

Boosting Human Capital in the 21st Century

Chapter 1 Pre-training and recruitment



January 2022

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Section A :

A description of the pre-training programmes in the 3 regions: West-Flanders, Hauts-de-France, Kent County

The newly developed recruitment and pre-training approach is put into practice by the public employment services and their partners in each partner region.

Its performance (i.e. impact on the predefined parameters) is once again monitored and analysed using a common methodology, allowing for cross-border comparison of the results.

This activity will be performed back-to-back with WP2, meaning that the low skilled job seekers participating in these tests will be similar to the trainees of the tests related to vocational training foreseen in WP2.

In activity 1.4, public employment services of each region and their partners implement a series of tests (2 per region) in which the cocreated approach for recruitment and pre-training is implemented and evaluated.

The adjusted approach resulting from these tests makes up the first chapter of the BHC21 training model and should allow for a larger influx of motivated LSP to vocational training (see WP2).

1. Case-study: the pre-training model in West-Flanders

1.1 Description of the local context

a) Economic situation

West Flanders is known as a region of entrepreneurship. It has thousands of resourceful small businesses, many of them in manufacturing. Major sectors are, the food industry and the manufacture of machinery. Economic activity is concentrated mainly around the cities, ports and airports. Around these centres there are many places that are relatively rural. ¹

Although the economy of West Flanders looks relatively strong on paper, it is facing certain problems such as the lack of skilled workers while thousands of jobs don't get filled in. The unemployment percentage is around 4 to 5% in West Flanders. We see that among unemployed people the highest percentage is of low skilled people. While the biggest demand in operational jobs and manufacturing asks a certain degree of technical training. There are different sectors with the same situation. What does it involve?

Every year VDAB publishes a list of the bottleneck professions (knelpuntberoepen) in Flanders. For each profession it is indicated why it constitutes a bottleneck.

<https://www.vdab.be/trends/knelpuntberoepen>

There are three possible causes:

- Quantitative shortage: there is too little outflow from education, for example because too few students choose that direction or because there is no schooling for it.
- Qualitative shortage: the candidates do not have the required skills.
- Specific working conditions: weekend work, low pay, heavy work, stress...

Bottleneck occupations remain, despite Corona crisis

Corona has been gripping the world for almost a year. The government measures to combat the pandemic and the uncertainty about the economic recovery obviously have a major impact on employers' decisions about new recruits. VDAB's annual survey of bottleneck occupations already shows that it is very difficult to predict to what extent the search for personnel will temporarily or structurally bear the consequences of this uncertainty.

The list of bottleneck professions looks somewhat different in 2021 than in other years.

Bottleneck professions that are currently less 'squeezed' as a result of the Corona measures, but of which we do expect that their bottleneck character will return when economic activity recovers, have been retained as bottleneck professions with a 'corona' indication.

Apart from corona, the 'classic' bottleneck professions remain. Care, construction, the technological sector and IT remain sectors with large numbers of bottleneck occupations. The search for technical personnel remains difficult for many employers. Also within the health and welfare sector - which

¹ <https://what-europe-does-for-me.eu/en/portal/1/BE25>

faced additional challenges this year - the shortage is causing major problems. In addition to these 'regulars', there are a number of new bottleneck occupations in 2021 that seem to be caused more by the large gap between the expectations of employers and candidates.

All data is to be found on <https://arvastat.vdab.be/>

b) VDAB in a nut shells /the services VDAB already provides outside of this project

The Flemish Employment, Mediation and Vocational Training Service (VDAB) is a public service with a social and economic mission. Its main task is to bring employers and jobseekers into contact with each other. VDAB is committed to help jobseekers find a suitable job, from registration with the VDAB to the first day of employment and throughout a citizens whole career.

The VDAB helps citizens develop their careers in interaction with market demand, paying special attention to citizens from disadvantaged groups. VDAB offers a comprehensive package of services such as job placement, competency development, career services. The challenge for VDAB is to get low-skilled people work in technical functions of the manufacturing industry. Not only working on technical skills is important. Working on social skills is as important. VDAB developed an online program on 21th century skills. (https://www.vdab.be/opleidingen/aanbod/O-AMI-800922/21e-eeuwse_vaadigheden) This is beside counselling, working outreaching, mediation, and all other services an update for unemployed people.

What can the VDAB do for me as a citizen?

If you are you allowed to live and work in Belgium, the VDAB can help you in many ways.

- Are you looking for a job in Belgium?
 - On vdab.be you will find thousands of job offers. [Browse the vacancies](#).
 - You can publish your CV on vdab.be for employers to read it and contact you. If you understand Dutch, you can [publish](#) your CV yourself on the website.
 - Would you like personal assistance in your search for a job? A consultant can offer you guidance.
- Do you want to follow training in Belgium?
 - For instance in order to brush up your Dutch or to learn a certain profession? That is possible. The VDAB offers many training courses.
 - If you understand Dutch, you can have a look for yourself in the [training data base](#). Or you can contact a VDAB consultant.
- Do you want to apply for unemployment benefit in Belgium?
 - Are you unemployed and do you meet the conditions, then you are entitled to unemployment benefits. It is the [RVA](#) who decides whether you will receive benefits.
 - In order to apply for unemployment benefit, you need to register as a job seeker at the employment service in your region.

An explanation for unemployed people in English can be watched through [following link](#). A summary of the provided services is available in the [following corporate film](#).

The challenges of the current labour market are so big that VDAB teams up with partners. VDAB is the director of the labour market, which means it works together with a lot of partners to reach the goals. The 'arbeidsmarktvademecum' is an overview on projects in West-Flanders alone.

<https://vademecum.west4work.be/nl/spotlight/detail/63:>

[Projects are rolled out based on needs of the local province. Based on data new partnerships are made. VDAB works together with partners to reach it goals, reach new people for the labourmarket, even to try to activate inactive people \(different than unemployed\).](#)

[In West- Flanders VDAB has over 400 projects to work on the goals, apart from regular mediation.](#)

1.2 Description of the programme

a) Schematic overview of the training programme

VDAB has organized a 2-weeks training programme for trainees who were interested in achieving the basics of packaging operator in the food industry. The target group were low-skilled people, often with a migration background. Before starting the vocational training, the trainees received information about the industry sector. A consultant from Travi has 'evaluated' the trainees with the help of the Test your selfie, a tool which maps the soft skills required by employers on the labour market. This was a great opportunity for 'breaking the ice' and getting to know the participants. The partners have also adapted the existing onboarding Welqome app² and redesigned it according to the needs of the programme. Trainees received each day a short notification with learning instructions, brain snacks, polls, motivation cues etc. At the end of the vocational training, VDAB organized a job application training and a job date. This last one was in cooperation with Travi and involved different interim offices. See details in table below. See below details of the pre-training as well as the schematic overview in Table 1:

- **The recruitment of candidates** for the pre-training and vocational training programme is not so simple. Given the shortage on the Flemish labour market, we have to 'fight' for every talent. In the first test session, we collaborated with the temporary employment agencies via VFU/Travi. Candidates find their way to the services of VDAB in different ways. Guided by a consultant of VDAB (or partners), candidates register themselves on the website of VDAB and/or receive an invitation via e-mail.
- **Intake interview/ info session** about the industry sector. The information session takes place in the Huis van Voeding Roeselare, also the place where the pre- and vocational training also take place. Candidates receive an invitation for this info session. They are given general information about jobs in the food industry, the location of most companies in West-Vlaanderen, types of jobs they might expect, things to take in consideration when applying (working in shifts, cold, heat, noise...), notions of food safety, as well as information about the rights and obligations vis-à-vis VDAB. The vocational trainer is also involved; he offers trainees information about the different machines. The professional

² <https://www.welqome.be/nl/tools/welqome-app>

film is shown. This is followed by an interview in which the candidates are asked about their interest, motivation and current knowledge of the Dutch language and arithmetic. Afterwards VDAB calls the candidates to inform them whether they can start the training or not.

- **Mediation and follow-up.** Once they join the training programme, the trainees get a mediator who ensures that everything runs smoothly in terms of administration; this mediator can also take up matters with the participants individually.
- www.testyourselfie.eu. Already on the first day of the training, a consultant from VFU/Travi runs an evaluation of the work attitudes of the trainees with the help of the mobile site Test your selfie. The young people fill in an online survey in order to get a good picture of themselves. How ready am I for my job? Do I have the right attitude? Can I handle criticism or remarks well enough? Am I flexible enough? These are all important issues when one is looking for a job. These questions do not offer a value judgement, but are an opportunity to discuss around soft skills needed on the job. On the last day of training, a job date is organised, where employment agencies are present and interview the trainees.
- **Welqome app.** On the first day, the trainees were explained how to install the app, what its purpose is and how it works. For the following 2 weeks of the training, they received a notification every day consisting of technical knowledge bites and motivational messages. This app can easily be adapted for each type of training or onboarding in a company. This way, the trainees have some support during the first period of employment and do not feel left alone.
- **Workshops on job application tips.** On the last Friday of the training programme, the trainees were offered an workshop on job application where topics such as writing a CV, preparing for a job interview... were on the agenda. This way they could prepare for the real job date in the afternoon.
- **A job date** was organised Friday afternoon. For the first cohort in January 2020 four temporary work agencies were present in order to recruit candidates for jobs in the food industry.



Table 1. Overview training programme in Flanders

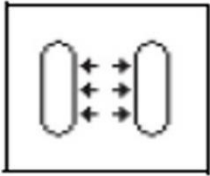
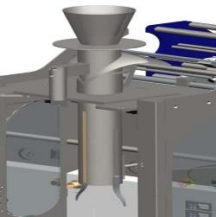

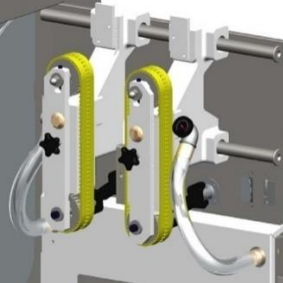
	Before starting the vocational training	Day 1 Monday	Day 2 Tuesday	Day 3 Wednesday	Day 4 Thursday	Day 5 Friday	
Recruitment and (pre-) training by VDAB and VFU	Information about the industry sector	www.Testyourselfie.eu Welqome app	Welqome app	Welqome app	Welqome app	Welqome app	
Skills training by VDAB in de training centres		Vocational training	Vocational training	Vocational training	Vocational training	Vocational training	
		Day 6	Day 7	Day 8	Day 9	Day 10	
Recruitment and (pre-) training by VDAB and VFU		Welqome app	Welqome app	Welqome app	Welqome app	Welqome app + Job application training Job date with employment services	
Skills training by VDAB in de training centres		Vocational training VR application	Vocational training VR application	Vocational training VR application	Vocational training VR application	Evaluation	


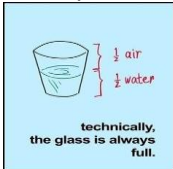

b) Welqome-app applied to BHC21

As specified already, the partners have adapted the existing onboarding Welqome app and redesigned it according to the needs of the programme. Trainees received each day a short notification with learning instructions, brain snacks, polls, motivation cues etc. At the end of the vocational training, VDAB organized a job application training and a job date. This last one was in cooperation with Travi and involved different interim offices.

Table 2. Description of the daily notification messages of the Welqome app

MA. Dag 1	<p>Success with your training programme! 😊</p> 
DI. Dag 2	<p>Write down the steps of the foil machine</p>  <p>TIP: Bart is showing how to insert foil today. Look closely and write down these steps in your notebook. Read these steps. Then operate the machine. Keep your notebook with you, also during the practical exercises.</p>
WOE. Dag 3	<p>Time for a video instruction!</p> <p>Bart is explaining in this video the steps of the film machine: https://vimeo.com/395441827/d6db5c896f Watch this video carefully before you start operating the machine.</p>
DOND.Dag 4	<p>What does this button do?</p>

		<p>a) The foil keeps rotation b) Vacuum pump starts</p> <p>Answer: the vacuum belts transport the film inside the machine. It is important that the vacuum belts work properly</p>
VRIJD. Dag 5	<p>Congratulations! You have already practiced at the machine a few times. Sometimes it goes well, sometimes it doesn't go so well. This is normal. Ask Bart for tips on how to do better!</p>	
ZAT.Dag 6	<p>This is:</p>	
		<p>a) The format set b) the bag shaper</p> <p>Answer: the format set folds the foil into a tube, which is the base of our bag.</p>
ZON. Dag 7	<p>What are your plans for today?</p> 	
MA.Dag 8	<p>What is this for?</p>	
		<p>a) Tighten the foil b) Sucking the film with vacuum and transporting it</p> <p>Answer: The vacuum belts transport the foil in the machine. Proper work results in perfect packaging!</p>

DIN. Dag 9	Last week you practiced at the machine. Follow the steps on the machine again and explain everything to the fellow student!	
WOE. Dag 10	What size set is needed for a 436mm film roll?	
		a) Format 400 b) Format 200
		Answer: a size of 200. 200mm front 2x100mm back and 2x18mm for forming the welding seam.
DOND. Dag 11	Evaluating yourself! You are now almost at the end of the training programme. What score do you give to yourself for the course you have completed? Between 0 and 5. Between 5 and 7. Between 7 and 10.	
VRIJD. Dag 12	Are you looking for a job? You can find vacancies in the food sector on this website: www.vdab.be	
ZAT. Dag 13	Think positive! 	
ZOND. Dag 14	 Enjoy your weekend!!	

1.3 Regional test methodology

The Flemish partners have tested the Test your Selfie and the Welqome app on several occasions. A set of questionnaires has been used in order to assess the understanding of the engineering sector by the trainees, the goals of the future, motivation to work in the industry... However, the answers of the trainees on these questionnaires have both been influenced by their experience with the pre-training as well as the vocational training. In other words, it is not always simple to conclude to which extend a statement is a result of the pre-training of the vocational training. In order to do justice to the research that has been carried out, the complete results are presented. More details around the research can be found in [Annexe](#).

Results tests and interpretation

General impression on the Test your Selfie and Welqome App

Based on observations of course participants and the results of Testjeselfie (run by VFU/Travi), Kulak carried out a baseline measurement. They came to the following conclusion:

- Trainees often overestimate themselves;
- Trainees do not take any notice while they receive technical training;
- Trainees find it difficult to link theory to practice, and diagram to the machine;
- Training duration is very short. Trainees leave the training with the feeling of being unprepared for the real jobs.

