

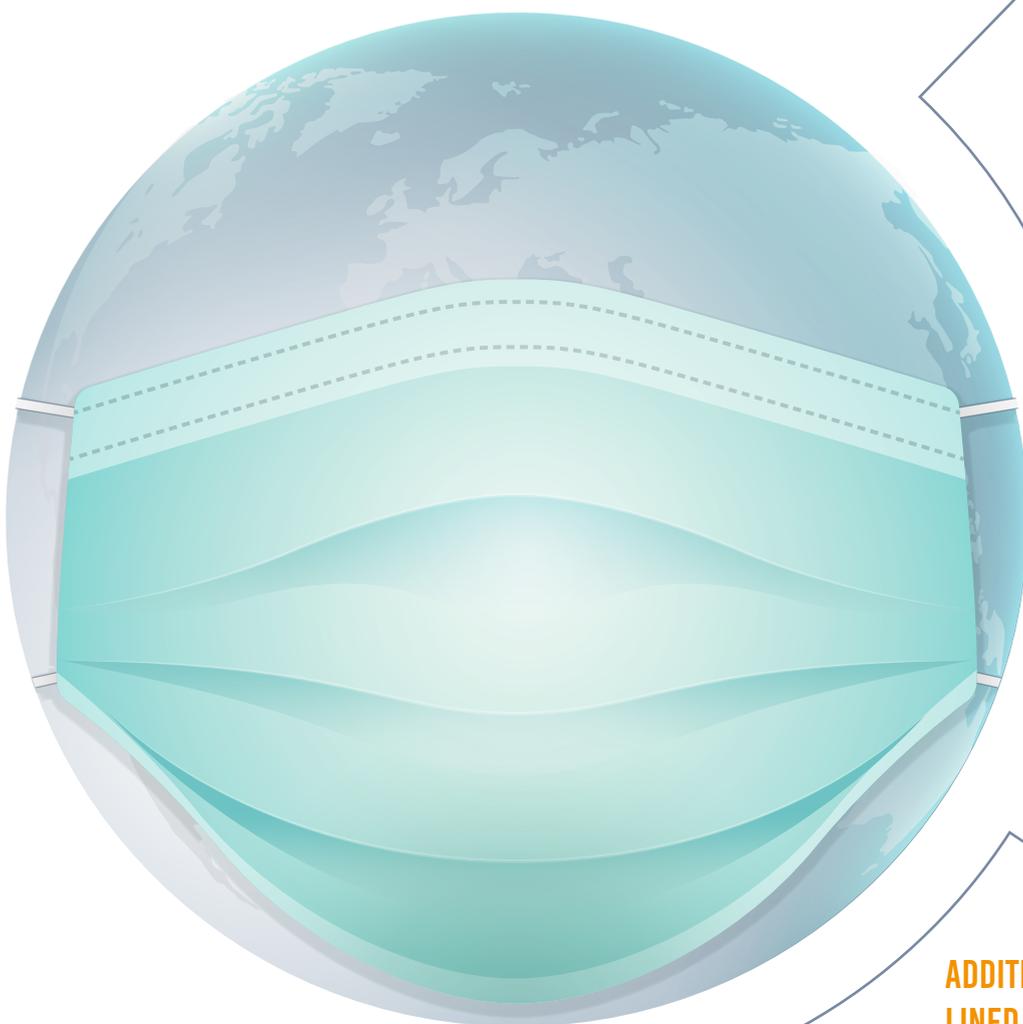


PEN-CP

Pan-European Network of
Customs Practitioners

MAGAZINE

COVID-19 & Customs



**3-STEP CUSTOMS PLAN IN
RESPONSE TO COVID-19**
(pp. 12-13)

**EUROPEAN AND
INTERNATIONAL
INSTITUTIONS ON COVID-19
RESPONSE**
(pp. 14-16)

**EXPERT REPORT CALL ON
“COVID-19 ACTUAL
IMPLICATIONS IN CUSTOMS
WORK”**
(pp. 17-20)

**ADDITIONAL COVID-19 TOPICS
LINED UP FOR MAGAZINE 9**
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement No 786773

Dear PEN-CP Magazine Readers

World has changed quite a bit since the last Magazine (Feb.2020) – who would have foreseen the COVID-19 related health, social, economic and other issues we have to deal with? By now, it is obvious that the pandemic has and will have several short-term and long-term implications on how global trade, supply chains, logistics, customs and border management function. This new situation needs novel and improved capabilities, which are triggering the implementation and design of a wave of innovations in border and supply chain technologies, processes and services. This includes the opportunity to systematically identify and exploit those technologies, processes and services that can be exploited from past and ongoing Research-Development-Innovation projects, including those financed by Horizon 2020. In this Magazine 8, and in the next Magazine 9, we publish a handful of COVID-19 and Customs related articles – hopefully you find them of useful reading!

On the bright side of the PEN-CP project, we have several updates to share. The Period 1 review meeting went well, with positive feedback, and few constructive suggestions (to be explained in Magazine 9). When it comes to work of the PEN-CP Expert Teams, PETs, we are happy to share the first outcomes of the PET-3 Laboratory equipment team – great progress during the past 2-3 months (pages 6-7). And also, the two other PETs – PET-1 on Risk & data, and PET-2 on Detection technologies – have started the work and will report the first outcomes in the next two Magazines. Then, topics have been defined for the next four Expert Report calls (pages 17-20); and more, as with 30 pages in total, this is the thickest Magazine so far.

As the last note: COVID-19 has started to cause delays in critical PEN-CP work, including with the “13 Customs visits”, where the first trip (to Irish Revenue) had to be cancelled in March. Also, when it comes to Year 2 Annual Event, the original October 2020 schedule is now being updated for January 2021 (still for Dublin, of course). Ultimately, we propose that the project will request a 6-month extension to the total schedule, i.e. to finish in February 2024 (instead of August 2023). Let's discuss about this, among many other topics, during the 7th Full Consortium GoToMeeting (Tuesday 19.5 at 2.15pm Brussels time).

[In Thun, 11.5.2020](#)

[Juha Hintsa](#)

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➤ PEN-CP has successfully entered into the second reporting period!

The PEN-CP Management Team has the pleasure to confirm that our project received positive feedback during Period 1 review session, which took place as a web-meeting in mid-April. We plan to publish the main recommendations in Magazine 9. The article below explains which Tasks (per Work Package) are foreseen to be most important during Period 2.

WORK PACKAGE 1 — PROJECT MANAGEMENT (LED BY CBRA)

The WP1 covers all the management, coordination and governance aspects of the PEN-CP project, with a specific eye on ensuring the completion of all deliverables in time and within budget and to the required quality standard. The WP1 consists of administrative, innovation, IPR, security, ethics and data privacy, quality and risk, and ICT platform management tasks which all are carried out to the full satisfaction of the project partners as well as the European Commission.

HIGH PRIORITY WP1 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T1.2 Innovation management, focusing particularly on the innovation up-scaling approaches, and achieving long-term, sustainable innovation outcomes.
- T1.3 Intellectual Property Rights (IPR) management, in the specific context of PEN-CP Innovation Instruments (PINs)
- T1.7 Data management and ICT platform administration – keep developing the structure and functionalities on the PEN-CP Online Platform (POP)
- T1.8 PEN-CP Grant and procurement administration – keep expanding the scope of grant announcement and procurement from (more simplistic) Expert reports to cover all the PEN-CP Innovation Instruments (PINs)
- T1.9 PEN-CP Advisory Board liaison – extend the current membership in the Advisory Board towards experts in innovation management.

WORK PACKAGE 2 — CONTINUOUS MONITORING AND INNOVATION IDEATION (LED BY GBR)

The WP2 covers continuous monitoring of a large variety of online and offline information sources, with the following three key aims in mind: (i) to share interesting observations and findings on customs security related topics and to stimulate further innovation idea flows and exchanges; (ii) to identify promising technology developments and share them within the PEN-CP partners and stakeholders; and, (iii) to convert monitoring and discussion outcomes into a large set of preliminary user need ideas and potential gaps.

HIGH PRIORITY WP2 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T2.1 PEN-CP Information observatory, PIO, will keep growing steadily - including topical items such as COVID-19 updates and implications for cross-border supply chains.
- T2.2 Security innovation repository, PSIM database, will keep growing steadily – a new goal is to start sharing User experiences with some of the high priority solutions in PSIM-database.
- T2.3 Ideation on customs security innovation needs, PUNI database, will keep growing steadily – the work will be driven by the three Expert Teams, PETs.
- T2.4 An eye to the future, work will start – the first case being “How to prepare better for future disruptions in global trade, supply chains and border management – first lessons learned from COVID-19”

WORK PACKAGE 3 — STUDIES, USER REQUIREMENTS AND STANDARDIZATION (LED BY IRL)

The WP3 seeks to elicit user requirements for future customs security solutions, complete existing knowledge on customs security, and to pave the way for customs security standardization activities. The work is carried out in the form of Annual studies, User requirement repository, Standardization roadmap and Pre-standardization workshops.

HIGH PRIORITY WP3 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T3.1 Annual studies: complete the first set of annual study chapters, and trigger the next set of them, considering all the six Customs security themes of PEN-CP
- T3.2 User requirement repository: the three Expert Teams, PETs, will play a leading role in identifying high priority User needs, PUNIs, which are to be developed towards detailed User requirements, particularly in the context of:
 - o Technology grants
 - o Open innovation instruments (Challenge competitions; Hackathons; Crowdsourcing ideas)
 - o Customs Innovation Awards – next one being competition for year 2020 (for the «best solution idea»)
 - o Candidate topics for future Horizon Europe calls
- T3.3 Standardization roadmap: identify the first Customs security topics calling for standardization activities in the future; action driven by the three Experts Teams, PETs
- T3.4 Pre-standardization workshops: explore needs and opportunities for the first pre-standardization workshop; could become (even) a “CEN Workshop Agreement (CWA)””; or, could remain a “customs informal action””; to be explored during Period 2.
- Consider introducing new task T3.5 which (formally) covers the work done by the three PETs.

WORK PACKAGE 4 — PROTOTYPES, GRANT PROGRAMS AND EXPERT SERVICES (LED BY BEL)

The main objective for WP4 is to accelerate uptake of innovative solutions in the field of customs security technologies and customs security management, via exploiting knowledge and expertise of select external parties. The WP4 bundles those PEN-CP activities where procurement, grant and prize contracts and awards are agreed during the project, through various procedures in open tenders, call for proposals and competitions. Such components consist of PEN-CP Technology Grants, NewView Grants,

HIGH PRIORITY WP4 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T4.2 PEN-CP Technology Grants: launch the first calls across all three Customs security technical themes = the 3 PETs are driving this
- T4.3 PEN-CP NewView Grants: launch the first calls across the available Open Innovation instruments – Challenge competitions, Hackathons, and Crowdsourcing ideas = the 3 PETs are driving this
- T4.4 PEN-CP Innovation Prizes: launch the next set of Innovation Prizes and Awards, for years 2020 and 2021 = the 3 PETs are supporting this
- T4.5 Expert reports: launch the next set of Expert report calls = the 3 PETs are supporting this

WORK PACKAGE 5 — DISSEMINATION, COMMUNICATION AND COMMUNITY BUILDING (LED BY CBRA)

The main objective of the WP5 is to ensure that a proactive and rich approach is taken towards dissemination, communication and community building across the PEN-CP project, throughout its five-year duration. Particularly, the WP5 promotes PEN-CP work among key stakeholder groups, to ensure wide recognition and uptake of the project's results.

