

**Dear student,**

When you are halfway your graduation internship, it is a good moment to reflect on your progress. Ask your company mentor to fill in the form that you can also find in Canvas and discuss together. Also, fill in the form below to help you think about your progress, and submit both forms (evaluation company mentor, and from yourself) in Canvas. Your graduation teachers will review and also give their view on the progress and will give feedback, feedforward and feedup. If you, the company mentor or your teacher judges to be helpful or necessary plan a meeting to further discuss with the three of you.

In the form on the next page, describe for each learning outcome on which level of progress you think you are working, and give substantiation your ideas how to further work on it. By the end of the semester, all learning outcomes should be at least on proficient level. We recognize the following levels:

Label	Description
<b>Undefined</b>	You have not yet undertaken activities to demonstrate the learning outcome.
<b>Orienting</b>	You have made a start and explored the possibilities to demonstrate the learning outcome.
<b>Beginning</b>	You have taken the first steps and carried them out which contribute to demonstrating the learning outcome.
<b>Proficient</b>	You have demonstrated the learning outcome several times. You will demonstrate the learning outcome at a sufficient level, if the development continues in this way.
<b>Advanced</b>	You have shown several times to work on this learning outcome with good results. You have performed above expectations and have focused on continuous improvement. You will demonstrate the learning outcome at a more than sufficient level, if the development continues in this way.

At the end of this document you find a clarification on the learning outcomes.

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<b>Student number</b>	4449681
<b>Graduation Profile</b>	Software & ICT
<b>Date</b>	25/11/2024
<b>Assessors</b>	Erik van der Schriek Nico Kuijpers

	<b>Learning Outcome</b>	<b>Level* (U, O, B, P, A)</b>	<b>Feedback</b>
1	Professional Duties	P	I believe that I carry my obligations at an bachelor level. This can be seen by how I analysed the requirements of my project with research, and was able to provide actionable suggestions based on the analysis. Realisation is an area where I'm lacking at the time of writing. The materials I produce are reviewed, and of high quality.
2	Situation-Orientation	B	I did not have previous technical knowledge that would be highly applicable to the project. The main previous knowledge I carried with me into the project, is the mindset of discovering the unknown unknowns. Most of the knowledge I demonstrate has been acquired on the go. This can be seen by how certain decisions can be flawed at first due to lack of a deep or encompassing understanding. In terms of showing the value of my project I make use of the TRL scale, additionally I have potential users lined up, to test the product.
3	Future-Oriented Organisation	B	<p>The project is a tool for helping developers, it's not that deep. It's not a disrupting or even money making piece of technology. The most future oriented you can be, is taking into account the changing needs of developers (the extendibility of the project). For this I have so far made sure that the project is well split into layers, which can be individually updated from each other. The hope is to also add enough tests to allow for extension without regressions; the project has been doing this from the start; it is not TDD.</p> <p>I have tried to work in a structure and planned matter. Creating a detailed planning from the start. However I slowly deviated from it, to the point that a new planning was made; to ensure the project could have a successful ending.</p>

			There could be a broader use of the project, but that I have yet to think about.
4	Investigative Problem Solving	P	<p>I have had to investigate everything about this project. As stated previously, I'm very much discovering this on the fly, hence why it is well documented with ADR's, research and (TBD) design documents.</p> <p>The code thus far, has been built side by side, with the test, to ensure no regressions. My knowledge of the subject is low, thus test are essential to maintain my assumptions in check.</p> <p>In terms of involving my stakeholders, I could be doing better. I currently do not communicate with them enough, nor pull them into the project enough.</p>
5	Personal Leadership	O	Much of having personal leadership I believe stems from having passion for a subject or project, and in that aspect I feel like I had a strong start, but that diminished due to some external factors, which I'm still recovering from.
6	Targeted Interaction	B	<p>I attempt to keep everyone informed of what is relevant to them, however I sometimes miscalculate which items are indeed relevant for which person. This can lead to either oversharing or leaving some stakeholders with partial information.</p> <p>I have scheduled meetings with my stakeholders.</p>

In general I can feel for myself that I lack initiative and enthusiasm, and I would like to pour that into the project. However I currently struggle to find the will or energy to even move forward, let alone to go above and beyond.

\*Choose from **U**ndefined, **O**rienting, **B**eginning, **P**roficient, **A**dvanced

## Appendix: Explanation about the learning outcomes

1. Professional Duties: You carry out the professional duties on a bachelor level resulting in professional products in line with the IT-area you are working in.