Another fact that stood out in the tests was that trainees interest in jobs in the industry had declined after the vocational training. This had something to do with the overestimation of the trainees before the programme. When they started, they had great expectations about their future wage, their own capacities and a lot of them underestimated the job. For them, the training was some sort of wake-up call where they noticed they still needed to learn a lot before they would be able to join the industry as an employee.

Understanding of the engineering/manufacturing sector

After the training, the understanding of the E&M sector has increased but the interest of trainees to look for work in the E&M sector has decreased. More details are to find in Table 5 - Understanding of the engineering/manufacturing sector.

Motivation for joining the vocational training

Creating a better resume was the highest motivator at the beginning of the training. At the end of the programme, the general interest in training went down a little bit in Belgium. Trainees were also less interested in a job in the industry after the programme and they thought they might get bored during the training. More detail are to find in Table 7 – Your interest in training.

Your goals for the future

Belgian trainees who have finished the programme say they have a clearer vision on their future although the knowledge about the necessary steps they need to take to achieve their aims, has gone down a little.

Before the training, 3/7 trainees mentioned they wanted to switch sector/work, 4/7 wanted to follow the training because it looks good on their CV. However, we do need to make a small remark. Trainees filled in the questionnaire after they talked to a VDAB mediator, a person who specifically mentions the importance of a CV. They could have been influenced by this conversation.

After the training, the trainees felt less supported by people on achieving their goals and indicated a lower belief in themselves to reach their career goals. The trainees found it a little less important to gain qualifications/skills and indicated a lower motivation to achieve the aims they had set for themselves. More details are to find in Table 8 – Your goals for the future.

Your confidence and general motivation

The trainer noticed that fine motor skills are hard to master for trainees from countries such as Somalia, Africa... Other trainees also dared to laugh at them, which is not beneficial for their self-confidence.

The trainer noted issues with stress, uncertainty and fear on each evaluation form:

- “Stress while putting in the foil.”
- “Uncertain about the use of the right button.”
- “Uncertain.”
- “Stress, uncertain.”
- “Asks for confirmation.”
- “Afraid, very uncertain.”

After the training, general confidence of the trainees has decreased.

The trainer mentioned that the training is a bit of a reality check for a lot of the trainees. They have great expectations of the training and themselves but those do not always turn out the way they hope it will. There are no barriers to follow the training, everyone who wants to enroll, gets an opportunity. That way, some trainees with little digital literacy, with poor math knowledge and poor Dutch speaking skills also end up in this training. Although the project aims to train low skilled people, there are also great differences within this group. More details are to find in Table 9 – Your confidence and general motivation.

Overcoming obstacles

According to the trainer, some things will remain difficult for the trainees:

- fine motor skills for trainees from Africa, Somalia..., in those countries, less attention is given to practicing fine motor skills during childhood. Those skills are very hard to train when you get older.
- counting is difficult for most of the trainees, they made a lot of mistakes

- the understanding of specific terminology remains a challenge.

Trainees also need a lot of help during their training which might indicate working by themselves might be hard. Looking at the differences between the tests before the programme and after the programme, we notice that the trainees have become less confident that they will be able to overcome obstacles. After the training, trainees are not sure they will perform well when things get tough. More details are to find in Table 10 – Overcoming obstacles.

How you feel about your readiness for the workplace

After the training, Belgian trainees feel less ready for the workplace than before. When we take a closer look at the feedback, we see that trainees indicate that they have a lack of relevant work experience which could explain why they don't feel fully prepared and ready to go into the workplace.

The trainees gave mixed reactions:

- “The training is too short, it should be extended.”
- “I like the training because you learn a lot and you can practice in reality!”
- “I need more information during the training”.

More details are to find in Table 11 – How you feel about your readiness for the workplace.

How you feel about the training

The trainees were positive about their training, they did not find the training tiresome or stressful and they did not think about quitting. The training was seen as very interesting, the pretraining did a good job preparing them for the training and the trainees think it would have been more difficult without that pretraining.

In the questionnaires we found a few quotes:

- “... I would like to get more information during the training.”
- “I like the training because you learn a lot and you can practice in reality.”

More details are to find in Table 12 – How you feel about the training.

2 Case- study: the pre-training model in Hauts-de-France

2.1 Description of the local context

In 2020, all sectors of the regional economy were very strongly affected by the economic effects of the covid-19 pandemic. The industry was marked by a massive decline in activity in all markets. The uncertainty at the beginning of the year was followed by an unprecedented shock to industrial production in the second quarter. During the second half of the year, the very strong recovery was abruptly halted by the announcement of the second containment. In the fourth quarter, the undeniable upturn in activity was curbed by uncertainty about the future evolution of the pandemic.

The production capacity utilisation rate (CUR), which was close to its long-term average (78% since 1996), was considerably reduced in April 2020 (CUR at 40%). Since then, despite a sharp rebound, it has never reached the levels of 2019 and stands at 73.35% at the end of 2020. **Order books** have deteriorated sharply (-60% in April 2020) with early signs at the beginning of the year. After a general drying up of orders in the second quarter, order books have regained some consistency but are well below (-10%) the levels seen over the past six years.

With a decline of 1.4% in 2019, the industry's turnover shows a historic decline in 2020 of -9.2% compared to the previous year. All the industrial branches experienced a very significant drop in their activity except for the food industry, which fell slightly (-2.5%). **The sectors of metallurgy (-16.4%) and transport equipment (-13.2%) are the most affected.**

Exports fell even more sharply at -12.1%. All branches experienced a massive decrease in their export activity. The activities of metallurgy and manufacture of metal products (-24.3%), followed by maintenance activities and other industrial products (-22.5%) have experienced the most marked declines.

In this context, **the permanent industrial workforce** contracted overall (-2.5%) with a variable extent depending on the sector and -3.5% for the activities of metallurgy and manufacture of metal products. The recourse to temporary work has decreased very strongly (-24.1%).

In this context, the total amount of industrial **investments** fell slightly in 2020 (-1.6%). Except for the agri-food industries, which saw a massive recovery in investment after a difficult year in 2019, all industrial branches saw a decline in investment in 2020. The managers in the transport equipment (-44.3%) and metallurgy (-28.6%) branches have very sharply reduced the volumes invested.

The industrialists of all the sectors announce a **rebound in activity** (+7.3%) for the year **2021** with, however, a marked uncertainty as shown by the drop in investments (-4.8%) and a low level of variation in the workforce (+0.9%). Similarly, the increase in exports (+7.1%) will be far from compensating for the fall observed in 2020 (-12.1%).

In this context, the turnover forecast for the metalworking branch is +13.3%, with a sharp rebound in exports (+25.2%) announced. The metallurgy sector announces a significant recovery in investment volumes (+13.1%). The metalworking branch expects the number of employees to rise by 1.1%.

It is possible to present a focus on the workforce of the branch thanks to the Metallurgy observatory (<https://www.observatoire-metallurgie.fr/>).

In 2020, at the national level, the sector counted 1,325,910 employees plus 90,496 temporary workers (in FTEs). For the **Hauts-de-France region**, this means 116,371 employees plus 1,033 temporary workers (in FTEs). Among the trades representative of the sector, those for which hiring (% given below) is considered difficult by employers are:

- Millers (61%)
- Mechanical and metalworking technicians and draughtsmen (58%)
- Boilermakers, sheet metal workers (75%)
- Pipe welders (56%)
- Maintenance workers (55%)

The Observatoire de la Métallurgie has published a summary of **the jobs in tension in 2020**. Trades in Tension are trades that are difficult to fill, either internally or externally, and for which there is a current mismatch (real or perceived) between demand (business needs) and supply (candidates). Tension can be caused by different reasons:

- the inadequacy of initial and continuing training provision about the actual skills expected
- the gap between the level of people and the expected level (skilled trades)
- the shortage of candidates for these jobs
- some occupations suffer from a poor image with perceived working conditions and pay

In conclusion, the situation at the end of 2020 confirms the choices we made at the start of BHC21 to work around 3 pillars: broadening sourcing for production jobs, in particular, the machinist (considered to be in tension) and equipping it with innovative technologies.

2.2 Description of the programme

The methodology for the pre-training used by the French partners MEEF SHS, CETIM and SUD CONCEPT aims to reinforce the soft skills and increase the interest for the industry among young low skilled people through the use of innovative tools.

The methodology was developed through different workshops and tests that took place as follows:

- Two regional co-creation workshops to develop proposals for innovative methods to enhance the attractiveness of industrial occupations to low-skilled people or those distant from employment, and to promote a return to employment.
- A test session of the regional methodology in immersion in a training centre.

Regional co-creation workshops: defining the methodology

The French partners organised two co-creation workshops in Péronne under the leading of MEEF SHS on 17 October 2019 and 11 March 2020. These workshops aimed to define the regional methodology to be tested and applied in the framework of the *Boosting Human Capital in the 21st Century* with young, low-skilled people who are far from employment.

These regional workshops were focused on the specific theme of *making industrial professions more attractive to people who are distant from employment and improving the use of training by people seeking employment*.

For the realization of these workshops, the partners called on associated experts and external speakers who:

- Participated in all the workshops
- Allowed the testing of devices susceptible to help the target public to become aware of their capacities, to insert themselves in the job market on the industrial sectors or to leave towards training applied to the manufacturing industries sector.
- Contributed to enriching the proposals of the workshop thanks to their feedback
- Took notice at the end of the workshops of the recommendations drawn up by the partners based on the working groups' proposals, and enriched these recommendations if necessary.

a) Schematic programme of the first co-creation session in October 2019



Projet INTERREG 2 MERS "Boosting Human Capital in the 21st century – BHC21"

1ère session de co-crédation

17/10/2019 à Péronne

PROGRAMME

10:00-11:00 :

Introduction en plénière pour présenter le projet
Répartition des participants en 3 groupes distincts.

11:00-12:00 / 13:30-14:30 / 14:30-15:30 :

Réunion de trois groupes de travail en parallèle avec rotation des groupes de participants

Groupe 1 : Valoriser les métiers de l'industrie auprès des publics cibles et motiver les publics pour ce domaine

Groupe 2 : Diagnostiquer les intérêts et les aptitudes/compétences métier pour construire ensemble des outils d'accompagnement adaptés

Groupe 3 : Bâtir des parcours de formations adaptés

12:00-13:30 :

Déjeuner sur place

16:00-16:30 :

Synthèse en plénière – rapport qui reprend les préconisations qui seront transformés en outils pour la 2ème session de co-crédation.

PARTENAIRES



Co-creation workshop on 17th October 2019

This first workshop took place in Péronne at the MEEF SHS offices. The participants of this workshop were professionals directly linked to the target audience of the BHC21 project, including representatives of employment agencies, representatives of employment and/or training policy actors, representatives of local companies and representatives of French BHC21 partner organisations.

Workshop process

The workshop was composed of 3 working groups animated by the Sud Concept project team. Each working group had one of the following three target themes:

- Promoting the value of industrial professions to the target audiences and motivating them to enter this field.
- To diagnose the interests and aptitudes/skills of the trades to build together adapted support tools
- Build adapted training paths: what are the challenges for building training paths for individuals and industry.

The working group discussion was based on the analysis of good practices established during the first phase of WP1. These good practice sheets were distributed to the participants before the workshop so that they could read them before the discussions.

At the end of this first workshop, the different groups formalised proposals on each theme. These proposals are intended to help the partnership in the construction of the regional methodology within the framework of the BHC21 project.

These proposals particularly target the specificities of training in the field of industry and with a low-skilled public distant from employment. The exchanges in the various working groups enabled the partners to envisage the setting up of a second workshop involving a more diverse public and the experimentation of tools.

b) Schematic programme of the second co-creation session in March 2020



Projet INTERREG 2 MERS "Boosting Human Capital in the 21st century – BHC21"

2^{ème} session de co-cr  ation
11/03/2020    P  ronne

PROGRAMME

10:00-10h30:

Accueil et introduction en pl  ni  re et r  partition des participants en 3 groupes distincts.

10:30-11:45 / 13:00-14:15 / 14:15-15:30 :

R  union de trois groupes de travail en parall  le avec rotation des groupes de participants

Groupe1 : Valoriser les m  tiers de l'industrie aupr  s des publics cibles et motiver les publics pour ce domaine – HUMANDO et ARTICLE 1 – *salle Groupement de cr  ateurs*

Groupe 2 : Diagnostiquer les int  r  ts et les aptitudes/comp  tences m  tier pour construire ensemble des outils d'accompagnement adapt  s – COLLECTIF POWA et CETIM – *salle Picardie*

Groupe 3 : B  tir des parcours de formations adapt  s – FABLAB IUT AMIENS et FABLAB HAM – *salle La Ruche / PROMEO – salle rdc*

12:00-13:00 :

D  jeuner sur place sous forme de buffet

15:30-16:00:

Cl  ture de la journ  e en pl  ni  re

PARTENAIRES





Projet INTERREG 2 MERS "Boosting Human Capital in the 21st century – BHC21"

2^{ème} session de co-création
11/03/2020 à Péronne

REPARTITION PAR GROUPE DE TRAVAIL

Coordination : Véronique DEBIGNY – MEEF SHS

Groupe1 : HUMANDO et ARTICLE 1 – salle Groupement de créateurs

Animateurs : Christophe CHERIAUX – MEEF SHS et François DEVAUX – Sud Concept

- 6 jeunes MEEF
- Diana FAIFER – POM
- Olivier CARCAGNO – Conseil Régional
- Ingrid CRESP – UIMM

Groupe 2 : COLLECTIF POWA et CETIM – salle Picardie

Animateurs : Vincent CARLINO – MEEF SHS et Philippe NEGRONI – Sud Concept

- 6 jeunes MEEF
- Julie SUQUET – Pôle Emploi
- Coralie LEGER – Bonduelle
- Christian DRELON – GEIQ MI HdF
- Thierry MINIEWSKI - MEEF SHS

Groupe 3 : FABLLAB IUT AMIENS et FABLAB HAM – salle La Ruche / PROMEO – salle rdc

Animateurs : Marie-Joëlle MENARD – MEEF SHS et Matthieu GUARY – Sud Concept

- 6 jeunes MEEF
- Ingrid VILETTE – Bonduelle
- Pascal OYER – Education Nationale
- Karine TOUSAIN – MLPM
- Ashley WAREING - Pôle Emploi Hauts de France
- Odile DERMONT - MEEF SHS

PARTENAIRES



Co-creation workshop on the 11th March 2020 Workshop

The second co-creation workshop took place in Péronne on 11 March 2020 at the MEEF SHS premises. This workshop gathered about thirty participants and ten facilitators.

