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Professional competence standard for the professional area of innovation management

(final version)

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Concept and methodological assumptions of the ComProCom project

The ComProCom project aims at the development and validation of the methodology to create descriptions of professional competence ensuring its better adjustment to the reality of the labour market's functioning. The mentioned competence descriptions are named differently in different countries: professional profiles, competence framework, or – as in Poland – professional competence standards. In some countries they are inseparably connected with the professional education standards (Germany, Austria), or they constitute an element of qualification descriptions according to the requirements of the national qualification frameworks (Ireland). In such countries as Poland, Greece or Great Britain, they function independently, as separate documents (respectively): national professional competence standards, professional profiles, national professional standards.

The currently prevailing in Europe outcome-based methodologies of creating professional competence descriptions are usually not satisfying and do not allow for the full description of more complicated professions, for which such aspects as the code of ethics, continuing professional development, or relations with other people are particularly important.

The concept proposed in the project assumes resignation from descriptions based on a detailed analysis of professional tasks, professional roles or work outcomes and the emphasis on key skills, applicable usually not for individual professions, but for the areas of professional activity. Despite specifying the set of knowledge, skills or social competence, descriptions focus on what a given person is able to do while working, with consideration of a broad context of the conditions of work performance (various positions, professional specialisations). This approach is to provide the standards with greater flexibility, universality and resistance to the content becoming outdated¹.

The proposed approach has been applied for the preparation of the below presented description of professional competence for the professional area of innovation management.

¹ The adopted assumptions are presented in detail in the methodological manual [www.comprocom.eu/pl/rezultaty/61-podrecznik-metodyczny]

Basic terms

Below you may find the definitions of the most important terms adopted for the purposes of the project and applied in the document. Their broader review and definitions of other terms related to the standardisation of professional competence have been included in a methodological manual².

Professional competence – everything that a given person is able to effectively perform, according to the situation in the workplace

Professional competence standard – standard describing the professional competence in the apprehension of key skills allowing for effective practice in a given profession or professional area, approved by representatives of professional and industrial organisations

Profession – the set of tasks (complex of actions) distinguished as a result of a social division of labour and requiring relevant competence

Professional area – commonly recognised area/sphere of professional activity, including professions related with regard to the scope of work or a set of professional functions

Description of the professional area "innovation management"

A key to the success of economies based on knowledge, science and R&D activity is not only the skill of developing new product, process, organisational or marketing solutions, but also the skill of formulating appropriate action strategies, and then the effective implementation of innovations on the market.

The innovation management requires the interdisciplinary competence, is related to the advisory tasks aiming at the support of development of innovative solutions both in enterprises and in R&D units, and the implementation of research results in the economic practice.

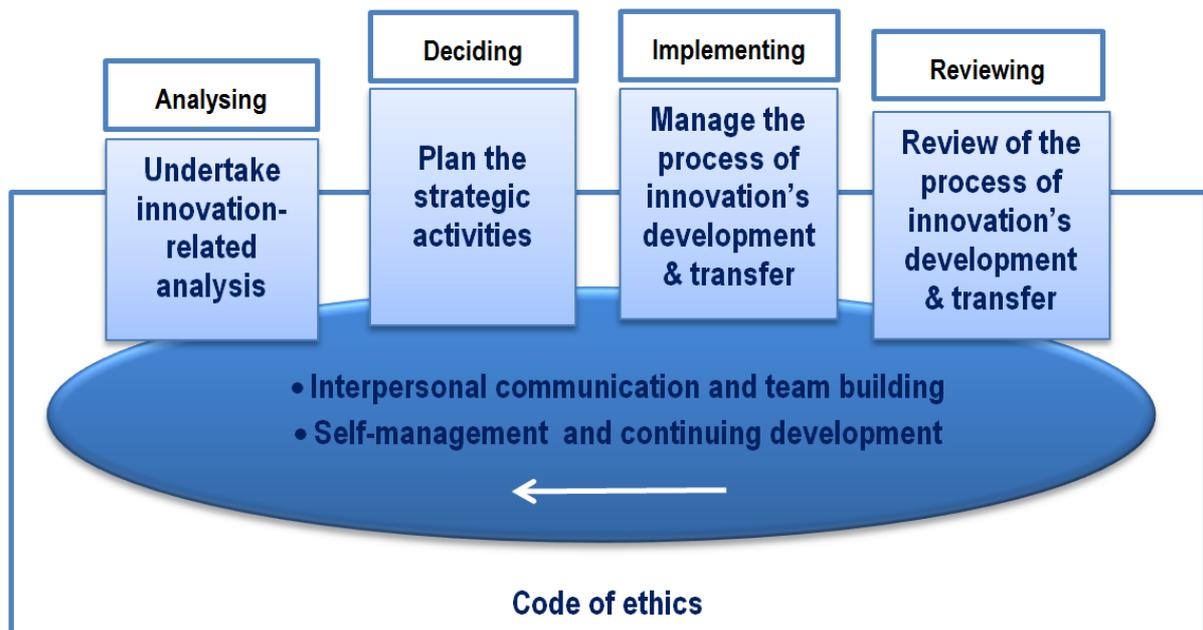
The presented competence set is dedicated to:

- enterprise managerial staff, e.g. managers/heads of strategy and planning, R&D managers, HR development managers, heads of sales and marketing, or managers of small enterprises (regardless of a company size or business sector);
- specialists of commercialisation, innovation, development, etc. hired in R&D institutions or innovation support centres, such as technology transfer centres, innovation centres, technological parks, business incubators, etc.

