevance of graduate knowledge, skills and



competences) will contribute to this understanding. Moreover, achieving recognition for training professionals and awarding students with certification will require making future courses to be more uniform in terms of learning outcomes and assessment methods.

#### - **Course organization changes**

A number of changes related to course organization were ranked by respondents as the third priority (by 60% of respondents) for enhancing employment boosting potential. In particular, *creating courses more connected to the physical realm of companies* is advised, where theory and practice are better integrated and students are offered *more engagement opportunities with companies that have a dedicated innovation focus*, i.e., producing new technology applications in the fashion and textile industry. These changes are aligned with suggestions for improved collaboration with companies, ranked as the 1st priority for enhancing the overall innovation/exploitation potential.

It was further suggested for courses to include *additional sessions/workshops to help students create a professional portfolio of projects to be showcased to future employers*. *Continuous updates to course contents* should be also considered to accommodate for changing jobs and skills demand in the FT market.

In addition changes to course organization for enhancing employment boosting potential, some ideas related to organizing and offering future courses to industry professionals that wish to learn specific skills and re-train were discussed. This will obviously require offering shorter courses with evening class, and overall needs agreement and planning among partners regarding course transferability beyond the master educational level.

#### - **Other improvements (better positioning of courses in respective HEIs)**

Among other suggestions for employment boosting potential is the need for *better positioning of courses at respective HEIs* to ensure student enrollment and academic tutor participation with diverse backgrounds. This is vital for knowledge sharing and developing the interdisciplinary skills demanded in the FT industry, including learners' abilities to communicate and therefore innovate across different disciplinary and market domains.

## 3. Results of evaluation of WP3

This section presents and discusses the results of the short-term and long-term impacts evaluation of the learning experiences delivered in WP3 (residencies) including suggestions for improvements for development and implementation of future FT residency programs.

### 3.1 Short-term impacts evaluation

Data for short-term impact assessment were collected via 3 surveys targeting different project stakeholders' groups: students, HEIs and companies. Information on survey response rate for short-term impacts assessment of FT residencies is presented in Figure 22.

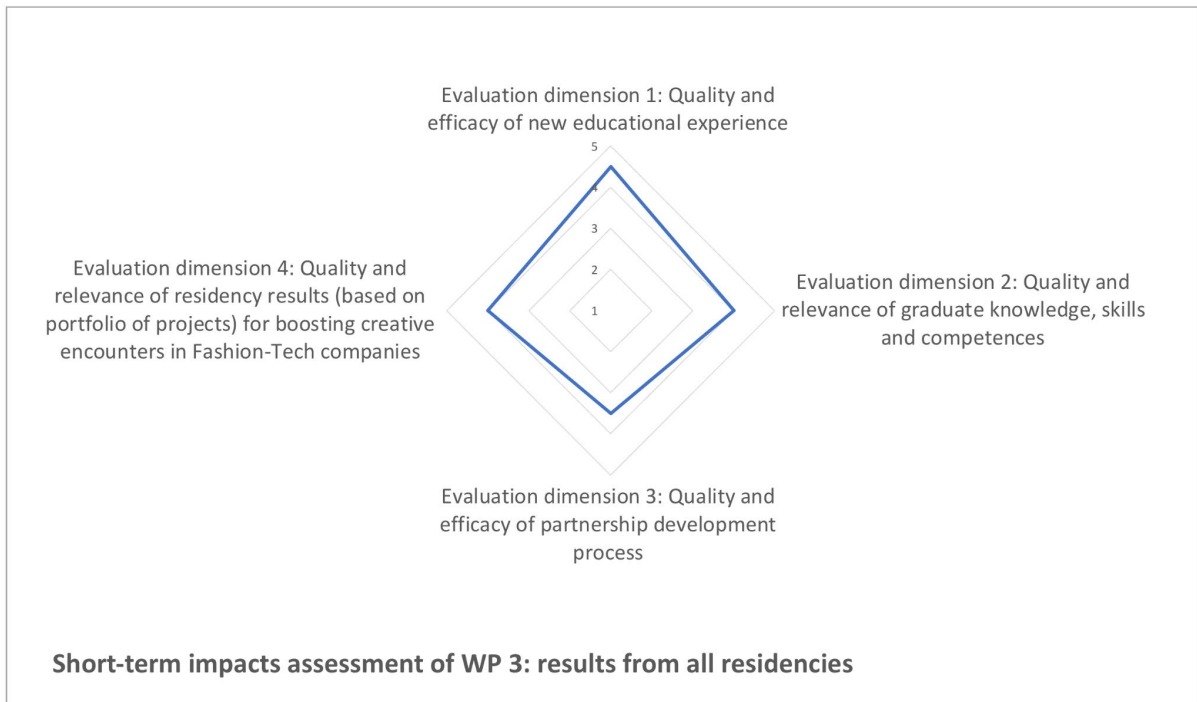
**Figure 22 - Survey response rate for short-term impacts assessment of WP3**

	Students	HEIs	Companies
Response rate	63% <i>(12 out of 19 students; covering all residencies organized by 4 HEIs in collaboration with 9 companies )</i>	100% <i>(teaching staff from all 4 HEIs, which led organization of all residencies, participated in survey; 5 respondents in total)</i>	44% <i>(4 companies out of 9 participated in the survey; 4 respondents in total who participated in residencies led by POLIMI, UAL and ESTIA)</i>

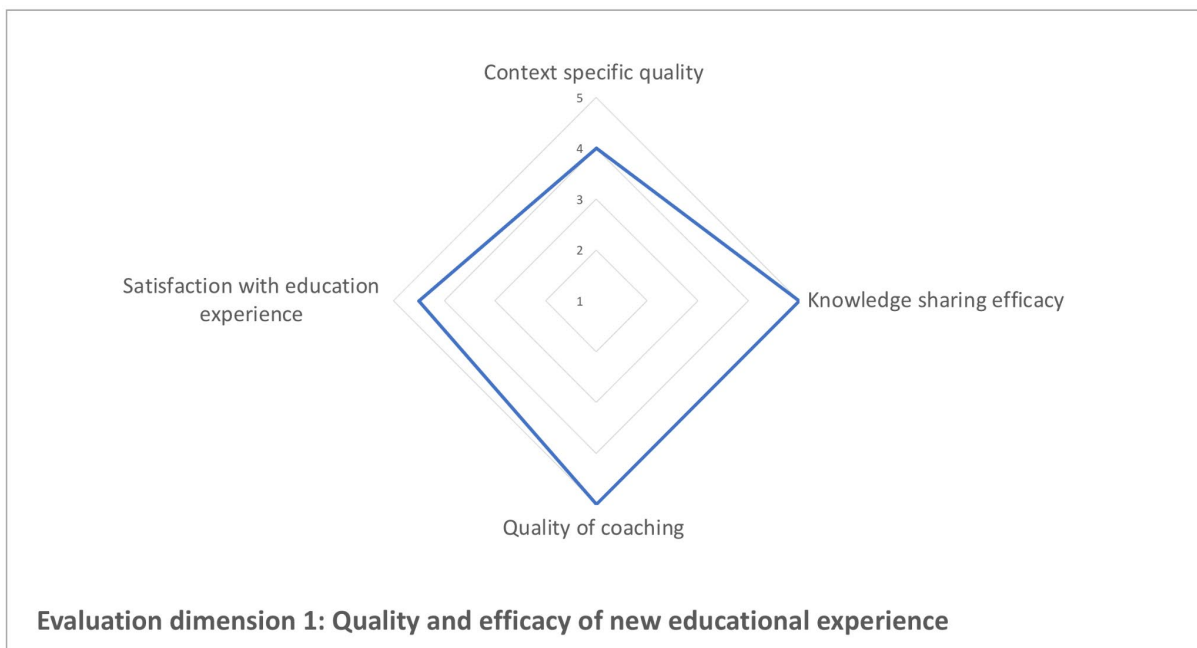
The summary of short-term impacts assessment of residencies piloted in WP3 is summarized in Figures 23 - 27, whereas Figure 28 provides a summary of findings for all FT residencies across key evaluation dimensions and associated criteria. It should be noted that results in Figures 18 - 28 depict ranking based on the Likert scale from 1 to 5 by majority of stakeholders (HEIs, companies, students), where 1 corresponds to the lowest level of assessment (e.g., not good/well/not satisfied at all) and 5 corresponds to the highest level of assessment (extremely good/well/extremely satisfied). More detailed results with regards to indicator grading associated with each set of criteria can be found in Appendix (see Appendix B).

Overall, FT residencies delivered in WP3 performed well with regards to the impact evaluation. All evaluation dimensions are ranked as '4 and above', except for the quality and efficacy of the partnership development process with the overall ranking between 3 and 4 by majority of stakeholders (Figure 28).

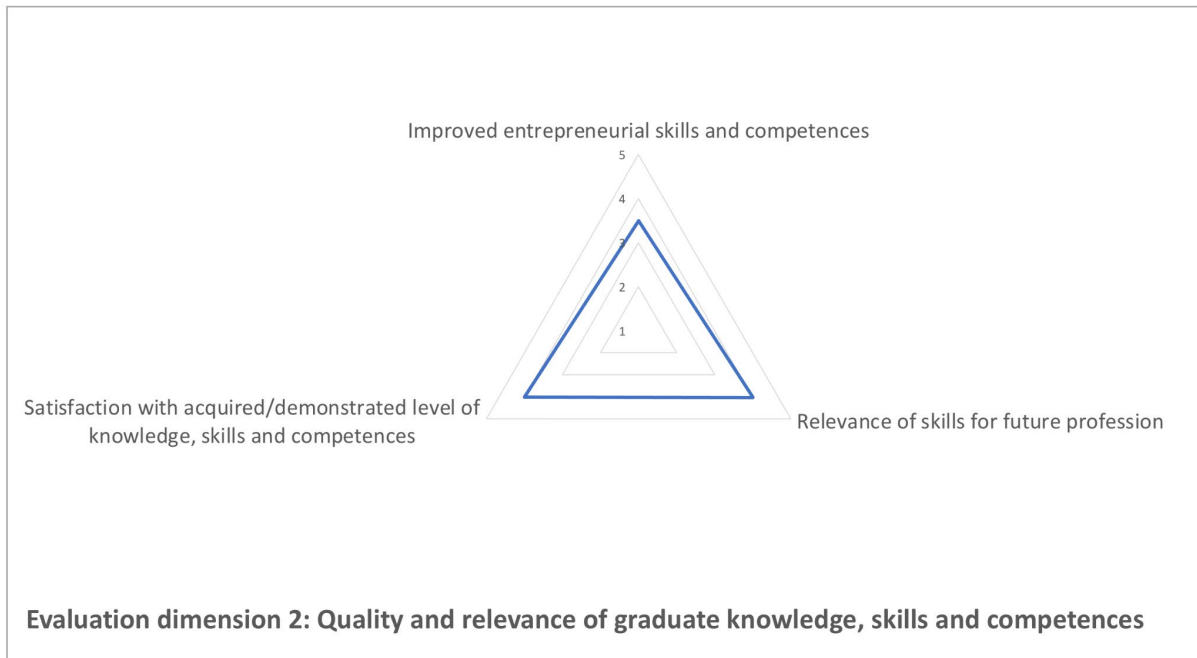
**Figure 23 - Summary of short-term impacts assessment of WP3**



**Figure 24 - Quality and efficacy of new educational experience piloted in WP3**



**Figure 25 - Quality and relevance of graduate knowledge, skills and competences acquired by students after completing new educational experience piloted in WP3**



**Figure 26 - Quality and efficacy of partnership development process in developing and implementing new educational experience piloted in WP3**



**Figure 27 - Quality and relevance of residency program results (based on portfolio of prototypes delivered in WP3) for boosting creative encounters in FT companies**



**Figure 28 - Summary of results of short-term impacts assessment for FT residencies delivered in WP3**

<p><b>Quality and efficacy of new educational experience (4-5)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 4</li> <li>• Knowledge sharing efficacy – 5</li> <li>• Quality of coaching – 5</li> <li>• Satisfaction with educational experience – 4-5</li> </ul>	<p><b>Quality and efficacy of partnership development process (3-4)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 3</li> <li>• Knowledge sharing efficacy – 3-4</li> <li>• Satisfaction with partnership development process – 3-4</li> </ul>
<p><b>Quality and relevance of graduate knowledge, skills and competences (4)</b></p> <ul style="list-style-type: none"> <li>• Improved knowledge, skills and competences– 3-4</li> <li>• Relevance of skills for future profession – 4</li> <li>• Satisfaction with acquired/demonstrated level of knowledge, skills and competences – 4</li> </ul>	<p><b>Quality and relevance of residency results for boosting creative encounters in Fashion-Tech companies (4)</b></p> <ul style="list-style-type: none"> <li>• Context specific quality – 4</li> <li>• Relevance for Fashion-Tech industry – 3-4</li> <li>• Satisfaction with delivered portfolio – 4</li> </ul>

In Figure 29 suggestions for short-term impacts’ improvements for FT residencies are summarized (based on roundtable discussion of results of short-term impacts assessment with project stakeholders). Key/major suggestions which can lead to improvements in several

dimensions of short-term impacts are highlighted in bold in Figure 29. More detailed discussion of suggested improvements is presented below.

**Figure 29 - Suggestions for short-term impacts improvements for FT residencies**

Suggestions for improvement	
<p><i>Quality and efficacy of new educational experiences</i></p> <ul style="list-style-type: none"> <li>● <b>Planning and management of the residency model (before/during)</b></li> <li>● <b>Structure of the residency model</b></li> </ul>	<p><i>Quality and relevance of graduate knowledge, skills and competence</i></p> <ul style="list-style-type: none"> <li>● <b>Planning and management of the residency model (before/during)</b></li> <li>● <b>Structure of the residency model</b></li> <li>● Defining and positioning skill sets gained from FT residency</li> </ul>
<p><i>Quality and efficacy of partnership development processes</i></p> <ul style="list-style-type: none"> <li>● <b>Planning and management of the residency model (before/during)</b></li> </ul>	<p><i>Quality and relevance of results for boosting creative encounters in FT companies</i></p> <ul style="list-style-type: none"> <li>● <b>Planning and management of the residency model (before/during)</b></li> <li>● <b>Structure of the residency model</b></li> <li>● Post-residency activities</li> </ul>

- Suggested improvements regarding the quality and efficacy of new educational experiences

- **Planning and management of the residency model (before/during)**

Several suggestions were specifically addressing the overall structure of the residency model (see the following point), and how these residencies can be better planned and managed. Specific suggestions highlighted the importance of improving the processes in the early stages, including giving significant time in advance for the planning of activities, which can thereafter be compared with actual residency activities (this requires identification of options for students to fulfill course requirements if their work doesn't go according to plan). Some solutions proposed included having an initial meeting to define shared goals to align all actors, and/or providing an online space or digital tools for students, HEI staff and companies to share ideas at the planning stage, regarding needs/desired outcomes (e.g., preorganized MIRO board with legal/administrative contents, and meeting Gantt). Overall, the focus was on the simplification of communication to track outcomes in relation to goals in accordance with updated residency structures (see below). Another suggestion for improved planning is the alignment of different courses meant to support residencies; however, this is considered difficult across European countries. Other challenges to improved planning mentioned included the need for additional time, resources and experience to work at companies, HEI support throughout multiple stages, and the need for companies to respond on time, as well as the complexity of aligning work with students' other academic commitments.

- **Structure of the residency model**

On a general level, several participants stressed a need to extend the residency duration. In particular, one student highlighted that addressing different fields in a FT

project is difficult within a short time. From the company perspective, some suggestions focused on dividing the residency in different stages (e.g., analysis of requirements, design, prototyping). Additionally, the need to align the timing of the project stages was highlighted, with more time for planning the implementation (see the previous point). Beyond suggestions regarding the early definition of projects, websites, and templates as well as the alignment of goals and course contents, relevant to preparation and planning, some issues were brought up regarding the implementation and execution of the projects. Notably, it was suggested to have more sessions for HEI/company tutoring to ensure projects can/could be implemented in industry. With more interactions like this, it was emphasized that there is a need for more clarity in defining the scope of the project (details vs. big picture prototyping), and time to perform iterative trials to better evaluate and develop business cases.

- *Suggested improvements regarding the quality and relevance of graduate knowledge, skills and competence*

- **Planning and management of the residency model (before/during)**

Among the various suggestions to improve knowledge and skills, several relate to improved planning of the residency process. In particular, respondents emphasized the need to be more precise as to what outcomes participating companies want from the research residency. This was considered necessary to better align company and HEI strategies and agendas during the process of planning the residencies. Specifically, this would require early interactions/discussions between HEI and host companies to ensure there is enough time for the project to develop and to refine the expected outcomes. This would allow for better awareness of the state of knowledge and skills and understanding of the potential for development. Throughout this process, it was considered crucial that communication would focus on where different types of support for students would come from (HEI/company). Another key improvement for the planning process suggested was for students and companies to define projects based on some preliminary promising results (e.g., within FT courses before the residency-that way the projects are integrated into a broader process of FT learning involving both hard and soft skills, cf. other suggestions regarding skills). This co-design of projects (and research questions) should also focus on being aligned with course/program curriculum requirements and providing sufficient time for learning (see following point).

- **Structure of the residency model**

As indicated in the suggestions above, there are several improvements emphasized regarding the overall structure of the residency model. In particular, it is considered crucial that there is sufficient time for student learning within the projects, which should include time for iterative cycles of prototyping and testing. Specifically, these iterative cycles should include guidance and methodologies throughout to ensure high quality outcomes. This should be supported by knowledge exchange and co-creation processes during planning in advance of the residency project to better understand the time requirements to achieve the project objectives and answer the defined research questions.

- **Defining and positioning skill sets gained from FT residencies**

To improve the relevance of student skills, specific suggestions included defining, or “narrowing down” the set of skills that students are likely to acquire during the process, which can be framed as a “sign of quality” or certification of some kind. Integration with FT courses can enable better audit of necessary skills, including the equal development of soft skills and other skills that companies need. This can benefit from learning opportunities/workshops to improve student capabilities to pitch and present their work and get support. In line with this focus on skills is the need to consider the skills needed in a dynamic industry context at the start, e.g., in the planning processes, in order to capture the needs according to socio-political, economic and environmental agendas. This was considered to be a possible outcome of the piloted residencies and courses within the FTalliance project; however, time, resources, and tools are barriers. Long-term this can benefit from multidisciplinary teams to align pressing issues within company and student experience, e.g., for identification of knowledge and skill gaps.

