



CONNECTING
GUIDANCE SERVICES
TO KEY IMPACT
INDICATORS

Keyway Guide to Implementing Key Performance and Impact Indicators for Guidance Services



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For the sake of the constant development of the quality of services related to Career Guidance and Counselling (CGC) the measurement of the effectiveness of these services is key.

- "Key-Performance and Impact Indicators" (as developed and described in the Keyway project (see [Output 1](#) and [Output 2](#))¹ are the base for all kind of measurement and evaluation of effectiveness of services (see chapter 1).
- The evaluation of impacts is one form of evaluation. Aside from this type, other forms of evaluation (e.g. of the effectiveness of service-management) might be of importance (see chapter 1). In this guide we focus on impact evaluation based on key-performance-indicators.
- Evaluation is a process that consists of several steps (see chapter 2). It is important to know that some of the steps are of strategic relevance and others are more technical. Managers should be aware that to choose the area of evaluation and to choose clear objectives are of strategic importance.
- The objectives an organization set for an evaluation are the base to identify suitable indicators. The indicators chosen must cover the objectives and should lead to significant results in accordance to those (see chapter 2).
- The objective and the indicators pre-define the evaluation design needed. For different levels of effects/outcomes different evaluation designs (e.g. with different points of data collection) are needed (see chapter 3).
- The realization of the evaluation (data collection, data processing, calculating results) is of high importance and need attention from a technical expert who understands the evaluation process (see chapter 3).

¹ The outcomes from O1 and O2 ([KPIs Database](#)) are the main sources for the evaluation. The Guide will provide an overview about the Indicators that have been developed within the Keyway project. The product is a "database" that can be used within evaluation- and effectiveness measurements in CGC organizations. The chapter gives a short outline of the indicators structure and links to the products of the project.

- The results of the Evaluation of Impacts should be used within the organization and above. Quality management and development activities can be very relevant activity to improve the service based on the evaluation results (see chapter 3).
- The results of evaluation should be visible for the stakeholders and the public. Publishing the results in an appropriate format might support the visibility and transparency of the service and underpin the image of the service in a positive way (see chapter 3) and transparency of the service and underpin the image of the service in a positive way (see chapter 3).

INTRODUCTION

Career Guidance and Counselling (CGC) is a developing professional field where many different actors, providers, customers, managers, etc., have an interest of good quality and the best possible service. At the same time practitioners and managers know about the dilemma between maintaining the day to day work with the clients – that should be in the focus of their practice – and the growing number of administrative tasks, need for networking and – not at least – quality measures. Evaluating the own service is for many CGC policies, services or projects a difficult task. One of the reasons is the complexity of the different steps and decisions an organization has to take, if they want to conduct evaluations that lead to informative, meaningful and justified results.

The Keyway project is aiming to support responsible policy makers, managers or practitioners who want to start with the evaluation and measurement of the impacts of their services. In addition, it can be addressed to the ones who also want to improve the evaluation and measurement of impacts methods or improve those methods already used to measure. The project developed in cooperation with relevant actors, managers and practitioners, different tools that might help in designing and realizing such an evaluation.

This Guide can be seen as a practical, step by step introduction, giving orientation and concrete help.

What this Guide adopts and the various contents that are addressed:

In the **first chapter** the Guide will support the user with his/her goal setting within evaluation and impact measurement procedures. Clear goals that are linked to the organizational needs (“why we want to measure impact?”, “what kind of measurement is fitting with our aims?”) are important steps before indicators can be chosen and an evaluation design can be developed. To give orientation in the process of the goal setting, the Guide provides a systematic logic of the evaluation of guidance impact. The user can navigate between the different levels of evaluation and can choose which levels are of relevance to reach his/her evaluation goals.

The **second chapter** of the Guide introduces the question of the measurement of effects in guidance and counselling. A wide range of literature has discussed “how to measure” effects. In recent years different literature-based reviews developed relevant structures for the measurement of guidance. The chapter allows the user to navigate within the different levels of the measurement of impacts.

The probably most crucial step in evaluating impacts is the development of a proper evaluation design. On the one hand users might strive to find the easiest way to measure the impact he/she is focusing on. On the other hand, there are methodological arguments that point out the need for a certain design if the results shall be of relevance and high quality. Reading **chapter three** can help to decide which steps should be taken in the evaluation process. It gives a glance at the complexity but also gives concrete direction for users.

In addition, the third chapter the Guide offers the possibility to use online instruments to gather the data from the clients and process the data. The Guide will link to different (more or less) easy to use instruments as well as to examples of evaluation instruments we have developed within the Keyway project. This might help the user to understand how his or her instrument can look like and we hope to smooth the process of adjusting and developing his or her own data collection instruments. Finally, the chapter provides links to online manuals and tools that are helpful in processing the data. This section gives finally ideas how to make use of evaluation results. Different forms of publication are addressed and some ideas are developed on how results can be distributed and used for different purposes.

CHAPTER 1. GOAL SETTING AND IDENTIFICATION OF INDICATORS

In the *first chapter* the Guide will support the user with his/her goal setting within evaluation and impact measurement procedures. Clear goals that are linked to the organizational needs (“why do we want to measure impact?”, “what kind of measurement fits our aims?”) are important steps before indicators can be chosen and an evaluation design can be developed. To give orientation in the process of the goal setting, the Guide provides a systematic logic of the evaluation of guidance impact. The user can navigate between the different levels of evaluation and can choose which levels of analysis are most relevant to the goals. In addition, we develop examples to make the link between goals and Indicators more feasible.

- ✓ Why are goals important? - Overview about the evaluation process.
- ✓ What questions should an organization or institution discuss and answer in the process of goal setting?
- ✓ How do you link goals to indicators? – Practical examples.

1.1. Evaluation and overview about the evaluation process - Why are goals important?

Evaluation is the measurement and interpretation regarding a certain action or the results of an action (Kuper 2005, p. 7) and more specifically a "methodically controlled, use and evaluation-oriented form of collecting and evaluating information" (Kromrey 2000, p. 22). Evaluating the effect or impact of counselling can be a goal for the evaluation. In this case evaluation is using the methods of impact research (see below). But as always in life, goals should be specific and measurable. Thus, it is essential to define goals for the evaluation (“what should be evaluated?”) and criteria (indicators) to be used for collection of data and the further processing (see evaluation process). In evaluation procedures, the step of using the results (for example, as information for measures of quality development, legitimizing the work in reports, etc.) is part of the evaluation process (see chapter 3). The evaluation of Impact of CGC is demanding in terms of the methodology. The logic of the measurement of

impact includes a connection between intervention (for example, realization of specific counseling intervention) as an independent variable and the effect or impact (effects on the person seeking the service as a dependent variable) (see Greif 2008, 275). This effect must be demonstrated by statistical methods (e.g., statistically through correlation or factor analysis). Ideally, an experimental or a quasi-experimental design would have to be conducted, especially experimental and control groups (see Kromrey 2000) (see chapter 3). This is also increasing the requirements for the survey tools and the sample size to ensure validity and reliability of the results.

Evaluation processes. All kind of evaluation and the evaluation of the impact of a CGC intervention or service can be described in a process (see Figure 1).



Figure 1: The process of evaluation

The starting point is typically the area of evaluation, e.g. a certain service or intervention. In larger organizations or contexts, it might be important that a decision is made that allows to:

1. Focus the evaluation on a certain and specific area or service (and not to all kind of services that are offered). Knowing that the objective(s) need to

be defined. The clearer the objective and the more concrete these are broken down to measurable goals, the easier the further steps are.

2. The map of indicators and chapter two might give a first orientation when an organization or institution decide about this.
3. The next step would be the identification of concepts to measure, particularly indicators, and the clarification of the conditions for the data collection regarding these indicators. One example is, that some indicators might imply that the data collection need to take part not directly after the session but e.g. 3 month later.
4. The fourth step is the design of the data collection tools (e.g. questionnaires). One should assume that many concepts cannot be measured with one item or question. These might require using a set of items or questions that allow a valid measurement of the broader indicator. Another example for this task is, if an organization or institution wants to evaluate a service (or different services) against existing data, e.g. local school drop-outs. In such a case in this step the instrument for the data collection need to be adjusted to the existing data, so the collected information and the existing statistics can be matched and compared later on.
5. In this step, the data collection need be planed and conducted. This includes the production of the questionnaires (e.g. paper pencil, interview, online-questionnaire) (see chapter 3) and the clarification of the practical conditions (for example, the selection of those clients who take part, the information to the counselors and the clients, the production of invitations and reminders). After a relevant number of data is collected or the data collection process has ended the data need to be analyzed with statistical methods and transferred into readable tables, texts and/or figures.
6. Depending upon the objectives of the evaluation, the results must be communicated to the relevant stakeholders. This communication could be at the policy level, to the management level and/or to the practitioners as well as the customers and clients of a service.
7. It is important to previously agree upon who has access to the results and what they are used for (this question should be discussed already when

setting the objective). This step should include the planning for the report (for example the publishing of the results).

