



Using Indicators to Measure Progress and Performance in the second workshop

Ben Jongbloed

Andrea Kottmann

CHEPS, University of Twente

November 2021

Contents

1. Introduction.....	3
2. The second workshop.....	3
3. BeyondScale Progress Indicators.....	5
4. Measuring project progress with the help of indicators across the project lifecycle	5
4.1 Inputs and Activities	6
Inputs.....	6
Activities	7
Assessing inputs and activities – Process monitoring and evaluation	8
4.2 Outputs and Outcomes	9
Outputs.....	9
Outcomes	10
Output and Outcomes Assessment.....	11
Excursion: Linking project progress and HEInnovate	12
5. Implementing the Second Workshop.....	13
Publication bibliography.....	14

1. Introduction

This paper proposes progress indicators and possible applications that the BeyondScale partners can use to monitor their activities or in the second workshop.

The BeyondScale project plan foresees that the partners conduct a second workshop as part of their inbound/outbound activities. The original plan was that the HEInnovate Self-Assessment Tool would be used a second time in this second workshop. The re-use of the HEInnovate Self-Assessment Tool was intended to provide a means of determining the extent to which your HEI's performance has changed concerning the statements, i.e. to determine the extent to which the 'entrepreneurial agenda' has become further embedded in their HEIs.

Because of BeyondScale's objective to promote the use and usability of HEInnovate, the second use of HEInnovate was to determine whether HEInnovate is also suitable for monitoring and steering projects that serve to strengthen entrepreneurship in HEIs. I.e. the second use and reflection of the tool were intended to systematically record whether the use adds value when implementing the projects.

The analysis of the experiences made by the partner projects in using the tool in the first workshop shows that the majority see no or only very little added value in using the self-assessment tool. Many rated the benefit as too low, as they cannot see the contribution of the self-assessment for the discussion with the stakeholders, the workshop outcome, especially the action plan. Also, costs of use, which arise from adaptation, explanation of the tool, analysis and presentation of the results, are assessed as too high compared to the knowledge and insights gained.

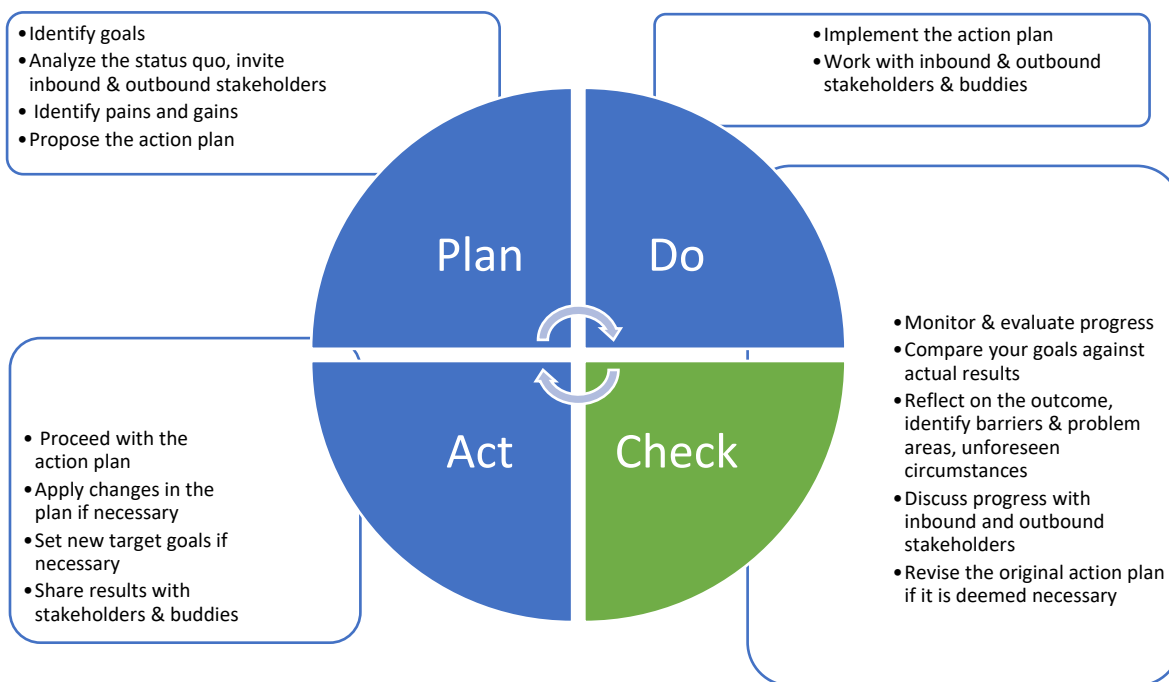
Against this background, the original project plan was changed, and the partners can decide individually whether they want to use HEInnovate again in their second workshop or whether they want to reflect and review the project progress with other tools.

