

IAEVG conference - Riding the wave of change (November 2024)

International workshop:

Digital competences and new counselling approaches
for CGC professionals riding the wave of change

The creation of these resources has been (partially) funded by the ERASMUS+ grant program of the European Union under grant n.o. 2022-1-DE01-KA220-HED-000089003.

Neither the European Commission nor the project's national funding agency DAAD are responsible for the content or liable for any losses or damage resulting of the use of these resources.

Workshop part I

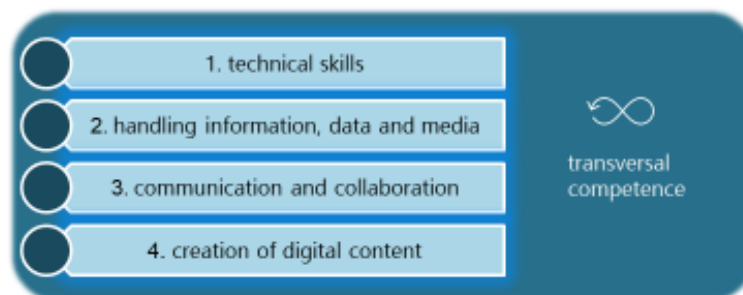
CGC-DigiTrans competence framework

Build 3 expert groups

Discuss one of the following questions and prepare a short talk (max. 3 min.):

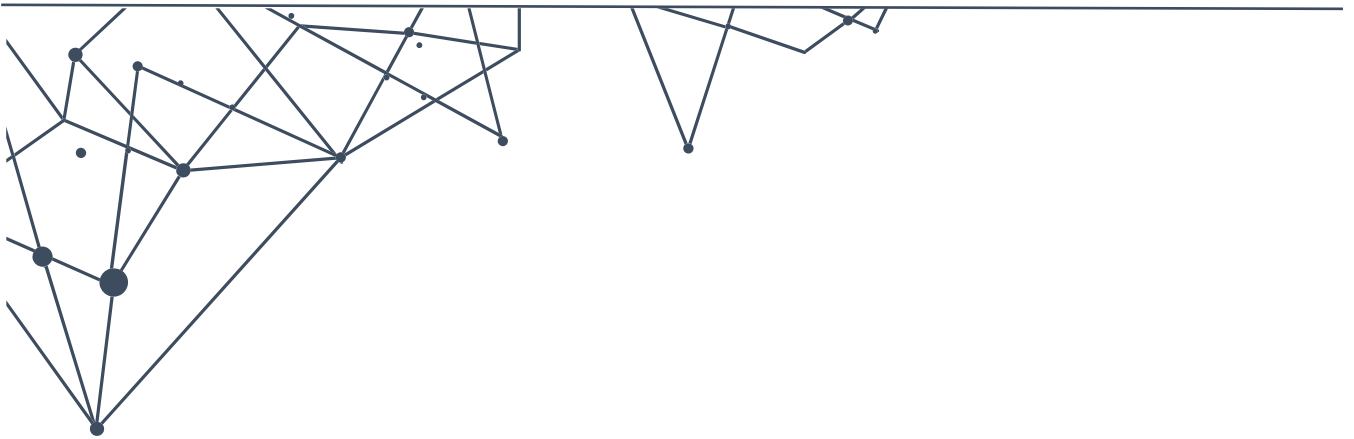
- Group A: To what extent does the CGC-DigiTrans competence framework fit in with the current discourse on digital competences?
- Group B: Does the CGC-DigiTrans competence framework need to be adapted to include the basic competences required to operate AI?
- Group C: Which of the digital competences (CGC-DigiTrans framework) are particularly important for CGC professionals? Also give examples of application!

CGC-DigiTrans Framework (1st level)



CGC-DigiTrans Framework (2nd level transversal)

- Creative, critical and future-orientated thinking
- Problem solving
- Psychological resilience
- Reflexivity
- Adaptability
- Digital security
- Digital Citizenship
- Digital learning and teaching
- Digital identity and well-being



Workshop part II

Case example for the application of the CGC Roundabout for Digital Transformation

The task

Read the case study and then discuss the questions with your group partners.