8. It is important to plan and foresee how to utilize the results of the evaluation for the development of practice or interventions. Not seldomly, evaluation results are produced but not used. This links the evaluation back to the importance of quality management (see chapter 2).

1.2. What questions should an organization or institution discuss and answer in the process of goal setting?

The overall process is made clear when the definition of the objective and the description of concrete goals is undertaken with priority. Without clear organization or management team, it is difficult to select possible indicators, without a clear goal the complexity of the evaluation is undefined and that means that it isn't clear what kind of resources are needed and what will be done to communicate the results to improve.

When planning your own evaluation, several questions should be discussed and answered at the beginning, which all together help to outline the evaluation goal:

- "Who are the stakeholders of the evaluation?", "What is the institutional frame?", "Who has interests in the evaluation and who is supporting it (with money, time, and backing?)"
- "What should be evaluated?", "Are there, for example, a client, a financing agency or similar which requires an evaluation?", "Do we want to use the evaluation for internal discussion or quality development?", "Do we want to show what we achieve? etc."
- "Which aspects of the CGC service should be evaluated?", "Is it about capturing characteristics of the target group?", "Do we want to capture the perception of process characteristics?", "Should direct or indirect impacts of the consultation be recorded?", If yes, "which level of impact?"
- "How many clients do we need to reach?", "Against what kind of information the results can be interpreted?", "Do we have results from earlier years?", "Do we have a control group?", "Is there data available that helps us to interpret our results?"
- "What happens to the results?", "Who is processing these (statistically)?", "How often should be evaluated?", "Who has access to the results?", "In

which circle are these discussed?"; "Should reports on the results be written and published?"

This list of questions could be used in the first meetings when a management team or organization starts to think about an impact evaluation. It can help not to overlook important aspects and guide through the whole process.

1.3. How do you link goals to indicators? – Practical examples

The previous section described the evaluation process and the relevance of clear objectives from a conceptual point of view. Now we use the presented structure to develop practical examples that try to clarify how goals and indicators fit together. Such examples – collected in annexes 1-4 (see also chapter 2 and glossary section) – might help to clarify own evaluation goals and link those to relevant indicators. In chapter 3 we present evaluation designs in accordance to the same examples.

CHAPTER 2. BASIC TERMS AND MODELS FOR THE MEASUREMENT OF IMPACTS IN CAREER GUIDANCE AND COUNSELLING (CGC)

The measurement of impacts of CGC is an important, interesting and somehow demanding task. This chapter aims to transmit some of the knowledge helping to understand and design evaluation procedures to discover the impact (or different impacts) of CGC services. To do so the chapter will discuss the following aspects:

- ✓ Basic terms of "evaluation, impact measurement, and evidence".
- ✓ A framework describing the link between input, process, outputs and outcomes.
- ✓ The different levels of impact that might result from a CGC activity.
- ✓ The need of understanding the limitation of impact measurement.

2.1. Basic terms of "evaluation, impact measurement, and evidence"

To provide a foundation for the Guide this chapter introduce some basic concepts and a number of terms that will be used in this context (see Glossary). This might help to navigate the jungle of parallel and similar concepts. At the same time, it is clear that a short introduction can't provide a deep discussion. You will find links for further reading at the end of the document (references). Typically, the scientific and practical discourse provides concepts that have some overlapping in their approach and their aims. Figure 2 provides an overview about four relevant concepts.

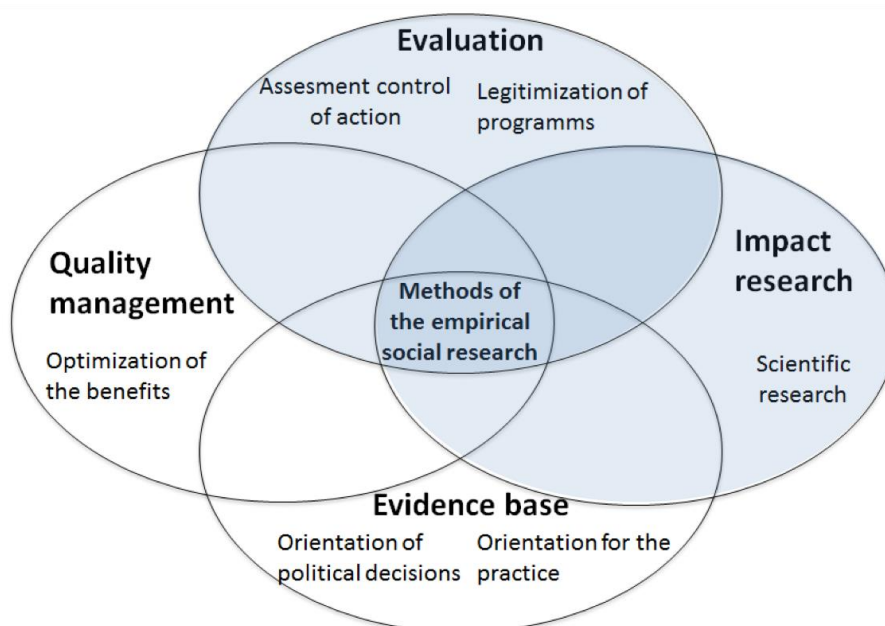


Figure 2: Four different concepts, differences and overlaps (Schiersmann/Weber 2016)

In the context of this Guide we use mainly the two terms "evaluation²" and "impact research/measurement". Aside these four basic concepts the Guide will use some other terms and concepts. A first overview- "Basic Terms for the Evaluation of CGC Impacts"- is given in the Glossary. The collection of terms might not be complete but is giving orientation in the further reading.

2.2. A framework describing the link between input, process, outputs and outcomes

Outputs, outcomes (as forms of impacts) should be understood in a broader frame. An intervention or a service resulting in a positive outcome has taken place in a certain context (that is described as the "input" for the intervention) and it has undergone a certain process. The connection of these dimensions is shown in Figure 3. It states the relevance of input and process for the outputs and outcomes (impacts) of an intervention. And it shows, that the practitioner/counsellor as well as the client has an effect on this dimension. This is relevant if a service provider has evaluated the impact of the service to compare results with other services to develop measures to improve the service.

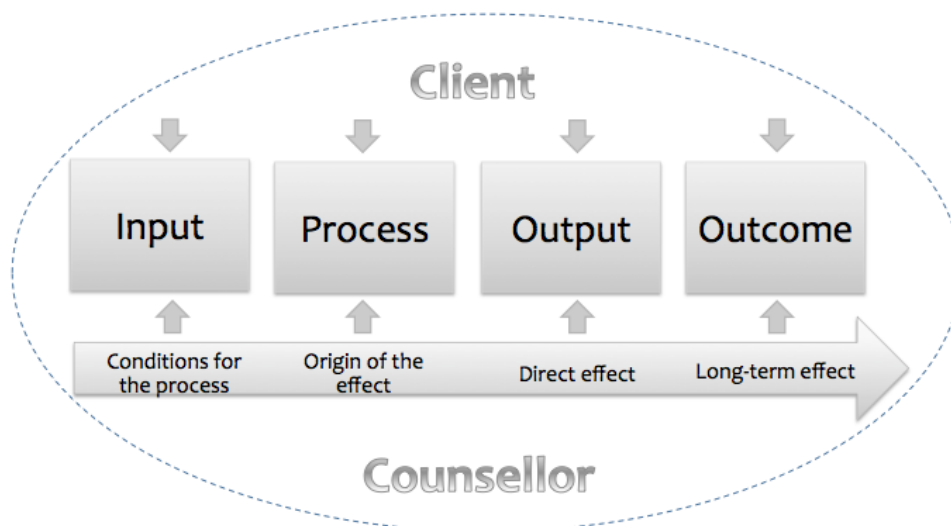


Figure 3: Dimensions of career guidance and counselling (Schiersmann & Weber, 2016)

² The major tasks of an evaluation process are: 1) deciding whether to evaluate; 2) defining the evaluation problem; 3) designing the evaluation; 4) collecting information; 5) analyzing information; 6) reporting the evaluation; 7) budgeting the evaluation; 8) contracting for evaluation; 9) managing the evaluation; and 10) staffing the evaluation.