The objective of this workshop was to define more precisely the regional methodology selected by the French partners. To do this, the partnership set up various working groups, following the same logic as the first workshop.

These groups aimed to reflect collectively on the same themes as those defined during the first workshop. This second workshop combined reflection with experimentation. Indeed, facilitators from the good practices identified during the first phase of WP1 participated in the co-creation session. They allowed the participants to experiment with their tools/technologies.

The facilitators were as follows:

- Article 1 with Jobready tool
- Humando
- FabLab IUT Amiens with 3D printers
- Proméo Beauvais with their virtual reality glasses technology
- CETIM with their Xperteam technology.

As for the participants, the workshop brought together a large number of participants from various backgrounds and all related to the BHC21 project. The goal was to involve all audiences that might be impacted by the training methodology developed by the French BHC21 partnership. The participants were:

- Young people followed by the MEEF SHS team were mobilised for this workshop. They brought the point of view of the target public, i.e., a low-skilled public distant from employment.
- Representatives of regional companies also participated in the workshop, providing a recruiter's perspective.
- Representatives of training centres in the field of the industry participated to provide a training perspective.
- Representatives of local employment institutions, providing a more institutional perspective.
- Finally, members of operators supporting the return to employment (Pole Emploi, MEEF SHS, etc.). They brought a vision of back-to-work support to the discussions.

This workshop was rich in exchanges and experiments. In particular, it enabled the young people to develop their knowledge of the industrial sector and to discover these careers. The young people involved were able to confirm their interest or lack of interest in this professional field.

It also emerged from this workshop that the presentation of this field in the form of practical workshops aroused the interest of a majority of the young people involved.

These two workshops fulfilled their function, i.e., to help the partnership to build an innovative training methodology adapted to the industry sector and the target audience. MEEF SHS, CETIM and Sud Concept were able to refine their methodology combining the use of ILTs and the development

of soft skills in general and those related to the industrial sector, more specifically to the job of operator-setter on a numerically controlled machine tool by material removal (CQPM09).

The methodology adopted is designed to strengthen the technical skills of the target groups. The aim is to provide them with all the technical skills required for the job of operator-setter on a numerically controlled machine tool by material removal. This profession requires specific skills that are acquired through practice. The purpose of the training is to provide them with these skills through the use of an ILT.

Secondly, the methodology also wants to strengthen the learners' soft skills which are essential in the professional field. Based on the CQPM09 job reference framework, the partnership wants to use an ILT and targeted animations. This innovative contribution allows learners to develop their soft skills practically and innovatively.

c) Schematic programme of the tests in March 2021

Table 3: Group 1 : **trainee 1x**, **trainee 2x**, **trainee 3x**, **trainee 4x**

	Jour	Matin (10h-12h30)			Après-midi (14h-16h30)		
Test WP1 & WP2	Lundi 22 mars	10h-11h Introduction : - Intervention Olivier HUTIN, Anne-Josèphe DENEUVILLERS et Olivier DURTESTE - Présentation des partenaires - Présentation du projet et ses objectifs – Matthieu GUARY 11h00-11h30 Pause 11h30-12h Suite introduction <ul style="list-style-type: none"> Point Sécurité – Benjamin DESJARDIN 12h-12h30 Brise-glace			14h-15h Welqome App 15h-15h30 Pause 15h30-16h15 Test your selfie 16h15-16h30 Point SIMSOFT		
Test WP2	Mardi 23 mars	10h-12h30 Test technologie SIMSOFT/CETIM - Tournage (Jeune 1x) 10h-11h SIMSOFT/CETIM Observation Fraisage (Jeune 3x)	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Activité	10h30-11h Test 1 technologie Proméo (jeune 4x) 12h-12h30 Test 1 technologie Proméo (jeune 2x)	14h-15h : Activité 15h-15h30 Pause 15h30-16h30 Activité	14h-14h30 Test 1 technologie Proméo (jeune 1x) 15h30-16h Test 1 technologie Proméo (jeune 3x)	14h-16h30 Test (Jeune 2x) technologie SIMSOFT/CETIM – Tournage 14h-15h SIMSOFT/CETIM Observation Fraisage(jeune 4x)
	Mercredi 24 mars	10h-11h Welqome app 11h-11h30 Pause	10h-12h30 Test technologie		14h-15h Activité 15h-15h30 Pause	14h-16h30 Test	

		11h30-12h30 Activité	SIMSOF/CETIM - Tournage (Jeune 3x) 10h-11h SIMSOF/CETIM observation fraisage (Jeune 1x)	15h30-16h30 Activité	technologie SIMSOF/CETIM (Jeune 4x) 14h-15h SIMSOF/CETIM observation Fraisage (jeune 2x)
	Jeudi 25 mars	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Activité	10h-10h30 Test 2 technologie Proméo (jeune 1x) 10h30-11h Test 2 technologie Proméo (jeune 2x) 11h-11h30 Pause 11h30-12h Test 2 technologie Proméo (jeune 3x) 12h-12h30 Test 2 technologie Proméo (jeune 4x)	14h-15h Activité 15h-15h30 Pause 15h30-16h30 Activité	
Clôture et évaluation	Vendredi 26 mars	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Test your Selfie		14h-15h30 Clôture <ul style="list-style-type: none"> • Animation retour d'expérience et Echange avec les industriels présents • Remise des attestations de participation 15h30-16h Pause 16h-16h30 Evaluation (Questionnaire P2 et T2)	

Table 4 : Group 2 – Trainee 1y, Trainee 2y, Trainee 3y, Trainee 4y

	Jour	Matin (10h-12h30)			Après-midi (14h-16h30)		
Test WP1 & WP2	Lundi 22 mars	10h-11h Introduction : - Intervention Olivier HUTIN, Anne-Josèphe DENEUVILLERS et Olivier DURTESTE - Présentation des partenaires - Présentation du projet et ses objectifs - Matthieu 11h00-11h30 Pause 11h30-12h Suite introduction <ul style="list-style-type: none"> Point Sécurité - Benjamin 12h-12h30 Brise-glace			14h-15h Welqome App 15h-15h30 Pause 15h30-16h15 Test your selfie 16h15-16h30 Point SIMSOFT		
Test WP2	Mardi 23 mars	10h-12h30 Test technologie SIMSOFT/CETIM - Fraisage (Jeune 1y) 14h-15h SIMSOFT/CETIM Observation Tournage(Jeune 3y)	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Activité	10h-10h30 Test 1 technologie Proméo (jeune 4y) 11h30-12h Test 1 technologie Proméo (Jeune 2y)	14h-15h : Activités 15h-15h30 Pause 15h30-16h30 Activité	14h30-15h Test 1 technologie Proméo (jeune 3y) 16h-16h30 Test 1 technologie Proméo (Jeune 1y)	14h-16h30 Test (Jeune 2y) technologie SIMSOFT/CETIM - Fraisage 14h-15h SIMSOFT/CETIM Observation Tournage (jeune 4y)
	Mercredi 24 mars	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Activité	10h-12h30 Test technologie SIMSOFT/CETIM (Jeune 3y)		14h-15h Activité 15h-15h30 Pause 15h30-16h30 Activité	14h-16h30 Test technologie SIMSOFT/CETIM – Fraisage (Jeune 4y)	

			10h-11h SIMSOFT/CETIM observation Tournage (Jeune 1y)		14h-15h SIMSOFT/CETIM Observation Tournage (Jeune 2y)
	Jeudi 25 mars	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Activité		14h-15h Activité 15h-15h30 Pause 15h30-16h30 Activité	14h-14h30 Test 2 technologie Proméo (jeune 1y) 14h30-15h Test 2 technologie Proméo (jeune 2y) 15h-15h30 Pause 15h30-16h Test 2 technologie Proméo (jeune 3y) 16h-16h30 Test 2 technologie Proméo (jeune 4y)
Clôture et évaluation	Vendredi 26 mars	10h-11h Welqome app 11h-11h30 Pause 11h30-12h30 Test your Selfie		14h-15h30 Clôture <ul style="list-style-type: none"> • Animation retour d'expérience et Echange avec les industriels présents • Remise des attestations de participation 15h30-16h Pause 16h-16h30 Evaluation	

The 2 cohorts of low-skilled people – aged 21 – 24 – have done the tests in March 2021. Two days of preparation were organised the week before in Péronne by MEEF SHS. Covid-19 has inevitably an impact on the number of low-skilled people before and during the tests.

Test sessions of the regional methodology developed during the co-creation sessions

A test session was held from 22 March to 26 March 2021 at the AFPI in Hénin-Beaumont. The AFPI is a training centre specialising in industrial trades. This training centre hosted the tests organised by the French partners. The objective was to test the regional training methodology set up by the partnership. Carrying out these tests in a training centre specialising in industrial careers was an opportunity to put the young trainees in a situation of immersion, and to make them discover training in industrial careers.

Participants

Two groups of young people (9 trainees) recruited by the MEEF SHS volunteered to participate in this test week. They were mobilised by the MEEF SHS team and in particular through preparatory workshops carried out by the MEEF SHS. These preparatory workshops provided them with the context and the technical bases of the industrial professions.

The young people were supported throughout the week by technology and soft skills trainers, as well as representatives of the partner organisations (coaches).

For one week, the trainees were able to test the training developed combining ILTs and soft skills work.

Methodology for pre-training

- **Soft skills guide**

The Sud Concept partner, in agreement with the MEEF SHS and the CETIM, has ordered the production of a soft skills guide. This is an operational guide collecting a set of animations allowing the identification and development of learners' soft skills. This guide is designed for industrial trainers to support them in the training of soft skills in the training courses of their young people/trainees.

This document was produced by a Sud Concept service provider. It sets out a series of activities to strengthen the soft skills targeted by the CQPM09. This guide contains:

- ⇒ An instructional file for each activity,
- ⇒ A trainer's assistance form for each activity explaining the different postures, the points to be aware of and providing additional information,
- ⇒ A young professional form providing additional information on the animation's progress

During the test week, a representative of the service provider worked with the young people. He tried out several activities from the soft skills guide. This test of the activities made it possible to measure the effectiveness of the activities, their impact on the young people and their practice. Following this, a final version was developed containing all the modifications and suggestions made during the test week.

- **Exploring the industry jobs with Virtual Reality**

Immersive virtual reality technology was considered (following the co-creation workshops) part of the development of learners' soft skills. The partners used a specialist provider of immersive learning technologies during the March 2021 tests. The idea was to test different basic virtual reality scenarios

with the young trainees. Through these scenarios, the trainees worked on their soft skills related to the field of industry.

The scenarios proposed were the following:

- ⇒ A scenario for creating an exoskeleton. The trainees had to follow the different steps proposed to build their exoskeleton. To carry out this scenario, learners are guided by the instructions but also by a trainer.
- ⇒ A scenario to repair a malfunction on an electrical circuit board. The learners were guided by a list of instructions to follow to repair the anomaly in the best conditions. The aim was for learners to be autonomous. This scenario allowed them to work on their problem-solving skills, their ability to analyse, their ability to reflect, etc.

Virtual reality is an effective immersive technology. It allowed the young people to work on their soft skills as well as some technical skills. The young people found themselves in a work situation and had to apply all the necessary gestures to complete their task.

- **Test Your Selfie**

The Belgian mobile site Test your Selfie was used during these tests. This application made it possible to define the notion of soft skills among the learners and to identify the main skills.

The learners used this application in two stages: at the beginning and at the end of the tests to try to evaluate the evolution of their soft skills over the week.

The application is interesting because it allows learners to reflect on their behaviour in professional situations in the form of a questionnaire. Each question puts the learner in a professional situation. Three answers are proposed. The learner must then choose the one that seems most appropriate according to his or her vision and analysis of the situation.

At the end of the questionnaire, each young person receives a medal according to the number of points collected per question. The young people were able to evaluate their soft skills and try to reflect on their professional posture

- **Welqome**

The Belgian mobile application Welqome was also used during the tests. The choice of this application was based on the fact that it was used over several days and on the possibilities for use.

The partnership used Welqome as an energizer during the tests. A specific pathway for the test week was created :

- ⇒ Day 1: introduction to the Test Your selfie application via an introduction video.
- ⇒ Day 2: a challenge on the users' personal and professional achievements.
- ⇒ Day 3: a survey on the integration in the company.
- ⇒ Day 4: a survey on ideal working conditions
- ⇒ Day 5 (last day): A challenge to discover other career areas that may be of interest to the learners.

Welqome is an application available only on smartphones and tablets. It is intended for stand-alone use. However, the methodologies used during the tests are group events. The French partnership,

therefore, decided to adapt the use of the Welqome application for its use in de group. Each morning during the test week, the trainees learned together about the day's activity with the help of the Welqome application. The aim was to create debates and to allow each learner to bring their point of view and experience to the discussion.

2.3 Regional test methodology

In the week of 22-26 March 2021 the French partners have run together the pre-training and vocational training. A set of questionnaires has been used in order to assess the understanding of the engineering sector by the trainees, the goals of the future, motivation to work in the industry... However, the answers of the trainees on these questionnaires have both been influenced by their experience with the pre-training as well as the vocational training. In other words, it is not always simple to conclude to which extend a statement is a result of the pre-training of the vocational training. In order to do justice to the research that has been carried out, the complete results are presented. More details around the research can be found in [Annexe](#).

2.4 Result tests and interpretation

General impression on the Test your Selfie and Welqome App

Of the opinion of the young people the exercises about soft-skills were redundant but some interesting. The two Flemish apps used were not quite well received, especially Test Your Selfie. Low-skilled people did not understand and appreciate being judged on their personal skills, which as the name suggests, are personal and express themselves in different ways depending on the person.

Understanding of the engineering/manufacturing sector

The trainees' perception of the sector before and after the training was gauged. In general, we can see a positive evolution of the understanding of the engineering/manufacturing sector. The French trainees see a greater chance for themselves having a long-term career in the E&M sector after the post-test. The participants know where to go for further training or employment. More details are to find in Table 5 - Understanding of the engineering/manufacturing sector.

Motivation for joining the vocational training

French trainees were very interested in getting to know the industry and the work (7 out of 8), one person was hesitant. In France, there was a small change in the interest in learning new things and the training. However, the trainees are more interested in a job in the industry after training. Quote of trainee: *"C'est intéressant de découvrir d'autres métiers dans un milieu de formation avec des professionnels"*. (Translation: "It is interesting to discover other jobs in a training environment with professionals."). More detail are to find in Table 7 – Your interest in training.

