

Call ID: PING-2024-3–Biodegradable-Plastics

Title: A Software tool and database to help customs officers verify the declared biodegradability of plastics

***Summary:** In the context of material identification, both for customs laboratory and border officer users, PEN-CP customs partners seek a software tool and database ('IT system') which contain information on known manufacturers, traders and their product catalogues, as well as applicable industry standards/norms and applied visual signs on biodegradable plastics (both raw materials and finished products). This IT system will provide an initial layer of assurance on whether plastics declared as biodegradable are likely to be accurately declared. The Selected Supplier will design and develop a prototype for such an IT system and populate the database with information available both in public domain and collected directly (by email requests) from the industry sources. Near the completion of the project, PEN-CP customs partners will assess the value of the IT system in their operations. If effective, the IT-system may be used by customs administrations after project completion, including conducting database queries on demand, and executing database updates (e.g. on a 3-monthly cycle).*

Context, customs challenge and innovation opportunity

The emerging “green trade rules” are expected to offer biodegradable plastics lower duty rates, exemptions from quotas, and other benefits compared to traditional, non-biodegradable plastics. However, this preferential treatment exposes the plastic trade to potentially fraudulent activities, with dishonest traders misrepresenting regular plastics as biodegradable in order to evade proper duty payments and circumvent trade restrictions.

Acting as the primary frontline border control agency, customs play a key role in enforcing a broad range of regulations related to the trade of environmentally sensitive goods, including plastics. A challenge for customs agencies today is the lack of quick, accurate methods distinguishing biodegradable plastics from their conventional counterparts. Existing identification methods depend largely on sophisticated laboratory instruments or natural decomposition experiments that may take months to complete.

A potential solution to the identification challenge is the creation of a reference database of verified manufacturers of raw materials and finished products, and of distributors who comply with biodegradable plastic regulations (e.g., ISO standards). This database could be built by scanning online product catalogues and information sheets, and by processing databases of companies certified by various certification organizations (e.g., TÜV) using web crawling techniques. It would help customs distinguish between companies not involved in biodegradable plastics trade and legitimate traders. Altogether, the database would streamline the control tasks for frontline customs officers at the border. They would no

longer need to rely on material identification sheets from traders, or to subject plastic samples to expensive and time-consuming laboratory testing. Instead, they could simply query the name of the trader or manufacturer to determine whether they indeed deal in biodegradable plastics.

Innovation Grant: technical elements and expected results

- This Innovation Grant is expected to deliver an operational prototype, encompassing both a database of verified traders of biodegradable plastics and an intuitive user interface for querying the database.
- The database should have at least 1000 records of manufacturers of raw materials and products and at least 1000 records of trading companies. The final number of records will be determined during the kick-off meeting discussions and agreement.
- Applicants are encouraged to propose techniques for scanning the internet for manufacturers, distributors, and buyers of biodegradable plastics. This may involve the utilization of advanced tools such as web crawlers or similar technologies.
- The information sources used to construct the database comprise a range of entities, with a particular emphasis on national environmental authorities and trade bodies.
- Integrating the database with widely used company information repositories, such as DnB or Orbis, is considered advantageous. This integration enhances the database's value by leveraging comprehensive and standardized company data from trusted sources, offering an additional layer of reliability and completeness.
- The tool and database architecture should be future-proofed to allow the addition of new functionalities down the road (e.g. to coordinate workflow and facilitate communication between customs and Environmental Regulatory Agencies).
- The use of open-source tools and databases is required. Alternatively, it must be possible to migrate the database easily to an open-source platform without loss of functionality at the end of the project.
- Concerning the technical outputs resulting from the Innovation Grant work, PEN-CP will retain IP rights at the end of the project.

Anticipated project tasks include:

- Live kick-off and user requirements meeting with customs in Hungary (Sep2024, the exact date to be confirmed as part of the contract process).
- Technical design, first round of application development, information collection and database population.
- Mid-term meeting with customs (online), to present the information content and functionalities achieved so far and agree details for the second round of development (Oct/Nov2024).
- Second round of application development, information collection and database population.
- Presenting the technical product and technical report at the final PEN-CP live event (Switzerland, Jan2025).

Common instructions for all PING calls

Announcement of call for proposals

This call for proposals for PEN-CP Innovation Grants (PINGs) is published on the PEN-CP project website at www.pen-cp.net/calls and on the European Commission portal at <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home> (the direct link to the EC call text page will not be known at the time that the call is published on the PEN-CP website).

Eligibility of applicants

- The call is targeted for companies and research organizations (as 'legal persons'), which have a well-recognized ID such as a national registration number, a VAT number, etc.
- Proposals from individual persons or consortia are not eligible and will not be considered in the evaluation.
- Proposals from applicants with prior involvement in customs innovation projects are encouraged.