HIGH PRIORITY WP5 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T5.4 PEN-CP Magazine: keep producing and publishing the Magazines, every 2-3 months, considering both PEN-CP internal and external audiences when producing the content
- T5.5 Liaison with key stakeholders: increase the breadth and depth of the liaison activities; the latter one particularly with selected Customs2020 Expert Groups = the 3 PETs will drive this
- T5.6 DG TAXUD policy briefings: aim to produce the first briefing by the end of Period 2
- T5.8 Security research policy -briefings: keep feeding user needs and ideas to Horizon Europe agenda.
- T5.9 Annual PEN-CP events: keep organizing meaningful annual events.
- T5.10 Additional events: start explore options for organizing smaller events, e.g. between 2-3 PEN-CP Customs partners; or, national events with other government agencies or with innovators.

WORK PACKAGE 6 — EXPLOITATION, EDUCATION AND SUSTAINABILITY (LED BY HUN)

The main objective of the WP6 is to ensure that PEN-CP activities will continue after the five-year H2020 funding period is over. This objective will be achieved via exploitation planning and sustainability blueprint activities, by successful sharing of existing customs resources, by production of user-friendly education and training materials, by exploring and exploiting additional financing instruments as well as by demonstrating the PEN-CP success story with positive performance and impact assessments.

HIGH PRIORITY WP6 TASKS FOR PERIOD 2 WILL INCLUDE THE FOLLOWING:

- T6.1 Exploitation plan: prepare a first draft version of the plan by the end of Period 2 (= Month 36)
- T6.2 PEN-CP performance measurement & impact assessment: continue work on both “bottom-up” as well as “top-down” measurement exercises on how PEN-CP is progressing in the context of “Novel Customs Innovation Boosting Network and On-line Platform, with Valuable Innovation Intermediary Services” = PEN-CP Vision
- T6.3 Customs resource pooling: explore options for first resources to be trialed/ shared between two or more Customs partners
- T6.4 Education and training materials: move ahead from training needs assessment stage to training material development and piloting phase
- T6.5 Additional financing instruments: explore options to exploit first additional financing instruments
- T6.6 PEN-CP Sustainability blueprint: keep exploring and developing the first components for the blueprint, in particular the “Customs officer communication toolbox”.

➤ In Action: PET-3 Laboratory Equipment

The team members

NETHERLANDS
• Micha Slegt
(Team Leader)

NORWAY
• Arnvid Gunnar

LITHUANIA
• Jonas Reklaitis

ALBANIA
• Dhimiter Janku

This is how we worked!



PET-3 Laboratory equipment

1 REVIEW OF CURRENT PUNIS & COLLECTION OF NEW ONES

The members were requested to review the PUNIs available in the PEN-CP Online Platform (POP) and submit new ones. In total, 15 new PUNIs were inserted into the POP.

2 BILATERAL CALLS WITH THE TEAM LEADER

A round of bilateral calls were conducted between the Team Leader and each member. Based on these calls, the grouping of the challenges was developed and discussed.

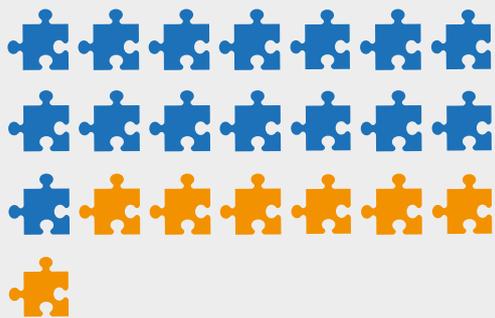
3 PUNI PRIORITISATION & PEN-CP INSTRUMENT SELECTION

All PET members prioritised, from 1 to 5 (1 being not important and 5 being very important), each PUNI according to the level of importance of the PUNI for their administration. Each member was asked to indicate which PEN-CP Innovation Instruments, PINs, are most applicable to tackle each PUNI.

4 ANALYSE THE HIGHEST RANKING PUNIS IN A GROUP CALL

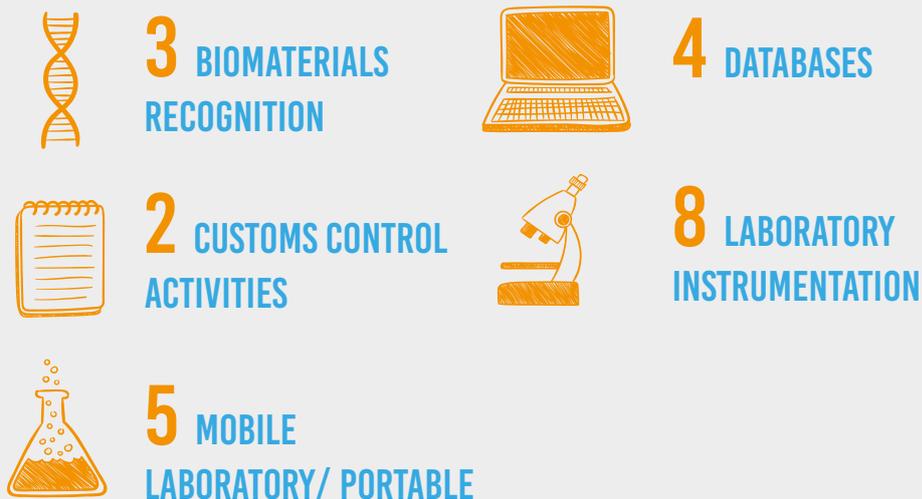
During the group call, the members analysed the highest ranking PUNIs (11 out of the 22 PUNIs). During such discussion, some PUNIs were merged into one due to their similarities. Furthermore, the members discussed and agreed on which instruments were the most suitable for the PUNI. In several cases, more than one instruments were selected, and the members proposed a two-stage approach for the PUNI.

22 PUNIs



 **15** NEW PUNIS
INSERTED BY PET-3

Distribution of PUNIs by Group



PEN-CP Instruments for the top 6 PUNIs



**ONLINE OPEN-SOURCE
ANALYTICAL METHOD
DATABASE**

Stage 1: **Expert report.** The objective is to analyse where are the sources of this knowledge, including databases from Japan, USA, etc. Focus on methods not used among customs)
Stage 2: **Hackathon** for the development of an open-source analytical method database.



**NOVEL APPROACHES FOR
MOBILE DETECTION OF NPS
AND OTHER DANGEROUS
SUBSTANCES**

First line of solution: **Innovation prizes** with packed fentanyl as a use case (What do customs use? What is the best solution? How to improve the current methods?)
Second line of solution: **Crowdsourcing ideas** and **Horizon Europe Call**



**LESS INTRUSIVE MASS
SPECTROMETRY
APPROACHES**

Stage 1: **Crowdsourcing ideas**
Stage 2: **Challenge competition or a prototype grant** depending on the results of stage 1.



**NPS ACCESS TO UPDATED
SPECTRA & RAMAN
LIBRARIES FILE FORMAT
TRANSLATION**

Stage 1: **Crowdsourcing ideas**
Stage 2: **Challenge competition**
***Standardisation roadmap** can also be used. However, cooperation is needed with those who administer the databases and the suppliers of the spectra.



**METHODS AND APPARATUS
USED TO DETERMINE IF
PLASTIC IS BIODEGRADABLE**

First line of solution: **Expert report** to analyse the standards in the market as well as new tendencies or process on detecting these plastics.
Second line of solution: **Innovation prizes** with WCO customs laboratories. The objective is to learn about their techniques and equipments used.



**ANTI-SYPHON DEVICES IN
MOTOR VEHICLES
PREVENTING FUEL SAMPLING
BY CUSTOMS**

Stage 1: **Expert Report** to search solutions available with the car industry
Stage 2: **Prototype grant or challenge competition** depending on the results of the expert report
***Tournament** can also be used.

UK BORDER FORCE WINS THE FIRST PEN-CP INNOVATION AWARD!

SEVEN PEN-CP CUSTOMS PARTNERS PARTICIPATED IN THE FIRST PEN-CP INNOVATION AWARD CONTEST, AND ALL THE PARTICIPANTS DEMONSTRATED ORIGINAL PROBLEM-SOLVING, FORWARD-LOOKING DESIGNS, AND GREAT AMBITION. FOLLOWING A TIGHT ROUND OF VOTING DURING THE YEAR 1 ANNUAL EVENT (BUDAPEST, NOVEMBER 2019), THE UK BORDER FORCE WON THE CONTEST AND WAS AWARDED A 2-DAY TRAINING SESSION ON CONTAINER CONTROL AT THE DUTCH CUSTOMS NATIONAL PRACTICE TRAINING CENTER IN ROTTERDAM, THE NETHERLANDS. IN THIS ARTICLE, WE SHARE DETAILS ON THE WINNING CUSTOMS INNOVATION.

Their Submission



Overview on the Innovation (Which Customs problem it aims to solve and how is it done?)

The numbers of people crossing the border is increasing annually. One of the customs risks from passengers is that of drugs concealed beneath clothing. Sheer volumes of passengers and finite staff resources make it challenging and impractical to interdict those seeking to smuggle. Border Force examined use of technologies which can be used without disruption to the passenger flow.

Apstec Systems is a centimetre-wave radar which was designed using NATO funding to detect person borne IEDs. The device superimposes a threat box onto a cctv image and provides automatic detection which can then be replayed to a smart device. The device can detect particular explosives and do this while multiple passengers are walking in range of the device. Border Force, together with the company are exploring whether the technology could detect narcotics and currency and have been working on data capture with Apstec at Gatwick airport on heroin, Cocaine and currency. Early indications are positive, so we are moving to validate with a different set of samples and to let passengers through the system to work out false alarm rates.

The value/ benefits/ impact of the Innovation (Please explain: For Customs it can be about new capabilities, faster performance, lower rate in false-positives/negatives, lower operational costs etc.; You can also explain on positive impacts for supply chains and/or society.)

If the technology is successful it would enable a far more robust monitoring of the border, as it will effectively screen everyone coming through the border.

- The ability to screen moving targets means the technology helps support a frictionless border whilst improving efficiency.
- Customs will be able to use scarce resources far more

effectively as the device only alarms when it detects substances in its memory.

- As the technology is a silent watcher, it would free up staff to be assigned to cover other risks.
- Stronger border = greater detection and greater deterrent.
- If the technology is successful it will enable customs to screen everyone crossing the border
- As detection of likely, it would send out a strong deterrent.

