



# POCITYF

## Quality Assessment, Risk Assessment and Contingency Plans

D11.4: Quality Assessment, Risk Assessment and Contingency Plans  
WP11, T11.2

Authors: João Formiga (EDPL); José Miguel Costa (EDPL)



This project has received funding from the European Union's Horizon 2020  
research and innovation programme under grant agreement N° 864400.

## Technical references

Project Acronym	POCITYF
Project Title	A Positive Energy CITY Transformation Framework
Project Coordinator	João Gonçalo Maciel EDPL JoaoGoncalo.Maciel@edp.com
Project Duration	60 months (from October 2019 - to September 2024)

Deliverable No.	D11.4
Dissemination level*	PU
Work Package	WP11 - Project Management
Task	T11.2 - Quality and Risk Management
Lead beneficiary	1 (EDPL)
Contributing beneficiary/ies	1 (EDPL); 2 (CME); 14 (INESC TEC); 15 (GA); 30 (E@W); 38 (CERTH); 39 (VTT); 40 (ICONS); 41 (RINA-C); 42 (CIRCE)
Due date of deliverable	31 March 2020
Actual submission date	02 April 2020

PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

v	Date	Beneficiary/ Author	Description
0.1	26/02/2020	EDPL	Table of Contents defined
0.2	05/03/2020	EDPL	Introductory sections concluded
0.3	16/03/2020	EDPL	All sections concluded
0.4	24/03/2020	EDPL	Final draft, ready for revision, with all WP-related risks included
1.0	02/04/2020	EDPL, INESC, GA	Revisions included. Final version



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



# Executive Summary

The present deliverable D11.4 - *Quality Assessment, Risk Assessment and Contingency Plans* - describes the underlying POCITYF's Quality Management and Risk Management Plan, essential to guarantee the quality of the project outcomes and to monitor the eminent risks and respective mitigation measures.

For the Quality Management Plan, a quality process addressing both quality management structure and deliverables' submission workflow is outlined.

As for the Risk Management Plan, the process of identifying and managing the risk and the subsequent mitigation measures is thoroughly depicted, and a map of the envisioned project risks and a set of contingency actions is presented per Work Package in the Annex section, aiming to ensure the quality of the work to be performed during the project.

The current document corresponds to the first version of POCITYF *Quality Assessment, Risk Assessment and Contingency Plans*, therefore composed by the preliminary information regarding both the processes and the envisioned risks.

The aforementioned plans and risks' matrixes will be subject to regular updates which will culminate in two upcoming periodic reports (M24 and M48).

POCITYF current risk matrix is as depicted below.

**Risk zones**

<b>15</b>	<b>14</b>	<b>10</b>	+
<b>7</b>	<b>8</b>	<b>6</b>	Impact
<b>5</b>	<b>7</b>	<b>7</b>	-
- Likelihood +			



# Table of contents

Executive Summary .....	3
1 Introduction .....	5
2 Quality Management Plan .....	6
2.1 Quality Management Structure .....	6
2.2 Deliverables' submission .....	7
3 Risk Management Plan .....	9
3.1 Risk Management Process .....	9
4 Conclusions .....	11
Annex - WP related risks .....	14
WP1	14
WP2	15
WP3	16
WP4	17
WP5	18
WP6	19
WP7	22
WP8	25
WP9	26
WP10	27
WP11	28

## List of Figures

Figure 1 - POCITYF management structure .....	7
Figure 2 - Deliverables' submission process .....	8
Figure 3 - Risk management process template. ....	9
Figure 4- Risk matrix used to assess risks' likelihood and impact.....	10
Figure 5 - WP1 risk matrix .....	14
Figure 6 - WP2 risk matrix .....	15
Figure 7 - WP3 risk matrix .....	16
Figure 8 - WP4 risk matrix .....	17
Figure 9 - WP5 risk matrix .....	18
Figure 10 - WP6 risk matrix .....	21
Figure 11 - WP7 risk matrix .....	24
Figure 12 - WP8 risk matrix .....	25
Figure 13 - WP9 risk matrix .....	26
Figure 14 - WP10 risk matrix .....	27
Figure 15 - WP11 risk matrix .....	29



# 1 Introduction

---

This deliverable presents the quality and risk management plans of POCITYF project, alongside with the fully aligned contingency plans.

Risk and quality management plans represent two crucial streams of the overall Project Management Work Package. These plans will guarantee the harmonisation of both risk and quality management processes to all Work Packages, Tasks and partners. All consortium partners, Work Package leaders, the Project Coordinator and the Project Steering Committee are deeply involved in the processes to ensure the participation of all stakeholders and the consequential viewpoints.

The quality management plan has the objective of assuring the quality of the project outcomes by continuously monitoring the progress of the project and its alignment with the initial goals based on the project management roadmap report.

As for the risk management process, all partners are expected to participate actively, which ultimately will lead to a set of contingency rules and mitigation measures.

Both the quality and risk management plans will be subject to regular updates (M24 and M48) to include all the upcoming risks and small refinements in the quality management process if needed.



## 2 Quality Management Plan

POCITYF Quality Management Plan has the foremost objective of ensuring, on a daily basis, that the consortium is efficiently and effectively paving the way towards the successful completion of project's goals and the achievement of the impacts presented in the Grant Agreement. The Quality Management Plan aims to ensure that:

- POCITYF outputs are in line with agreed protocols and standards (such as the ones concerning Open Data);
- Both project-internal and external communications are high standard and in line with POCITYF vision;
- POCITYF set of objectives is being fulfilled.

POCITYF's overarching Quality Management Plan, such as the Risk-related one, will be updated by M24 and M48 and on an ad hoc basis.

### 2.1 Quality Management Structure

POCITYF Management Structure was presented in D11.1 - Project Management Roadmap, submitted by M4, being therein identified and characterised the diverse project bodies and roles, as depicted in Figure 1.

The **Project Steering Committee** is a crucial body in what concerns POCITYF Quality Management, as it is responsible for monitoring the project's performance, managing the technical audits, supervising the preparation of the deliverables, amongst other topics.

POCITYF **Quality & Risk Manager** (Luísa Serra from EDPL) is at the core of quality control process, being responsible for the quality and timely delivery of required reports, along with identification of main areas of possible risks and promotion of appropriate contingency activities.

The **Quality & Risk Manager** will count with the technical expertise of the **Technical & Innovation Manager**, assisting the former throughout disputes over the quality of work (escalated to the Project Officer, case no decision is reached), the **Advisor on EU Data Protection Law**, providing insights regarding compliance with GDPR and other relevant regulatory frameworks in more complex cases, and the **Regulation & Standards Manager**, dealing with interoperability and standards issues associated to the deployment of POCITYF tools and actions.

**WP leaders** play a key role as well in quality control processes, as they are responsible for a timely and high-quality execution of their WP tasks, managing the progress of their WP deliverable together with respective authors. They guarantee, together with the **Quality & Risk Manager**, that deliverables and other reports are timely delivered to reviewers. Case some deviation of the Description of Work is envisioned, WP leaders shall report this to the Project Coordinator and Technical Coordinator, with whom mitigation plans will be conceived. Project Coordinator is then responsible to discuss possible changes to the contract with POCITYF Project Officer, who will approve, or not, the mitigation plans and subsequent modifications.



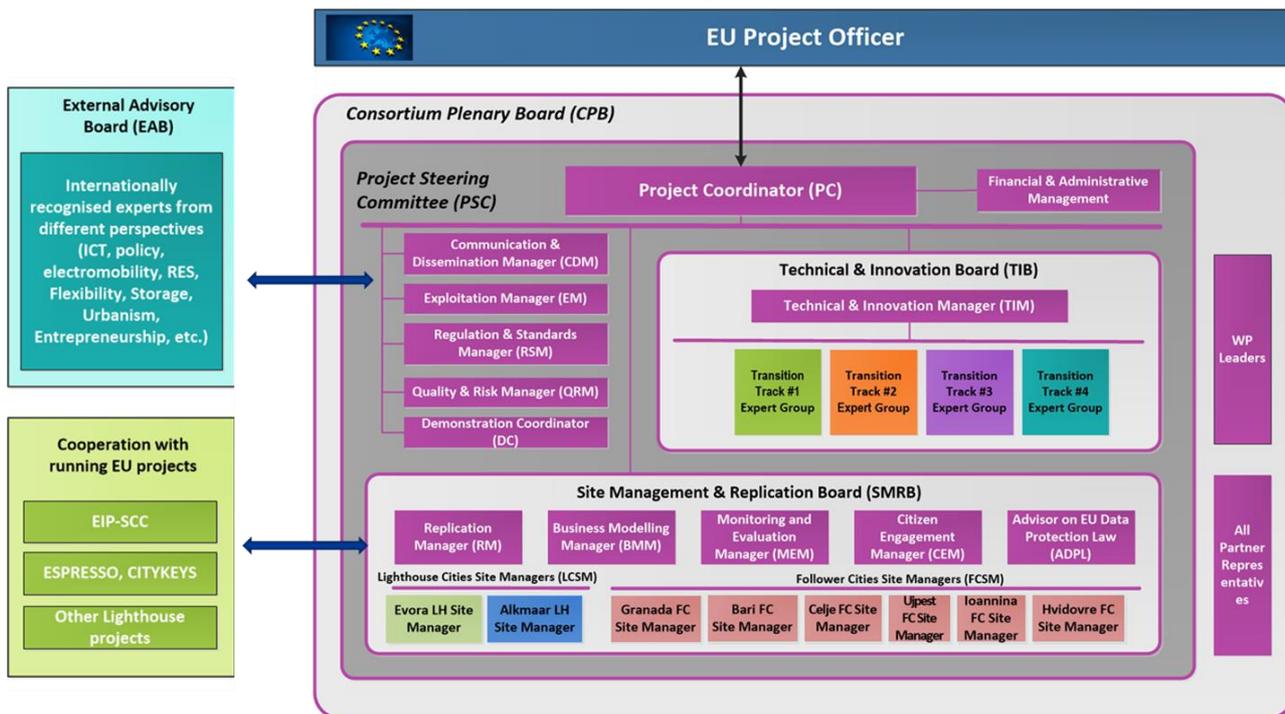


Figure 1 - POCITYF management structure

The Work Structure Breakdown performed by each WP leader, and presented in D11.1, will be updated, at least, each trimester, preceding the Project Steering Committee meetings, where the Project Coordinator will accept, or not, the proposed updated. Both Project and Technical Coordinators are regularly keep tracking of WPs’ progress, especially WP6 and WP7 on Évora and Alkmaar demonstration activities, respectively. Major risks - as observed in section 3 (Risk Management Plan)- are being dealt via mitigations plans that are already being carried out for some cases.