2. The second workshop

The second workshop with your stakeholders, therefore, essentially aims to reflect on how your project has developed: i.e. the extent to which objectives have been achieved, how the use of funds and resources relates to this, whether the selected activities can contribute to achieving the objectives, and whether the project/activity has possibly already been able to realise the envisaged result.

We have already referred to the Demming or P-D-C-A cycle (see also workshop guide sent October 1st, 2021), which divides the project process into four phases. The second workshop covers the lower right quarter of the circle.

Figure 1: P-D-C-A Cycle in the BeyondScale Partner projects



In the second workshop, you will, together with your internal and external stakeholders:

- discuss the progress of your activity,
- consider to what extent the objectives set for your activity have already been achieved,
- check whether the objectives set could still contribute to eliminating/relieving the pains of your stakeholders or whether they are still in line with their expectations in the way they have been implemented so far.
- Check the use of resources for your activity. This includes reviewing the use of resources to date and determining how many resources, particularly time and funding, are still available for the activity.
- Review the previous Action Plan and adapt or change it as necessary.

To carry out these tasks, we would like to suggest that you use a set of indicators that will enable you to determine the progress of the projects and reflect on the project's progress.

3. BeyondScale Progress Indicators

How do we know a project is on track to deliver on its objectives? And whether progress is being made? How can we know if an action – a policy, an intervention – is working? Indicators are one approach to measure progress. With some carefully selected indicators, it is possible to get a good overview of the progress and performance of your activities.

Generally, an indicator focuses on a small, manageable set of information that gives a sense of the bigger picture. The choice of indicators is important as to whether it gives a sufficient 'sense of the bigger picture'. There is no need to measure everything. It is better to start with a small set of feasible indicators to monitor and improve or adapt the set over time to meet the project goals.

What are indicators?