Your goals for the future

Most French trainees wanted to **discover** the industry. After the training, they seem to have better knowledge about what steps are needed to achieve their aims. More details are to find in Table 8 – Your goals for the future.

Your confidence and general motivation

In all three countries, **stress, uncertainty and the need for confirmation** were noticed by the trainers. French trainees had difficulties with concentration/attention (4 out of 7) and stress, the trainers describe stress, nerves, fear... The stress is expressed in talking and movements, one person in particular had a difficult time standing still. Another trainee was too self-confident, he wanted to catch the attention of others. However, the trainers also said he was positive and motivated!

On the other hand, trainees were also described as thoughtful & curious (3 out of 6), positive & comfortable (2 out of 6). According to the trainers: “most participants work accurately and are enthusiastic”.

One of the trainees did not cooperate: he was calling someone, he was not listening, not polite... Another trainee asked for a lot of help but only because he wanted to work especially fast.

Quote trainee: *“Je ne me sens pas prêt pour la formation car j'ai peur d'échouer au cour de celle-ci et de ne pas avoir les connaissances et les compétences nécessaires.”*. (Translation: “I don’t feel ready for the training because I am afraid of failing in the middle of it and not having the necessary knowledge and skills.”).

After the training, trainees feel more confident and they believe that they will be able to overcome unexpected challenges. They are a little less positive about their skills to progress in the future. More details are to find in Table 9 – Your confidence and general motivation.

Overcoming obstacles

In France, there is only a very slight difference between before and after the programme, trainees mostly still believe they will be able to tackle challenges, unless when things are tough. More details are to find in Table 10 – Overcoming obstacles.

How you feel about your readiness for the workplace

The trainees feel less aware of the skills needed to do well in employment; they do feel fully prepared and ready to go into the workplace. They also indicate that they have got some relevant work experience.

The trainers were pleased with the results: *“Tous les formateurs ont été épaté par la rapidité des acquis des formés de première. Ils ont tous réussi la troisième phase sans tablette et sans support (à 1 ou 2 doutes près mais ils connaissaient la réponse) en reproduisant les gestes qu’il faut pour produire la pièce.”*. (Translation: “All the trainers were amazed by the rapidity of the achievements of the first-class trainees. They all succeeded in the third phase (within 1 or 2 doubts but they knew the answer), without tablet and without any support. The trainees reproduced gestures that were necessary to produce the part”. More details are to find in Table 11 – How you feel about your readiness for the workplace.

How you feel about the training

The trainees were positive about their training, they did not find the training tiresome or stressful and they did not think about quitting. The training was seen as very interesting and the pretraining did a good job preparing them for the training. The trainees also say they found it easy to understand the training. More details are to find in Table 12 – How you feel about the training.

3 Case-study: the pre-training model in Kent County

3.1 Description of the local context

The economic state of the region in terms of unemployment and vacancies

For the purposes of this report the data for unemployment, skill levels and vacancies is taken from 2019/20, before the impact of the Coronavirus Epidemic (which commenced in March 2020). The virus had the impact of increasing the number of claimants significantly, (more than double) particularly amongst young adults (more than treble). The virus has 'skewed' the figures, so 2019/20 provides a more realistic picture of Kent & Medway for the purpose of this project. However, the impact of the virus has increased the need for the BHC21 project: even more young adults will benefit from training which enables them to find employment in the engineering sector.

Unemployment in Kent & Medway

January 2020*	18-24		18-64	
UK	223,320	3.9%	1.21m	2.9%
Kent	5,385	4.4%	26,275	2.8%
Medway	1,140	5.1%	5,630	3.2%

*Claimant count: NOMIS data, published February 2021

Youth (18-24) unemployment was (and remains) above the National Average in both Kent and Medway. The districts of Kent neighbouring Medway, where the training takes place, (Swale and Gravesham) had youth unemployment levels of 6.7% and 5.4% respectively, each significantly above the National average.

Skill levels in Kent & Medway, 2019

	No quals	Level 2	Level 3	Level 4 & above
UK	7.7	75.6	58.5	40.3
Kent	7.8	74.5	55.9	36.6
Medway	8.4	75.2	55.4	32.9

(% of adult population, 16-64, ONS Annual Survey, January – Dec 2019)

Skill levels, as measured by the proxy measure of 'highest qualification' shows that Kent and Medway have skill levels below the National average at every level, particularly at higher skill levels.

The % of adults with no qualifications is also above average; 88,000 adults in Kent and Medway have no qualifications. This is equivalent to about 1 in 12 adults.

Sectors at most risk targeted for this project

The **Engineering & Manufacturing sector** is the target for this project for reasons that will become evident from the analysis outlined below.

The *Kent & Medway Economic Partnership*, a body representing the Local Authorities and larger employers in Kent & Medway, recently commissioned the production of a *Workforce Skills Evidence Base*. The following paragraphs, are the Author's analysis of the Engineering/Manufacturing sector.³

Manufacturing is a significant sector in terms of employment, making up 7% of all jobs in Kent and Medway. (48,000 employees).

The main concentrations of employment are in Medway, Swale and Ashford and, while there is a wide range of occupations in the sector, skilled trades roles are especially numerous.

An important driver of change in terms of skills needs is the adoption of new technologies, in areas such as digitalisation / Industry 4.0, rapid changeability, Internet of Things, smart factories and supply chain security. De-carbonisation and sustainability are further important drivers of change. Companies in the sector also tend to have high levels of productivity, reflecting the ongoing importance of skills in company operations.

The key skills-related issues to be addressed in the coming years are:

- **Ageing workforce:** *many skilled staff are approaching retirement, and companies are looking at ways of recruiting and developing younger workers. This can help drive company engagement with the education and skills sector, and also increase interest in Apprenticeships and potentially newer programmes like T Levels. The impact of Brexit on the sector is not yet understood, but labour shortages could further drive the adoption of new technologies to increase productivity and reduce headcount.*
- **Workforce diversity:** *women, for example, are an untapped talent pool for the industry.*
- **Image and perceptions of the sector:** *manufacturing, engineering and STEM more widely would benefit from clearer and more positive communication of the career opportunities available in the sector, which includes less 'heavy' activities like food science and requires a high level of innovation and creativity. Many local companies already support such work. Schools, colleges and universities need the right tutors, facilities and equipment to engage young people and make programme delivery relevant to industry needs.*
- **The local skills offer:** *companies would like to understand better what provider specialisms are available. They want to be confident that what is on offer is relevant to their business needs and brings tangible benefits, but is also delivered in a way that works for them in areas like administration and pastoral care for Apprenticeships. Given, for example, recent changes in FE, new investments in HE and the availability of new Apprenticeship standards, there could be untapped potential to increase engagement with industry.*
- **Short courses:** *there is likely to be unmet demand for short, specialist courses and workshops (including online) relating to new technology adoption and deployment, in subjects like AutoCAD, digital automation, Big Data, Internet of Things and digital skills more generally.*

³ The Kent & Medway Workforce Skills Evidence Base 2021. Steve Matthews, Jonathan Pratt and Ross Gill. For Kent and Medway Economic Partnership.

Such courses can often require significant travel within the UK, which can be prohibitive for companies, and equipment / system vendor courses can be too limited in scope and expensive.

Context Summary

The background context for the BHC21 project is an identified need to recruit young adults for an important (and growing) sector, but in an area of relatively high unemployment and relatively low skill levels. The 'solution' offered by the project is to train young adults as efficiently and as rapidly as possible (using ILTs) to prepare them for employment in the sector.

Characteristics of the targeted groups for BHC21

The project has targeted low skilled and (predominantly) in Kent, unemployed people interested in re-training in an industry sector that has high demand. The programme is particularly aimed at younger adults (ages 18-30). The pool of participants who actually enrolled on the day also included a handful of people in their early to mid 30's, plus 1-2 in their late 30's/early 40's

In order to address the gender imbalance in the sector, the project has urged job centre staff to encourage young women to attend promotional events. The participants that have taken part thus far have come from a range of backgrounds and have had a range of abilities. By relying on the JCP to recruit participants, the social background of participants inevitably was of disadvantage, relative poverty, low educational attainment, social dislocation, fragmented families, learning disabilities, social anxiety, and conflict with the law. Some are caring for ill, elderly, unemployed, and/or young family members, some are parents and some have learning disabilities (ADHD, dyslexia, autism, etc.) or mental health concerns (e.g., depression, social anxiety).

Lack of access to nearby public transportation or high-speed internet connection is an issue for some participants.

3.2 Description of the programme

The first four weeks, participants were trained at MidKent College by a tutor and at the University of Greenwich by an engineering lecturer. Different aspects were part of the training:

- **Testing vocational skills.** Prior to the programme starting, an applicant's aptitude and attitude is visually assessed at the Taster Day. This shows if there is an affinity with the programme content and indicates the ability to comply and work with others. During the 4 weeks at the college the trainees are introduced to a range of fabrication skills and knowledge, each project item introduces and demonstrates new technical abilities. When the college training is complete, the trainees will have an understanding of numerous engineering techniques and experience in a basic engineering workshop.
- **Motivational training.** This is delivered throughout the training programme in a variety of formal and informal ways. The Tavistock Institute of Human Relations (TIHR) helps the trainees to focus on getting the most out of the experience through the understanding of:
 - working in the real world;
 - taking instruction through tuition and in the workplace;
 - working for other people and within a team;
 - TIHR also aims to help the trainees understand themselves.

Other motivational outcomes are:

- Completion of each fabricated piece of project work;
- Peer competition;
- Work placement engagements and outcomes.
- **Career orientation.** The trainees are introduced to the breadth and scope of a career in engineering and the variety of specialisms, branches and sub-branches available to enter. An awareness is raised at the levels of professionalism and continuing professional development required across the sector. This section will also help them find an area they may not have considered due to lack of information.
- **Industrial visits.** Visits to a variety of companies with different branches of engineering and different workshops.

In week 4, trainees were placed in companies for the start of their apprenticeship. This programme consists of:

- **On-the-job training:** trainees learned from the mentors in the workplace. They practiced the skills they acquired during the training at MidKent College.
- **Mentorship:** mentors supported the trainees in the companies. More information about the mentorship can be found in [Annexe](#) and within the results from the tests.
- **Day release workshop training:** one day a week, the LSP's return to Mid Kent College for theoretical knowledge.
- **Virtual social discussion:** trainees could talk about the things that went well during the apprenticeship and things they struggled with. That way, they could help each other and they heard that they were not the only ones who sometimes had a hard time.
- **Career advice**
- **Digital CV creation**
- **Employment in engineering support**

The Kent partners have run and tested the full Engineering Training Programme for two cohorts:

A) Cohort 1, February 2020

Participants

The first cohort (Test) commenced initial training on 17th February 2020 with 24 participants. In January 2020 UK partners made presentations to 'job coaches' in four Job Centres. The coaches subsequently recruited over 70 unemployed young adults to attend presentation sessions. 45 signed up for a 'taster day' and 36 subsequently attended the taster day at Mid Kent College on 10th February 2020 and 27 enrolled for training. Of the 27 people who enrolled for the BHC21 training, 19 completed the training and were placed in companies. However, the programme was interrupted due to Covid-19. After the summer, 7 LSP's returned and completed training and 4 of them were placed in companies.

Schedule

The participants attended Mid Kent College for three weeks undertaking training in welding and machining. Instruction for welding included the use of VR welding kits. The students were divided into two groups. Group 1 used the VR welding kits prior to entering the 'real' welding bays; while group 2 went straight into the welding bays (acting as a 'control' group). There was a marked difference in the speed and quality of learning and performance.

Videos, taken from You Tube, were used for some of the instruction on machining (milling and drilling).

In addition to basic engineering skills training, participants also attended sessions with the Tavistock Institute to address barriers to learning through an adaption of the Institute's 'Group Relations' method.

University of Greenwich and Tavistock institute offered training for employers (prospective workplace mentors) in pedagogical skills. Four employers took up the training.

Nineteen participants commenced industry placements on Monday 9th and Monday 16th March. These placements were significantly disrupted by Covid 19 when the UK went into full lockdown on 23rd March 2020. The programme was suspended in April 2020.

Seven of the remaining students returned to College to complete their skills training in September 2020. Several re-commenced work placements with one gaining employment.

B) Cohort (test)2, October 2020

Participants

Covid-19 has inevitably a big impact on the reach of the target groups in 2020. With regard to the second cohort, which started in the autumn of 2020, around 15 LSP's attended the info-sessions organized at the JCP offices in Kent. Of these people, 11 LSP's signed up for the Taster Day and 8 LSP's turned up to the first day of training at the MKC.

Of the eight students that commenced on the programme five completed the initial training. After suspension of the work placements in November, due to a covid outbreak on the course, four students returned in March 2021 and are currently completing their work placements, hoping to gain employment.

Schedule

BHC21 UK timetable: Cohort (test) 2

Weeks 1 -3 : October 26th – 13th November

Mon	Uni of Greenwich	9.00-12.00 Testing	1.00-4.00 Group Relations (Tavi)
Tue	Mid Kent College	9.30 -12.30 Engineering Skills	1.00-4.00 Engineering Skills
Wed	Mid Kent College	9.30 -12.30 Engineering Skills	1.00-4.00 Engineering Skills
Thu	Mid Kent College	9.30 -12.30 Engineering Skills	1.00-4.00 Orientation & visits
Fri 6	Mid Kent College	9.30 -12.30 Engineering Skills	1.00-4.00 Careers (CXK)

Weeks 4 -12: commencing Monday 16th November

Industrial placements: 16 Nov – 18 Dec (5 weeks) & 4 Jan – 29 Jan (4 weeks) = 9 weeks
Mid Kent College on Wednesdays, 9.30-4.00pm

The learning experienced by partners from the first test led to a number of changes to the programme for the second cohort in October:

- In addition to the Skills Training provided by Mid Kent College, University of Greenwich provided half a day of training each week on ‘testing’ broadening the engineering skills for the students.
- CXK, a Kent based training organisation that delivers the *National Careers Service* to adults, provided weekly sessions on job preparation (Job search, CVs, interview skills, self-presentation). This included the production of video CVs.
- A further, weekly, session, delivered by KCC staff at Mid Kent College was added. Entitled orientation to the Engineering Sector this included information sessions about job roles, training routes and salary expectations; and industry visits to three very different local engineering companies.
- Tavistock Institute amended their delivery (smaller groups, shorter sessions, informal environment)
- An introductory evening for employers was introduced as it was felt that it was necessary for employers to have a clear understanding of the whole programme and the role of the partners.