## 2.2 Deliverables’ submission

Each deliverable author is responsible, assisted by Task and/or WP leader, to grasp the information available in the Description of Action and convert it into a fit-for-purpose deliverable. Timely actions shall be taken by the authors in order to plan the request of inputs from other partners, in order not to delay the submission. Case a delay is expected, it should be communicated to the Quality & Risk Manager and Project Coordinator as soon as possible, together with a reasonable justification (e.g. reasons such as “lack of time” will not be accepted) and a new expected date for submission.

From the very beginning, POCITYF consortia has set up a two reviewers-system, aiming to ensure their high-quality via peer review:

- **First reviewer:** someone involved in the task under which deliverable is being written and with right expertise to provide content-wise and scientific evaluation;
- **Second reviewer:** partner not involved or not deeply involved in task and respective WP, so as to provide more high-level revision.

Both reviewers should assess deliverables’ content against the activities described in the Description of Action, to infer about their alignment with the contract.

In the first version of the Project Management Roadmap (D11.1) it was a presented a process (chapter 1.11) regarding the submission of deliverables. It can be again observed,



in Figure 2, with some slight changes (namely the inclusion of the Quality & Risk Manager in the process).

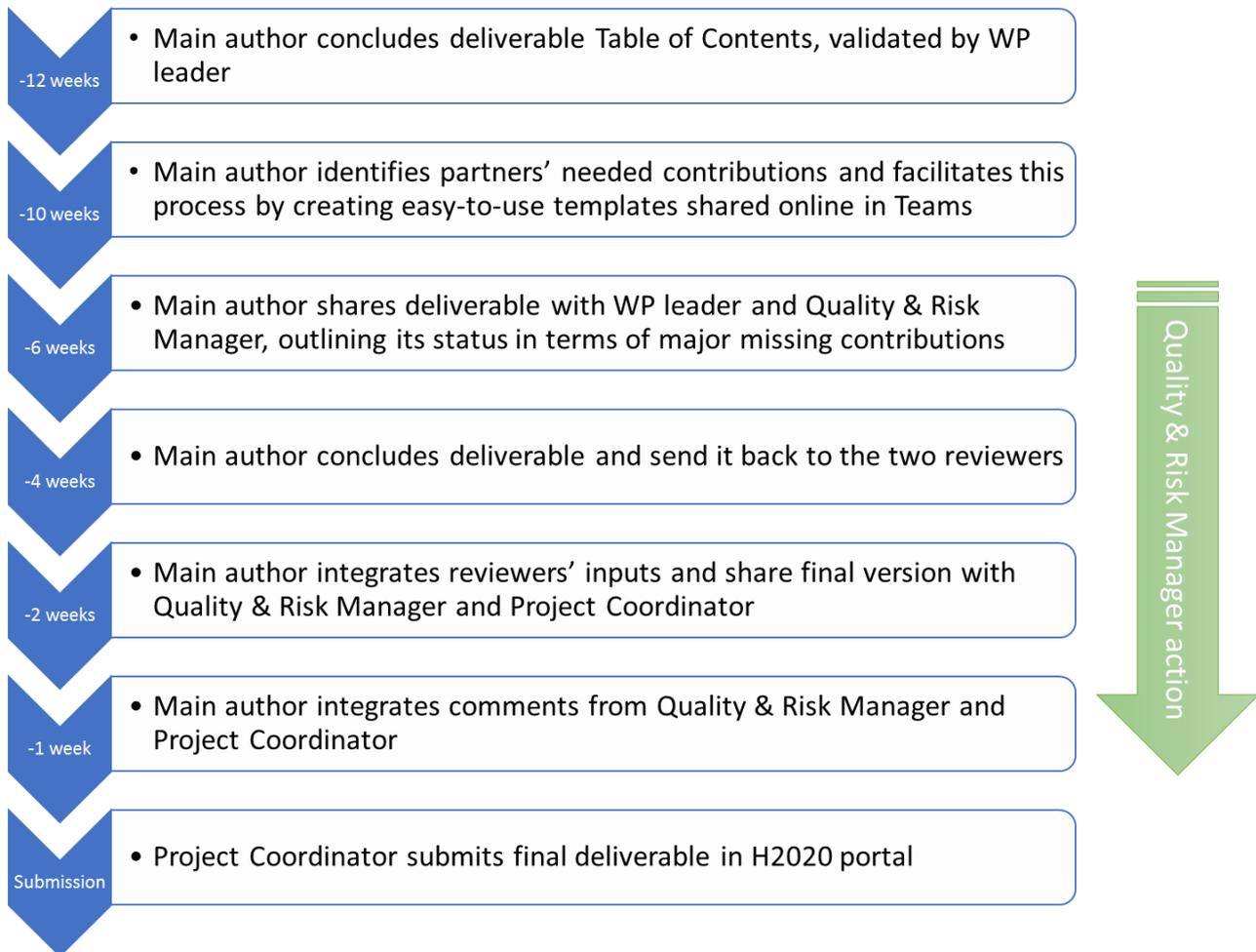


Figure 2 - Deliverables' submission process

POCITYF will always use MS Office, more concretely: doc and docx will be the most used ones. Before officially submitting deliverables in the H2020 portal, the Project Coordinator will convert the documents into .pdf. Templates were already provided to consortium and they are being strictly used. Every deliverable main author is responsible to check the quality of the .pdf output, regarding fonts, graphics as charts, pictures, etc.



## 3 Risk Management Plan

Risk Management undertakes a pivotal role in the project management structure. The risk management plan main objective is to ensure an early identification of the risks during the preparation phase (typically related to technical and legislations constraints), as well as during the demonstration activities and monitoring periods. The identification of the risks is then followed by a thorough analysis by the risk owner, where the risk level is assessed - Figure 3 and Figure 4 -, and the proper mitigation measures are outlined. Each mitigation measure has an associated responsible entity and a well-defined deadline.

High-risks tasks or actions will be further screened and scrutinised, and new mitigation measures will be taken to reduce the overall risk to an acceptable level.

POCITYF **Quality & Risk Manager** takes the responsibility for regularly reassess and update the risk management strategy, accordingly to the ISO 31000:2018 standard, and subsequent plan, which will be addressed and revised back-to-back with the occurrence of the Project Steering Meetings. Risk management will be an ongoing process running during the project lifetime, including risks' reassessment and mitigation plans, which will lead to a definition and execution of risk recovery actions.

### 3.1 Risk Management Process

The process of risk management should be led by each WP leader in close cooperation with the Quality & Risk Manager, the Project Coordinator and the Project Steering Committee.

Nevertheless, risks could be identified by any partner (at any given time) and should be analysed by Task and WP leaders. This identification contemplates overall project risks, WP-level risks or tasks risks. After being raised, each risk is then assigned to a WP (if raised in other forums) and a responsible partner.

To guarantee the consistency and uniformization of the risks management process, a template has been elaborated - Figure 3 - and shared with each WP leader.

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments

Figure 3 - Risk management process template.

Each raised risk shall have the following characterisation:

- **An associated risk owner** (WP level, task leader or other involved partner): responsible for managing the risk, coordinating all the mitigation actions in accordance with the established deadlines, and periodic reevaluating the risk. It will be the single point of contact in what concerns the mentioned risk;
- **Risk ID:** identifies the number of the issued risk. All the risks that were already suppressed should keep the assigned number to avoid any mismatch (risks with the same ID number). The risk owner is responsible for managing the risk numbering system and each WP has its own numbering process;



- **Risk description:** brief description of the entitled risk. The description should be concise, describing, nevertheless, all the relevant matters related to the reason of being;
- **Likelihood and Impact:** these are two of the upmost importance categories to manage the risks. The risks' likelihood and impact should be evaluated according to the risk matrix depicted in Figure 4.

**Risk zones**

0	1	0	+
0	2	1	Impact
0	0	0	-
- Likelihood +			

Figure 4- Risk matrix used to assess risks' likelihood and impact.

