

Open Market Consultation

FIRES Challenge

PROTECT consortium

15 November 2023, 14:30 - 16:00



FIRE Challenge – 15 Nov. 14:30 – 16:00

Time	Topic	Notes
14:30 – 14:40	Introducing PROTECT & objectives of the OMC	Melissa Campagno, GAC
14:40 – 15:00	Presentation of the State-Of-The-Art analysis for the FIRE challenge, insights from providers, OMC report	Ana Lucia Jaramillo, Corvers
15:00 – 15:30	Presentation of the FIRE challenge and use cases by the group of buyers	Kees Koudenburg, DCMR Jozef Kubinec, Ministry of Interior of the Slovak Republic
15:30 – 15:50	Open discussion	All
15:50 – 16:00	Wrap-up and next steps	Melissa Campagno, GAC

Introducing PROTECT & objectives of the OMC

Mélissa CAMPAGNO

GAC, project coordinator



What is PROTECT about and who is it for?

An Horizon Europe (HE) CSA project aimed at **raising public and private buyers' awareness, building their capacity, and preparing them** for undertaking a joint cross-border Pre-Commercial Procurement (PCP) fully funded under another HE [PCP call](#).

Key actors:

- **Buyers** – public authorities (regions, cities, national and regional agencies, etc.) that may be interested in exploring innovative procurement for tackling adaptation and mitigation issues.
- **EO-based climate services providers** willing to collaborate with the public demand to overcome pressing challenges in the area of climate adaptation by co-designing a new solution 'climate service' based on EO data **NOT YET AVAILABLE** on the market.

An innovative and strategic public governance and procurement approach to climate change adaptation and mitigation

What is the PCP call about?

The Pre-Commercial Procurement (PCP) call “*Customisation/pre-operationalisation of prototypes end-user services in the area Climate Change Adaptation and Mitigation*” is open and available on the Funding and Tenders Portal: [here](#).



19M EUR FULLY funded by Horizon Europe programme



Opened on **17 October 2023**

Close on **28 February 2024 at 17:00 CET**

Estimate start of the PCP: **Sep 2024**

The PCP should deliver successful innovative and fully tested product(s) and/or service(s) that meet the common needs of a buyers' group (consortium of procurers) to *procure research, develop innovative marketable solutions, speed up the time-to-market, and provide best value for money.*



PROTECT supports the preparation of future candidate applications to the PCP call by working both with the demand (**buyers**) and supply side (**providers**) of Earth Observation (EO)-based climate services.

Key expected outcomes of the PCP

- Build on the **Copernicus Services** & respond to the common needs and **beyond state-of-the-art performance targets** of the buyers group;
- **Reduce the fragmentation** of demand for innovative solutions by enabling public procurers to collectively implement a Pre-Commercial Procurement (PCP) in the area of climate adaptation and mitigation, which, due to their nature, are **better addressed jointly**, or which they would not have been able to tackle independently;
- **Create new opportunities** for wide market uptake and economies of scale for the supply side through the use of joint specifications, wide publication of results and – where relevant – contribution to standardization, regulation or certification to remove barriers for introducing innovations into the market and create new products, processes and/or services ready for market uptake



PCP call requirements & eligibility criteria

- The PCP must be executed by:
 - **One or more public buyer(s)** plus possibly one or more private and/or NGO procurer(s) that provide similar services of public interest
 - Entities with a **mandate** from one or more of these procurers to act on their behalf in the procurement (public utilities companies, central purchasing bodies, etc.)
- The **‘lead procurer’** is a public procurer and is the beneficiary appointed by the buyers’ group to coordinate and **lead the procurement activities**. They can be either one of the procurers in the buyers’ group or another beneficiary in the action who is established or designated by the procurers.
- The PCP must address **ONE (only) concrete procurement need identified as a common challenge**, which requires new R&D and is described in the common specifications of the joint PCP call for tender.
- Addressing the common challenge in different countries may require the development and testing of **additional local functionality or adaption of solutions** by each procurer due to differences in the **local context**.
- A PCP that addresses a challenge consisting of **several facets** (sub-challenges or building blocks) is considered one joint PCP, as long as all procurers in the buyers’ group share the need for it.
- Projects applications submitted should have a **maximum duration of 3 years**. Projects of a longer duration will not eligible!