- Suggested improvements regarding the quality and efficacy of partnership development processes

- **Planning and management of the residency model (before/during)**

Among the various suggestions to improve the collaboration between different residency participants (HEIs, companies, students), many underline the need for increased interactions and highlight some ways that this can be enabled/facilitated. In particular, it was emphasized that interactions and feedback should be focused on throughout the year, i.e., in advance of planning the residency partnerships, in order for different partners to be on the same page about changes regarding important and interesting research subjects. This would benefit from defining appropriate times in the academic calendar for interactions (e.g., workshops). In accordance with this preliminary planning, residency goals (aims/objectives and timelines/deadlines) should be defined collaboratively to align HEI and company priorities. Within such planning processes, it is crucial to provide better clarity about time required for administration activities-to be started earlier, with a clear timeline and activities. One suggestion for improving this clarity, and managing the organizational complexity, is to design a digital space for collaboration and communication regarding: 1) goals/expectations, 2) responsibilities and rules, 3) Gantt/timelines for both synchronous and asynchronous meetings/activities, and 4) evaluation activities-to be simplified, for instance, using google forms/MIRO. Long-term, it is considered beneficial to have a partner for project management.

- Suggested improvements regarding quality and relevance of results for boosting creative encounters in FT companies

- **Planning and management of the residency model (before/during)**

Like with other evaluation dimensions, it was stressed that companies and HEIs should be in dialogue and collaborate at an earlier stage, which could be enabled by linking the residencies with FT courses for the best projects/students. This can allow for early



collaboration with companies for project development, and improved progress within the scope of the projects.

#### - **Structure of the residency model**

One key element that was highlighted regarding a change to the structure of the residency was having a longer project duration, including more time that the students can spend within the company and iterating their work to get a better final outcome. However, this was potentially challenging with respect to the need to align the projects with courses/academic calendars. With limited time it was stressed that prototyping should be clear whether the focus is on the details or the general idea. Moreover, the limited time was also a motivation for potentially opening up the potential for students to work in groups; however, this could demand different HEIs and company supervisors to work together, including between different academic institutions that can create too much complexity and may not be allowed in some courses/curriculums. Nonetheless, the focus on being able to form multi-disciplinary teams was stressed among students, e.g., through alignment with FT courses (see previous suggestion). Additionally, dissemination and diffusion improvements were discussed, including reflection on the residency projects within the scope of a thesis project, and potentially within the structure of PhD projects, which can also enable longer timeframes.

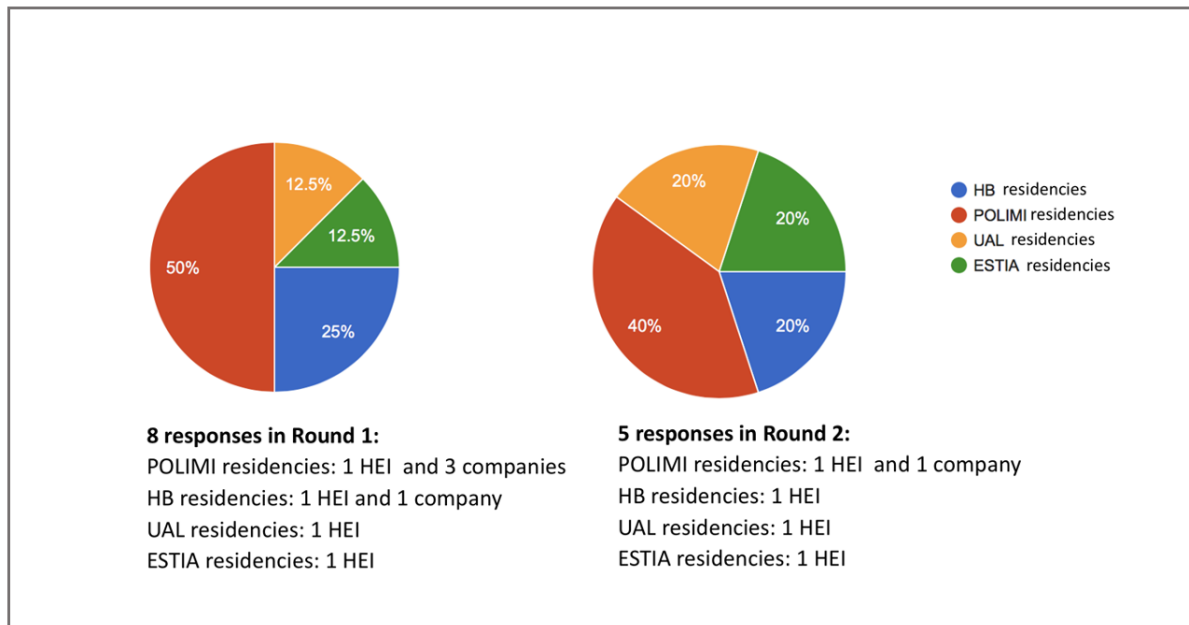
#### - **Post-residency activities**

Post-residency, it was suggested that there can be different opportunities for evaluation and promotion of projects, for instance through a competition focused on key aspects of innovation, or another format for evaluation of “business cases” from third party expert(s)-although the challenge of such evaluations being objective was highlighted. As a long-term goal, the ability to have graduate placement was highlighted.

## 3.2 Long-term impacts evaluation

Data for long-term impact assessment were collected via two rounds of a survey based on the Delphi method, each round jointly targeting respondents from HEIs and companies. Information on survey response rate including respondents’ roles (HEIs or companies) and participation in delivered residencies is presented in Figure 30.

Figure 30 - Survey response rate for long-term impacts assessment of WP3

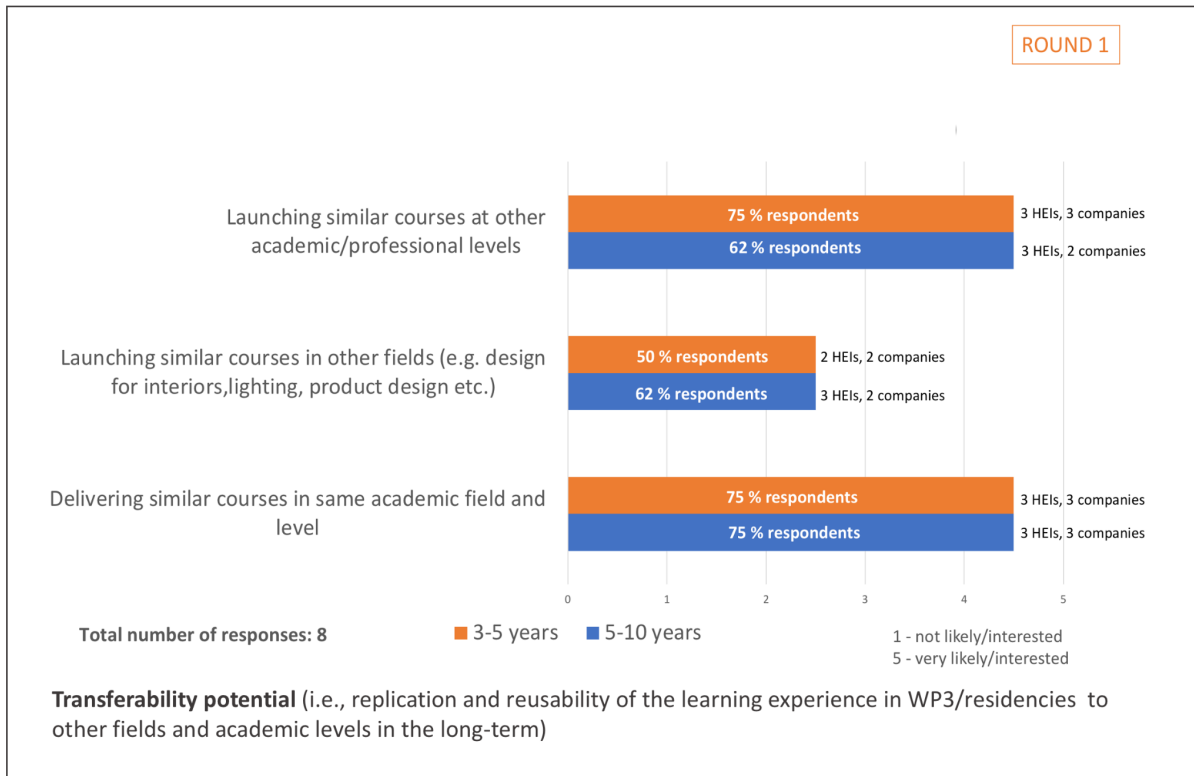


The results of assessments of transferability potential (*i.e.*, replication and reusability of the FT residencies to other fields and academic levels in the long-term) in round 1 and round 2 are presented in Figure 31 and Figure 32 respectively.

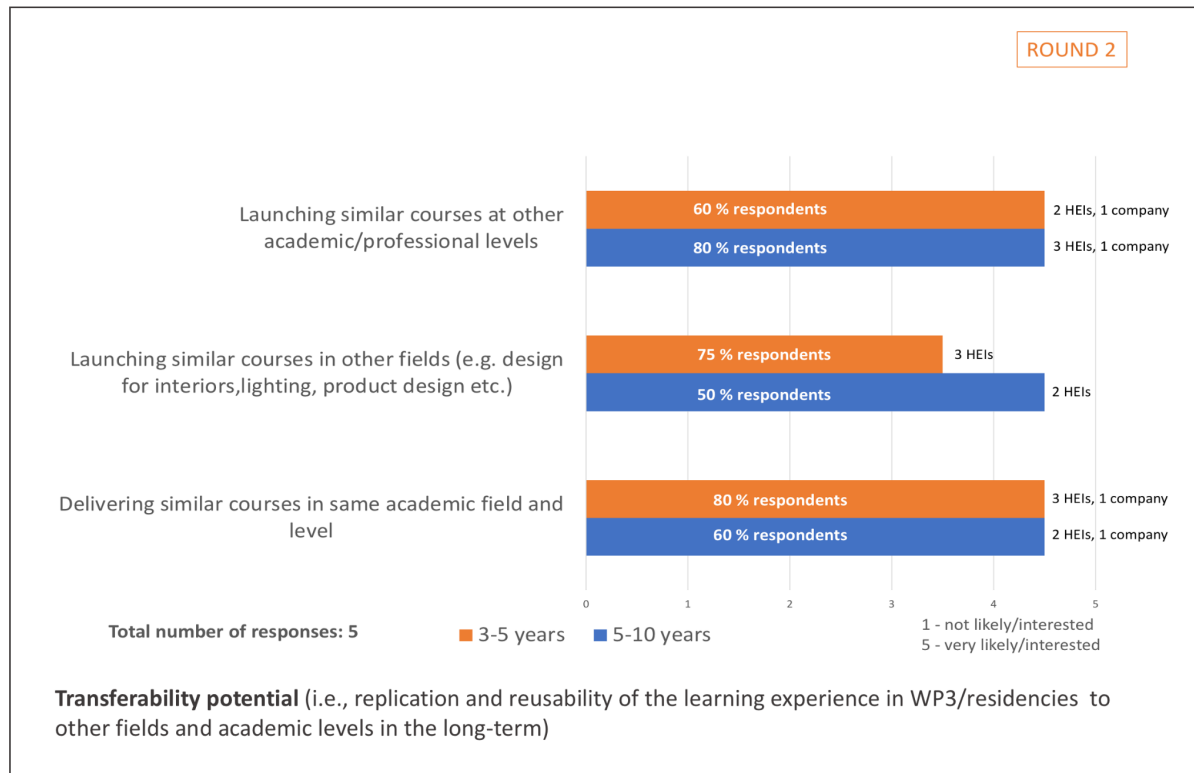
After the 2nd round, the following inference can be made with regards to the transferability potential of FT residencies:

- High likelihood/interest (4-5) in delivering the same type of courses/educational experiences in the same academic field/level both in 3-5 years and 5-10 years (as ranked by 80% and 60% of respondents respectively in round 2);
- Moderate likelihood/interest (3-4) in launching similar type of courses/educational experiences in other fields in 3-5 years (as ranked by 75% of respondents in round 2);
- High likelihood/interest (4-5) in launching similar type of courses/educational experiences in other fields in 5-10 years (as ranked by 50% of respondents in round 2);
- High likelihood/interest (4-5) in launching similar type of courses/educational experiences at other academic/professional levels in 3-5 years (as ranked by 80% of respondents in round 2);
- High likelihood/interest (4-5) in launching similar type of courses/educational experiences at other academic/professional levels in 5-10 years (as ranked by 60% of respondents in round 2).

**Figure 31 - Transferability potential of the residencies piloted in WP3 (results from 1st round of survey)**



**Figure 32 - Transferability potential of the residencies piloted in WP3 (results from 2nd round of survey)**

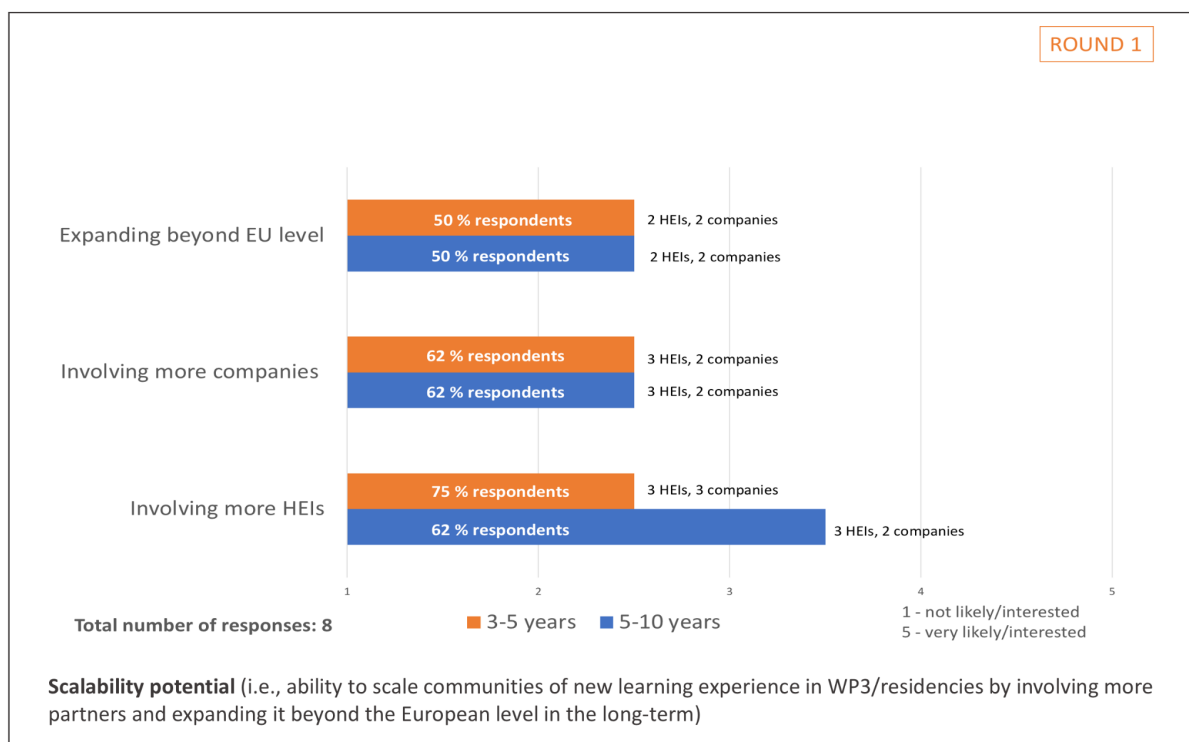


The results of assessments of the scalability potential (i.e., ability to scale communities of FT residencies by involving more partners and expanding it beyond the European level in the long-term) in round 1 and round 2 are presented in Figure 33 and Figure 34 respectively.

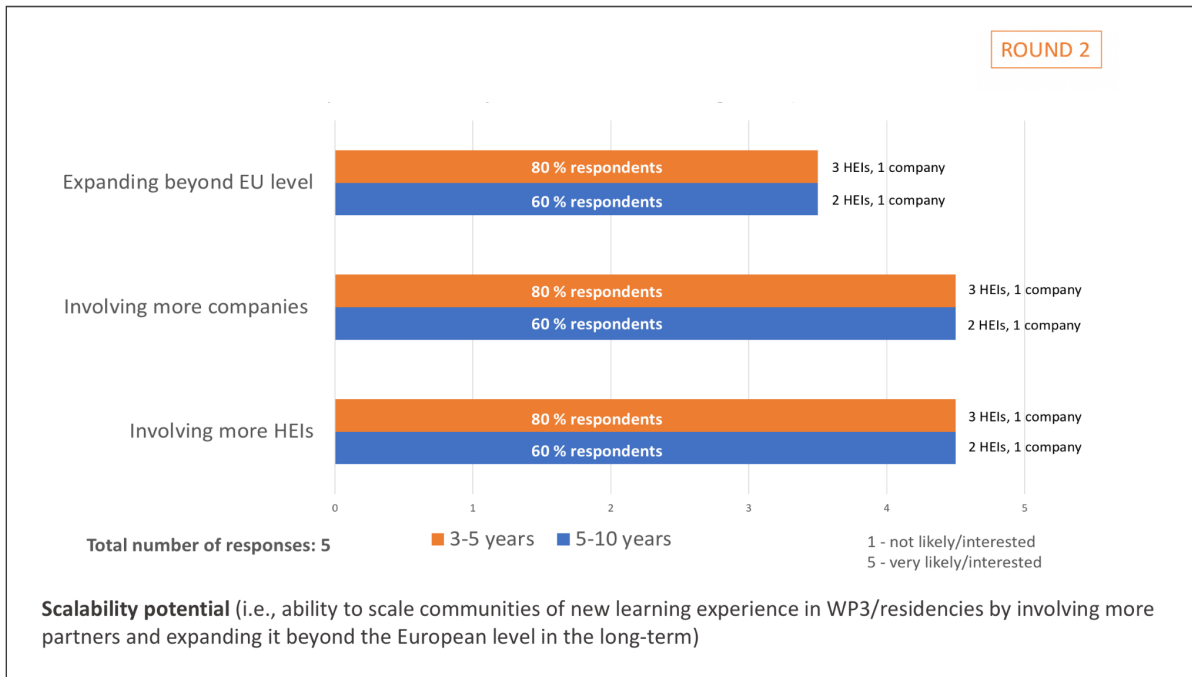
After the 2nd round, the following inference can be made with regards to the scalability potential of FT residencies:

- High likelihood/interest (4-5) to involve more HEI (both in 3-5 years and in 5-10 years, as rated by 80% and 60% of respondents respectively in round 2);
- High likelihood/interest (4-5) to involve more companies (both in 3-5 years and in 5-10 years, as rated by 80% and 60% of respondents respectively in round 2);
- Moderate likelihood/interest (3-4) to expand beyond EU level (both in 3-5 years and in 5-10 years, as rated by 80% and 60% of respondents respectively in round 2).