The timing and treatment associated to each risk should be managed by the risk owner in straight collaboration with the relevant parties involved. In case of any disagreements regarding the risks, the issue can be escalated to the Quality & Risk Manager, the Project Coordinator and the Project Steering Committee.

Every risk that is catalogued in the orange or red areas of the abovementioned risk matrix (see Figure 4) - the ones considered as "critical", should be communicated to the Quality & Risk Manager, the Project Coordinator and the Project Steering Committee as well, to guarantee a high-level monitoring. These risks will be closely followed by the Quality & Risk Manager and the Project Coordinator together with respective WP leader, being always part of the agenda of the Project Steering Committees meetings. WP leaders are responsible, in order to prepare those meetings, for communicating with risk owners in order to be entirely up to date concerning the state of play of the critical risks. The other ones will still be target of a close monitoring by the WP leaders, responsible to assess when, and if, they should be moved to the critical area. The critical risks shall have a thorough mitigation plan, whereas the remaining ones can be less detailed, especially in the green area.

- **Mitigation Measure(s) description, responsible and deadline:** should be as exhaustive as possible, with a responsible partner(s) and a deadline associated. The mitigation measure responsible should carry the action followed up by the risk owner to guarantee risk's improved management.
- **Open comments:** as the name implies, this field is left for relevant comments not mentioned in the previous categories. Risk owner should manage this process, accommodating and filtering all the remarks provided by the partners.

The goal is to ensure the risks have the lower likelihood and impact for the project smooth deployment.

In the Annex section, a list of risks per WP is presented, in accordance with the risk management process herein stipulated.



## 4 Conclusions

In this deliverable, both the Quality and the Risk Management Plans are delineated, presenting the basis through which POCITYF consortia will deal with risks and the tracking of their evolution will be conducted.

For the moment being, POCITYF has 10 critical risks, as depicted below, being 1 from WP3 (Evaluation Activities, Socio-economic Impact Assessment and Recommendations), 2 from WP4 (Citizens Engagement and Open Innovation Activities), 6 from WP6 (Évora demonstration activities) and WP7 (Alkmaar demonstration activities), respectively, and 1 from WP11 (Project Management). As expected, the majority of critical risks come from the lighthouse cities' WPs.

Risk zones

15	14	10	+
7	8	6	Impact
5	7	7	-
- Likelihood +			

The critical risks are the following:

- WP3: “Monitoring and impact assessment Cities use different monitoring methodologies and metrics, producing incomparable datasets. Difficulty in generating relevant monitoring data”;
- WP4:
  - “Limited participation of citizens and stakeholders in the engagement actions and co-creation initiatives as researchers and citizens should avoid the personal contact that enables the Corona Virus transmission.”;
  - “Limited access to citizen data.”;
- WP6:
  - “Slow evolution or impossibility in deploying solutions relevant to Cultural Heritage due to policy/legal and/or social-motivated (citizens tend to be conservative in protecting their heritage) barriers of historical and protected areas”;
  - “Possibility or large delay in deploy Solar Community Farm: PV plant in the outskirts of Évora that still needs to be constructed (financed by a promoter) and connected to the grid. Afterwards, citizens still need to pay "shares" of the solar farm to use its PV generation”;
  - “Technical problems regarding deployment of PV traditional shingle solution from TEGOLA, given that it is a rather innovative product.”;
- WP7:
  - “Covid 19 virus may impact the overall planning of all pilot sites”;
  - “Pilot *GasFreeWorks!*: The main risk is that DBL does not find a proper location to build the new building within suitable timelines.”;
  - “Pilot *GasFreeWorks!*: as the building is not final, more or less of the IE will be installed. (e.g.triple glazing, thermo acoustic heat pumps, PVT, PCM, smaller heat pumps in cascade and buffers vessels ATES system). See risk 10”;



- WP11
  - “COVID-19 impact: due to recent spread of the virus across Europe, it's possible that this situation impacts the project not only in terms of physical meetings' occurrence, but also in terms of deployment of solutions, as this phase is very dependent on site visits and field work (it's not reliable predictable when circulation restraints will be lifted, as of today). The amount of persons going to sick leave can also impact project progress, as stated in risk #6”.

The abovementioned risks are fully characterised in the Annex section, together with mitigation plans.

The outbreak of COVID-19 will lead to the emergence of significant risks, both project- and demonstration-related. Due to its recent swift evolution, their thorough analysis will be performed separately from the current deliverable. The Project Coordinator, the Technical Coordinator and Quality & Risk Manager will set the framework to be followed and assess the general project risks. The LHCs' Site Managers will be involved in a subsequent stage, being responsible, together with their ecosystem (especially the Transition Track leaders), for the characterisation of risks, solution by solution.





# POCITYF



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.

# Annex - WP related risks

The risks herein presented were provided by each WP leader, having as basis the risks identified in the Grant Agreement.

## WP1

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Nikos Nikolopoulos (n.nikolopoulos@certh.gr)	1	Barriers and limitations in legislation, regulation, policy within the duration of POCITYF	Medium	High	Cooperation from the start with relevant networks, stakeholders (e.g. Municipalities, Regulatory Energy Authorities, Citizens)	●	1) RUG to identify Regulatory barriers and limitations (focus on cultural heritage areas) 2) EDPL, as coordinator; WP1, WP6, WP7 and WP8 leaders; 3) LHCS' Site Managers with the contribution of ETT Leaders 4) INESC TEC to coordinate citizen engagement activities	Throughout project duration	
João Formiga (joao.formiga@edp.com) and Martijn de Vries (m.devries@newenergycoalition.org)	2	Wrong selection of POCITYF solutions and incomplete requirements or not deep enough, mainly related for TRL 6 starting technologies' inclusion	Medium	High	The technical knowledge of the participants (including the corresponding technology providers), the composition of the consortium and the selection of an appropriate specification methodology. The fact that all of these technologies have already been pre-piloted. Therefore direct know-how exchange and lessons learnt between them and the LH Site Managers is possible.	●	LHs Site Managers, Technology Providers, CERTH as Technical Coordinator and EDPL as Project Coordinator	Throughout project duration	
João Formiga (joao.formiga@edp.com) and Martijn de Vries (m.devries@newenergycoalition.org)	3	Solutions relevant to Cultural Heritage (mainly related to Evora LH) and protected buildings entail a significant risk of not-being applicable	Medium	High	Relevant technologies have already been pre-assessed for the demo buildings and have been implemented with success in relevant environments	●	Evora LH Site Manager, technology Providers, CERTH as Technical Coordinator and EDPL as Project Coordinator	Throughout project duration	
José Miguel Costa (josemiguel.costa@edp.com)	4	Poor Communication among partners and especially with the LHs	Low	High	POCITYF already proposes the development of an already tested LH structure (IRIS), in each LH ecosystem (including Site Manager, ETT Manager, IS Manager, Regulation & Standards Manager, Replication Manager, Monitoring and Evaluation Manager, e.t.c. as being described in D11.1).	●	All POCITYF Managers being included in POCITYF Steering Committee (D11.1)	Throughout project duration	
Luigi D'Oriano (luigi.doriano@energyatwork.it)	5	Poor knowledge transfer from LHs to FCs hinders replication planning	Low	High	POCITYF overall structure adopted (D11.1) with specific allocated roles, based on the entitled WP Leadership. Active participation and mentoring, sufficient resources, staff exchange and practicing sessions	●	All POCITYF Managers being included in POCITYF Steering Committee (D11.1), with an increased role of Business Modelling Manager (BMM), Citizen Engagement Manager, Demonstration Coordinator, Exploitation Manager (EM), Regulation & Standards Manager and Replication Manager.	Throughout project duration	

### Risk zones

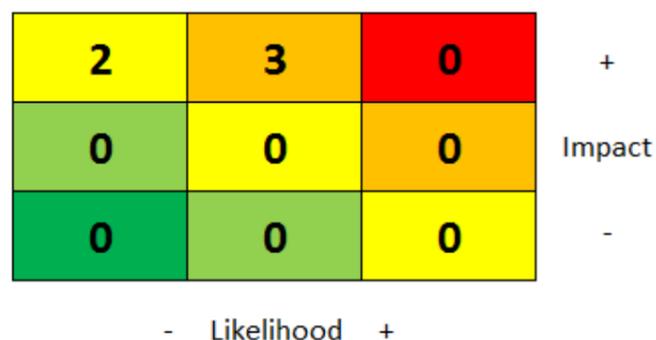


Figure 5 - WP1 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP2

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
WPL (WP2) Julia Kantorovitch@vtt.fi	1	Delay in demo PED development, which in term may affect the monitoring activities	High	Medium	The monitoring and evaluation plan to be adapted accordingly	●	EETs' leaders	M24	
WPL (WP2) Julia Kantorovitch@vtt.fi	2	Interfaces to access monitoring data are not available	Medium	High	Carefully following the development of ETTs with EETs' leaders and technology leaders	●	EETs' leaders	M24	
T2.4 leader ( Neumann Hans-Martin <Hans-Martin.Neumann@ait.ac.at>)	3	CIPs are not available in LH demo sites	Medium	Medium	Carefully following the status and availability of respective APIs with EETs' leaders	●	LH demo sites leaders	M24	
T2.1 leader (Konstantinos Kourtzanidis <kourtzanidis@certh.gr>)	4	Baseline measurements are not available	Medium	Medium	Continues dialog with EETs' leaders and solution providers while assessing PED solutions and defining KPIs	●	EET's leaders and solutions providers	M12	