Reach out to info-protect@group-gac.com for more info!

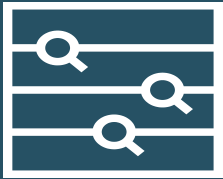


Process towards the 4 OMCs and the PCP call

Mapping of climate challenges at EU regional level



Mapping of EO climate service providers at EU level



Consultations with buyers to identify 4 pressing challenges and finetune their needs



E-pitching sessions with EO climate service providers to complement the SOTA analysis



4 Open Market Consultations on key challenges to inform market providers



Identifying *lead buyer* to build 4 consortia of buyers willing to prepare a joint cross-border PCP application



4 pressing challenges identified



Lead buyer identified



1

Mapping and predicting **FLOODS** (marine, riverine and other sources)



2

Prediction and prevention of **FIRES** and tracing and tracking responsible sources (waste, forest/nature, other)



3

Climate resilient **WATER** solutions (prediction, connecting data, planning, supply-demand)



4

Sustainable & resilient **INFRASTRUCTURE** (sustainable re-development, buildings restoring & adaptation).



Open Market Consultation Objectives



Validate the findings of the State-Of-The-Art (SOTA) analysis and discuss the viability of possible technical and financial provisions/ functionalities.



Raise awareness of the industry and relevant stakeholders (including other users) regarding the upcoming PCP.



Collect insights from the industry and relevant stakeholders (including users) to finetune the tender specifications.

How to get involved?



[Sign up](#) for the **Community Platform** to get access to its ever-expanding Knowledge Hub on Innovation Procurement, Climate Services and Earth Observation (EO) data, get invited to all PROTECT webinars, and stay up to date through our newsletter.



[Join a PROTECT Buyers Group](#) each targeting one of the identified and selected common challenges.



Access to the relevant material and documentation to best prepare for the PCP call, please visit: <https://www.protect-pcp.eu/relevant-resources/>



State-Of-The-Art analysis for the FIRE challenge, insights from providers, and OMC report