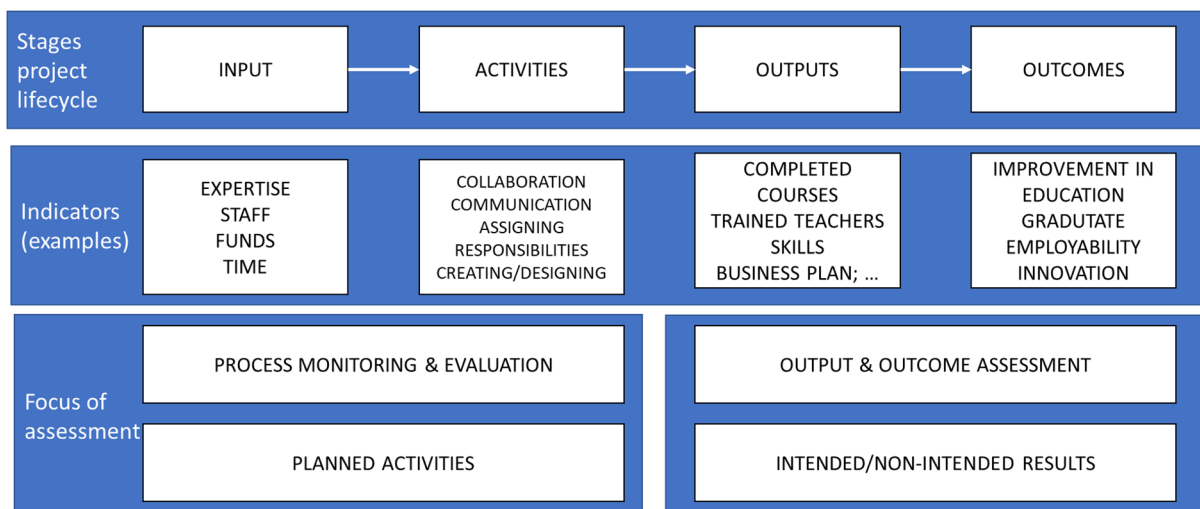
Indicators

- measure progress in realizing performance (or, at least: change) against a target to evaluate the effect of policy actions and plans.
- provide information to the project team (i.e. the responsible organisation), the HEI, policymakers, and internal or external stakeholders.
- describe, show trends, communicate the results of implementing actions in a simplified way.
- indicators can help identify barriers and facilitators in project implementation.

4. Measuring project progress with the help of indicators across the project lifecycle

We want to suggest understanding your activities as structured along a simple project lifecycle that breaks down the project into four major phases. This implies four stages in the project, and for each, a set of indicators can be established (Albats et al. 2018): Inputs, Activities, Outputs and Outcomes. Figure 1 below provides an overview of this project lifecycle, examples of indicators (here for activities/projects linked to the HEInnovate dimension 'Entrepreneurial Teaching and Learning', and the elements on which the assessment/reflection of the project should concentrate.

Figure 2: Progress indicators, project lifecycle and assessment activities



In the following, we will describe the indicators and how to use them in the reflection and provide a few example indicators.

4.1 Inputs and Activities

Inputs

Inputs refer to the resources you dedicated to the project. These mainly include time and money. Please consider the resources your institution or unit invests in the activity and the resources provided by your stakeholders. Besides time and money, one could also think of immaterial inputs such as knowledge, expertise and support or hardware such as buildings, IT-infrastructure and legislation. Input indicators address the extent to which these inputs have been used so far. These indicators also allow checking how much time and other resources are still available for the project. Input indicators are, among others:

- Time until project completion
- Time spent on the specific activities that are part of the project;
- Number of dedicated staff involved in the project; and whether that number has changed during the project's duration;
- Financial resources dedicated to the project and whether the project budget has changed (depleted; augmented) during the project's duration; resources spent (by the respective partners) on activities so far.

Activities

The activities carried out during the project depend on the actual goals of the project. While most projects are special regards their goals, most projects pushing the entrepreneurial agenda have in common that they require partners (internal; external to the HEI) to collaborate in the activities. The partners have to work together to deliver on the project's objectives. For instance: creating entrepreneurial modules, training teachers, or helping students set up a business plan. To ensure such a collaboration, partners will have to meet, negotiate, agree on who does what, invest time and financial resources, exchange information and test their intermediate outputs.

Progress indicators could therefore measure

- The number of meetings organised
- The number of participants in those meetings
- Whether the project has managed to extend its outreach (number of participants in the network/collaboration)
- The degree to which the general information, progress, and project issues were communicated among the partners in an effective and timely manner
- The degree to which those meetings and discussions between partners have contributed to achieving the project's intended results
- The degree to which the roles and responsibilities for each partner in the project were divided and communicated
- Whether external project partners have provided technical assistance or expertise
- Whether the initial time planning for delivering on the outputs of the project is realistic
- Whether the scope and objectives of the project were realistic
- Whether the deliverables (intermediate outcomes) that were specified as part of the project plan have been produced
- Communication to ensure the collaboration success the communication channels should be defined and established, communication groups should be formed

For many of the progress indicators mentioned above, objective quantitative indicators do not exist. For these, information can be collected among the project participants asking for their perceptions, opinions and qualitative assessments of the issues under review. For that, a five-point Likert scale can be used, as shown in the example below:

	not at all (1)	to a little extent/ degree (2)	to a moderate extent/ degree (3)	To a great extent/ degree (4)	To a very great extent/ degree (5)
the general information, progress, and project issues were communicated among the partners in an effective and timely manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Assessing inputs and activities – Process monitoring and evaluation

The reflection of inputs and activities thus essentially looks at the things that have already been contributed and undertaken. It is important to determine how much effort was put into the activities, i.e., relating the inputs to the activities. Here it can be questioned, for example, whether the planned activities can also be implemented with the planned resources. For example, can it be determined that a selected activity requires significantly more or fewer resources than planned? Then it makes sense to find out the reason for this and, if possible, redesign the activity.