Recruitment followed a similar process to cohort 1 (presentation to Job Centre Staff; presentations to prospective participants; taster day), except that the presentations were made on-line via MS Teams.

Due to Covid restrictions (social distancing requirements) at Mid Kent College the number of participants was restricted to eight students. Subsequently the geography for recruitment was restricted to Medway and Sittingbourne.

Again, the programme was adversely affected by Covid. During initial training one of the students tested positive for Covid causing all other students to self-isolate leading to suspension of training. Work placements were subsequently delayed until the New Year, and further delayed due to a resurgence of the Covid virus in January. Five of the students eventually have embarked on work placements and it is likely that three of these will secure employment in the near future.

3.3 Regional test methodology

A set of questionnaires has been used in order to assess the understanding of the engineering sector by the trainees, the goals of the future and motivation to work in the industry. However, the answers of the trainees on these questionnaires have both been influenced by their experience with the pre-training as well as the vocational training. In other words, it is not always simple to conclude to what extent a statement is a result of the pre-training or the vocational training. In order to do justice to the research that has been carried out, the complete results are presented. More details around the research can be found in [Annexe Xx](#).

3.4 Results tests and interpretations

Understanding of the engineering/manufacturing sector

The participants have a better understanding of the E&M sector after the training, they also see themselves having a long-term career in the E&M sector and know who to contact to discuss further training or employment opportunities. More details are to find in Table 5 - Understanding of the engineering/manufacturing sector.

Motivation for joining the vocational training

Trainees from the UK were particularly enthusiastic about getting to know the industrial sector and about learning new skills. Half of the participants wanted to change industries/jobs and especially wanted to earn a higher salary. The quotes also reflect this:

“Gain knowledge and skills in another sector without 100% commitment. A taster of the industry. If I enjoy/I am competent, I will pursue.”

“...complete this training because I like to explore new courses and also gain new skills...”

“I want to get a better understanding of other careers and find what I enjoy/am good at.”

“... to get a higher learning and knowledge of how E&M works.”

The training has been evaluated as being less interesting after it was finished but they did want to learn new skills throughout their work life.

More detail are to find in Table 7 – Your interest in training.

Your goals for the future

Most trainees wanted to discover the industry (7/8), some of them also wanted to work towards a higher level degree (3/8). After the training, trainees indicate that they have a clearer vision for their future. More details are to find in Table 8 – Your goals for the future.

Your confidence and general motivation

After the three week training in MidKent College, confidence has decreased, they seem to feel less satisfied with themselves. The trainees mentioned that they liked to maintain contact with the base.

The mentors felt *“young people need more reassurance than other generations.”*

More details are to find in Table 9 – Your confidence and general motivation.

Overcoming obstacles

In the interview it was mentioned: “The mentors said that they did not expect trainees to know everything on day one. The mentors were prepared to train the trainees up further, but they were most concerned about whether the trainees were ‘coachable or not’.”

The trainees themselves feel confident about overcoming their obstacles.

One trainee had specific obstacles, he was not low skilled but was on the autistic spectrum and tended to identify this characteristic of his persona upon his first meeting with a new person. This trainee had undertaken vocational academic studies in Engineering prior to the project and had shown a level of skill and knowledge in this subject area. His participation in the project has been with determination to complete the training and obtain a work place. Ideally, he required an SME that could provide almost 1-2-1 training. Initially, he requested constant checks of his work, but when he felt he had it just right, he would produce items well within their tolerance. His main challenge remains his inquisitiveness, hence prone to wander off to inspect something unless he was involved in a task. So keeping him focused was the key. More details are to find in Table 10 – Overcoming obstacles.

How you feel about your readiness for the workplace

In the UK, trainees feel fully prepared and ready to go into the workplace, they also say they are aware of how to behave in the workplace.

More details are to find in Table 11 – How you feel about your readiness for the workplace.

How you feel about the training

In the traditional group, instruction was given by a professor from Greenwich University and worked at a steady pace with technicians to assist. The ILT video was also created by the professor.

The self-led group chose a variety of ways to interact with their learning tool, they also asked the assistants for help which was discouraged and then prevented. Many worked at a ‘staccato’ pace.

Both groups completed mini project A, by lunchtime, there was very little finish time difference between each group. The afternoon projects were tutor and technician assisted for all; this helped some students to work faster.

There were three mini soldering projects to complete. At the end of the afternoon session most students had completed two mini projects to satisfaction, some completed all three.

The students were asked to comment on their experience.

- Some members of the traditionally taught group expressed a preference to experience the self-led video,
- In the video-led group, for some, the remote working proved unsatisfactory, with them expressing the need to be assisted by the tutor or technicians.

The academic tutor did not comment on the quality of the work.

This basic and simple comparison test indicates that in this instance, the preferred method of learning is highly dependent on the participant's preference to learn using a particular learning technology or learning medium.

More details are to find in Table 12 – How you feel about the training.

4. Conclusions and Recommendations for all the Regions

4.1 Generic recommendation: the importance of a holistic approach

The above activities provided evidence that skill training alone is not sufficient to prepare Low Skilled people for employment in the Manufacturing/Engineering sector. It is also necessary to address barriers to learning, and to prepare people for learning.

Recommendation: Any training programme directed at LSPs must apply a holistic approach addressing a variety of learning needs. This includes innovative methods for imparting skills (see C2 below); orientation sessions imparting knowledge about the engineering sector (c3) training for soft skills, addressing barriers to learning and providing mentor support (C4 and C5)

4.2 Recommendations for promoting the industry professions to LSP

Relevant Activities: B1.1 VR Electrical; B1.2:3D Workshops; B1.3Industrial visits; B1.4 VR welding.

C.2.1 VR/AR and associated technologies help to give a rapid understanding of the type of skills requires in the sector. They are also ‘user friendly’ and accessible to low skilled people. They afford the opportunity to make mistakes without associated consequences. This is important for people that have low self-esteem and low confidence levels.

Recommendation: VR/AR and other Innovative Learning Technologies (ILTs) to be used with LSPs to develop confidence and overcome barriers to learning.

C.2.2 The use of ‘state of the art’ equipment such as 3D printers, VR/AR technology, and robots/cobots helped to excite students and stimulate their interest and motivation to work in a sector which is undergoing rapid technical change.

Recommendation: VR/AR and other Innovative Learning Technologies (ILTs) to be used with LSPs to stimulate interest and learning in unfamiliar skills.

4.3 Recommendations for stimulating the interests, attitudes and (technical and soft) skills of LSP for jobs in the industry

Relevant activities: B1.3 Industrial visits; B2.1: Test your selfie; B2.2 Xperteam; B2.3: online assessment; B2.4 Job ready

C.3.1 In the tests it was discovered that participants knowledge about, and understanding of, manufacturing environments was variable and limited. This implied a need to orient people towards the sector by providing information about the breadth of roles, the qualification structure, salary levels and, most importantly, providing opportunities for exposure to a variety of engineering environments; from technical ‘laboratory’ facilities to heavy industry.

It is recommended, that LSPs are given exposure to the sector, through visits and presentations, early in the training programme

C. 3.2 The tests found that ensuring better understanding of the engineering sector (including breadth of roles; salaries and careers structure) proved to be motivational. This was reflected in the responses to the questionnaire which showed that imparting such knowledge increased the desire of participants to pursue careers in the engineering sector.

It is recommended that awareness/orientation sessions are delivered early in any training programme for LSPs considering engineering.

4.4 Recommendations for training the attitudes and skills for the labour market of the LSP

Job date ((B) Job application (B) CXK Video CVs (UK)

The tests demonstrated that providing training in engineering skills alone was not sufficient to guarantee sustained employment. It is evident that ‘Soft skills’ are as necessary as engineering skills to gain entry to, and maintain, employment. These soft skills include: CV writing, interview skills, job search (including social media) self-presentation, timekeeping, communication, customer service (particularly when dealing with clients) and team/groupwork skills. The latter includes the ability to work alongside experienced colleagues and accept supervision with a positive attitude.

Recommendation: training in a range of ‘soft’ skills, should be an integral part of any engineering training programme for LSPs

4.5 Recommendations for tackling the learning barriers and organizing successful motivational/group activities with LSP

Welqome app (B); reflexion game(F); group relations (UK); job application training (B)

C.5.1. The experience of training providers during the tests was that three or four weeks was a very short time to address deep seated barriers to learning; it was, therefore, necessary to adjust the training to provide participants with ‘coping mechanisms’.

It is recommended that barriers to learning are addressed from the perspective of reducing the likelihood of dropout.

C.5.2. Sustained contact with a sympathetic adult throughout the entire programme (twelve weeks and beyond) was seen to be vital in ensuring that participants stayed on programme, particularly during periods of personal crises or dips in confidence.

It is recommended that a formal mechanism for mentor support is provided as part of any training programme for LSPs

Section B

A description of the methods deployed in the regions

In this section the various methods deployed by the partners in the regions are explained. The experience, measured effectiveness and results from these methods are described. They inform the design of future programmes including the forthcoming pilots (WP2).

The results and insights from the different regional sessions are presented and discussed by the participating partners and organisations. These results and discussions deliver the input for the elaboration of a common, cross-border approach for recruitment and pre-training of LSP in preparation of a vocational training programme.

1. Methods to recruit and motivate low skilled people for the industry sector

1.1 Electrical repair with virtual reality

Typology:

Method to stimulate and motivate the low skilled people for jobs in the industry

Organisation responsible:

Promeo Formation <https://www.promeo-formation.fr/>

Objective:

- Test knowledge on simple technical concepts, ability to follow instructions.
- Practising technical skills in realistic and safe work settings
- Generate interest in industry jobs

Target group (age, social background ...) on which this method was used:

Young people from 16 to 25 years old, low skilled people

Description of the approach:

This VR simulation allows job seekers to practice technical skills in a virtual work environment, entirely designed for VR glasses. While repairing the electrical systems, the participants are guided by the audio and visual instructions. These last ones are also projected on a screen. The trainer offers advice and encourage the participants with the execution of tasks.

Experiences of the job seekers and trainers with running this method

Enthusiastic reactions from participants due in particular to the user-friendliness of the VR application. Everything that appears in the glasses is also projected on a screen in the classroom. This allows young people to "help" each other with the correct execution of the tasks. The activity therefore enabled social interaction which was not foreseen in the original objectives.

1.2 Learning to use the 3D printer workshops

Typology:

Method to stimulate and motivate the low skilled people for jobs in the industry

Organisation responsible:

Institut Universitaire de Technologie (IUT) of Picardie

Objective:

- Practising technical skills in realistic and safe work settings
- Generate interest in industry jobs

Target group (age, social background ...) on which this method was used:

17 young low skilled people with ages between 16 to 25 years have followed this workshop during the first co-creation session

Description of the approach:

Students of the Institut Universitaire de Technologie (IUT) of Picardie have given interactive/playing demo sessions around the use of the 3D printer. Different objects have been created. Besides this, the young participant have also received practical information around jobs where 3D printing skills are needed, the average salary in the jobs etc.

Experiences of the job seekers and trainers with running this method

The participants were really enthusiastic and captured about the potential of the 3D printing. They were surprised about the job opportunities and work conditions in the sector. This is an evidence of the fact that many of them did not have an accurate image of the industry sector. The similar age of the students and the target group was a facilitating factor for a positive communication and mutual understanding between each other.

1.3 Orientation to the engineering sector

Typology:

Method to stimulate and motivate the low skilled people around jobs in the industry

Organisation responsible:

Kent County Council <https://www.kent.gov.uk/>

Objective:

The students on the programme will have a better understanding of industrial workplaces, including the noises, smells and scale. They will feel less intimidated to enter the workplace for their work placements.

Target group (age, social background ...) on which this method was used:

Young people from 18 to 30 years old, low skilled people

Description of the approach/methodology (what does this practice actually consist of?):

An afternoon each week of the three-week intensive training programme was timetabled for 'Orientation to the Engineering Sector':

- In week 1 the variety of engineering disciplines, job roles, qualification structure and salary levels were explained to the students.
- In weeks 2 and 3 visits were made to three very different industrial settings: EAP Ltd (a ship repair company), GEKU Automation (a robotics company) and H&E Equipment Services (producing hydraulic equipment). The industrial visits were part of a process of 'orientation to the engineering sector' recognising that students have a limited understanding of engineering processes, jobs and roles.

Experiences of the LSP and trainers with running this method

Young people or people without work experience in the industry can get intimidated by unfamiliar work settings, large open spaces, sometimes very noisy, large heavy equipment, complicated processes, industrial smells, sometimes dirt and grime... Our intention was to reduce the anxiety of the trainees and expose them to the workplace before embarking on their placements and to address any concerns they might have.

The participants were enthusiastic and pleasantly surprised at the variety of roles and how they might 'fit in'. The employers were very welcoming and friendly.

How would you improve your method?

Increase the number of visits (shorter more intensive) and ask trainees to do some research on the companies beforehand (internet search)

1.4 Workshop with VR welding

Typology:

Method to stimulate and motivate the low skilled people around jobs in the industry

Organisation responsible:

Mid Kent College

Objective:

The VR welding simulation is being used as a learning tool during the vocational training. However, this application has also been used during the taster day for showing the candidates what welding is and how this is learned in a safe, accessible way with the help of VR, before using the 'real thing'. Subsequently, to use VR to enhance and accelerate the learning process.

Target group (age, social background ...) on which this method was used:

Low skilled people with ages between 18 and 30 years. Around 30 candidates have attended this workshop.

Description of the approach/methodology (what does this practice actually consist of?):

Students received instruction on how to use VR headsets and associated equipment to practice a variety of welds. They could then apply their newly acquired skills using real equipment in welding bays. The students could return at any time to use the VR equipment.

In the first test, some students entered the welding bays without first using the VR, acting as a 'control group'. There was a noticeable difference in the speed of learning.

VR headsets are an attractive option for young adults to learn new skills. They learn at the same time as having fun with the equipment. The VR process reduces the fear of using the welding equipment for the first time... and also reduces the fear of failure (prevalent in LSPs). They can try as many times as they want with a VR headset. This rapidly increases the speed of learning.

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

The students enjoy using the VR headsets. They are currently 'on trend' and they feel they are using a very up-to date training method. There is often competition for time using the kits, and students compete with each other to get the best scores, creating a game to intensify their learning.

The tutors enjoyed using and teaching with the VR kits. They felt that, although the initial outlay was expensive, the improvement to learning, and the reduced need for time in the welding bays, justified the cost.