Case description “Julia”

Julia is 51-year-old, has a supportive family, highly experienced, highly educated (university degree). She had a successful career in a public library for over 20 years, but then she became unemployed when she was 44. During her unemployment she did a course through the PES and found a new job in a medium-sized company at a welcome desk. Her experience is mainly in temporary employment in lower skilled jobs outside her primary branch. Now her skills have aged with her, she feels that they are not so much future proof anymore. Her actual employers (mainly staffing bureaus for flex workers) did not offer her much support in dealing with technical issues or if they did, she did not see how it could be useful for her. Julia is very much willing to re-enter the labour market in her primary field of education or in another stable employment, but the labour market demands are not matching.

A friend told her about a new guidance service that supports people to catch up with digital skills. She is a bit sceptical at first but with the support of her friend she agreed to an appointment for a counselling session.

Based on her first positive mail-contact with her counsellor, Julia made an appointment for an online counselling session.

The first meeting with the counsellor was very open and friendly. The counsellor took time to introduce her and Julia was able to describe her current professional situation. Together with the counsellor, she formulated her interest in counselling. With the help of the counsellor, she would like to find out whether there is further training that would help her to regain her footing in a stable employment where she can build upon her qualification (librarian) and her experience in administrative jobs in companies.

Julia has indicated to the counsellor that she is very unsure whether she can successfully learn again (concern and interest). They agreed that during the counselling process they would look more closely at Julia's strengths and professional experience and work out possible requirements for suitable further education. The counsellor also agreed to explore current needs in the local labour market and to identify with training providers whether there are suitable training courses (contracting). At the end of this first conversation, Julia was a little more confident. She thought the counsellor was interested in her concerns and together they had worked out some plans on how the counselling could continue (relationship building).

In the next counselling session the counsellor asks Julia to tell him about her current situation in the work context. The conversation focused also on her attitude and experience toward learning. The counsellor listens to her concerns and reservations about training. Together they discovered some criteria that make a reasonable learning situation.

Julia wants to understand if she has a chance to re-enter a better qualified job (as a librarian or in an office). In the ESCO database, the client and the counsellor analysed the skills for the job field "General office and administrative tasks" in more detail. Julia has most of the necessary skills, but she wants to deepen her knowledge and skills in using IT in this context. For this field (clerical and administrative jobs), she has identified three possible vacancies. They agreed that it might be good if Julia got in contact with one of the employers. The counsellor will contact two other employers and wants to identify what IT skills exactly are required and if the employer supports training or can advise a certain training measure.

Additionally, they planned a structured needs analysis (self-assessment). They made a new appointment to discuss the information they collected from the employers.

When Julia started the process, her career goals were quite vague. Now Julia takes time to formulate her goals. With the support of the counsellor, she set some sub-goals she needs to reach in this way.

Main goal: find a new, sustainable, and qualified employment (e.g., office clerk, team assistant, assistant in the technical documentation or related).

Sub-goal 1: take part in a training regarding the following competence (information skills, data processing and management, using computers in the office context, using digital tools for collaboration).

Sub-goal 2: identify possible trainings and contact providers.

Sub-goal 3: clarify support (financial, employer if applicable).

Together with the counsellor, Julia screened the different training offers in the region. They identified relevant providers. Julia found a provider for suitable training with the help of the counsellor. The times for the training were discussed with the provider. The biggest current challenge is funding. Julia can reduce her current working hours, but this will reduce her income. The counsellor supports Julia with possible financing for this intermediate phase. Julia and the counsellor developed a written action plan to document the next steps.

The training could thus begin. Julia has some doubts at the beginning and some practical difficulties to organise the learning besides work and family. The counsellor encourages her to take some of the pressure off herself, e.g. with her family, and to plan her learning time. At the same time, Julia started looking for a new employer. Her training will last a total of 6 months, after which she would like to find a new job as quickly as possible. She approaches different employers and applies on her own initiative. The counsellor can further support her here with his network contacts.

Julia met with the counsellor again after completing her training. Together they discussed the learning outcomes and the counsellor helped Julia to complete her application documents to improve Julia's chances of finding a new job. The counsellor checked with Julia the completeness of the certificate she received. With his help, Julia managed to update her CV and apply for new a job.

In the same session, the counsellor and Julia take time to discuss and reflect the process. On the one hand, it is about finding out how Julia experienced the support, what was helpful and supportive and how the counselling could have been even more effective. On the other hand, the counsellor wants to show Julia again what development she has gone through and how she has used and developed her resources. In addition, Julia and the counsellor have agreed that opportunities for advanced courses will be clarified with the training provider. Julia will now tackle her overall goal - namely to find a new job.

