

Issue 3 (May 2019)



PEN-CP

Pan-European Network of
Customs Practitioners

MAGAZINE

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Dear PEN-CP Magazine Readers

It is a pleasure to publish now in May the PEN-CP Magazine Issue 3 – shifting from every-3-month to every-2-month publication cycle, as discussed in our last PEN-CP consortium web-meeting.

First, thanks to all experts across PEN-CP consortium who have played a role in testing the PEN-CP Online Platform (POP): we are now implementing proposed changes and improvements, and by the end of May we open the POP-platform for a wider user base (see POP-Corner for more details).

And second, thanks to Hungarian, Lithuanian, Estonian, and Norwegian Customs for hosting productive live meetings during the past two months – it makes a lot of sense to meet in person time-to-time, and to discuss and exchange ideas face-to-face.

Magazine 3 should have quite rich content regarding the recent developments in PEN-CP; and beyond. In particular, it proposes multiple actions for all partners, in the context of: Upcoming interviews and surveys on assessing benefits from PEN-CP; Identifying expert(s) for seals control educational videos; Mapping of relevant institutions and projects across all PEN-CP countries; Participating in the Customs Innovation Award competition; and so forth.

I hope you enjoy reading the Magazine, and that it stimulates further thinking on how all partners can benefit from the project - while always trying to take part in a handful of concrete PEN-CP activities.

In Thun, 1.5.2019

Juha Hintsala

PS. Our next Full consortium Gotomeeting will take place on Tuesday 4.6 at 10.15am CET (max duration 90 mins) - <https://www.gotomeet.me/JuhaHintsala> (if you would like to test Gotomeeting before, please send an email to: pen-cp@cross-border.org).

PPS. Maybe the new scheduling of PEN-CP Magazine every second month, and Full consortium Gotomeeting every second month, will prove to be “a decent rhythm” to keep all partners well informed on the project progress and next step actions ... what do you think?

PEN-CP Magazine Editorial Team

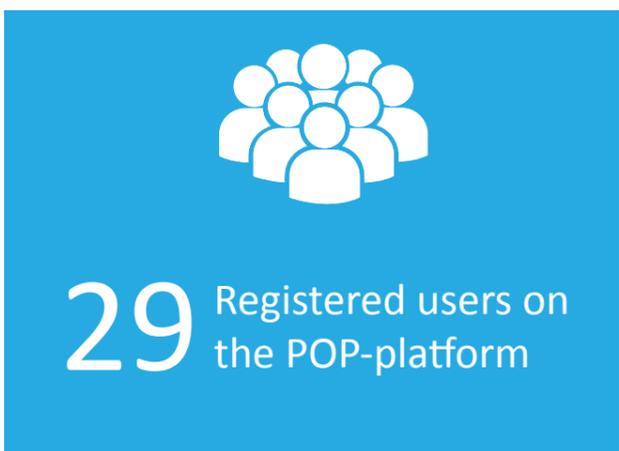
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➤ PEN-CP Online Platform – “POP-Corner”

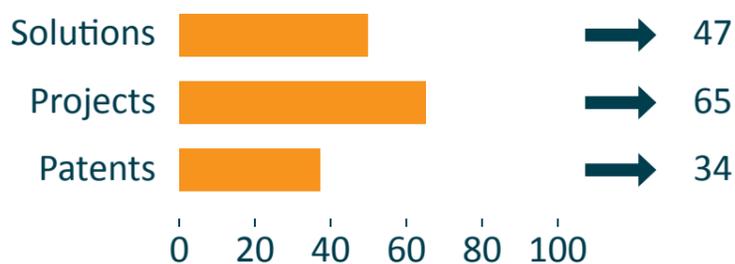
It is time to introduce the “POP-Corner”, as a regular section in PEN-CP Magazines. In the POP-Corner we share the latest updates on PEN-CP Online Platform: anything from current number of users and various items stored on the platform, to latest stories on how PEN-CP Customs partners have benefitted from the information and underlying process maintained on the POP platform; from upcoming campaigns to collect and store new User needs/ Customs challenges (PUNIs) on the platform, to on-going match-making exercise between PUNIs versus Security Innovation Monitoring items, i.e. solutions, projects and patents (PSIMs).

In this first edition of POP-Corner, we would like to start by thanking all the POP test users, for their work and suggestions during the past 6-8 weeks. We have taken all your suggestions on board, and will be implementing updates and improvements on the POP platform – including the first release of the POP User guide - until 31 May this spring. After that we will announce that POP vs.2.0 is ready for use, and invite all PEN-CP Customs partners to join the platform with multiple users, say between 3-6 users per Customs administration. And, if all goes well, we can then invite unlimited number of Customs partner experts to register on POP platform, as of 1.9.2019.

Next on the POP-Corner, we share below the latest statistics from POP platform.