The following table explains in detail each of these four dimensions of Career Guidance and Counselling:

Table 1. Dimensions of CGC

<p>Input</p>	<p>Sets the conditions for the process and indirectly affects the outcomes. From the client side an important input factor is the complexity and type of problem to be addressed as well as his/her initial situation (social, cultural background, gender etc.) These are important aspects because for instance more complex problems are more difficult to solve. On the other hand, the counselling setting (face to face, by telephone, internet based), the number of participants (per counsellor), the qualification of practitioners or temporal factors (e.g. number and length of the counselling sessions) have an impact on the process as well as on the outputs and outcomes. The conclusion might be, that even in an evaluation that focus mainly on the impact of the intervention should capture some information about the input dimension (see chapter 3)</p>
<p>Process</p>	<p>We can distinguish between client aspects and those from the professionals' side. From the individual's side his/her resources are affecting the quality of the process. Such resources might be the intellectual capacities, the affective situation and his/her motivation for change. It is for instance very likely that a client with a clear personal aim might have a stronger outcome from a service that a client that is discouraged and unclear about his future or as a client who is sent to the service. From the practitioners' side, it is mainly his or her ability to set up a helpful change process. This might be oriented on theory and practice-based concepts or on factors for effective interventions. The use of methods, materials and actions in a good and synchronized way with the client as well as clear agreements (at the beginning and the end of a session) might be other examples of professional action. However, the process of the intervention is on stake when we look to the impact of a service (e.g. the evaluation shall indicate if the service as it is implemented has an impact to peoples' life and societal goals in the broader sense). If a service measures its outcome without knowing and take into consideration the process dimension it is very difficult to measure outcome.</p>
<p>Output</p>	<p>It describes the immediate impact of an intervention, e.g. a counselling session. Outputs can be measured directly in or after an activity. Often evaluation focus on this kind of outputs from the clients' side. The satisfaction of the clients (with the process or the result he/she has developed during a session) are examples for such outcomes, acquired information or knowledge is another. Also, goals or plans developed and set in the session could be direct outcomes (the client cannot prognoses if he/she will realize it, but it can be seen as an output, that it is there). Also direct after the session an output evaluation could ask if the perception of a problem is reduced, if an open question is clarified or a decision is made or prepared ("Now I know how I can handle my problem, I gained criteria for my decision making"). Also, important and measurable is the estimation of personal resources, potentials or strengths by the client ("I can see now, what my strengths are"). In CGC context often of interest are the gained information during a session (Information on education or</p>

	labor-marked). Emotional aspects like the reduction of emotional instability or the extension of positive affects (“I am more confident”, “my optimism raised”) can be of relevance. All these outputs do not state a change in the “real world” (like gaining a better job or enrolling in an education) but they are important predictors for more successful action after the session
Outcome	Does focus on medium and long-term impacts. Thus, this dimension does not just focus on the individual client but also on higher aggregated levels like the organizational, economic or the societal frame (see impact map)

With the focus on the measurement of impacts the dimension “outcomes” is of highest interest. This dimension can be differentiated in a variety of indicators dependent to the individual and the social level (see Impact Map). On the individual level outcomes from different dimensions can be of interest: to the person, its personality or competence. While potentially many outcomes can be of interest, evaluation should focus on such aspects that are linked to the aims of the CGC service or the intervention. *Personal factors* in play are for instance, “self-efficacy”, “self-confidence” or “emotional control” because there is evidence, that such factors have a positive effect also on further outcomes (like educational or vocational achievement). Aside personal factors *gained competences* can be a relevant outcome of a CGC service. Such are described in concepts like “career management skills” or “career adaptability”, “problem solving” or “self-organization”. Such concepts mostly consist of a set of skills in a certain combination of such³. But also, “information processing”, “goal setting”, “networking” or “job search” can play a role.

In terms of observable changes in actions, evaluation typically focus on outcomes that are achieved within the social world like the educational, vocational or employment context. An assumption is, that better developed factors on personal level lead to better outcomes also on this level. In addition, and to prove the impact on such aspects the evaluation of educational and employment related steps can be of interest. Examples can be to measure “started or completed qualification or training”, the “change or adjustment of the educational path”, or of the successful “prevention of a drop out”. Regarding

³ Thus, a broad indicator like “Career Adaptability”, needs an operationalization for its four concepts and a set of items (questions) for each sub-concept (exploration, planning ...)

employment indicators, it might be the "(new) employment situation", a "mastered career change", the "starting a self-employment" and with respect to an economic impact a "better payment", the "(new) employment situation", a "mastered career change", the "starting a self-employment" and with respect to an economic impact a "better payment".

Looking at the *economic or societal outcomes* (see Impact Map) we have on the one hand an overlapping of the aspects described in the previous paragraph (an employer organization or a public employment service offering CGC might have also interest on achieved education of employment shifts) and on the other hand we can consider an important difference: the organization, the community or the society might focus more upon a comparison within aggregated data and the balance between those who have participated in a service or intervention and those who have not (e.g.) "better access to education", "better educational achievements", "less drop outs", "faster transition to employment", "higher productivity". These examples might give an idea about possible link between the described impact extended to the society, typically the evaluating institution or organization needs to define the goals of a program or policy and will adjust the indicators of evaluation accordingly.

2.3. The different levels and the interested actors in evaluation

This paragraph focuses on the different levels of impact that might result from a CGC activity and the link to the different actors that might have an interest in the evaluation.

Already in the presented model that distinguishes between "output" and "outcome" it is visible, that different impacts are not of the same kind. This leads to consequences in terms of the planning, realization and interpretation of the collected data. One evaluation frame that helps to understand the differences of impacts is provided by Kirkpatrick & Kirkpatrick (2008) (within the education and training sector) and adapted to the CGC practice (ELGPN, 2014).

Table 2. Impact level (ELGPN, 2014 derived from Kirkpatrick & Kirkpatrick, 2008)

<p>Reaction (impact level 1). How participants in guidance describe their experience</p> <p>Learning (impact level 2). The set of knowledge, skills and/or competences an individual has acquired and/ or is able to demonstrate after completion of a guidance activity or through participation in the guidance process</p> <p>Behavior (impact level 3). Any change that is possible to observe in how participants act following a guidance intervention</p> <p>Results (impact level 4). Whether it is possible to observe any changes to systems, organizations and individuals following a guidance intervention</p>

In this model it is clear, that an evaluation procedure needs *to decide* on which impact level it shall focus. A second consequence is relevant for the evaluation design, because a reaction is easier to evaluate than a learning and to observe the results of behaviors needs another *time perspective* than the latter ones. If one wants to evaluate results he/she needs a broader scope and comparison of the evaluated aspect with data coming from the system or organization (see chapter 3).

In the context of the goal setting and the decision about the impact level of an evaluation (see chapter 1) the question “who is interested in the evaluation and its result” comes into play. Typically, different actors have different questions. It might be, that practitioners or a team firsthand look on the reaction of the clients and use this as an impulse for own reflection or improvement of a service. But also, the management might show the satisfaction of clients with the service offered. Often practitioners want to know more about the outcomes in terms of learning. “Did the intervention make a difference in the client?”, “Is he/she now better equipped to work on his/her plans?”, “Did he/she gain competences relevant for career planning and sustainable education and work?” The organization or policy level in contrast might be eager to evaluate the realized action of clients (behavior). “Did the service support people so that they have made a change?”, “Is the change in line with the aims of the service or the organization?” And finally: “Does all these changes have a lasting impact (results) on the longer run and in comparison, with those who did not participate?” This level often is linked to the question, “if the investment into the service payed out after all”.

It is obvious that the four levels have each one its relevance. At the same time for each level different indicators are relevant, and a different design is needed. Before we go into the planning of a concrete evaluation the next section gives some hints about the difficulties and limitations of impact measurement.