Applications of the CGC-Roundabout for Digital Transformation, networking and success factors

1. Read the case example.
2. Divide the example into six sections. Assign the individual sections to the phases of the CGC-Roundabout methodology (engagement, assessment, planning, action, results, evaluation).
3. Elaborate for every phase which success factors (actions and attitudes of the counsellor) contributed to the success of the counselling process. Use the table on the next page to fix your results.

Phases of the CGC-Roundabout for Digital Transformation methodology

Phase	Success factors
Engagement	
Assessment	
Planning	
Action	
Results	
Evaluation	

Workshop part III

Exchange and Discussion

Questions for group discussion

1. What are the advantages of involving several stakeholders in the counselling process?
2. What obstacles does the MACG face?
3. Which other network actors could be relevant regarding the assessment of digital competences and their further training?
4. What digital competences do counsellors need for the CGC-Roundabout method?

Case description “Mr. E.”

Mr. E. is the owner of a medium-sized, family-run company. He took over the business from his father, who held on to tried-and-tested manufacturing processes and procedures for a long time. While digitization has progressed well in the commercial area of the business, the machines in the production area are still of a purely conventional nature. Milling, machining and turning are still carried out in the family business with precision by eye and without computer support. Two out of ten employees in the production area are about to retire. Due to the shortage of skilled workers, Mr. E. is having difficulty filling the positions. However, since Mr. E. wants to continue to grow with his company and produce in larger quantities than before in order to remain competitive, he decides to purchase new production machinery.

On the one hand, a 3D laser scanner will help to measure the raw material for production more precisely and make suggestions for optimal material utilization. On the other hand, Mr. E. is going to buy CNC machines that can process the material independently, perform quality checks and report defective machine parts as well as malfunctions in the process.

All machines are to communicate with each other via app in order to adapt the operating processes to each other and to detect malfunctions more quickly.

Mr. E. wonders whether the previous skills of his employees are sufficient for the new machines.

Mr. E. contacts the external HR consultant Mr. C., who was recommended to him by a good acquaintance who is also a company owner in the industry. In a first conversation, which takes place on the premises of the company, Mr. E. describes his request. He wants to order new machines for his production plant and wonders whether the skills his employees bring with them are sufficient. At the same time, he is concerned about how he will be able to change the machines with the full order books without the entire operation coming to a standstill.

Mr. C. and Mr. E. visit the workshop with the old machines together. Mr. E. describes the new functions of the machines he has ordered. This allows Mr. C. and Mr. E. to work out that behind the original concern about whether the employees have the necessary competences, there is a hidden concern for advice on appropriate further training with which the employees can acquire the necessary digital competencies. Mr. C. notes the concern in a joint counselling document.

Mr. C. takes a closer look at Mr. E.'s concerns about how to change the machines when the order books are full. Together they look at what it takes to change the machines. For one thing, the new machines have to be delivered and set up. In the workshop, preparations also have to be made on the subfloor and in the power connections. In addition, Mr. E.'s employees need further training to be able to operate the machines. Mr. C. explains to Mr. E. that as a counsellor he has no influence on the delivery times of the machines and the preparation work. However, he can advise Mr. E. on further training models that correspond to the setup time for the new machines in order to make the changeover process as efficient as possible.

Mr. E. is relatively surprised that the retooling process of the machines is more extensive than previously assumed. He is now worried about the financial losses that await him due to the loss of production and the

further training. In addition, he does not know how he will be able to look through the many training courses on offer. Mr. C. emphasizes that, as a counsellor, he has access to a network of many training providers that can help him select the right training for employees and the company. However, according to Mr. C., employees and their supervisors must also be brought on board. Mr. C. offers that he can support and moderate the process.

Mr. E. asks for a few days to think it over. He has a good feeling about putting the coordination of the training process in the hands of Mr. C. and decides to cooperate.

Mr. E. and Mr. C. have another appointment to assess the initial situation in the company. Also present is Ms. A., who as a manager is in charge of the production area and has a very good insight into the strengths of her employees. Ms. A. is in favor of the acquisition of new machines and the further training of the employees. However, she notes that she is not convinced that all employees will be equally convinced by the training.

Together they work out the ACTUAL state, which Mr. C. also visualizes immediately on a flipchart. 10 people work in the production department. 7 of them have obtained their basic vocational qualification as milling operators (today: metal technology specialists (machining technology)) in the company and 3 have joined externally. Two employees are about to retire. Of the remaining 8 employees, two are between 50 and 60 years old. 4 employees are between 40 and 50 years old. 2 employees are between 30 and 40 years old. As the company has had a low turnover in recent years, no trainees have been taken on.

