

## ALIGNING INTERPROFESSIONAL EDUCATION AND COLLABORATION IN PRACTICE

using promising regional experiences for international exchange

# INPRO COMPETENCY FRAMEWORK

### User's guide



The INPRO CF (Competency Framework) User's Guide is a comprehensive resource designed to assist users in effectively navigating and utilising the INPRO CF. This guide aims to provide clear instructions, tips, and insights for a smooth and successful experience with the framework. Whether you are a student, a professional, a manager or an educator, this user's guide will support you in understanding and making the most of the INPRO CF. This manual specifically targets individuals who wish to utilise the interprofessional competencies, not only within educational institutes but also in practical settings. It aligns with the objective of the INPRO project, making it suitable for both education and practice contexts.

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## 1. Preface

The primary objective of the INPRO project was to contribute to bridge the gap between education and rehabilitation practice in terms of interprofessional collaboration. Therefore, the INPRO project aims to align interprofessional collaboration in health and wellbeing from education to practice by integrating the education pathway with collaborative practice in the field of rehabilitation.

Two of the main objectives of INPRO are:

- 1) to enhance interprofessional education and collaborative practice (IPECP)
- 2) to improve the transition of future health and wellbeing workforce (students) from education to rehabilitation practice by aligning innovative approaches in interprofessional collaboration.

Several aspects need to be considered to further align IPECP: ensuring consistent terminology across domains and different levels (students, educators, professionals), focusing on interprofessional competencies and how to teach and train them in education and practice, and finally, implementing these aspects in a practical setting. Therefore, the participating partners in the INPRO project have worked on various outputs, including an interprofessional competency framework with additional assessment tools, e-learning modules on the International Classification of Functioning, Disability, and Health ([ICF education](#)) and [ICF in person centred rehabilitation](#) for establishing common language in interprofessional collaboration and person-centeredness, a process guide for designing interprofessional learning interventions in an educational setting (link to [Process guide HEI](#)) and in practice (link to [Process guide practice](#)), and a guideline for establishing an interprofessional learning ward (link to [Guideline SR-IPLW](#)). These materials have been tested and evaluated during the INPRO project (2021-2023) by the consortium.

The development of the INPRO Competency Framework will be published. At the time of writing this guide, the process of a peer reviewed article is still running. When the article is approved and published the link will follow on the INPRO website ([www.inproproject.eu](http://www.inproproject.eu)). During the development process of the INPRO Competency Framework, a definition of interprofessional competencies for INPRO emerged and became:

**“Interprofessional competencies are the observable abilities of a learner that integrate knowledge, skills, values, and attitudes, enabling successful collaboration across professions, with individuals and their families, to enhance health outcomes in specific care contexts. Competencies are enduring, trainable, and measurable through the expression of learning outcomes. Personal characteristics such as motivation, self-confidence, determination, and adaptability are influenced by specific contexts.”**

The INPRO CF User's Guide is an invaluable tool to maximize the benefits of the framework and enhance your understanding and proficiency in competency assessment. Whether you are a beginner or an advanced user, this guide will support you in utilising the INPRO CF effectively and achieving your desired outcomes. This manual specifically targets individuals who wish to utilise the interprofessional competencies within educational institutes or practical settings.

## 2. Introduction

Welcome to the guidebook on the use of the INPRO Competency Framework (INPRO CF).

In today's fast-paced and ever-evolving professional landscape, organisations are recognizing the importance of defining and developing the skills and abilities required for success. Competency Frameworks have emerged as powerful tools to assist in this endeavour, providing a comprehensive and structured approach to assessing, developing, and managing talent.

The INPRO CF serves as a **roadmap** for individuals and organisations, outlining the knowledge, skills, behaviours, and attitudes necessary to excel in specific roles or domains. It goes beyond traditional job descriptions by offering a holistic view of the capabilities needed to achieve interprofessional performance.

This guidebook is designed to demystify the world of competency frameworks, providing you with valuable insights and practical guidance on their creation, implementation, and utilization. Whether you are an HR professional seeking to enhance interprofessional management practices, a manager aiming to align your team's skills with interprofessional goals, a teacher defining learning goals for the interprofessional course or an individual looking to navigate your career path more effectively, this guidebook is your go-to resource.

Throughout this guidebook, we will explore the content and the benefits of this INPRO CF and his various applications. We will delve into the process of designing a robust competency framework **for your own purpose**, including defining core competencies, mapping proficiency levels, and establishing evaluation methods. Furthermore, we will discuss strategies for integrating your chosen learning outcomes from the INPRO CF into recruitment, performance management, learning and development, and succession planning initiatives.