**Figure 33 - Scalability potential of the residencies piloted in WP3 (results from 1st round of survey)**



**Figure 34 - Scalability potential of the residencies piloted in WP3 (results from 2nd round of survey)**

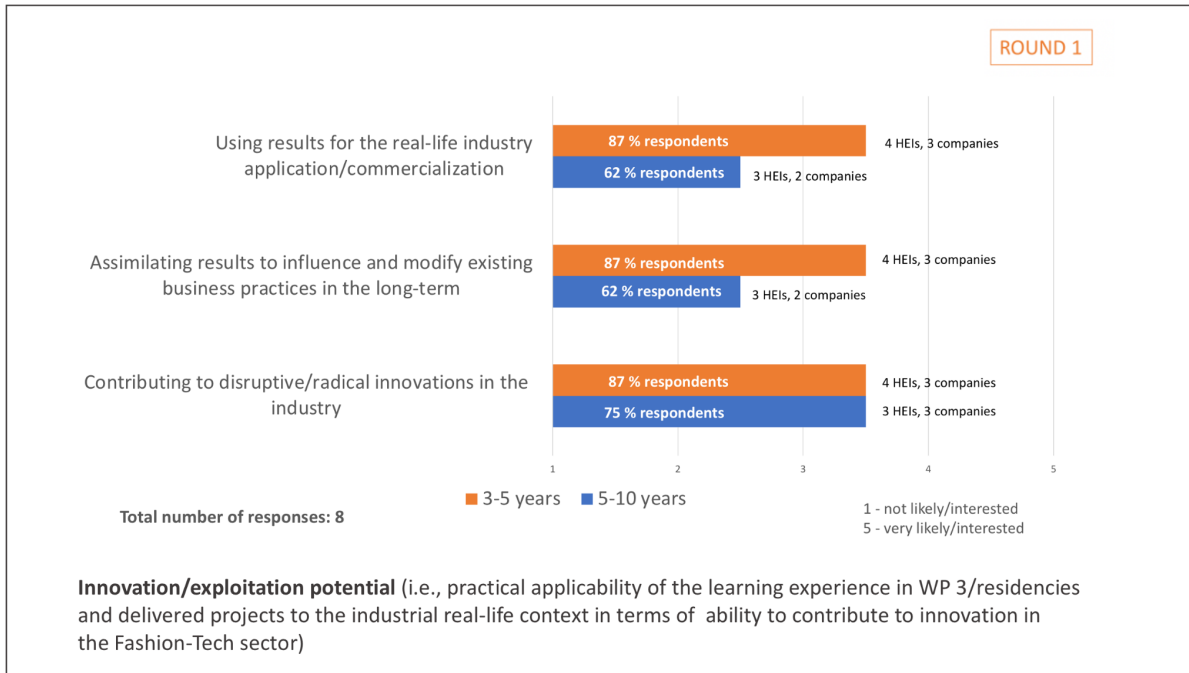


The results of assessments of the innovation/exploitation potential (i.e., practical applicability of the FT residencies and its results to the real-life industrial context and ability to contribute to innovation in the long-term) in round 1 and round 2 are presented in Figure 35 and Figure 36 respectively.

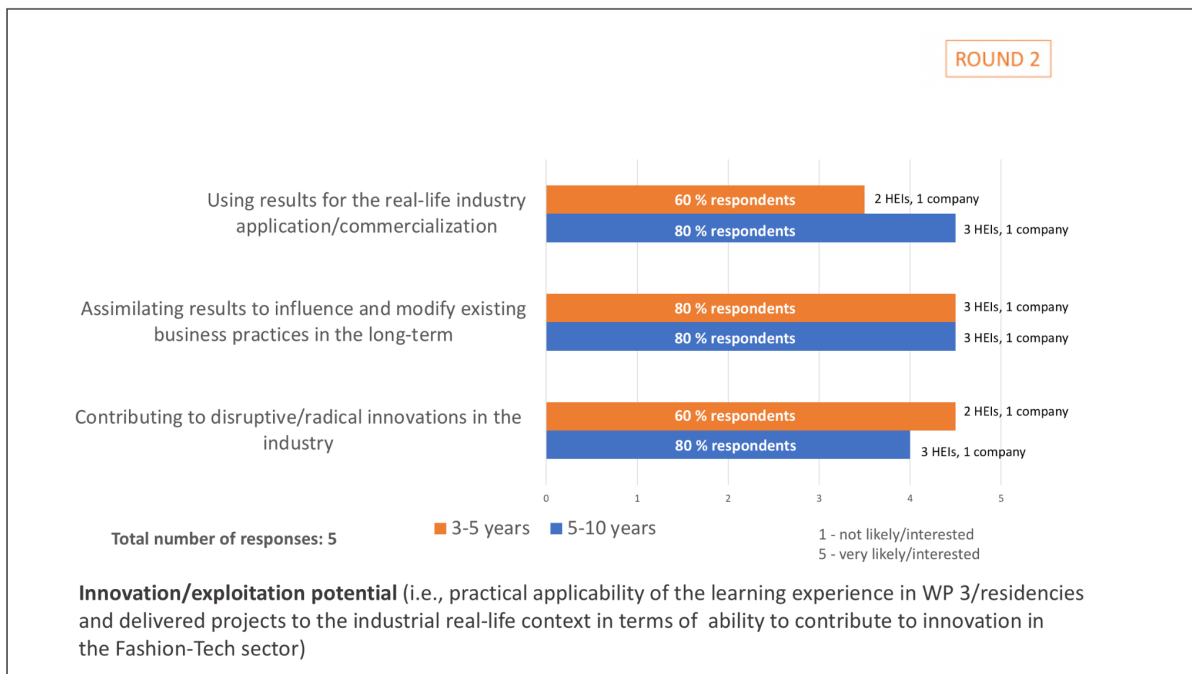
After the second round, the following inference can be made with regards to the innovation/exploitation potential of FT residencies:

- High likelihood (4-5) of contributing to disruptive innovations in the industry in 3-5 years (as rated by 60% of respondents in round 2);
- Relatively high likelihood (4) of contributing to disruptive innovations in the industry in 5-10 years (as rated by 80% of respondents in round 2);
- High likelihood (4-5) of assimilating results (i.e., portfolio of prototypes) to influence/modify business practices both in 3-5 years and in 5-10 years (as rated by 80% of respondents in round 2);
- Moderate likelihood (3-4) of using results (i.e., portfolio of prototypes) for real-life industry application/commercialization in 3-5 years (as rated by 60% of respondents in round 2);
- High likelihood (4-5) of using results (i.e., portfolio of prototypes) for real-life industry application/commercialization in 5-10 years (as rated by 80% of respondents in round 2).

**Figure 35 - Innovation/exploitation potential of the residencies piloted in WP3 (results from 1st round of survey)**



**Figure 36 - Innovation/exploitation potential of the residencies piloted in WP3 (results from 2nd round of survey)**

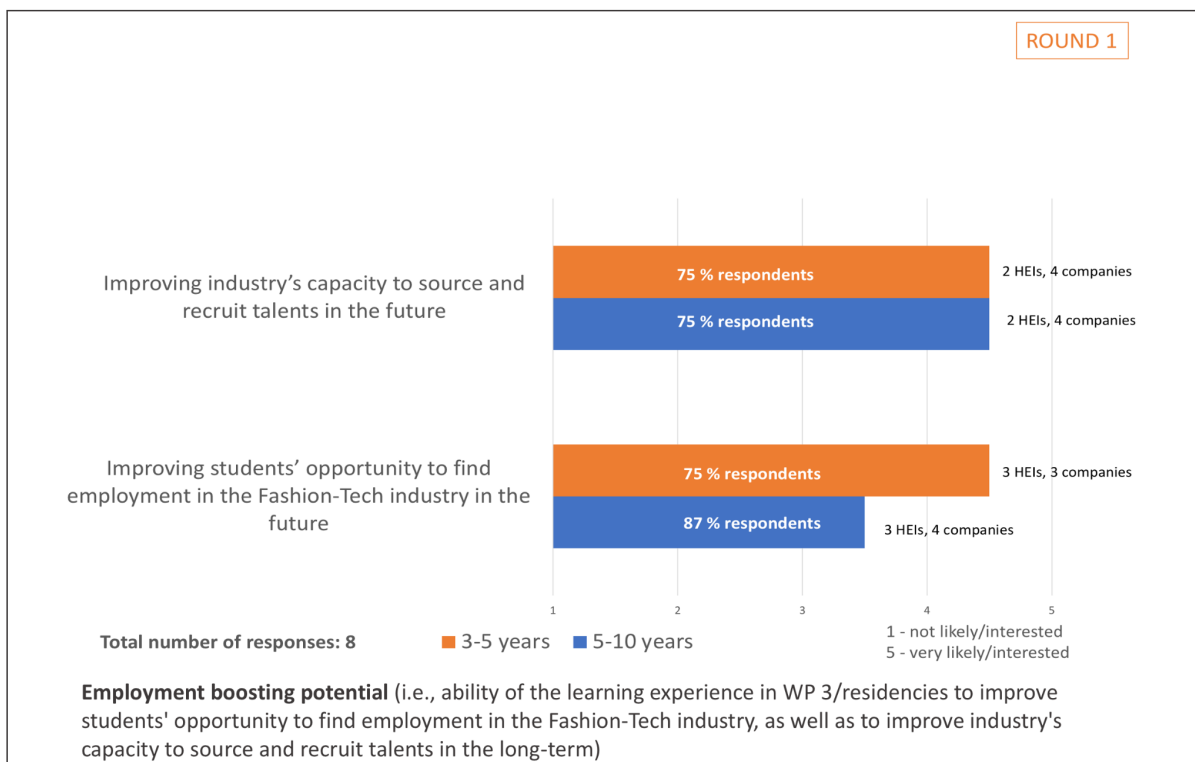


The results of assessments of the employment boosting potential (*i.e.*, ability of the FT residencies to improve students' opportunities to find employment in the FT industry, as well as to improve industry's capacity to source and recruit talents in the long-term) in round 1 and round 2 are presented in Figure 37 and Figure 38 respectively.

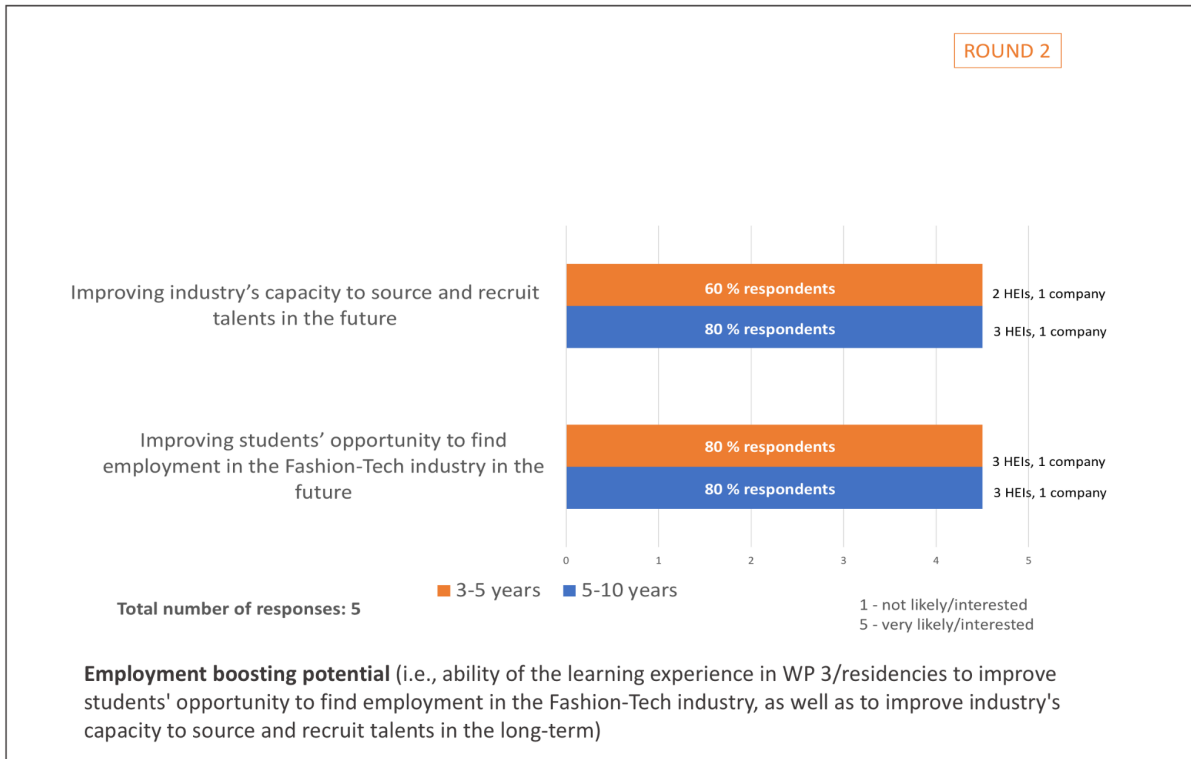
After the second round, the following inference can be made with regards to the employment boosting potential of FT residencies:

- High likelihood (4-5) that FT residencies can improve students' opportunity to find employment in the FT industry both in 3-5 years and in 5-10 years (as ranked by 80% of respondents in round 2);
- High likelihood (4-5) that FT courses can improve industry's capacity to source and recruit talents both in 3-5 years and in 5-10 years (as ranked by 60% and 80% of respondents respectively in round 2).

**Figure 37 - Employment boosting potential of the residencies piloted in WP3 (results from 1st round of survey)**



**Figure 38 - Employment boosting potential of the residencies piloted in WP3 (results from 2nd round of survey)**



In Figure 39, suggestions for long-term impacts' improvements are summarized for the FT residencies piloted in WP3. These suggestions for improvement were identified in the first round of survey for long-term impacts assessment and then ranked by project partners in the second round of survey. In particular, project partners were asked to select and rank the top three improvements among suggestions identified in the first round of survey. Some of the top three improvements can lead to improvements in several dimensions of long-term impacts and are thus highlighted in bold in Figure 39. More detailed discussion of the suggestions for long-term impact improvements for FT courses is presented below.



Figure 39 - Suggestions for long-term impacts improvements for FT residencies

Suggestions for improvement	
<i>New communities of educational practice based on partnership approach</i>	<i>FT industry development and jobs</i>
<p><i>Transferability potential</i></p> <ul style="list-style-type: none"> <li>● <b>Improved collaboration among partners (before/during)</b></li> <li>● <b>Integration of residencies into HEI educational programs</b></li> <li>● Integration of students into goals/activities</li> <li>● Other improvements (organization and legal support; Interdisciplinary teams of students-Including PhD students)</li> </ul> <p><i>Scalability potential</i></p> <ul style="list-style-type: none"> <li>● Workload control for partners</li> <li>● Clear process (ontology) for replication/expansion</li> <li>● Alignment of projects with future company activities</li> <li>● Other improvements (Enhancing student interest; Interaction with other industries' professionals)</li> </ul>	<p><i>Innovation/Exploitation potential</i></p> <ul style="list-style-type: none"> <li>● (More) active involvement of industry partners</li> <li>● Improved student pre-knowledge</li> <li>● <b>Integration of residencies into HEI educational programs</b></li> <li>● Other improvements (Funding for project development)</li> </ul> <p><i>Employment boosting potential</i></p> <ul style="list-style-type: none"> <li>● <b>Improved collaboration among partners (before/during)</b></li> <li>● Improved communication of projects/skills (to companies/HEIs)</li> <li>● Development of student competences to communicate skills</li> <li>● Other improvements (Legal support)</li> </ul>

- Suggested improvements for enhanced transferability potential

- **Improved collaboration among partners (before/during)**

Among the various suggestions for improvement, survey respondents stressed the need to improve collaboration as the highest priority to enhance transferability (First priority for 80%). Specific recommendations included *more structured processes for defining goals and methodologies for collaboration between HEIs and companies* (potentially in smaller working groups-for better commitment), as well as starting these planning processes earlier (e.g., one year in advance). In particular, interaction was discussed as crucial during the process of syllabus development to align expected requirements, and better integrate the learning activities into overall student education (see the following suggestion). Additionally, it was suggested to plan for *more interactions* before the process begins; for instance, an informal warm up/meet and greet between companies and students to promote and facilitate planning processes. Overall, emphasis was placed on improving the level of involvement of industry partners, for instance, through alternating the coordination of meetings for planning/preparation, with another possible opportunity being the joint involvement of multiple companies/students on a single topic area. To improve collaboration, the *introduction of digital tools/platforms for visual management* was suggested, to overcome challenges with team building and accountability, through enabling information sharing and collaborative planning, moderation and evaluation.