Risk zones

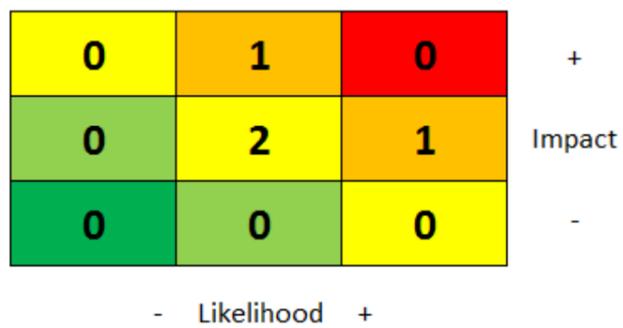


Figure 6 - WP2 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP3

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Luigi D'Oriano (luigi.doriano@energyatwork.it) Giuseppe Mastandrea (giuseppe.mastandrea@energyatwork.it)	1	Poor knowledge transfer from LHs to FCs hinders replication planning	Medium	Medium	Active participation and mentoring, sufficient resources, staff exchange and practicing sessions	●	E@W, CIRCE, CERTH	Continuous	This risk is shared with WP8
David Zambrana (dazambrana@fcirce.es)	2	Monitoring and impact assessment Cities use different monitoring methodologies and metrics, producing incomparable datasets. Difficulty in generating relevant monitoring data	High	High	A common data sharing and monitoring (WP2) protocol and benchmarking standards are specifically designed in WP3. Solutions and their implementation will comply with agreed metrics and protocols to ensure the comparability of performance data and datasets.	●	E@W, CIRCE, CERTH	M30	This risk is shared with WP2

Risk zones

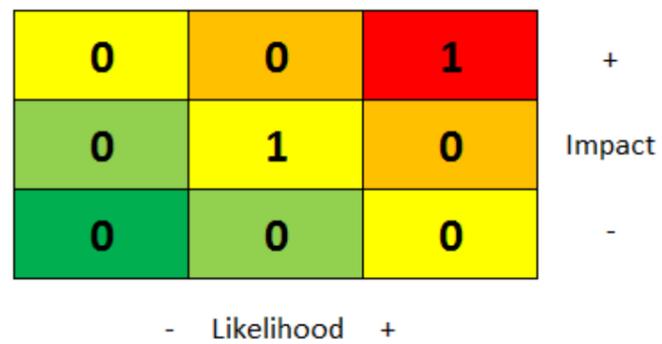


Figure 7 - WP3 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP4

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Lia Patrício lpatric@fe.up.pt	1	Limited participation of citizens and stakeholders in the engagement actions and co-creation initiatives as researchers and citizens should avoid the personal contact that enables the Corona Virus transmission.	High	High	(sample selection) Efficient plan of dissemination actions to invite citizens to participate of the interviews if there is no possibility to promote face to face events or meetings.  (data collection) First, start by interviewing stakeholders through skype, followed by the interviews with citizens using the same tool.	●	INESC	M8	Deadline of Deliverable 4.1 should be extended as participants tend to be less interested if the project team are not in the field and close to citizens.
Lia Patrício lpatric@fe.up.pt	2	Insufficient details in the defined strategies of 4.1 could lead to underestimate the co-creation of solutions through engagement.	Medium	High	Participation of all relevant partners to requirements, solutions, and scenarios gathering. Meetings will be held to ensure that activities are streamlined and punctual issues are mitigated.	●	INESC	M12	Risk 1 can impact risk 2.
Lia Patrício lpatric@fe.up.pt	3	Underperforming partners - Low quality of work, namely the platform development, systematic delays, etc.	Low	High	Propose a close relationship with the developers to ensure quality of the deliverables and their preparation in a timely manner. Regular WP & technical meetings will be held to ensure that activities are streamlined.	●	INESC	Continuous	N/A
Lia Patrício lpatric@fe.up.pt	4	Limited participation of external third parties in the Open Innovation Contests.	High	Medium	Experts on citizen engagement will collaborate and closely cooperate with the cities' ecosystem to train the local cities' coaches for ensuring wide participation of local third parties and co-creating communities by organizing open innovation contests and by allocating a certain amount of budget as a prize for such a purpose.	●	INESC	M20	N/A
Lia Patrício lpatric@fe.up.pt	5	Limited access to citizen data.	High	High	Experts on citizen engagement will treat data as anonymous and confidential according to POCITYF data privacy principles and GDPR.	●	INESC	M12	N/A
Lia Patrício lpatric@fe.up.pt	6	Unwilling partners to cooperate with the engagement strategies and co-creation initiatives.	Low	High	Before initiating activities partners will be involved and contacted to contribute with WP4. A communication plan is being developed to map all partners involved in each task, in order to establish effective synergies.	●	INESC	M12	N/A

Risk zones

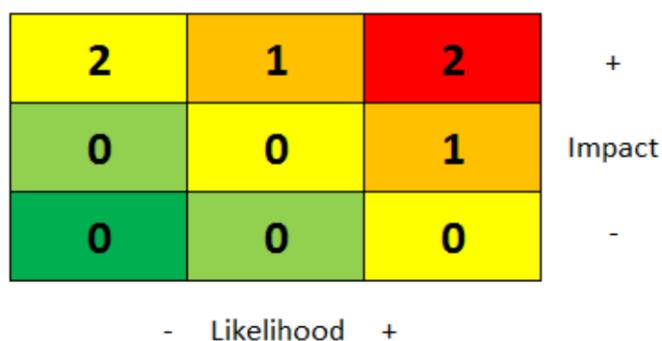


Figure 8 - WP4 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP5

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
WP5	1	Out of the radar/emerging competition could hinder innovation and threaten commercialization	Medium	Low	Market intelligence activities will ensure continuous monitoring and analysis of the market and competition landscape. The project will ensure the thoroughness and quality of the resulting reports and the exploitation plan will be updated to reduce the risk and new ways of exploitation will be evaluated.	●	RINA / ICONS	M60	ICONS is in charge of the exploitation measures and RINA of the business modelling

Risk zones

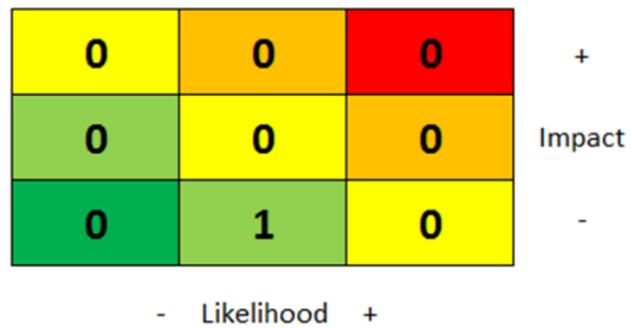


Figure 9 - WP5 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP6

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	1	Barriers and limitations in legislation, regulation, policy cannot be affected within duration of the project	Medium	High	1) Cooperate from the start with relevant networks (other selected projects, branch organisations, EURO CITIES etc), to learn from similar lessons learnt and ways to surpass these possible obstacles 2) Giving the fact that POCITYF is an innovation project, the consortium may have access to regulatory sandboxes, in case of need. For that, an ad-hoc involvement of National Regulatory Bodies should be pursued	●	1) EDPL (WP9 leader) and LHC Site Managers 2) Each LHC Site Manager Continuous No short-term next steps were defined	Continuous	
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	2	Poor coordination of the implementation and demonstration activities	Low	High	1) Detailed technical, business and end-users' requirements elicitation as well as regulatory framework investigation will lead to detailed and solid master plans for each LH city across all 4 ETTs in WP1. Such master plans will be annually revised and updated by adapting to the on-the-fly identified implementation deadlocks in WP6 and WP7 respectively. 2) Close cooperation between WP6 and WP1	●	1) CME (as WP6 leader) 2) EDPL (as T6.2 leader) 3) CERTH (as WP1 leader) 4) RUG (regulatory expert) and other WP1 and WP6 main contributors	Continuous	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	3	Slow evolution or impossibility in deploying solutions relevant to Cultural Heritage due to policy/legal and/or social-motivated (citizens tend to be conservative in protecting their heritage) barriers of historical and protected areas	High	High	1) Relevant technologies have already been pre-assessed for the demo buildings and have been implemented with success in relevant environments 2) Start contact with legal authorities that can prevent the deployment of solutions within the city centre, by presenting the project (its social, economic and technological gains) and the solutions to be implemented 3) Start engagement with citizens (which is at the core of POCITYF anyhow) and establish relationship of confidence and excitement between citizens and POCITYF solutions for heritage sites	●	1) Concluded 2) CME & EDPL & ONYX & Tegola & Other technological providers 3) CME & EDPL & INESC and ICONS	1) Continuous 2) M6 3) Continuous	1) No short-term next steps were defined. WP1 will promote reanalysis of solutions envisioned in the proposal and assess their deployment feasibility 2) EDPL, CME and PV providers (ONYX and TEGOLA) have had the site visit alongside with DRC and shall present the final solution to DRC by the end of April 3) EDPL will promote, together with CME, ICONS (WP10 leader) and INESC TEC (WP4 leader), the creation of a social-oriented message to be delivered to Évora citizens and communities, until end of M8, to mitigate a possible lack of trust towards POCITYF and worry that
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	4	Inclusion of technologies of TRL6 endangering timely implementation and results in under-performance	Low	Medium	1) Technologies have been pre-piloted by all relevant technology providers/industrial partners of the consortium 2) Close cooperation between WP6 and requirements' identification in WP1 3) Consider the installation of additional solutions	●	1) Concluded 2) WP6 technology providers and WP1 main contributors 3) EDPL and CME	1) Concluded during proposal stage 2) Continuous 3) Continuous	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	5	Possibility or large delay in deploy Solar Community Farm: PV plant in the outskirts of Évora that still needs to be constructed (financed by a promoter) and connected to the grid. Afterwards, citizens still need to pay "shares" of the solar farm to use its PV generation	High	High	1) CME to find land where community farm will be built 2) EDPL will identify the next steps for the community farm's licensing 3) Define, at an early stage, the business model behind this solution 4) Launch public procurement as soon as the business model is defined 4.1) If no promoter expresses the desire to proceed with the investment, a crowdfunding sustainable platform can be used to finance it, such as GoParity (Portuguese company) 4.2) EDPL has communication channel with GoParity	●	1) CME 2) EDPL 3) EDPL & CME & DECSIS 4) CME 4.1) EDPL & CME 4.2) EDPL	1) Completed 2) End of M6 3) End of M7 4) M8 4.1) If steps 4) is not completed, start contact with GoParity by beginning of M7	2) EDPL already identified the main actions for the community solar farm's licensing, but is still pending for some clarifications regarding the Solar Plants' auctions.
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	6	Delay in public procurement for subcontracting PV solutions installers	Low	Low	1) CME will launch public procurement previous to the formal start of demonstration tasks. More concretely, when solutions' descriptions and requirements are fully known (content to be presented in D1.1 by M9) 2) CME has already participated in other H2020 projects, where similar processes and best practices were successfully followed	●	1) CME 2) CME	1) Public procurement to be launched between M8 and M9 2) Concluded	N/A



Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	7	Low engagement of citizens of PEB1 and PEB2 towards POCITYF solutions (hardware and software)	Medium	High	1) Regarding PEB2, EDPL has a solid relation of trust with local citizens' community, as previous and ongoing projects (SENSIBLE, InteGrid) were/are being carried out in Valverde village. Therefore, this relation will be leveraged towards POCITYF engagement 2) UEVORA is a major player within PEB2. Given its role within the community, it will lead the way to an effective participation 3) The solution P2P platform (transversal to all PEBs) will be used as the single point of interface between POCITYF residential solutions and the engaged users, in order to not overload them with tools. Hence, a constant cooperation between P2P platform and other software developers will be put in place 3.1) The use cases and business model of the P2P platform had its first refinement (since the proposal stage) in the SSPCR EURAC conference in December 2019, where EDPL held a 90 minutes long workshop on this solution 4) INESCTEC - the responsible for WP4 on citizen engagement - is one of the major technology providers for Évora. That way, it will allow for a sound alignment between top-level defined engagement strategies in WP4 and their application within WP6 concerning Évora solutions. INESCTEC will ensure that the required level of behavioural information will be gathered in a timely manner	●	1) EDPL & CME 2) UEVORA 3 / 3.1) EDPL, software developers and providers 4) INESCTEC	1) To-be-started further down the road, in order to avoid to communicate too soon and let the project be meanwhile forgotten. It will be a continuous task 2) Continuous 3) From M3 onwards 4) Continuous	By M8, citizens will start to receive information about the project and invitations to participate in the demo
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	8	The construction of the vision for Évora Municipality may be affected by the eventual change of political bodies	Low	Low	Strengthen the commitment to the project with the highest political body, throughout project duration	●	CME & EDPL	Continuous	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	9	Partner availability changes driven by imponderable situations early in the project, i.e., impossibility of installing PV solutions within city-centre municipal buildings	Low	High	1) This risk is strictly connected to risk #1. Therefore, if the latter is properly mitigated, this one will follow the same path 2) Due to the groundbreaking challenge that POCITYF is surfing, case the permission to install PV solutions in the municipal buildings of PEB1 is not rendered, the consortium will explore the hypothesis of installing the same solutions outside, but near, the city-centre. The P2P platform will allow to interlink this generation with the consumption within PEB1	●	1) Same as risk #1 2) CME & EDPL & solutions' providers	1) Same as risk #1 2) Continuous	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	10	Lack of local entities to install TEGOLA and ONYX PV solutions	Low	Medium	1) CME to start disseminating project from an early stage in order to create awareness inside the local business ecosystem and raise interest for the future installation of solutions. Subcontracting costs were properly estimated and allocated during the proposal stage. 2) TEGOLA and ONYX to provide specific training in its headquarters, case needed, to CME local professionals in order to coach experts to guide installation process. CME has had similar experiences with different technologies.	●	1) CME 2) CME & TEGOLA & ONYX (to-be-assessed ad-hoc)	1) Continuous 2) To be assessed as soon as solutions requirements are fully listed (from D1.1)	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	11	Insufficient integration of solutions: a significant amount of different solutions technology will be installed in some buildings, which entails the risk of not reaching a smooth and effective communication between solutions (for instance, at the level of different management systems inside one building), affecting data availability and data quality	Low	High	1) A Data Management Plan (D11.4) will be generated early in the project (M6) and maintained for the whole project lifetime addressing the whole lifecycle of the generated data, being updated by M24 and M48 2) Ubiwhere, one of the key players within Évora ecosystem, has substantial expertise in communication protocols and data models, ensuring the needed expertise to mitigate this risk. Ubiwhere is also the provider of the CIP, so, it will have an universal view towards the information flows and data requirements, being able to map the system from a top-down perspective	●	1) EDPL 2) Ubiwhere together with BMS/HEMS solutions' providers	1) First version by M6 2) Continuous, during WP6	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	12	Insufficient space for PV solutions and in-house assets within PEB1 and PEB2	Low	High	1) Municipal demo buildings were fully analyzed during proposal stage, being the required area for PV solutions estimated and matched with buildings availability 2) Two site visits have already been held between PV solutions' providers (Tegola, ONYX and Betteries), EDPL and CME to assess PEB1 and PEB2 existing installations 3) PEB2 to-be-engaged clients already have all the hardware within their homes practically installed, so, space will not be an obstacle 4) Case PEB1 identified clients do not have space inside their households for, for instance, the 2nd life batteries, other citizens will be identified, without any significant lost in terms of final impacts	●	1) Concluded 2) CME & EDPL & solutions' providers 3) Concluded 4) EDPL & CME	1) Concluded 2) Continuous 3) Concluded 4) M8, when citizens will be contacted to participate in POCITYF	N/A



Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	14	Technical problems regarding deployment of PV traditional shingle solution from TEGOLA, given that it is a rather innovative product	High	High	1) A site visit between TEGOLA, CME and DRC (Regional Culture Administration) was held in January in order to assess the feasibility in installing the envisioned amount of PV traditional shingle stated in the Grant Agreement. 2) Case the value is impossible to be attained, TEGOLA will deploy a more traditional solution in a demo building of PEB2 (Mitra University Campus, owned by UEVORA), which will be linked to PEB1 positiveness via the P2P platform	●	1) CME & TEGOLA & EDPL 2) TEGOLA & UEVORA & EDPL	1) M7 2) Option to be followed, if needed, after M7	1) After the site visit and DRC remarks, Tegola is now assessing the possibility of having some technical adjustments. In addition, CME is assessing new rooftops/façades (within the buildings identified in the GA) suitable for Tegola's PV traditional shingle.
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	15	Neighboring PV plants' operators don't want to provide certificates of origin, rewarding sustainable behaviour inside PEB1, within POCITYF scope	Low	Low	1) One of the PV owners belongs to EDP Group, therefore, EDPL will have an easy communication channel to use 2) PV plants' operators will be involved as soon as use cases of P2P platform are designed. Anyway, the guarantees of origin will only be valid within POCITYF scope, without any major drawback for the companies. Increase of social responsibility in local communities will be enhanced in this engagement process	●	1) EDPL 2) EDPL & CME	1) M7 2) M7	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	16	Only one small replication area was identified for Évora during the proposal and Grant Agreement stage. This fact may limit the replication activities within the city	Medium	Low	Replication areas of LHCs will be reassessed during WP1 and, if needed, more areas more suitable for envisioned replication actions will be identified and included	●	1) CERTH & CME & EDPL	1) During WP1	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	17	UNINOVA's Energy routers need a proper area/room in each one of the eight municipal buildings	Medium	Medium	1) UNINOVA to share Energy routers' requirements 2) CME to crosscheck Energy Routers' requirements with the Municipal Buildings existing spaces	●	1) UNINOVA 2) CME	1) Completed 2) End of M6	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	18	Lack of electric vehicles with V2G technological capabilities	Medium	Medium	1) Identify how many vehicles in Évora have V2G capabilities (at the present date and envisioned for POCITYF's lifetime) 2) Benchmarking from other EU funded projects (IRIS, e.g), which have faced the same challenges	●	1) CME & EDPL 2) CERTH & UW & INESC TEC & CME & EDPL	1) End of M8 2) End of M8	N/A
João Formiga joao.formiga@edp.com Nuno Bilo nuno.choraobilo@cm-evora.pt	19	Potential conflict of interests in Évora demonstration since both EDP and SONAE/Elergone can act as energy dealers of smart grid surplus energy, within and without the grid	Low	Low	1) An effective governance model of the demonstrator and also an agreement that can define boundaries of commercial interests post-project among the partners in conflict of interest.	●	1) EDPL & ELERGONE	1) M8	Setup specific meeting with the parties involved to discuss the potential conflict of interests. In principle, this issue doesn't present major risks since EDP Labeltec operates autonomously from other EDP affiliated companies (ESCo included).