Drawing from real-world examples and best practices, this guidebook will equip you with the knowledge and tools to successfully implement and leverage competency frameworks. It will empower you to foster a culture of continuous learning, enhance individual and team performance, and drive organisational success.

So, whether you are embarking on the development of a competency framework or seeking to maximize the benefits of an existing one, join us on this journey as we unlock the transformative potential of the INPRO CF in today's dynamic work environment. Let's embark on this enlightening exploration together!

### 3. Acknowledgements

The researchers extend their gratitude to all those who dedicated efforts and expertise to this resource. Experts on interprofessional competencies and collaboration of higher education institutions and practices committed considerable time providing feedback to draft iterations of interprofessional competencies framework for interprofessionalism in action (INPRO) and participated in several expert meetings. Consensus was reached through individual and group meetings facilitated by the work package 4 (WP4) researchers, and the revised version became the pilot INPRO Competency Framework (INPRO CF). Thanks to the following experts who participated in the expert group.

From Hanze: Katrien Colman, Sandra Jorna-Lakke, Jan-Jaap Reinders, Ellen van Lingen, Andrea Werkman

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From JAMK: Anu Myllyharju-Puikkonen, Jaana Paltamaa, Jaana Ritsilä

From Coronaria: Laura Mutanen

Also, thanks to everyone who provided an independent written critique containing constructive feedback and identifying areas for improvement. Based on the feedback received, revisions were compiled into the pilot version and use of the INPRO CF.

Also, thanks to the translators from the INPRO consortium.

## 4. Terminology and key characteristics of the INPRO CF

The INPRO CF is partly adopted and adapted from the Rehabilitation Competence Framework (RCF) (World Health Organization (WHO), 2020). The researchers of WP4 adopted and adapted the core values and beliefs, the competencies and the description of the behaviours. They engaged in a series of facilitated discussions to develop and refine the learning outcomes to an interprofessional context, including parsing and combining competencies and learning outcomes of other included frameworks from their literature search (see article, not yet submitted).

In these various sources, we often encounter different usage of terms, such as the use of "patient." Some terms were also adopted from the consensus reached during discussions on terminology within the INPRO team. Therefore, it is important to first clarify the terms used in the INPRO Competency Framework (CF).

**Learner:** every person, regardless of their role as a student, as a professional, as a coach, can be learning at some point. When the word "learner" is used, it refers to the person who is learning at that moment, regardless of their role or responsibilities.

**Professional:** an individual who works within the field of healthcare and wellbeing services, providing support, care, and assistance to individuals, families, and communities. These professionals are trained and educated to address various health and wellbeing needs of people across different stages of life. Health and wellbeing care professionals include a wide range of roles, such as doctors, nurses, social workers, therapists, counsellors, healthcare administrators, paramedics, and more. They work in settings like hospitals, clinics, community centres, nursing homes, rehabilitation centres, and private practices. Their primary goal is to improve the well-being, health, and quality of life of individuals, while considering both medical and wellbeing aspects of care.

**Person and their family:** the use of the meaning of "person and their family" from the RCF (WHO, 2020) has been copied to the INPRO CF. "The person" refers to the individual with rehabilitation needs; "their family" refers to all those, related or unrelated to the person, who are directly involved in the rehabilitation process e.g. family members, partner, employer, teacher. In some contexts, "family" may be extended to include the broader community.

**Rehabilitation:** Rehabilitation is meant as a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions, in interaction with their environment. Rehabilitation aims to maximize a person's ability to live, work and learn. (WHO, 2020)

**A health condition** may include disease, disorder, injury or trauma, as well as other circumstances such as pregnancy, ageing, stress, congenital anomaly, or genetic predisposition (WHO, 2020).

**Values and beliefs** underscore all competencies and learning outcomes/behaviours.

**Learning outcomes** or behaviours refer to specific measurable goals or observable actions that individuals are expected to achieve or demonstrate as a result of a learning experience or educational program. These outcomes define what a person should be able to do, understand, or perform upon completing a course, training, or educational activity. Learning outcomes can encompass a range of cognitive, practical, and affective skills, and they help assess whether the learning objectives have been met. In the INPRO CF the learning outcomes are expressed from level 0 (referable to 'knows' level from Miller's pyramid) to level 3 (referable to 'does' level from Miller's pyramid) (Miller, 1990). The learning outcomes described for level 0 are expected for all proceeding levels.



**Competencies** are organized thematically across five domains; however, they will frequently support performance across multiple domains. For example, the communication competency described in the practice domain will support performance in all domains but is not repeated in each one.

**The performance** of a learner may vary across levels of proficiency within and between domains; the level to which a learner aligns will be influenced by their experiences, the expectations of their role and their personal strengths and interests. It is typical for a learner to align with a different level in each of the domains and for this to change over time.