Innovation novelty value/ uniqueness (Is the Innovation really a new way of thinking and/or doing things at customs?)

The ambition is to take a technology at a relatively high TRL level and adapt it to deployment in a customs environment.

A further advantage of the technology is that it makes use of existing passenger flow and does not add any burden to existing processes.

Innovation generalisability (Is it feasible to implement and to benefit from this Innovation in other Customs administrations?)

The technology if successful, should be capable of being deployed in different administrations, provided each is coContent with adhering to data protection and privacy regulations. This is suitable technology for screening passengers travelling through airports or land border BCPs.

UK undertook this work with the express intention of sharing its findings with other EU partners.

Implementation status (as summer 2019) of the Innovation (Define at each stage of the development the innovation is):

Proof of Concept



Congratulations to the UK Border Force! And thanks to everyone who participated and helped make this contest a success – we plan to publish short versions of all submissions in Magazine 9, subject to approvals by the participating administrations! And, stay tuned for the second PEN-CP Innovation Award competition in 2020!

Winner's certificate



PEN-CP

Pan-European Network of
Customs Practitioners



Customs Innovation Award

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Home Office, The United Kingdom

for their innovation called *“Using a Human security radar screening passengers on the move”*

THE PRIZE

2-day training session (for up to 8 experts) on container control at the Dutch Customs National Practice Training Center in Rotterdam, in 2020*

Dutch Customs Administration
(Task Leader)

CBRA
(PEN-CP Coordinator)

PEN-CP Advisory Board

* Travel and hotel costs are paid by the PEN-CP project (up to 1500 EUR, which may enable two experts to participate; and even more experts, up to eight in total, may join, if the winning administration covers their travel and hotel costs)

► PEN-Card Ideas Collected during the Year 1 Annual Event

PEN-CP partners shared their thoughts and ideas on the backside of PEN-Cards, on eight PEN-CP components and actions. Below are the outcomes of this exercise – thanks again to everyone who participated. And in case we missed or misunderstood your PEN-Card input (apologies for that), please feel free to email your ideas to: pen-cp@cross-border.org (try to send by 15.6.2020, so we can include them in Magazine 9). Please email us also in case you would be interested to discuss any of the ideas in more detail – and we will connect you with the administration who provided the inputs (e.g. when it comes to PEN-Card 5 on Resource pooling).



PROPOSE A TOPIC FOR AN EXPERT REPORT!

Expert reports can be triggered on demand by any of the PEN-CP custom laboratory when a need for new information and analysis emerges not yet being covered in other PEN-CP key components (e.g. information observatory or Annual Studies).

FOLLOWING A SIMPLE CALL PROCEDURE, THE MOST SUITABLE EXPERT IS CHOSEN TO CARRY OUT THE WORK AND TO DELIVER A REPORT TO COVER THE INFORMATION NEEDS, IN A RELATIVELY SHORT TIMEFRAME.

1

- Experiences of international joint procurement projects – best practices, lessons learned, and cost-benefit analyses.
- Best practices of multi-agency cooperation between customs, police agencies, and border forces.
- Social aspects of customs innovation, such as training, working conditions, and community building.

SHARE IDEAS FOR THE STANDARDIZATION ROADMAP!

GOAL
PROMOTE FIVE STANDARDIZATION ITEMS ELABORATED IN THE ROADMAP (BY 2023)

IT HELPS BRINGING THE GAPS BETWEEN THE CUSTOMS PROFESSIONALS' NEEDS AND AVAILABLE TECHNOLOGIES AND SERVICES IN THE MARKET.

IT ALSO FACILITATES JOINT TRAINING/PROCUREMENT IN THE FUTURE, BETWEEN TWO OR MORE CUSTOMS ADMINISTRATIONS.

2

- Specifications for a common X-ray image format across all scanner types.

BECOME A PEN-CP POINT-OF-CONTACT (PEN-POC)

GOAL
12-16 institutions, expert groups and projects as integral part of the key stakeholder liaison process.

Establish with key stakeholders focused on regular communication, and interactions with select group of high priority stakeholders, including half dozen Customs 2020 Working/ expert groups, and the H2020 Police security practitioners pan-European networks.

AS A PEN-POC, YOU WILL BE LEADING DISCUSSIONS AND OTHER INTERACTIONS WITH AN EXTERNAL NETWORK, EXPERT GROUP, PROJECT OR INSTITUTION.

- New POCs have been activated, based on the PEN-Card inputs

SHARE USER EXPERIENCES AND TECHNICAL TEST-DATASHEETS WITH OTHERS

PLEASE SHARE ANY IDEAS YOU MAY HAVE!

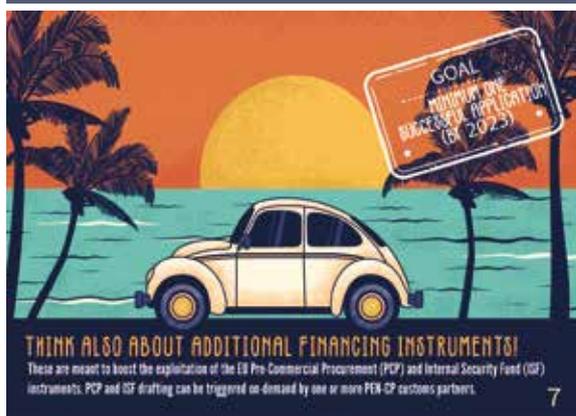
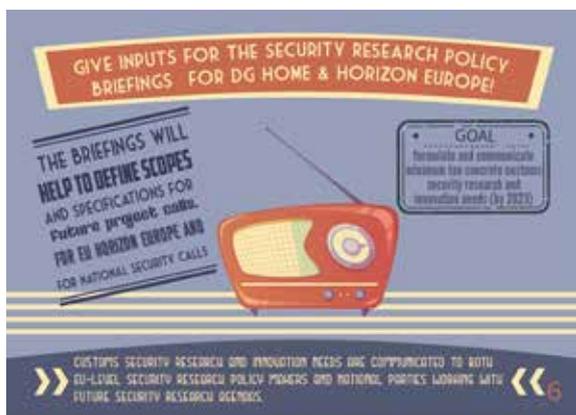
WE CAN LEARN FROM EACH OTHER ON WHICH SOLUTIONS FUNCTION WELL, IN ACCORDANCE TO, OR EVEN BEYOND EXPECTATIONS.

We can avoid testing same technologies many times by different administrations.

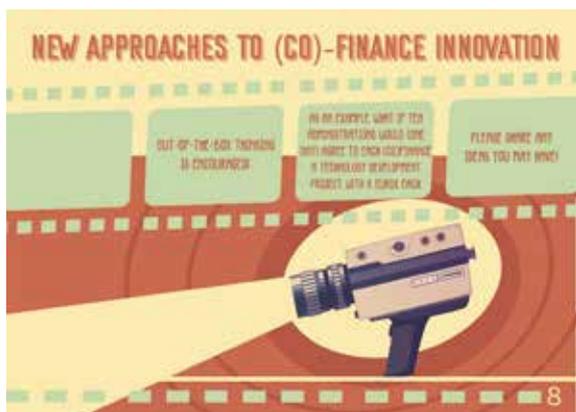
4

- Common guidelines and reporting standards for Advance Passenger Information (API) and Passenger Name Record (PNR)
- Sharing of laboratory test results of Raman spectroscopy devices.
- Participation in Interlaboratory Tests that can measure and benchmark performance of customs individual laboratories.

- Exchange of best practices between national targeting centres and their leading experts.
- Experiences with handling advance cargo information, essentially any information that supports implementation of the Import Control System 2, ICS2.
- Best practices for process automation, especially automatic reading and analysis of customs documents.
- Sharing of best practices concerning physical inspection techniques, for example examination difficult targets like liquified gas bottles and fuel tanks.
- Research and development cooperation in the use of Artificial Intelligence for X-ray image analysis.
- Exchange of information on the available training materials; as well as Pool of experts, trainers/topic.



- Scenario development and pilot designs to support full scale roll-out of IT systems and embedded data analytics, considering e.g. adoption by officers, and implementation in existing customs IT systems
- Baltic X-ray images exchange (BAXE) was financed by OLAF. It is developing, for example, Artificial Intelligence has to be improved.

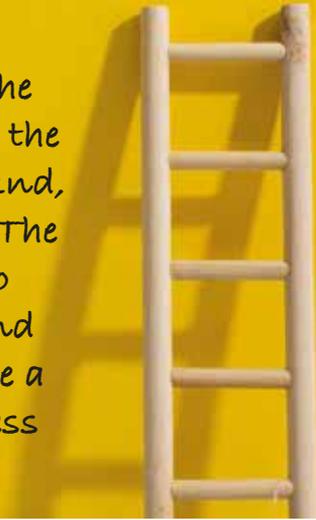


- Studies on legal and IPR aspects of co-financed customs innovation projects.
- Explore opportunities with multi-country/ multi-administration co-financing.

➤ 3-Step Customs Plan in Response to COVID-19

BY LEONARDO MACEDO, GLOBAL CUSTOMS | WCO EXPERT | JUDGE BRAZIL HIGH APPEALS TAX AND CUSTOMS COURT / LINKEDIN: [HTTPS://WWW.LINKEDIN.COM/IN/MACEDOLEO/](https://www.linkedin.com/in/macedoleo/)

A sailing quote says, "The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails." As a customs professional with a sailing background, the current outbreak of COVID-19 requires adjustments. The pandemic affects all countries, and action is needed to support supply chains, particularly of medical goods and pharmaceutical products. In this article, I briefly describe a three-step plan for customs and border agencies to address the pandemic.



Define and update a Harmonized System (HS) List of goods

Customs and other border agencies step one is to decide on a list of Harmonized System (HS) codes for the pandemic. The codes of the HS are essential to guide the policy for facilitating import/export, transit, licenses, clearance and all other formalities at the border.

The HS nomenclature developed by the World Customs Organization (WCO) is operational in practically all foreign trade systems in the globe. Many national tax administrations also use the HS nomenclature for indirect taxation, such as VAT and GST. That said, the importance of the HS six-digit codes is enormous.

A list of HS codes accelerates the discovery of sellers, buyers, requirements and the passage of goods through territories and borders in time to save lives. HS codes are the backbone of trade. It is the language for machines, faster than any other communication tool.

Given the pandemic, several countries released their list of HS codes according to their health priorities. On March 19, the WCO published its first list of HS reference codes for medical supplies. The list is available on the organization's website and should serve as a basis for many countries. The WCO revised its list adding new codes on April 9.

Both the WCO and countries HS list are living instruments, as needs and priorities are continually changing. Once the initial HS code list is released, the main challenge is to identify and anticipate the inclusion or exclusion of goods to fight the virus. Non-obvious products such as substances of human/animal/plant origin, spare parts for breathing apparatus and many others, are the ball in the game. The HS codes lists released by the WCO and countries should differ from each other in the number of listed goods. For example, country A is interested in listing the HS code for azithromycin, while country B is not.