### *Clarification:*

- Professional duties is about the professional activities and the resulting professional products that are the core of your graduation portfolio. In activities and products the lifecycle of Analysis, Design, Realise, Advice and Manage&Control can be recognised although not all projects need to address all of these phases..
- As a reference for the activities and products that are expected and their level you can look at (a) the HBO-I domain description<sup>1</sup> for the proficiency indicator at level 3 (Bachelor level), (b) the level and products that you created during the semesters 6 and 7 and that are related to the IT sub-domain of your graduation project and (c) the professional standards, expectations and level that is in line with the practice within the IT sub-domain of your graduation project.
- A large part of your portfolio will consist of professional (end)products. Which products will be in your portfolio depends on the IT sub-domain and matching graduation project. They provide the context for the professional products that can be expected as a result of your activities. Therefore professional products should always be recognizable as common (professional) practice for the IT sub-domain of your graduation project. E.g. a software architecture in full stack software development is a common product for the IT sub-domain of full stack development and therefore should be in your portfolio as professional product when your graduation project lays inside the full stack development IT sub domain.
- All IT sub-domains are related to one or a mix of the five architectural layers of the HBO-I domain description (User Interaction, Organizational Processes, Software, Hardware Interfacing, Infrastructure). This means that your activities and resulting professional products may be related to the proficiency description of one of these layers or on a mix of layers at level 3. Mixing layers is quite common in domains like cybersecurity, web development, AI engineering, game development, mobile development etc. You show professional duties when using the right mix of layers that fit to the needs of your graduation project.

2. Situation-Orientation: You apply your previously acquired knowledge and skills in a new and authentic context to deliver relevant and valuable results for the project and company.

### *Clarification:*

- There should be a clear match between the knowledge and skills you offer the project and the project's needs. Also the needed knowledge and skills should be at level 3 (HBO-I framework).
- You *apply* your previously acquired knowledge and skills in the project's context which means that you adapt to the processes and way of working of the company and to what is expected or standard for the IT sub-domain
- Your activities and products are relevant for the project's stakeholders and users and creates value.
- You put effort in showing, proving and monitoring the added value of your project for example by (a) the upward Technology Readiness Level (TRL) transition you realise, (b) validation oriented methodology and (c) explicit value creation related objectives you have defined using the Design Challenge (Newman 1995, 2003)

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<sup>1</sup> As described in: HBO-i Domeinbeschrijving 2018, HBO-I stichting, Amsterdam. [Domeinbeschrijving - HBO-i stichting](#)

- You work in a methodological and structured manner within a context where approach and solution area are open, with multiple stakeholders and multiple IT areas combined. Your project, activities and products show contextual innovation and exploration.
3. Future-Oriented Organisation: You explore the organisational context of your project, make business, sustainable and ethical considerations and manage all aspects of the execution of the project.
- Clarification:*
- You put your situation orientation of Learning Outcome 2 in the perspective of the future (both inside and extending the project) and use this perspective to:
    - o Create a project plan and monitor your project execution including the practice based research activities, project approach/strategy, planning, financial aspects, risks and the quality of the solution.
    - o identify long term business legitimisation and business values that are relevant for the stakeholders.
    - o Consider business and domain trends, sustainable development and ethical aspects in your judgement process using standards or methods/tools (e.g. the Technology Impact Cycle Tool TICT).
4. Investigative Problem Solving: You take a critical look at your project from different perspectives, identify problems, find an effective approach and arrive at appropriate solutions.
- Clarification:*
- Throughout all phases of the project you identify and solve relevant problems and challenges:
    - o Initially (problem analysis) by
      - identifying the problem/opportunity of the stakeholders (client),
      - defining the scope and focus of the project and
      - formulating the related practice based research questions (using the Design Challenge),
    - o During the project by identifying newly encountered problems/challenges (e.g. spikes) and formulating more in-depth or detailed research questions.
  - Effective approach means that you use a variety of research strategies, methods and activities based on the DOT framework<sup>2</sup> in a structured way in order to find justified answers to your research questions.
  - Appropriate solutions means you use the results from your research to create valuable solutions and validate these using test methods, usability tests and by assessing the conformity with stakeholders, experts, peers or using a benchmark.
5. Personal Leadership: you are entrepreneurial around your projects and personal development, you pay attention to your own learning ability and keep in mind what kind of IT professional and/or what type of positions you aspire to.
- Clarification:*
- Entrepreneurial means that you take the lead in your own project, both planning as well as content wise.
  - Paying attention to your own learning ability means that you can reflect on your own actions, ask and receive feedback on your actions and look for further opportunities and possibilities that flow from that feedback and that you are aware of your development as an IT professional.
  - You know which role you envision in the IT-landscape and what role you play in a team.

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<sup>2</sup> Reference: [https://ictresearchmethods.nl/The\\_DOT\\_Framework](https://ictresearchmethods.nl/The_DOT_Framework)

6. Targeted Interaction: You determine which partners play a role in your project, collaborate constructively with them and communicate appropriately to achieve the desired impact.

*Clarification:*

- Communicate appropriately means that you make sure that your communication has the right impact and execution.
- Partners are the different stakeholders in the project to which you pay attention to and whose interest in the project are clear to you.