**Proficiency levels** are not determined by duration of education or training, or by any specific qualification. For example, a community health worker may align with level 0 in some domains, and level 2 or 3 in other domains. In some areas, and depending on experience and role, a community health worker may align with a higher level than a more qualified rehabilitation worker (for example a community health worker may align with higher levels in leadership and management if they hold a coordination role).

By “**assessment**” we mean the assessment of individuals (learners, employees) or teams. By “**evaluation**” we mean the evaluation of courses, curricula, programs, practice models, sites, etc. Evaluation often relies on assessment data (along with other types of data). We alternate the word “**scores**” with “**responses**.” both refer to whatever types of data result from the application of assessment/evaluation tools.

## 5. The INPRO Competency Framework

### 5.1. Content

The INPRO CF is a framework that contains interprofessional competencies for a lifelong learner in health and wellbeing. This means that it would be valuable starting on day one of your studies in becoming a health or wellbeing interprofessional collaborator and ending the day before you retire. We like to call it “a competency framework for the lifelong learner in interprofessional health and wellbeing”. The specific professional competencies are not included in this framework.

For the INPRO project Interprofessional Competencies are defined as the observable abilities of a learner, integrating knowledge, skills, values and attitudes, that enable working together successfully across the professions and with a person and their family to improve health outcomes in specific care contexts. Competencies are durable, trainable and, through the expression of learning outcomes, measurable. Personal characteristics such as motivation, self-confidence, willpower and flexibility are part of a certain context.

The INPRO CF comprises five domains, around core values and beliefs. These domains cover the areas of Interprofessional Practice (IP), InterProfessionalisM (IPM), Learning and Development (LD), Management and Leadership (ML), and Research (R). Independent of a domain core value and beliefs are described.



FIGURE 1: INPRO COMPETENCY FRAMEWORK ([LINK TO PREZI MOVIE ABOUT INPRO CF](#))

Each domain of the INPRO CF has its own competencies. These interprofessional competencies are divided into Learning Outcomes (LO). Each LO is described in terms of four performance levels (Level 0 to Level 3). The meaning of the domains is explained in more detail in the following sections.

## 5.2. Core Values and Beliefs



FIGURE 2: VALUES

Five core values and four core beliefs underlie all competencies. Together they help to shape the interprofessional performance of a learner in all domains of INPRO CF.



FIGURE 3: BELIEFS

### 5.2.1. VALUES

**Compassion and empathy;** Professionals seek to relate and respond with understanding to a person and their family's experience.

**Sensitivity and respect for diversity;** Professionals treat all people equally and fairly, regardless of race, ethnicity, age, sex, gender identity, sexual orientation, disability, beliefs or economic status; they seek to provide care that is respectful and acceptable.

**Dignity and human rights;** Professionals recognize the inherent value of each person, respect their dignity and promote their human rights.

**Self-determination;** Professionals seek to provide choice and promote self-determination for each person.

**Flexibility;** Professionals adapt their behaviour and actions depending on the situation.

### 5.2.2. BELIEFS

**Functioning is central to health and well-being;** it is integral to how a person is included and participates in meaningful activities and life roles.

**Rehabilitation is person/family-centred;** it is orientated around the specific needs and goals of the person and their family.

**Rehabilitation is collaborative;** it requires consultation with, and the active involvement of, the person and their family.

**Rehabilitation should be available to all who need it;** it should be integrated throughout the continuum of care for anyone with impairment in functioning who are experiencing activity limitations and participation restrictions.

### 5.3. Description of the 5 domains of the INPRO CF



#### INTERPROFESSIONAL PRACTICE (IP)

Interprofessional competencies with their Learning Outcomes (LO)/behaviours (B) related to interaction between professionals and the person and their family. Interprofessional competencies includes those LO/B necessary for establishing appropriate interprofessional relationships, assessment, planning, delivering interprofessional interventions, communication and shared decision-making.



#### INTERPROFESSIONALISM (IPM)

Interprofessional competencies with their LO/B related to interprofessional integrity, interprofessional collaboration, safety and quality of care, that enable the performance of an interprofessional role.



#### LEARNING AND DEVELOPMENT (LD)

Interprofessional competencies with their LO/B related to the interprofessional development of the professional. Competencies within this domain involve interprofessional development, teaching, and learning.



#### MANAGEMENT AND LEADERSHIP (ML)

Interprofessional competencies with their LO/B related to teamwork, strategic thinking, management, service development and evaluation, and resource management.



#### RESEARCH (R)

Interprofessional competencies with their LO related to the generation, dissemination and integration of interprofessional collaboration research.