Risk zones

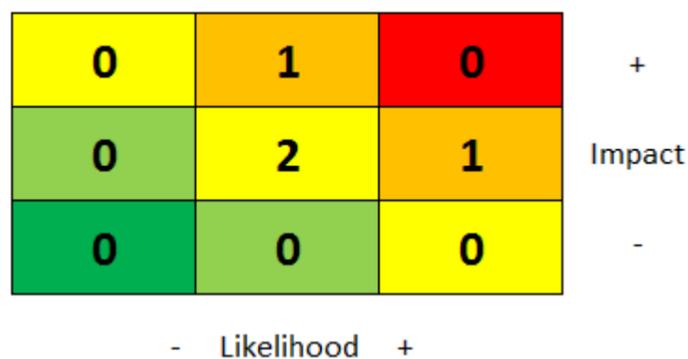


Figure 10 - WP6 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP7

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood Highly unlikely (low), Unlikely (medium), Likely (high)	Impact Slightly harmful (low), Harmful (medium), Extremely harmful (high)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
<a href="mailto:josemiguel.costa@edp.com">José Miguel Costa josemiguel.costa@edp.com</a>	1	Covid 19 virus may impact the financial possibilities of all parties to continue their pilot in this project	Medium	High	Actions from EU and government to protect the economic situation.	●	Government & EU		Not possible to influence this risk by the project team.
<a href="mailto:josemiguel.costa@edp.com">José Miguel Costa josemiguel.costa@edp.com</a>	2	Covid 19 virus may impact the overall planning of all pilot sites	High	High	EDP to report to EU Project coordinator to grant extra time	●	EDP		A specific mitigation plan will be developed for COVID19, as stated in WP11 risk matrix. The impact will be large due to: participants taking children-care leave; municipalities and social housing companies efforts oriented to COVID-19 situation.
<a href="mailto:CGroot2@alkmaar.nl">Cees Groot CGroot2@alkmaar.nl</a>	3	Pilot De Meent: No timely full completion of the intervention (delay) due to permitting issues	Low	High	1. Early involvement of the permitting department of the municipality 2. Look at possibility for separate permits for different phases, which decreases delay	●	Cees Groot (GA)	Ongoing	
<a href="mailto:kverbeek@alkmaar.nl">Karin Verbeek kverbeek@alkmaar.nl</a>	4	Pilot De Meent: Cancellation of project due to no positive business case. Especially the heat&cooling demand of future neighbours is not known, so the capacity of the heat pump and the ATEs system is yet unknown. The lengths & diameter of the piping of the local heat/cooling system from the heat pump to the neighbours shall be examined and will influence the business case.	Low	High	1. Inform council of Alkmaar Municipality regularly 2. Use quotation based information of third parties for financial information 3. Inform EDP / CERTH as soon as the business case forms a problem 4. Feasibility study has been started with several scenarios (e.g. 30% cold/heat supply, 60% cold/heat supply) to determine the optimal system configuration.	●	GA	Ongoing	
<a href="mailto:TdeWit@woonwaard.nl">Thom de Wit TdeWit@woonwaard.nl</a>	5	Pilot Highrise: changing the zoning plan takes a lot of time, in order to investigate which permits are required	Low	High	The local municipality already decided that changing the zoning plan is not necessary. A normal building permit will be needed.	●	Thom de Wit (WW)	Ongoing	
<a href="mailto:TdeWit@woonwaard.nl">Thom de Wit TdeWit@woonwaard.nl</a>	6	Pilot Highrise: if there will be a lot of resistance from the tenants, consortia won't be able to install the Powernest on top of the roof	Medium	High	Collaboration with TNO to formulate a good communication and participation plan before we start the field work	●	Thom de Wit ( WW)	Starts in Q2 of 2020	
<a href="mailto:l.hageman@vanalckmaer.nl">Luuk Hageman l.hageman@vanalckmaer.nl</a>	7	Pilot Bloemwijk: Based on the final urban plan, the allocation plan will be requested from the Gemeente Alkmaar. If these are not issued, consortia will not be able to continue and delay will be inevitable. A big part of the plan regards the parking norm. The current plan allows for a norm of 1,0, expected to be allowed by the city. Consortia is aiming for a norm of 0,7.	Medium	High	Adjust the urban plan and restart the proces. The likelihood was defined as very unlikely given the fact that the city council has been part of the proces from the start and are up to date.	●	Luuk Hageman (VA)	Start is Q3 2020	
<a href="mailto:l.hageman@vanalckmaer.nl">Luuk Hageman l.hageman@vanalckmaer.nl</a>	8	Pilot Bloemwijk: Financially the project is not feasible due to market conditions. If the housing market shows a downturn this will affect the ability of Van Alckmaer to secure financing given the current financial ratio's as required by the guarantor.	Medium	High	Contact the guarantor or delay other projects of Van Alckmaer	●	David van Oostrom (VA)	Start in Q3 2020	
<a href="mailto:l.hageman@vanalckmaer.nl">Luuk Hageman l.hageman@vanalckmaer.nl</a>	9	Pilot Bloemwijk: Financially the project is not feasible due to increased building costs. Current budgetting allows for a significant increase in the investments necessary to complete the project.	Low	High	Contact the guarantor or delay with other projects of Van Alckmaer	●	David van Oostrom (VA)	Ongoing	
<a href="mailto:r.degroot@duurzaambouwloket.nl">Roel de Groot r.degroot@duurzaambouwloket.nl</a>	10	Pilot GasFreeWorks: The main risk is that DBL does not find a proper location to build the new building within suitable timelines.	High	High	Decision with regards to a possible location will be done before end of march 2020. If DBL cannot find a location to build their buidling, GA has an alternative newly built primary school in De Hoef, which will be operational from September 2021.	●	Roel de Groot (DBL) GA	Principle decision: March 24th	
<a href="mailto:r.weijers@connexion.nl">Robert Weijers r.weijers@connexion.nl</a>	11	Smart charging is not available at the start of the operation of the charging depot	High	Low	Lower the number of buses in specific time slots	●	Robèrt Weijers (RW)	Ongoing	
<a href="mailto:TdeWit@woonwaard.nl">Thom de Wit TdeWit@woonwaard.nl</a>	12	Pilot Highrise: consortia might have to take mitigating measurements to protect the bat colony when installing circular material insulation	High	Low	Put extra bat cases	●	Thom de Wit ( WW)	Extra research from May 2020 till September 2020.	
<a href="mailto:r.degroot@duurzaambouwloket.nl">Roel de Groot r.degroot@duurzaambouwloket.nl</a>	13	Pilot GasFreeWorks: as the building is not final, more or less of the IE will be installed. (e.g.triple glazing, thermo acoustic heat pumps, PVT, PCM, smaller heat pumps in cascade and buffers vessels ATEs system). See risk 10	High	High	Throughout search for a new location, DBL will take into account the possibility of using the new techniques as described in the original plan.	●	Roel de Groot (DBL)	Ongoing	



Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood Highly unlikely (low), Unlikely (medium), Likely (high)	Impact Slightly harmful (low), Harmful (medium), Extremely harmful (high)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
<a href="mailto:l.hageman@vanalckmaer.nl">Luuk Hageman</a> <a href="mailto:l.hageman@vanalckmaer.nl">l.hageman@vanalckmaer.nl</a>	14	Pilot Bloemwijk: Amount of batteries is uncertain. Engineering is not started with regards to the installation.	Medium	Low	Continue engineering	●	Luuk Hageman (VA)	Start in Q3 2020	
<a href="mailto:CGroot2@alkmaar.nl">Cees Groot</a> <a href="mailto:CGroot2@alkmaar.nl">CGroot2@alkmaar.nl</a>	15	Pilot De Meent: Amount of batteries is uncertain. Engineering is not started with regards to the installation.	Medium	Low	Continue engineering	●	Cees Groot (GA)	Ongoing	
<a href="mailto:kverbeek@alkmaar.nl">Karin Verbeek</a> <a href="mailto:kverbeek@alkmaar.nl">kverbeek@alkmaar.nl</a>	16	Solar road cannot be installed in Bloemwijk due to following reasons: 1. the monitoring phase will be too short as the solar road can only be installed after all the dwellings in Bloemwijk are realised. Otherwise the solar road will be damaged by the heavy transport vehicles (after 2025). 2. there is a lot of shadow in Bloemwijk due to the dwellings and trees. There is no good place to install the solar road to have optimal sun conditions. 3. the top layer of the solar road will be damaged by heavy traffic and is only suitable for bicycle roads. This is the result of other pre-pilot projects. Bloemwijk doesn't have separate bicycle roads.	High	Low	Install the solar road in pilot area Olympiapark (close to De Meent)	●	GA	Ongoing	
<a href="mailto:jeroen.jansen@neroa.nl">Jeroen Jansen</a> <a href="mailto:jeroen.jansen@neroa.nl">jeroen.jansen@neroa.nl</a>	17	City Energy Management System in the pilot projects 1. dwellings must be available for monitoring, individual dwelling owners can refuse 2. technical ability to monitor the premises; availability of an interface to connect.	Medium	Medium	1. With 400 dwellings, there will be people that refuse, but there will remain more than enough people 2. There are other options to monitor smart meters, but data will be less accurate. 3. When there are no smart meters, consortia can arrange with grid operators to get them installed.  All members at the WP7 have been informed in the consortium meeting and with separate email to pay attention to the interfacing and to involve Neroa starting from the procurement phase until realisation phase of the pilots.	●	1. Neroa 2. Building owners 3. Pilot owners	Ongoing	
<a href="mailto:vasiliki.georgiadou@tno.nl">Vasiliki Georgiadou</a> <a href="mailto:vasiliki.georgiadou@tno.nl">vasiliki.georgiadou@tno.nl</a>	18	DSM solution, ReFlex (based on PowerMatcher, but more advanced) in the pilot projects: 1. Availability of flexibility, lack of ability to control devices  PS. This task highly depends on the timely completion of construction of new houses (Bloemwijk), timely selection of GFW location (see other risks)	High	Medium	1. Properly analyse the possibilities for available flexibility and control options. Properly prepare. 2. Search for alternatives with pilot owners	●	1. TNO 2. Pilot owners	Ongoing	
<a href="mailto:tfaassen@alkmaar.nl">Tim Faassen</a> <a href="mailto:tfaassen@alkmaar.nl">tfaassen@alkmaar.nl</a>	19	A DC grid (only cabling) is available at two locations in Alkmaar. But the components for the lamp posts and the supply of DC with associated safety components are not easily available and still in a pre design phase at the commercial parties (e.g. Citytec).	High	Low	Further investigation is ongoing. Possible no connection to the DC grid. Alternative IE possible? See risk 20	●	GA	Ongoing	
<a href="mailto:tfaassen@alkmaar.nl">Tim Faassen</a> <a href="mailto:tfaassen@alkmaar.nl">tfaassen@alkmaar.nl</a>	20	Location of the Lamp posts is in Bloemwijk in accordance with the grant agreement. But currently only 65 pcs of lamp posts are located in whole area of Bloemwijk. At De Meent ice rink there are currently exactly 82 lamp posts present. Probably a mistake in the grant agreement with regards to the location.	High	Low	Install some smart lampposts in De Meent and a few in Bloemwijk. To be determined how many and where exactly.	●	GA	Ongoing	
<a href="mailto:tfaassen@alkmaar.nl">Tim Faassen</a> <a href="mailto:tfaassen@alkmaar.nl">tfaassen@alkmaar.nl</a>	21	5G on lamp posts may cause resistance as some fear health problems. Especially when located at residence areas such as Bloemwijk.	High	Low	1. Install some 5G lamp posts at location De Meent (no dwellings in the neighbourhood). Also McDonalds opposite to the ice rink has indicated that they would like to have 5G possibilities. 2. Collaboration with TNO to formulate a good communication and participation plan before we start the field work.	●	GA	Ongoing	



Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood Highly unlikely (low), Unlikely (medium), Likely (high)	Impact Slightly harmful (low), Harmful (medium), Extremely harmful (high)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
<a href="mailto:tfaassen@alkmaar.nl">Tim Faassen</a>	22	Combined lamp posts with integrated e-car charging pole possibilities might not be possible, because: 1. technical issue: different voltage is needed of both cabling will cause electromagnetic interference with each other, leading to malfunctioning of the system and possible damage. 2. legal issue: in case of a collision of a car with the lamppost, which party should repair the lamp post? There are 2 parties involved (party of the lamp post is Stadswerk072 and party of the charging point will be the electricity cabling company e.g. Alllander) 3. technical issue: strong foundation is required as the charging point requires a stable and strong system. This might not be possible on the location where the lamp posts are foreseen.	High	Low	Separate charging points and smart lamp posts. Investigate another new IE related to electric charging of the e-cars. Company MRA-e is experimenting with multiple e-charging poles to combine the charging and buffering of electricity on local level in order to create less local electricity peak demand (other Horizon 2020 project). GA is investigating how to proceed in this IE with this party. Also the location of the charging poles is yet uncertain (Bloemwijk or De Meent).	●	GA	Ongoing	
<a href="mailto:l.hageman@vanalckmaer.nl">Luuk Hageman</a> <a href="mailto:t.deWit@woonwaard.nl">Thom de Wit</a> <a href="mailto:r.hogeveen@hvcgroep.nl">Rene Hogeveen</a>	23	Financially may not be feasible to connect the high rise building and Bloemwijk to the district heating. Also technical risks due to the train track where the piping has to go underneath.	High	Medium	New pilot has been identified (Dillenburgstraat) to connect the district heating.	●	Van Alckmaer; Woonwaard; HVC	Ongoing	An official change of this scope is ongoing. No longer a risk, but mitigation is definitive.
<a href="mailto:tfaassen@alkmaar.nl">Tim Faassen</a>	24	Hydrogen-powered HD vehicle: no budget present. No financial possibilities for municipality of Alkmaar to purchase one.	High	Medium	Another ongoing EU project is the development of two H2 garbage truck vehicles together with a H2 charging point. The project has been granted to the dutch company Hygro. One H2 garbage truck would then be leased to GA (this was the status of this project during the Grant Agreement). RECENT problem is that there is only one supplier for the H2 charging points and this supplier has no capacity (time) to install this charging point within the planning of this EU project. Large risk that the subsidy cannot be used from this EU project and the charging point with the two H2 vehicles will not be bought and the project will be cancelled.	●	GA	Ongoing	Large risk this IE will not continue. Not within the influence of the GA, as GA has no part of this other EU project.

Risk zones

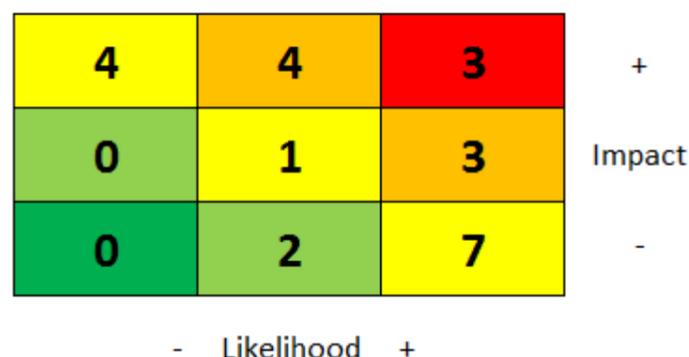


Figure 11 - WP7 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP8

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Luigi D'Orlano (luigi.doriano@energyatwork.it) Giuseppe Mastandrea (giuseppe.mastandrea@energyatwork.it)	1	Poor knowledge transfer from LHs to FCs hinders replication planning	Low	High	Active participation and mentoring, sufficient resources, staff exchange and practicing sessions. Correct execution of T8.2. Establishment of periodical (remote/physical) sessions for showing project's advancements to FCs.	●	WP leader (E@W) and Tasks leader	Mid June	
Luigi D'Orlano (luigi.doriano@energyatwork.it) Giuseppe Mastandrea (giuseppe.mastandrea@energyatwork.it)	2	Deliverable submission overlap: WP leader may have difficulties to manage submission of deliverables related T8.3-T8.8. Also T8.3-T8.8 are heavily dependent from T8.1 and T8.2. Only two months between T8.1 T8.2 and T8.3-T8.8 deliverables deadline may be a problem	Medium	Medium	1) Avoid relying on final deliverable reports as input for tasks: update partners on task advancement while progressing with project's activities. 2) Evaluate, in the context of the first periodic report, one-two months shifting for some deliverables to spread and then relax the submission period.	●	1) E@W 2) E@W, EDPL	December 2020	Here it is important to propagate such risk to the coordinator so it can discuss with the PO, and understand if such mitigation can be feasible or not.
Luigi D'Orlano (luigi.doriano@energyatwork.it) Giuseppe Mastandrea (giuseppe.mastandrea@energyatwork.it)	3	The COVID-19 may cause trouble into the correct kick-off of the workpackage. More specifically, due to the possibility in some territories to perform only web conferences, it is expected that the local meeting between FCs and their ecosystem partners will be less effective.	High	Medium	Reinforce the WP and Tasks coordination, and check, in 3 months, for each task, the overall status of th work, to eventually include specific actions to put the work on the line.	●	E@W	Mid June	

Risk zones

1	0	0	+
0	1	1	
0	0	0	
			-

Impact

- Likelihood +

Figure 12 - WP8 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP9

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Luisa Serra (EDPL) luisa.serra@edp.pt	1	No interest from the cities and other stakeholders to become members of the working group on smart cities for cultural sites	Medium	Medium	1) The working group is being created within EURADA - POCITYF partner -, which is significantly interested and already has a strong network of cities (via the regional development agencies that compose EURADA) 2) The working group will utilize the secretariat of EURADA, hence starting alongside a solid structure that will enable the WG to be dynamic and attend to the initial requests	●	1), 2) EURADA, EDPL, CME, DECSIS	1), 2) Throughout all project	