The competence standard proposed herein for the professional area of innovation management is based on a cyclical model of competence description. This model describes the areas of functioning in a given professional area in the way specific for four stages of the project cycle, i.e.: Analysing; Decision-making/Planning; Implementing; Evaluating. It is completed with the so-called horizontal areas (Management/Work organisation, Communication, Code of ethics).

² Methodological manual [www.comprocom.eu/pl/rezultaty/61-podrecznik-metodyczny]

Areas of professional activity in the innovation management
(cyclical model)



Source: Lester (2014), *Professional competence standards and frameworks in the UK, Assessment and Evaluation in Higher Education*

The further part of the standard presents the key skills required for each area of professional activity related to the innovation management mentioned in the diagram.

INNOVATION MANAGEMENT

Areas of professional activity (level I) and key skills in a given area (level II)

1. Performance of the innovation-related analyses

In this area of activity you must be able to:

- 1.1. Analyse the market with regard to the innovation demand and supply**
- 1.2. Assess the innovativeness of solutions**
- 1.3. Analyse innovative solutions with regard to economy**

2. Planning of strategic pro-innovative actions

In this area of activity you must be able to:

- 2.1. Plan the innovation management strategy**
- 2.2. Plan the effective use of the institution's resources in the innovation management process**

3. Innovation management

In this area of activity you must be able to:

- 3.1. Manage the innovation development and implementation process**
- 3.2. Manage the innovation commercialisation process**
- 3.3. Provide the advisory services**
- 3.4. Create the culture of respect for and support of innovativeness**

4. Evaluation of the innovation management processes

In this area of activity you must be able to:

- 4.1. Evaluate the organisation's innovative potential**
- 4.2. Evaluate the processes of development, commercialisation and/or implementation of innovations**

5. Organisation of one's own work and continuing development

In this area of activity you must be able to:

- 5.1. Manage your own work in the way ensuring the achievement of assumed goals and adopted arrangements**
- 5.2. Plan and continuously develop your competence within the scope necessary for effective innovation management**

- 5.3. **Support professional development of other team members to ensure the performance of pro-innovative undertakings**

6. Interpersonal communication and team building

In this area of activity you must be able to:

- 6.1. **Build the team to deal with development, commercialisation and/or implementation of innovations**
- 6.2. **Organise and manage the team work in the way ensuring the achievement of assumed goals and adopted arrangements**

7. Code of ethics

In this area of activity you must be able to:

- 7.1. **Act according to the applicable law**
- 7.2. **Take responsibility for undertaken actions**

Specification, additional explanations (level III)

1. Performance of the innovation-related analyses

1.1. Market analysis with regard to the innovation demand and supply

Including:

- analysis of the innovative solutions available on the market,
- analysis of potential innovation providers corresponding with the identified needs, including an analysis of the organisation's own potential,
- application of the methods to assess the new solution's commercial potential (e.g. Quicklook, In-Depth, expert methods of fact analysis, methods with use of computer information analysis, etc.),
- analysis and synthesis of qualitative and quantitative data in order to obtain the information necessary to plan strategic pro-innovative actions.

1.2. Assessment of the innovativeness of solutions

Including:

- application of the methods to assess the new solution's innovativeness (e.g. comparative methods, expert descriptive methods),
- application of the methods to assess the innovative solution's implementation maturity (e.g. assessment methods of TRL – Technology Readiness Levels).

1.3. Economic analysis of innovative solutions

Including:

- application of the financial analysis ratios for the proper assessment of risk related to the innovation implementation (e.g. financial liquidity, debt level),
- analysis and interpretation of results of the undertaking's financial viability assessment (e.g. based on the current net value, period of return on the investment, profitability-related data) in order to make a proper decision on continuation of or resignation from pro-innovative actions.

2. Planning of strategic pro-innovative actions

2.1. Planning of the innovation management strategy

Including:

- planning of the process of development or implementation of innovations, including e.g. formulation of the SMART purposes (Specific, Measurable, Achievable, Realistic, Time-bound), schedules, tasks, milestones, success indicators, etc., and considering the current recommendations, guidelines, standards, purposes, priorities included in regional, national, international strategies for development or promotion of innovativeness of the economy,

- selection and adjustment of the innovation management model and possible sources of financing of pro-innovative actions based on the results of market and economic analyses.

2.2. Planning of the effective use of the institution's resources in the innovation management process

Including:

- planning of the use of human, material and financial resources in the process of development, commercialisation or implementation of an innovative solution,
- provision of the durability of the sources of financing supporting the innovation management process,
- provision of appropriate human resources supporting the effective and reasonable development, commercialisation and/or implementation of innovations.