## 5.4. Summary of the 5 domains with the competencies of the INPRO CF



### INTERPROFESSIONAL PRACTICE (IP)

**IPC1.** Places the person and their family at the centre of the interprofessional practice

**IPC2.** Establishes a collaborative relationship with the person and their family, and the interprofessional team

**IPC3.** Communicates effectively with the person, their family, and the interprofessional team

**IPC4.** Adopts a sustainable interprofessional approach to problem-solving and decision-making

**IPC5.** Works within scope of interprofessional practice



### LEARNING AND DEVELOPMENT (LD)

**LDC1.** Continues to learn and develop in interprofessionalism

**LDC2.** Supports the learning and development of the interprofessional team, including the person and their family

**LDC3.** Works to strengthen interprofessional rehabilitation education and training



### INTERPROFESSIONALISM (IPM)

**IPMC1.** Demonstrates ethical conduct

**IPMC2.** Maintains interprofessionalism

**IPMC3.** Works interprofessionally

**IPMC4.** Manages interprofessional responsibilities



### MANAGEMENT AND LEADERSHIP (ML)

**MLC1.** Works to enhance the performance of the interprofessional team

**MLC2.** Works to enhance the performance of an interprofessional service delivery

**MLC3.** Acts as an interprofessionalism advocate



### RESEARCH (R)

**RC1.** Integrates evidence in interprofessional practice

**RC2.** Works to strengthen evidence for interprofessional rehabilitation

FIGURE 4: SUMMARY OF THE DOMAINS WITH THEIR COMPETENCIES

## 6. Exploring the INPRO Competency Framework in Various Contexts

The INPRO CF guides you in various situations due to its flexibility and inclusiveness. Whether applied in educational fields, practice settings, interprofessional collaborations, or individual empowerment, this framework actively promotes interprofessional collaboration at every opportunity. By embracing the potential of this framework, both individuals and teams can lead the path towards a more promising future of interprofessional collaboration.

Let us embark on a journey to discover how the INPRO Competency Framework thrives in these contexts.

### 6.1. Educational Settings:

Within educational institutions, the INPRO Competency Framework takes centre stage as a catalyst for nurturing the interprofessional collaboration of the professionals of tomorrow. Educators can seamlessly choose the LO they want to integrate into curricula, ensuring students cultivate essential skills beyond traditional academic knowledge. By focusing on not just what is learned but how it is learned, the INPRO CF empowers learners with critical thinking, communication, and problem-solving abilities.

As students develop these competencies, they are better equipped to excel in real interprofessional practice challenges. Moreover, the INPRO CF encourages a growth mindset, promoting a passion for lifelong learning and a willingness to embrace diverse perspectives.

### 6.2. Practice Environments:

In the interprofessional arena, the INPRO CF serves as a cornerstone for nice interprofessional collaboration.

By identifying key competencies relevant to specific roles, the framework enables professionals to map their interprofessional collaboration competencies' progression and identify areas for improvement. Moreover, organisations benefit from its implementation as it promotes a unified understanding of proficiency levels, allowing for clearer expectations and streamlined evaluations of employee interprofessional performance.

### 6.3. Interprofessional Teams:

The INPRO CF plays a crucial role in bolstering the effectiveness of interprofessional teams. When diverse professionals come together, communication and coordination can be challenging.

Team members gain insight into each other's strengths and areas for interprofessional development, fostering mutual respect and a supportive atmosphere. As a result, interprofessional teams can synergize their efforts, leading to innovative solutions and improved outcomes for the person and their family.

### 6.4. Personal Interprofessional Development:

Beyond formal settings, the INPRO Competency Framework empowers individuals on their personal interprofessional development journey. It offers a structured roadmap for self-improvement, allowing professionals to set clear goals and track their progress over time.

## 7. Determining competencies / learning outcomes / behaviours

This process you can do it individually or in your team. The following steps are described to do it as a team. If you do it individually, you can leave out the consensus part.

**STEP 1:** Open the INPRO CF Competency book (link to [INPRO CF\\_ENG\\_competencybook.pdf](#)) and the INPRO CF Excel (link to [INPRO CF\\_ENG](#))

Or look at the [Prezi movie about the INPRO CF](#) (\*)

**STEP 2:** Individually assess which domains align most effectively with your objectives. Subsequently, convene with your team and engage in deliberation until a consensus is reached.

**STEP 3:** Individually, in preparation for a next team meeting, review the competencies along with their associated learning outcomes/behaviours corresponding to the chosen domains. In a designated column in the Excel spreadsheet, mark which learning outcome/behavior and level best aligns with the expectations of your objectives.

**STEP 4:** As a team, engage in a discussion regarding the anticipated learning outcomes/behaviours until a consensus is reached.