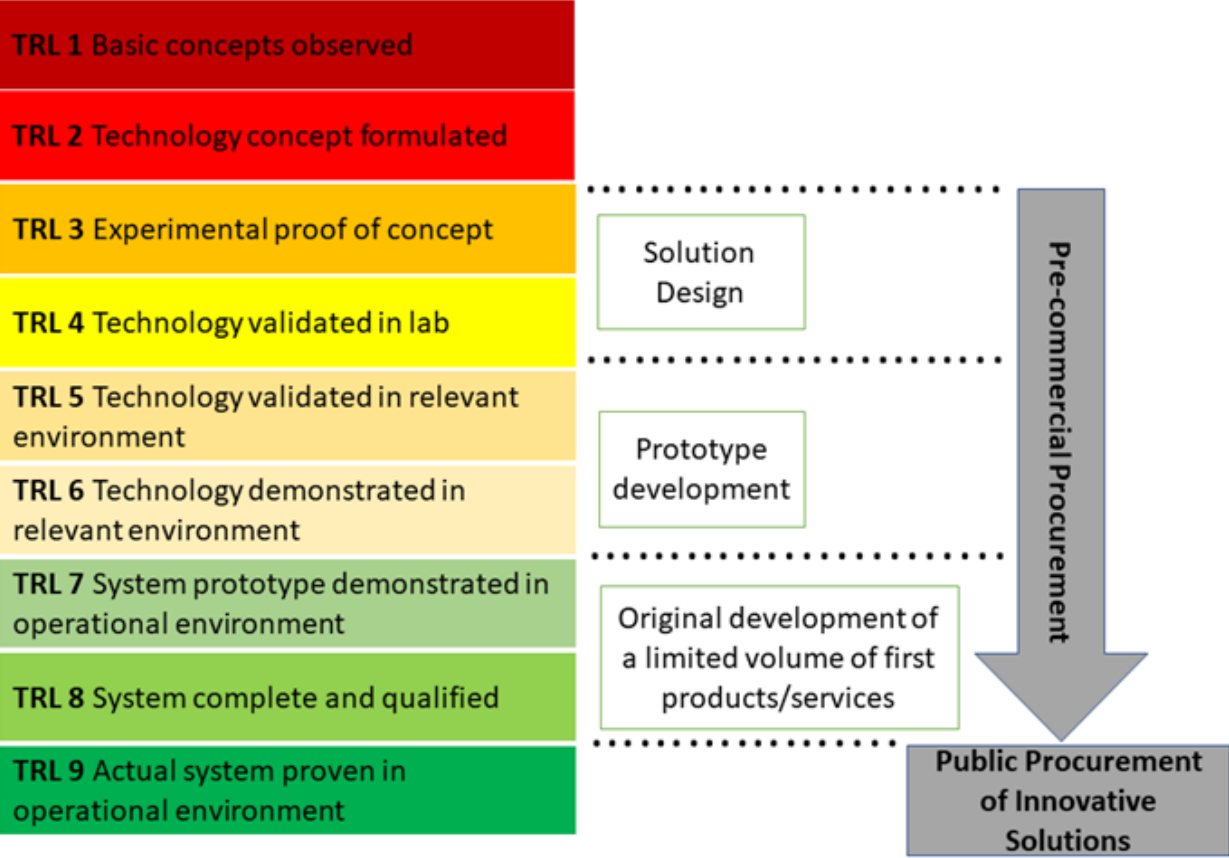
Corvers Procurement Services B.V.
project partner