Number of Security Innovation Monitoring (PSIM) items: 146



Number of Information Observatory (PIO) items: 152

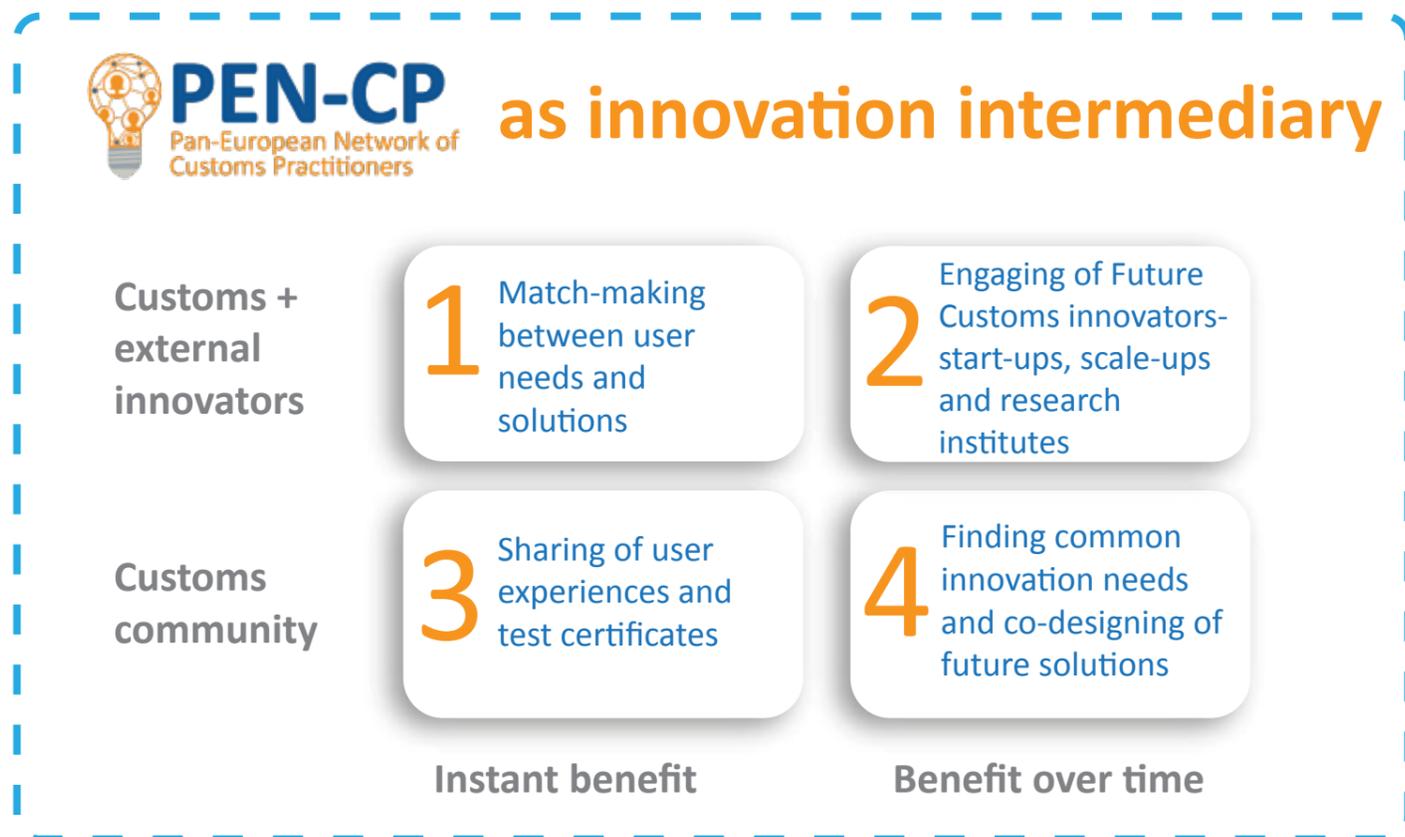


The number of registered users will hopefully grow from 29 to at least 70, by the end of the summer. Our biggest bottleneck is at the moment to grow in number of PUNIs from the current 27 to say 60 or even more – this will require lots of focus and effort from all the Customs partners, but we are sure that we can do it. When it comes to PSIM and PIO items, the steady growth continues, thus no major worries there. And when it comes to a subset of PSIMs – existing solutions in the markets – we will be interacting actively with all Customs partner this summer to collect inventories of existing solutions, across the PEN-CP security themes (and even beyond, details to be discussed later).

Final topic on the POP-Corner/ Magazine 3, is about crystalizing the key services that PEN-CP as an innovation intermediary - facilitated by the POP platform - is aiming to offer to the Customs community. We visualize this with a 2x2 matrix, which was first introduced few weeks ago, during the PEN-CP Management Team meeting in

Budapest, with Director General of Hungarian Customs joining that session; and, in parallel, during the WCO SAFE Working Group meeting in Brussels.

On the y-axis we differentiate whether an activity/ service takes place between Customs and External innovators; or whether an activity is of Customs-to-Customs nature. And, on the x-axis we differentiate whether a benefit of a specific activity/ service (typically) materialized instantly versus over a longer time period.



1 Match-making between User needs/ Customs challenges versus existing Solutions: This is clearly an activity which includes external innovators / solution providers in the loop. In the very best case, the benefits for Customs partners can be instant, if, thanks to the POP match-making service, we can identify an existing solution to solve the Customs challenge. As a minimum, the match-making service can yield interesting product, service, and also R&D project leads for involved Customs partners to follow-up.

2 Engaging future innovators – including such scale-ups, start-ups, research institutes, and University departments which are not yet active in “customs business” – is again clearly an activity including external innovators. When it comes to materializing the benefits, it will typically take a longer period of time before tangible solutions or services have been (co)developed, tested and taken into operational use. As a minimum, facilitated by targeted extracts from POP platform, dozens to few hundreds of innovators will become aware of the fascinating challenges customs are facing – giving them an opportunity to focus their best brains on research and development of future customs solutions and services.

3 Sharing of user experiences with existing (specific) technologies and solutions - like 1 to 5 star rating on performance, reliability, maintenance commitment and total value to customs – and sharing of technical testing data sheets, both embedded in the heart of POP platform, obviously take place between customs administrations. The benefit for the Customs reading about user experiences and/or test certificates can be instant, for example when an administration is assessing alternative options for technologies or solutions to solve a specific user need/ Customs challenge. As a minimum, we are creating a reference database covering large number of existing technologies and solutions, with “objective and subjective notes” attached to them.

4 Finding common innovation needs and sharing ideas on future solutions, even “co-designing” them, lies in the heart of POP platform and services. As a default, this activity takes place between the Customs partners – of course not excluding that the activity could be expanded towards the external innovators, on case-by-case basis. We believe strongly that as a minimum, this service will increase the degree of customs-to-customs idea exchange and communication to new levels.

Thanks for reading the first edition of the POP-Corner. You can always send us feedback on it, just like on any other content in PEN-CP Magazines, by email to: pen-cp@cross-border.org

The URL for the POP platform is: <https://cmt.eurtd.com/groups/profile/85016/pen-cp>
 If you need help in registering as a new user, please email susana.wongchan@unil.ch

➤ Measuring the Impact of the PEN-CP Innovation Intermediary (Innomediary) Services

What is the PEN-CP Innomediary impact measurement about and why is it of high importance?

The objective of this exercise is to assess how well PEN-CP is able to serve and support the Customs partners in their innovation related plans and efforts. The measurement is done in “before PEN-CP and POP platform is in full use versus after PEN-CP and POP platform have been up-and-running for a period of time” -style. More specifically, this exercise will shed light on following factors:

- The overall usefulness and value of each PEN-CP service for the Customs administrations;
- The improvements in the information exchange and other interaction between solution seekers (= Customs administrations) and solution providers (= the firms, including SMEs, start-ups and scale-ups); and
- The tangible benefits in the context of “better solutions for customs (faster performing, more accurate, cheaper..) developed in shorter R&D-cycles”

How is the impact measurement done?

We will collect information and data – facts, opinions, viewpoints, additional contacts etc. - from each PEN-CP Customs Administrations via interviews (phone or live) and electronic questionnaires. This information will be collected minimum twice during the 5-year project, in order to compare the effects and impacts that the PEN-CP innovation intermediary services have within each organization.

Who are invited to join the assessment?

We plan to start by interviewing each main Custom contact point for PEN-CP. Next to several interview questions (which we share before the interviews with the main contact points), we will be asking the following:

- The person(s) in your administration in charge of dealing with innovation activities, promotion etc. within your organization (for example: the head of the innovation department or the coordinator of an innovation program)
- The person(s) in your administration in charge with the procurement of detection technologies; laboratory equipment; and, big data and risk management tools.

Summary table: what, who and when?