**STEP 5:** In the Excel spreadsheet, each learning outcomes/behavior corresponds to a separate row. Hide the rows that do not pertain to the selected learning outcomes/behaviours, and generate a PDF document containing the remaining learning outcomes/behaviours. This will provide you with a concise summary of your chosen learning outcomes/behaviours.

[Link to Movie about the use of the Excel](#)

Once you have established your competency framework for your specific objectives, you can then proceed to develop the assignments, assessments, interview guidelines, and other relevant material.

## 8. Assessment of learning outcomes

Once the desired learning outcomes are selected, an assessment tool can be developed to measure the learning yield. This manual provides a range of examples tailored to the specific situation. To design an assessment tool the steps of Smeets, Sluijsmans, Moser, & van Merriënboer, 2022 were followed. This study yielded a comprehensive set of 26 guidelines to help design performance assessments for IP education: ten guidelines for both the IP assessment tasks and the IP assessors and six guidelines for the IP assessment procedures.

**Table 3** Guidelines for the design of a program to assess IP competencies

Guidelines for the design of assessments for IP education  
*With these guidelines, we aim to address the design team in charge of designing the IP assessment program, which can consist of lecturers, managers, students, policy makers, patient/representatives, and other stakeholders*

IP Assessment Task <sup>a</sup>	IP Assessors <sup>b</sup>	IP Assessment Procedure <sup>c</sup>
The IP assessment task should be based on a description of the required IP competencies	The team of assessors should consist of multiple relevant actors, such as peers, patients (if willing and able to participate), professionals, and lecturers	In the assessment procedure, the standards should be clear, concise, and transparent
The IP assessment task should be based on the professional qualifications as defined in each professional profile	During the course, the team of assessors should provide feedback to students about their progress regarding performance outcomes	In the assessment procedure, the standards are aligned with the performance outcomes of the IP course
In the IP assessment task, there should be clear and transparent communication about the way students are assessed (which competencies, why, how, function)	The roles (tasks and responsibilities) of each assessor on the assessment team should be clearly defined	The assessment procedure should include rules on how feedback is included to reach a decision about the acquisition of IP competencies
In the IP assessment task, both the task and the underlying performance outcomes should be the same for all participating students regardless of professional background	The team of assessors should be informed about performance outcomes, the assessment task, the assessment instrument, and the standards on which students are assessed	In the assessment procedure, standards are included on the quality of the IP collaboration process and the individual contribution of students to it
The IP assessment task should describe an authentic professional (patient) case in which multiple professions must collaborate to solve the task	The team of assessors should include at least one assessor with: practical experience as a healthcare professional, practical experience in interprofessional collaboration, interprofessional competence	Students should be rewarded with credits when passing the IP assessment task
The IP assessment task should be carried out by the students based upon their professional background	The team of assessors should be trained in the assessment procedure used	The IP assessment is embedded in students' educational programs
The IP assessment task should lead to both products and processes as performance outcomes	To have a shared understanding and interpretation of the assessment standards, the team of assessors should hold calibration sessions before the assessment	
The IP assessment task should require student reflection on the quality of the IP collaboration process	The team of assessors should understand which assessment procedure is used to decide on IP competencies and should adhere to this model	
The IP assessment task should include multiple opportunities for feedback on students' development	The team of assessors should be facilitated in time and resources to conduct the assessment	
In the IP assessment task, language should be used that can be understood by all participating students	The team of assessors should be facilitated by the educational programs to assess students from different professions	

<sup>a</sup> An IP assessment task is an educational task in which students from two or more educational programs show their IP competence. This IP assessment task leads to IP performance that can be assessed.

<sup>b</sup> An IP assessor is responsible for assessing/examining/grading the IP performance of the students.

<sup>c</sup> An IP assessment procedure describes the performance criteria and decision rules based on which the assessors can judge the IP competencies of students.

### FIGURE 5: GUIDELINES FOR THE DESIGN OF A PROGRAM TO ASSESS IP COMPETENCIES (SMEETS, SLUIJSMANS, MOSER, & VAN MERRIËNBOER, 2022)

For the online intervention interprofessional module organised by St. Poelten (link to [Process guide HEI](#)) these guidelines from Smeets et al (2022) are followed and each step is motivated how it is present. See document 4.3.k Guideline (Smeets) vs assessment plan of INPRO OLI (link to [Guideline \(Smeets\) vs assessment plan of INPRO OLI](#))



Measurement Tool

On the website <https://nexusipe.org/informing/resource-center/evaluating-ipecp> (national center for interprofessional practice and education, 2023) you will find tools/methods for assessment.