Tax and Customs Fiscal Measures

Having an HS list of goods, step two consists of taking tax and customs fiscal measures to address tariffs and border adjustment taxes.

The short-term objective is to limit the economic hardship caused by COVID-19 containment measures. Fiscal actions need to focus on goods to fight the virus, as well as the support of enterprises, employment and household income.

From an international trade perspective, tax and customs response to the COVID-19 crisis include, but are not limited to: a) eliminate/reduce tariffs and other tax rates for the medical supplies; b) extend declarations filling; c) defer payments; d) provide for flexible tax debt repayments; e) enhance tax refunds; and f) waive penalties, among others. Reference for tax and customs fiscal measures are the IMF fiscal monitor reports; the OECD reports and G20 documents.



Trade Facilitation Measures

The third step of this basic plan consists of faster adoption of border trade facilitation measures.

From a facilitation angle, customs and border agencies must take measures to ensure the smooth operation of value chains, avoiding disruptions. Cutting the red tape of border procedures is essential. Examples of actions that can be taken are a) suspension or simplification of licensing and origin requirements; b) automatic clearance (green channel) of goods in the HS code list; c) acceptance of copies, electronic and digital documents; d) physical inspection on importers premises; e) create COVID-19 help desks; f) suspend monetary limits for postal and courier imports/exports; and, g) consult directly with customs brokers and freight forwarders to facilitate trade. References for trade facilitation measures are the WTO Trade Facilitation Agreement (TFA) and the WCO Revised Kyoto Convention.

In line with trade facilitation, countries should also direct efforts to adhere to international instruments that can assist their populations. An example is "The United Nations Model Agreement on Customs Facilitation", which was drawn up jointly by the WCO and United Nations Office for the Coordination of Humanitarian Affairs (OCHA). Customs administrations are encouraged to sign this document with the UN, and it is set out in Chapter 5 "Relief consignments" of Specific Annex J "Special procedures" to the WCO Revised Kyoto Convention (RKC).



Conclusion

The outlined plan is relevant for customs and border agencies to respond to the COVID-19 crises. Humanity needs to adjust the sails for the current winds.



► International Organisations Present Overviews of COVID-19 -related Information

A number of international institutions and organisations are addressing the health and economic crisis resulting from the COVID-19 pandemic, by producing and publishing information relevant to customs and trade. The PEN-CP Magazine has made a broad horizon scan of this, to be able to give guidance as to where and what information is available today. Our plan is to provide similar updates also in the future Magazines.

EUROPEAN COMMISSION

DG TAXUD

To answer the questions being raised as a consequence of COVID-19 regarding the application of Customs provisions relating to the Customs decision making process, Customs procedures and formalities, the European Commission and its Directorates General TAXUD has provided guidance on the practical solutions and facilitations available within the current legislation (Union Customs Code) to ensure uniform application within the EU. Case scenarios are considered, how they can be resolved and the appropriate legal basis provided.

For instance, there is a section titled “Medical, surgical and laboratory equipment for emergency treatments” where it is explained that these goods are not exempted from the obligation to lodge an Entry Summary Declaration (ENS), even in emergency cases, but that under Article 127(7) other documents can be accepted, like commercial, port or transport documents, if they contain the mandatory information required by the ENS. The document also includes links to the most recent information that has been issued, changes made to the legislation and a link to an overview of the exceptional measures in the customs area taken by the member states in face of COVID-19.

You can access the DG TAXUD main web-page for COVID-19 information here:
https://ec.europa.eu/taxation_customs/covid-19-taxud-response/guidance-customs-issues-related-covid-19-emergency_en

Additionally the Commission has temporarily waived

VAT and customs duties on vital medical equipment. More information here:

https://ec.europa.eu/taxation_customs/covid-19-taxud-response/covid-19-waiving-vat-and-customs-duties-vital-medical-equipment_en

DG TRADE

The European Commission DG TRADE Latest News -page contains a series of news items on trade measures published by the Commission. For example, the notification of trade measures to the WTO from 27 April; a declaration of the EU and 14 other WTO members on food supply chains from 23 April; and, guidelines to protect critical European assets and technology in the current crisis from 25 March. Included is a document on the impact of the COVID-19 pandemic on global and EU trade, from the Chief Economist Team, published 17 April. The Commission team aims to assess the impact of the pandemic on global trade flows, following the quick contraction of the economy. The team predicts a decrease in global trade with 9.7 percent for the whole of 2020.

You can access the DG TRADE news page here:
<https://ec.europa.eu/trade/trade-policy-and-you/publications/news-archive/>

THE WORLD CUSTOMS ORGANIZATION

The WCO COVID-19 -page comprises a wide range of information. The focus from the WCO on minimising the impact of restrictions on the economy is clearly stated. “Customs administrations are strongly urged to establish a coordinated and proactive approach with all concerned agencies to ensure the integrity and continued facilitation of the global supply chain.”

The web page contains news concerning WCO meetings and internal affairs affected by the restrictions around COVID-19; links to WCO and Partners Communication regarding COVID-19, including joint statements with partner organisations. Under WCO Instruments and tools, a number of instruments are highlighted that can help in managing trade flows during the pandemic, while extra guidelines are provided to instruments such as the HS reference for COVID medical supplies and a list of priority medicines. Also provided is a large number of links to information on the measures taken by the individual member countries of the WCO; a document titled What can customs do to mitigate the effect of the COVID-19 pandemic - Highlights of WCO Members' practices; Points of entry status and information published by partner organisations such as IATA, IMO and UNECE to cover all means of transport and also postal services and finally there is a section with links to the World Health Organization, WHO,

recommendations and guidance.

You can access the WCO main page for COVID-19 here:

<http://www.wcoomd.org/en/topics/facilitation/activities-and-programmes/natural-disaster/coronavirus.aspx>

The Private Sector Consultative Group to the WCO, PSCG, published its comments on the impact of the COVID-19 pandemic on 13 April, and their ideas as to how the WCO and its Member Administrations could act in face of the crisis. The group, consisting of close to 30 businesses and business associations, presented thoughts, ideas and best practices on a number of aspects of the COVID-19 pandemic.

The paper covers 4 key issues:

1. "How to expedite the clearance of essential goods and workers to support and maintain essential services". The need for flexibility over time is emphasised as well as the ability to identify essential goods and service.
2. The methods to maintain safety at borders concerning spreading of the disease are explained under "Apply the Principles of 'Social Distancing' to Border Processes".
3. Automation is one of several measures covered under "Strive for Efficiencies and Simplification for All Clearances". A number of measures for a more rapid clearance of all goods are considered and discussed.
4. "Support for Business Resumption and Recovery", discusses measures to support small and medium sized businesses, in order to minimise the numbers of unnecessary business closures. Measures for opening up trade and meeting demand once the economy is opened up again are also highlighted, as well as the importance of meaningful consultations between the authorities and trade.

You will find the PSCG paper here:

http://www.wcoomd.org/-/media/wco/public/global/pdf/media/important-notice/pscg-covid_19_en.pdf?la=en



INTERPOL

INTERPOL has produced guidelines for law enforcement agencies to enhance safety and effectiveness. They outline the roles, such as border control, maintaining public order and assisting national health authorities to identify cases and trace their origin. INTERPOL provides 24/7 support through its secure global communication system and its colour coded system of notices to enable countries to share trends, alerts, threats and requests for information, worldwide. The page identifies various COVID-19 related emerging threats including counterfeit medical products, fraud and cybercrime, including on what can be done about the trade in fake medicines. You find the INTERPOL COVID-19 section here:

<https://www.interpol.int/en/How-we-work/COVID-19>

The INTERPOL global threat assessment report provides information on how to protect police staff from the virus and how to prevent crime in the COVID-19 shut down environment. The publicly available report (which is presented at a superficial level; while the full text is for law enforcement use only) highlights a number of threats issues in the follow of COVID-19 at a global level, for example, the threat of cybercrime is increasing; hospitals and other health care institutions are being targeted for fraud and other crime; fraudulent and substandard protection equipment and pharmaceutical products are being seen in growing numbers; etc.. Drug trade via social media is increasing and individuals and businesses in economic difficulties are being targeted by loan sharks. INTERPOL has also noted a change in crime patterns, for example, with more people staying at home it is more attractive to break into empty factories or offices.

You can reach the threat assessment report page here: https://www.interpol.int/en/News-and-Events/News/2020/Preventing-crime-and-protecting-police-INTERPOL-s-COVID-19-global-threat-assessment?fbclid=IwAR1X7xUhPeXj8IB_HBTvd3A-mOYoOdAat1rtqlwSURi5AzRYJXJdkIRmKZM

WORLD BANK

The World Bank's COVID-19 focus is on maintaining supply chains and facilitating trade to avoid any unnecessary shortages in food and other critical supplies that risk impact on the economic and poverty levels. The World Bank provides guidance notes related to these issues, as well as a set of databases. The

guidance notes include information on risk management; a set of suggestions on trade responses specifically in Africa; as well as guidelines for the facilitation of critical COVID-19 products. There is also a database on COVID-19 Trade Flows and Policies, focusing on medical supplies and food products.

The guidelines for trade facilitation cover a broad spectrum of issues, such as relaxation of procedural formalities; risk management to prioritize clearance of imports and exports of low-risk critical supplies; border agency cooperation to facilitate the import of critical supplies; information technology to support trade (e.g., single windows and trade information portals); and, protection of front-line workers. The themes are all illustrated with real measures taken by various countries and governments.

In the Trade in COVID-19 products -paper, the World Bank studies the trade in 17 products listed by the WHO as essential in combating the pandemic, identifying that the market is very restrained with few suppliers. The World Bank also looks at the impact in developing countries of export restrictions and interrupted trade flows due to the COVID-19 measures.

