D5.2 Reports on Results and Conclusions

Organisation: University of Zagreb Faculty of Kinesiology

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1. Introduction to the project evaluation plan
1.1. Background

Sport4HealthNet addressed the topic: encourage participation in sport and physical activity especially by supporting Council Recommendations on HEPA and EU Physical Activity Guidelines.

The main objective of the Sport4HealthNet aimed at creating better access and more opportunities in people's everyday lives to engage in exercise and maintain a healthy lifestyle.

The transnational network of 6 European Countries – Sport4HeathNet with a synergise approach addressed two issues as major concerns and obstacles for citizens to be more active: lack of time and better sport local infrastructure. In this context Sport4HeathNet have influenced changes.

1.2.   Strategic and Specific Objectives of Sport4HealthNet

The overall idea evaluated in this project is that advanced practices and knowledge on alternative physical activities in/around the workplace represents a quantifiable health benefit, contributing to increasing healthy lifestyle behaviour in working population, resulting in mood improvement, higher productivity, decrease in absenteeism and lifestyle diseases

The specific objectives of Sport4HealthNe project were:

(1) to evaluate target groups of employees for health profiles (see below) before/after an educational intervention;
(2) to develop user-friendly manual for physical activity at workplace that includes multicomponent interventions with innovative activities (including stretching and strength exercise);
(3) to provide an educational intervention and practical demonstration by a HEPA-recognised professional how to implement novel interventions in work settings;
(4) to determine the extent to which the intervention would yield an additional benefit for health profiles; and
(5) to promote and disseminate project results using popular media, non-professional and professional bodies and relevant events.

1.3. Key Activities and Products of Evaluation in Sport4HealthNet

In order to assess the results of Sport4Health and provide educated projections of the results the Sport for Health Network community might have after the end of the project, work package 5 deploys a simple but focused evaluation exercise in which a set of indicators of interest will be measured and analysed.

The resulting deliverables were:

D5.1 Report on evaluation methodology (M4)
D5.2 Report on results and conclusions (M18) +3 months of extension due the COVID-19 pandemic

2. Project Evaluation Approach

2.1. Summary Notions

Evaluation in Sport4HealthNet project has followed an established approach framed by the Guidelines for Health-Enhancing Physical Activity Promotion Programmes from The European Network for the Promotion of Health-Enhancing Physical Activity.

Faculty of Kinesiology University of Zagreb played a considerable evaluation role in all of the above and is accordingly in the position to adapt the approach to the needs of Sport4HealthNet.

In order to assess the results of Sport4HealthNet and provide educated projections of the results the Sport for Health Network community might have after the end of the project, work package 5 "Results evaluation" deployed a simple but focused evaluation exercise in which a set of indicators of interest are measured and analysed.

In order to reach the goal, evaluation is scheduled to execute a "before and after" analysis, which is effectively conducted as follows:

- Establishment of a project baseline, which represents to all means and purposes the departing situation (before) and as such the benchmark against which comparing the final one. The baseline is analysed through an initial round of data collection, which concerns the same exact impact and process indicators that are going to be collected at project conclusion.
- Continuous verification (monitoring) of the smooth implementation of the activities and intermediate rounds of data collection to monitor trends.

▪ Determination of a final project picture, which represents the concluding situation (after) as a result of the interventions made possible by Sport4HealthNet Again, the instrument utilised is impact and process data collection, performed according to the methods employed for baseline and monitoring.

The information thus produced enabled the evaluation team to produce a thorough impact and process assessment.

This brief overview of the approach clearly shows that it has a strong dependency from a set of performance indicators (necessary for impact evaluation) and questionnaires (necessary for process evaluation), together with a rigorous administration of both types of data collection.

2.2.   Impact Evaluation and Performance Indicators

Key to impact evaluation is the identification and measurement of appropriate performance indicators, which are nothing else than tools that enable a quantification of the impacts (or effects, results) of a project. The progression toward the full execution of the evaluation exercise involves the definition of the following:

Figure 1: progression of evaluation

Indicators have been determined, which describe important characteristics of the situation at hand and that can be measured or estimated both before and after the implementation of the measures, so that appropriate comparisons can be made of any changes or with any alternative(s). There are often many indicator options for measuring an impact, thus the selection of the right indicators is very important for an evaluation with limited resources.