Together they also discuss the previous activities of all employees. The employees' tasks consisted of conventional machining. According to drawings and instructions, they had to clamp workpieces in machines, bring them to the specified dimensions and shapes, and carry out quality checks for each individual workpiece. The employees were used as all-rounders, so that anyone could take on any task. In this way, Mr. E. proudly recounts, it was ensured that production continued even during vacation and sick leave.

During the interview, Mr. C. asks about the previous training practice. None of the employees had completed further training in the last 4 years. According to Mr. E., his father had not pushed this in his business policy. Ms. A. adds that the employees are also rather reluctant to request further training and prefer to go about their work.

Mr. E. is initially uncomfortable discussing internal company data with Mr. C. because he is not from the company. Mr. C. notices Mr. E.'s reticence and addresses it. He assures him that he will treat the data confidentially.

After Mr. C. has recorded the ACTUAL state of the previous operational tasks, the focus now turns to the digital skills in particular that the employees need for the CNC machines and the new 3D laser scanner.

Mr. C. goes through the chart of digital competences. With the help of Mr. E. and Ms. A., who planned the purchase and selection of the new production machines, he records the digital competencies required to operate the new machines.

For this it needs, for example:

- Application of digital hardware and software: Employees must know how to start up the machines. They

must read plans and data into the machines and operate the software.

- Handling digital data: During processing, the machine creates control data. Employees must be able to read them, check them for plausibility, and derive the next steps for the production process from them.
- Transversal competencies: Digital problem-solving skills: Employees must be able to understand the error messages that the machine produces during its own runtime or for quality control purposes and initiate appropriate steps to solve the problem themselves. At the same time, they must recognize when they need to seek the help of more in-depth support.
- Digital security: Networking also makes the machines more vulnerable to a target of external attacks. They are therefore particularly protected by two-factor authentication and regular access code changes. Employees must master the use of two-factor authentication.
- Digital learning capability: Regular updates expand the functional scope of the machines. Online training courses are offered by the manufacturer for this purpose. Employees must be able to complete these training courses independently and identify their own learning needs based on the machine.

Mr. C., Mr. E. and Ms. A. then talk to each employee individually and go through these competences. They find that two of the employees are already familiar with two-factor authentication and can read error messages from other digital contexts. For most employees, however, these basic digital skills are completely new. Although they also have contact with smartphones and tablets in their free time, they need help setting them up and feel unsure how to use them.

Mr. C. collects the competence characteristics in a table and attaches them to the detailed counselling notes. He has previously checked with the employees that he is allowed to collect this data. He also asks them how they feel about further training and how they would be available for learning. He finds out that 4 employees have family commitments and therefore cannot attend further training outside their daily working hours. All employees have full-time positions and would like to be able to complete continuing education during their work hours. Mr. E. would like the employees to complete further training after work hours before the machines are installed because of the delays in the operating process.

John G. is married and has one child. He has been an employee in Mr. E.'s company since his apprenticeship and his last further training was over 8 years ago. He still knows the company as a family-run business and is aware of Mr. E.'s modernisation efforts.

The learning experiences he had at school were rather negative. Therefore, he has a rather negative attitude towards learning and any form of further education.

In his everyday life, John uses a smartphone, but beyond that, he has no pronounced digital skills. His view of the world is more focused on the short-term future. He considers technological innovations to be largely superfluous and is therefore not aware of the digital changes that will come before he retires. He is convinced that he is coping well in his current job and performing well.

He is rather sceptical about Mr E.'s plans - the innovations, which he sees as unnecessary, unsettle him. He feels left out because now a superior who has not learned the job himself from the beginning wants to tell

him how the activities could supposedly be done better. He knows that he would have to leave his comfort zone with the new machines.

So far, John has had no experience with counselling. He therefore has no idea what happens in a counselling session. John's previous training experience is limited to short training sessions (3-4 days) in frontal teaching. There has never been a transfer into practice. John is not afraid of losing out due to his low digital competences, as he is not aware of the risk.

Mr. C. and Mr. E. then collect different possible solutions together. Mr. C. makes sure that Mr. E. does not commit himself too quickly to a single solution.

Mr. E. would like all employees to undertake the further training before the machines are replaced in the evening. Mr. C. creates a matrix on a flipchart with the fields "who?", "what?", "how?" and "where?" and fills this solution list with Mr. E.'s first ideas.

