

Guidelines for HEInnovate for RIS3



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Self-reflection Tools for Smart Universities Acting Regionally

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Introduction

This "Guideline for HEInnovate for RIS3" document is a deliverable of Work Package 1 (WP1) in the shared project titled "self-reflection tools for smart universities acting regionally" (RE-ACT) which involved five partner institutions: Porto Business School (as project coordinator – Portugal), Corvinus University of Budapest (Hungary), Technical University of Košice (Slovak Republic), Babes-Bolyai University of Cluj Napoca (Romania), and University of Macerata (Italy) – with methodological consultancy from SERN (Startup Europe Regions Network).

WP1 included several research processes, such as literature review, Delphi questionnaire, interviews, the results of which were concluded in the Research Report. Since the expected outcome of the project is an enhanced and extended HEInnovate tool, the research results must be reformulated for implementation into the tool's dimension and statement-oriented structure. A long and scientifically challenging path led us from the raw data of the research methods, through the stakeholders' validation activities, to the final structure of statements that will be the starting point of the new self-assessment tool.

This document serves as the backbone for the development of the conceptual outline for "HEInnovate for RIS3" tool. Its form is a step-by-step guide of the research activities from the first collection of the statements to the final consolidation and conclusions in bullet points. It contains the following chapters:

- 1. First list of statements (Step 1)
- 2. Consolidation of statements (Step 2)
- 3. Validation Workshops (Step 3)
- 4. Final Statements (Step 4)

During the refinement process, we were trying to find links with previous activities of the project lifetime:

- the key product of the RE-ACT project prepared so far is the Research Report which has a double purpose: first, it launches the research towards various fields of regional studies; secondly, it draws the most important conclusions of the different research methods to present and ask for validation by the validation workshops.
- o this document also serves as an input for the Conceptual Outline which represents the next step of the process through which the Consortium will arrive at a substantially more coherent and compact version of dimensions and statements to provide the basis of the new assessment tool "HEInnovate for RIS3." Thus, it will serve as the necessary backbone for the preparation of the related online self-assessment tool.

Figure 1 describes the logic of this guideline, and the tool-centric content of the document:

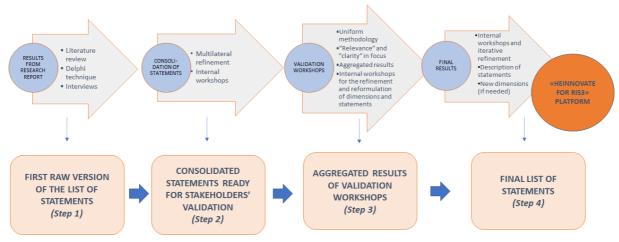


FIGURE 1. THE ELABORATION OF STATEMENTS FOR "HEINNOVATE FOR RIS3"

Source: Authors



1. The first list of statements (Step 1)

The HEInnovate for RIS3 self-assessment tool will follow the logic of the original HEInnovate tool and contain different statements organised in groups (dimensions). The users (HEIs) will be able to measure the maturity and effectiveness of their involvement in RIS3 design and implementation by positioning themselves on a scale of 1 to 5 relying on the description of each statement. On this scale, 1 will represent the lowest and 5 the highest score. A "not applicable" (n/a) option should also be available. Step 1 describes the activities needed to collect a thorough list of statements.

Platform: online*Time:* 2 months

Aim: To create the first list of statements

1.1. Collect data from different sources

Note: the research activities below and their results are summarised in the Research Report. This section helps the understanding of the following activities.

Various explorative research methods (both semi-quantitative and qualitative) were used:

- Literature review to discover the scientific background
- Delphi questionnaires with HEI representatives and HEInnovate experts to discover elements on the demand side (i.e., what the actors responsible for RIS3 would need from HEIs)
- Interviews with HEI experts to analyse the supply side (i.e., what HEIs can offer to enhance research and innovation in their region)
- Positioning the relevant research results that were justified by the technical features of their elaboration:
 - 1. Literature review:
 - 1.1. collected relevant and (if possible) recent scientific literature by keywords (HEI research and innovation, universities and RIS3, etc.)
 - 1.2. analysed the main findings of each piece of the literature, and make excerpts
 - 2. Delphi method
 - 2.1. Delphi aims to reach a consensus among experts
 - 2.2. the consensual elements can be considered as primary results leading to the formulation of new statements in the self-assessment tool, and less supported ideas as secondary elements leading to sub-statements
 - 3. Interviews
 - 3.1. prepare a long list of possible interviewees
 - 3.2. check the RIS3 relevance (take care of the demarcation between the RIS3 scope of the project and the extension of the HEInnovate dimensions to a broader community engagement)
 - 4. Identifying the research findings that could be considered as the basis for self-assessment items.