The goal was to identify a comprehensive yet limited indicator set (no more than ten), which **reconciles:**

- the scientific requirements of evaluation,
- the evidence-based knowledge necessary to produce findings and formulate recommendations, and
- the budgetary constraints of the project.

2.2.1. Objectives and Impact Areas

A meaningful indicator selection has bounded to stem directly from the declared project **objectives**.

Likewise, the participating cities have devoted time to determine the **areas** in which Sport4HealthNet is expected to record the most relevant impacts, and the next table shows the results of these considerations by a decreasing priority order.

Table 1: Impact area

Market visibility	Traffic flows on main portal (Sport4HealthNet), on websites of sport organisations/employees' associations and companies, number of enquiries, number of references on key websites and/or specialised magazines.
Collaborative community	Level of cooperation between project partners, between partners and their local communities, between members, etc.
Pro-active community	Number of relevant initiatives set in motion at the initiative of members of the Sport4HealthNet community, both associations and dedicated individuals. Actions on the social media channel of the project.
Healthy community	Number of enquiries and booking trainings with the members, number of employees with the members, turnover with the members, number of interactions, number of tested employees/ companies etc.
HEPA educated community	The number of participants recruited for health-related lifestyle profiles evaluation and education = 20%

2.2.2. Performance Indicators

The last step was the identification of the **performance indicators** most suitable to quantify the chosen impacts. Each impact area can be addressed through more than one indicator, and what matters is that indicators are:

- Able to clearly reflect the related performance or impact.
- Capable of reliable assessment using the experimental tools and measurement methods chosen by the participating cities.

At the same, the indicators eventually selected ensure:

- **Relevance**: each indicator should bear significant importance for the evaluation process.
- **Completeness**: the set of indicators should consider all aspects of the project under evaluation.
- **Availability**: the set of indicators must be readily available and/or sufficient resources should be apportioned for their measurement.
- **Measurability**: the identified indicators should be capable of being measured objectively or subjectively.
- **Reliability**: the indicators should be easy to understand and reliable in terms of feedback.

The table of common performance indicators appears on Section 3 of the document.

2.3.   Process Evaluation

Process evaluation is the necessary complement to impact evaluation. Whilst the latter finds out **if** and to **what extent** certain results have been reached, the former allows understanding **how** and **why** those results have (or not) been attained.
The techniques have been used for data collection are likely to include questionnaires and/or Interviews.
Process-related information have been collected as follows:

- Identification of the reference person for process evaluation
- Preparation of a questionnaire
- Administration of questionnaires at set intervals (through direct interviews) at project outset, mid-term and project conclusion.
- Reporting of findings for distillation of common insights in D5.2.

All in all, impact and process evaluation geared to building the following framework (in red possible performance indicators).

## 2.4.   Phases, Timescale and Resources

As illustrated, the evaluation approach of Sport4HealthNet is organised in three main phases:

1. **Evaluation planning**, which defines the expected impacts and processes of the project and identifies indicators and methods to measure them.

2. **Data collection and measurement**, during which data is collected, both before and after the implementation of the measures. This is an on-going activity.

3. **Evaluation reporting and recommendations**, which interprets field results, comparing them with the stated targets. This is the core content of **D5.2 Report on results and conclusions** to be delivered at month 18.

The next figure visualises the timescale of evaluation and the estimated levels of resource concentration.