You will find the World Bank page on COVID-19 here: <https://www.worldbank.org/en/topic/trade/brief/trade-and-covid-19?fbclid=IwAR1XIOH1jLwQTJa0gOQcywZyJI453ffX6FbxLEL0ty9FIHdpzIGIBoFs>

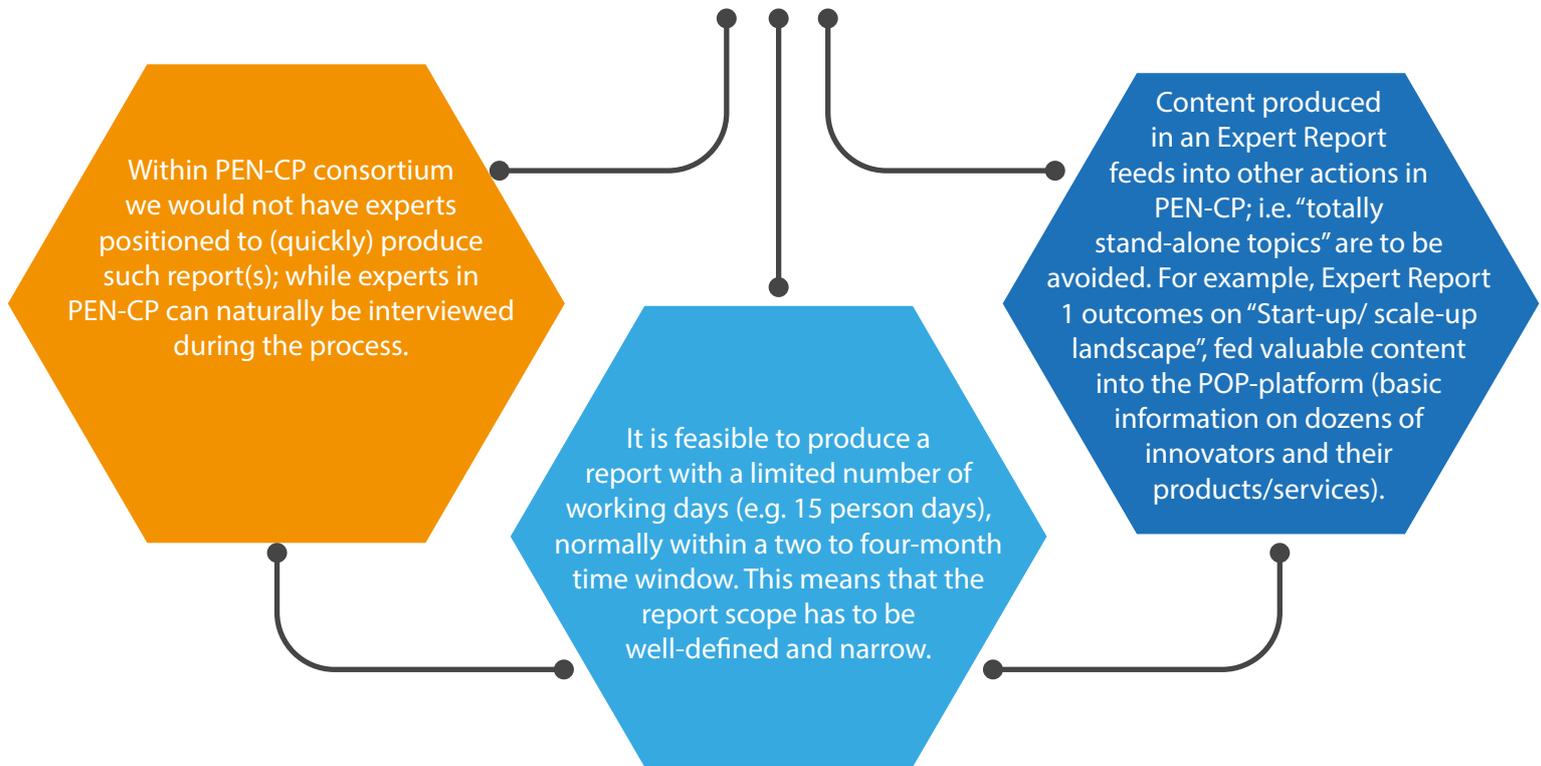
UNCTAD

UNCTAD is monitoring the effects of COVID-19 on manufacturing, trade, foreign investment and economic growth, providing technical assistance to help countries to mitigate the economic impacts of the pandemic. Their paper 'How countries can leverage Trade Facilitation to defeat the COVID-19' considers country specific trade facilitation solutions to meet the challenges for Customs and other border agencies.

You find the UNCTAD web page here: <https://unctad.org/en/Pages/coronavirus.aspx?fbclid=IwAR01NGL-2H51bxdyfy-HwgGZmMR39CSgNt3OU1s2x6C99RV0XhOahay-uLWk>

➤ PEN-CP Expert Reports – May 2020

PEN-CP Expert Reports (ERs) have proven to be handy instruments when needs among the PEN-CP community arise for specific information/ knowledge, with the following characteristics:



In this Magazine 8 article we present details on one, and overviews on three Expert Report topics (formal call texts are under preparation). At the end of the article, we also outline the common section for all the calls. We aim to launch all the four calls during May-June 2020 (note: we can discuss this briefly during the 7th Full consortium web-meeting, Tuesday 19.5 at 2.15pm Brussels time). When it comes to next set of Expert report calls, preparations are under way with the three PET-teams – in particular with PET-3, as you can read elsewhere in Magazine 8. And as usual, any PEN-CP Partner is welcome to present topics for the future Expert report calls!

➤ ER2: Market review on Communication toolboxes suitable for government agency usage

Background

To facilitate efficient communications within and to ensure the long-term sustainability of a Customs innovation network - like PEN-CP, Horizon 2020 funded Pan-European Network of Customs Practitioners (2018-2023) – it is crucial to explore and try out different Communication platforms and toolboxes, available in the markets today. Customs experts across Europe need to be able to communicate cross-border with each other, topics varying from “I have this specific question on x-ray machines user experiences, could anyone help”; to “Lets organize a 30 minute video conference every two months to discuss about innovation needs related to customs laboratory equipment”; and much more. The needs for organising efficient, effective, user-friendly, and affordable communications among European Customs experts are growing - not least to do with social distancing and travel restrictions set by COVID-19 pandemic. One should also keep in mind the information sensitivity – security and commercial – aspects of Customs communications. GoToMeeting, Webex, LinkedIn, and Whatsapp are examples of popular communication and networking tools and applications, with certain potential use in the frame of “European Customs cross-border communications”. However, no de facto solutions, neither single ones nor combinations of two or more, are known to be in use today.

Purpose/ Goal for the Expert Report

The Expert Report sheds light on (i) what kind of Communication tools and platforms exist in the markets currently, and (ii) what are the features and functions which are likely to be introduced during the next 1-2 years. The work is done in the context of the “Preliminary Features and Functions” listed below; to be finetuned in (web)discussions with action leaders from the PEN-CP consortium. The outcomes of the Expert Report will be presented and discussed in a broader web-meeting once the report has been finalized; latest in January 2021, as part of the PEN-CP Year 2 Annual Event (in Dublin, Ireland).

CommsBox - Preliminary Features and Functions

Based on a preliminary User requirement collection, carried out during Year 1 Annual Event of the PEN-CP network (Nov.2019), Customs administrations would find following features and functionalities to be useful for the future Communication tools and platforms:

1. Videoconferencing
2. Screen sharing

3. Instant messaging
4. Secure system compatible with several interfaces, i.e., computers, mobile phones, tablets, etc.
5. Directory of users with basic information, such as the country and the area of expertise of the user.
6. Collaborative editing of documents
7. Possibility to create thematic groups where customs officers can join. In such a group, each person should receive notifications when a message is posted in the system. The notification settings should be customizable.
8. Ability to tag a person or an organization, so that you particularly ask a question to someone and receive a direct response.
9. Automated transcription, voice recognition, and translation of transcripts and documents.
10. Calendar with all the events/calls of the groups as well as the notes and documents from the meeting.
11. Link the system with virtual/augmented reality like Google Glasses.

Note: although the requirements listed above are not in a strict priority order, one can note that the requirements in the beginning of the list are more important than the last ones.

Tasks to be carried out

- Identify up to one dozen potential Communication tools and platforms in the markets and write a brief overview on them.
- Present the list to PEN-CP, and agree on 3-4 tools/ platforms relevant for more detailed analysis
- Prepare a brief information collection or interview sheet to be used with the 3-4 tool/ platform providers
- Present the sheet to PEN-CP, and agree on the final questions to ask
- Contact the Product-Marketing function of the 3-4 selected tool/ platform providers, and collect the agreed information
- Compile all information into the final Expert report.

Tentative Structure for the Expert Report (15-20 pages, plus annexes)

- Chapter 1. Market overview on Communication tools and platforms
- Chapter 2. Analysis outcomes with 3-4 most relevant tools and platforms available in the markets
- Chapter 3. Recommendations for PEN-CP

- ▶ ER3: User experiences with state-of-the-art Communication toolboxes among law enforcement and inspection agencies (Customs, Police), and international institutions (TAXUD, WCO, EUROPOL, INTERPOL..)

Abstract As a sister-topic for the ER2 above, we will launch an Expert Report call (ER3) on collecting and analysing user experiences on Communication tools and platforms currently in use by law enforcement and inspection national agencies, and related European and International institutions. The expert(s) doing the work need to carry out interviews in 4-5 relevant organizations, to learn about “what works and what doesn’t today”, as well as “how well the user needs will be matched in the future, based on what tool/ platform providers have accounced to improve during the next 1-2 years”.

COVID-19

COVID-19

- ▶ ER4: Practical experiences by Customs administrations on COVID-19 impacts in border management and cross-border logistics flows and controls

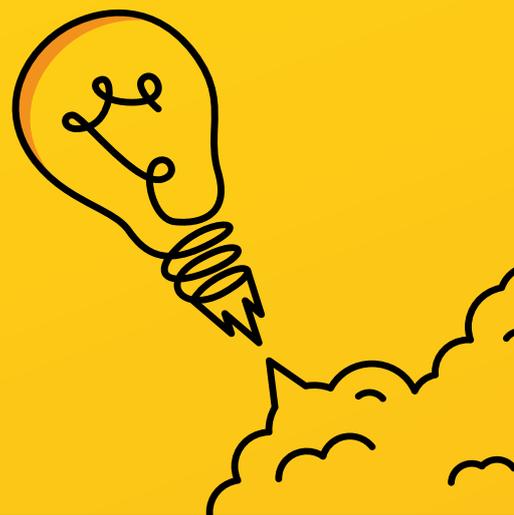
Abstract Next to a variety of implications the COVID-19 pandemic is having on global demand and supply patterns of many raw materials, industrial products and consumer goods, it is also presenting challenges on the way Customs administrations work at border crossings, laboratories, targeting centers, headquarter offices etc. As can be read elsewhere in this Magazine 8, multiple initiatives in terms of updated guidance, exemptions in regulations, defining country-level actions etc., are being processed and presented by the European Commission, the World Customs Organization, and many other international and national institutions and organizations. However, it is still early days to interpret and conclude how COVID-19 is changing the actual operational and strategic management priorities and practiced of Customs administrations”.

This Expert Report has the goal to deepen understanding on this topic. The expert(s) carrying out the work will need to interview 4-5 Customs administrations and write a brief report about what has actually changed; and whether it is (just) for the short-term versus long-term changes. The findings from this report will also feed into broader PEN-CP work on “How Customs can be better prepared for global pandemic, and serious risks/ disruptions in the future”.

- ▶ ER5: Review on past and current calls for security projects / innovations that are relevant for the European Customs community.