Action	Who is invited	Timing
Kick-off interview and electronic questionnaire	PEN-CP main contact point	During May - June 2019
Electronic questionnaire	To the heads of procurement and innovation (if available)	Between July and August 2019
Follow-up interview and electronic questionnaire	PEN-CP main contact point	Between May and June 2020
Follow-up electronic questionnaire	To the heads of procurement and innovation (if any)	Between July and August 2020

Next steps & contact for more information

Ms. Susana Wong Chan, University of Lausanne, will be in touch with all the Customs partners/ their main contacts in PEN-CP, during May. You can reach her at: susana.wongchan@unil.ch , +41787320757 (WhatsApp & Tel).

➤ Pushing Boundaries - how Dutch Customs Reforms Innovation to Pursue an Ambitious Vision, Part 1.

From 8 million customs declarations in 2007 to 195 million declaration messages 2017. New technologies and changing staff. Dutch Customs faces challenges that are common to many Customs administrations. But the way they tackle the issues through Innovation is neither common nor well known. PEN-CP Magazine welcomed the invitation from Dutch Customs and sat down with Frank Heijmann, Head of Trade Relations and Maarten Veltman, Chair of the Coordination Group on Innovation, to understand the changes they are implementing to the way the Dutch Customs Administration is working with innovation. This is the first of two articles coming from our conversations with the two Dutch customs experts in April 2019.

Frank Heijmann:

"To give you a small insight; in 2007 we dealt with about 8 million declarations in our import, export and transit IT systems. In those days we still had a lot of local clearance procedures where big companies for export and for import simply did entry in the records of declarations, so they did not lodge them shipment by shipment to customs. Due to all kind of amendments to European legislations all these procedures needed to be abolished. On top of that, in 2009 we received the EU amendments on the security legislation. This led to a lot of new procedures and a lot of new declarations, entry summary declarations, pre-arrival and pre-departure notifications. On top of that, we have a continuing growth, going back to 2014 of about seven per cent a year. So compared to before the crisis, it is continuously growing. And then we had the change to e-commerce, large shipments become small parcels, this led to that in 2017, ten years after, we dealt with 195 million declaration messages in our IT systems."

Frank Heijmann shares a comprehensive picture of how the amount of declarations has increased. And he sees no stop to this trend. Seven percent growth rate per year in number of declarations. This presents huge

challenges both to the IT-systems that need to process the declarations and to the physical inspection of the goods. But this is just the start of the challenges. A large part of the present staff will be going into retirement during the next 6-7 years, which means that out of the anticipated 5500 members of staff, in 2023-24 only 3000 will have been in the service today. On top of that there is the continuous development of technology and the need to adapt to that both in IT and data management and in meeting new kinds of criminality, like those based on crypto-currencies.

To meet this, Dutch Customs has developed a number of measures in the field of innovation. Again Frank Heijmann:

"We have a long-term vision and that vision is called Pushing Boundaries. Pushing boundaries is for a customs administration a kind of a dot on the horizon on whatever we want to develop and it gives a reply to all kinds of challenges that we stand before."

Based on this vision the Dutch Customs has made step-by-step changes on how they work with Innovation. One basis of this is the visualisation of innovation as an interdependent triangle where the strategic goals are linked to the technical and the social side of innovation. They all influence each other. Maarten Veltman explains:

"We work via a triangle kind of approach. The triangle consists of the strategic goals of customs, and the other parts are the technical part of innovations, that we are dealing with, and social innovation. Social innovation is the capability of customs to change."

Social innovation will be the theme of the second article in this mini-series, to appear in the PEN-CP Magazine Issue 4 (July 2019). For now, we focus on the organisation of the work. In the work with the vision, five innovation areas have been identified. It is the Green flow, the Yellow flow, the Blue Flow,

Auto-detection of data and Auto-detection of cargo (see flow diagram below). Frank Heijmann explains:

“The Green flow, that is what we call Trusted Traders, then we have the Yellow flow, that is about trusted trade lanes. Can we supervise also based on complete supply lanes? Is it possible when you have information from the source, when you know that the data are smart and correct and that the supply chain is secure, for Customs to then control these flows of goods in different ways when they enter our country, than other goods? The third innovation area is what we call the Blue flow, which is the remaining goods, those who are not the trusted traders and those who are not using trusted trade lanes, that is the blue flow. And the innovation there is to apply control mechanisms as much as possible in a way that we do not intervene or that we minimise the intervention in the logistical chain.”

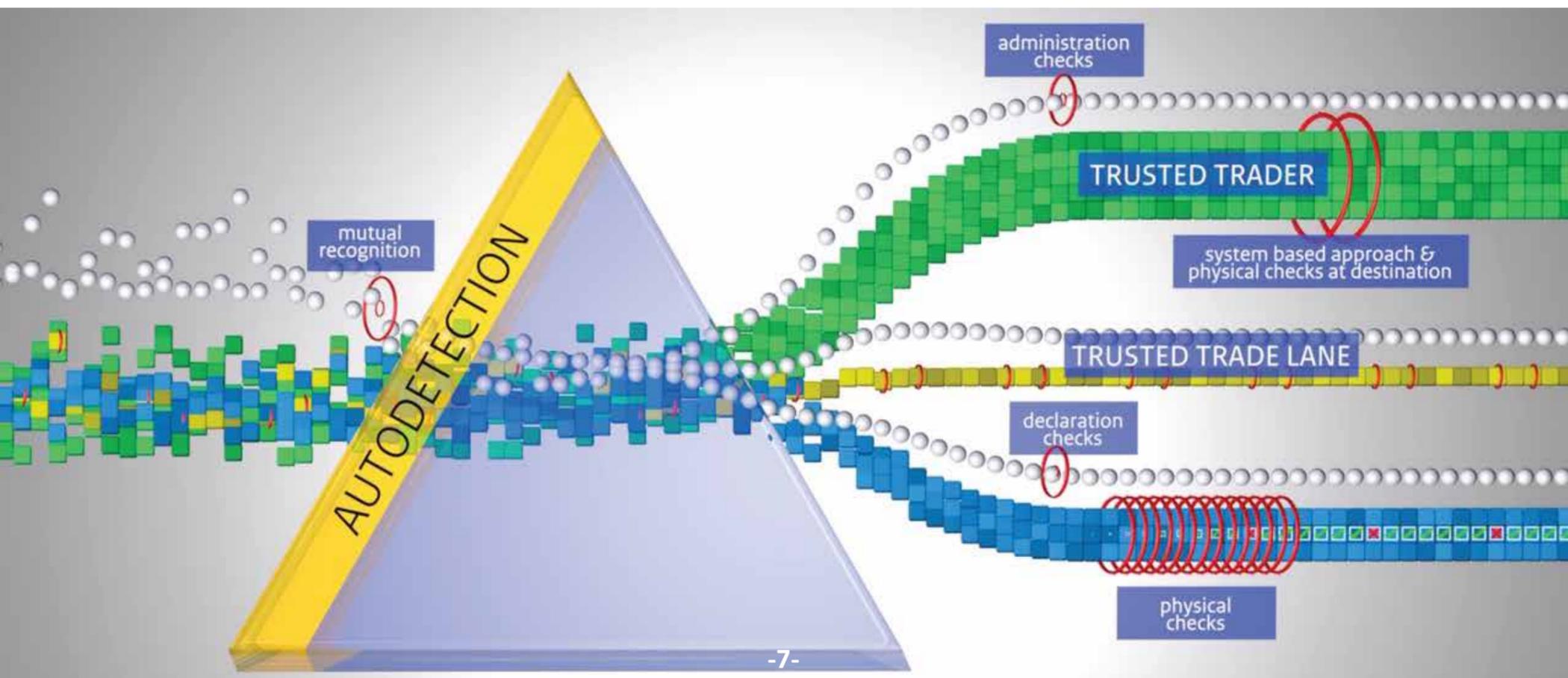
Frank continues:

“Auto-detection of data consists of all the activities that we carry out to have an automated selection of information, gathering of information, setting up Artificial Intelligence, automated decision rules, but also having access to different data sources. Using different data sources, not only customs declarations but also business data, traders data, supply chain information, or information from other sources, and all the technology around that, where we try to connect the data as smartly as possible and make as smart as possible decisions on this data. That is a separate innovation area and it covers all the Green, Yellow and the Blue flows”

The fifth innovation area is auto-detection of cargo. This consists of measures set up in the supply chain itself, where images or other indicators will help detect anomalies. An example of this is the radiation detection gates that have been installed in the harbors, in such a way that the radiation is measured in the paths the goods would usually follow anyway. There is also a trial to do the same for x-ray machines. Here the placement is the innovation but this can be taken one step further. In a European project AXCIS, Dutch Customs has worked with partners developing algorithms, mathematical models, that will enable scanners to carry out detection in the context of empty containers. It might sound simple, given the high degree of standardisation of containers, yet thousands of images had to be uploaded to allow building algorithms for a full detection of the containers, to see to that there is no hidden rooms or compartments in floors or ceilings, or for instance in the reefer engine.

The five innovation areas have each a responsible champion in the organisation, who drafts suggestions on what is needed to fulfill the vision. The next layer is the Innovation coordination group presided by Maarten Veltman. Their task is to analyse proposals to see if they are technically feasible, the right size for the organisation, contributing to the vision as well as being affordable. They carry out proof-of-concept and have a small budget for this.

The innovation coordination group has identified eight innovation themes (see Figure in the next page). The group consists of experts from different parts of the organisation and with different professional backgrounds. It is expertise from IT, information management, purchasing, enforcement and so on that come together in the group deciding on whether



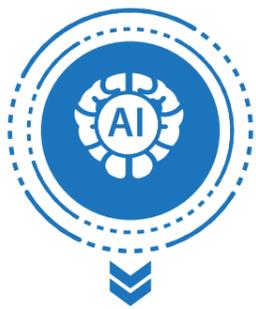
to put an innovation idea on the Innovation agenda or not. Once on the agenda there is a roadmap towards implementation. Maarten Veltman again:

"We have the research projects, we have the proof of concepts, after the evaluation of such a concept now we go into this implementation phase and that is one of the hardest part of the development. So our roadmap consists of all sorts of R&D kind of steps that we take and the big challenges are what happens after the success of a proof of concept. If it is not a success we stop it and we clear out the sandbox environment and we start up with a new idea.

But if it is good idea then a lot of money is involved. So one of the things that we do in a evaluation is an impact analysis to look at the consequences of implementing this new kind of way of working or a new technique within a certain process."

Both Marteen Veltman and Frank Heijmann come back to the fact that the biggest success of this work is the growing commitment in the organisation. Once an idea is taken beyond the proof of concept stage there will be a huge demand on resources not only in the form of money, but more importantly from the staff of the main operations. There is no R&D department so

Innovation themes identified by the Dutch Customs Administration



Artificial Intelligence



Robotisation



Internet of things



Data Driven Customs



Distributed Ledger Technology (Blockchain)



Sensor Technology



Internet of logistics



Social Innovation

the implementation needs to be carried out by the staff and in the operational parts, it becomes an extra task for many. In this situation the growing awareness in the organisation is crucial to gain access to certain disciplines and professions. Also the implementation phase is seen as the most difficult part of innovation and efforts are being put into trying to shorten the time to implement an idea in the organisation. Once an idea gets out of the proof of concept stage, it can also become much bigger and the sheer scale makes it hard to do procurement, or IT implementation. Then the commitment in the organisation is a key element to success.

We ask Frank Heijmann and Maarten Veltman if they have a message to PEN-CP. They both touch on the

need of communicating between custom services either between PEN-CP members or between all European Customs organisations. They are asking for a Whatsapp or LinkedIn for customs professional. Then Frank Heijmann continues:

"You have to take along your administrations, your organisation in what you are doing in PEN-CP. It is not a game of the players in the project, you're representing your administrations. And I think that is very important for everyone, take along everyone."

This article will have a follow-up in the next issue of the PEN-CP Magazine, when we will focus on Social Innovation.

► PEN-CP Customs Innovation Award & PEN-CP Innovation Prize

According to the PEN-CP project plan, as of Year 2 Annual Event, we plan to select and announce the winner of the PEN-CP Innovation Prize – with the scope and process described in the Box at the bottom of this article. While waiting for the first “official PEN-CP Innovation Prize” to happen, PEN-CP Management Team would like to propose an additional innovation recognition, focused exclusively on Customs partners in the PEN-CP consortium.

The process and rules for the PEN-CP Customs Innovation Award are the following:

1. Each PEN-CP Customs partner may propose up to 3 innovations to the competition.

2. The nature of innovations can be very broad: anything from what customs considers as “incremental innovations” all the way to “radical innovations”; improvements in existing solutions and technologies, and introduction of new solutions and technologies; improvements in existing processes, as well as introduction of new processes are; and so forth, are all in the scope of the Customs Innovation Award.

3. The Customs innovations submitted to the competition can cover years 2018 and 2019; in other words, any innovations which were introduced/ implemented/ published during these two years qualify for the competition.

4. PhD candidate Susana Wong Chan (susana.wongchan@unil.ch) of University of Lausanne, is the main contact point for the innovation submissions. She will send all partners link to the submission form to be filled, by 31.5.2019.

5. Deadline to submit your suggestions - max 3 per PEN-CP Customs - to the competition is 31.8.2019. Please use the PEN-CP Online Platform (POP) for the submission. Susana will advise you on the details.

6. Susana assembles all the suggestions together, and passes them to the PEN-CP Advisory Board. Advisory Board scores all innovations (scoring rules to be announced by 31.5), and produces a list of 4-8 top innovations.