Application process

- Step 1: To express interest, the applicant should send an email to pen-cp@cross-border.org, **specifying the call identifier in the subject line**. The email should include the contact details of the applicant's designated representative, including their email address and phone number.
- Step 2: In a return email, the applicant will receive a designated applicant ID, indicating clearance to proceed with the full proposal submission.
- Step 3: The applicant should submit the full proposal by sending the three required documents to pen-cp@cross-border.org AND pen-cp-arttic@eurtd.com

Required documents for full proposal submission

- Document 1 — Technology starting point, main outputs and expected results
 - Explain the starting point with the technologies you propose to use and/or develop/innovate further.
 - Provide a comprehensive outline of the project's main outputs and results. This may incorporate technical diagrams where appropriate.
 - Please ensure that the document does not exceed 3 pages.
- Document 2 — Methodology, work plan and risk management
 - Detail the methodology, work plan and risk management plan, as well as any accompanying resources such as Gantt charts, person-day allocations, etc.
 - Please ensure that this document does not exceed 3 pages.
- Document 3 — CV of the project manager and CV of a key expert

- Submit *curricula vitae* (CVs) for the project manager and one other key expert, detailing their respective relevant experience and skills.
 - While there is no page limit, we encourage you to follow the Europass standard format.
 - *Additional action: Please include in the project manager CV cover page a web link to a (national) Register of Commerce or similar institution, where the legal entity data is visible. Alternatively, please include a separate extract document on the legal entity data.*
- *Please do not include a financial bid, since the grant amount is pre-determined as described at the end of this document.*

Submission language

- All documents must be in English.

Proposal evaluation and scoring

- Document 1 — Technology starting point, main outputs and expected results (max 42 points, threshold 25 points)
 - Suitability of the technologies / solutions you plan to use for project execution.
 - Feasibility to achieve the planned outputs and results of the project.
 - Anticipated impacts for the broader customs community.
- Document 2 — Methodology, work plan, risk management (max 42 points, threshold 25 points)
 - Proposed approach, techniques, and methodologies for conducting the project.
 - Project timeline with tasks outlined in the work plan, considering organization, scheduling, and resource allocation for efficient project execution.
 - Summary of key project risks and related mitigation measures.
- Document 3 — CV of the project manager and a key expert (max 16 points, threshold 10 points)
 - Capability to effectively carry out technical work and all project tasks.
 - Demonstrated experience and skills relevant to the project.
 - Past involvement in customs innovation projects is viewed favorably.
- *Full proposal: total points max 100 (threshold 60 – aggregation of individual document thresholds).*

Evaluation and contract signing process

- Step 1: Evaluation of all proposals through scoring and ranking.
- Step 2: Selection of the applicant (referred to as the Selected Supplier) with the highest score and initiation of the contractual process.
- Step 3: Notification of evaluation results to all other applicants.
- Step 4: Contracting with the Selected Supplier.

- Step 5: If the contract cannot be finalized with the Selected Supplier, the next highest scoring applicant may be invited for contract negotiation (then proceed with Step 4).

Questions and Answers

- All questions should be addressed to pen-cp@cross-border.org AND pen-cp-arttic@eurtd.com
- *Please specify the call identifier in the subject line of your email.*
- All questions from applicants will be published along with their respective answers at www.pen-cp.net/calls

Publication of evaluation results

- Results of the evaluations will be published in due course at www.pen-cp.net/calls

Innovation Grant Panels

- Each PEN-CP Innovation Grant (PING) has its dedicated Innovation Grant Panel, whose responsibilities will include proposal evaluation, project steering, and assessment of outputs and results.
- The Panels will comprise three PEN-CP experts, at least two of whom will be representatives of PEN-CP member customs administrations.

Dates & deadlines

- Official call publication date: 1 March 2024
- Deadline for proposal submission: 1 June 2024 (by 5pm Brussels time)
- Proposal evaluation results available: 15 June 2024 (target date)
- Project start date: Latest by 1 September 2024 (and earliest on 1 July 2024)
- Project duration: Maximum 5 months (project must finish by 31.1.2025 latest)

Grant amount, payments travel expenses and IP rights

- Grant amount: 59.500 EUR (fixed)
- Payment terms: The grant will be paid in two installments: 60% upon project kick-off, and the remaining 40% following the delivery and presentation of final outputs and results at the designated PEN-CP event.
- The Selected Supplier will be responsible for covering the expenses related to two trips for attendance at live project meetings, which include the kick-off and the final presentation.
- IP rights issues, including possible transfers, are explained separately in each PING call.

Contact person for all queries

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