3. Innovation management

3.1. Management of the innovation development and implementation process

Including:

- support of the process of generating concepts concerning innovative solutions with use of the creativity supporting methods (such as brainstorming and its varieties, design thinking, creative problem solving, etc.),
- support of the effective use of human resources and their creativity in the process of development and/or implementation of innovations,
- provision of the effective use of financial and material resources at the institution's disposal in the process of development and/or implementation of innovations,
- management of the professional cooperation of organisational units of the institutions involved in the process of development and/or implementation of innovations (e.g. research, construction, marketing, finance, sales departments, etc.),
- connection (in justified cases) of scientific and business partners.

3.2. Management of the innovation commercialisation process

Including:

- application of various models of commercialisation of innovative solutions (e.g. sales of intellectual property rights, licensing, establishment of a venture capital company, business angels, etc.), according to a type of innovation, financing methods and potential of a transferring institution,
- compliance, at all stages of the commercialisation process, with the principles (both national and international) protecting the intellectual property right,
- effective use of competence of the institutions involved in the innovation commercialisation processes.

3.3. Provision of advisory services in the area of innovation management

Including:

- advising in the area of selection and application of various innovation commercialisation models, considering the applicable law and results of the innovation-related market research,
- advising concerning the acquisition of financial support of the development of the institutions' innovative potential and of the implementation of pro-innovative actions,
- advising in the area of human resource management providing with effective development or implementation of innovations.

3.4. Creation of the culture of respect for and support of innovativeness

Including:

- participation in the development and implementation of the pro-innovative policy,
- stimulation of a pro-innovative approach among the institution's employees and their encouragement to creative search for new solutions
- promotion of the values of innovativeness among internal and external participants of the innovation management process.

4. Evaluation of the innovation management processes

4.1. Evaluation of the organisation's innovative potential

Including:

- analysis of material and non-material resources of the institution, if needed, initiation of their complementation to ensure effective performance of the planned pro-innovative actions,
- evaluation of the institution's human resources and initiation of its development, if necessary, to ensure effective performance of the planned pro-innovative actions,
- performance of the review of financial resources for the pro-innovative actions, if needed, proposal of relevant changes, including additional sources of financing.

4.2. Evaluation of the processes of development, commercialisation and/or implementation of innovations

Including:

- monitoring of progress and improvement of the process of development or implementation of innovations in reference to the agreed plan and purposes,
- synthesis of the monitoring results and formulation of conclusions for the further process stages (formal feedback),
- application of informal feedback to identify the areas requiring improvement or changed approach to the innovation management,

- planning and monitoring of corrective actions to the agreed action plans, applied structures and methods of innovation management in order to achieve the expected results.

5. Organisation of one's own work and continuing development

5.1. Management of one's own work in the way ensuring the achievement of assumed goals and adopted arrangements

Including:

- acting according to the scope of performed professional duties, with consideration of the limitations arising from the scope of one's own competence,
- efficient and compliant with the adopted goals management of one's time in order to achieve the assumed results,
- proper and professional response to the results of formal and informal evaluation of one's own work.

5.2. Planning and continuing development of one's own competence within the scope necessary for effective innovation management

Including:

- planning of the path of development of one's competence within the scope allowing for the effective performance of current and future professional roles,
- development of competence through formal and/or informal education, according to the changing state of theoretical and practical knowledge in the areas concerning the innovation management.

5.3. Support of professional development of other team members to ensure the possibility of performance of pro-innovative undertakings

Including:

- encouragement and motivation of the team members to the development of professional competence to facilitate their professional activity in the area of innovation management,
- support of the team members' development of competence, according to the specific needs of innovative solutions.

6. Interpersonal communication and team building

6.1. Building the team to deal with development, commercialisation and/or implementation of innovations

Including:

- selection of the team members according to the competence required for effective development, commercialisation or implementation of a specific innovation,

- initiation and coordination of cooperation with institutions and external experts, competent in the area of stimulating innovativeness and developing innovative solutions according to their capacity and permissions,
- clear and effective communication of plans concerning pro-innovative actions, ensuring unified understanding and joint vision among the team members,
- constructive and objective justification of decisions concerning pro-innovative actions,
- effective use of theories and methods of influencing people, use of negotiating techniques in justified cases,
- dealing with conflict situations in the team.

6.2. Organisation and management of the team work in the way ensuring the achievement of assumed goals and adopted arrangements

Including:

- management of the team work in a way consistent with strategic plans and schedule of pro-innovative actions,
- distribution of tasks among the team members according to their competence,
- promotion of flexibility and adaptability to changes in the innovation management processes,
- maintenance of a high level of the team's motivation and focus on goals of pro-innovative actions.

7. Code of ethics

7.1. Acting according to the applicable law

Including:

- application of the intellectual property right in the innovation management processes,
- application of the confidentiality principles concerning a specific type of information (in particular personal data and trade secret),
- compliance with the standards concerning human impact on various elements of environment.

7.2. Responsibility for undertaken actions

Including:

- implementation of managerial tasks in the way ensuring the compliance with the hiring institution's mission, priorities and values,
- taking responsibility for one's own and team's actions according to the competence,
- application of the approach of responsible research and innovation (RRI), with particular consideration of corporate social responsibility and environmental protection.