7. The 4-8 top innovations are then shared with all PEN-CP Customs partners, by 30.9.2019, so that each Customs has around 7 weeks time to consider which innovations they find as the best ones.

8. The final voting to find out the winner takes place during the Year 1 Annual Event, in Budapest, Hungary, 20-22.11.2019. And the winner will be announced & celebrated during the common dinner of Year 1 event.

9. The plan is to share afterwards key information (on the PEN-CP Online Platform, POP) with all PEN-CP partners on all the submitted innovations; and of course, to identify which of the innovations (in the full pool of maximum $13 \times 3 = 39$ innovations) could be of interest for further assessment, sharing of details etc.

Please note that the nature of the PEN-CP Customs Innovation Award for Year 1 is on “recognition & fame style” (and a small trophy or similar). We hope that this becomes an interesting, a useful and, why not also a fun tradition in the PEN-CP project. And, maybe as of year 2020, we could also open a second track, where Customs administrations outside PEN-CP consortium could participate, too... (details to be explored and discussed during the Year 1 Annual Event in Budapest).

For more information, please contact the task leader Mr. Ron Roelofs from Dutch Customs: rkw.roelofs@belastingdienst.nl

PS. Just that we don't confuse PEN-CP Innovation Prize with the Customs Innovation Award: Extract from PEN-CP project plan (Description of Action, DoA) on the Innovation Prize:

PEN-CP Innovation Prize brings in limelight annually the most innovative customs security action or discovery – may it be originating from the PEN-CP Technology Grants, PEN-CP NewView Grants, Expert reports, Annual studies or any other PEN-CP Key components and activities. Budget has been reserved for four individual prizes, which will be handed out at the PEN-CP Annual events (from year 2 onwards). The PEN-CP Advisory Board makes recommendations on the selecting the winner, followed by final vote of all PEN-CP customs partners. Public announcement will ensure that not only the European customs community will become aware of the prize, but also the global customs community will be well-informed about the selection outcomes.

➤ Outreach Towards Innovators – Actions Suggested for All PEN-CP Partners!

Key part of PEN-CP work - throughout the 5-year project life span - **is to reach out to a broad set of current and potential innovators and solution providers.** We have started to build a pan-European database, which sits on the PEN-CP Online Platform, POP (which you might already have access to, if not you can send email to susana.wongchan@unil.ch). For the time being, we have stored information on around 90 institutions on the POP platform (visible to all users on the PIO-section of POP).

There are many reasons why building **the innovator and solution provider database will be beneficial for the PEN-CP network**, including the following ones:

- We boost and speed up customs relevant innovation activities by proactively sharing information about Customs needs and challenges towards innovators and solution providers; and, they will be able to target their research & development efforts more effectively towards what customs really needs.
- We learn about past and on-going customs related research-development-innovation projects, in Europe and beyond; and we may be able to tap into some relevant outcomes.
- We become aware about promising solutions which are in use by other government agencies or by companies in global supply chains; and which may be tailored for customs use in the future.

In addition, the database will be used when we invite participants for various grant and competition calls, including: PEN-CP Prototype grants, Challenge competitions, Hackathons, Crowdsourcing, Expert reports, and so forth.

In order to continue building the pan-European database on current and potential innovators – start-up companies, scale-up companies, research institutions, University departments etc. – we call all PEN-CP Customs partners for action! It would be great, if each partner takes the following actions, and finishes them by 31.8.2019:



1) Research institutes and University departments: try to identify minimum 7 of those in your country; aim to be specific, by identifying department names and contact details of relevant professors, research directors, scientists etc.; include web-links, as much as possible. The main point of contact to assist you in this task is Mr. Kevin Humpreys from Irish Revenue, email: khumphre@revenue.ie

2) Research-development-innovation projects: try to identify minimum 5 on-going and past projects – either national or European – where there is already some participation by your administration, or, where you see that customs participation could be beneficial in the future. The main point of contact to assist you in this task is Mr. Trevor Francis from UK Border Force, email: Trevor.Francis2@homeoffice.gov.uk

3) Start-up and scale-up companies: Try to identify minimum 3 promising start-up/ scale-up companies established in your country, somehow linked to big data and risk management; detection technologies; laboratory equipment; or even other “customs relevant topics”. By start-up we mean “a company in the early stages of determining product-market fit, experimenting with customer segmentation and working toward a positive contribution margin” and by scale-up we mean “a company that has already validated its product within the marketplace and has proven that the unit economics are sustainable” The main point of contact to assist you in this task is Mr. Yannick van Ranst from the Belgian administration, email: yannick.vanranst@minfin.fed.be

Anything else, where you see customs relevant promising developments happening in your country, please email to susana.wongchan@unil.ch. Susana will also assist you in entering the details to the POP-platform; but initially, you can compile relevant information just on a word file.

Great, if all 13 Customs partners in PEN-CP take these 3 actions listed above – this way we will take a big step in innovator and solution provider database development, by the end of summer 2019.

PS. We are now trying out the 2nd PEN-CP WhatsApp group (1st one is for the Management Team). The purpose of “PEN-CP Innovators” WhatsApp group is to facilitate information exchange among PEN-CP partners, while carrying out the 3 tasks listed above. If you would like to join “PEN-CP Innovators” group, please send a WhatsApp message to the following number +41787320757. In the message, please indicate your full name and the Customs administration that you work for.

➤ Customs – working in front line

by Micha Slegt and Wil van Heeswijk

Original article in Dutch: Veiligheidsdiplomaat, 18 March 2019, <https://bit.ly/2DZi8F1>

An important element of the Dutch Integrated Foreign and Security Strategy (GVBS - Geïntegreerde Buitenland- en Veiligheidsstrategie) is the prevention of proliferation of weapons of mass destruction and the spread of CBRN material (chemical, biological, radioactive and nuclear) so that it does not fall into the wrong hands. Many parties are involved, including Dutch and European customs. Customs has an essential task in monitoring the flow of goods from and to the Netherlands, but also that of the entire European Union. In order to provide insight into exactly how customs works, and what role it plays in, i. a., tracing CBRN materials, guest authors Micha Slegt, senior scientific assistant at the customs laboratory, and Wil van Heeswijk, policy officer at the EU Directorate - General for Taxation and Customs Union, write about their work.

Customs supervises flows of goods entering and leaving the territory of the European Union. The purpose of supervision is to effectively and efficiently enforce Dutch and European legislation and regulations on the import, export, and transit of goods. From their unique information position, with the presence at the border and the availability of advanced means and international networks, customs are able to stop risky shipments at the border or even before arrival. When it detects a violation, it acts upon it or engages the relevant competent authorities.

However, the oldest civil service does much more ...

Where once tax duties were paramount, the security of cross-border trade and supply chains is now an equally high priority. European customs services are at a frontline position to protect civilians and societies against criminal and terrorist activities. At the same time, they support and promote legitimate trade. In this way the customs organisations contribute to the security of the Netherlands and the European Union.