- **Integration of residencies into educational programs**

Participants argued the need for specific changes to the structure of the residency model for short-term impact improvements. The integration of residencies into educational programs was considered by survey respondents to be key for long-term transferability (second priority for 60%). This includes recommendations to align the residency model with existing routines for field study/internships, and the FT course. Additionally, this was considered to benefit from long-term collaboration between companies and HEIs for consistency regarding the implementation of residencies within student education. This also required improved alignment of HEI and company expectations, in terms of workflow, methodologies and commitments (e.g., through processes/tools, as discussed with short-term impacts and within several other suggestions for improved long-term impacts). Overall, adjustments should be made to both the course curriculum and residency to ensure long-term integration.

- **Integration of students into planning goals/activities**

Beyond the general suggestions regarding improved collaboration among partners, there were several improvements highlighted by survey respondents regarding better integrating students into residency planning processes and goal development (3rd priority for 80%). Specific recommendations include engagement with students earlier in the process (e.g., beginning of educational programs) to provide clarity and information regarding expected outcomes, and support for education and practicalities/logistics. This early involvement can benefit from enhanced collaboration with student associations. Additionally, prior to the residency, HEIs should provide support for students in the form of open educational resources (OER) and other forms of documentation. During the residency projects, student collaboration can be enabled with shared digital tools/platforms for project management, as discussed with several other suggested improvements. Specifically, such tools should support project management through collaborative planning of activities within a project Gantt, and ongoing monitoring of how the activities progress and any constraints on either planning or execution.

- **Other improvements**

Among the various other suggestions that were put forward by respondents, several were regarding improvements to organization and organizational support. For instance, improved legal support during the drafting of contracts, and the potential for a dedicated budget for project management (which was considered to benefit the process of aligning objectives, as stressed in other suggested improvements discussed). Another suggestion was regarding the development of interdisciplinary teams, which could include different students from an HEI going to the same company to develop project prototypes from different perspectives, and/or at different educational levels (e.g., additionally including PhD students).

● *Suggested improvements for enhanced scalability potential*

- **Workload control for partners**

While there was not an overwhelming majority of survey respondents highlighting the need for better control of the workload for FT residency partners, it was a top priority for some (first priority for 40%) among other priorities emphasized. Specifically, the suggestions stressed the need for time and budget to be allocated to partners more appropriately. Moreover, it was suggested that organizational support can be beneficial in decreasing management complexity. Additionally, suggestions focused on streamlining and standardization, e.g., through a clear ontology-as addressed below (including quantification of hours for administration) for communicating benefits and commitments associated with the residency processes. Within this goal of additional streamlining, it was specifically suggested to set up research projects/topics in FT courses (like in WP2) before the residency process, to align expectations and strengthen partnerships.

- **Clear process (ontology) for replication/expansion**

Another suggestion emphasized by some respondents (second priority for 40%) was the need for a process ontology for the replication of residencies. This includes consolidating the information regarding the piloted partnership processes to embed the residency both in continuing company activities and HEI educational curricula. This information can then be used to provide details regarding processes and advantages of residencies to engage new partners. Specific information to include is a list of current and future partners, benefits and rewards for participants (students and companies), a clear description of workload/commitments, and possible funding opportunities. Such funding applications can support partners with resources for the replication and expansion of residencies to supplement existing (course/project) budgets.

- **Alignment of projects with future company activities**

In addition, it was more widely highlighted by some survey respondents (first and third priority for 40%) that improvements are required to better align residency projects with company activities in the future. This requires more structured digital tools/platforms for collaboration, as discussed with other suggestions for enhanced short-term impacts. Additionally, it requires embedding the residency model within HEI educational programs, which can benefit from the development of company roadmaps to define required skills and research topics to be integrated into programs/curricula.

- **Other improvements**

Among the other suggestions, some issues addressed were facilitating greater interest among the students at HEIs, and facilitating collaboration with professionals in other industries that share common interests.

- *Suggested improvements for better innovation/exploitation potential*

- **(More) active involvement of industry partners**

While there was not a clear first priority for survey respondents, all considered improvements to the level of involvement of industry partners to be either a first or second priority. This can benefit from better alignment of student projects (research

questions) to company interests and challenges (e.g., through enhanced/early involvement, as discussed with short-term impact suggestions). Additionally, a suggested improvement was to change organizational mindsets to focus on the potential for innovation and competitiveness for companies through involvement with HEIs in general, and residencies (and courses) in particular. This can benefit from including an interdisciplinary team (designers, operators, managers, HR, etc.) in the residency process; however, it can be challenged by company cultures (research focus vs. traditional company cultures).

#### - **Improved student pre-knowledge**

Another priority for some respondents (third priority for 40%) was the improvement of the levels of student knowledge when starting residencies. Specific recommendations included integrating courses with FT residencies to align both into an educational curriculum and enhance students' pre-knowledge. Additionally, specific educational experiences (lectures, workshops, etc.) can be designed to focus on/highlight topics that are of significant interest to companies. Moreover, a module or short course could be used to support the residencies within an elective course (like in WP2), which could be designed with specific companies. Additionally, HEIs could provide career development services to support students as they identify their strengths and weaknesses regarding the skills required in residencies. Overall, it was stressed that students should be provided with clear processes and paths to assess and fill in missing knowledge in preparation for residency activities (e.g., project proposals to be used to enable assessment of critical knowledge, understanding and reasoning).

#### - **Integration of residencies into educational programs**

As previously highlighted, some survey respondents (third priority for 40%) stressed the need to improve the integration of the residency model into the educational programs of HEIs to enhance innovation and exploitation potential. This should include standardization of residency models within a well-defined educational curriculum, which can be customized based on learnings from piloted partnerships. Specific recommendations within this suggestion include development of interdisciplinary teaching teams at HEIs and supporting enhanced involvement of companies (teaching/workshops, etc.) at HEIs with appropriate resources and budget allocation. These learning experiences can support co-development and more active involvement of industry partners, as stressed in several other improvements.

#### - **Other improvements**

The other suggestions were focused on increasing awareness of the potential for students to challenge "business as usual" and thus support more radical innovation (long-term avenues) than is possible within the limits of current company activities. However, with awareness of this potential other improvements stressed the need for additional funding for projects to be more relevant to business and markets, and specific events that can enhance such innovation possibilities.

- Suggested improvements for employment boosting potential

- **Improved collaboration among partners (before/during)**

The improvement priority emphasized by a majority of survey respondents (first priority for 60%) was enhancing collaboration among HEIs and company partners. The specific recommendations included designing projects to focus on relevant company challenges and the skills required to meet those challenges. This was considered to benefit from better visibility and communication of student skills before and after residencies (self-assessment through skill radar, as can be supported by outcomes from WP 1). Such assessments can make visible the level of alignment of student skills to residency activities, which can provide feedback into the ongoing skill development in FT courses. Additionally, this can benefit from early involvement of companies in FT courses (or joint courses) to improve student knowledge before residencies (as discussed with other suggested improvements). Moreover, having a clearly defined and formalized residency model (as previously discussed) was considered to be beneficial for improving collaboration. Specifically, a clear process ontology that focuses on the details rather than a more general process view was highlighted as key.

- **Improved communication of projects/skills to companies/HEIs**

Another priority to improve the employment potential of students was to increase the visibility of student projects and skills to various stakeholders (second priority for 60%). Specific suggestions included promoting the results of projects through the organization of an event/competition jointly among partners (e.g., through improved collaboration as addressed in other suggested improvements). Additionally, the residencies can be awarded certificates, commendations, or other honors that can be communicated on project/event/company websites, newsletters, and social media to create visibility of student skills and position these students more competitively in the industry. These and other platforms for dissemination of project results mentioned can enable the promotion of student/alumni testimonials. In particular, the possibility of having a certification of the residency participation and achievements was highlighted as a key opportunity to improve such communication (as discussed with suggestions for improved short-term impacts).

- **Development of student competences to communicate skills**

As a complement to the previous point, another priority highlighted (third priority for 60%) was to directly support and improve the skills of students regarding communication of the newly developed skills. For instance, it was considered beneficial to provide opportunities for students to develop, and guidance regarding, their abilities to present skills through pitches, portfolios, CVs, and cover letters. This requires additional tutoring focused on the students' critical reflections on their achievements and skills. Such opportunities could be in the form of a pitch competition in which students can show their ability to identify and communicate their developed skills, with company involvement to support communication in professional terms.

- **Other improvements**

The other suggestions for long-term employment boosting potential emphasized the importance of having additional legal support for dealing with the processes of enrolling students within the residency model, including the development of contracts.

## 4. Summary of improvements: priorities and recommendations

A summary of improvements (discussed in the previous chapter) for enhancing the short-term and long-term impacts of FT courses and FT residencies is summarized in Figures 40 and 41 respectively. The remainder of this chapter focuses on discussion of priority improvements for enhancing short-term and long-term impact dimensions (highlighted in bold in Figures 40-41) and recommendations for future FT learning experiences.

### 4.1 Priorities for FT courses

Based on results of short-term impact assessments, several priorities for action (highlighted in bold text in Figure 40) can be suggested for planning and implementing future FT courses, which can lead to improvements in several dimensions of short-term impacts, namely:

- **Improving the partnership development process** before and during courses is key, specifically with a focus on: knowledge sharing among partners via collaborative course planning (to align expectations with regards to course objectives, targeted skills development matching market needs, and different partners' contributions in accordance with project budgets); enhanced company involvement in course planning (specifically to define a project brief that is better connected to industry agendas/needs/challenges and that explicitly specify key project outcomes and skills development that are considered by companies and HEIs as relevant/important); enhanced company involvement in students tutoring during the challenge-based part of the course (e.g., students' mid-term and final project presentation can be accompanied by a reflective part where implications, limitations and future application potential of the developed portfolio of prototypes are discussed jointly with companies). Based on survey results and discussion of improvements related to short-term impacts assessment during the roundtable discussion, improving the partnership development process will not only enhance its quality and efficacy per se but will lead to short-term impact improvements related to the other three dimensions.
- **Improving interdisciplinary knowledge sharing/exchange** is another important recommendation for short-term impacts improvement, with a particular focus on improving dialogue and interaction between students and tutors from the companies, ensuring multidisciplinary student groups, and organizing discussion sessions where students, companies and HEIs can jointly reflect on the interdisciplinary approach and team collaboration during project work, as well as on interdisciplinary aspects of the

delivered portfolio of prototypes. Improvements to enabling better interdisciplinary knowledge sharing/exchange can positively contribute to the overall quality and efficacy of education experience, but also will lead to better knowledge/skills acquisition by students on how to integrate fashion and tech domains to design innovative and sustainable products, services and business models (thus enhancing the quality and efficacy of graduate knowledge, skills and competences). Moreover, providing and ensuring practices and activities that facilitate interdisciplinary knowledge sharing can lead to more specific/in-depth presentation of multidisciplinary aspects of innovative FT solutions (*i.e.*, portfolio of prototypes) being essential for enhancing the applicability/usability for project partners and thus enhancing relevance for boosting creative encounters in FT companies.

- *Better/more focused practice-oriented project brief* enabled by improved partnership development process is key not only for enhancing the relevance of delivered student projects to the physical realm (*i.e.*, agendas, needs and challenges) of companies thus boosting their creative encounters, but also for enhancing the quality and relevance of graduate knowledge, skills and competence, and the quality and efficacy of new educational experience. Initially defining the project briefs jointly with the companies, and then deciding on the content of theoretical pillars, can provide students with relevant knowledge for the challenge-based part of the course and thus enable the delivery of more tangible and innovative proofs of concepts/portfolio of prototypes. Moreover, formulating course objectives and contents after defining project briefs driven by industry needs will ensure the relevance and quality of acquired knowledge, skills, and competence for future professions. Finally, project briefs that are co-created and reviewed by companies to make sure they align with their needs and interests, will create incentives for better company commitment to course participation, especially during student tutoring in the challenge-based part of the course. In addition, this will enhance the overall quality and efficacy of new educational experience via improved knowledge sharing and co-creation together with companies.
- *Better alignment of skills and competences offered by courses with future career prospects (job roles and relevant professional skills) in FT industry* has been highlighted by project partners as a key priority for improvement during the roundtable discussion for enhancing the quality and relevance of graduate knowledge, skills, and competences. Better linkage of courses to future jobs and skills should be considered during the partnership development process (as part of knowledge sharing and collaborative course planning between companies and HEIs). Specific recommended measures include: (i) providing a list of possible job roles and relevant professional skills (traditional and new) that a course aims to address (for this, results of WP 1 can be included as an additional theoretical pillar); (ii) preceding theoretical pillars with some information on their relevance to the challenge-based part of the course and how knowledge gained can be applied within the professional context and for skills/roles relevant to the FT sector; and (iii) including final reflections by students on their skill developments that are relevant for FT job roles.
- *Improving company involvement* is another issue highlighted by project partners as a key priority for improvement for enhancement of the partnership development process. Specific measures recommended include: (i) more active commitment of companies

during mentoring sessions in the challenge-based part of the course-which requires clear tasks, responsibilities and resources; (ii) more involvement of companies in setting project briefs; (iii) holding roundtable discussions/workshops early in the process of planning the courses (with HEIs and companies) to define interesting areas for the students' projects; (iv) defining the content of the theoretical pillars after definition of project briefs. These suggestions to enhance company involvement can also lead to improvements to the overall quality and efficacy of such educational experiences, and the associated skills and competence development by students for future employability.

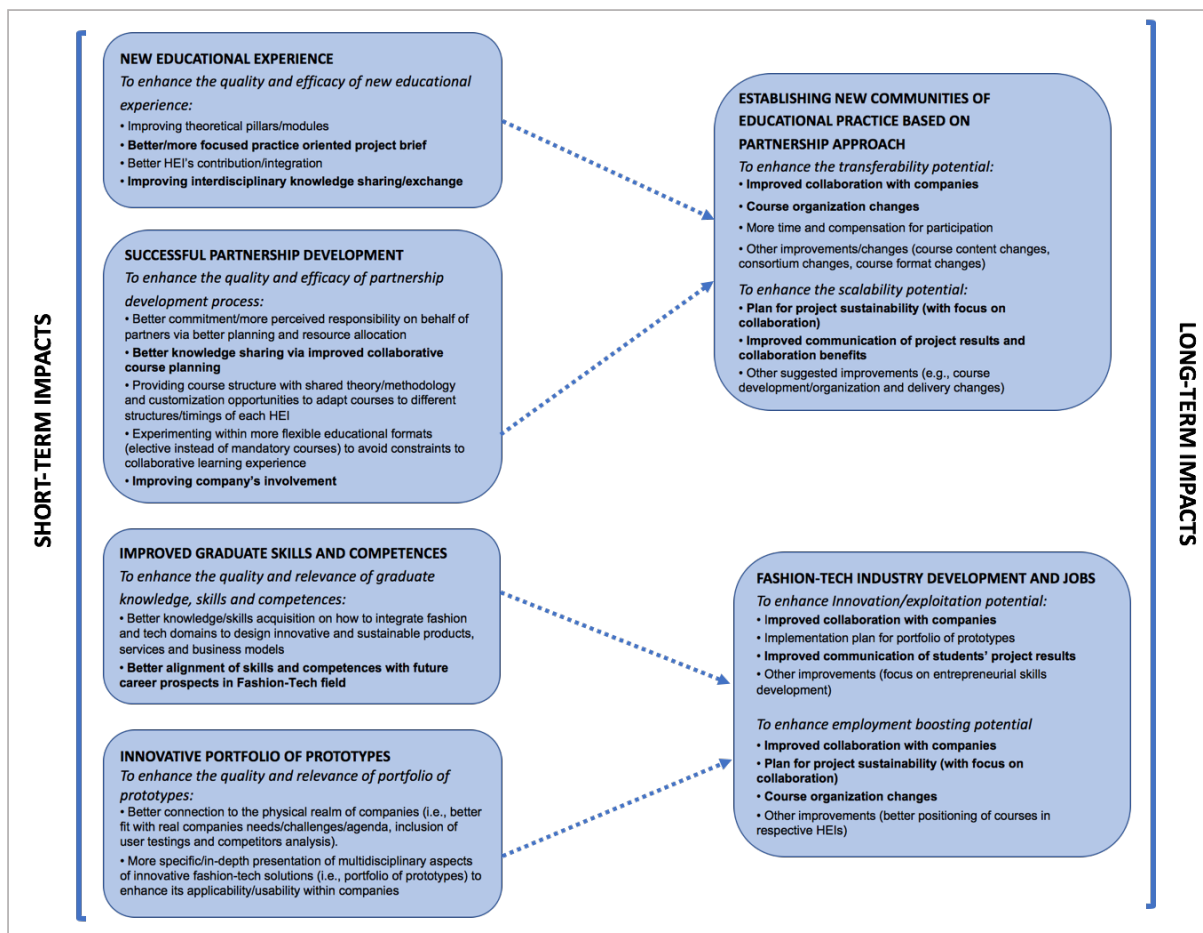
Based on the results of the long-term impact assessment, the following priorities for action (highlighted in bold in Figure 40) can be suggested for planning and implementing future FT courses to support various long-term impact dimensions:

- **Improved collaboration with companies** for enhanced transferability, innovation and exploitation, and employment boosting potential should account for the following key improvements: (i) joint review and definition of relevant skills set and associated job descriptions that future courses will offer to students; (ii) better connection of the challenge-based part of the course to the physical realm of the companies; (iii) joint critical discussion/assessment of implementation potential of student projects; and (iv) organization of industry events at the end of the courses where students can showcase their projects and receive career advice from companies on their professional portfolio.
- **Plan for project sustainability (with focus on expanding/strengthening collaboration)** for enhanced scalability and employment boosting potential should consider the following key improvements: establishing a clear plan for future delivery of developed courses within the consortium, as well as process and criteria for enrolling new partners. This requires making strategic choices about the overall topical areas and educational levels (as part of master level educational curriculum and professional training) to be targeted with future courses, and consideration of how to make and harmonize courses so they become recognized for professional training in the industry. Offering courses for upskilling professionals has been highlighted as one key area for consideration for improved scaling and employment boosting potential at the roundtable discussion as it can motivate more companies' participation.
- **Course organization changes** for enhanced transferability and employment boosting potential include: (i) better collaborative planning of courses at the very beginning of the partnership development process to help partners align course expectations and foresee benefits of committing to such courses in the long-term; (ii) granting companies the leading role in project brief formulation; (iii) providing process and tools for matchmaking project topics among companies and HEIs; (iv) aligning course curriculum and calendars/timetables among different partners; and (v) providing clear course delivery model (including contents, structure, methodology, assessment methods, collaboration tools for partners to align expectations, roles, responsibilities) accessible for current and new partners replication in the coming 10 years under creative commons public licenses (e.g., Creative Commons Attribution - ShareAlike 4.0 International).