2. Methods to identify and stimulate the interests, attitudes and (technical and soft) skills of LSP for jobs in the industry

2.1 Pre-screening of attitudes with www.Testyourselfie.eu

Typology:

Creating awareness for the attitudes needed on the labour market

Organisation responsible:

This is an existing tool which has been developed by www.Travi.be (Training funds for temporary workforce as observing partner) in collaboration with other partners. For this project, the tool has been used by Flemish (VDAB) and French (MEEF) partners. More information in English and French you find here: <http://www.youtube.com/watch?v=HCpPsPNaQcE#action=share>

Objective:

The goal of Testyourselfie is to make the young people aware of the importance of soft skills needed on the labour market when looking for a job. This tool only gives a general indication of the soft skills of the young people and should not be used for diagnosing the attitudes on a very strict way.

Target group (age, social background ...) on which this method was used:

This tool has been used for low skilled young people with ages between 18 to 30 years old

Description of the approach/methodology :

Testyourselfie is an online tool built around 7 dimensions of soft skills/attitudes needed on the labour market:

- Learnability
- Knowing your strengths and weaknesses
- Flexibility
- Taking initiative
- Verbal communication
- Being on time
- Professional appearance

In the Flemish programme the tool has been used on the first day of the training as a way to get to know the trainees and make them aware of the soft skills needed for the labour market. It is also a pleasant way to start the day.

Experiences of the LSP and trainers with running this method:

We see that the trainees have the tendency to overestimate themselves. For the future programmes, we recommend the partners to focus on the ability of young people to estimate themselves. It is often that they do not have an accurate image about themselves and over-estimate themselves.

2.2 Pre-screening of technical knowledge and skills with tools created on <https://xperteam.net>

Typology:

Identification of the pre-existing technical knowledge and skills before starting the vocational training

Organisation responsible:

CETIM <https://www.cetim.fr/>

Objective:

CETIM has created an online assessment tool aimed at pre-screening the technical knowledge and skills of learners before starting the training.

Target group (age, social background ...):

18 young low skilled people with ages between 16 to 25 years have taken this online assessment

Description of the approach/methodology:

This is an online evaluation and training tool which allows teaching and evaluation of knowledge on different subjects. It consists of questions around:

- general knowledge
- technical knowledge
- knowledge around the industry sector

The online assessment must be accompanied by a remote or face-to-face interview. At the end, the trainer/coach writes an evaluation report. Based on this, a tailored refresher course or full training will be offered to the trainees.

Here are some tips to improve this method:

- Popularize the terms used, especially those from the industrial sector
- Present more video sequences to stimulate the interest of users
- Make more links with the living experiences of young people, their needs, etc.

Experiences of the LSP and trainers with running this method:

The trainees have responded positive on the assessment. Special attention is needed for the technical issues related to the website.

2.3 (Pre-)screening of technical skills with an online test (UK)

Typology:

Assessing the students aptitude to working in the Engineering sector in a cost efficient way

Organisation responsible:

University of Greenwich <https://www.gre.ac.uk/>

Objective:

The goal of the online tool is to assess students aptitude and skill levels relating to the engineering sector in a cost efficient way, and to re-assess these abilities after training.

Target group (age, social background ...):

Eight students with ages between 18-30, low skilled profiles.

Description of the approach/methodology (what does this practice actually consist of?):

At the start of the programme (week1) students undertook an online test answering a variety of questions created to assess the likelihood of their success in learning engineering skills.

Experiences of the LSP and trainers with running this method:

Some students were uncomfortable taking a test due to the previous experiences, fear of failure etc. They were assured that this was not a pass/fail test, but an assessment of their abilities to enable tailoring to their development needs. Once they overcame their initial fear of 'tests' the student completed the survey enthusiastically.

Tutors/officers were present to support them in answering questions. The process of assessing competence sat alongside a further survey which assessed the students' motivations and attitudes regarding working in the sector (applied across all three regions).

The tool tests theoretical knowledge. A tip for the future is to develop a competence assessment process by adding practical elements to the assessment tool.

2.4 Self-assessment of soft skills with the platform Job Ready (France)

Typology:

Gaining insight in the talents/competences/personal interests of young people

Organisation responsible:

Jobready is a skills recognition programme for social and professional integration developed by the association Article 1 <https://article-1.eu/>

Objective (what do you intend to achieve with the practice):

The aim of the tool is to raise awareness of “unsuspected” skills among target audiences.

Target group (age, social background ...):

12 young people with low qualifications, with ages between 16 to 25 years.

Description of the approach/methodology (what does this practice actually consist of?):

Article 21 has developed the online platform <https://www.jobready.fr/> for the assessment of the soft and transversal skills. Each skill can then be self-assessed and / or assessed by relatives such as friends, colleagues, trainers, etc. Based on this diagnosis of transversal skills, the site offers a resource centre for courses to work on your soft skills (Moocs) and matches the skills with activities such as volunteering, small jobs, etc. capable of improving the skills where gaps are noticed.

How are the experiences of the trainees and trainers with running this method in the local co-creation sessions?

Mixed reactions were registered among trainees from "the tool allows you to become aware of your abilities in a pleasant way ", "we see that we are not zero's" to "the tools is useless ", "we don't need that because we have no problem selling ourselves".

According to the trainers, this tool requires some adaptation when used by an audience with a low level of qualification. For example, trainees do not always understand the vocabulary, not even when this is explained by the tutor. In addition to this, this platform Job Ready requires an email address which young people don't necessarily have.

3. Methods to train attitudes and skills for the labour market

3.1 Job date (Belgium)

Typology:

Recruitment of employers on the last day of the vocational training programme

Organisation responsible:

VDAB and Travi

Objective (what do you intend to achieve with the practice):

The aim of organizing the job date on the last day of the vocational training programme was to recruit workforce for temporary jobs in the food industry.

Target group (age, social background ...):

This job date has been organized 2 times within this project. The target group were low skilled people of different ages, most of them with a migration background.

Description of the approach/methodology (what does this practice actually consist of?):

The last day of the programme, after the completion of the vocational training, different job counsellors of temporary employment agencies come to interview the trainees and recruit them for jobs in the industry.

The job counsellors hold individual interviews with the trainees and assess their soft and technical skills needed for a job as packaging operator in the food industry. At the end, all the counsellors come together and discuss upon the profile of the trainees. This is a very important step which offers the counsellors a complete image on the individual trainee.

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

It would be a good idea not just to invite the temporary employment services, but also the companies themselves. For the moment, the trainees who graduate are mainly employed by the temporary employment services.

3.2 Job application training (Belgium)

Typology:

Preparing young people with knowledge and skills for job applications

Organisation responsible:

VDAB

Objective:

Preparing young people with knowledge and skills for job applications

Target group (age, social background ...):

This job date has been organized 2 times within this project. The target group were low skilled people of different ages, most of them with a migration background.

Description of the approach/methodology (what does this practice actually consist of?):

After the completion of the vocational training, the counsellors of VDAB offer a short workshops around job application skills. Topics such as writing an CV, preparing yourself for a job interview ...are discussed and practiced.

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

Positive

4. Methods to tackle the learning barriers

4.1 Welqome-app <https://www.welqome.be/nl> (Belgium and France)

Typology:

Development of learning skills

Organisation responsible:

www.VDABbe and www.Travi.be (previously known as VFU – The Training funds for temporary work offices)

Objective (what do you intend to achieve with the practice):

In Belgium, the goal of the partners was to guide trainees in the development of learning and technical skills.

Target group (age, social background ...):

The app is originally developed as an onboarding tool for the youngsters who are in search for temporary jobs. Withing BHC21, the partners have re-designed this app and tailored this on the needs and profile of low skilled people of different ages, sometimes with a migration background. Six trainees enrolled for the course 'packing machine in the food industry' have tested this app.

Description of the approach/methodology (what does this practice actually consist of?):

Based on the results from the www.testyourselfie.eu and observation at the machine during the technical training, the partners have come to the conclusion that trainees do not always have the right learning skills: they do not link to theory to the practice, they do not take notes, they have the feeling that are can operate the machine fast...

For the time of 30 days the trainees received daily short notifications related to the development of learning or technical skills and knowledge. These notifications varied from tips about learning skills, a test about the technical skills, a technical challenge to surveys and instruction videos or self-evaluation...In some notifications the trainees were asked to consult the trainer or a peer colleague about the working of the packing machine.

VFU is the owner of the app but the content can be customized by every organisation. In case of BHC21 the content was jointly developed by Travi (former FVU), VDAB, KULAK and POM. The content developer has 100% control over the data displayed

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

This a fun and accessible way to approach young people. It is also a fine example of micro learning where small notifications keep them daily motivated to work on the learning and technical skills. The main problem trainees faced when testing the app for the first time was language. The content was written in an academic Dutch. The content was the reviewed.

4.2 Reflexion game (France)

Typology:

Method to tackle the learning barriers by addressing reflecting questions to trainees. It is also an orientation tool which provide insights in the talents, competences and personal interests.

Organisation responsible:

POWA

Objective (what do you intend to achieve with the practice):

This is card-based game aims to:

1. Encourage the young people to express their feelings, perceptions, ideas...over themes proposed by the animator, and if necessary, discuss these perceptions ...
2. Make young people aware of their skills and qualities that characterize and show them that they can be valued and trusted.

Target group (age, social background ...):

18 young people from 16 to 25 years old followed by the MEEF, with low levels of qualification.

Description of the approach/methodology (what does this practice actually consist of?):

This reflexion game is card-based and consists of a series of activities which encourage discussions with and between participants. After each question is being discussed, a « doorbell » is used to move on to another question (and to limit the duration of each sequence). Three types of activities are possible:

Activity 1: The facilitator asks the young people to stand in a circle and addresses them questions around different aspects of work such as: profession, management, compensation, training, etc.

Activity 2: The facilitator reads some (controversial) statements around « the world of work » and asks the participants to stand right of left in the room, according to their meanings (right if they agree, left if they disagree) and motivate their position.

Ex: "I think we are going to do the same job for our whole life" or "We are going to change jobs several time in our life".

Activity 3: The facilitator lays cards on a table and asks the participants to choose an animal card and define him/ her personality with the help of that animal. The participants motivate their choice and describe their personality traits.

The activities can be complementary to the use of the Job Ready tool. There is no chronological order

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

Depending on the groups, young people have more or less trouble expressing themselves, but they found the activities entertaining. The game makes possible to address question to each other, express their feelings, question themselves... The success of the game depends on the talent of the facilitator to animate the group discussions.

4.3. Experiential learning in group relations (UK)

Typology:

Identify and address (learning) barriers that have previously prevented the low skilled people from securing and maintaining sustainable employment

Organisation responsible:

Tavistock Institute <https://www.tavainstitute.org/>

Objective (what do you intend to achieve with the practice):

The goal of the experiential learning is to prepare young people to enter, survive and thrive in the workplace

Target group (age, social background ...):

Around 32 young adults with ages between 18-30 years old have attended the experiential learning sessions

Description of the approach/methodology (what does this practice actually consist of?):

See the Group Relations Method at [Appendix](#). An essential part of the Group Relations method from the perspective of BHC21 is an understanding of how people behave in groups. This understanding helped students to find a place in the workplace and understand some of the group dynamics that might impact on their position.

How are the experiences of the LSP and trainers with running this method in the local co-creation sessions?

Some LSPs felt uncomfortable with the Group Relations process which asks about personal feelings and experiences. As a result, in cohort 1, some 'voted with their feet' and excluded themselves from the process. But those that stayed and took part fully in the sessions gained insights into their own behaviours and feelings which helped them to prepare for the workplace (and life in general).

In a short space of time, some noticeably grew in confidence. The intervention was adjusted for cohort 2 with increased engagement. The group size was reduced and the length of sessions was also reduced. This was in recognition of some students discomfort with expressing their feelings in a large group. The Group Relations process was supplemented by intensive research with some of the families of students on the programme. This is in recognition that a student's family background may have a significant impact on their motivation and attitudes towards work and learning.

APPENDICES

5. Research methodology

5.1 Participants

In Table 1 you can see how many participants started and finished the training in each country. You can also see the education level of the participants.

	BE	FR	UK
Primary education	4	-	Low skilled: 4 Not low skilled: 4
2 nd degree secondary education	1	2	
3 rd degree secondary education	3	5	
Higher education	0	1	
Starters	8 participants	8 participants	8 participants
Finished	6 participants	7 participant	5 participants

Table 1 - Participants of the trainings

5.2 Instruments

Development of the instruments

The first version of the trainee and trainer instruments capturing trainee motivation and perception of the training was developed by KU Leuven, campus Kulak Kortrijk on the basis of previous internal work (Vanneste et al., 2021). This was proposed at the roadshow in England in September 2019, finalised in January 2020, and tested with groups at the VDAB in February-March 2020. Simultaneously, a WP1 evaluation instrument was also developed for the second cohort in England in August 2020.

A research script was also developed to support the regional partners who are responsible for data collection.

In Belgium, a few trials were already held in fall 2019 and spring 2020 to work towards an optimal training programme and to try-out the questionnaires. During the first trial, no ILT's were used. During the second trial, an instructional video was used by the trainees working on Chromebooks in the

VDAB-training center. No other ILT's were used. Attached, you can find [Annexe](#), with a brief description of the results from these trials.

Taking the general feedback from the tests in the three countries, new versions of the instruments were developed in August 2020. In the final version, questions about the knowledge of the industry and the career path of the participants were included. Introducing different industrial activities to the participants and leading them towards a job or a well-fitted training is crucial in BHC21. Therefore, it is necessary to look into the knowledge of the participants, their internal motivation and their career goals.

5.2.1 Description of the instruments

In this description, you will find information about P-questionnaires, questionnaires that were completed by Participants. You will also find T-questionnaires, those questionnaires were filled in by Trainers. The number after P or T indicates the order in which the questionnaires were taken.

Participant questionnaires were used to explore how trainees looked at the industry and training beforehand (P1). After the training, trainees were questioned about how they felt about the industry, their future career, the training and the use of ILT's after the training (P2). The initial trainee questionnaire was developed on the basis of work by Vanneste et al. (2021), but was adapted to the target group and the needs of the BHC21 project.

Trainers were asked how they felt about training the trainees with the use of ILT's (T1).

An observation form (Observation form) was available for trainers to count the mistakes trainees made and to note down workpoints. Trainers could use this at the end of the vocational training to evaluate the trainees.