State-of-the-art analysis

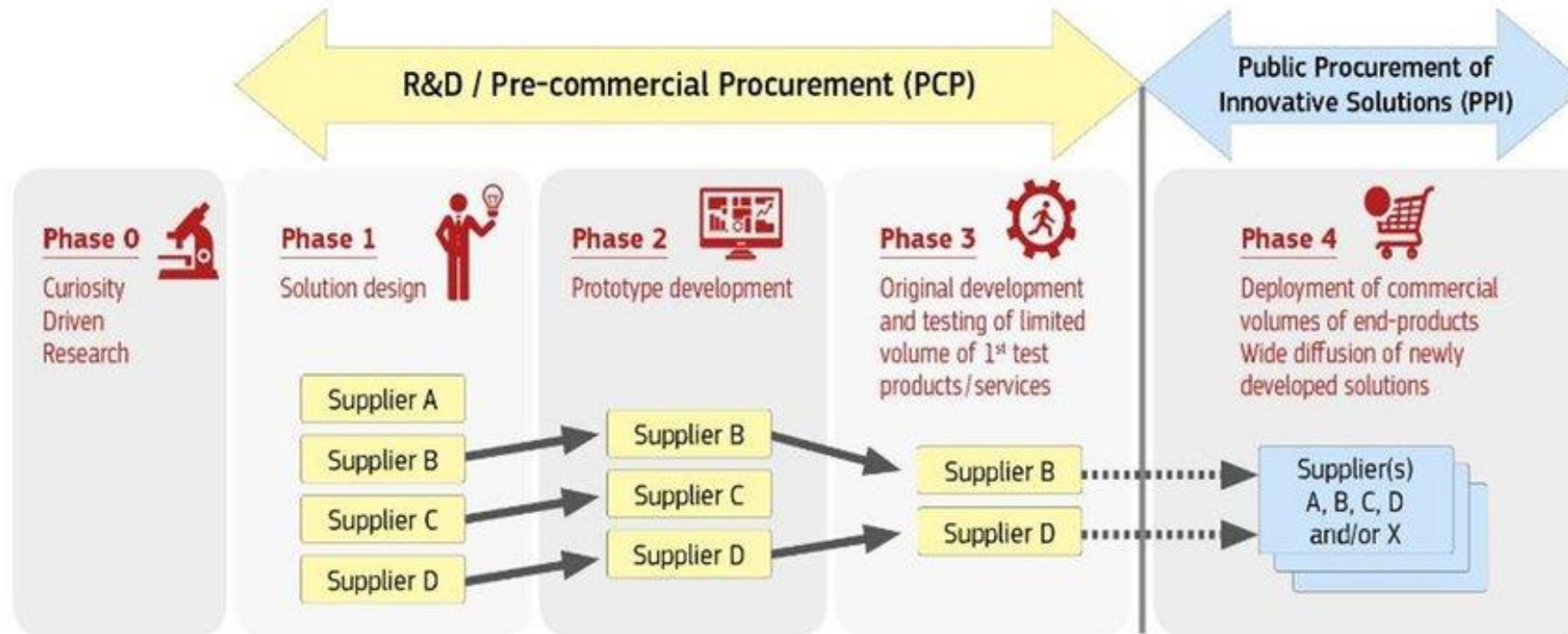
SOTA analysis

Pre-Commercial Procurement (PCP): TRL 3 - 8

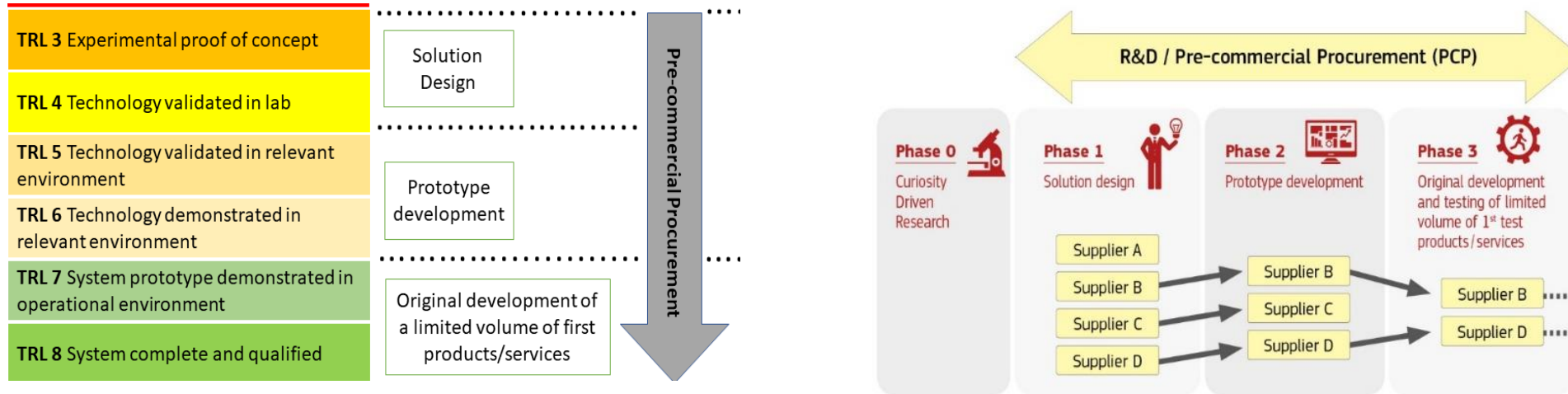


Pre-Commercial Procurement (PCP)

*Innovation Procurement happens when **public buyers** acquire the **development or deployment of pioneering innovative solutions** to address specific mid-to-long term public sector needs.*