Abstract This call for expert report looks for specialists who can review past and future calls for security projects that are relevant for the European customs community. The document should focus on project calls in the EU and the US. Interesting call themes include detection technologies, data analytics, laboratory analysis, counter-terrorism, illicit trade, and fiscal fraud. The expert report shall:

- Summarise innovation challenges, calls for projects, hackathons, crowd-sourcing schemes, and other initiatives that seek to promote security innovation.
- Understand the underlying challenges these initiatives seek to resolve.
- Identify winners and participants of the innovation initiatives.
- Analyse the extent to these initiatives overlap with activities of PEN-CP
- Recommend best practices for establishing a permanent system for monitoring innovation calls in the EU and the US.



➤ Common section across all PEN-CP Expert Report calls:

Who can apply?

You can apply either as a natural person or as a legal entity (registered company with a VAT ID). In case you are a team of two natural persons, please identify clearly who is the main contact person for contractual purposes. It is also important to note that the call is announced in public and is open for anyone knowledgeable on the topic to apply. In parallel, we do send email invitations to a minimum of three potential experts, as explained below.

Invitation and submission process

- Step 1: An email invitation will be sent out to a minimum of three experts potentially interested to submit an application.
- Step 2: Interested experts will confirm their intent to participate in the call, within 7 days from receiving the email invitation.
- Step 3: Experts should submit the methodology & project plan file as well as the 1-2 CVs by the call due date.
- Note: any expert who wants to join the call can do so, just by doing the submitting the documents (Step 3 above); and you don't have to follow the notification (as in Step 2 above)

Documents to submit

Submit the following documents as part of your application to pen-cp@cross-border.org and pen-cp-arttic@eurtd.com

1. Technical application (max 2 pages)
 - a. Describe the methodology you will employ to achieve the objective of this call
 - b. State the list of activities that will be conducted and respective time frame to conduct these activities (total assignment duration max four months)
 - c. List the main risks/limitations you foresee with the assignment and your mitigation plan to overcome them.
2. CVs of 1-2 experts who will carry out the work, highlighting their past experiences working on similar

topic(s).

Evaluation criteria

- Criteria 1: The quality of the methodology, project work and risk plan = max 60 points
- Criteria 2: The relevant past experience of the 1-2 experts = max 40 points
- Total = max 100 points

Evaluation and contract signing process

- Step 1: Evaluation of all applications by scoring and ranking them.
- Step 2: Selection of applicant with the highest score and initiation of the contractual process.
- Step 3: Communication with the non-selected applications of the evaluation results.
- Step 4: Contracting with the selected applicant.
- Step 5: Possibility to contact the unsuccessful applicant (if the contract cannot be closed with the selected applicant for appropriate reasons), to suggest contract negotiation (then follow with Step 4)

Other information (to be finalized and included in the actual call documents)

- Call due date: xx June 2020
- Call results available (expected): yy July 2020
- Duration of the expert report assignment: Up to 3-4 months
- Maximum fee: 5.900 EUR
- Language of the application: English
- Technical contact person: Dr. Juha Hintsa, Cross-border Research Association, Switzerland; pen-cp@cross-border.org
- Administrative contact person: Ms. Amrita Choudhary, ARTTIC, France; pen-cp-arttic@eurtd.com
- Note: a brief overview on the PEN-CP project and network will be added to each call



➤ PEN-CP Innovation Instruments, a.k.a. the 6 PINs

The six PEN-CP Innovation Instruments, PINs, lie without a question in the heart of the PEN-CP activities, from the start of Period 2, till the end of the project. The first two, Prototype Grants and Innovation Prizes, were explicitly presented already in the proposal – the only update being the extension of Innovation Prizes, targeted for external innovators, to Innovation Awards, targeted for Customs partners in the consortium (now we have both). The third instrument below, PEN-Tournaments, was born as a concept during project early day discussions with DG TAXUD. The last three PINs – Challenge Competitions, Hackathons and Crowdsourcing Ideas – were built on top of the original Newview Grant, which, on purpose, was left with a relatively vague description in the project proposal. And, as explained also elsewhere in Magazine 8, the main action to match Customs user Needs, PUNIs, across the six Innovation Instruments, PINs, is carried out by the three Expert Teams, PETS. We all look forward to the outcomes of the PET work, to launch first PIN calls targeted for external innovators – already this summer!



PEN-CP PROTOTYPE GRANT is a core instrument for facilitating technology innovation uptake by the PEN-CP customs partners. With the grant money, the selected security innovators customize and / or field-test their solutions, to match the requirements of two or more PEN-CP customs partners. Illustrative examples of potential grant topics include (note: these are from the proposal, i.e. not updated since 2016/17 text):

- Detection of past violations and criminal patterns from maritime or postal big databases
- Testing a narcotics detection / analysis laboratory device at border conditions.

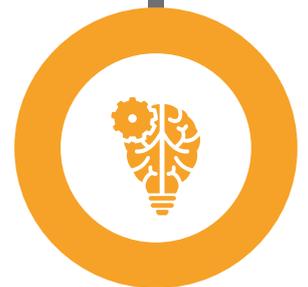
Note: one option is to organize “an extended field trial of a past FP7 / H2020 project customs relevant outcome”

PEN-CP INNOVATION AWARDS AND PRIZES

bring annually in limelight highly innovative customs actions, discoveries etc. The current pipeline is following:

- Year 2019 (completed): Real innovations among the PEN-CP Customs partners (read elsewhere in Magazine 8 about the winning entry)
- Year 2020 (plan with the 3 PET-teams): New solution ideas, among PEN-CP Customs officers; to deal with high priority Customs challenges (PUNIs)
- Year 2021 (until 2023): Innovations born with external parties, inside and outside of PEN-CP activities.

Note: as of year 2020 onwards, we can opt (in parallel) for 2-3 different Innovation Award/ Prize schemes.



PEN-TOURNAMENTS

are about customs officers and/or external experts competing on a specific task, and the winner gaining (small) recognition. The set-up can be either (i) everyone travels to one place for the tournament (e.g. Annual event city), or (ii) everyone competes where they are normally located. The tournament outcomes can be used as basis for follow-up actions, e.g. Prototype Grant or Challenge Competition specifications. Examples of possible topics for PEN-Tournaments include:

- Various types of “container & seal intrusions” (winner: fastest, or most difficult to detect that intrusion completed etc.)
- “Field detection (outside lab) on CITES-DNA, animal or plant” (winner; fastest, or most accurate etc.)
- “Identifying illicit items in a pile of x-ray images” (winner: most correct findings in a limited time; e.g. 1 hour time to identify 42 illicit items in a pile of 200 images)

CHALLENGE COMPETITIONS

seek to address a previously unsolved Customs problem. We can opt to proceed in two stages: Stage1 = Open call to submit a 2-4 page proposal for a solution; and Stage2 = The most promising solution proposal is given an award to develop a “detailed blueprint” (Other option is to go with one stage competition; to be decided later). Example of a recent Customs relevant Challenge competition: USD 1.55 million competition for rapid, nonintrusive detection tools that will help find illicit opioids in international mail. (for more details, see an article elsewhere in Magazine 8).

Note: IPR issues have to be clearly agreed, before making final decisions with the award.

HACKATHONS

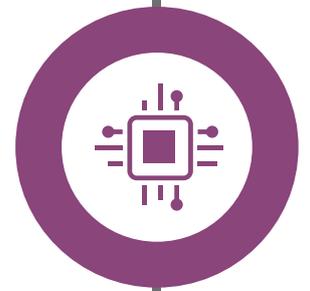
can be defined as follows: “The goal of a Hackathon is to create functioning software or hardware by the end of the event (which usually takes between 24-48 hours). Hackathons tend to have a specific focus, which can include the programming language used, the operating system, an application, an API, or the subject and the demographic group of the programmers.” As PET-1 (Data & risks) would be an obvious fit for this, also PET-2 (Detection tech.) and PET-3 (Laboratory equipment) should be able to come up with relevant Hackathon topics.

Note: in PEN-CP, we can consider variations from the description above; even where we would merge PEN-Tournaments and Hackathons into one innovation instrument.

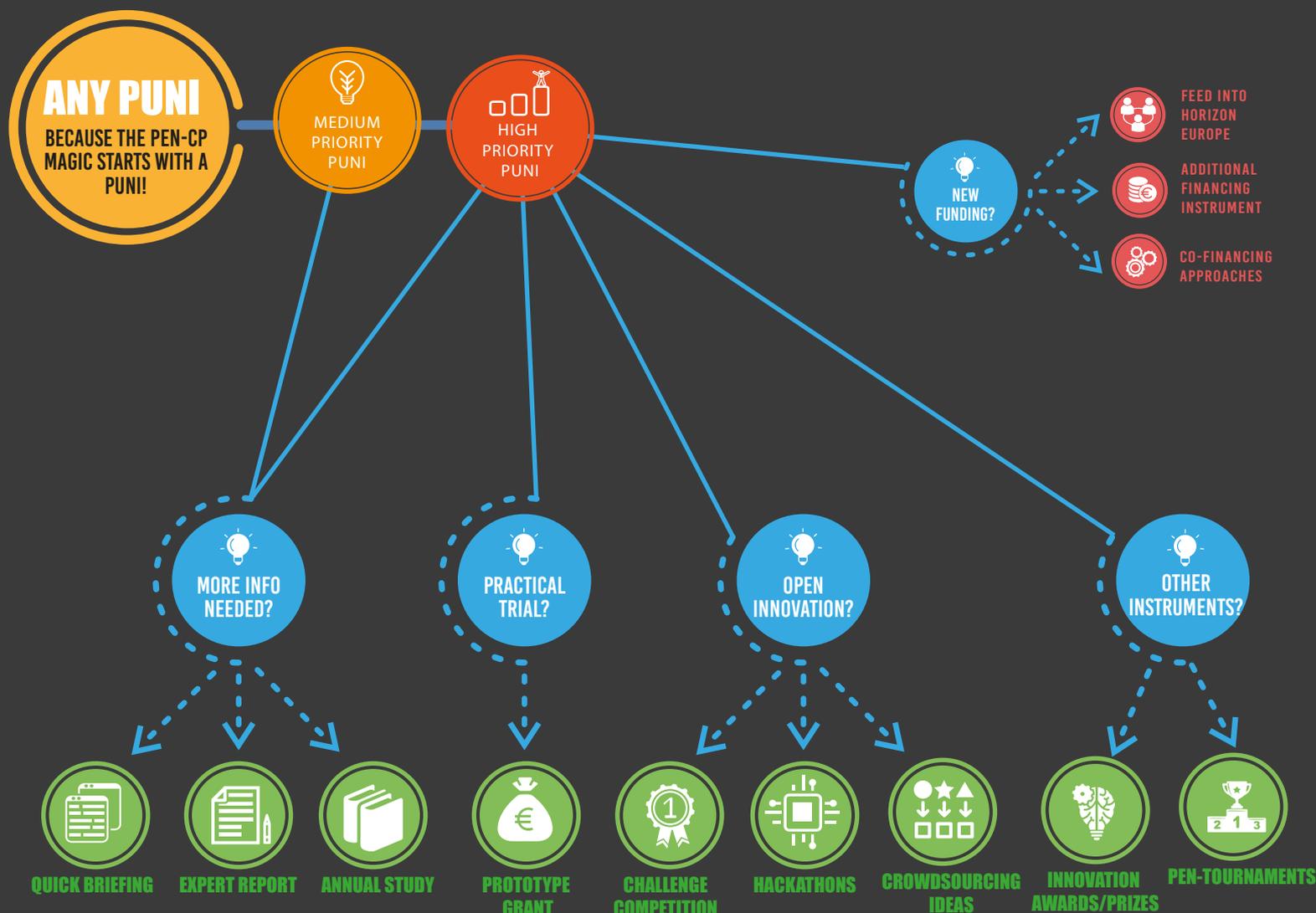
CROWDSOURCING IDEAS

can be defined as: “A global brainstorming for producing breakthrough ideas.” As an example, PET-3 could opt to source ideas around a specific “chemistry problem” (e.g. on New Psychoactive Substances, NPSs) from say 1000 Professors of Chemistry around the world. The submitted ideas could be anything from a 5-line email to sharing of (pre-existing) research paper, granted patent etc. As a follow-up, the most promising ideas can be taken further for example in the context of Challenge Competitions, Hackathons or Future R&D funding calls (e.g. Horizon Europe).