Figure 2: Evaluation timescale and resource concentration
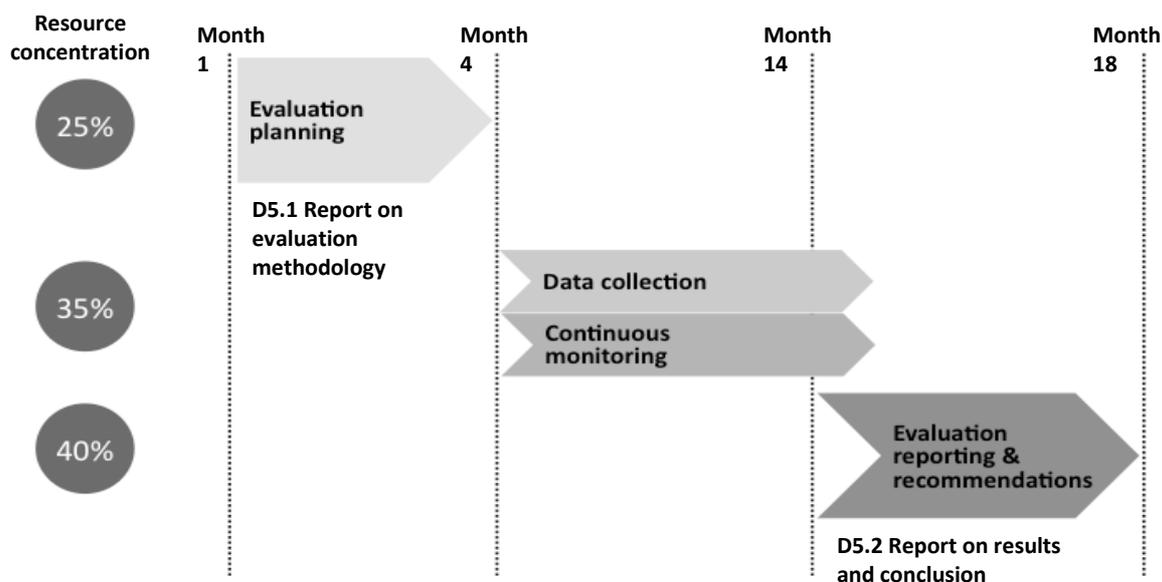
The table below (table 2) shows the working days per partner available to the project for the execution of the evaluation activities:

Table 2: Working days per partner

Partner	Person days
UNS	7
KIF	7
ECC	7
SZC	7
BCU	7
STG	7

3. Project Performance Indicators

3.1.   Project Impact Framework

Sport4healthNet has also monitored the rollout of initiatives, events and outputs foreseen by the work plan, including:

- Community composition (KPI1 to KPI6).
- Market visibility KPI (KPI7 to KPI9).
- Collaborative community (KPI10 and KPI11).
- Pro-active community (KPI12 and KPI13).
- Awareness and acceptance (KPI14 and KPI15).
- Healthy community (KPI16 and KPI17).
- HEPA educated community (KPI18 and KPI19).

Based on the indicators in Table 3, it is possible to conclude that all activities within the Sport4Health project were performed in accordance with the intended objectives, and in many indicators the expected values were significantly exceeded.

Table 3: Project performance indicators

IMPACT AREAS	KPI NO.	DESCRIPTION	TARGET IN THE PROJECT	ACTUAL FIGURES (30.06.2021.)
Community composition	KPI1	Number of actual community members: sport centres, small and medium entreprises, academia, other joining the community	102	276
	KPI2	Number of actual community members: number of national, regional sport federations joining the community	102	689
	KPI3	Number of prospective community members	NT	1823
	KPI4	Number of training booked via project's web site	NT	18
	KPI5	Number of training booked via the mobile app	NT	18
	KPI6	Number of innovation hub activities	NT	3
Market visibility	KPI7	Traffic flows on the SPORT4H portal	NT	13015
	KPI8	Number of enquiries received	NT	880
	KPI9	Number of references on key websites and/or specialised magazines	NT	105
Collaborative community	KPI10	Level of cooperation between project partners	NT	100%
	KPI11	Level of cooperation between partners and their local communities	NT	100%
Pro-active community	KPI12	Number of relevant initiatives set in motion at the initiative of members of the SPORT4H community, both associations and dedicated individuals	NT	40
	KPI13	Actions on the social media channel of the project.	NT	658
Awareness & acceptance	KPI14	Number of local promotion videos, meetings, conferences, etc.	NT	75
	KPI15	Number of followers of social media campaigns: followers in the community.	NT	1467
Healthy community	KPI16	Number of participants/surveys filled out (at site/on-line) by the participants per country	6000	40500
HEPA educated community	KPI17	Number of participants recruited for health-related lifestyle profiles evaluation and education	40%	4774
	KPI18	Development of innovative manual for physical activity in working population	100%	100%
	KPI19	Transfer of information to target groups and end-users	100%	8008

3.2.   Project Process Framework

As mentioned before, process evaluation intended to assess why the measures performed as they did and in what way congenital or external factors played a role. Process evaluation thus intended to assess the effectiveness of project handling and not the effectiveness of project results. The next is a list of common questions are used by Sport4HealthNet partners to evaluate processes and average answers given by partners.