Process monitoring can also be used to review the project timetable: Were the envisaged milestones achieved within the planned time? Which subtasks are delayed? What is causing these delays? Does the delay possibly endanger that the project goal cannot be achieved on time? What measures can be taken to make up for the delay?

I.e. the assessment of inputs and activities should address the following points if possible:

- Determine whether sufficient resources are generally available to complete the project objectives.
- Determine whether the resources currently available are sufficient to achieve the project's objectives.
- Determine how much input has already been used for the activities and whether the consumption aligns with the planning.
- Determine whether the sub-activities of the project are still on schedule or whether any delays have occurred.
- Determine whether these delays have an impact on the achievement of the project objective.

- If these assessments show a difference between the initial planning and the project's current state, it may be necessary to identify the causes of the deviation and adjust the project plan accordingly. Accordingly, if possible, answers to the following questions should be formulated when such deviations occur:
- Why is there this deviation between the plan and the current processing status? What factors (individual, institutional, legislative, in the university's environment) have contributed to this?
- What activities can help to resolve the situation? Does it make sense to allocate additional funds to the project? Does the project goal perhaps need to be more realistic, i.e. adapted to the circumstances?

4.2 Outputs and Outcomes

Outputs

Outputs are the products and services which result from the project. They may also include other unplanned changes that result from the intervention and are relevant to achieving the outcomes. Depending on the project goals, the intended outputs will differ in their definition, nature and degree of exactness. The question is whether the intended outputs can be clearly defined and specified as measurable quantitative outputs.

Most projects in the area of pushing the entrepreneurial agenda have in common that they intend to create entrepreneurial education modules, train teachers, help students set up a business plan.

Projects that touch on the HEInnovate dimension 'Knowledge Exchange and Collaboration' often intend to enlarge and intensify the institution's number of contacts with external partners. Contracts or joint projects or joint activities may result from these contacts.

To measure outputs, quantitative as well as qualitative indicators can be used. Quantitative indicators could include the number of courses or modules developed in the project, how many students have signed up for them, or completed such modules). However, assessing or evaluating the learning outcomes of students and staff is a more difficult undertaking. In these cases, one may have to resort to qualitative indicators or consider EPIC or Entreprcomp.

So, some examples of progress indicators for assessing the outputs are:

- The number of new (or improved) education modules that focus on entrepreneurship & entrepreneurial skills
- The number of spin-offs and start-up companies created by students/staff
- Support services or technologies developed by the HEI
- The number of contracts signed between the HEI (or some of its departments) and companies or not-for-profit organisations
- Advice provided

Outcomes

Outcomes are the likely or achieved short-term and medium-term effects of the project's outputs. While outputs are often more tangible and direct, the project's outcomes are usually less tangible, with 'softer' effects unfolding some time after the outputs had been produced.

Outcomes relate to the wider goals or effects of the projects. For example, projects aiming at strengthening entrepreneurial teaching and learning in the institution could produce as an output an increase in the number of courses that include an entrepreneurial component or an increase in the number of teachers participating in entrepreneurship training. As project outcomes, one could think of more students venturing into their businesses upon graduation or a shorter time to a first adequate job. Outcomes thus reflect longer-term effects for stakeholders or target groups of the actions and whether the outputs improve the target group's economic well-being, level of information, education, living standards, awareness, or capacities. As target groups, one could also think of the region in which the higher education institution is embedded.

Outcomes, however, are not per se positive or unfold as planned. Rather, there can be positive and negative, primary and secondary long-term effects resulting from a project. Some are felt directly, others indirectly, some outcomes are intended, while others are unintended.

Example outcome indicators:

- Satisfaction with the impact of the project's activities & outputs on the institution
- Satisfaction with the impact of the project's activities & outputs on the target groups and relevant stakeholders
- Increase in the number of start-up companies in the close/regional environment of the HEI
- Increase in the number of students finding adequate employment shortly upon graduation

Output and Outcomes Assessment

The evaluation of outputs and outcomes covers what the project activities are supposed to achieve and bring about. This is essentially a question of whether the services provided by the project, i.e. the outputs, can produce the desired effects, i.e. the outcomes. To answer this question, so-called impact logics are often used, containing assumptions about which outputs' characteristics bring about the desired effects. For example, in entrepreneurial teaching and learning projects, it can be asked whether strengthening the students' entrepreneurial skills has improved their chances in the labour market.