Apart from the questionnaires and the observation form, there interviews with mentors in the UK were held and all trainers from the three countries could give informal feedback via mail or via Google Forms.

5.2.2 Description of the objectives of the questionnaires

Questionnaire P1 was used to get insight in the expectations from the trainees. You can find the questions below. With **questionnaire P2** we wanted to study the differences between the expectations and the experiences during the training. The topics from P1 were repeated but two topics were added, you can find the specifics below.

Topics from the trainee questionnaires	P1	P2
• Understanding of the engineering/manufacturing sector	X	X
• Your interest in training	X	X
• Your goals for the future	X	X
• Your confidence and general motivation	X	X

• Overcoming obstacles	X	X
• How you feel about the training		X
• Thinking about the learning technologies		X
• How you feel about readiness for the workplace	X	X

Table 2 - Questions of questionnaire P1 and questionnaire P2

In the table below, you can find an overview of all available instruments for trainers, for each country is mentioned what was used.

Instruments for the trainers	BE	FR	UK
Observation form To quantify the increase in skills and productivity through counting numbers of errors. The trainers also had the possibility to take notes.	X		
Questionnaire T1 After the training, we wanted to know how the trainers felt about: <ul style="list-style-type: none"> the user-friendliness of the learning technologies; the effect of the technologies on the training and trainees; the effect of learning technologies on their role as a trainer. 	X	X	X
Informal feedback The feedback was given via mail and via a Google-form. The trainers could express their experiences and could share their needs and their advice.	X	X	X

Table 3 – Instruments for the trainers

All items were scored on a 5-point Likert scale. The colours scheme in the following tables was chosen as follows:

- Mean difference: green for mean higher than 3,25; red for mean lower than 2,75; orange for difference around 3 between 2,75 and 3,25.
- Mean: green for mean difference higher than 0,25; red for difference lower than -0,25; orange for difference around 0 between 0,25 and -0,25.

Note

In the UK, mentors guided the trainees during the on-the-job training. They did not use ILT's and they had no specific training programme. For that reason, only interviews were held and no quantitative data was collected. During the interview, mentors could speak freely about the trainees they mentored, about their own experiences in the industry and about their future perspectives.

5.2.3 Overview of the timing of the instruments in the three countries

In Table 4 you can see when the instruments were used.

	Belgium	France	UK
Test P1	before the start of the training	before the start of the training	before the start of the training and at the end of the training
Observation form	during the assessment		-
Test P2	at the end of the training	at the end of the training	-
Test T1	at the end of the complete training		at the end of the 3-week training in MidKent College
Informal feedback	yes	yes	yes
Interview	-	-	with the mentors

Table 4 - Overview of the implementation of the instruments in the three countries

5.2.4 Procedure

Data was collected from the different regions, who administered P1, P2, the observation form and T1 at different points in their training's timeline. The regional partners were responsible for data collection and could refer to a research script for the process. They then sent the pseudonymised data to KU LEUVEN, campus Kulak Kortrijk for further analysis.

Data was analysed in the following way: the quantitative data for each participant from P1 and P2 was matched for time1 and time2 and aggregated in one table for analysis. For each variable, descriptive statistics were calculated for the whole dataset and for the regional datasets. As the sample sizes were very low and no significant tests could be organised, mean difference for each variable was considered as a sign of the development between time1 and time2. There were regional differences in the data available (due to missing data or different use of the instruments). This was taken into account in the analyses.

Qualitative data from the informal feedback and interviews were thematically analysed per region. As this feedback was very close to the regional implementation of training, broader analysis was not preferred at this point.

To interpret the results of the quantitative and qualitative analysis, the results were presented to the whole project group (11 June 2021), and discussed in three sessions with the regional partners responsible for the training (VDAB (BE), MEEF (FR) and the University of Greenwich (UK)). During these sessions, the outcomes of the regional datasets were interpreted, reasons and rationales behind the design of the learning activities were sought, and proposed changes to future training were discussed. The results

The attached survey was presented to all students participating in training from September 2020 across all three regions. The survey was used on a 'test/re-test' basis whereby participants completed the survey at the start of the programme and subsequently completed a very similar survey after initial training. (Both questionnaires attached) It was possible from this to assess changes in motivation, attitude and confidence relating to learning, employment and to the manufacturing/engineering sector

a) Questionnaire 1 Pre-test

Region	3	Test	01	Class Number	01
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Age: _____

Highest obtained degree:

- ☐ No degree
- ☐ Primary education
- ☐ Secondary education
- ☐ Further education
- ☐ Higher education

1a. Please select your primary motivation for joining this training (select only one answer).

- ☐ Career progression
- ☐ To earn higher pay
- ☐ Looks good on my CV
- ☐ To learn new skills
- ☐ To change industries/jobs
- ☐ Because I was referred by someone
- ☐ Other: [_____]

1b. Why do you want to complete this training?

1c. Thinking about YOUR UNDERSTANDING OF THE ENGINEERING/MANUFACTURING (E&M) SECTOR (including awareness of career paths and employers) to what extent do you agree with the following statements? (for each statement, indicate how much you agree or disagree with it)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel I have a very good understanding of the Engineering/Manufacturing (E&M) sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know what it is like to work in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a good understanding of the potential career paths in the E&M sector, including available training and qualifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know some potential employers in my areas of interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know who to contact to discuss further training or employment opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am likely to look for work in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to have a long-term career in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Thinking about YOUR INTEREST IN TRAINING, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

I like to learn new things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel ready to learn new things during the training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel stressed about starting the training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I am going to be bored during the training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The training looks interesting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It feels like it is my choice to start this training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to learn new skills throughout my professional life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in training because it will enhance my employability and possibly lead to a job in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Thinking about YOUR GOALS FOR THE FUTURE, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I have a clear vision for my future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am motivated to achieve the career aims that I have set for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I know what steps are needed in order to achieve my professional aims.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have people in my life who are supporting me in achieving my goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gaining qualifications or skills is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I will be able to achieve my career goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Thinking about YOUR CONFIDENCE AND GENERAL MOTIVATION, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel confident in myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that I can overcome unexpected challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I always try to do my best.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel confident about my skills and abilities to progress in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Thinking about OVERCOMING OBSTACLES, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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When facing difficult tasks, I am certain that I will accomplish them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, I think that I can obtain professional outcomes that are important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I will be able to overcome many work-related challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that I can perform effectively on many different work tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Even when things are tough, I can perform quite well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Thinking about HOW YOU FEEL ABOUT YOUR READINESS FOR THE WORKPLACE, to what extent do you agree with the following statements? (for each statement, indicate how much you agree or disagree with it)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am aware of the skills needed to do well in employment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am aware of how to behave in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel fully prepared and ready to go into employment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have some relevant work experience including placements,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

internships, and/or on-the job training.

7a. Lastly, in a few words, please tell us in what ways (if any) you may feel NOT ready to start a training.

7b. What would make you feel more ready to start your training?

Thank you for taking the time to complete this survey.

b) Questionnaire 2: Post-test

Region		Test		Class number	
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1a. Please select your primary motivation for finishing this training (select only one answer).

- ☐ Career progression
- ☐ To earn higher pay
- ☐ Looks good on my CV
- ☐ To learn new skills
- ☐ To change industries/jobs
- ☐ Other: [_____]

1b. Why would you recommend this training to someone else?

1c. Thinking about YOUR UNDERSTANDING OF THE ENGINEERING/MANUFACTURING (E&M) SECTOR (including awareness of career paths and employers) to what extent do you agree with the following statements? (for each statement, indicate how much you agree or disagree with it)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel I have a very good understanding of the Engineering/Manufacturing (E&M) sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know what it is like to work in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a good understanding of the potential career paths in the E&M sector, including available training and qualifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know some potential employers in my areas of interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know who to contact to discuss further training or employment opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am likely to look for work in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I would like to have a long-term career in the E&M sector. ☐ ☐ ☐ ☐ ☐

2. Thinking about YOUR INTEREST IN THE WORK PLACEMENT, to what extent do you agree with the following statements? (for each statement, indicate how much you agree or disagree with it)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I like to learn new things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel ready to learn new things during the work placement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel stressed about starting the work placement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I am going to be bored during the work placement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The work placement looks interesting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It feels like it is my choice to start this work placement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to learn new skills throughout my professional life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in the work placement because it will enhance my employability and possibly lead to a job in the E&M sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Thinking about YOUR GOALS FOR THE FUTURE, to what extent do you agree with the following statements? (for each statement, indicate how much you agree or disagree with it)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I have a clear vision for my future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am motivated to achieve the career aims that I have set for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know what steps are needed in order to achieve my professional aims.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have people in my life who are supporting me in achieving my goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gaining qualifications or skills is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I will be able to achieve my career goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Thinking about YOUR CONFIDENCE AND GENERAL MOTIVATION, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel confident in myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that I can overcome unexpected challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I always try to do my best.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel confident about my skills and abilities to progress in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Thinking about OVERCOMING OBSTACLES, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
When facing difficult tasks, I am certain that I will accomplish them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, I think that I can obtain professional outcomes that are important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I will be able to overcome many work-related challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that I can perform effectively on many different work tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Even when things are tough, I can perform quite well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Thinking about HOW YOU FEEL ABOUT THE TRAINING, to what extent do you agree with the following statements? *(for each statement, indicate how much you agree or disagree with it)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I found it easy to understand the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I found this training tiresome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I was stressed during the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					
I found the training very interesting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					
I thought about quitting during the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					
The pretraining did a good job in preparing me for the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					
Without the pretraining it would have been more difficult to follow the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					
The pretraining has increased my motivation to learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>					

of these discussions are also incorporated in this report.

5.3 Results

Understanding of the engineering/manufacturing sector

The trainees' perception of the sector before and after the training was gauged.

1. UNDERSTANDING OF THE ENGINEERING/MANUFACTURING SECTOR	BE	FR	UK
I feel I have a very good understanding of the Engineering/Manufacturing (E&M) sector	0	0,767857143	1,228571429
I know all about training and qualifications in the E&M sector			1,6
I know what it is like to work in the E&M sector	0	0,696428571	1,314285714
I have a good understanding of the potential career paths in the E&M sector	0,35	1,464285714	
I have a good understanding of the potential career paths in the E&M sector			0,6
I know some potential employers in my areas of interest	0,071428571	1,446428571	2,542857143
I know who to contact to discuss further training or employment opportunities	-0,083333333	0,285714286	0,657142857
I am highly likely to look for work in the E&M sector	-0,666666667	0,107142857	0,628571429
I see myself having a long-term career in the E&M sector	-0,041666667	0,339285714	0,914285714

Table 5 - Understanding of the engineering/manufacturing sector
Mean difference between P2 - P1
 (BE, n = 6; FR, n = 7; UK, n = 5)

2. Your interest in training

Motivation for joining the training

In table 6, you can find all the reasons why trainees wanted to start the training. These results are from the P1-test (pre-test). Participants could choose to pick one or more reasons. The top 3 reasons to start the training were the same over the three countries, trainees wanted to learn new skills, they wanted career progression and they wanted to change industries/jobs.

	BE	FR	UK	In total
1. To learn new skills	1	6	7	14
2. Career progression	2	4	6	12
3. To change industries/job	3	3	5	11
4. Earning higher pay	0	2	5	7
5. Looks good on my CV	4	1	2	7
6. Because I was referred by someone	0	2	1	3
7. Further education	0	1	1	2

Table 6 - Motivation for joining this training
(BE, n = 8; FR, n = 8; UK n = 8)

2. YOUR INTEREST IN TRAINING	BE	FR	UK
I like to learn new things	-0,25	-0,035714286	-0,057142857
I feel ready to learn new things during the training	-0,314285714	-0,339285714	-0,114285714
I feel stressed about starting the training*	-0,5	-0,089285714	-0,257142857
I think I'm going to be bored during the training*	0,541666667	-0,410714286	1
The training looks interesting	-0,166666667	-0,267857143	-0,285714286
It feels like it's my choice to start this training	-0,142857143	-0,053571429	0,171428571
I would like to learn new skills throughout my working life	-0,208333333	0,035714286	0,285714286
I am interested in training because it increases my work certainty and it may lead to a job in the industry.	-0,791666667	0,410714286	

Table 7 – Your interest in training
Mean difference between P2 - P1
*reversed questions
(BE, n = 6; FR, n = 7; UK, n = 5)

3. Your goals for the future

3. YOUR GOALS FOR THE FUTURE	BE	FR	UK
I have aims that I would like to achieve in my life			0,114285714
I have a clear vision for my future	0,142857143	-0,017857143	0,857142857
I'm motivated to achieve the aims that I have set myself	-0,125	-0,089285714	0,2
I know what steps are needed in order to achieve my aims	-0,041666667	0,303571429	0,171428571
I have people in my life who are supporting me in achieving my goals	-1,175	-0,25	-0,057142857
Gaining qualifications or skills is important to me	-0,2	-0,071428571	0,171428571
I am going to succeed to reach my career goals	-0,291666667	-0,25	

Table 8 – Your goals for the future
Mean difference between P2 - P1
(BE, n = 6; FR, n = 7; UK, n = 5)

4. Your confidence and general motivation

4. YOUR CONFIDENCE AND GENERAL MOTIVATION	BE	FR	UK
I feel confident in myself	-0,375	0,125	1,028571429
I am confident that I can overcome unexpected challenges	-0,583333333	0,446428571	-0,314285714
I am satisfied with myself			-2,857142857
I always try to do my best	0,225	-0,196428571	0,657142857
I am positive about my skills to progress in the future	-0,738095238	-0,178571429	0,457142857

Table 9 – Your confidence and general motivation
Mean difference between P2 - P1
(BE, n = 6; FR, n = 7; UK, n = 5)

5. Overcoming obstacles

5. OVERCOMING OBSTACLES	BE	FR	UK
I will be able to achieve most of the goals that I set for myself			-0,2
When facing difficult tasks, I am certain that I will accomplish them	-0,25	0,035714286	0,228571429
In general, I think that I can obtain outcomes that are important to me	-0,125	0,017857143	0,342857143
I believe I can succeed at most any endeavor to which I set my mind			0,342857143
I will be able to successfully overcome many challenges	-0,083333333	-0,017857143	0,342857143
I am confident that I can perform effectively on many different tasks	-0,25	0	0,4
Compared to other people, I can do most tasks very well			1,085714286
Even when things are tough, I can perform quite well	-0,5	-0,339285714	0,485714286

Table 10 – Overcoming obstacles
Mean difference between P2 - P1
(BE, n = 6; FR, n = 7; UK, n = 5)

6. How you feel about your readiness for the workplace

6. HOW YOU FEEL ABOUT YOUR READINESS FOR THE WORKPLACE	BE	FR	UK
I am aware of the skills needed to do well in employment	-0,25	-0,375	0,035714286
I am aware of how to behave in the workplace	-0,166666667	0	0,642857143
I feel fully prepared and ready to go into the workplace	-0,357142857	0,333333333	0,428571429
I have got some relevant work experience including placements, internships, or on-the-job training	-0,666666667	0,375	0,25

Table 11 – How you feel about your readiness for the workplace
Mean difference between P2 - P1
(BE, n = 6; FR, n = 7; UK, n = 5)

7. How you feel about the training

7. HOW YOU FEEL ABOUT THE TRAINING	BE	FR
I found it easy to understand the training	3,166667	4,285714
I found this training tiresome*	2,166667	2,428571
I was stressed during the training*	3	2,428571
I found the training very interesting	4,166667	4,571429
I thought about quitting during the training*	2,666667	1,428571
The pretraining did a good job in preparing me for the training	3,5	3,571429
Without the pretraining it would have been more difficult to follow the training	3,4	3,166667
The pretraining has increased my motivation to learn	3,25	3,666667

Table 12 – How you feel about the training

Mean of P2

*** reversed question**

(BE, n = 6; FR, n = 7)

6. EXPERIENTIAL LEARNING GROUPS AND THEIR APPLICATION TO INTERREG-BHC21

NOTE:

- The group relations conference (GRC) events listed below comprise one integrated whole and it is called a 'temporary learning organisation'. Group Relations conferences do not usually include: Action Learning Sets and Social Dreaming Matrices.
- In the BHC21 project, the elements in the programme – the technical training and emotional development – were poorly integrated. When the rebellion group felt sufficiently dissatisfied with the experience, they successfully managed to drive a wedge between the two elements instead of negotiating their way off the programme. There is much learning for staff here in sustaining the boundaries of the learning events for the participants against their destructive impulses.
- We recommend future designs include: Action Learning Sets, Inter-Group Event, Review and Application Groups, and Adapted-Small Study Groups.

