

Project plan

Digitalization of CBBD Competency Game

CBBD
(Cross-border Business Development)
Venlo, Limburg

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1. Project Assignment

1.1 Context

In the Dutch-German border region, the Cross-border Business Development (CBBB) team of Fontys Venlo is dedicated to promoting cross-border cooperation and revealing regional prospects. The national border is close by, which has a big impact on the local environment. It affects things like labor market dynamics, multilingualism, and intercultural understanding. The border is frequently viewed as a separating line in spite of these prospects, which leads to the loss of chances for cooperation and advancement. CBBB carries out practical studies to tackle these issues and encourage integration in the border area. Their goal is to help people, groups, and networks identify and take advantage of development opportunities on both sides of the border. By using a 360-degree perspective, CBBB seeks to shift mindsets from a limited view of the border as a barrier to seeing it as an area full of potential. The assignment to digitalize the Competency Game comes from CBBB's broader mission. This game is an important tool used to help people develop the competencies needed to succeed in cross-border business environments. The aim is to modernize this tool and make it more accessible through digital platforms, allowing users to engage with it regardless of their physical location. The demand for digital solutions has grown due to technological advancements and the need for more flexible, remote learning environments. Therefore, the digitalization of the Competency Game aligns with ongoing developments in both education and business sectors, ensuring that CBBB can continue to support regional growth and cross-border cooperation in an innovative way.

1.2 Goal of the project

The goal of this project is to digitalize the Competency Game, a tool used by the Cross-border Business Development (CBBB) team to promote effective communication and collaboration between individuals working across the Dutch-German border. The Competency Game encourages participants to engage in discussions about the competencies required for cross-border work, providing insights into recruitment priorities, job requirements, and interpersonal dynamics in cross-cultural teams. The challenge this project addresses is the limited accessibility of the game in its current, physical format. This restricts its use to in-person workshops, which reduces its reach and limits its ability to support broader learning objectives. By digitalizing the game, CBBB aims to expand its impact, making the tool more widely available to participants regardless of location and allowing for more dynamic, interactive learning experiences. The desired outcome is a fully digital version of the Competency Game, complete with the same functions as the physical game—facilitating discussions on recruitment, competency prioritization, and cultural dilemmas. The digital platform will offer greater flexibility, enabling more frequent use and easier access for a broader audience. Additionally, the digital format will allow for continuous improvement, user data collection, and potential expansion with new game elements and updates. This digital transformation offers several key benefits: it extends the game's reach, enhances the user experience through interactive features, and supports CBBB's mission of fostering cross-border collaboration by helping individuals and organizations develop essential competencies for success in the border region. The digital game will also provide possibilities such as multiplayer functionalities, data tracking for research, and scalability, enabling customization for different cultural and linguistic contexts.

1.3 The assignment

The assignment is to digitalize the Competency Game for the Cross-border Business Development (CBBB) team at Fontys Venlo. The digital version of the game must retain the functionality of the physical game, facilitating discussions about cross-border recruitment priorities, job competencies, and cultural dynamics. The objective is to create a user-friendly, interactive digital platform that allows remote participants to engage with the game effectively.

CBBB Requirements:

- The digital version should replicate the core structure of the physical Competency Game, including all three game rounds: Recruitment Priorities, Vacancy, and Dilemmas.
- The platform must support multiple users interacting simultaneously (multiplayer functionality).
- The game should allow for easy facilitation by a moderator, ensuring they can guide discussions and capture key insights from participants.
- It must offer a flexible, intuitive user experience, suitable for a wide range of participants, including those with limited digital proficiency.

Minimum Quality Requirements:

- The platform must be stable and free of significant bugs that disrupt gameplay.
- The interface should be responsive and work on a variety of devices (e.g., desktops, tablets).
- The design should follow accessibility guidelines to ensure usability for participants with diverse needs.
- It must be adaptable to different languages and cultural contexts (e.g., Dutch and German versions).
- The game must include functionality for collecting and analysing data from participants, such as choices made during gameplay and feedback provided during discussions.

Functional Requirements:

1. Multiplayer support for group-based gameplay.
2. Ability to facilitate multiple rounds (Recruitment Priorities, Vacancy, and Dilemmas).
3. Moderation tools for guiding discussions and tracking insights.
4. Customizable language settings (Dutch, German, possibly English for internationals).
5. Interactive card-based system mimicking the physical game elements.

Non-Functional Requirements:

1. Platform must be available across multiple devices (desktop, tablet).
2. The user interface should be simple and intuitive, ensuring ease of use.
3. The platform must be secure and comply with data protection regulations (e.g., GDPR).
4. Scalable infrastructure to support varying group sizes.
5. Reliable performance, with minimal downtime or disruptions during gameplay.

1.4 Scope

The scope of this project is the development and delivery of a fully functional digital version of the Competency Game for the Cross-border Business Development (CBBB) team. The digital platform will replicate the structure and functionality of the physical game, ensuring it can be played remotely and moderated effectively.