PCP competitive approach

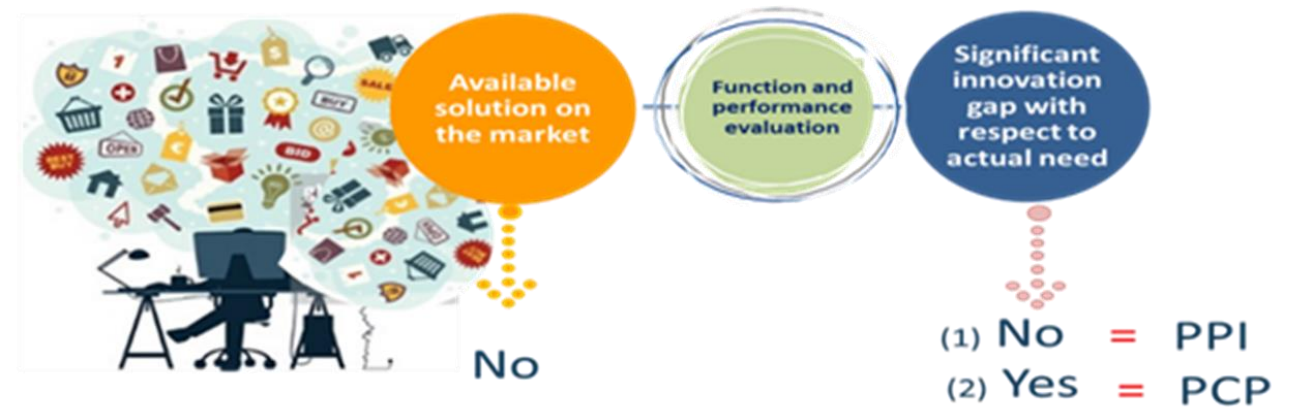


PCP is a public procurement of Research and Development (**R&D**) **services** characterized by:

- ✓ **competitive** development in **phases**
- ✓ **risk-benefit sharing** under market conditions → Public procurer does not pay the full cost of the R&D performed under the contract
- ✓ a clear **separation** between the procurement of the R&D from the deployment of **commercial volumes of end-products**

PCP of R&D services

- R&D is needed to identify an **innovative solution** to satisfy public procurers' needs.
- **No solutions exist yet on the market** that meet public procurers' needs and based on a search conducted by the procurers, it does not seem that such a solution will be available on a short-term notice.



- (1) Improvements are needed but don't require new and significant R&D (only integration, incremental adaptations and improvement, customization...), so authority can act as early adopter of innovative commercial end-solutions newly arriving on the market
- (2) There isn't any solution or the problem is so technologically demanding that a radical and breakthrough new solution and significant R&D is needed.

Challenge 2 Fire – SOTA preliminary results

- The analysis revealed research on the
 - Methods for identifying fire risk level
 - Early warning- prediction
 - Fire management system (status, monitoring & forecast –estimated progression)
 - Maps & graphical representation of fire information
 - None of the results was related to waste fire specifically but the inventions identified can provide a technological basis for the challenge
- Technologies & tools: satellite imagery, multi sensor input (drones etc), satellite images , vegetation information, and weather data, statistical analysis, and mathematical analysis, cloud-to-ground lightning distribution characteristics, water-based network devices.

List of keywords used

- fire ignition
- monitoring of fire
- prediction
- forest fires
- Wildfires
- satellites
- Earth Observation
- waste fire
- fire prevention
- fire risk
- fire prediction
- Automated notification
- Artificial Intelligence
- drones

Insights from providers

From the e-pitching & EU Survey questionnaire

Insights from providers – e-pitching

- No one solution tackles all the functionalities.
- Possible combination of technologies.
- Potential solutions would be in TRL 5-6
- Potential synergies between providers for the PCP.