The expanding safety-related tasks present customs with new challenges. The demand for applicable knowledge and resources goes beyond that for traditional tasks focused on levying and collecting

duties, excise duties and taxes. The European Commission - and more specifically the Directorate-General for Taxation and the Customs Union (DG TAXUD) - strives for adequate and high-quality equipment for European customs officials. For example, European customs administrations make use of modern technologies, including container scanners, radiation detection equipment and risk management software.



PICTURE 1: Checking a container for the presence of radiation using a Radiation portal monitor (Source: <https://bit.ly/2J8jeme>)

CBRN

Stopping chemical, biological, radiological and nuclear materials (CBRN) and related technology is also a task for customs. It goes without saying that the aim is to prevent these goods from crossing a border and becoming an active threat to a Member State. Apart from the terrible consequences of an actual use as a weapon, a threat from one of the CBR or N categories can cause considerable damage to society. From its privileged information position and its presence at airports, seaports, land borders and postal depots, customs can help counter this risk with targeted checks.

The European Union recognises the growing concern for the distribution of CBRN materials and related technology and has drawn up an action plan. Especially in an environment with increased terrorist threat and growing international trade, the Union is making considerable efforts to tackle this problem, mainly by supporting Member States in developing and improving their prevention, detection and response capabilities.

European customs administrations have long played

an important role in preventing and detecting the illegal transport of radioactive and other nuclear material across the EU's external borders and elsewhere. The use of high-quality detection technologies is essential in order to quickly and efficiently inspect high-risk goods without delaying legitimate trade. Trained customs officers are able to operate advanced radiation detection gates and portable measuring equipment and to respond adequately to possible alarm signals. For example, Dutch customs in the port of Rotterdam has an extensive system of centrally read radiation detection portals and mobile teams at their disposal.



PICTURE 2: Portable measuring instrument for the identification of radiation sources (Source: EUSECTRA)

From the start of registration by the International Atomic Energy Agency (IAEA) in 1993, around ten incidents have been recorded every year in which smuggling or malicious uses have been detected, while in around 30 other cases the background to the use or transport of the radiological or nuclear sources remain unclear. This shows that vigilance is always required, also at the Dutch and European borders.

EUSECTRA

To educate and train customs experts, DG TAXUD has set up a comprehensive program together with the European Nuclear Security Training Center (EUSECTRA) of the Joint Research Center in Karlsruhe. The training makes the experts more aware of radiological and nuclear threats and provides practical training to recognise these threats. There is also a lot of attention given in the training on the latest technological developments of radiation detection equipment and innovative smuggling methods. The training is given in a realistic environment with the use of radioactive and nuclear sources. This example could also be followed for other threats.

Global risks, such as the illegal cross-border transportation of CBRN material, must be tackled jointly through international cooperation and coordinated policies. The European Union facilitates research and development into prevention, detection and response options for CBRN threats in the Horizon 2020 program. Participation in projects under this research program is not limited to the European Union. In one of the projects resulting from this program, COSMIC, end users from Spain, Israel and the Netherlands are working together with researchers and technology producers, both from Israel and Spain, on the development of detection portals that can strengthen the detection of CBRN and similar risk materials. Dutch Customs, which contributes to more international investigations, is the coordinating end-user in this project.



PICTURE 3: The European Nuclear Security Training Center (EUSECTRA) (Source: EUSECTRA)

By constantly building onto knowledge and expertise in the customs services, the European Union is making a valuable contribution to combating CBRN risks. Dutch Customs and its European colleagues always deploy the most advanced equipment and well-trained staff to prevent illicit cross-border transports. Active participation in research and development further strengthens customs' ability to stop CBRN goods effectively and efficiently even with growing international trade and evolving threats.

Want to know more about the work of customs? Visit the website of Dutch customs and the EU Directorate-General for Taxation and Customs Union.

<https://www.belastingdienst.nl/customs>

https://ec.europa.eu/info/departments/taxation-and-customs-union_en

➤ Work in education and training materials has started

We are pleased to announce that work in PEN-CP education and training materials has started. As the very **first activity**, Customs Administration of the Republic of North Macedonia and University of Lausanne edited a **Macedonian language version of the “AEO programs & potential benefits for trade and logistics” animation**, <https://bit.ly/2JvxMeW> (please note that the animation provides a global view on opportunities to design and deliver tangible benefits to AEO companies; while it is not reflecting the current benefit status in any specific country)



Volunteer customs experts needed in production of seals controls education and training materials!

As the **second activity**, we are producing a series of short training videos on verification and inspection of different types of seals. For this activity, we seek volunteer experts from PEN-CP Customs partners. The experts can support the process in two ways: (i) by sharing their knowledge and any existing technical materials on seal controls; and/or (ii) by demonstrating how control actions are done in practice, in the actual videos.

Training materials will cover at least:

- General seal verification and inspection process - the “VTT verification process”;
- Specific seal verification according to the seal types; and
- Seal affixing process.

If you are a suitable expert, or if you know one working in your administration (or, even in other administrations), please email us at: susana.wongchan@unil.ch. Great, if you send the email latest by 15.6.2019!

Finally, when it comes to the planning and next steps in PEN-CP Education and training materials, we will publish a comprehensive article in PEN-CP Magazine 4 (July 2019). And as usual, your main contact to discuss about user needs and future ideas for education and training materials is Dr. Zsolt Dézsi from the Hungarian administration, email dezsi.zsolt@nav.gov.hu



PS. Reminder on what we wrote in the PEN-CP project plan (Description of Action, DoA) about education and training materials:

“Education & training materials are based on a variety of research and technical findings and lessons learned across the PEN-CP project, converted into high quality blended learning materials – self-learning materials, lecture slides and notes, case studies, whiteboard animations, quizzes etc. The raw materials flow in e.g. from PEN-CP In-formation observatory, Annual studies, Technology Grants, and Expert reports, among other possible sources. The learning content is implemented in a Learning Management System (LMS) platform. The first two real-life pilot users of such materials within the PEN-CP consortium are the Hungarian Customs Academy and the Technical University of Delft (Masters in Customs and Supply Chain Compliance -program) Tested Education & training materials will be made step-by-step available across the PEN-CP consortium, during the five-year project. The goal is to have by the end of the project a minimum of 40 hours of new learning materials produced and thoroughly test-ed by minimum 30 customs practitioners.”



Virtual Reality Tool to be used in Dubai Customs Training

26.2.2019

The Dubai Customs Training Center has recently started testing a Virtual Reality (VR) tool as part of their training of customs officers. The tool that is tested for maritime inspections in this round - before being rolled out to training for other customs inspections - allows training both on inspections and on preparations, for instance concerning safety equipment.