For choosing a measurement tool we relied on the table 3 out of this report:

Schmitz, C.C. & Cullen, M.J. (2015): Evaluating Interprofessional Education and Collaborative Practice: What Should I Consider When Selecting a Measurement Tool? (Schmitz & Cullen, 2015)

**Table 3: Examples of Measurement Tools by Respondent Level and Outcome Category**

RESPONDENT LEVEL	KNOWLEDGE		SKILLS		BEHAVIORS		AFFECTIVE
	SUBJECTIVE	OBJECTIVE	SUBJECTIVE	OBJECTIVE	SUBJECTIVE	OBJECTIVE	SUBJECTIVE
INDIVIDUAL RESPONDENT	Pre-post self-assessment	Multiple choice test	Pre-post self-assessment	Ratings of individual simulated performance	Self-reflection inventory	360 degree evaluation; Situational judgment test	Opinion survey; Pre-post confidence
TEAM	Pre-post team self-assessment	Team quiz	Pre-post team self-assessment	Ratings of team simulations	Team debriefing	Observation rating tool	Summary of team interviews
ORGANIZATION	Key leader assessment of needs	Readiness for IPE audit	Trainer feedback on course	Review of quality measures	Self-study	External site visit, review of documents	Climate survey

**Subjective:** e.g., self-report, self-assessment

**Objective:** e.g., standardized tests, observed by others using standardized methods, systematic reviews of logs

**FIGURE 6: EXAMPLES OF MEASUREMENT TOOLS BY RESPONDENT LEVEL AND OUTCOME CATEGORY (SCHMITZ & CULLEN, 2015)**

Educators examine the selected learning outcomes and subsequently choose the most appropriate instrument for assessment. When we refer to "assessment," we are focusing on evaluating individuals (such as learners or employees) or teams. For instance, we can provide an overview of the assessment tool utilized during the learning intervention organized by INPRO in 2022 at St. Poelten.

LEVELS OF BEHAVIOURS (LEVEL 0-3)	EXPECTED LEARNING OUTCOMES / THE LEARNER ...	linked with the assignment	linked with the assessment	peer- en self assessme	group observation	student reflection
<b>INTERPROFESSIONAL PRACTICE (IP)</b>						
<b>IPC1. Places the person and their family at the centre of the interprofessional practice</b>						
Level 0	Recognizes the person and their family to be active partners as a preparation of the interprofessional rehabilitation, including decision-making.	X		X	X	X
	Assess the person's functioning and his/her needs by collecting information from the person and his/her family, for example through interviews or questionnaires.	XX	ICF			X
Level 1	Identifies the desired outcomes of the person and their family, responding to their needs, preferences, goals and circumstances.	X		X		X
	Recognizes barriers to the person and their family's engagement in the interprofessional workflow including their ability to access services.	X				X
	Recognizes that the ICF components can be used to describe a person's functioning, taking into account both positive and negative aspects of functioning.	XX	ICF			X
<b>IPC2. Establishes a collaborative relationship with the person and their family, and the interprofessional team</b>						
Level 0	Recognizes and acknowledges the attitudes, beliefs, and feelings of the person and their family.	X				X
	Identifies important information and unmet needs of the person and their family from a broad interprofessional perspective.	X		X	X	X
<b>IPC4. Adopts a sustainable interprofessional approach to problem-solving and decision-making</b>						
Level 0	Identifies personal, environmental, and health factors by using the ICF model when conceptualizing problems and identifying solutions.	XX	ICF			X
Level 1	Prioritizes information from multiple sources by using the ICF model when solving problems and making decisions with the person and their family.	XX	ICF			X
<b>IPC5. Works within scope of interprofessional practice and competence</b>						
Level 0	Knows its own profession-specific competencies and limitations.	XXX		X	X	X
	Describes how professionals in health and other areas can collaborate and integrate clinical care and public health interventions to optimize population health.	X (AIN: placed it back = introduction)				X
Level 1	Respects the contributions and expertise of members of other health professions.	X		X	X	X
	Effectively communicates their role, knowledge and opinions to team members in a way that promotes positive interaction.	XX		X	X	X

FIGURE 7: EXAMPLE OF A MATRIX TO CHECK IF EVERY LEARNING OUTCOME WILL BE ASSESSED

These documents are some examples we used for our projects in 2022:

[INPRO CF Reflection tool](#)

[INPRO CF Peer and self-assessment](#)

[Group observation tool](#)

[INPRO CF Performance review](#)

[INPRO CF Questionnaire for professionals/internship assessment](#)

## 9. Implementation of INPRO CF

The INPRO CF has been tested and evaluated with by the Inpro consortium. Together with the partners, a realistic implementation of the INPRO CF was sought. Each situation is unique and described in a project brief, demonstrating the high flexibility of the INPRO CF. Tools have been developed for each situation, which you can also find further details about.