Table 4: project process performance indicators

No.	Question	Answer	
1	To what extent are the activities of the project delivered?	☐ Fully delivered ☐ Partially delivered ☐ Not delivered	
2	How well are they implemented, do they exceed or fail to reach expectations? If not fully implemented, what is the reason?	☐ Exceeded expectations ☐ Met expectations ☐ Did not meet expectations	
3	How do you rate the approaches and methods (e.g. communication, cooperation) used in the project?	☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)	
4	To what degree does the staff responsible for implementation value the project and how well do they work together?	Project value ☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)	Cooperation level ☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)
5	Does the staff possess the right skills, and are these improved by the project?	Skill ownership ☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)	Skill improvement ☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)

No.	Question	Answer
6	Are there adequate resources (time and money) allocated to the project?	☐ More than adequate ☐ Adequate ☐ Less than adequate
7	To what extent does the project receive political support and leadership from the city?	☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)
8	To what degree do other key actors, internal or external, affect the project, both positive and negative?	☐ 1 (low) ☐ 2 ☐ 3 ☐ 4 ☐ 5 (high)
9	Are there other key factors, internal or external, that sustain or hinder the project?	Open answer
10	Overall, what are the main success factors and barriers of the project?	Open answer

The methodology called for the establishment of before (at project outset, expectedly by month 4) and after (by month 18) scenarios. All indicators have been measured at these two points in time, even though the electronic nature of many of the measurements allowed Sport4HealthNet to dispose of a continuing base of data. In between scenarios, the work package Faculty of Kinesiology monitored the data flow and prepared the partners for the final measurements. Depending on the indicator at hand, it was expected that results have been measured using the website(s), online surveys, direct calls to select community members and interviews with project partners.

3.3.   Project specific products and activities

The specific products and activities of the Sport4Health project are presented in detail in special reports, the most important of which are:

1. Sport4Health web site and mobile application

Project Sport4Health created a web site and a mobile app with standard tools and programmed them according to the needs of consumers representing the working population, encouraging them to be physically active. Our tools will also motivate employers, that are not always willing to give extra time to their employees to practice exercises, to join our network. The two tools will also be useful for other stakeholders such as fitness clubs, local communities, and other active people not involved in regular sport activities.

- **Sport4Health web site**
  - https://sport4healthnet.eu/ The website of the Sport4HeathNetis currently based on the beta architecture with the support for English and possibility for other languages. The website underwent extensive testing and fine-tuning in order to fix possible bugs, collecting users' feedback (both companies and worker groups), and incorporating the intelligent tools for support, advice, and prescription of physical activity.

- **Sport4Health mobile application**
  - Project Mobile app Sport4Healthnet have been developed with Microsoft tools: mobile app with Xamarin, web app with ASP.NET. All data is stored in a cloud based MSSQL database. Source code is written in Visual Studio 2019 and Visual Studio for Mac. IOS app has been published with Xcode by Apple. Users can, free of charge, download mobile apps at the Apple store or Google Play store depending on device they use. Basic language is English, but app allows direct translations also to European languages such as: German,Italian, Dutch, Croatian, Serbian, French, Bulgarian and non-European languages.

2. Guidelines for stretching and strengthening at work

Having enough physical activity to advance health and wellbeing remains a challenging task for Europeans of all ages and backgrounds. Many general guidelines and educational materials that promote healthy exercise are already available, yet somehow a majority of Europeans do not meet the physical activity recommendations while staying sedentary and physically inactive. Among others, members of the workforce tend to spend more time sitting while having fewer opportunities (and time) to exercise. Therefore, this sensible population requires an attentive approach of the academic community to address specific

needs for physical activity and provide easy-to-digest instructions to promote healthy behaviors both at the workplace and home.

The manual Stretching and Strengthening at Work has been prepared as a possible step forward in the right direction, being a guidebook to help testing manpower lifestyles but also to provide an illustrative document that contains many exercises for improving flexibility and muscular strength at workplace. As one of the main intellectual outputs and deliverables of SPORT4H Network, a project co-funded by the Erasmus + Programme of the European Union, the manual is intended to assist employees in improving health-related physical fitness by taking part in simple, short-term, specific and convenient exercises either at the workplace, home and during leisure. Exercises described here are primarily designed for healthy adults; always check with your health care provider before beginning exercise regimen to make sure you are medically able to participate.