Furthermore, for the assessment of outputs and outcomes, the existence of a reference value is important. This means that it can be checked whether the planned number of outputs has been produced or how a characteristic of the university has changed throughout the project. This means that the situation at the beginning of the project is usually compared with the current state. Both quantitative and qualitative indicators can be used for this purpose.

In this assessment, it is important to look at the intended effects and the non-intended effects. Non-intended effects are project results that were not foreseen in the project planning but have resulted from the intervention or the measures implemented. For example, integrating entrepreneurial skills into the curriculum can lead to teachers becoming more committed to entrepreneurship and developing new courses and formats of study that were not envisaged in the initial planning. On the other hand, integrating these skills into the curriculum can contribute to the fact that the teaching of subject-specific content takes a back seat.

When assessing outputs and outcomes, the following aspects can be considered:

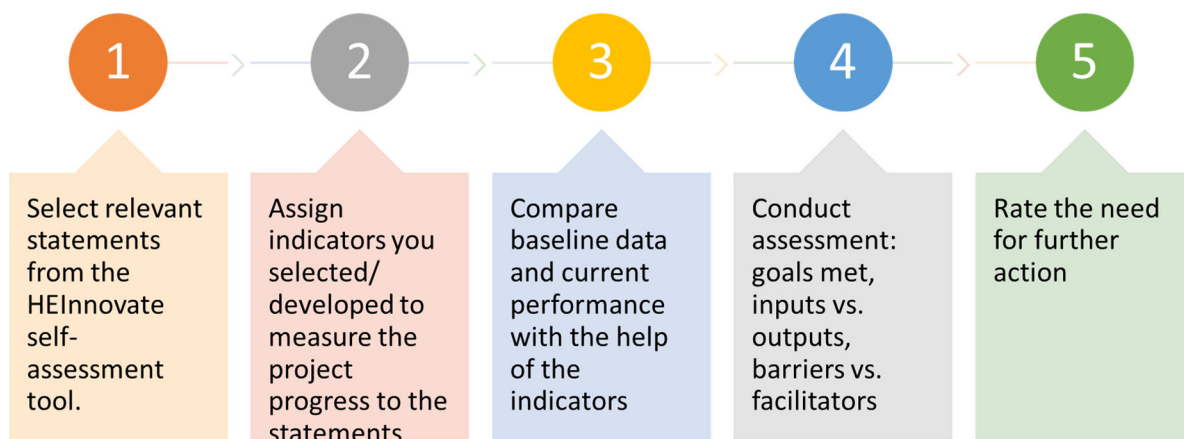
- Which outputs were realised? Does the outcome correspond to the planning?
- Which outcomes are expected for the outputs? Which indicators can be used to measure the outcomes?
- What changes have occurred since the beginning of the activity in terms of outputs and outcomes of the project? Comparison of baseline data and current performance?
- Can you also identify changes and effects that were brought about by your activity but were not planned? How do you evaluate these effects? Do you have to do anything to prevent these effects, as they jeopardise the success of the project? If so, what should be done?

- Does the change correspond to the expectations or assumptions on which the planned measures in the project are based?
- If so, how do you explain the success of your project and what recommendations, or best practices can you derive from it? Which factors do you hold responsible for the success of the project?
- If no: How do you explain the fact that the expected impact has not (yet) been achieved and what measures will you take to bring about the planned impacts? Is there also a possible need to fundamentally review and adjust the assumptions on which your project is based?

Excursion: Linking project progress and HEInnovate






With the output and outcome assessment, you can also check to which extent entrepreneurship has developed in your university when linking to the HEInnovate statements. The assessment would proceed in a similar way to that outlined above. Figure 3 summarises the five steps once again.

Figure 3: Linking the HEInnovate tool to the output and outcome assessment



The main difference when the assessment is carried out about the HEInnovate tool is that the project results and impacts are assessed against the background of selected statements of the HEInnovate tool. The assessment checks if your project has contributed to changing your HEI's performance measured against the statement. Figure 4 summarises the procedure for a statement as an example.