Each country has implemented and evaluated the INPRO CF in three different settings: an education setting, a practice environment and a combination of it.



By presenting real-life scenarios, our objective is to offer a comprehensive comprehension of the effective utilization of the INPRO competency framework in enhancing interprofessional collaboration and performance across various situations. Beneath each project, a brief content description is provided to help you identify topics relevant to your purpose. Subsequently, you will find a link to the document outlining user-performed steps, following the phases outlined in the WHO's stepwise guide for competency framework developers (WHO, 2020). Additionally, links to the specific developed tools are also provided.

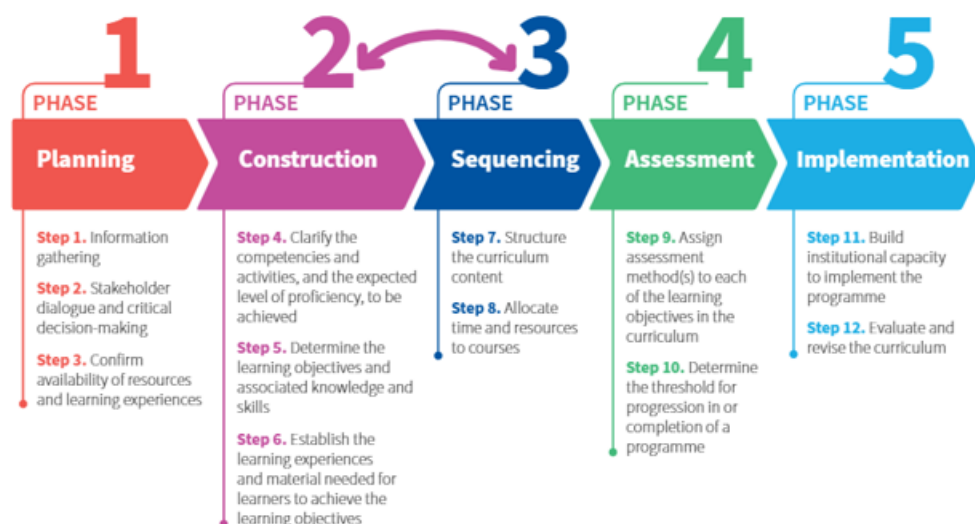


FIGURE 8: PHASES OUTLINED BY WHO'S STEPWISE GUIDE FOR COMPETENCY FRAMEWORK DEVELOPERS (WHO, 2020)



## 9.1. Projects of Finland



### 9.1.1. Jamk

#### Short description of project

Jamk used the INPRO CF in three different pilots.

PILOT 1: The use of INPRO CF during interprofessional internship.

PILOT 2: The use of INPRO CF during interprofessional case days.

PILOT 3: The use of INPRO CF in ICF “Advanced Course”

Overall goal and/or research question:

PILOTS 1 + 2: Is INPRO CF a useful tool to assess the interprofessional competencies of students in the school of health and wellbeing studies during the interprofessional internship and the interprofessional case days? If yes, how should it be used?

PILOT 3: How the International Classification of functioning or ICF competencies/ learning objectives were achieved by using the “ICF Advanced course” material

Link to project fiche: [Project F\\_JAMK](#)

### 9.1.2. Coronaria

#### Short description of project

Coronaria used the INPRO CF for two internal objectives.

PILOT 1: Develop interprofessional working models that serve the entire rehabilitation staff of Coronaria.

PILOT 2: Develop ICF-based tools to promote ICF implementation and practice and to increase staff competencies in the use of ICF in rehabilitation (training).

PILOT 3: in cooperation with JAMK “The use of INPRO CF during interprofessional internship.”

Overall goals and/or research question:

How can the INPRO CF help to build new ways for interprofessional working both for students and rehabilitation professionals?

Link to project fiche [Project F\\_CORONARIA](#)

Link to developed tools

[INPRO CF\\_only ICF competencies ENG](#)

[INPRO CF Reflection tool](#)

### 9.1.3. Common intervention: JAMK and Coronaria

The common intervention is described under 9.1.1 and 9.1.2



## 9.2. Projects of Austria



### 9.2.1. St. Poelten education

#### Short description of project

Interprofessional collaboration becomes increasingly important for health care professions to improve health care quality. To prepare future health professionals for interprofessional collaboration, interprofessional education is needed. In the UAS St.Poelten interprofessional education in health professions was implemented firstly in 2019 as a project with 24 students from 4 professions and has continuously increased since that. Within the INPRO project international, interprofessional education in an online setting and with the use of ICF was implemented in two interventions in order to provide students and educators with the opportunity to (additionally) exchange on international differences and similarities. The INPRO CF and the International Online Collaboration Competencies (IOCC) (Kolm, van Merriënboer, Frambach, Vanherle, & de Nooijer, 2023) were implemented to define the expected learning outcomes of the students for an international, interprofessional online course (2x in 2021 and 2022).