- Improved and targeted communication of project results beyond HEIs (towards companies, potential users and students) for enhanced scalability and innovation/exploitation should include information provision (leaflets, short project briefs) and dissemination activities (targeting industry, academia, public events). Its focus should be on raising awareness about the portfolio of prototypes delivered by students, skill development opportunities offered by courses that match job requirements, and collaboration benefits for potential partners to join in future course implementation.

**Figure 40 - Summary of improvements for enhancing the short-term and long-term impacts of FT courses delivered in WP2 (priority for action are highlighted in bold)**



## 4.2 Priorities for FT residencies

Based on the results of the short-term impact assessment, priorities for action for FT residencies (highlighted in bold in Figure 41), which can lead to improvements in several dimensions of short-term impacts relate to several key areas, namely:

- Planning and management of the residency model (before/during) changes can lead to improved short-term impacts in all dimensions and is the main area of improvement required for better partnership development. For enhanced partnership development

processes the key suggestions were focused on improving the collaboration between all residency participants (HEIs, companies, students). To do this, interactions and feedback should be encouraged throughout the year-to identify changes regarding interesting research subjects (e.g., through scheduled opportunities like workshops, and collaboration within FT courses-which can further enhance the creative encounters in FT companies). Additionally, residency goals (aims/objectives and timelines/deadlines) should be defined collaboratively to align HEI and company priorities, thus increasing the relevance of graduate knowledge, skills and competence. Early planning stages should also provide clarity about the time required for administration activities-together with a clear timeline. There should also be communication for increased clarity about where support for students will come from (company/HEIs). Overall, the integration with FT courses can enable students and companies to define projects based on some initial promising results, and contribute to a broader process of FT skills development, but must be done in accordance with existing courses/curriculum requirements. The management of organizational complexity can be enabled with design/implementation of a digital space for collaboration and communication regarding: (i) goals/expectations; (ii) responsibilities and rules; (iii) Gantt/timelines for both synchronous and asynchronous meetings/activities; and (iv) evaluation activities-to be simplified, for instance, using google forms/MIRO etc. However, in the long-term, a partner responsible for project management would be beneficial to support these processes.

- Structure of the residency model adjustments were key to support improvements to the overall educational experience as well as student skill levels, and to enhance the creative encounters in FT companies. For all these dimensions, increasing the duration of the residency projects was the main priority stressed. Such expanded project durations can allow for iteration within the prototyping process but should be combined with clearly defined stages (e.g., analysis of requirements, design, prototyping) and enhanced planning before the residency project (as previously discussed). Moreover, the quality of the educational experience can be enhanced by more collaborative tutoring including both HEI and company tutors. Together with sufficient time for iterative cycles of prototyping and testing, graduate skills can be enhanced by both knowledge exchange and co-creation processes during planning in advance of the residency project and guidance/methodologies for high quality outcomes during the process. While these structural adjustments can additionally boost creative encounters in FT companies, other related suggestions focused on working within (or overcoming) time frame limitations by delimiting project prototype scope-either to the general idea or the details; enabling students to work in groups; or integrating the residency into thesis/PhD projects.
- Defining and positioning skill sets gained from FT residencies is another improvement which should be combined with the previous suggestions to lead to enhanced quality of graduate knowledge, skills and competence. This can include some certification of the skills that are acquired during the process, that can act as a “sign of quality”. The auditing of, and development of, (soft/hard) skills can be supported by integration with FT courses (as mentioned in the previous section). Additionally, student capabilities can be enhanced by other learning opportunities (e.g., workshops) to focus on soft skills like pitching and presenting their work. Overall, the skills needed should be

understood and positioned within the dynamic industry context from the start, i.e., understanding in relation to socio-political, economic and environmental agendas. The piloted FT residencies and courses can support this positioning and defining of required skills; however, long-term goals should include the development of multidisciplinary teams to identify changing knowledge and skill gaps in alignment with pressing issues within companies.

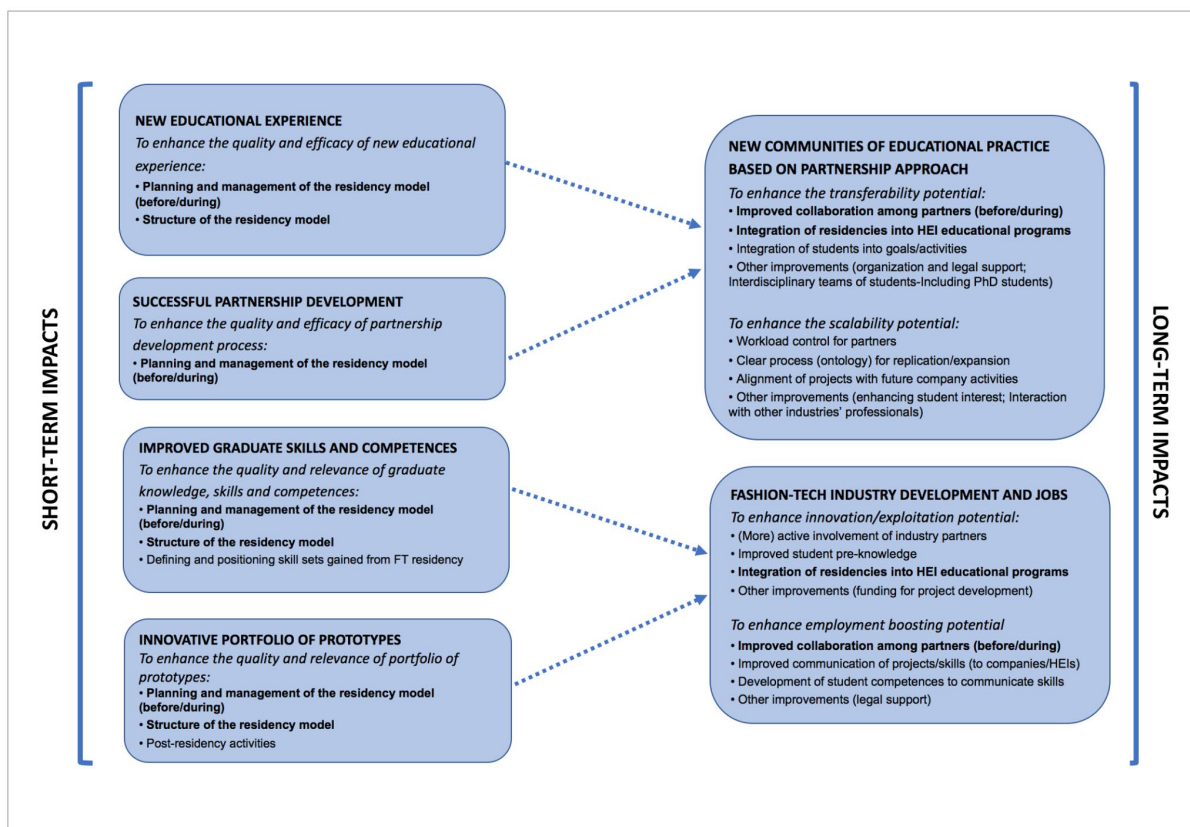
- Post-residency activities are another key improvement suggested for greater relevance for boosting creative encounters in FT companies, which can include different opportunities for evaluation and promotion of projects. Among the specific post-residency activities discussed are competitions, or similar, for assessment of the resulting projects by third parties. Additionally, the ability to have graduate placement in companies was considered a crucial activity to strive for in the long-term.

Based on the results of the long-term impact assessment, the following priorities for action can be suggested for planning and implementing future FT residencies (highlighted in bold in Figure 41) to support various long-term impact dimensions:

- Integration of residencies into HEI education programs for enhanced transferability and innovation/exploitation potential should account for the following key improvements: (i) collaborative efforts between companies and HEIs to further standardize the residency model with defined curriculum, which in turn will create opportunities for better positioning and institutionalization of residencies in mandatory educational curriculum of respective HEIs; and (ii) alignment and integration of new learning experiences developed in WP2 (FT courses) and WP3 (FT residencies). With regards to the latter, FT courses can contribute to equipping students with better pre-knowledge to successfully deliver more tangible portfolio of prototypes ready for market application, thus facilitating the innovation potential of FT residencies. Moreover, FT residencies can build on the proofs of concepts developed in students course projects and focus on implementation planning of these within interested companies.
- Improved collaboration among partners (before/during residency) for enhanced transferability and employment boosting potential should account for the following key improvements: (i) more structured processes for defining goals; (ii) collaborative working methods and processes for implementing residencies; (iii) enhanced/early involvement of companies in planning residency to better align student projects to real-life industry interests and challenges; and (iv) involving students into residency goals and activities planning. These collaborative residency planning activities (before/during) are critical for its successful delivery in the future and generating intended long-term impacts, and thus require more time and resource allocation, as well as creation of digital support tools/platforms to assist in collaborative residency management (by e.g., improved information transparency, matchmaking HEIs and companies in terms of residency topics considered as interesting/relevant, visibility of each partner's contribution, and opportunities to make adjustments during the residencies if certain problems are encountered by partners and students).

Both aforementioned priorities require several improvements associated with making the proposition and process of residencies clearer for all parties involved, which requires improvements to both internal and external communication. In particular, internal communication should focus on clear specification of the residency process/ontology for replication, required efforts for workload control, and expected residency project deliverables/results to all parties involved (companies, HEIs, students). External communication improvements should focus on better communication of students' projects/portfolio of prototypes and developed skills to the industry, which will enhance employment boosting potential. In particular, organizing several “post-residency activities” are suggested in the format of competition events (where students are also able to strengthen their communication skills when pitching their projects to the industry) and interactive skills checks (to better define and communicate the level of skills and competence development to both companies and companies, but also to provide insights with regards to required skills improvements to be targeted in future courses).

**Figure 41 - Summary of improvements for enhancing the short-term and long-term impacts of FT residencies delivered in WP3 (priority for action are highlighted in bold)**



### 4.3 Recommendations for future FT learning experience

Based on discussed improvements and priorities for action to facilitate the successful delivery of short-term and long-term impacts of FT courses and residencies, several recommendations can be suggested specifically targeting HEIs, companies, and educational policymakers

(Figure 42). These recommendations further aim to address three major types of challenges experienced by partners in the process of developing and implementing new FT learning experiences (courses and residencies), namely:

- constraints associated with partners’ commitment to participation (due to existing mindsets and institutional structures, limited awareness of benefits to engage in collaborative educational practices, insufficient time and resources);
- difficulties related to the overall complexity of organizing interdisciplinary multi-stakeholder FT courses and residencies (due to lack of dedicated project management support that helps establish clear collaboration processes and tools for partners to use when planning and implementing new learning experiences, as well as making required modifications to the process of implementation when certain problems arise);
- challenges of balancing breadth and depth, i.e., tensions between broadness of interdisciplinary curriculum (to address various aspects of FT innovation including sustainability) and specialized education necessary for targeting specific jobs and professional skills profiles, as educating for specific Fashion-Tech jobs and delivery of industry-relevant projects requires more narrow focus, whereas integrating design, technology/engineering, and management along with various sustainability perspectives simultaneously requires a certain degree of broadness.

**Figure 42 - Recommendations for future FT learning experiences**

	<i>To address the challenge of commitment</i>	<i>To address the challenge of organizational complexity</i>	<i>To address the challenge of balancing breadth and depth of educational experience</i>
Recommendations for HEIs	<ul style="list-style-type: none"> <li>- Engaging in industry-oriented educational experience</li> <li>- Promoting long-term commitment</li> <li>- Avoiding high staff turnover</li> <li>- Creating institutional rewards and incentives for participation</li> <li>- Establishing institutional practices for implementing interdisciplinary, multi-stakeholder learning experience</li> </ul>	<ul style="list-style-type: none"> <li>- Establishing project management support services and tools</li> </ul>	<ul style="list-style-type: none"> <li>- Creating continuity and integration between FT courses and FT residency activities</li> <li>- Creating blended delivery models customizable for different educational programs and career paths</li> <li>- Collaborating with career services</li> </ul>

<p>Recommendations for companies</p>	<ul style="list-style-type: none"> <li>- Promoting long-term commitment</li> <li>- Avoiding high staff turnover</li> <li>- Creating organizational rewards and incentives for participation</li> <li>- Changing mindset towards openness to long-term radical innovation that FT courses and residencies can deliver</li> </ul>	<ul style="list-style-type: none"> <li>- Establishing project management support services and tools</li> </ul>	<ul style="list-style-type: none"> <li>- Changing mindset towards openness to long-term radical innovation that courses and residencies can deliver</li> <li>- Participating in both courses and residencies as integrated/aligned activities</li> <li>- Collaborating on continuous basis with HEIs and career services to create educational experience matching jobs and professional skills requirements</li> <li>- Seeking collaborations within company's existing networks to assist in further expanding or specializing of future learning experiences in accordance with industry needs</li> </ul>
<p>Recommendations to educational policy makers</p>	<ul style="list-style-type: none"> <li>- Allocating more/long-term funding for future FT learning experiences</li> <li>- Awareness raising among stakeholders of benefits of participation in industry-oriented educational model offered by FT learning experiences</li> <li>- Developing incentive schemes for HEIs and companies to institutionalize interdisciplinary multi-stakeholder FT learning experiences</li> </ul>	<ul style="list-style-type: none"> <li>- Allocating more/long-term funding for future FT learning experience</li> </ul>	<ul style="list-style-type: none"> <li>- Capacity development of career services at HEIs to enable their collaboration in FT learning experiences</li> </ul>

Recommendations for HEIs:

- **Engaging in industry-oriented educational experience** where topics emerge from the needs and interests of specific companies is of utmost importance to stimulate company involvement in future FT courses and residencies. HEIs' roles can be to support students methodologically in developing FT solutions/prototypes relevant for application in industry contexts. Such industry orientation in future FT learning

experiences will lead to diversification and increase in the number of participating companies, enabling both short-term and long-term impact delivery. However, the process for extending the network of companies to be engaged in future learning experiences should be carefully considered to balance the opportunities and risks of increasing and diversifying the number of collaborating partners. Gradual/step-by-step increases in the number of partners should be considered, including discussion of pros and cons of the collaborative experience between companies and HEIs prior to and after FT learning experiences. Ensuring such a reflection process in the early stages of network extension should later allow developing a clearer set of criteria for future partners' enrollment, thus making future transferability and scaling more successful.

- **Promoting long-term commitment** is associated with better positioning and promotion of courses at each participating HEI to reduce the risk of FT courses and residencies becoming sporadic and unstructured learning experiences. Promoting long-term commitment will help refining and harmonizing educational contents and activities, as well as the collaboration model/process among partners, via learning processes (e.g., reflection on what works and what does not, and implementing necessary adjustments for successful planning and delivery of future FT learning experiences). Over time, this can lead to establishment of standardized yet customized learning experiences (i.e., 'blended delivery' model with well-elaborated course structure including shared and customizable theoretical and methodological tools to adapt to different study curriculum, learning objectives, assessment methods and academic calendars). Such development will in turn enable the integration of new FT learning experience into existing educational programs at respective HEIs, enabling both short-term and long-term impact delivery.
- **Avoiding high staff turnover** in terms of ensuring continuous involvement/dedication of the same staff (e.g., through securing budget allocation over time at HEIs' administrative planning level) is important for enabling individual's commitment and learning, and thus successful delivery of FT courses and residencies in the future. In particular, enabling individual long-term commitment is important for further detailing the industry needs and challenge, providing detailed expectations on project outcomes considered as relevant by both HEIs and companies, updating educational contents and activities over time to match changing industry expectations, as well as ensuring development of harmonized learning experiences adjusted to different partners' requirements over time. Enabling successful delivery of FT courses and residencies via avoiding high staff turnover should further enhance individual's satisfaction with the learning experience enabling their interest to participate in future replication and scaling activities. In HEIs dealing with large number of staff on fractional contracts, the recommendation to build in measures to avoid high staff turnover is of particular importance.
- **Creating institutional rewards and incentives for participation** is complementary to support implementation of the above-mentioned recommendations (i.e., engaging in industry-oriented educational experience, promoting long-term commitment and avoiding high staff turnover). Whereas at some HEIs collaborative industry-oriented courses are becoming more expected and viewed as beneficial for students and the overall quality of educational programs, there is limited recognition that such courses

are associated with significant organizational complexities and require more time and resources for planning and implementation. As per current HEIs practices, course budgets often remain the same (as for traditional courses), as well as no economic compensation or other rewards/recognition for participation are offered. Among the recommended incentives for participation are increasing the number of hours allocated in course budgets, financial rewards and career promotion opportunities.

- **Establishing institutional practices for implementing interdisciplinary multi-stakeholder learning experience** is an additional complementary measure to address the challenge of commitment to participation. As per current HEIs practices, course syllabi are often expected to specialize within a particular disciplinary/subject domain to get approval from educational boards, making harmonization of educational curriculum (e.g., learning goals, contents and examination requirements) for interdisciplinary courses among different HEIs rather problematic and thus prohibitive for further standardization, which is necessary for integration into HEIs' educational programs. Moreover, the process and procedures for organizing interdisciplinary courses that permit the enrollment of students from different HEIs and access of students from different universities to one educational platform (i.e., hosted by the HEI leading a particular course implementation) are either too complex or underdeveloped. Thus, establishing institutional practices for approval and delivery of interdisciplinary multi-stakeholder learning experience should be established, with a clear process to be followed by partners interested in participation.
- **Establishing project management support services and tools** is important to address the challenge of organizational complexity and can be viewed as a specific measure related to the previous recommendation on establishing institutional practices for implementation of interdisciplinary multi-stakeholder learning experiences. In particular, the following project management support has been recognized by partners as crucial for future successful delivery of FT learning experiences: (i) establishing transparency and openness for continuous iteration of collaboration process before/during learning experiences, (ii) availability of digital collaboration tools for visibility and accountability management of each partner's contribution, (iii) contact management services to assist students placement in companies during FT residencies.
- **Creating continuity and integration between FT courses and FT residencies** is recommended to address the challenge of balancing between the breadth and depth of interdisciplinary educational experience targeting FT jobs and professional skill sets. Running FT courses in preparation of FT residencies will help equipping students with relevant broader competences within design, engineering and management domains to ensure their ability to communicate and work within interdisciplinary teams and to ideate innovative FT proofs of concepts with potential for market applications. FT residencies as a follow-up to FT courses can focus on further implementation planning of proofs of concepts towards more tangible and market ready prototypes in the company context, thus supporting development of professional skills to aid future employment in addition to promoting innovation. Consideration of offering FT courses and residencies as joint learning experiences will also help addressing the challenge of industry partners' commitment, as integration between the two is more prone to



benefit companies with delivery of relevant and innovative portfolio of prototypes, able to boost creative encounters within individual companies in the short-term and supporting FT industry development in the long-term.