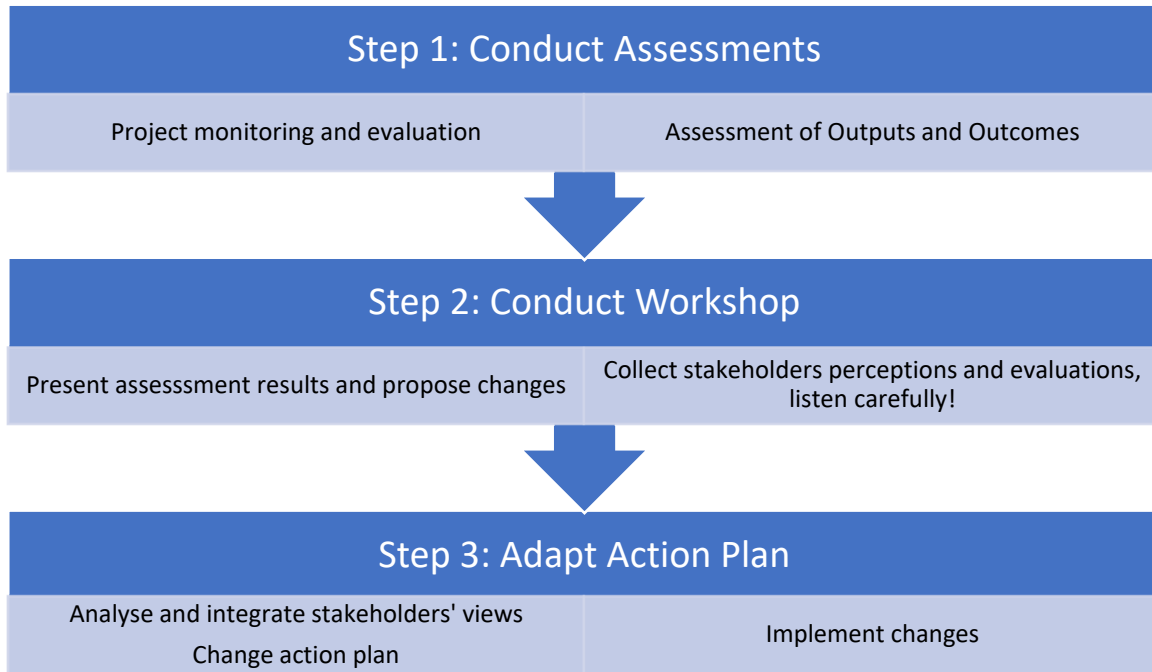
Figure 4: Example Output/Outcome Assessment when linking to HEInnovate self-assessment tool

	1. Select statements	The HEI provides diverse formal learning opportunities to develop entrepreneurial mindsets and skills.
	2. Measurement: Baseline data and current performance	# of formal opportunities at the start of the project/activity # of formal opportunities (current)
	3. Assessment 1	How does the change look like?
	4. Assessment 2	Why did the change happen/Why did it not happen? Identify factors contributing to achievements
	5. Rating/Evaluation	Re-evaluate statements based on the collected evidence: Any need for further action?

5. Implementing the Second Workshop

This section proposes linking or embedding the work with progress indicators to/in your second workshop. To this end, we recommend a three-step approach in which you essentially carry out the work with the indicators. The workshop should not discuss the indicators with the stakeholders but about using the indicators to process project results. Therefore, we recommend that you carry out a preliminary project monitoring and evaluation and an assessment of the project results already during the preparation of the workshop. The results of these assessments can then be presented at the workshop and discussed with the stakeholders. After the workshop, the stakeholders' contributions and suggestions will be included in the assessment, and, if necessary, the corresponding changes will be made in the Action Plan. Figure 5 summarises the implementation of the second workshop.

Figure 5: Implementation of the second workshop



Publication bibliography

Albats, Ekaterina; Fiegenbaum, Irina; Cunningham, James A. (2018): A micro level study of university industry collaborative lifecycle key performance indicators. In *J Technol Transf* 43 (2), pp. 389–431.
DOI: 10.1007/s10961-017-9555-2.

Disclaimer:

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.