Note: IPR-aspects need to be proactively well-managed, for example “Solvers grant the Seeker a non-exclusive license to use any submitted solution, awarded or non-awarded.”

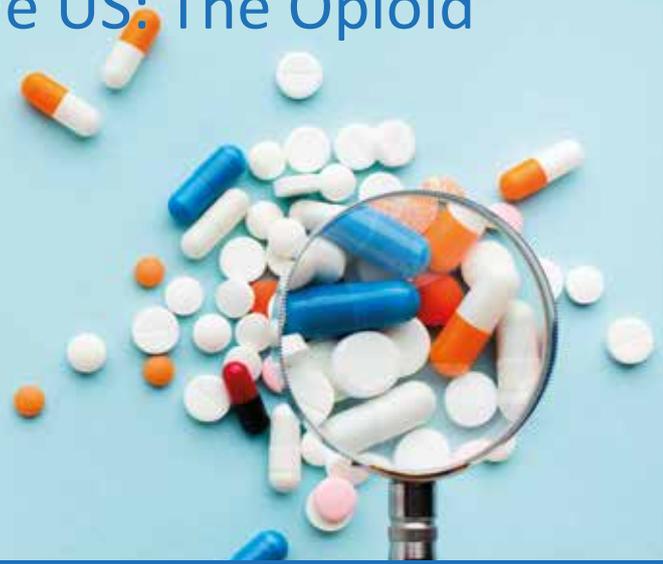


PEN-CP INNOVATION INSTRUMENT (PIN)	LEAD-TIME AND DURATION (NUMBERS ARE ILLUSTRATIVE)	WHO EXTERNAL TO PEN-CP COULD PARTICIPATE?	QUALIFIES AS «OPEN INNOVATION»	FISCAL/ PRIZE ASPECTS
Prototype Grants	9-month full cycle; 4-month active phase	Innovators with existing products	No	Fixed, 60.000 EUR for the selected party to implement / run field trial. (2 grants are per PET).
Innovation Awards/ Prizes	5-month full cycle; 2-month active phase (for submissions and selections)	Broad community of innovators	Maybe	Possible, e.g. gift card to a spa-hotel for winner(s)
PEN-Tournaments	9-month full cycle; 1-day active phase	Experts with relevant skill sets	Maybe	Possible, e.g. gift card to a spa-hotel for winner(s)
Challenge Competitions	9-month full cycle; 3-month active phase	Could be anyone in the world	Yes	Possible, e.g. 15.000 EUR to be spent on "detailed blueprinting"
Hackathons	9-month full cycle; 2-days active phase	Experts with relevant skill sets	Yes	Possible, e.g. 7.500 EUR for winner(s)
Crowdsourcing Ideas	5-month full cycle; 2-month active phase	Could be anyone in the world	Yes	Not common, but possible (e.g. 500 EUR random drawing among "10 most promising ideas")



➤ Open Innovation Action in the US: The Opioid Detection Challenge

In an effort to stem the influx of opioids, four US authorities have in 2019 run an innovation challenge competition encouraging technology firms as well as individual experts to submit proposals for rapid non-intrusive inspections of the postal flow, where many illicit substances cross the borders. When the challenge was successfully ended in December 2019, two solutions providers shared 750.000 US dollars in prize money for two different promising proposals, tested in the final round of the competition. Are there lessons to be learned for PEN-CP from this effort?



PUBLIC HEALTH CRISIS

The US Department of Homeland and Security - Science and Technology; the US Customs and Border Protection; the United States Postal Inspection Services; and the Office of National Drug Control Policy are the four federal authorities that have joined forces in order to try to find innovative solutions to stem the influx of opioids. In 2017, some 50.000 Americans died from opioid overdoses. This large and growing number constitutes an unprecedented public health crisis while opioids such as Fentanyl are transported into the US in powdered form. The four authorities have identified international mail as one important way of entering the illicit substances into the USA.

THE NATURE OF THE BEAST

Of course, the postal flow has its special conditions where speed is of essence and there is a protection of mail secrecy. This means that any attempt to detect illicit goods in the flow needs to be non-intrusive, cannot harm parcels that are licit, and should avoid false alarms as far as possible.

SET-UP OF THE COMPETITION

In order to encourage innovation and get quick access to new solutions, the Department of Homeland Security together with the other authorities organised a competition, the Opioid Detection Challenge, run in two phases in 2019. They were seeking solutions that would allow to detect opioids in parcels moving through international postal service centers and express consignment facilities. The innovators that were called

FACT BOX

What: Opioid Detection Challenge
Open Innovation Competition to fight the opioid influx to the US through Postal and Carrier Services

Initiators:
US Department of Homeland and Security - Science and Technology Directorate, (S&T)
US Customs and Border Protection, CBP
United States Postal Inspection Services, USPIS
Office of National Drug Control Policy, ONDCP.

When:
Submission period: 27 February to 24 April 2019.

Stage 1: Eight finalists announced 11 June 2019
Stage 2: Winner and Runner-up announced 12 December 2019

Price money:
Stage 1: 800.000 US Dollars for up to 8 finalists
Stage 2: 750.000 US Dollars: 500.000 USD to winner and 250.000 USD to runner-up

Winner:
IDSS for combined 3D X-ray CT scanner with automated detection algorithms identifying anomalies in X-ray images.

Runner up: One Resonance for a quadrupole resonance technology using radio frequency signals to search for specific materials.

upon where active in a wide range of fields, from forensic technologies to Artificial Intelligence. In the first face the authorities sought plans for solutions, not ready-made prototypes. The solutions needed to be novel, non-intrusive, user-friendly and well-developed.

THE FIRST SELECTION PROCESS

In the first phase of the challenge there were 83 entries presented from various innovators, both from the US and abroad. A judging panel consisting of eight experts, both academics and experts from authorities, including also the Transportation Security Administration (TSA), as well as representatives from private industry (See Box on Judging panel for details) had the daunting task of selecting the eight finalists, based on a number of pre-defined selection criteria. The basic demands on the entries were that the solutions could not be physically invasive in any way; that they could not pretreat the parcels with any substance, like powders or liquids; and that the solutions needed to be dependent on information that could be gleaned from the parcel and could not rely on external data, that may or may not be accessible to the authorities. There were also demands on a moderate size of the solution and that it must be able to handle packages up to a certain size (27 inches * 17 inches * 17 inches). A larger size was indicated as an extra benefit.

THE EIGHT FINALISTS

The eight finalists presented solutions from a wide field of technologies - from machine learning to hyperspectral imaging and to x-ray diffraction. Stage 1 finalists received 100.000 USD in cash prizes and advanced to Stage 2 in the challenge, where they got the opportunity to work closer with the involved authorities. This involved taking part in a 14-week prototyping accelerator where they were invited to develop their plans into working prototypes. This involved support from the participating authorities including elements of mentorship, on-site visits, datasets for setting up the prototypes, knowledge of current procedures, webinars and on-line training. This was truly a concerted effort to help foster the best innovations, access to data being a key feature. Stage 2 culminated in a mandatory live test day where the finalists convened at a government facility testing their prototype on the articles provided by the DHS. A standard testing approach

was developed and applied to all prototypes. The results of the live test were announced to be an important factor in judging the challenge, while not the only basis for selection. It is worthwhile to note that the participants at this stage needed to pay for their own travel and accommodation in connection with the test event.

An interesting feature of the competition was that after the first round, the eight winners could build onto their teams by joining forces with other contestants and they were given contact details and submission abstracts in order to encourage that sort of exchange.

THE SECOND STAGE

The winner of the competition and the runner up were presented on 12 December 2019. The prize money involved was 750.000 US Dollars: 500.000 USD to winner and 250.000 USD to runner-up. The jury chose IDSS as the winner for their solution of

JUDGING PANEL

JOSÉ R. ALMIRALL, Ph. D. Director, Center for advanced research in forensic science

MANUEL A. GARZA JR., Director, Manifest and Conveyance Security Division, US Customs and Border Protection

ALEXIS LONG, Chief Innovator officer, transportation Security Administration.

STEPHEN D. MCCONACHIE, Chief Operations manager, US Customs and Border Protection

MICHAEL M MCCORMICK, Ph D., Science officer, US Customs and Border Protection

JOHN SANDERS, President, Emerging markets, Daon

STEPHANIE L. SMITH, M. S., Scientific and technical Advisor, US Postal Inspection Service

ANDREW THERRIault, Former Data Officer, City of Boston

8 FINALISTS:

BATTELLE: Automated Multimodal Opioid Detection

DYNAXION: Atomic level Drug Detection

HALO X-RAY TECHNOLOGIES: Enhanced X-ray Diffraction

ONE RESONANCE: Nonimaging Concealed Drug Detector

GTMB, INC.: Noninvasive Detection using Molecular Signatures

VADUM, INC.: NQR Detection of Nitrogen-Containing Substances

XID, LLC: Operator-free X-ray Diffraction

IDSS HOLDINGS: Scanner and Algorithms for Automatic Opioid Detection

combined 3D X-ray CT scanner with automated detection algorithms identifying anomalies in X-ray images.

The runner up was One Resonance for a quadrupole resonance technology using radio frequency signals to search for specific materials.

If the initiative was deemed a success by government, there would also be possibilities for various forms of contracts between the participants and the authorities, in order to carry the innovations further to real implementation. As PEN-CP Magazine has seen it, this was not exclusive to the winner or the runner-up but a

possibility for all good participants.

THE WINNING CONTRIBUTION FROM IDSS

IDSS Holdings won the competition with their scanner and algorithms for Automatic Opioid detection, and carries the 500.000 US dollars in prize money. The solution combines a 3D X-ray CT scanner with automated detection algorithms that allows for identification of not expected features in the scanned objects physical properties. IDSS, a relatively young company founded in 2012, has previously specialized in CT scanners in airport environments.