- **Creating ‘blended delivery’ models customizable for different educational programs and career paths** (that can be enabled via promoting long-term commitment to participation and supported by institutional incentives, rewards and practices, as discussed above) is also important for balancing between the breadth and depth of interdisciplinary FT learning experiences. Blended delivery models (with well-elaborated course structure, including shared and customizable theoretical and methodological tools-to adapt to different study curriculum and learning objectives) will not only allow for successful integration of learning experiences into different educational programs at various HEIs, but also enable personalization of study/learning paths for students to tackle specific professional skill set and job roles. However, for enabling personalization/customization of students’ learning to different career paths, better alignment of skills and competences with future career prospects in the FT field is required as part of collaborative course planning between HEIs and companies. In particular, companies are expected to be more proactive in communicating skills and jobs viewed as relevant yet underdeveloped within the industry in order to integrate required skills and competence development in the educational curriculum (and adjust it over time depending on changes to industry needs).
- **Collaborating with career services** is important to further balance between the breadth and depth of FT learning experience to harness the benefits of both. In particular, collaboration with career services can aim for organization of different activities/events that help students reflect on the relevance of acquired knowledge, skills and competences for future professions and identify possible employment opportunities. These activities can be organized in the format of workshops, ‘career days’ and competition events open for industry participation, where students can showcase their projects, communicate to future employers the newly acquired skills and competences, receive feedback on relevance and market implementation potential of their projects, and even compete for graduate placements in companies.

#### Recommendations for companies:

Several recommendations suggested for HEIs to deal with the challenge of commitment to participation also apply to companies, namely:

- **Promoting long-term commitment** by better positioning and promotion of courses within the companies but also in companies’ networks will help further refining educational goals and contents, especially in terms of aligning project briefs with real-life practical challenges and needs experienced by companies, ensuring better link between skills and competences development and future job requirements in the industry, and specifying the expected outcomes of student projects perceived as relevant by companies (e.g., what aspects the delivered portfolio of prototypes should tackle and at what level of detail). By promoting long-term commitment, the educational experience and collaboration process for its planning and implementation becomes

more refined and harmonized via organizational learning, with clear awareness of benefits and improved satisfaction with both learning experience and portfolio of prototypes delivered by students, which in turn creates additional incentives for future participation. By promoting long-term commitment and thus enabling better connection of FT learning experience to the physical realm of companies, FT courses and residencies can become co-creation spaces for nurturing talents and innovation, as well as assist companies in future recruitment (e.g., offering graduate placements for high performing creative students).

- **Avoiding high staff turnover** by appointing dedicated individuals and teams to engage with course planning and implementation will allow improving the quality and efficacy of the partnership development process, especially with regards to better communication and knowledge sharing among companies and HEIs. This will further support academic partners in engaging with industry-oriented educational experiences that deliver innovative proofs of concepts viable for commercial implementation and develop professional skill sets relevant for future employment.
- **Creating organizational rewards and incentives for participation** is just as important for corporate personnel as for academic partners, as both parties reported facing time and resource constraints to engage with interdisciplinary, multi-stakeholder learning experiences piloted during the FTalliance project. Companies who intend to join the communities of new educational practices to replicate and scale future FT courses should allocate sufficient budgets, provide financial incentives and create recognition/award schemes for dedicated individuals and teams.
- **Changing mindset towards openness to long-term radical innovation that FT courses and residencies can deliver** will further stimulate company involvement in future FT courses and residencies, as many companies still perceive traditional internship placements (where students focus on more narrow and short-term tasks) more beneficial. As acknowledged by some academic partners, some FT residencies were initially treated as traditional internships, and thus required some efforts to change the perception of companies to facilitate a more creative interdisciplinary approach. By recognizing the value of speculative transformative thinking that FT learning experiences can deliver, companies will become aware of opportunities for long-term radical innovations, which in turn can stimulate long-term commitment, allocation of dedicated personnel and creating incentives for involvement in future courses at the organizational level. Moving the focus away from the narrow tasks towards more broad interdisciplinary industrial challenges will also allow for better balancing the breadth and depth of such educational experiences.
- **Establishing project management support services and tools** has been acknowledged by companies as an important measure to address the organizational complexity of planning and implementing FT learning experiences. Since such services are often lacking within academia while also being stressed by academic partners as important, companies can support future implementation of FT courses and residencies by allocating project management personnel if available in-house. As mentioned above (as part of recommendations for HEIs), project management support should aid multi-stakeholder collaboration by: (i) establishing clear process for

planning and implementing FT learning experience where course expectations including goals and deliverables, partners' roles and responsibilities are made transparent and open for iteration; (ii) providing digital collaboration tools to facilitate knowledge sharing and manage visibility/accountability of each partner's contribution; and (iii) administering students' contract management, ensuring that residency arrangements, expectations and financial reimbursement are made clear to all parties involved.

- **Participating in both courses and residencies as integrated activities** can help address a few difficulties experienced by companies during implemented FT residency pilots. These difficulties include insufficient student pre-knowledge and complexity of matchmaking students' and companies' interests. Both difficulties are caused by the challenge of balancing the breadth and depth of FT learning experiences (i.e., need for multi-/interdisciplinarity vs. need for specialized students' training for particular job profiles and skills). By participating in both FT learning experiences (i.e., courses and residencies) as integrated activities companies can influence the FT course goals and contents to ensure that students receive required pre-knowledge to successfully engage with FT residencies and to be able to deliver residency projects (i.e., portfolio of prototypes) which are sufficiently detailed, innovative and have high implementation potential (that is of direct benefit for companies). In addition, by participating in FT courses in preparation for FT residencies companies can establish early contacts with students and secure better matchmaking of students for residency placements within their organizations based on common interests. FT residencies can be considered as part of specialization and training for specific job roles and professional skills, whereas preceding FT courses can be viewed as broader learning experience targeting various disciplinary domains and associated skill sets to be applied later in the practical context of FT residencies. By participating in both FT learning experiences, companies can contribute to better alignment and integration between the two, in a way that enables customization/personalization of student's study paths throughout the integrated learning experience and supports navigating the required breadth and depth of acquired knowledge, skills and competences to enhance innovation and employment boosting potential.
- **Collaborating on a continuous basis with HEIs and career services to create educational experience matching jobs and professional skills requirements** is of particular importance to strive for the necessary balance between the breadth and depth of interdisciplinary FT learning experiences. Collaboration with HEIs should specifically aim to define and position relevant skill sets in relation to the dynamic industry context (e.g., according to socio-political, economic and environmental agendas) and emerging job needs. Such collaboration is required at the very beginning of course/residency planning to further define educational goals, contents, teaching/learning and assessment methods that are perceived by both partners as relevant and motivating for participation. In the long-term, third-party auditing services can be used to acquire certification as a sign of quality and recognition for training professionals in the FT industry. Career services within HEIs and companies (if available) can assist in the process of mapping skill sets and job requirements prior to learning experience implementation, but can also help organizing post implementation activities (e.g. workshops, 'career days', competition events) where students can

further reflect on the relevance of acquired competence for future careers, and showcase, evaluate and promote their projects in the broader industry setting, as well as network with future employers. In the long-term, the learning experiences can be followed up by graduate placements opportunities to further allow for more specialized professional skills development and enhanced employment boosting potential.

- **Seeking collaborations within a company's existing networks to assist in further expanding or specializing of future learning experiences in accordance with industry needs** can be part of a scaling approach that carefully considers the challenge of balancing broad (e.g., interdisciplinary) and specialized (subject-specific) skills development. In order to enable such an approach to scaling, companies need to promote long-term commitment and create organizational incentives for engaging with courses and residencies (as suggested above) to further clarify and standardize educational goals, contents and outcomes. This would allow for improved understanding of the kind of partners suitable to include in new communities of educational practice, to further diversify and specialize skill sets it aims to develop.

Recommendations for educational policy-makers:

- **Allocating more/long-term funding for future FT learning experiences** is important to help overcome challenges associated with both partners' commitment levels and the organizational complexity of managing multi-stakeholder collaboration. In particular, more/long-term funding can enable: (i) long-term engagement of academic and industry partners in further refinement of industry-oriented educational models (e.g., harmonizing/standardizing educational curriculum aligned with practical realm of companies and customizable for integration into existing educational programs at HEIs); and (ii) establishment of appropriate project management support for a collaborative course planning and implementation process, including creation of digital tools for managing visibility and accountability of partners' contributions. In particular, allocation of more time and resources for managing multi-stakeholder collaboration/partnership development processes should be considered in future project budgets.
- **Awareness raising among stakeholders of benefits of participation in industry-oriented educational model offered by FT learning experiences** is of particular importance for enabling long-term commitment on behalf of academic and corporate partners and successful enrollment of multidisciplinary pools of students, thus contributing to scaling the communities of new education practice in the future. Communication activities (e.g., leaflets, briefs, marketing events) targeting various groups of stakeholders (e.g., education institutions, industry actors, students) can be implemented by educational policymakers in collaboration with FTalliance consortium members and should clearly outline the benefits of engaging with FT learning experiences (including examples of innovative portfolio of prototypes and professional skills development).
- **Developing incentive schemes for HEIs and companies to institutionalize interdisciplinary multi-stakeholder FT learning experiences** will enable individuals and organizations to engage with industry-oriented educational models despite the

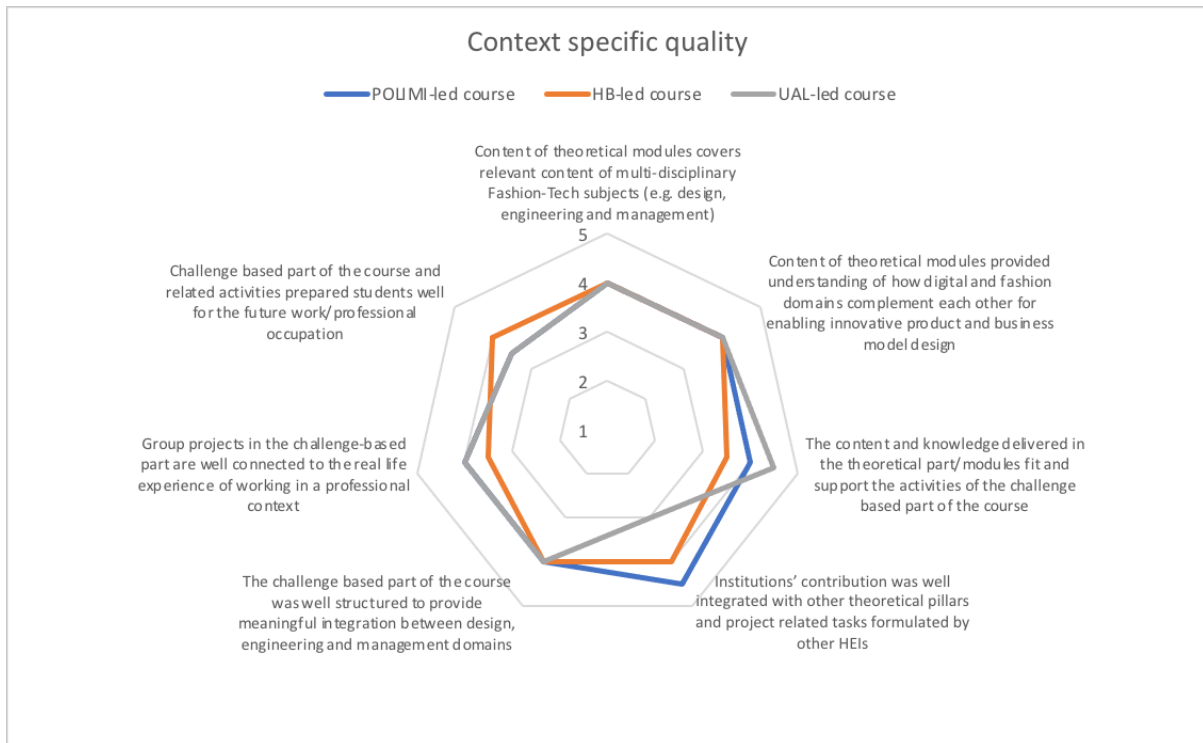
organizational complexity. Such incentive schemes can include recognition (e.g., educational awards) and financial reimbursement opportunities for individuals committed to planning and implementation of future FT courses and residencies. Moreover, certain principles can be outlined at the EU level (e.g., by Steering Committee for Educational/Council of Europe) on how interdisciplinary, multi-stakeholder and industry-oriented courses should be organized, in order to: (i) ease the approval of broader interdisciplinary courses at subject-specific departments by local educational boards; (ii) permit the enrollment of students registered at different HEIs without going through official lengthy process of student admission at the individual HEI's level; and (iii) quickly enable students' registration at one educational platform that is also easily accessible by all course partners and tutors. To further incentivize institutionalization of FT learning experiences by HEIs and companies, certification and third-party awards can be created to recognize their value of training professionals and enabling innovation in the FT industry.

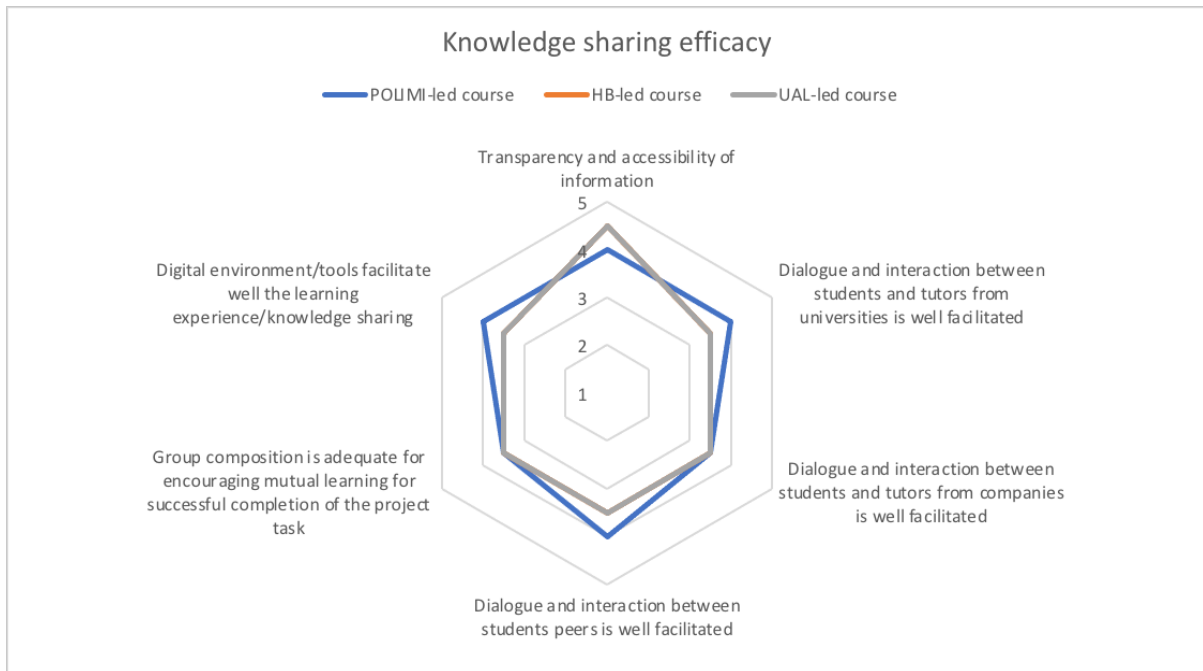
- **Capacity development of career services at HEIs to enable their collaboration in FT learning experiences** can be suggested as an 'intervention policy' by educational policymakers. Collaboration with career services has been recommended for HEIs and companies (see above) to address the challenge of balancing the breadth and depth of FT learning experiences, and via this to enhance its impact associated with innovation and employment boosting potential. However, the nature of career services differs between different academic institutions, with many possessing limited competence and resources to assist HEIs and companies in important planning and implementation activities, such as: (i) defining and positioning skill sets to be developed by FT courses and FT residencies, and matching these with emerging job roles in the FT industry; and (ii) organizing workshops, 'career' days and competition events at the end of FT learning experience (to help students further reflect on relevance of acquired competence for future careers, plan future career paths, promote and discuss implementation potential of their projects, and even compete for graduate placements and entrepreneurial funding based on the level of their achievements). Thus, capacity development activities including awareness of funding opportunities should be made available to career services at academic institutions to support their participation in future FT learning experiences.

## 5. Appendix

### Appendix A: indicators rating for FT courses delivered in WP2

#### Indicators for quality and efficacy of new educational experience





Note: Indicators grading for HB- and UAL-led courses is the same.

Additional qualitative indicators (not measured on the likert scale):

- Equal opportunities for participation - 'yes' by all respondents for all three courses.