Insights from providers - questions

- Are there requirements on “financial stability” or “minimum revenue of the company to participate?”
 - → **Low thresholds of PCP to allow a start-up or SME to participate.**
- What are the associated countries able to participate?
 - → [list-3rd-country-participation_horizon-euratom_en.pdf \(europa.eu\)](#)
- Can you make a list of the PCP requirements to make it easier to recognize them and address them?
 - → **The tender documents will include further specifications for a specific challenge**
- What kind of data do you use? Do you use raster data?
 - → **Differences between Public buyers**

Insights from providers - questions

- Are there any restrictions for each budget?
 - → **more than 50% should be allocated to R&D activities as defined by Frascati.**
[Concepts and definitions for identifying R&D | Frascati Manual 2015 : Guidelines for Collecting and Reporting Data on Research and Experimental Development | OECD iLibrary \(oecd-ilibrary.org\)](#)
- Is there any payment plan already envisioned?
 - → **initial % to start and payment based on milestones and at the end of each phase of the PCP, based on satisfactory completion. The tender documents will detail the payment scheme.**
- Is Critical Infrastructure considered?
 - → **It is relevant to all challenges. More details will be described in the tender documents.**
- What are preferred data sources, target users (non-expert, casual, expert), etc?.
 - → **Public buyers will provide more information.**

Insights from providers - questions

- FIRE Challenge: What about the carbon released in atmosphere? Do you have any way to measure it?
- FIRE Challenge: Forest can be valorized as part of the EU ETS carbon market strategy as “carbon sink”, are you doing this? If yes, how do you manage assurance?
- Are you interested in offering INSPIRE-compliant raster data if this is possible straightforward?
- Are you interested in timeseries visualization and analysis services?
- Would you be interested in vendor presentations on the state of the art?



OMC Report

Follow up steps

OMC Report

- Summary of OMC activities conducted.
- Anonymized OMC report based on the feedback from providers and users.
- Information on the next steps.
- To be published on the website of PROTECT and in EU Survey.

<https://ec.europa.eu/eusurvey/runner/PROTECT-PCP-2023>



PROTECT OMC timetable

Date	Event
20 September 2023	Publication of the Prior Information Notice (PIN) on TED
25 September 2023	Publication of the OMC documents in the project's website and EU Survey: https://ec.europa.eu/eusurvey/runner/PROTECT-PCP-2023 Open registration for the events and submission of questions
10 November 2023	Deadline to submit questions (17:00 CET)
14 November 2023	Deadline to register for the webinars (17:00 CET)
15-16 November 2023	4 OMC webinars
17 November 2023	Publication of the Q&A document in the project's website
20 November 2023	Deadline to fill in the EU Survey (17:00 CET)
25 November 2023	Publication of the OMC report
30 November 2023	Closure of the OMC

[Services - 574857-2023](#)
[- TED Tenders](#)
[Electronic Daily](#)
[\(europa.eu\)](#)

[PROTECT-OMC-](#)
[document-2023-FINAL-](#)
[updated.pdf \(protect-](#)
[pcp.eu\)](#)

<https://ec.europa.eu/eusurvey/runner/PROTECT-PCP-2023>

Questions?

Ana Lucia Jaramillo

Corvers Procurement Services B.V.



Presentation of the FIRE challenge and use cases by the group of buyers

Kees Koudenburg

DCMR, Netherlands





Waste fires

- Kees Koudenburg



CHALLENGE

WASTE FIRES

- Definition:
An uncontrolled fire in a waste storage site
- +/- 77 waste fires/year in the Netherlands
- +/- 60 waste fires/year in Sweden
- +/- 25 waste fires/year in Austria



IMPACT

FINANCIAL COSTS

- Soil remediation
- Water treatment
- Damage of buildings and equipment
- Loss of recyclables

SOCIAL COSTS

- Impact on Health
- Sense of security
- Odor complaints
- Redirection of taxes

ENVIRONMENTAL COSTS

- Discharge of pollutants like PM_{2.5} and Dioxins



WHERE & HOW

TYPE OF WASTE SITES

- Recycle centres
- Landfills

MAIN CAUSES

- Spontaneous ignition
 - Sweden: 55% of the cases
 - North-Rhine-Westfalen: 33% of the cases
- Unknown
- Lithium/ion batteries



CONTRIBUTING FACTORS

- Type of waste / contamination
- Amount of waste
- Ambient temperature (variation and level)
- Ambient moist content / rainfall
- Wind
- On-site remediating factors



USE CASE

Prediction of waste fires with AI by combining remote sensing, historical and weather data.