3. E-learning educational materials

The e-learning module was developed based on the Sport4Health methodology and guidelines that describe different stretching and strength exercises that are appropriate for a typical workplace, with detailed description of exercise execution with regard to different degrees of intensity, duration and number of repetitions, in order to make it available to a wider audience using online tools.

The process of developing of the e-learning videos for the Sport4Health project started with the analysis of the exercises from the guidelines with regards to effectiveness and applicability. Based on this analysis, the exercises at the workplace were grouped into two basic sections: 1. Improving flexibility during working hours and 2. Improving muscular strength during working hours. Filming was done with both male and female actors to create more diversity and motivate both genders.

Further to the exercises at the workplace, the e-learning module contains videos;
-   showing how to be active at home and during leisure,
-   videos containing recommendations on how to exercise safely, with tips and advices.
-   additional, promotion video's where made
-   special attention was given to creating videos for physical activities for special populations.

Altogether, 68 videos were filmed and edited with written description in English language.

4. GIS map of sport and leisure facilities

During the project implementation we have mapped 300 sports facilities municipalities of the project's partners : Brussels, Celje, Novi Sad, Sofia, Weert and Zagreb. The mapped sports facilities can be found on the Sport4HealthNet project website: https://sport4healthnet.eu/sports-infrastructure/ as well as on the project's mobile apps (Android and IOS).

In our D.3.2 Study of sports leisure and facilities an inventory list of sport indoors and outdoors facilities in Brussels, Novi Sad, Zagreb, Celje, Sofia and Weert linked to Google maps, as well as the recommendations to local authorities to popularise and expand them in conjunction with sport organisations and create offices for support, advice and prescription of physical activity aimed at promoting physical activity and support participation in sedentary groups of the population can be found.

In general, it can be concluded that for most of the sports objects and facilities, the share differs between the cities and towns. There is also a valid reason for this, because six different countries participate in this project, hence there are also diverse strategies and policies of the municipalities of Brussels, Celje, Novi Sad, Sofia, Weert and Zagreb. Another justification could be that the mentioned cities and towns prefer one sports type over another, e.g. due to economic reasons and other interests. Therefore, this could explain why there are larger numbers of some sports objects and facilities and lower numbers for others.

The recommendations of the Sport4HealthNet partners for the municipalities of Brussels, Celje, Novi Sad, Sofia, Weert and Zagreb are as follows:

The municipalities:

1. Should create programmes for further development of sports objects and facilities, so that their functionality can be maintained and modernisation of those can be fostered.
2. Could consider establishing a balance between the number of sports objects and facilities, or at least to ensure that new ones are built.
3. Continue to ensure that data and information on the sports objects and facilities is accurate and easily accessible on online websites and Google Maps.
4. Develop programmes and policies that specifically target the working population and thus to offer sports activities before and/or after working time, e.g. training sessions at evenings.
5. Cooperate with Sport4HealthNet project partners on sports programmes and strategies
   that fall under the project´s scope.

In month 15 (M15) of the project we have initiated the first Support Office in Novi Sad UNS creation under the coordination of the University of Novi Sad and the project's partners   network: in   Zagreb,   Brussels,   Sofia,   Celje,   Weert:

https://sport4healthnet.eu/book-a-trainer-at-the-workplace/. Every Wednesday UNS staff and students organise workout session & healthy lifestyle recommendations – open door for all citizens. Those sessions are covered by the local TV of Novi Sad.

5. Evaluation of employees health profile

SPORT4H project demonstrated beneficial effects of short-term exercise and educational intervention on health-related physical fitness, lifestyle behaviours, and quality of life in employees across Europe. Educating workforce using a plethora of written, verbal and video media and materials appears to be a rather effective, applicable and suitable tool in driving positive changes in this sensitive population. SPORT4H know-hows perhaps remain as a useful expertise for others to use and built into all lifestyle interventions targeted to working population and beyond. Multidisciplinary and trans-national collaboration established through SPORT4H network enables fruitful exchange of expertise between partners from academia, industry, non-governmental and public entities, and successful overcoming of challenges identified during the implementation of this project.

6. Sport community recognition

Results of the general commu nity health information of the countries that participate in the project indicate that all of the countries are faced with a large percentage of obese persons, who at the same time do no exercise sufficiently. The proportion of these per- sons is the highest for the low- educated. At the same time, workers are worried about their health and safety at work. This indicates that there is a growing need for the introduction of programs that would increase exercise and activity for health promotion at work.
Project partners have conducted a thorough analysis of the potential stakeholders in their countries and have developed a landscape of them. Each partner has identified several potential stakeholders from various groups such as sports organizations and academia that would be willing to support the introduction of a mobile app for exercise and activity for health promotion at work.