Risk zones

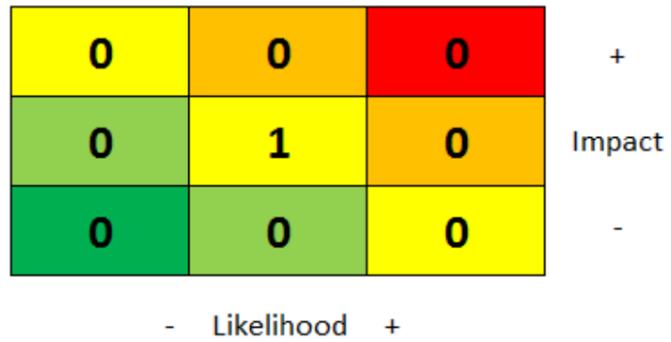


Figure 13 - WP9 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP10

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
Giuliana Folo - giuliana.folco@icube.global	1	Disputes over ownership of IP amongst consortium partners	Low	High	IP dealt since the beginning of the project; dedicated IP workshops foreseen during execution; clear roles of different tech providers to be discussed as part of the exploitation strategy	●	ICONS	Continuous	N/A
Giuliana Folo - giuliana.folco@icube.global	2	Empowerment issues in exploitation strategic decisions	Medium	High	Identification of one key contact for exploitation activities (empowered to discuss and take decisions for the entire partner organization) at the beginning of the project. Involvement of partners' decision makers in project's execution if needed.	●	ICONS, all partners	Continuous	N/A
Giuliana Folo - giuliana.folco@icube.global	3	Finding an agreement on cost and revenue sharing for IS	Medium	High	Clear definition of IP and joint collaborative workshops to define strategies together	●	ICONS	Continuous	N/A
Dídac Rull drull@itec.cat	4	Not receiving a sufficiently detailed definition of solutions on time from relevant partners, necessary to carry out the regulatory research.	Medium	Low	ITeC will ask about this information to the relevant partners, as much as it is needed to obtain the detailed description.	●	ITeC	M9	This detailed description was already ask during January's Steering Committee
Dídac Rull drull@itec.cat	5	Some regulation might be accessible only in the official country language. In some cases it could be a problem to understand specific requirements.	Medium	Low	In these cases, translation from a member partner of the specific country will be needed.	●	ITeC	Continuous	N/A
Dídac Rull drull@itec.cat	6	For some solutions regulatory activities there may be no expert within T10.7	Low	Medium	Options: - Less detailed study for these solutions (as precisely as T10.7 can do) - External contacts	●	Owner of that/those solution/s	M19 - for LHC solutions M41 - for FC solutions	N/A

Risk zones

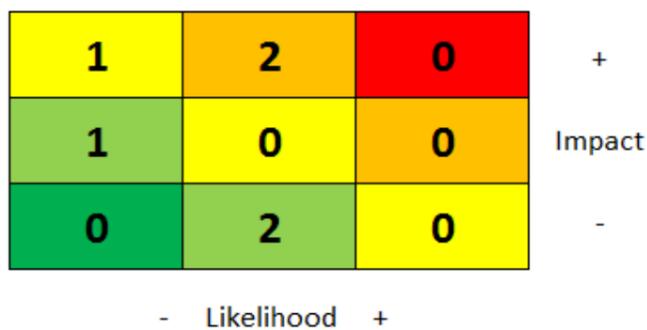


Figure 14 - WP10 risk matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864400.



WP11

Risk owner - name and email (WP leader OR task leader OR other involved partner)	Risk ID	Risk description	Likelihood (Low, Medium or High)	Impact (Low, Medium or High)	Mitigation measure(s)	Risk zone	Responsible for mitigation measure(s)	Mitigation measure(s) deadline(s)	Open comments
José Miguel Costa josemiguel.costa@edp.com	1	Underperforming partners (low quality of work/deliverables; systematic delays, etc.)	Low	High	1) Proper internal two-entities peer review procedures are already in place, as presented in D11.1, in order to ensure quality of the deliverables and their preparation in a timely manner. This procedure is also presented, and updated, in D11.4, where the figure of the Quality & Risk Manager (and Technical Coordinator) gains more importance in ensuring the quality of project outputs. 2) Regular WP & technical meetings are being held to ensure that activities are streamlined, with clear next steps and assigned responsible partners and that lessons learnt are shared.	●	1) EDPL, as coordinator; CERTH, as technical coordinator; and EDPL, in the role of Quality & Risk Manager 2) EDPL, as coordinator; WP leaders; and LHCs' Site Managers	1) Throughout project duration 2) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	2	Technical/administrative disagreement and cooperation problems among partners	Low	Medium	1) Continuous communication between all the partners. 2) The Coordinator, Technical Coordinator and Quality & Risk Manager are working on problem solving, already working on identified risks and respective mitigation plans. If necessary, the Consortium Plenary Board will decide the right solution according to the CA and the GA. 3) D11.1 and D11.4 define the communication procedures and the use of communication tools already operational for the consortium (Teams workspace). The PC is the responsible of solving communication problems, establishing communication flows and methods and calling to bilateral meetings if necessary. WP-related mailing lists were created and are being regularly updated.	●	1) All consortium 2) EDPL; CERTH 3) EDPL, WP-leaders	1) Throughout project duration 2) Throughout project duration 3) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	3	Limited or inadequate resources to manage the project complexity: POCITYF consortium members have long experience in large-scale pilots and large technology-driven innovation projects as well as in the implementation of large and complex systems, thus the possibilities of such problems compromising the project are relatively low. However, the limited financial resources and extended project duration may increase the respective risk	Medium	Low	1) Besides the EC reporting periods, EDPL has stipulated, in D11.1, regular internal reportings, to be used to closely monitor (maximum each 6 months) resources' allocation and technical progress 2) Installation of solutions that require more budget are being already studied, together with mitigation plans, in order to anticipate any significant financial deviation from the GA	●	1) EDPL; CERTH 2) EDPL; LHCs' Site Managers	1) Throughout project duration 2) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	4	Consortium has no harmony	Low	Low	Coordinator is regular contact with all partners, guaranteeing that any team problems are identified and solved before they escalate.	●	1) EDPL	1) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	5	Partner leaves Consortium	Medium	Medium	1) Consortium is of sufficient strength and diversity so that partners can be replaced if required. Coordinator and Technical Coordinator are ensuring, via internal reporting periods, appropriate control and management of the work in progress so that the remaining partners can complete the work, until a new partner is found (in case that is considered necessary). 2) Risks that may lead to partner withdrawal (all related to LHCs' demonstration activities) were already identified in D11.4, with defined mitigation plans involving not only the search of a new partner, but the reallocation of the removed partner to others that can execute that work.	●	1) EDPL; CERTH 2) EDPL; LHCs' Site Managers	1) Throughout project duration 2) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	6	Key staff illness/leave during critical phase	Medium	High	1) All partners have experienced staff that may replace and take over the work assigned to the leaving member, either temporarily or permanently. 2) Coordinator, Technical Coordinator and Quality & Risk Manager will develop a mitigation plan specifically related to COVID-19, where one of the addressed topics will be the possible lack of key personnel	●	1) Consortium 2) EDPL, CERTH	1) Throughout project duration 2) April, 30th	Risk likelihood would be "Low" without the emergence of the COVID-19. Due to its recent evolution (so as of March, 2020), Coordinator has changed the likelihood to "Medium", in order to raise awareness to this fact amongst the consortium preventing a more dramatic situation in terms of the spreading of the virus.
Lúisa Serra luisa.serra@edp.pt	7	Unwilling partners to cooperate with the social, ethical and legal requirements	Low	Medium	1) POCITYF Ethics Manager has proven experience within the ethical compliance domain 2) Project management structure, more concretely the Ethics Board (chaired by the Ethics Manager and with one representative from each partner) will ensure that the consortium is in line with social, ethical and legal requirements. Moreover, three deliverables - D12.1, D12.2, D12.3 - were submitted in November 2019, addressing already some ethical-related topics. D11.11 - Ethical Monitoring and GDPR Conformation Plans - delineates major guidelines to be followed throughout the project.	●	1) EDPL 2) EDPL, Ethics Board	1) Throughout project duration 2) Throughout project duration	N/A
José Miguel Costa josemiguel.costa@edp.com	8	COVID-19 impact: due to recent spread of the virus across Europe, it's possible that this situation impacts the project not only in terms of physical meetings' occurrence, but also in terms of deployment of solutions, as this phase is very dependent on site visits and field work (it's not reliable predictable when circulation restraints will be lifted, as of today). The amount of persons going to sick leave can also impact project progress, as stated in risk #6	High	High	1) Next physical meetings (until July, at least) will be converted into remote calls. 2) POCITYF Coordinator, Technical Coordinator and the Quality & Risk Manager will initiate a process to thoroughly characterise this risk (which was impossible to timely conclude until D11.4 submission), involving in a second stage the LHCs' Site Managers to identify solutions that have the highest possibility of getting delayed.	●	1) EDPL 2) EDPL; CERTH; LHCs' Site Managers	1) March, 31st 2) April, 30th	This risk can suffer significant changes in the months to come, inclusive its total removal until the second version of D11.4 (M14). Nevertheless, due to its continental presence across Europe, and being POCITYF consortium formed by 46 partners from 13 different countries (leading right know with harder boarder controls), the Coordinator has decided to develop a sound mitigation plan for this risk to start assessing its possible consequences and start conceiving mitigation plans.



**Risk zones**

<b>1</b>	<b>1</b>	<b>1</b>	+
<b>2</b>	<b>1</b>	<b>0</b>	Impact
<b>1</b>	<b>1</b>	<b>0</b>	-

- Likelihood +

Figure 15 - WP11 risk matrix