#### Research questions:

Which competencies and learning outcomes are adequate/realistic for an international, interprofessional online setting?

How can specific competencies be reached: which type of assignment is needed?

How can the acquisition of certain competencies be assessed?

Which competencies did the students acquire in the learning intervention?

Link naar project fiche [Project AU St.Polten](#)

Link naar ontwikkelde tools [Process guide HEI](#)

### 9.2.2. MOHA Practice

#### Short description of project

Moha used the INPRO CF in two pilot projects:

PILOT 1: During the employee conversations.

PILOT 2: The use of INPRO CF during interprofessional internship.

Overall goal and/or research question:

Increase interprofessional communication between the employees at Moha. Make them aware of interprofessional communication/cooperation by reflecting on their own level and how to improve.

To provide the chance for students to develop interprofessional competences.

Does the use of reflection questions about interprofessionalism help to increase the interprofessional work at Moha?

Link to project fiche [Project AU MOHA](#)

Link to developed tools [INPRO CF conversation tool with professionals](#)

### 9.2.3. Common intervention: St. Poelten and Moha

#### Short description of project

St. Poelten and Moha used the INPRO CF in one project:

PILOT 1: The use of INPRO CF during interprofessional internship.

Overall goal and/or research question:

The students reflect more intensively about their own interprofessional competencies and other health professions.

Link to project fiche [Project AU MOHA](#)

Link to developed tools [INPRO CF Reflection tool English German](#)



## 9.3. Projects of The Netherlands

### 9.3.1. Hanze UAS education

#### Short description of project

Hanze University of Applied Sciences used the INPRO CF in one project:

PILOT 1: Getting a clear picture of what is already present in terms of interprofessional learning in the department and identifying the gaps that still exist.

Overall goal and/or research question:

To make an overview of all interprofessional learning activities at the Hanze UAS by means of the INPRO CF learning outcomes. And therewith give insight in the learning outcomes that need more attention

Link to project fiche [Project NL HANZE](#)

Link to developed tools

No specific tools have been developed; instead, Excel ([INPRO CF ENG Excel](#)) is being utilized for this purpose. The process involves marking the competencies already present at Hanze to create a comprehensive overview. The Excel tool is available in 4 languages (English, Dutch, German and Finnish).

### 9.3.2. Revalidatie Friesland Practice

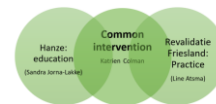
#### Short description of project

Revalidatie Friesland used the INPRO CF in two project:

PILOT 1: Team growing in interprofessional collaboration

PILOT 2: Involvement of the students in the interprofessional collaboration

Overall goal and/or research question:



To assess the initial state of the team and identify opportunities for growth in interprofessional collaboration. Students were a part of the conversations that took place.

[Link to project fiche Project\\_NL\\_RF](#)

[Link to developed tools](#)

No tools were created; instead, a team conversation approach was consistently employed. The discussions drew on certain INPRO competencies as a theoretical foundation to initiate the process. For further insights into the implementation, you can refer to the interview available at the provided link ([interview use of INPRO CF for team functioning](#))

### 9.3.3. Common intervention: Hanze and Revalidatie Friesland

Short description of project see 9.3.2



## 9.4. Projects of Belgium

### 9.4.1. Practice (Geriatric department in a hospital in Antwerp)

Short description of project

A geriatric department of a hospital in Antwerp used the INPRO CF in one project:

PILOT 1: Get to know each other profession

Overall goal and/or research question:

Collect the knowledge of each employee about the other team members. Clarify roles and responsibilities in the interprofessional team.

[Link to project fiche Project\\_B\\_Hospital](#)

The mission/vision is: Together offering accessible quality medicine and care in a respectful and friendly manner. The focus on together we started in phase 1 on a department to get to know each other. What is the function of the different disciplines in the department. A workshop with the team and a poster as an end result with the aim to get to know each other expertise.

### 9.4.2. AP UAS Education

Short description of project

AP UAS used the INPRO CF in one project:

PILOT 1: Reflection of nutrition and dietetic students on INPRO CF during and after practice placement

Overall goal and/or research question:

- Which learning outcomes of the INPRO CF do students of nutrition and dietetics reach during their practice placement?
- Another goal was that the students evaluate the INPRO CF. That's part of the validation phase of the INPRO CF

[Link to project fiche Project B AP](#)

[Link to developed tools INPRO CF Reflection tool English Dutch](#)

The project's aim is to explore which of the INPRO competencies were gained during the practice placement by the students of nutrition and dietetics.

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