FORESEEN STEPS

EXPLORING BOUNDARIES

AGGREGATING DATA

MODEL DEVELOPMENT

TRAINING THE MODEL / ON-SITE VALIDATION

UTILIZATION OF PREDICTIONS

IMPLEMENTING NOTIFICATIONS





QUESTIONS?

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www.dcmr.nl



Presentation of the FIRE challenge and use cases by the group of buyers

Jozef Kubinec

Ministry of Interior of Slovak Republic



Scope of the problem → definition of challenge

Use case relates to identifying, tracing, and tracking the cause (and the culprit) of the fire.

1. Tracing of illegal setting of fires to waste dumping sites

- It is challenging for **law enforcement agencies to trace the individuals responsible for criminal behavior** (e.g., setting fire or dumping substances that cause fire to official waste dumping sites/facilities).

2. Comparing the site before and after

- In the event that a fire consumes part of a waste dumping site, it is vital to be able to **compare the site's condition before and after the fire**. This comparison would enable us to determine the amount of waste that was burnt and, consequently, evaluate the environmental damage caused.

3. Establishing and comparing amount of waste officially reported

- Additionally, the same technology could be used to establish whether the amount of waste entities dump into the site matches the amount they report officially.

4. Additionally, the **absence of usable data hinders the ability to gather evidence** for criminal proceedings.

Foreseen steps (1)

1. Conducting a comprehensive **assessment of existing monitoring capabilities** to identify gaps and potential improvements.
2. Defining the **types of substances** that are commonly illegally dumped, drawing from previous experiences and specific case studies.
3. Develop a **model that uses both existing and new data to compare** the amount of waste before and after an incident occurs.
4. **Aggregate all data from past waste fire incidents** or incidents involving the dumping of more waste than officially reported
5. Developing **appropriate measures** to address these incidents.

Foreseen steps (2)

1. Establishing **timely communication channels between environmental agencies, firefighters, and other relevant law enforcement entities** to promptly notify them of potential risks and share investigation outcomes.
2. Defining and implementing possible **interventions to tackle wildfires** and/or at dumping sites to prevent further illegal activities and mitigate damage.
3. **Standardizing the reporting and data collection** processes, ensuring the admissibility of the gathered information in both civil and criminal courts. This will enable the establishment of responsibilities in accordance with the applicable laws within specific judiciary systems.

Functions of expected solutions → the desired outcome

The desired outcome is:

- the implementation of an **alert system that sends notifications to competent authorities**, aiming to **prevent the illegal dumping of waste/ illegal activities** that could lead to fires in dumping sites and mitigate the risks of cross-border damage.
- The system would enable us to **compare the state of the waste dumping site** before and after the fire, determine the amount of burnt waste, and define the extent of environmental damage.
- Additionally, the system would be able to verify if the amount of waste entities dump into the dumping site is **consistent with their official reports**.
- Furthermore, **standardized reports** and information should be readily available and admissible in civil and criminal proceedings.
 - This will facilitate the establishment of responsibilities in accordance with the applicable laws and regulations within the specific judiciary system.

Further information

- Our organisation **currently does not use** any solutions based on EO.
- In the use case we presented challenges and **we expect from providers** to offer a solutions to tackle these challenges.
- If you have further **questions** please send them **through the chat**.

Open discussion with providers



Wrap-up and next steps

Mélissa CAMPAGNO

GAC, project coordinator



Next steps



OMC – WATER
challenge

16th of November

11h30 – 13h00



OMC – SUSTAINABLE
INFRASTRUCTURES

16th of November

14h30 – 16h00

- Publication of the OMC report – 25 Nov 2023
- Final webinar with providers – Jan 2024
- Building consortium/a of buyers & aggregation of needs – up to Feb 2024
- Final event – March 2024



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