Mr. C. encourages Mr. E. to fill in the open matrix fields as well by asking specific questions. They use the transcripts from the assessment to help them. Mr. C. collects all possible solutions in this phase, even if they cause conflicts within or between the matrix fields. For example, the solution options "after hours of the employees" and "during working hours" do not fit together as a wish of the employees.

<p><i>WHO (completes continuing education?)</i></p> <ul style="list-style-type: none"> • <i>All employees in the production area</i> • <i>Employees who are not about to retire</i> • <i>Manager in the production area (Ms. A.)</i> 	<p><i>WHAT (does the training include?)</i></p> <ul style="list-style-type: none"> • <i>Application of digital hardware and software: operating the CNC/3D laser scanning machines, reading in plans, operating the app that networks the machines, starting the digital production process.</i> • <i>Digital data: Reading, understanding and interpreting control data, deriving steps for process optimization.</i> • <i>Transversal Competencies: Understanding error messages, deriving steps to address problems on the machine, carrying out the steps, recognizing problem-solving limitations and calling in additional support, using two-factor authentication, keeping credentials secure, recognizing own learning needs, conducting training on updates independently.</i>
<p><i>HOW? (does the further training look like?)</i></p> <ul style="list-style-type: none"> • <i>Time: Before replacement of all machines; during the replacement of the machines (production is stopped for 2 weeks), part after installation of the new machines.</i> • <i>Integration into the operational process: After hours of employees; during working hours during the week; time off during</i> 	<p><i>WHERE? (can the further training be realized?)</i></p> <ul style="list-style-type: none"> • <i>In the company, at the on-site training provider, remotely</i> • <i>Continuing education offerings:</i>

<p><i>working hours and course on weekends.</i></p> <ul style="list-style-type: none"> • <i>Training on the job (on the machines in the company itself), training near the job (only the employees in a seminar group, ideally in-house)</i> • <i>Cost:</i> 	
---	--

After the collection, the costs and the further training offers are still open. Mr. C. asks Mr. E. to prepare a further education budget until the next meeting. Mr. E. prepares this with his finance department. Mr. C. has good contacts to further education providers and knows which offers are available. He brings information on offers to the next meeting.

At the next meeting of Mr. C. and Mr. E., Ms. A. is also present again as the manager of the production employees. Mr. C. presents the offers of the sponsors FUTURE, Strategy and ChaNce. They cover brainstorming on possible solutions to varying degrees. Together, Mr. E. and Ms. A. decide on the offer of the training provider ChaNce, as this best combines the goals of Mr. E. (cost-effectiveness of further training, high application relevance) and the interests of the employees (within working hours). The offer is aimed specifically at people who are working with CNC machines for the first time and includes learning close to the workplace on machines in the on-site training center. Mr. C. moderates the determination of Mrs. A. and Mr. E. and supports them in finding out their own decision criteria. ChaNce does not offer any follow-up support in the company, but A. and E. both want this. Therefore, Mr. C. calls the training provider in the presence of both of them and together they clarify by telephone when the start of the course would be possible and whether follow-up support can be added. ChaNce assures Mr. E. that it will send him an individual offer and information about funding opportunities.

At the end of the conversation, Mr. C. goes through the next steps with Mr. E.. He communicates that he will be supportive.

Mr. C. is again a guest of Mr. E. at the company. Today, Mr. W. from the training provider also comes, as the company and the training provider conclude a cooperation agreement. In addition, the employees are informed about the further training. Mr. E. still has questions about funding opportunities. Mr. C. can put Mr. E. in touch with a contact in his network, who will call him.

A few days later, the new machines are delivered, and Mr. E.'s employees start their two-week training. Mr. C. inquires with Mr. E. about the progress. Mr. E. has no problems and is satisfied.

After four weeks, the aftercare on the machines in the company is also completed and the training has been passed. Mr. E. informs Mr. C. about the end of the further training and the result. Unfortunately, one employee was injured and could not complete the training. Mr. C. also takes note of the result and offers his help. However, Mr. E. is in discussion with Mr. W. from the training provider and therefore does not need any help.

After half a year, Mr. C., Mr. E., Ms. A. and Mr. W. meet again. The employee is also present. Using a feedback sheet, Mr. C. obtains feedback on how the consulting process and the involvement of other actors worked from the perspective of those present. From the feedback, Mr. C. draws conclusions for his further consulting activities. He also turns to his colleague in confidence to reflect together.