The scope includes:	The scope does not include:
1 Game Digitalization: Conversion of all three rounds of the Competency Game (Recruitment Priorities, Vacancy, Dilemmas) into an interactive digital format.	1 Full System Implementation and Management: The ongoing management, hosting, and maintenance of the platform after delivery are outside the scope. These tasks will be handled by CBBB or an appointed third party.
2 Multiplayer Support: Implementation of multiplayer functionality to allow groups of participants to engage in the game simultaneously, regardless of their location.	2 Integration with Other Systems: This project does not include integration with other existing systems such as learning management systems or enterprise platforms.
3 Moderator Tools: Development of features that allow moderators to guide discussions, collect insights, and track participant progress.	3 Advanced AI or Machine Learning Features: No AI-based decision-making or automated feedback mechanisms will be included in this phase of the project.
4 User Interface: Creation of an intuitive, user-friendly interface that works on multiple devices.	4 Mobile App Development: The platform will be optimized for all devices that can access the web but not in a native mobile application style in this initial version.
5 Localization: The platform will be available in Dutch, German. (and possibly later on English will be incorporated to cater to the cross-border context)	5 Post-Launch User Support: Long-term user support, including troubleshooting and system updates after delivery, will not be provided as part of this project.
6 Data Collection: Incorporation of features that allow the collection of participant data, including gameplay decisions and feedback, for future analysis by CBBB.	6
7 Access Control: Implementation of secure login and access methods, ensuring that only authorized participants and moderators can join the game.	7

1.5 Conditions

Several preconditions must be met to ensure the successful completion and implementation of the digitalized Competency Game for the Cross-border Business Development (CBBB) team. These conditions are necessary to align with existing company technology, standards, and external factors.

Technology Stack:

- **Hosting:** The client (CBBB) must either provide a suitable hosting environment or agree on an external hosting provider to ensure smooth operation and maintenance post-launch. The hosting environment should be scalable, reliable, and secure.
- **Development Tools:** Development of the digital platform will utilize modern web development frameworks such as React for the front end, a suitable backend technology such as Node.js, and MongoDB for the database.

Dependencies:

- **Client Availability for Feedback:** Active client involvement is critical throughout the project. Regular feedback cycles and input from CBBB will be required to ensure the platform meets their expectations and requirements.
- **Content Readiness:** All necessary game content (e.g., cards, dilemmas, scenarios) must be provided by CBBB in a digital format before the development begins.

2. Approach

2.1 Scrum

This project will follow a **Scrum-inspired methodology** to ensure a structured and iterative approach. Adopting elements of Scrum allows for effective planning, regular progress tracking, and feedback integration, mimicking the organized workflow typical in a team environment. This method will help maintain focus and flexibility throughout the project lifecycle.

Scrum Methodology (Solo Adaptation)

Although this is a solo project, key elements of Scrum will be utilized to maintain structure:

- Weekly sprints will guide the workflow, with each sprint focusing on specific features or tasks related to the digitalization of the Competency Game.
- A backlog of tasks will be created and prioritized at the start of the project, ensuring that important features are addressed first.
- End-of-sprint reviews will be conducted with the client (CBBB) to showcase progress and gather feedback, ensuring alignment with their goals.

2.2 Phases of the Project

1. Problem Definition Phase

- **Initial Meeting:** This phase will begin with a meeting with the CBBB team to define the problem, goals, and requirements of the project.
- **User Stories and Backlog Creation:** Based on discussions with the client, I will break down the project into user stories, detailing the desired features and functionalities. These stories will form the project's backlog and will be prioritized according to importance and time constraints.

2. Sprint Set-up

- **Sprint Planning:** Before each weekly sprint, I will plan the specific tasks from the backlog to be completed during that sprint. These tasks will be organized to ensure consistent progress toward project milestones.
- **Daily Check-ins:** To stay on track, I will review daily progress, identify any challenges, and adjust priorities if needed.
- **Development:** During the sprint, I will focus on completing the tasks for that period, ensuring that the work aligns with the overall goals.
- **Sprint Review:** At the end of each sprint, I will present a demo of the completed work to the CBBB, allowing for feedback and adjustment of the next sprint's tasks.
- **Sprint Retrospective:** A quick self-assessment will be conducted after each sprint to reflect on what went well, what challenges arose, and how to improve in the following sprint.

3. Completion Phase

- **Final Testing:** The last sprint(s) will focus on testing the platform for both functionality and usability. This will include user testing to ensure the digital game meets the requirements and provides a seamless experience.
- **Feedback Integration:** Final feedback from the client and user tests will be integrated into the platform, ensuring that all features work as expected.
- **Final Demo and Delivery:** Once the product is complete, a final demo will be presented to the client for approval. Upon approval, the final product and supporting documentation will be delivered.

2.3 Tools and Communication

- **Task Management:** Even as a solo developer, I will use a GitHub Kanban to track tasks, ensuring I stay organized and transparent in my progress.
- **Version Control:** GitHub will be used for version control, allowing for clear tracking of changes throughout the development process.
- **Communication:** Regular communication with the CBBB will be maintained via email or scheduled meetings on campus, especially during sprint reviews and demos.