7. Inspirational, social and dissemination activities

The SPORT4H project had many indicators like social media channels, webpage and other statistics, feedback from internal evaluators, partners and stakeholders, which were the best evidence of which content/event/activity engaged our end-users the most and what should be changed in promotional materials to answer all targeted

audience needs. Moreover, dissemination activities data includes information on the number of people involved in every listed activity.

Analysis of those indicators after eighteen months of project duration lead us to the general conclusion that the number of SPORT4H recipients grows continuously and the project itself gathers more and more interest from respective, previously defined target groups.

A particularly important aspect of project promotion and knowledge dissemination were public events organized by individual project members. All activities have fully fulfilled their purpose. Among the most important activities for the dissemination of the Sport4Health project are:

- Multiplier Sport Events in Celje and Sofia in September 2020.
    - ''Sports Sunday at Spica Center'' (Celje, Slovenia)
    - ''European week of Sport (Sofia, Bulgaria)
- Round table "Sport Infrastructure in Sofia – available for all" (Sofia, Bulgaria)
- Online conference "Healthy lifestyle and the working population" (Brussels, Belgium)
- Scientific conference "Stretching and strengthening at work – final project results" (Novi Sad, Serbia)

4. Realization of main project tasks

Through 18 + 3 months of work, the Sport4Health Network project managed to accomplish all the tasks from the 6 basic work packages (Table 5). Despite the problems caused by the COVID-19 pandemic, the members of the project consortium still managed to respond to all the challenges and project goals. The most important achievement of the view is reflected in the sustainability and applicability of the project results in the near and distant future. Also, it is desirable that projects with similar content continue in the coming years through various EU projects.

Table 5: Realization of main project tasks

Work package and results	Title	Realization
WP1	**Sport4HealthNet creation and launch**	
Result 1.	Report on sport community recognition (M4)	✓
Result 2.	Report on the launch of the Sport4HealthNet website and mobile application (M6)	✓
Result 3.	Finalisation of sport community analysis and	✓

	agreement on vision (M4)	
Result 4.	Launch of the website (M6)	✓
Result 5.	Launch of the mobile application (M6)	✓
WP2	**Employee physical health evaluation & guidelines**	
Result 1.	Report on evaluation of employees' health profiles (M11)	✓
Result 2.	Employee physical health evaluation & guidelines (M16)	✓
Result 3.	Launch of the E-learning module (M11)	✓
Result 4.	Data integration and analysis (M16)	✓
WP 3	**Study of sports and leisure facilities**	
Result 1.	Report on GIS Mapping and sport leisure and facilities inventory (M10)	✓
Result 2.	Study of sports leisure and facilities (M15)	✓
Result 3.	Support offices initiation (M15)	✓
WP4	**Promotion and dissemination**	
Result 1.	Report on inspirational, social and dissemination activities (M18)	
Result 2.	Release of the project video (M9)	✓
Result 3.	Engagement campaign in partners countries	✓
Result 4.	Social media up and running (M4)	✓
Result 5.	Participation in select key events	✓
WP 5	**Results evaluation**	
Result 1.	Report on evaluation methodology (M4)	✓
Result 2.	Report on results and conclusions (M18)	✓
Result 3.	Performance indicators selected (M4)	✓
Result 4.	Measurements concluded (M16)	✓
WP 6	**Coordination and management**	
Result 1.	First Interim technical implementation report and financial statement (M6)	✓
Result 2.	Second Interim technical implementation report and financial statement (M12)	✓
Result 3.	Final technical implementation report and Report of Factual Findings on the Final Financial Report (M18)	✓
Result 4.	Consortium Agreement signed (M3)	✓
Result 5.	Consortium meetings (M1, M6, M12, M18)	✓

5. Resume of Evaluation Tasks

Table 6: resume of main evaluation tasks

Action	Medium	Date	Status
Establish project evaluation approach	D5.1	M4	✓
Establish project baseline	D5.1	M7	✓
Monitor progress of key results	Progress reports	Continuing	✓
Report on evaluation activities	D5.2	M18	✓