2.4. Understanding the limitation of impact measurement

- ✓ When climbing up the ladder from impact level 1 to impact level 3 or 4 the complexity of intervening variables is increasing at the same time.
- ✓ If we want to evaluate more complex indicators we need to adapt more demanding evaluation designs.
- ✓ Evaluation affects the further development of programs. If we have reductive approach in choosing impacts to measure, we risk reducing the scope of the intervention in the future.

Table 3. A note of caution on using and interpreting evidence/impact (ELGPN, 2014, p. 14)

"It is important to remember that any attempt to measure impact is inevitably reductive. Any educational activity such as lifelong guidance leads to a range of impacts, many of which are difficult to predict or measure. For example, a relationship built during work experience may not result in a job for the individual involved, but that individual may pass on an opportunity to a friend or family member. Such happenstance connections are difficult to identify, but this does not make them any less real.

This is one reason why it is important that monitoring and evaluation processes do not skew the delivery of programs in ways that reduce their potential to have wider impacts. For instance, an excessive focus on immediate employment outcomes may have negative impacts in the long term if it reduces the opportunity for individuals to rethink their careers and consider more strategically where their talents might be best directed. Such concerns about ensuring that lifelong guidance is understood and evaluated in the round highlight the importance of using a range of different evaluation approaches. Quantitative measures can identify relationships between interventions and measurable impacts. Qualitative measures can help to identify broader and more subtle types of impact. There is therefore considerable value in mixed-methods approaches. However, it is also important to remember that no research can ever describe all of the impacts that result from an intervention" (ELGPN, 2014, p. 14).

CHAPTER 3. EVALUATION DESIGN

3.1. The evaluation process: general overview

An evaluation design is a plan for conducting an evaluation. Every evaluation is essentially a research or discovery project. The research may be about determining how effective the program or effort is overall, which parts of it are working well and which need adjusting, or whether some participants respond to certain methods or conditions differently from others. If the results are to be reliable, it has to give the evaluation a structure that will tell us what we want to know. That structure – the arrangement of discovery- is the evaluation's design. An evaluation plan documents the details of your evaluation design- "what information do you need to make informed decisions? ", and "how you will go about gathering that information?" Evaluation design is often an iterative process that prioritizes the evaluation questions based on the resources and time available. No one has all the funding or time they need to answer all the evaluation questions they have.

Some of the most common evaluation (research) questions are:

- "Does a particular program or intervention – whether an instructional or motivational program, improving access and opportunities, or a policy change – cause a particular change in participants' or others' behavior, in physical or social conditions, health or development outcomes, or other indicators of success?"
- "What component(s) and element(s) of the program or intervention were responsible for the change?"
- "What are the unintended effects of an intervention, and how did they influence the outcomes?"
- "If you try a new method or activity, what happens?"
- "Will the program that worked in another context, or the one that you read about in a professional journal, work in your community, or with your population, or with your issue?"

Table 4, adapted from the Joint Committee on Standards for Educational Evaluation (1994), offers a framework for designing and assessing evaluations. In these standards, they define the principles for the conception of Evaluation

that should guide and govern program/service evaluation efforts. The following table offers practical suggestions for observing these principles.

Table 4. Focusing the evaluation design

Definition	Planning in advance where the evaluation is headed and what steps will be taken; process is iterative (i.e., it continues until a focused approach is found to answer evaluation questions with methods that stakeholders agree will be useful, feasible, ethical, and accurate); evaluation questions and methods might be adjusted to achieve an optimal match that facilitates use by primary users
Role of the evaluation design	Provides investment in quality; increases the chances that the evaluation will succeed by identifying procedures that are practical, politically viable, and cost effective; failure to plan thoroughly can be self-defeating, leading to an evaluation that might become impractical or useless; when stakeholders agree on a design focus, it is used throughout the evaluation process to keep the project on track
Activities	<ul style="list-style-type: none"> - Meeting with stakeholders to clarify the real intent or purpose of the evaluation - Learning which persons are in a position to actually use the findings, then orienting the plan to meet their needs - Understanding how the evaluation results are to be used - Writing explicit evaluation questions to be answered - Describing practical methods for sampling, data collection, data analysis, interpretation, and judgment - Preparing a written protocol or agreement that summarizes the evaluation procedures, with clear roles and responsibilities for all stakeholders - Revising parts or all of the evaluation plan when critical circumstances change

In addition, this Join Committee has been established thirty standards which are categorized into four groups corresponding to the aspects of sound and fair program/service evaluation: utility, feasibility, propriety and accuracy.

3.2. Some examples of evaluation designs

The most crucial step in evaluating impacts is the decision for a proper evaluation design. On one side users have to find the easiest way to measure the impact they are focusing on. Moreover, there are methodological arguments that point out the need of a certain design if the results shall be of relevance and high quality. Some examples and/or advices to carry out an evaluation design are

exposed below. Table 5 can be seen as guidelines to develop an evaluation design.

Table 5. Some examples of evaluation designs

Statement of purpose	<p>Develop a written statement of purpose for your evaluation: this evaluation will provide (which decision makers) with (what information) in order to (make which decisions) about (which project or issue). This statement will keep you focused on decision-making, which is the hallmark of evaluation as opposed to research</p>
Evaluation goals	<p>Once you have a statement of purpose develop a list of evaluation goals, usually in the form of issues/questions that you want the evaluation to answer. Do you want to know if participants liked the service, found it useful and interesting? Do you have questions about audience learning, changes in attitudes or abilities/skills? Do you want to know your service’s impact on participants, on the community, on the environment? Do you want to know how your service compares to similar ones?</p>
Audience Definition / description	<ul style="list-style-type: none"> - Who can provide the answers to the questions you want answered and what do you know about them? - Who are they and where are they? How do you contact them? - How would you like them to participate? - How will the audience react to being evaluated? - Are there ethical issues or human subject research issues? - Are there other audience issues (age, education level, technology access, language, culture/ethnicity, etc.) which may influence data collection? - How will your audiences’ characteristics influence your evaluation plan and methods, choice of evaluation tools (instruments) and/or the design of instruments?
Outcomes	<p>To measure changes, it’s important to clearly state what changes you want your audience to make. Many service managers and developers struggle with defining outcomes and distinguishing between objectives, outputs and outcomes. Simply stated, outcomes are what your audience achieves as a result of your outputs.</p> <ul style="list-style-type: none"> - <i>Objectives are measurable statements</i> of what learners should be able to achieve (know, feel, do) by the end, of the learning experience. They’re usually stated in the format: The (learner) will be able to do (what) by (when) and (how well). The “what” can be cognitive, affective or psychomotor/skills (and for environmental or conservation education projects you should have objectives for all three learning domains). Objectives are written at the beginning of your project to help you plan your activities and outputs. - <i>Activities/outputs</i> are the instruction, products and/or services you deliver during the project. Your outputs are what you do to facilitate the achievement of objectives by your audience.

	<ul style="list-style-type: none"> - <i>Outcomes</i> are the results in terms of what your audience achieves after participating in your service. Outcomes can be medium or long-term, intentional or unintentional.
Methods	<p>The next stage of your evaluation design is to decide:</p> <ul style="list-style-type: none"> - How you'll collect data? (evaluation methods and instruments) - From whom (some or all of your audience) and when (before, during and/or after your service provided). - The best evaluation methods balance your audience's abilities and your needs as well as abilities. To determine the best method(s) for your service, start by talking to colleagues and reviewing the research literature. Find out who has been interested in the same outcomes and what methods they have found most useful. Start by talking to colleagues and reviewing the research literature. Find out who has been interested in the same outcomes and what methods they have found most useful. <p><i>Common methods include:</i> observations by people, via media (audio, video, electronic/magnetic devices), telephone surveys (usually formal and highly structured), in-person interviews (can be informal or structured), focus groups (usually informal, but structured), panel series (can be informal or structured), self-administered surveys or tests (via mail, newspaper/magazine, online), rubrics (a scoring guide used to quantify subjective assessments), concept maps (a cognitive map; a graphic representation of how someone views the relationship between concepts).</p> <p>There are many other <i>evaluation methods</i>, they all have advantages and disadvantages. The tip is to choose the method(s) that are the easiest and the least expensive ways to provide you with answers you have about your audience. And, as per the definition of evaluation, you need to be systematic in the way you gather your data so that you're reporting back results, not impressions or anecdotes</p>

3.3. Evaluation designs

3.3.1. Selecting a design

Before deciding on the most appropriate evaluation design, it is important to be clear about the primary evaluation questions. Once the most important evaluation questions have been defined, there are several designs that may be able to adequately answer the evaluation question. A specific design can be selected by considering the following:

- "Which design will provide the information we want?"