THE RUNNER-UP : ONE RESONANCE

The runner-up solution was awarded with 250.000 US dollars and the prize was awarded to One Resonance for a solution using radio frequency signals to detect illicit substances. One Resonance is a company founded in 2009 based in Massachusetts, specialising in on state-of-the-art instrumentation and methods for medical and security applications.

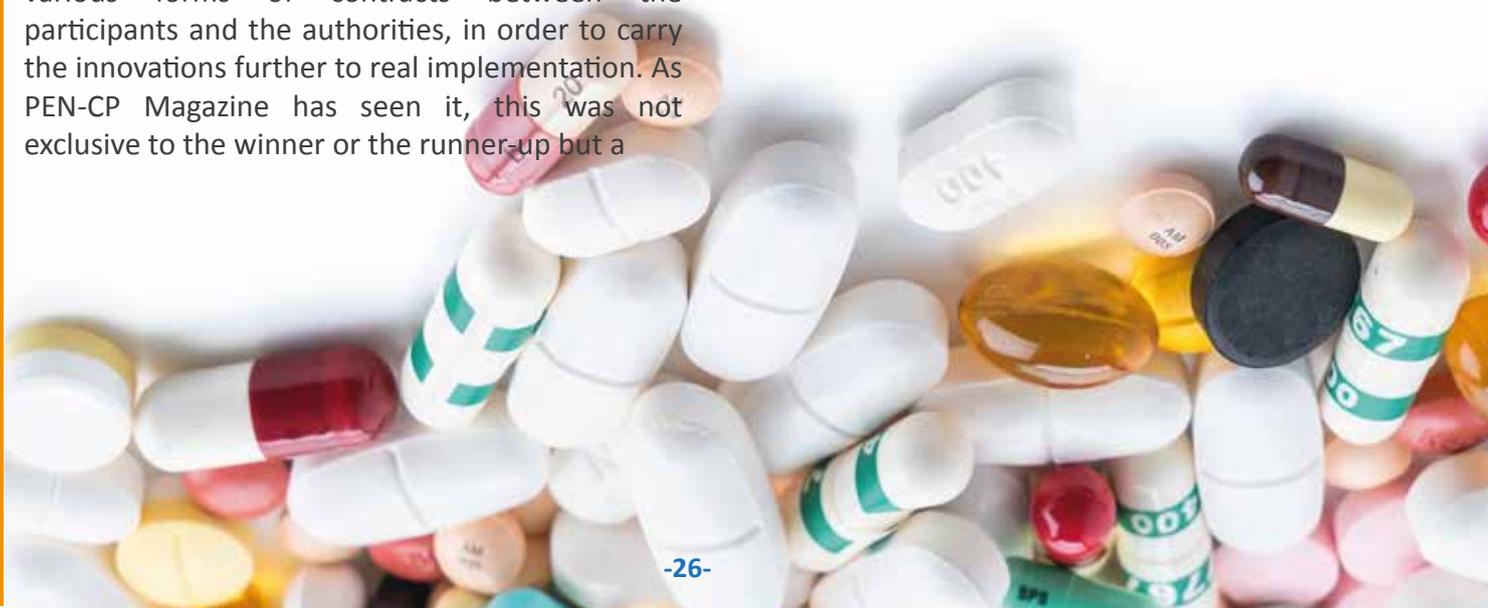
THIS ARTICLE WAS BASED ON INFORMATION MAINLY FROM THE FOLLOWING WEBPAGES:

<https://www.challenge.gov/challenge/opioid-detection-challenge/>

<https://www.opioiddetectionchallenge.com>

<https://www.idsscorp.net>

<http://www.oneresonance.com/about.html>



▶ PEN-CP - Year2 Annual Event – Draft agenda

Location and time (tentative): Dublin, Ireland; January 2021

ANNUAL EVENT PLANNER

MONTH: January YEAR: 2020

DAY1
(5.5 HOURS EFFECTIVE)

PANEL1: the 3 PETs provide an overview on the work done so far in 2020 (120 mins)

PRESENTATION1 (AND DISCUSSION): Annual study chapter on External data sources in Customs risk management (45 mins)

UPDATE1: Training materials (15 mins)

BREAKOUT1: the 3 PETs work on next set of Prototype grants and Open innovation instruments, and present in plenary (90 mins)

PRESENTATION2 (AND DISCUSSION): Annual study chapter on Targeting and detection in small parcel logistics (45 mins)

UPDATE2: Customs communication toolbox (15 mins)

WEEK'S MAIN EVENTS

WEEK'S MUST DO'S

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- ---
- ---
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DAY2
(6 HOURS EFFECTIVE)

PRESENTATION3 (AND DISCUSSION): Annual study chapter on Quantified models in Customs societal protection work (45 mins)

UPDATE3: Latest on POP-platform (15 mins)

PANEL2: Cooperation with parallel projects: iProcureNet, ARESIBO, iLeaNet, iLEAD, tbd (60 mins)

BREAKOUT2: the 3 PETs work on User experience sharing; Standardization roadmap items; Resource pooling ideas; and Training needs identification, and present in plenary (90 mins)

UPDATE4: PEN-CP impacts on innovation acceleration (15 mins)

PRESENTATION4 (AND DISCUSSION): Annual study chapter, topic tbd (45 mins)

GENERAL ASSEMBLY MEETING (90 mins)

Year2 Dinner, with announcement of Customs Innovation Award/ Prize winners

January

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NOTES

DAY3
(4 HOURS EFFECTIVE)

PANEL3: Reflections by the Advisory Board & external experts (60 mins)

UPDATE5: Findings from the 13 Customs country visits (15 mins)

BREAKOUT3: the 3 PETs work on the detailed work plans for the next 6-9 months, and present in plenary (105 mins)

PANEL4/ FINAL SESSION: What all is going well? What can we do better during Year3? (60 mins)

➤ PEN-CP Online Platform

Updated POP statistics

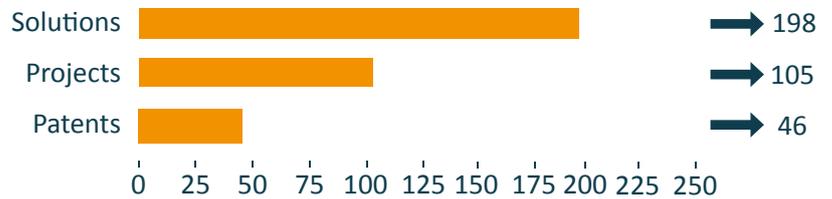


54 Registered users on the POP-platform

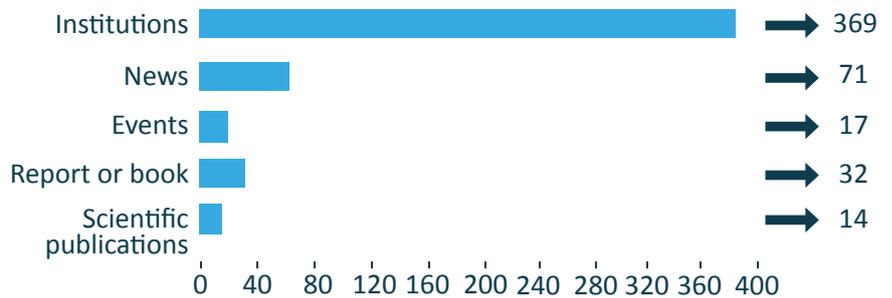


51 User Needs/ Customs Challenges (PUNIs)

Number of Security Innovation Monitoring (PSIM) items: 349



Number of Information Observatory (PIO) items: 521



POP USER GUIDE- Check out the **VIDEOS**

« **PASSWORD** »

Email pen-cp@cross-border.org for the password



How to create a PEN-CP Online Platform account
<https://vimeo.com/349890798>



What is PEN-CP User Need Ideas (PUNI) and how to add one
<https://vimeo.com/349891263>



How to add a potential solution
<https://vimeo.com/349890596>



About PEN-CP Security Innovation Monitoring (PSIM)
<https://vimeo.com/350704256>



About PEN-CP Information Observatory (PIO)
<https://vimeo.com/349889753>



How to use the filters
<https://vimeo.com/349891128>



How to manage notifications in the PEN-CP Online Platform (POP)
<https://vimeo.com/349890949>

PEN-CP KEY TERMS AND ABBREVIATIONS



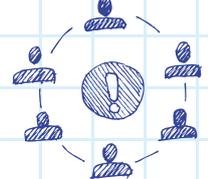
POP 01

PEN-CP Online Platform

You can access POP using this website



<https://cmt.eurtd.com/groups/profile/85016/pen-cp>



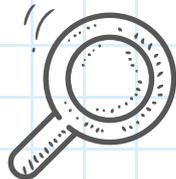
02

PUNI

PEN-CP User Need Ideas

Which includes:

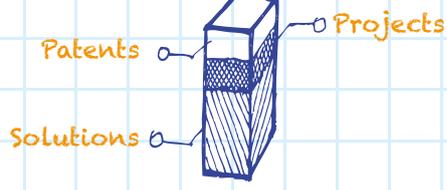
- Challenges
- User needs



03

PSIM

PEN-CP Security Innovation Monitoring



Monitoring items include:



04

PIO

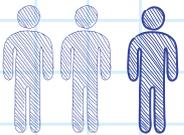
PEN-CP Information Observatory



05

PET

PEN-CP Expert Team



06

PCIA

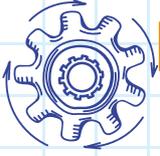
Customs Innovation Award



07

PIN

PEN-CP Innovation Instrument



- ✓ Prototype grants
- ✓ PEN-tournaments
- ✓ Challenge competitions
- ✓ Hackathons
- ✓ Crowdsourcing ideas

08

PEN-POC

PEN-CP Point of Contact



Examples:

- ✓ H2020 Police network iLEAD
- ✓ H2020 Procurement network iProcureNet
- ✓ H2020 Security Research NCP Network, SEREN4
- ✓ H2020 Security Research Events
- ✓ C2020 Customs Detection Technology Expert Group, CDTPG
- ✓ C2020 Customs Laboratories European Network, CLEN

➤ Tentative topics for Magazine 9

- Customs Security Innovation related past and current calls, case UK
- Updates on the PEN-CP Training Needs survey
- Summaries of all Innovation Award 2019 submissions (subject to approvals by the respective administrations)
- Final non-reported/ pending inputs from the Year 1 Annual Event
- COVID-19, Customs and Cross-border supply chains – PEN-CP Information Observatory, and Eye to the Future actions
- COVID-19 Triggering a variety of Open Innovation calls – anything for PEN-CP to learn so far?
- Professor Interview: Short- and long-term impacts with COVID-19 and global supply chain and logistics.

FOR MORE INFORMATION:



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www.researchgate.net/project/PEN-CP-EU-H2020



www.linkedin.com/groups/8183667/



<https://youtu.be/OXwQPHHS5Ls>