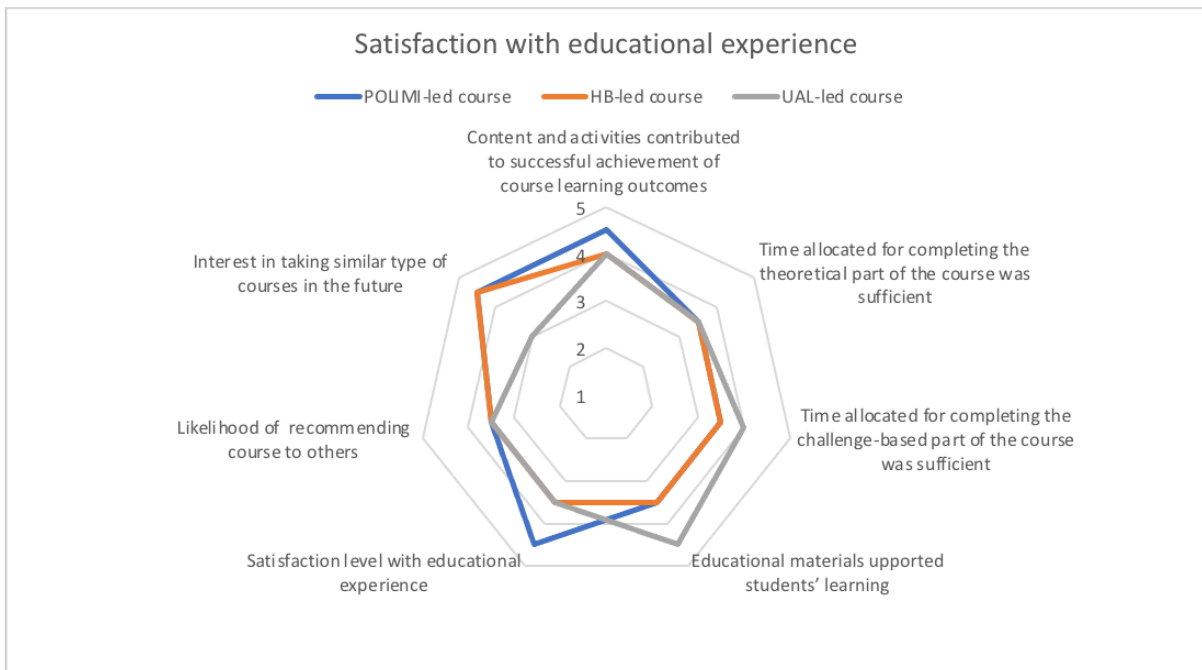
Note: Indicators grading for HB- and UAL-led courses is the same.

Additional qualitative indicators (not measured on the likert scale):

- Type of help from industry and academic tutors:

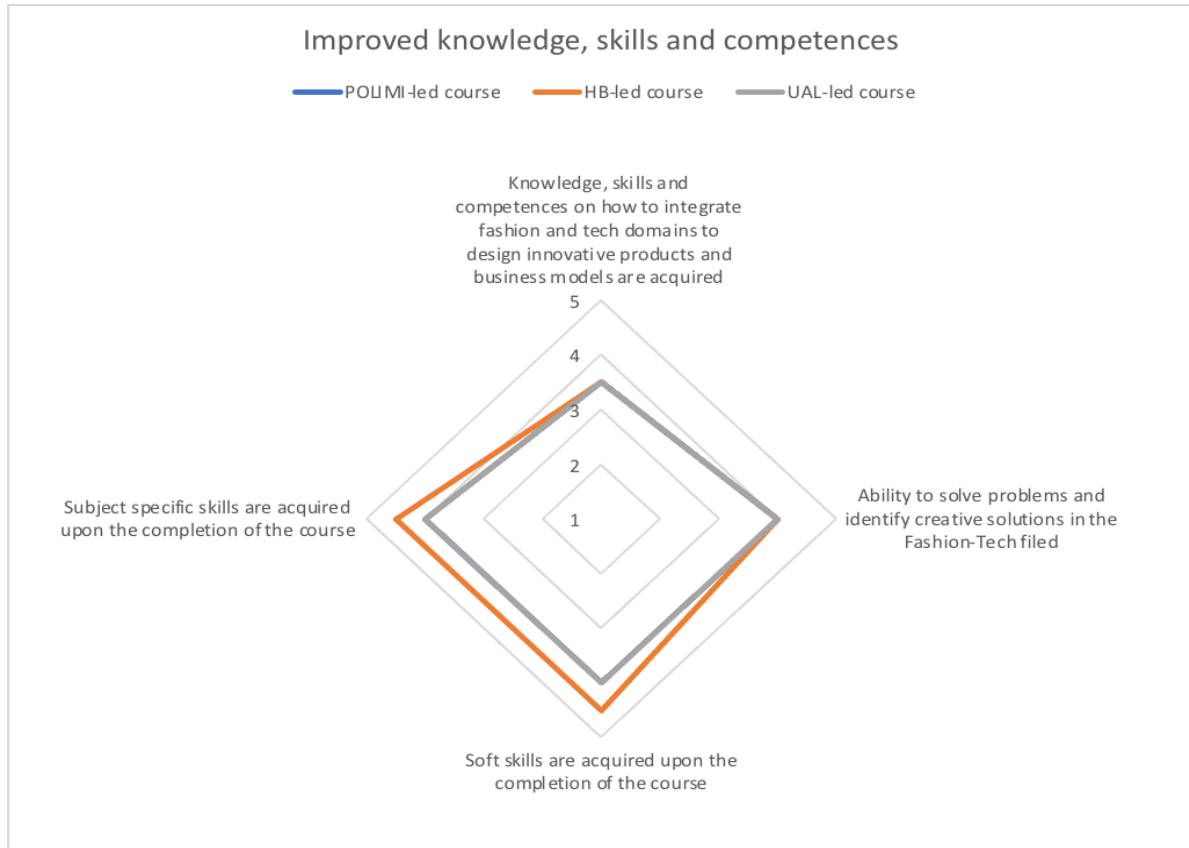
	POLIMI-led course	HB-led course	UAL-led course
Scaffolding of the task	by 10% of students	by 25% of students	by 8% of students

Directive guidelines on how to improve	by 74% of students	by 56% of students	by 75% of students
Inspiration and motivation to identify creative solutions and critically and independently reflect on what improvements are needed	by 50% of students	by 56% of students	by 67% of students
Critically and independently reflect on what improvements are need	by 66% of students	by 69% of students	by 25% of students
HEI's tutors actively participated in joint co-production of knowledge	by 45% of students	by 37% of students	by 50 of students
Industry tutors actively participated in joint co-production of knowledge	by 13% of students	by 19% of students	by 33% of students

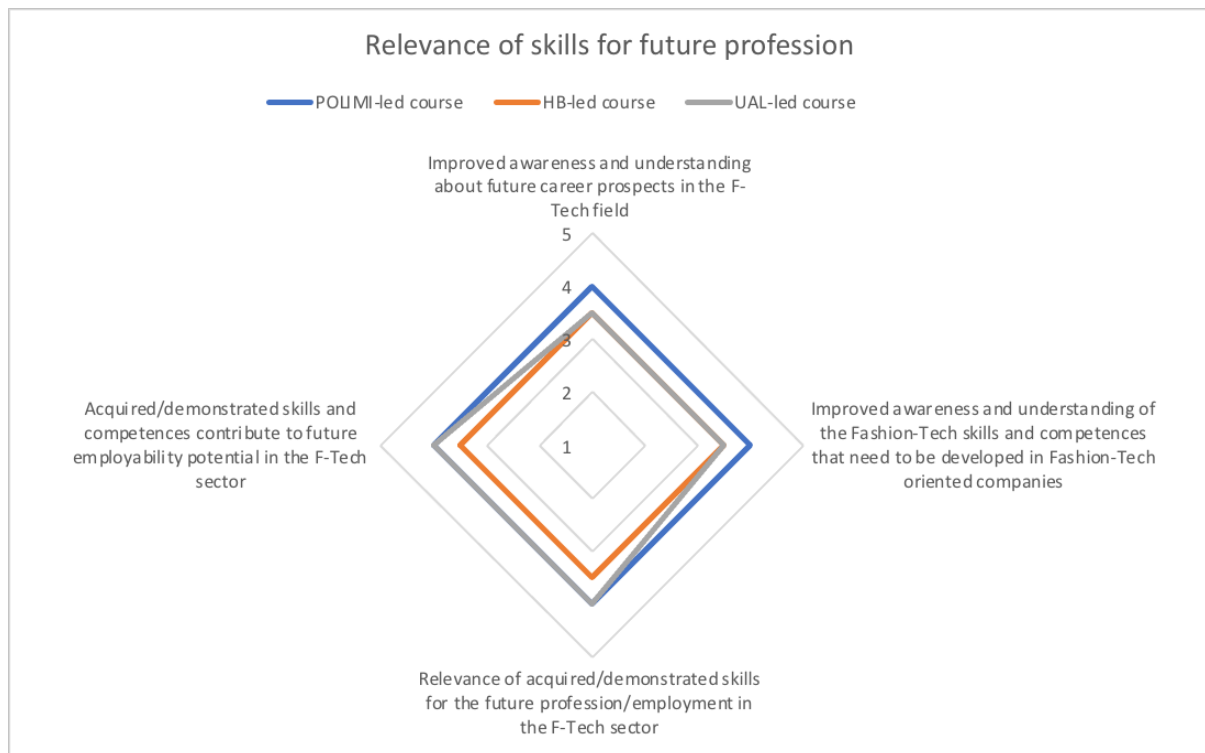


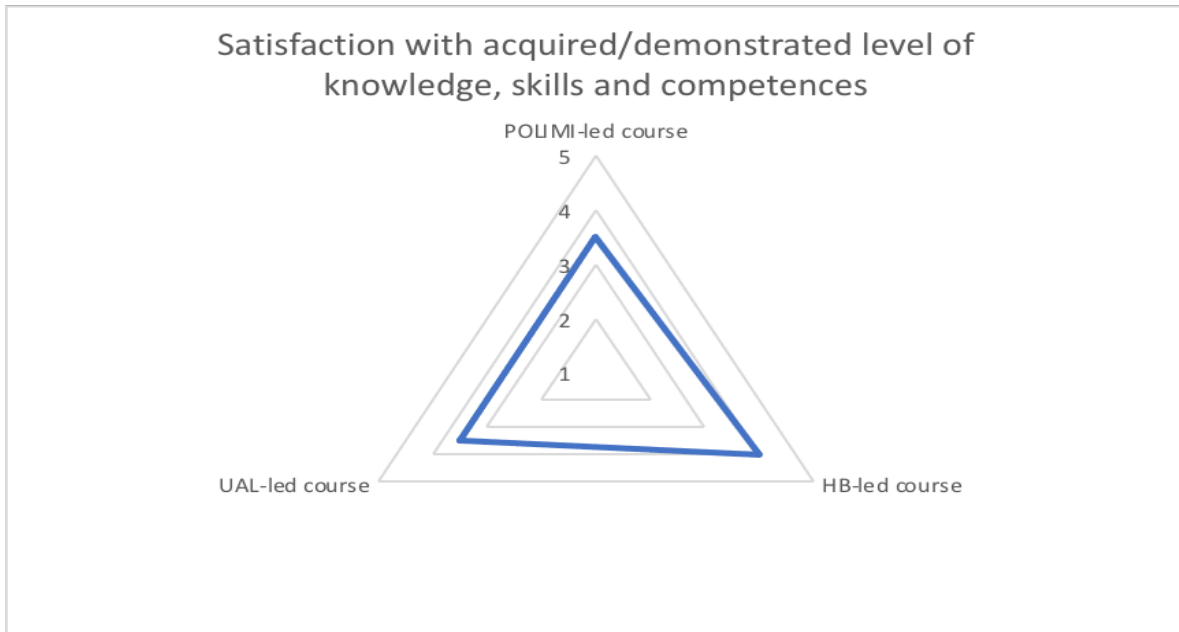


## Indicators for quality and relevance of graduate knowledge, skills and competences



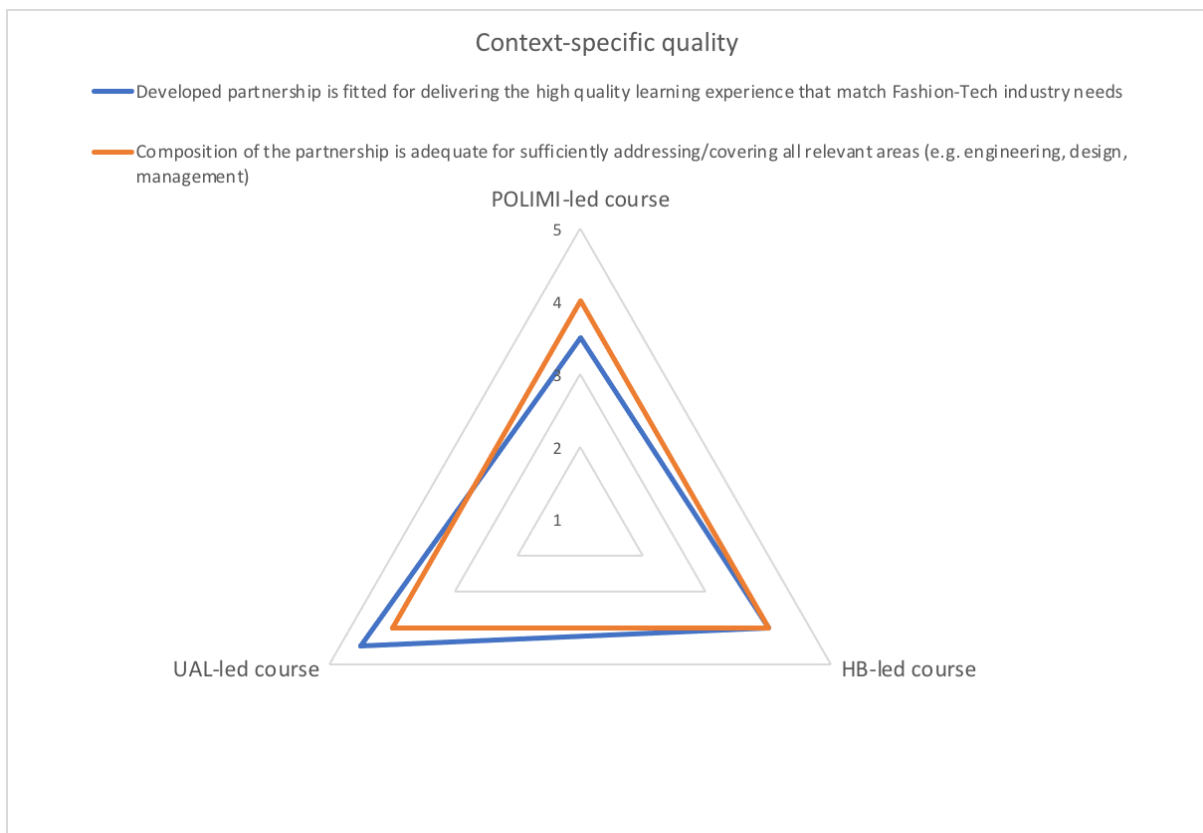
Note: indicators' rating for POLIMI- and UAL-led courses are the same





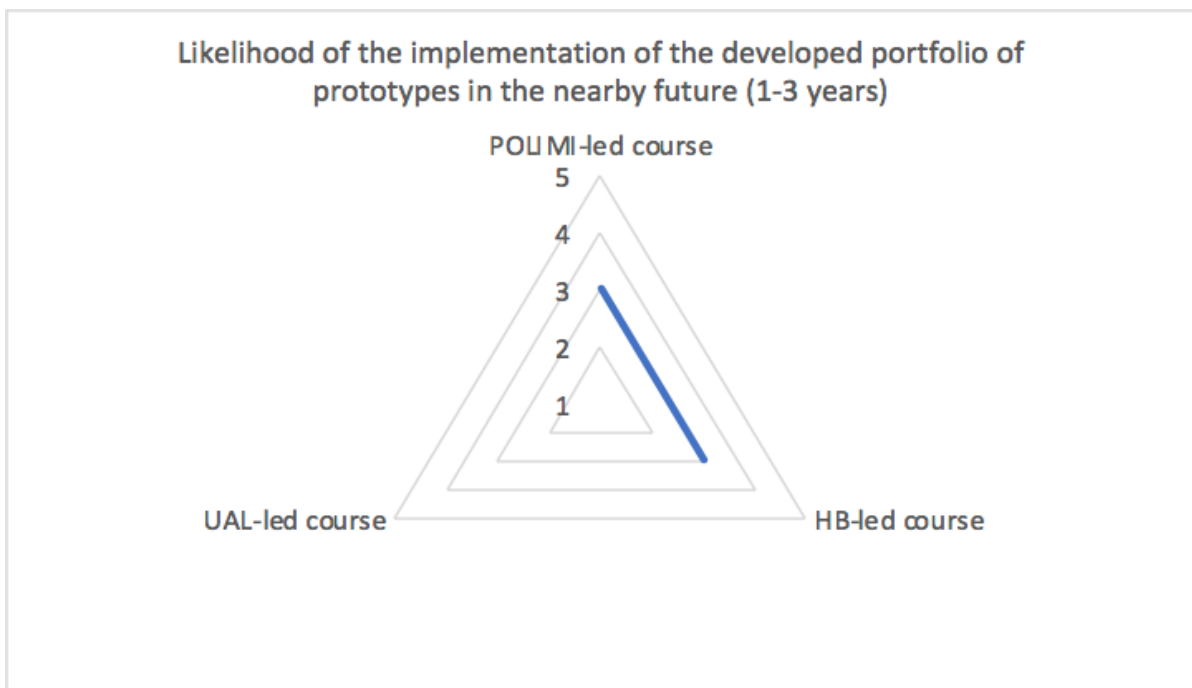
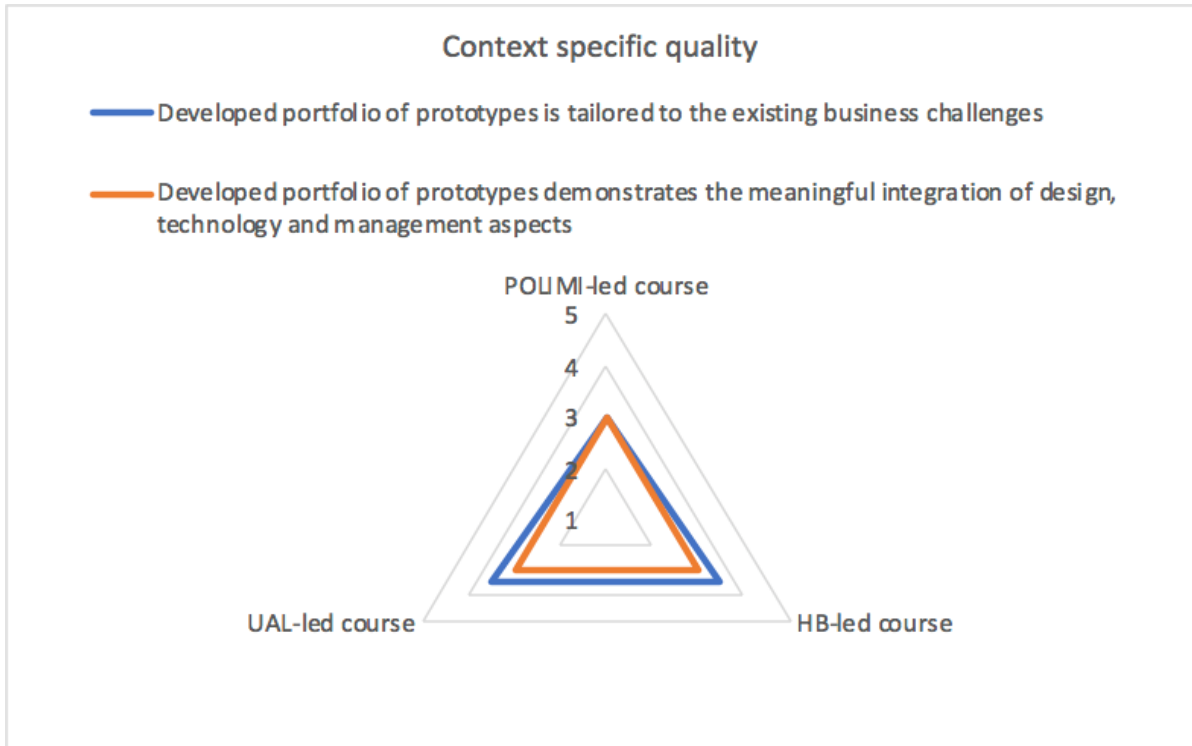
Note: Satisfaction criteria was measured by using only one indicator depicted in this figure - acquired/demonstrated knowledge, skills and competences meet the expectations.