- "How feasible is each option?"
- "How valid and reliable do our findings need to be?"
- "Are there any ethical concerns related to choosing a specific design?"
- "How much would each option cost?"

The logic of the measurement of effects calls for the design of different designs.

3.3.2. Types of evaluation designs

Below are described several types of research designs that offer suitable options depending on the specific needs and research questions.

Table 6. Evaluation Designs

<p>Process-output measurements ⁴ (direct) after the intervention (t1)</p>	<p>Impact dimensions of counselling: Output: Direct effect</p> <p>Client: Satisfaction of the clients (with the process and the results); acquired information/knowledge; acquired/evolved skills/competencies (e.g: problem solving, decide, apply, emotional control, reflection of attitudes, set goals and achievement of objectives, identify personal resources, potentials and strengths)</p> <p>Counsellor: Professional further development because of advisor experiences (short-term)</p> <p>Results of Research: Individual outputs: Pre-post measures of satisfaction, wellbeing or emotional regulation; strengthening of trust in developmental perspectives, increased goal clarity and reduction of uncertainty. Interactive influence of the intervention with internal and external factors</p>
<p>Outcome and process-outcome measurements ⁵ (t2), e.g. 3 months after intervention</p>	<p>Impact dimensions of counselling: Outcome: Long-term effect</p> <p>Client: <u>Individual level:</u> Intrapersonal factors (self-efficacy, self-confidence, skill management); education (completed/additional qualification; new employment situation; employment; career change; starting a self-employment; better payment/new career step; long-term satisfaction with the counselling)</p>

⁴ These indicators are already used from O1 project results (impacts that have been already identified at the Keyway map of impacts)

⁵ These indicators are already used from O2 project results (Impact indicators for O2)

	<p><u>Organizational level</u>: cost-saving by effective job placement; companies (cost-saving because of a small dropout rate of the apprenticeships and an appropriate continuing education rate)</p> <p><u>Societal level</u>: increasing employment rate; higher final degree rate; suitable crossover of employment; increased recognition of educational qualifications (e.g. migrants); increased access to education/labor market for specific target groups; full utilization of the employment market; better use of the labor force potential; higher tax revenues-payroll tax-; lower social spending; strengthening innovation power/entrepreneurial thinking.</p> <p>Counsellor:</p> <p>Professional further development because of advisor experiences (long-term); effects on the counselling service; social esteem of counselling</p> <p>Results of Research</p> <p><u>Individual outcomes</u>: competence, e.g. for career-planning, vocational-maturity, CMS; realizing a transition, e.g. school-work transitions, integration into labour-market and/or further training</p> <p><u>Organizational/social outcomes</u>: increase of employment rate, taxes and income; effects of further training on income; retention and work engagement of employees and talents in companies</p>
<p>Control group⁶ designs/ quasi control group designs</p>	<p>The evaluator gathers data on two separate groups prior to and following an intervention or program.</p> <p><u>One group</u>, typically called the experimental or treatment group, receives the intervention</p> <p><u>The other group</u>, called the control group, does not receive the intervention.</p> <p>If we are implementing a program in which random assignment of participants to treatment and control groups is not possible, a quasi-experimental design⁷ may be the best option.</p>

3.4. Data collection tools

The data collection is in practice one of the biggest barriers. Online data collection is an alternative to "paper pencil tools" and especially for outcome and process-outcome measurement designs (t2) most appropriate in practice.

⁶ Using comparison group approaches to understand impact (2013-2014): <http://www.clinks.org/sites/default/files/UsingControlGroupApproachesToIdentifyImpact.pdf>.

Evaluation and impact project for a British non-profit: www.clinks.org/support/evaluation-and-effectiveness

⁷ Quasi experimental Design: Defined by collecting data on two or more studygroups – an intervention group and a comparison group: The intervention and comparison groups are identified from pre-existing or self-selected groups and are not formed through a random assignment process self-selected groups and are not formed through a random assignment process through a random . Pre-existing differences between the intervention and comparison groups at the outset of the intervention may lead to inaccurate estimates of the program's effects.

The decision on the data collection strategies depends on: "What is necessary to know: numbers or stories", "Where the data reside: environment, files, people", "Resources and time available", "Complexity of the data to be collected", "Frequency of data collection", "Intended forms of data analysis".

Some rules for collecting data are: use multiple data collection methods, use available data, but need to know: "how the measures were defined"; "how the data were collected and cleaned", "the extent of missing data"; "how accuracy of the data was ensured". If one must collect original data: be sensitive to burden on others (e.g. designs consisting of "pre-test, treatment, post-test" are very time consuming and complex); establish procedures and follow them (protocol); maintain accurate records of definitions and coding; verify accuracy of coding, data input.

The information you gather can come from a range of sources. Likewise, there are a variety of techniques to use when gathering primary data. Some of the most common data collection tools are *Surveys or questionnaires* which are instruments used for collecting data in survey research. They usually include a set of standardized questions that explore a specific topic and collect information about demographics, opinions, attitudes, or behaviors.

The key facts are: responses can be analyzed with quantitative methods by assigning numerical values to Likert-type scales; results are generally easier (than qualitative techniques) to analyze; pre-test/post-test can be compared and analyzed.

3.4.1. Use of data collection tools

There are several advantages that an online tool could provide. Among others, internet is a medium suitable for research into: specific groups (students, organizations, IT professionals, scientists, etc.); "sensitive issues": higher openness due to anonymity; ethical problems might be "How to get consent from responders?"; problems of data safety; privacy in online surveys, etc.

To use data collection tools for evaluating services and collecting evidence, are needed some skills. The online collection tools provide "how to use" guides (tutorials, videos ...). Table 7 shows a basic introduction on data collection and analysis tools as well as a set of tutorials and videos which provide tips and hints helpful in processing the data.

Table 7. Online data collection and analysis tools

<p>LimeSurvey</p>	<p>An open-source, free software application, one of the best web questionnaires which offers professionals for free services.</p> <p>The tool allows users to quickly create intuitive, powerful, online question-and-answer surveys that can work for tens to thousands of participants without much effort.</p> <p>The survey software itself is self-guiding for the respondents who are participating</p>	<p><u>Tutorial sources:</u></p> <ul style="list-style-type: none"> ▪ https://www.limesurvey.org/ ▪ https://manual.limesurvey.org/LimeSurvey_Manual/es ▪ https://www.limesurvey.org/downloads ▪ https://www.limesurvey.org/examples ▪ https://www.limesurvey.org/about-limesurvey/license ▪ https://www.limesurvey.com/ ▪ https://www.youtube.com/watch?v=MIBr2oFprJE
<p>Keysurvey</p>	<p>Professional survey software which provides the power and flexibility to centralize data and feedback collection across the entire enterprise. Users enjoy a seamless, controlled environment that ensures data is accurate, integrated, and actionable.</p>	<p><u>Example:</u></p> <ul style="list-style-type: none"> ▪ https://www.keysurvey.com/
<p>Simple Survey</p>	<p>Tool for a variety of online data collection and analysis projects. Is a powerful, cloud-based data collection and analysis software tool that lets you easily create, deploy, manage and analyze online surveys, questionnaires, polls, forms and other similar applications. Widely used by professionals in marketing, healthcare, research, communications, human resources, education, government, consulting and other fields. It can support simple to advanced needs, workflow processes, report distribution, multilingual surveys, team collaboration, data sharing and much more.</p> <p>This instrument allows to: easily create multilingual web surveys and deploy by email, Web links, social media, QR codes; create web forms</p>	<p><u>Examples:</u></p> <ul style="list-style-type: none"> ▪ https://simplesurvey.com/examples/ <p><u>Other examples:</u></p> <ul style="list-style-type: none"> ▪ http://asq.org/learn-about-quality/data-collection-analysis-tools/overview/overview.html ▪ http://asq.org/learn-about-quality/data-collection-analysis-tools/overview/read-more.html ▪ https://www.import.io/post/all-the-best-big-data-tools-and-how-to-use-them/

	for information requests, event registrations; incorporate quick polls in your newsletters or web site; view reports online, save to PDF or export/integrate with Excel	
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3.4.2. Online data processing – relevant statistics

Data collection needs to be done to produce results, this contains the data-clearing and descriptive statistics. To generate evidence analytical statistics are needed. The online tools provide some support for the data analysis.