A. Plenary Sessions [GRC Event: Yes]

- Description:** Group Relations conferences open and close in plenary sessions. The plenaries further the process of crossing the boundary into and out of the conference. The final plenary additionally allows for studying the process of ending relationships.
- How it was applied to BHC21:** Used to open the Tavistock portion of the programme.
- Outcome**
 - For the Interreg cohort, all forms of large group meetings and talking about feelings and experiences – including anxieties about being on the programme and not somewhere else, was difficult. Fear of talking in a large group was immediately obvious, but over time and with encouragement and by experimenting, confidence grew.
 - Large group dynamics facilitated the expression of mirth, cynicism, rejection, displacement, and attack, leading to a rebellion by a small faction - a cluster of agitated people with apparent symptoms of ADHD who were disruptive, drawing attention to themselves without let up, hostile and aggressive, seeking to attract a following to repudiate the work. There was no learning about endings; only a continual re-enactment of sharp, abrupt endings that characterise the lives of many participants.
- Plans to improve:** Avoid large groups early in the timetable, best to build rapport first.

B. Action Learning Sets [GRC Event: No]

- a. **Description:** Action Learning Sets (ALS) are not part of a group relations menu of events, were nevertheless run as small experiential groups. The definition of Action Learning is a group process of development of managers and leaders by discussing a problem in real-time, and analysing their dynamics; implementing proposed solutions that are offered by colleagues; monitoring results; learning from the results so that future problem-solving and opportunity-taking is improved.
- b. **How it was applied to BHC21:** 2-hour experiential action learning meetings (once a week for a 9-week period) served to review the participants' work experiences and for them to raise any issues in relation to their placements – what was working well and what was problematic.
- c. **Outcome**
 - i. The ALS small groups with 3 consultants worked well - the tone of the group and the dynamic changed because the people present had chosen to attend. Some spoke for the first time about their self-consciousness about being rejected in a large group that they became paralyzed. Anxieties from schooldays were recalled. The small group is comfortable, can see the value of joining and sharing and even acknowledging what they are learning from one another.
 - ii. The ALS small group work changed the character and dynamics of the group functioning – more application, seriousness and visible amounts of learning taking place. Supports recommendations above.
 - iii. The participants said they felt better working with others who really wanted to be here. Collaborative membership of groups was a hard thing to learn and the best way to learn that was by joining small groups, working in them and reflecting on the experience. The contributions of members were serious and applied; some referred to their fears of being in a large group, how inhibited it made them feel, especially the daunting influence of the more negative people.
- d. **Plans to improve:** Consider adding a peer coaching and/or 1-on-1 coaching component to accompany the ALS group work.

C. Inter-Group Event [GRC Event: Yes]

a. Description

- i. The Inter-Group event is an opportunity for members to learn about the processes and relationships that form between different groups when they are engaged on a common task.
- ii. Especially relevant with learning how to take up representative roles and negotiating and carrying authority on behalf of others.
- iii. This is an event that combines experiential 'here-and-now' learning with action learning, i.e. the putting into action, within the conference, sets of relationships between groups that derive from the experiential learning of the conference.

b. How it was applied to BHC21

- i. The Inter-Group event - relations between groups – is central to the structures in companies and developing joining and participating skills was a unique aspect of this programme. This was understood.
- ii. The group of 10 sub-divided into two groups of 5 and they occupied different corners of the room, each with a staff facilitator. One representative from each group chose two themes which the groups were asked (i) to discuss as a group, and (ii) to share their findings with the other group. The 4 themes for discussion were Work, Goals, Plans, and Motivation.

c. Outcome

- i. The Inter-Group event was successful and very worthwhile. More of it should be introduced into the timetable.
- ii. The groups addressed the tasks in different ways – in one group a benign leadership emerged which facilitated the participation and contributions of less able people who were invited to step up, taking up representative roles, to speak publicly, to use their resources when communicating with the other group, to remember what takes place when visiting other groups and to report back after their visits. The result of this was outstanding for the hesitant representatives.
- iii. The group discussing 'Work' and 'Goals' introduced useful themes in understanding the challenges of work for young people: not everyone in the group has worked before; not everyone enjoys the work they do, so there is apprehension and anxiety about the start of their work placements. On the other hand, they hear that companies need people to work in engineering, and this is reassuring. In terms of Work aims, the group felt the stability that work gives is important; they said work should be stimulating and empowering.
- iv. In their discussion on the theme of 'Goals', this group too stressed the goal of stability – the stability of work, financial stability and stability in the family. This group's goals were to seek support from colleagues, to increase motivation, and to develop a team spirit.
- v. The group discussing 'Motivation' and 'Plans' felt that it was motivated and committed; they had attended this day even though attendance was voluntary. The group felt that 'presence' is key; their experience of motivation is sporadic, and they

realised it is confidence-related. Their group experience was one of familiarity, building bonds and creating knowledge; being a member of the group helped to identify strengths and weaknesses. The group felt that motivation is linked to money, stability, security, praise, and job satisfaction. Positive feedback and inspirational leadership help in developing and sustaining motivation. Motivation means working well as a team, having a solid plan – a life plan and a work plan. High levels of motivation occur when one is a member of a good working team; being the right person in the right place; teams having common goals; if one is not noticed, then one should not be afraid to ask for help.

- vi. Demotivation was discussed: it is easy to feel demotivated, feeling hopeless, spiralling out of control, which can affect mental health, and lead to unruly, disruptive behaviour. Demotivation comes from having no plan, feeling lost.
- vii. On 'Plans', the group said these are important; one needs daily planning, thinking ahead, and using the resources available. Short-term and long-term plans have different requirements. Good usable plans include obtaining knowledge and skills and networking amongst teams to develop oneself and creating a positive work ethic; to become self-sufficient and achieve financial independence. The Group accepts that Plans do not always go to plan! Failures all depend on how one reacts to them!!

d. Plans to improve

D. Review and Application Group [GRC Event: Yes]

- a. **Description:** Review and Application Groups provide members with opportunities to reflect on their experiences of the day and how they are taking up their different roles in the conference.
 - i. Towards the latter half of the conference, the focus of the sessions will shift to how the members hope to transfer their conference learning into their back-home organisations. This is a bridging exercise between the individual's conference learning and post-conference organisational behavioural practice and has 'here-and-now' and 'now-and-then' aspects to it.
 - 1. The focal question will be: what are we learning in the conference ('here-and-now') that can be applied to our roles in our organisations ('now-and-then')?
- b. **How it was applied to BHC21:** Often scheduled near the end of a session to debrief one of the other experiential learning events.
- c. **Outcome**
 - i. During the Review and Application group, participants wondered why so many participants squander their best opportunities; what self-destructive impulses drive them? Especially, as the Tavistock days are useful in challenging people's inhibitions; the programme acknowledges people's difficulties and sometimes their weirdness.
 - ii. People on this programme are generally shy and have lowered self-confidence. Anxious people, they said, tend to gravitate towards people like themselves, thus forming small clusters of frightened and poorly behaved people.
- d. **Plans to improve**

E. **Small Study Group** [GRC Event: Yes]

- a. **Description:** The Small Study Group consists of up to 12 participants working with 1 consultant. Its primary task is to learn about the dynamics of small groups and the formation of leadership and followership relationships as they happen in the group.

- i. The Small Study Group is an experiential ‘here-and-now’ event in which the behaviour of the group is placed under a high-resolution microscope and the group has the opportunity to study its own behaviour as it happens with the help of consultancy. The rationale for this is that learning, understanding and knowledge lead to change.

- b. **How it was applied to BHC21**

- i. Small group exercises – adapted forms of small study groups (3-4 groups of 6-7 members each) to facilitate discussion based on pre-selected topics.
 - ii. Family interviews – informal group interviews conducted with all family members who live in the household; 5-6 meetings with the participants’ families over a 12-week programme period, to explain the importance of the family supporting and encouraging their young person who is on the programme.

- c. **Outcome**

- i. Small group exercises – Some engagement; received feedback that the exercises were too juvenile (see ‘plans to improve’)
 - ii. Family interviews – Open to the invitation, very engaged and appreciative of the opportunity; difficult to connect in-between meetings due to limited access to technology.

- d. **Plans to improve**

- i. **Small group exercises**

- 1. Run smaller-sized groups
 - 2. Maintain firm boundaries regarding task, time, and space
 - 3. Allow participants to suggest topics
 - 4. Consider opening the programme with a didactic component to prepare participants for engaging experientially and interpersonally in the context of the workplace

- ii. **Family interviews**

- 1. Integrate into the plan from the beginning - important adjunct to helping participants remain on the course and get a job
 - 2. Coordinate support with the placement advisor, on-site mentor, and job coach
 - 3. Offer an option to connect via weekly phone calls instead of in-person to increase participation for those who may desire to maintain privacy.
 - 4. Offer a first meeting in-person and follow up via phone weekly instead of scheduling fortnightly (in-person).

F. Large Study Group [GRC Event: Yes]

- a. **Description:** The Large Study Group comprises all the members of the conference working together with 3 or 4 consultants.
 - i. The primary task of this event is to provide opportunities for studying the dynamics of large groups and the processes of cohesion and fragmentation, myth-making and reality-testing as they happen in the group.
 - ii. This is an experiential 'here-and-now' event in which the behaviour of the group is placed under a high-resolution microscope and the group has the opportunity to study its own behaviour as it happens with the help of consultancy. The rationale for this is that learning, understanding and knowledge lead to change.
- b. **How it was applied to Interreg**
 - i. See 'Social Dreaming Matrix'
 - ii. See 'Plenary Sessions'
- c. **Outcome**
 - i. Large group experiences at the beginning were very hard because the timid people were worried about being made fun of by the more juvenile elements in the group. If one was serious about participating one was at risk of being thought of as a nerd, so it was easier to join in the banter.
 - ii. The large groups made people feel out of control, overshadowed by the other more dominant people. Some said they could see the connection to what was happening in the programme now, and what could well happen in the workplace, thus sabotaging people's chances of employment. "Why do the 'dumbcunts' throw away their chances?" someone asked.
- d. **Plans to improve:** Avoid large groups early in the timetable, best to build rapport and trust first.

G. Social Dreaming Matrix (SDM) [GRC Event: No]

- a. **Description:** A Social Dreaming Matrix (SDM) is a method of inquiry which provides opportunities for the sharing of and making associations to our night dreams so that we can make links and connections between private thought (dreams) and social meaning (seeking employment through training).
 - i. Dreams and their associations make it possible to discern patterns, feelings and behaviour that one can speak to. An association is a thought, idea, experience, memory that is triggered in one by something in another person's dream.
 - ii. In a SDM, a dream would not trigger the question: 'what does the dream say about me, the dreamer?' Rather, it would trigger the question: 'what does the dream say about us, the members of this matrix, the programme and the society which we inhabit?' Social Dreaming, although providing an insight into people's thinking, expectations and fears, is not appropriate for this cohort.
- b. **How it was applied to BHC21:** Run as is

- c. **Outcome:** See 'Plenary Sessions - Outcome' and 'Large Study Group - Outcome'
- d. **Plans to improve:** Deemed not suitable for the programme

H. Whole System Event [GRC Event: Yes]

- a. **Description:** The Whole System Event, is, as it says, an event that involves all parts of the conference – groups formed by the members and groups formed by the staff: in learning about relationships between parts and wholes; managing differentials of power and influence; how to keep the whole system in mind when one is working in part of it, especially when the system is large and complex and often unknowable. The event involves 'here-and-now' experiential learning.
- b. **How it was applied to BHC21**
 - i. During the Whole System event (overlapping with Review and Application) participants discovered that the way one perceives others is also how they experience themselves, so for example, describing someone as aggressive or inadequate, may be saying something about one's own aggression or inadequacies.
 - ii. This can also be expressed when an event (like another group's success in its task) stirs up pre-existing inadequacies in oneself to the extent of creating a crisis of confidence, the dynamic being that "I have been knocked so many times before, that I now, in turn, attack what is good for me because I expect the good thing (the programme, graduation, getting a job) to be taken from me again". In other words, to avoid hurt and disappointment again, I refuse/reject the 'good' thing and in that way I can tell myself that I still exert some control over an unpredictable world – the basis of self-sabotage.
- c. **Outcome:**
 - i. See 'Plenary Sessions-Outcome' and 'Large Study Groups-Outcome'
- d. **Plans to improve**