1.2. Analyse and sort data

The different types of data need to be brought into a single platform for generalisation:

- collect and upload all semi-quantitative data into a single database or document (statistical analysis)
- reformulate the findings of the qualitative methods (Delphi, interviews) into semi-quantitative data to insert them into the same database or document
- group the statements according to the 8 HEInnovate dimensions, and check:
 - those that might fit multiple places, or
 - those that can hardly be attached to any of the 8 dimensions
- put the main findings in the most appropriate dimension of the existing 8 HEInnovate dimensions
 - if possible, create a matrix with the stakeholders, i.e., HEIs, public sector, business sector, civil sector
- if a statement does not fit the matrix, collect the outlier in a separate group



- if the group of outliers share common attributes, create a new dimension (including explanations) → new dimension in HEInnovate for RIS3.

1.3. Match statements with existing HEInnovate dimensions (explanations and statements)

Since we consider this tool a completion (and upgrade) of the original HEInnovate tool tailored to RIS3, the logic, structure and dimensions will likely be similar. The three to-dos in this regard:

- check if new statements are not repeating the content of already existing ones
- check to avoid simple repetition
- check the reasons for statements that highlight a brand-new approach.



2. Consolidation of statements (Step 2)

In the previous step, a first raw version of the list of statements is created. But this list may contain duplications, overlaps, outliers, or other anomalies which need thorough analysis and refinement. We propose a three-phase consolidation process to improve the system of statements and to prepare for stakeholder validation.

- Platform: emails, messages and/or online meetings

Time: 1 month

- Aim: create a framework for systematic consolidation

2.1. Multilateral refinement process

The first phase contains explorative step-by-step activities to discover the inner structure and the interconnections between the statements.

The three major groups of activities are:

- Launch a written reflection process with the involvement of each academic unit of the project, expecting multiple, emergent viewpoints.
 - continuous correspondence
 - · consensus on principal methodological and contextual elements of the analysis
- As a meta-reflection, collect the main observations and their related conceptual expectations.
 - focus on key elements
- Create an analytical frame that helps the consolidation of the statements systematically.
 - choose methods for analysis
 - create evaluation protocol
 - choose feedback mechanism

2.2. Organise internal workshop (optional)

If the previous steps would not end up in an acceptable list of statements, use interactive and participatory methods (e.g., live negotiation events, workshops) with the project team members, considering the following points:

- If possible, optimise the statements by reducing the number of repetitive/unnecessary statements (identify overlaps, closely related items and merge them or erase duplications)
- hierarchy: select those statements that can be considered as overarching RIS3 features (main titles) and those that can explain the content as components (sub-statements)

2.3. A draft version of the list of statements

- create a transparent, rationally built list of statements that is appropriate for validation by stakeholders



3. Validation Workshops (Step 3)

Step 3 contains activities related to sharing the research findings with expert groups and evaluating the statements derived from the previously presented research findings. The validation workshops will help the assessment of the current set of statements and test their clarity, relevance, necessity, and sufficiency.

- **Platform:** live (if possible) or online workshop
- **Time:** 1 month (partly in parallel with Step 2)
- Aim: test and validate the consolidated list of statements

3.1. Uniform methodology and indicators for VWs

For the sake of analysability and comparability, follow a uniform methodology when organising the VWs, especially:

- number of stakeholders invited to the event,
- introduction of the project,
- the given time for validation,
- opportunity to guestions and answers,
- comment and give oral feedback (besides the written answers),
- record the workshop (if technically feasible and participants agree)

Further activities to enhance the efficiency of the validation workshops:

- set back-up solutions: technical issues, methodological difficulties, insufficient number of participants, unclear statements, and definitions, etc.
- introduce the methodology of validation → what and how to measure: statements using Likert-scale pointing system

3.2. The mission of the VW: measure the relevance and clarity of the statements

During the workshops, the stakeholders are asked to check:

- relevance, and
- clarity of each statement

Necessary activities:

- ask or comment any unclear, incomprehensible, or incorrect wording, definition, or statement (**Note:** The validation workshops will be organised in national languages, therefore, the quality of the translation of the statements is essential. However, not only the formal quality of the translations is crucial, but due to the specific professional language and terminologies of the RIS3 professional area, the joint interpretation of the central terms might also be necessary.)
- the advantage of the workshop is the interactivity, questionable statements must be negotiated:
 - beyond the interpretation of the statement's consensus among the participants about their relevance is also important,
 - ask for potential rewording of problematic statements,
 - separate outlier statements for further discussion, identify needs for major correction, replacement or delete

3.3. Aggregate the results (VW Reports)

The results of the VWs need to be summarised with quantitative and qualitative techniques:

- make statistic calculations about the overall validity and clarity of the statements (quantitative measures)
- analyse qualitative feedback (during or post-workshop) to amend statements
- consider the diverse national contexts and the different perspectives of the professional areas represented in the VWs
- analyse questions and comments to further refine the wording or the structure of statements
- highlight the most problematic statements
- indicate if according to the involved stakeholders some statements would not fit the HEInnovate dimensions (the broader comparison with the original HEInnovate statements is the subject of the last element of Step 4)



4. Final Statements (Step 4)

Finally, in Step 4, a final list of statements will be created that is scientifically grounded (on literature, and experts' knowledge), consolidated (in internal workshops), and evaluated (in the validation workshops). Though further refinement may take place, the final list will be the starting point for building the information technology architecture of the new self-assessment tool.

- Platform: the key features to set to prepare the configuration of the platform and its supporting functions
- **Time:** decide on the necessary implementation time (1 month)
- **Aim:** clarify the aim and the required functionalities of the platform, how to access and assess set the statements and in what form the users can receive the aggregated results of their groups

4.1. Incorporate the previous results of the validation workshops to confirm the final list of statements

The following actions should be taken based on the results of the VWs:

- In case of strong support \rightarrow keep the content of statements unchanged
- In case of a less convincing approval → consider the refinement of the statement
- In case of modest disapproval → consider the revision of the statement
- In case of strong disapproval → consider deleting the statement
- In case, if necessary, based on qualitative feedback formulations, the terms used should be revised.

4.2. Analyse if there is a need to add further statement(s) or create new dimension(s)

After the adjustments of the statements, consider whether the professional coherence of the existing statements would need to insert one or more new statements that can contribute to support the logic and the completeness of the dimensions and there are strong professional arguments to do so.

- Due to the undertaking of the originally submitted proposal to consider the relevance of one or more new dimensions, check whether any of the groups of statements are too diverse
- Carefully consider each dimension whether a respective sub-group of the statements across the 8 existing dimensions, could be reallocated to one or more new dimensions.
- Check the overall consistency of the dimensions and their content.

4.3. Assess to what extent the "HEInnovate for RIS3" will look similar to "HEInnovate" considering the extended dimensions (if any), and the entire set of the new statements

This phase contains activities that reflect the technological requirements and interface of the new tool:

- Assess the coherence of the statements of the "HEInnovate for RIS3" project with those prepared for the HEInnovate self-assessment tool.
- Assess whether the difference between the two sets of statements (of the respective self-assessment tools) is proportional and justifiable aligned with the difference in the content expectations of the two tools.



4.4. Checking the RIS3 related added value of the new set of statements compared to the original ones

This step provides an opportunity to explain the relation of the new RIS3 related statements and the original ones of the HEInnovate self-assessment tool. This also provides an opportunity to demonstrate why a new set of statements is proposed instead of adding new dimensions and/or statements as complementary to the original ones

- Check whether each original statement that is relevant in the IS3 context, does have a "pair" in the RIS3 version of the set
- Consider whether the RIS3 specific adjustments are well targeted (not narrowed too much and if there is lost content, it is justifiable)
- The entirely new statements if there were some that have not got pairs in the original tool, are indeed relevant and specific to the RIS3 context exclusively, or this RIS3 related developmental work helped identify missing content elements (statement) of the original tool to be considered at a later revisional phase of the original tool.

4.5. Future issues

Across the whole consolidation process, check the coherence between the Conceptual Outline and the Guideline







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