Data processing is the conversion of raw data to meaningful information through a process. Data is manipulated to produce results that lead to a resolution of a problem or improvement of an existing situation. Similar to a production process, it follows a cycle where inputs (raw data) are fed to a process (computer systems, software, etc.) to produce output (information and insights). Generally, organizations employ computer systems to carry out a series of operations on the data in order to present, interpret, or obtain information. The process includes activities like data entry, summary, calculation, storage, etc. Useful and informative output is presented in various appropriate forms such as diagrams, reports, graphics, etc.

The important *stages of the data processing cycle* are collected below:

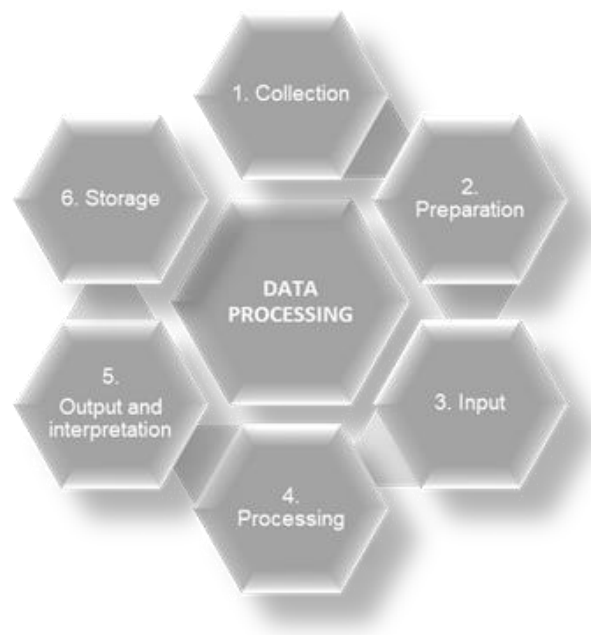


Figure 4: Data processing Cycle

The Data Processing Cycle is a series of steps carried out to extract information from raw data. Although each step must be taken in order, the order is cyclic. The output and storage stage can lead to the repeat of the data collection stage, resulting in another cycle of data processing. The cycle provides a view on how the data travels and transforms from collection to interpretation, and ultimately, used in effective business decisions. The following table offers a detailed description of each of these phases:

Table 8. Data processing stages

<p>1. Collection</p>	<p>First stage of the cycle, and is very crucial, since the quality of data collected will impact heavily on the output. The collection process needs to ensure that the data gathered are both defined and accurate, so that subsequent decisions based on the findings are valid. This stage provides both the baseline from which to measure, and a target on what to improve.</p> <p>Some types of data collection include census (data collection about everything in a group or statistical population), sample survey (collection method that includes only part of the total population), and administrative by-product (data collection is a byproduct of an organization's day-to-day operations)</p>
<p>2. Preparation</p>	<p>It is the manipulation of data into a form suitable for further analysis and processing. Raw data cannot be processed and must be checked for accuracy. Preparation is about constructing a dataset from one or more data sources to be used for further exploration and processing. Analyzing data that has not been carefully screened for problems can produce highly misleading results that are heavily dependent on the quality of the data prepared</p>
<p>3. Input</p>	<p>Task where verified data is coded or converted into machine readable form so that it can be processed through a computer. Data entry is done through the use of a keyboard, digitizer, scanner, or data entry from an existing source. This time-consuming process requires speed and accuracy. Most data need to follow a formal and strict syntax since a great deal of processing power is required to breakdown the complex data at this stage. Due to the costs, many businesses are resorting to outsource this stage</p>
<p>4. Processing</p>	<p>When the data is subjected to various means and methods of manipulation, the point where a computer program is being executed, and it contains the program code and its current activity. The process may be made up of multiple threads of execution that simultaneously execute instructions, depending on the operating system. While a computer program is a passive collection of instructions, a process is the actual execution of those instructions. Many software programs are available for processing large volumes of data within very short periods</p>

5. Output and Interpretation	<p>Stage where processed information is now transmitted to the user. Output is presented to users in various report formats like printed report, audio, video, or on monitor. Output need to be interpreted so that it can provide meaningful information that will guide future decisions of the company</p>
6. Storage	<p>Last stage in the data processing cycle, where data, instruction and information are held for future use. The importance of this cycle is that it allows quick access and retrieval of the processed information, allowing it to be passed on to the next stage directly, when needed. Every computer uses storage to hold system and application software</p>

There are different *data processing methods and data processing techniques* such as electronic data processing through a computer program or online processing. However, data processing methods follow the same cycle, as illustrated in figure 4 and table 8. As examples:

Table 9. Data processing methods and data processing techniques

METHODS AND TECHNIQUES	DEFINITION
Online Processing	<p>Method that utilizes Internet connections and equipment directly attached to a computer. This allows for the data stored in one place and being used at altogether different place. Cloud computing can be considered as an example which uses this type of processing. It is used mainly for information recording and research.</p>
Electronic Data Processing	<p>Nowadays data is processed through computers. Data and sets of instructions are given to the computer as input and the computer automatically processes the data according to the given set of instructions. This method is very fast and accurate. For example, in a computerized education environment results of students are prepared through computer, in banks, accounts of customers are maintained (or processed) through computers, etc.</p>
Statistical Package for the Social Science (SPSS)	<p>Is one of the most popular statistical packages which can perform highly complex data manipulation and analysis with simple instructions. SPSS is a comprehensive system for analyzing data.</p> <p>It is designed for both interactive and non-interactive uses. SPSS can take data from almost any type of file and use them to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analysis.</p> <p>SPSS can take data from almost any type of file and use them to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analysis.</p>

<p>SAS System is Base SAS software</p>	<p>Consists of the following: DATA step (a programming language that you use to manipulate and manage your data); SAS procedures (software tools for data analysis and reporting); macro facility (a tool for extending and customizing SAS software programs and for reducing text in your programs); DATA step debugger (a programming tool that helps you find logic problems in DATA step programs); Output Delivery System (ODS-a system that delivers output in a variety of easy-to-access formats, such as SAS data sets, procedure output files, or Hypertext Markup Language (HTML); SAS windowing environment (an interactive, graphical user interface that enables you to easily run and test your SAS programs) tools for data analysis and reporting); macro facility (a tool for extending and customizing SAS software programs and for reducing text in your programs); DATA step debugger (a programming tool that helps you find logic problems in DATA step programs); Output Delivery System (ODS-a system that delivers output in a variety of easy-to-access formats, such as SAS data sets, procedure output files, or Hypertext Markup Language (HTML); SAS windowing environment (an interactive, graphical user interface that enables you to easily run and test your SAS programs).</p>
<p>R software</p>	<p>R is a free software environment for statistical computing and graphics. It provides a wide variety of statistical and graphical techniques.</p> <p>R is an open source programming language that is excellent for data analysis and graphics. It is considered a domain specific language because it was designed primarily for data analysis. R can be used as an interactive environment or embed scripts and models into packages and integrate them with other software modules. R can be used to analyze data from many different data sources including external files or databases.</p>

Finally, it should be pointed out, that a *data processing system* is a combination of machines and people that for a set of inputs produces a defined set of outputs. The inputs and outputs are interpreted as data, facts, information, depending on the interpreter's relation to the system.

A data processing system may involve some combination of:

- Conversion converting data to another format.
- Validation – Ensuring that supplied data is “clean, correct and useful”.
- Sorting – “arranging items in some sequence and/or in different sets”.
- Summarization – reducing detail data to its main points.
- Aggregation – combining multiple pieces of data.
- Analysis – the “collection, organization, analysis, interpretation and presentation of data”.
- Reporting – list detail or summary data or computed information.

3.5. Use and visibility of results

The results of evaluation should be used. As is described in chapter 1, there is a strong link between the identification of the area of evaluation, the objectives of the evaluation and the end of the circle, namely the use and the visibility of the results and the development of practice.