In the training, that certainly has a game aspect to it, the trainees are given points for detecting illicit goods like drugs and weapons in the virtual environment, and this allows them to move onto the next level.

The tool has been developed in collaboration with a private contractor who has provided software development, graphic design and features making the tool user-friendly. The tool is not only tested for the learning experience but also for potential negative health effects, as nausea and vision issues have been reported in VR tools. If successful, the tool will be used by all customs trainees; and, the Dubai Customs sees broad use being possible in the future.

The Dubai Customs strives to improve its service delivery on all fronts to raise the level of public trust. It has also started working with Artificial Intelligence and robot solutions, and a system for an automated claim and refund service was deployed last year. Dubai Customs is also reaching out to other customs administration to collaborate on training development.

Source: <https://mag.wcoomd.org/magazine/wco-news-88/dubai-virtual-reality-customs-training/>



Amazon to use AI to fight counterfeit goods

19.2.2019

Amazon, one of the leading e-commerce platforms, is testing artificial intelligence to stop counterfeit products from appearing on its website. The company is testing this technique in what they call Project Zero, which should make it possible to automatically look for illicit goods and to allow Intellectual Property owners / companies to take down counterfeit items from Amazon platform. Companies give Amazon their logos, trademarks and other important information about their brands, and Amazon scans product listings every day looking for fake items. Brand companies no longer have to report counterfeit items to Amazon, but can remove them themselves, through a special functionality. Amazon has also introduced a new serialization service that offers a unique code for every item, which brands can place on products during the manufacturing process. This also allows for the detection of illicit goods and simplifies the monitoring for the brand companies. The project involves several brands and it has sped up the process of detection, finding 100 times more suspected fake items than the previous procedure. Companies can participate on invitation only; and, Amazon is working on including more brands.

Source: <https://cnn.it/2YcXPf4>



Brexit: Less than half of trusted trader applications approved

19.3.2019

Since June 2016 until January 2019 some 750 British companies have applied for AEO status but only 365 have been awarded the trusted trader status by Her Majesty's Revenue and Customs (HMRC). The AEO is seen as a quality marker and the HMRC states that the companies need to "meet strict compliance standards".

The AEO status would allow companies to have their goods pass smoother through customs, especially after Brexit. Mutual recognition between AEO programmes should allow British companies advantages both in passing EU-borders and in trade with other countries.

Many companies have applied several times and HMRC states that they have tried to reach out to companies to help and guide them through the application process. Companies on their side complain about "chaotic

information". Rod McKenzie, of the Road Haulage Association, said it's members had been given "chaotic, confusing and frankly incomplete" information. "It's just impossible to run a business without a clear system," he said.

Source:

<https://www.bbc.com/news/business-47628769>



New UNESCO tools to fight the illicit trafficking of cultural property

15.3.2019

Two new tools to help law enforcement agencies to fight illicit trafficking of cultural goods have been developed by the UN organisation UNESCO, the United Nations Educational, Scientific and Cultural Organization, in collaboration with the European Union, and with contributions by WCO.

The first tool is called "Toolkit for European Judiciary and Law Enforcement" and aims to be a direct help for professionals in the judiciary and law enforcement agencies to gain or deepen their knowledge of the European and international legal framework on cultural property. The toolkit contains case studies and exercises and is thought as a training material for individuals or groups.

The second tool is an e-learning platform that contains a step-by-step learning material providing an understanding of how this type of organised crime works, and what legal and practical tools can be used to fight it. The platform also provides key concepts and information on special investigative techniques.

The toolkit is available in both French and English.

Source:

<http://www.wcoomd.org/en/media/newsroom/2019/march/new-unesco-tools-to-fight-the-illicit-trafficking-of-cultural-property.aspx>





Once hailed as unhackable, blockchains are now getting hacked

19.2.2019

Blockchain was the technique that was impossible to hack, thanks to the technical upset. Transactions need to be verified by all computers or nodes in the network and that is the basis for the security assumptions. However, there are several ways to enter the blockchain to defraud it, and this is difficult to change or even trace, as the used techniques build on altering the chain of proof in the blockchain.

In total, hackers have stolen nearly 2 billion US dollars worth of cryptocurrency since the beginning of 2017, mostly from exchanges, and this is just the published statistics. Theft from blockchains is a growing issue, and it is not only individual hackers, but also advanced cybercrime organisations, who are behind this development.

One commonly used technique for this is called the 51% rule. In the blockchain, nodes spend a lot of computing power to make themselves trustworthy enough, to be allowed to duplicate the information in the chain. If an intruder somehow can get control over more than half the nodes, s/he can defraud other users by sending them payments and then creating an alternative version of the blockchain in which the payments never happened.

This makes the fraud hard to detect and hard to backtrack. The more complex the blockchain, the higher the risk that there will be design flaws that allow hacking. Some companies have started offering auditing services, some based on AI, but it is still early days - and, the combination of human greed, the possibilities of gambling and the intellectual challenge in breaking the blockchain keeps attracting hackers.

Source: <https://www.technologyreview.com/s/612974/once-hailed-as-unhackable-blockchains-are-now-getting-hacked/>



Singapore launches maritime trade platform using blockchain

10.3.2019

Singapore government has launched a trial of a new platform for maritime trade using blockchain technique, called TradeTrust. Singapore customs and their partners (Infocomm Media Development Authority, IMDA, the Maritime Port Authority and the Singapore Shipping Association) will work to promote the use of electronic bills of lading, partly through the development of a set of standards for secure exchange of information and documents.

The platform should help remedy issues with conventional paper-based bills of lading and other paper documents. TradeTrust will build on blockchain technique, also known as distributed ledger knowledge technology, and will include governance structures, standards and a digital framework. This taken together, will provide users with proof of legitimacy and origins of exchanged documents.

The authorities have signed a memorandum of understanding in January 2019 providing continuous backing of the project. The IMDA states that there are large gains for the maritime industry to be had from the project, as digitization on documentation and trade processing is calculated to save up to 20% of the physical cost of shipping a single container.

Source: <https://www.cointrust.com/market-news/singapore-launches-trial-of-tradetrust-blockchain-shipping-initiative>

➤ Venue for the Year 1 Annual Event: Continental Hotel Budapest Superior



Address

Dohány utca 42-44, H-1074 Budapest, Hungary



Tel / email

+36 1 815 1000
continentalinfo@zeinahotels.com



Website

<https://continentalhotelbudapest.com/>

The hotel is offering following room options and prices for anyone who wants to stay there:

- Superior double room for single use: EUR 105/room/night
- Superior double room for double use: EUR 120/room/night

The above rates are inclusive of taxes (VAT (18%), city tax (4%) and the breakfast) and free entrance to Wellness and Fitness area on the rooftop.