### Indicators for quality and efficacy of partnership development process





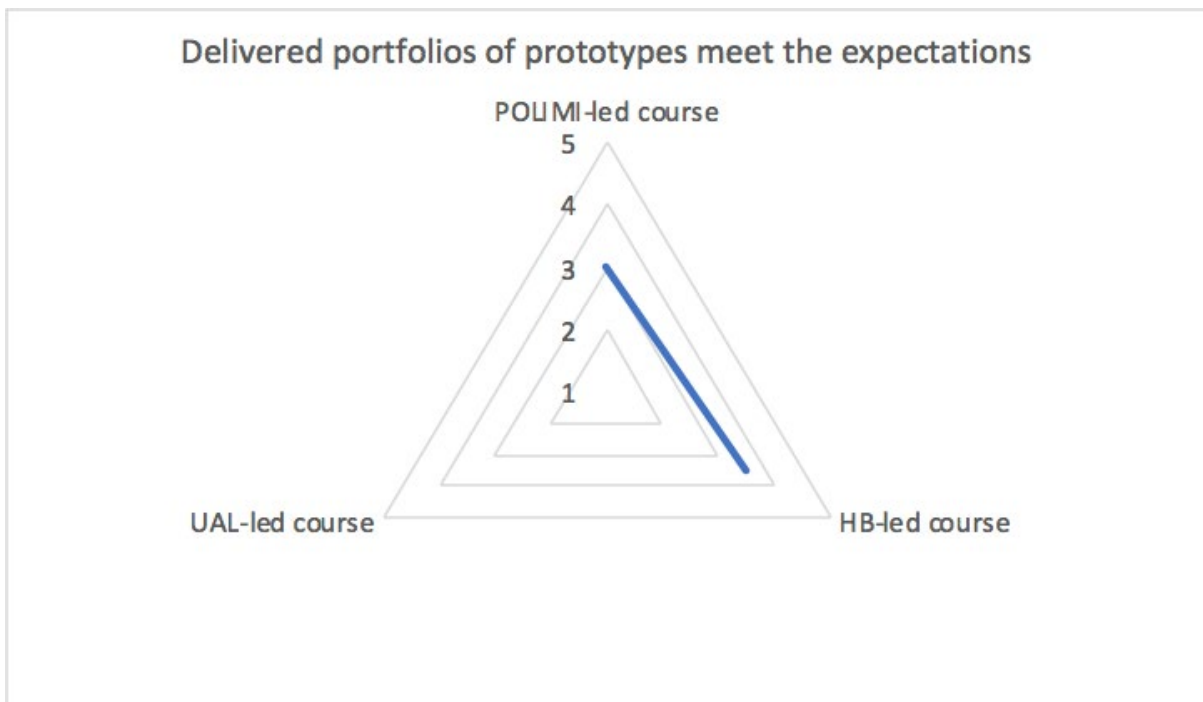
## Indicators for quality and relevance of portfolio of prototypes for boosting creating encounters in FT companies



Note: Indicator rating UAL-led course is not available. This indicator (likelihood of the implementation of the developed portfolio of prototypes in the near future, i.e., 1-3 years) is associated with criteria of “Relevance for FT industry”.

*Additional qualitative indicators for criteria “Relevance for FT industry” (not measured on the likert scale):*

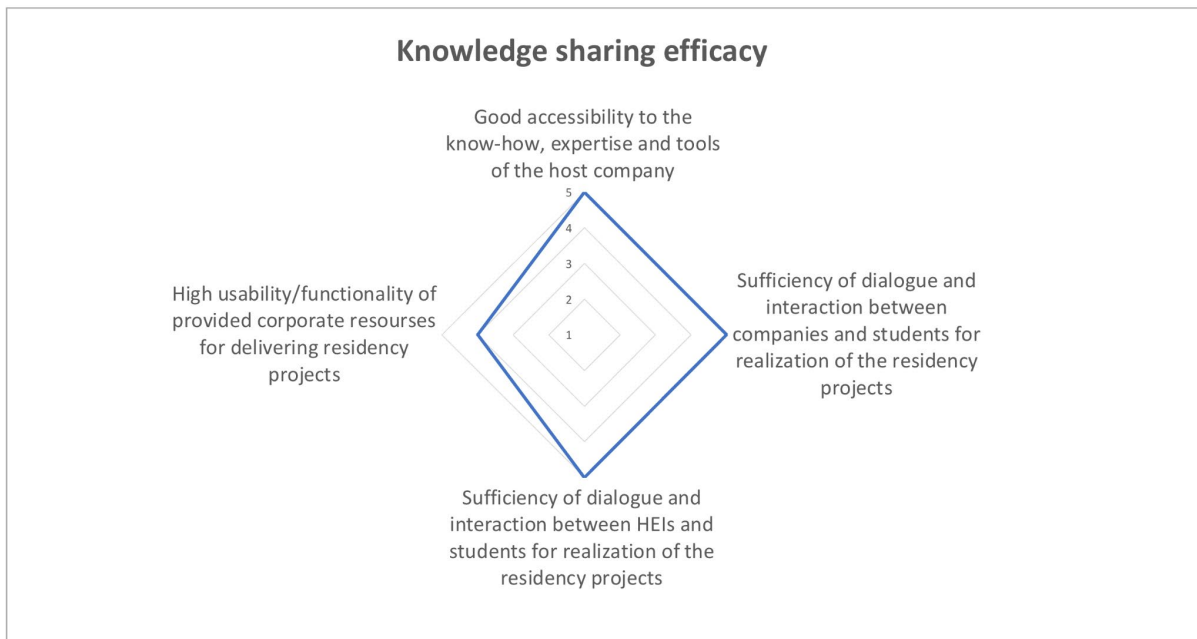
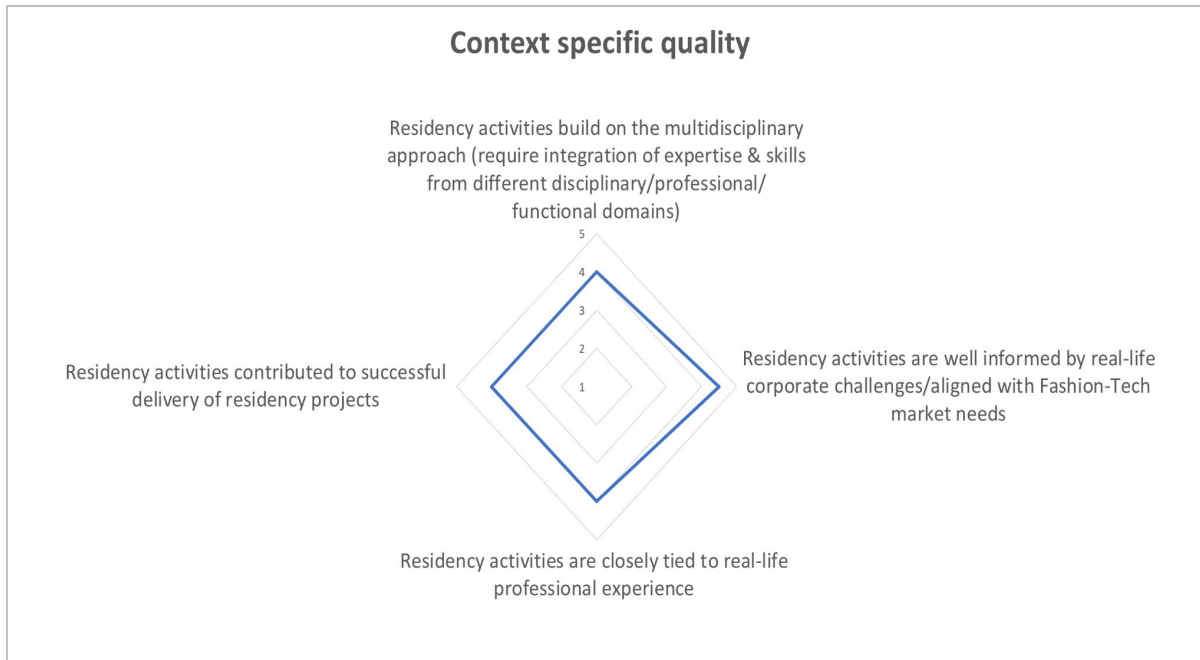
	POLIMI-led course	HB-led course	UAL-led course
<ul style="list-style-type: none"> <li>Improved knowledge and awareness of FT business opportunities</li> </ul>	by 33,3% of companies	by 75% of companies	N/A
<ul style="list-style-type: none"> <li>Contribution to knowledge mobilization and boosting innovation potential (i.e. produced knowledge/results can be assimilated to influence and modify existing business practices)</li> </ul>	by 33,3% of companies	by 0% of companies	N/A
<ul style="list-style-type: none"> <li>Usability of results (i.e. certain results are viewed as useful and have potential to be used for real-life application in corporate practices in the future)</li> </ul>	by 33,3% of companies	by 0% of companies	N/A



Note: Indicator rating UAL-led course is not available

## Appendix B: indicators rating for FT residencies delivered in WP3

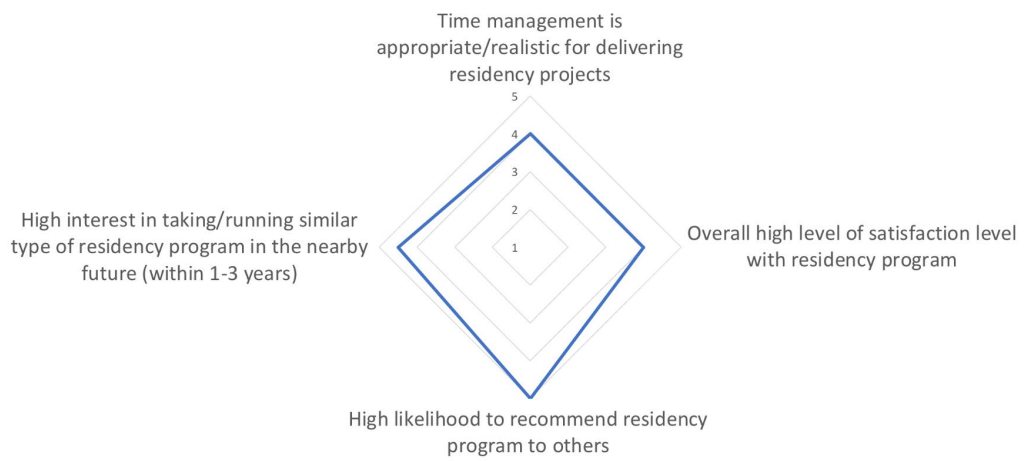
### Indicators for quality and efficacy of new educational experience



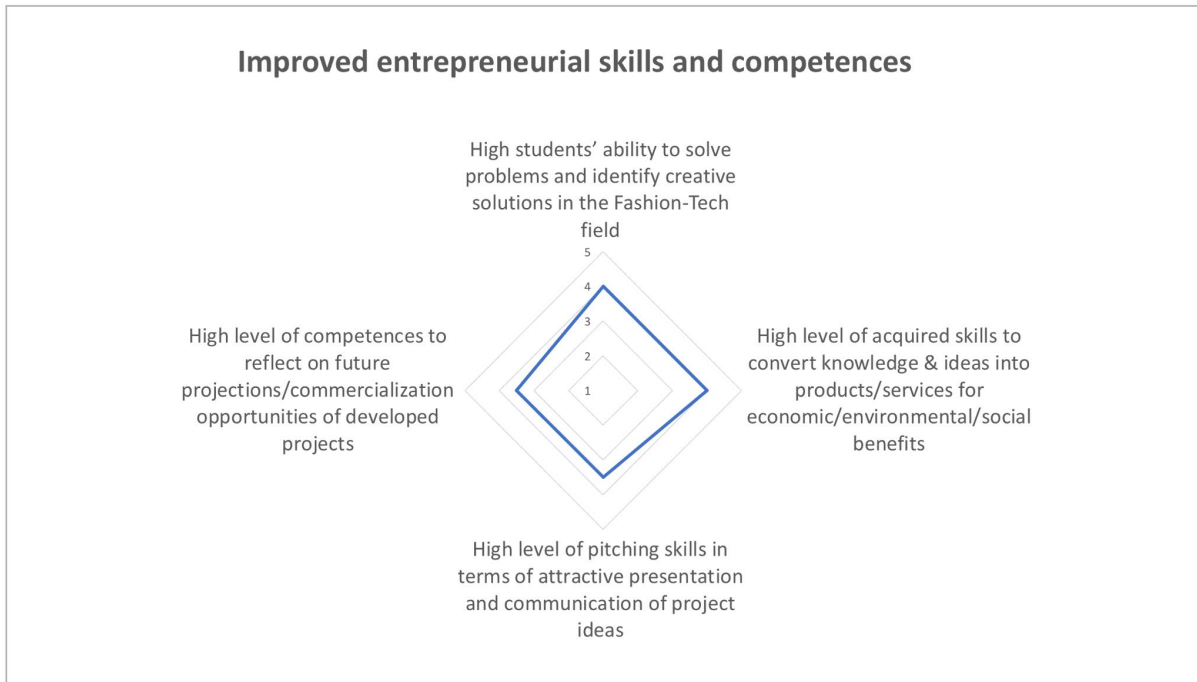
### Quality of coaching

- Good quality of coaching from industry tutors during residency program (5)
- Good quality of coaching from academic tutors during residency program (5)

### Satisfaction with educational experience



## Indicators for quality and relevance of graduate knowledge, skills and competences



- Relevance of skills for future profession**
- High relevance of acquired/demonstrated skills for the future profession/employment in the Fashion-Tech sector (4)
  - Acquired/demonstrated skills and competences contribute well to future employability potential in the Fashion-Tech sector (4)

- Satisfaction with acquired/demonstrated level of knowledge, skills and competences**
- Acquired/demonstrated knowledge, skills and competences meet the expectations (4)



## Indicators for quality and efficacy of partnership development process

**Context specific quality**

- Developed partnership (in terms of involved academic and industry partners) is well fitted for designing and delivering residency program that match Fashion-Tech industry/market needs (3)

**Knowledge sharing efficacy**

Sufficiency of dialogue and interaction between HEIs and companies during development of the residency program

Sufficiency of dialogue and interaction between HEIs and companies during delivery of the residency program

Clear and structured organisation/management of the working process to administer the residency program

**Satisfaction with partnership development process**

Overall high satisfaction with the partnership development process for administering residency program

Sufficient allocation of time and resources to develop meaningful partnership for developing and delivering the residency program

High likelihood to stay in the developed partnership with purpose to run similar type of residency program within 1-3 year

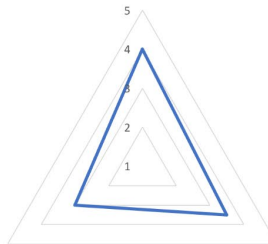
**Indicators for quality and relevance of residency program results (based on delivered portfolio of prototypes) for boosting creating encounters in FT companies**

**Context specific quality**

- Residency program results (based on portfolio of students projects) are well tailored to real-life industry problems/ challenges/market needs (4)
- Residency program results (based on presented portfolio of students projects) demonstrate well the employment of the multidisciplinary approach, i.e. application of expertise and skills from different disciplinary, professional and/or functional domains (4)

**Relevance for Fashion-Tech Industry**

Residency program results (based on portfolio of students projects) improve awareness of Fashion-Tech innovation opportunities



Immediate usability/implementation of residency program results, i.e. certain ideas/concepts/prototypes from presented portfolio of students projects can be used for real-life application in corporate practices in the nearby future (within 1-3 years)

Residency program results (based on portfolio of students projects) can be assimilated by companies/industry to influence and modify existing business practices in the nearby future (within 1-3 years)

**Satisfaction with residency results**

- Residency program results (based on portfolio of students projects) meet the expectations (4)