Important reasons to use the results from the evaluation could be the following:

- *Internal information and visibility.* On the first hand, evaluation results need to be visible internally. The organization and management should identify proper forms to transfer results to counsellors, practitioners, teams, managers and leaders. Make sure that questions of anonymity and confidentiality are addressed.
- *External information, visibility to environment.* Customers, their families, stakeholders and the public in general can be informed about the results of your evaluation. Typically, this kind of information is delivered in a dense form, focusing the highlights, so people can see the benefit of the service easily. If you have more elaborated reports at the same time, a person who has a deeper interest can access those.
- *External reporting to higher levels of the organization and stakeholders.* An evaluation is often done to report the effectiveness of the service to the organization and eventually to other stakeholders like financing institutions, local authorities or government. Such report typically covers more than just the evaluation result. But the evaluation can contribute significantly to the legitimation of the work of the organization and though to a positive future development.
- *Reflection of effectiveness of work on team level and management level.* Evaluation results should be feed backed into the teams and the management boards. They can be an impulse to reflect practice and find aspects to be developed and/or changed.
- *Using the results when setting up new programs and interventions.* In many contexts the products, programs and the kind of interventions used/offered are under a constant change. Evaluation results might be

relevant, when the organization plan the coming programs/projects or when for instance new forms of interventions are discussed.

- *Integration of results in quality-schemes and quality-management.* Evaluation is or should be an integrative part of quality-schemes and quality-management. If the organization has established a systematic quality scheme (like ISO 9001, EFQM or others) evaluation might be a fixed part of that. If not, evaluation results could be a starting point to check the actual status of quality and make use of that in terms of defining ideas for further development of the practice.

The use of the evaluation results is key for several reasons. Obviously, without using evaluation results the approach does not fulfill its defined function. The effort of the managers, practitioners, participants and experts involved as well as the money spent are wasted. On the other hand, the organization and the responsible should discuss and plan the possibilities, restrictions, potential tensions, data protection and carefully and early in the process.

CONCLUSIONS

The central aim of the Keyway project is to support organizations providing career guidance and counselling services to evaluate the impacts of these services with regards to key performance indicators. As the efforts on European and national levels have shown, the relevance of the methodological questions of measuring such effects and impacts is very high. At the same time, the knowledge and experience on the scientific as well as on the side of practice is still relatively low. This project and publication as well as parallel activities aim to extend the knowledge in this regard and one can expect several positive effects from this:

- More and better evaluation can have direct impact on the quality of services, if measurement is embedded into quality development actions
- It might also help to improve the effects we can reach with interventions, especially if the evaluation integrates process-outcome designs
- Evaluation of impacts can also extend the visibility and the acceptance of services, if results are transparent for citizens, customers, policy makers and experts

- The sustainability of career guidance and counseling activities can be supported and might increase.

The reader of this document got a structured overview about the evaluation task and – together with the “map of indicators” a toolbox that has the potential to smoothen the entry into the impact evaluation approach. Anyhow, evaluation of outcomes and impacts is not a task easy to fulfill. It needs time, planning skills and continuing work. Thus, service organizations and policy makers should be aware that evaluation of impacts needs suitable resources and careful planning. In this respect, it might be important to involve the different stakeholders, like practitioners, managers and experts. This is important also to ensure the acceptance of the approach and the openness to participate in the process in all relevant steps. Last but not least, this is a question of competences. To be able to develop and to contribute to an evaluation process implies different competences (for different actors). Such should be developed in appropriate training and integrated by cooperation between institutions.

Looking to the future, we are aware that this guide is the result of a specific project. We invite the readers to make use of it and to add knowledge from references and further resources. In the future, it might be relevant – based on experience - to put even more attention to the question of practicability, acceptance, validity and data protection.

We invite all partners in the field to contribute and to cooperate!

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GLOSSARY

CONCEPT	DEFINITION
Before-and-after studies	Taking two snapshots before and after implementation of the program, to try and identify what changes have happened as a result (ELGPN, 2014 p. 72-75)
Common Quality-assurance framework	Set of common principles, guidelines, criteria and tools adopted by a group at a local, regional, national or international level in order to develop and assure quality in guidance delivery and in relation to the qualification of guidance practitioners (ELGPN, 2014 p. 16)
Economic and social outcomes of guidance	Guidance has social and economic outcomes: in particular, improving the efficiency and effectiveness of education, training and the labour market through its contribution to reducing drop-out, preventing skills mismatches, increasing job tenure and boosting productivity; and also addressing social equity and social inclusion (ELGPN, 2014 p. 18)
Effectiveness	Extent to which the objectives of a policy or an intervention are achieved, usually without reference to costs (ELGPN, 2014 p. 72-75)
Evaluation	An assessment and the control of an ongoing or completed development program or intervention (ELGPN, 2014 p. 72-75). Often the reason of evaluation is the legitimization of the activity (e.g. against the invested resources). However, evaluation can follow a broad range of evaluation questions or aims (not just the impact of an action) and it might focus on very different levels (e.g. policy, concepts, practices). In this respect there is an overlapping to impact research.
Evidence	The information presented to support a finding or conclusion. Evidence should be sufficient, competent and relevant. There are four main types of evidence: observations (obtained through direct observation of people or events); documentary (obtained from written information); analytical (based on computations and comparisons); and self-reported (obtained through, for example, surveys) (ELGPN, 2014 p. 72-75)
Evidence base concept	In the social sector is derived mainly from fields like medicine. The idea is, that such interventions should be used that has proven their impact in a (higher) number of studies. In the CGC field some (qualitative analytical) studies has been undertaken to investigate the evidence this field has developed yet (e.g. ELGPN 2014). One important outcome of such evidence studies might be the knowledge of relevant indicators can be used for further data collection (Indicators-sources and database). In the center of the picture it is stated, that the methods used are relevant for all four field. Thus, methods for empirical research are also the base for the data collection and analyses as it is presented in this Guide
Evidence-	The conscientious, explicit and judicious use of current evidence of

based policy and practice	what works best, and most cost-effectively, to inform lifelong guidance policy and practice. More generally, any activity, intervention or way of working that has been designed on the basis of evidence that demonstrates the effectiveness of the particular approach (policy or practice) being used (ELGPN, 2014 p. 22)
Guidance outcomes	Guidance has economic, social and learning outcomes, and these reflect both its personal impact and the wider societal benefits (ELGPN, 2014 p. 23)
Guidance services	The range of services offered by a particular guidance provider. These might be services designed for different client groups or the different ways that guidance might be delivered (e.g. face-to-face, online, telephone, etc.) (ELGPN, 2014 p. 23)
Impact	General term used to describe the effects of a program, policy or socioeconomic change. Impact can be positive or negative, as well as foreseen or unforeseen (ELGPN, 2014 p. 72-75)
Impact measurement / research	An activity to discover impacts an intervention release. Because of the methodological difficulties impact measurement/research need to use high quality indicators (Indicators-sources and database) and control the methodological design (chapter 3). While such an approach is typically used in scientific research, today we observe a need for practice-oriented measurement of impacts. One reason might be the quality management instruments implemented more often also in social services (as CGC)
Indicator	Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor (ELGPN, 2014 p. 72-75)
Intervention	A deliberate and organized attempt to impact on the career of an individual or group (ELGPN, 2014 p. 72-75)
Key Performance Impact Indicators	Measurable values that demonstrate the progress of an organization in achieving its goals and objectives (Keyway project, 2018)
Outcome	Positive or negative longer-term socio- economic change or impact that occurs directly or indirectly from an intervention's input, activities and output (ELGPN, 2014 p. 72-75)
Output	Immediate and direct tangible result of an intervention (ELGPN, 2014 p. 72-75)
Quality assurance	Activities involving planning, implementation, evaluation, reporting, and quality improvement, implemented to ensure that guidance activities (content of programs, design, assessment and validation of outcomes, etc.) meet the quality requirements expected by stakeholders (ELGPN, 2014 p. 72-75)

Quality criteria	Independent standards for measuring the quality of guidance provision or services (ELGPN, 2014 p. 28)
Quality indicators	Formally recognized figure(s) or ratio(s) used as yardsticks to judge and assess quality performance (ELGPN, 2014 p. 28)
Quality management or quality assurance	<p>Are broad concepts typically consisting of a process idea (planning, implementation, evaluation, reporting, and quality improvement).</p> <p>In this context impact measurement might be one (important) step in the quality circle</p>
Quality standards	<p>Technical specifications which are measurable and have been drawn up by consensus and approved by an organization with recognized and relevant expertise at regional, national or international levels. The purpose of quality standards is optimization of input and/or output of guidance.</p> <p>The standard(s) that an organization sets for all of its key business operations and that help clarify what an organization expects of its employees in delivering these operations or a client can expect when using the service (ELGPN, 2014 p. 29)</p>
Quality system	Organizational structure, procedures, processes, and resources needed to implement quality management. The quality system provides the framework for planning, implementing, and assessing services provided and for carrying out required quality assurance and quality control (ELGPN, 2014 p. 29)
Quantitative and qualitative evidence	Numerical information is used to provide quantitative evidence, while qualitative evidence is based on observation and judgement and deals with meanings. Qualitative evidence is usually provided by experts or people considered by virtue of their training or work experience to be appropriately qualified to make such assessments (ELGPN, 2014 p. 29)
Research methods	An approach to collecting and analyzing data for the purpose of exploring an issue or answering a question (ELGPN, 2014 p. 72-75)
Self-knowledge	Knowledge that an individual has about him/herself (ELGPN, 2014 p. 30)
Self-management of competences	When an individual takes responsibility for the development of their own competences. Sometimes this might also include the individual taking responsibility for the recording or logging of their competences: for example, in a portfolio (ELGPN, 2014 p. 30)

ANNEXES

Annex 1. Evaluating a vocational guidance intervention (pre- and post-intervention design)

Category	Description
Context and frame of the Evaluation	A public service delivered for young person in the transition from secondary school to post-secondary school and vocational training. The evaluation shall inform about the quality of the service (impact concerning the objective of the instrument) and allow comparison between e.g. different service providers.
What should be evaluated, what for? (goals)	The evaluation focus on the effects a specific intervention has on the readiness for vocational decision making of young persons (9th grade)
Aspects of the service that should be evaluated	The service is based on the assumption that an intensive guidance intervention (mainly in a counselling setting) help the participant to have a better transition from secondary to post-secondary education (including vocational training). This is operationalized with a concept of career choice readiness. The evaluation follows the assumption that this kind of readiness is significantly higher after the intervention than before.
What is the impact level? ⁸	<u>Impact level 2</u> (see section 2): The set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of the guidance intervention.
What are relevant indicators? ⁹	The concept of career choice readiness is a subset of indicators as described in the map of indicators in the section "competence". The indicators chosen are: <ul style="list-style-type: none"> • problem awareness (outcome) • vocational self-perception (outcome) • level of vocational information (outcome) • decision-making behavior (outcome) • activities to realize plans (outcome)

⁸ See chapter 2, section 2.3

⁹ Identify them from the list of Keyway indicators (resources from outcomes O1/O2: KPIs and [Database](#))

Annex 2. Evaluating a program for adult career counselling (input-process-output/outcome)

Category	Description
Context and frame of the Evaluation	A regional/national project piloting a new form of career counselling for adults.
What should be evaluated, what for? (goals)	The evaluation shall test the quality of the service and the impact for different target groups (i.e. adults with different backgrounds using the service). The outcome shall be monitored also at a second point 3 month after the end of the counselling process.
Aspects of the service that should be evaluated	The evaluation tries to discover the effects of the intervention within the context of the diverse problems clients present in the counselling. It should discover the impact of this aspects as well as the positive experience in the process and relevant outputs. Regarding the outcomes some aspects shall be measured (also after the final sessions).
What is the impact level? ¹⁰	<p>Reaction (<u>Impact level 1</u>). How participants in guidance describe their experience.</p> <p>Learning (<u>Impact level 2</u>). The set of knowledge, skills, and/or competences an individual has acquired and/or is able to demonstrate after completion of a guidance activity or through participation in the guidance process.</p>
What are relevant indicators? ¹¹	<ul style="list-style-type: none"> • Complexity of the problem (input) • Positive experience (intra-personal, such as dealing with emotions, problem-solving, making decisions) (process) • Information gained through the consultation (output) • Optimism to deal with one's own situation (output) • Increase of career opportunities (output) • Clearness of educational and professional goals (output) • Increase of self-efficacy (outcome) • Increase of self-esteem (outcome)

¹⁰ See chapter 2, section 2.3

¹¹ Identify them from the list of Keyway indicators (resources from outcomes O1/O2: KPIs and [Database](#))

Annex 3. Evaluating the national service – impacts on national level

(Combination of outcome measurements with aggregated data)

Category	Description
Context and frame of the Evaluation	A new form of career guidance service provided in selected schools and by local authorities. The service was developed in the context of shortages of qualified employees. The evaluation is a comparison of those schools realizing this service in comparison to national average and amongst each other. The evaluation provides information to policy and practice on national/local/school level.
What should be evaluated, what for? (goals)	The objective is to establish a monitoring system delivering data in a continuing way.
Aspects of the service that should be evaluated	The whole monitoring system try to cover a broad range of aspects (interventions, personal factors, personal outcomes, national outcomes).
What is the impact level? ¹²	Behavior (<u>impact level 3</u>): Any changes that it is possible to observe in how participants act following a guidance intervention. Results (<u>impact level 4</u>): Whether it is possible to observe any changes to systems, organizations and individuals following a guidance intervention.
What are relevant indicators? ¹³	The whole model (input, process, output, and outcome) is very broad and covers 50 Indicators. Focusing on the impact levels 3 and 4 the indicators are: <ul style="list-style-type: none"> • Education: attainment/qualification in schools taking part (compared with national average) (individual outcomes) • Education: % of STEM qualification (Science, Technology, Engineering and Mathematics) (individual outcomes) • Education: % of apprenticeships (individual outcomes) • National: number and % of young people aged 16-19 who are NEET (national outcomes) • National: number and % of young people aged 16-19 who are unemployed (national outcomes) • National: number and % of employers reporting skills shortages (STEM qualifications) (national outcomes)

¹² See chapter 2, section 2.3

¹³ Identify them from the list of Keyway indicators (resources from outcomes O1/O2: KPIs and [Database](#))

	<ul style="list-style-type: none"> • National: Productivity. National/regional GVA (Gross value added) per head (national outcomes) • National: Earnings. Average Earnings of 18-24 years old (national outcomes) • National: Equity. Improvements in social mobility (national outcomes)
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Annex 4. Evaluating a coaching program for school-drop-outs

(Example using [O2 Database](#) and a combination of outcomes focusing on personal aspects, competence and education/employment)

Category	Description
Context and frame of the Evaluation	The context of the evaluation is a coaching and training program for young people who dropped out from school. They are not in education, employment or training (NEET). The coaching program is embedded in a 6-week course program that focus on key-competences the young people (shall) gain in a combination with the exploration of different possible fields of (practical) vocations. The expectation is, that the program strengthens the participants in their ability to plan and take next career decision, weather to re-engage with education or to realize a transition into VET or work.
What should be evaluated, what for? (goals)	The objective is to evaluate the impact of the coaching and training program. The goals are to show/explore the change within the individuals and between the individuals and their concrete next steps.
Aspects of the service that should be evaluated	An indicator model is chosen that allow the formative evaluation of the gained personal and competence-related (CMS) outcomes and the summative evaluation regarding attainment (education and/or work-transitions).
What is the impact level? ¹⁴	<p>Learning (<u>impact level 2</u>). The set of knowledge, skills and/or competences an individual has acquired and/ or is able to demonstrate after completion of a guidance activity or through participation in the guidance process.</p> <p>Behavior (<u>impact level 3</u>): Any changes that it is possible to observe in how participants act following a guidance intervention.</p> <p>Results (<u>impact level 4</u>): Whether it is possible to observe any changes to systems, organizations and individuals following a guidance intervention.</p>

¹⁴ See chapter 2, section 2.3

What are relevant indicators?¹⁵

- Personal outcomes: self-esteem; self-confidence; motivation (about training/work); setting career goals; career planning skills; emotional control
- Competence outcomes: self-knowledge; problem solving, decision making; networking skills; job-search skills
- Education/Employment: re-engagement in education; right (proper) choice of studies; (reduction of) NEET rate; and school-work transition.

¹⁵ Identify them from the list of Keyway indicators (resources from outcomes O1/O2: KPIs and [Database](#))