Please use this link to make your booking: <https://continentalhotelbudapest.com/> and use the promotion code: pencp2019

If you have any questions about the venue, rooms etc., please send an email to:
pen-cp@cross-border.org

➤ Year 1 Annual Event (20-22.11.2019)

– Latest agenda



Panel sessions (in plenary: short opening presentations, followed with rich discussions, audience included)

- User experiences - what works so far and what not – with the PEN-CP Online Platform (POP) - focusing particularly on Customs challenges & User needs (PUNIs), and Security innovation monitoring with solutions, projects, patents (PSIMs) (note: there will be also a workshop session on how to use POP)
- Past experiences and future opportunities in country-level open innovation activities (3-4 customs partners in the panel)
- Lessons learned and way forward with other H2020 practitioner networks: Police networks (iLEAD and ILEAnet), and 1-2 others, tbc.
- Eye on productive cooperation with Customs2020 expert groups (we could invite experts from CDTPG, CELBET, CLEN and 1 more to join the panel, tbc – noting that most of these expert groups are already present at the Year 1 Event)



Breakout sessions (where “all partners are asked to work hard on a topic in small groups” – followed by the plenary)

- Brainstorming on topics for PEN-CP Prototype grants, NewView grants, Innovation prizes, Crowdsourcing, Hackathons and more (for project years 2 to 5)
- Identifying user needs and relevant topics for education and training materials.
- User needs and requirements for a future customs operations related communication toolbox – something like “Whatsapp & LinkedIn & Gotomeeting for Customs”
- Final session: How to drive maximum value out of PEN-CP during the coming 12 months?



Workshop sessions (parallel style, where we split to sit in two different rooms)

- PEN-CP Online Platform (POP) tutorial and exercises (great, if many participants have their own laptops with them!) - focusing particularly on Customs challenges & User needs (PUNIs), and Security innovation monitoring with solutions, projects, patents (PSIMs)
- Formal reporting in H2020 projects - tutorial and exercises: timesheets, work package level reporting, calculating working hour costs, filling in Form Cs (for Month 18, 36, 54 and 60), etc.



Presentations, announcements and formalities (in plenary)

- Presentation on the 1st Expert report (intermediate draft version): Mapping start-up and scale-up landscape in Europe – and how to work further with the mapping outcomes.
- Presentations on Annual study chapters (Big data for fraud and crime detection; Value of data analytics in customs processes; Customs societal protection index; and, Good practices in customs & postal targeting and detection)
- PEN-CP General Assembly meeting (details to follow in due time)
- Announcement: Winner of Year 1 Customs Innovation Award (or, this can take place during the main dinner, tbd)

➤ Visit this summer PEN-CP booths at key events by WCO and INTERPOL World!



Visits us at booth 27 in the WCO IT/TI conference and exhibition!

Objectives of the conference

- Explore implications of the digital world on Customs and other Government agencies in the future.
- Showcase private sector and Governments' most recent technological developments that will provide new capabilities and opportunities and impact how Customs facilitates trade and performs its regulatory tasks.
- Monitor emerging trends, including IT solutions for exchange of information between Customs and between Customs and other agencies.
- Seek potential areas of synergy amongst relevant stakeholders at national, regional and international level.

Mission of PEN-CP at the event:

- Collect User needs and Customs challenges from all participating administrations
- Collect information from Solution providers and innovators about their products, services and projects.



INTERPOL World is a global co-creation opportunity which engages the public and private sectors in dialogue, and fosters collaboration to counter future security and policing challenges. INTERPOL World comprises of three interlinked activities:

Visit PEN-CP at the stand Q02 of the INTERPOL World 2019 event

PEN-CP joins the event to collect information from Solution providers and innovators about their products, services and projects – seeking for synergies between the global police and customs communities

► 14th Annual WCO PICARD Conference CALL FOR PAPERS

Skopje, Republic of North Macedonia
22 - 24 October 2019

The 14th Annual WCO PICARD Conference's theme is 'SMART borders for seamless Trade, Travel and Transport', acknowledging the importance of the swift movement of goods, people and means of transport through borders. Submissions should therefore focus on a variety of topics including, but not limited to: [Big Data Analytics](#), [Coordination and Cooperation at Borders](#), [Cross-border E-commerce](#), [Special Economic Zones](#), [Technology at the Border](#), [Predominance of Protectionism](#).

The Conference in particular welcomes and encourages attendance and submissions from Customs professionals as well as researchers from various academic disciplines, such as anthropology, criminology, economics, geography, history, international relations and international trade, law and political science. The WCO Research Unit is particularly interested in developing an interdisciplinary approach with different perspectives, approaches and methodologies regarding contemporary systems of regulation and control at borders, and strongly welcomes papers co-authored by Customs officials and academics.

As in previous years, applicant submissions can include (1) Presentation Summaries of up to 1,000 words; (2) Papers of up to 9,000 words; or (3) Proposals for Panels. Papers will not have any inherent advantage over Presentation Summaries.

Submissions should be submitted in accordance with following requirements:

- Arial font size 11.
- Submissions should be in English or French.

Ample time will be allowed for discussion and simultaneous interpretation will be provided at the Conference in English and French.

Proposals for Panels should consist of two or three speakers presenting research on one cohesive topic. The WCO would like to encourage Customs and academics to engage in comparative and policy-relevant research on Customs issues: panel proposals are an ideal format for such discussions to take place.

To respond to this Call for Papers, please submit Presentation Summaries, Papers or Panel Proposals with the following details by email to picard2019@wcoomd.org no later than 21 June 2019:

- Name, title, and biography (maximum 250 words) of researcher or researchers.
- Current position, organization, and country of researcher or researchers.
- Contact email and telephone.
- Proposed title of contribution.
- For papers of more than 1,000 words, an abstract of no more than 300 words is required.

Authors will be notified by 19 July 2019 of selection or non-selection of their paper and/or presentation summaries for presentation at the Conference.

The WCO is particularly grateful for the support from:

- The Ministry of Finance and Customs Administration of the Republic of North Macedonia
- The Korea Customs Service.
- The PICARD Scientific Board Members.

If necessary, the WCO will seek to identify funding for reasonable travel and hotel expenses for a small number of presenters who lack institutional backing and have been selected following this Call for Papers. If you have any questions or concerns, please email picard2019@wcoomd.org.

Information about the Conference including venue, accommodation, visa requirements and registration is available at the following Website address:

www.etches.com/picard2019

If any customs expert is interested to join a PEN-CP conference paper or panel session -submission for PICARD2019, please send an email by 31.5.2019 to: pen-cp@cross-border.org

► Topics planned for PEN-CP Magazine 4 (July 2019)

01



Update on the 1st PEN-CP Expert report, which will detail a European-wide pool of scale-up and start-up companies related to customs operations and security innovations, and devise a plan for PEN-CP network on (i) how to access them (multi-channel) for innovation communication and interaction purposes and (ii) how to keep expanding this pool of companies throughout the 5-year PEN-CP project - this article will be led by Belgian Customs.



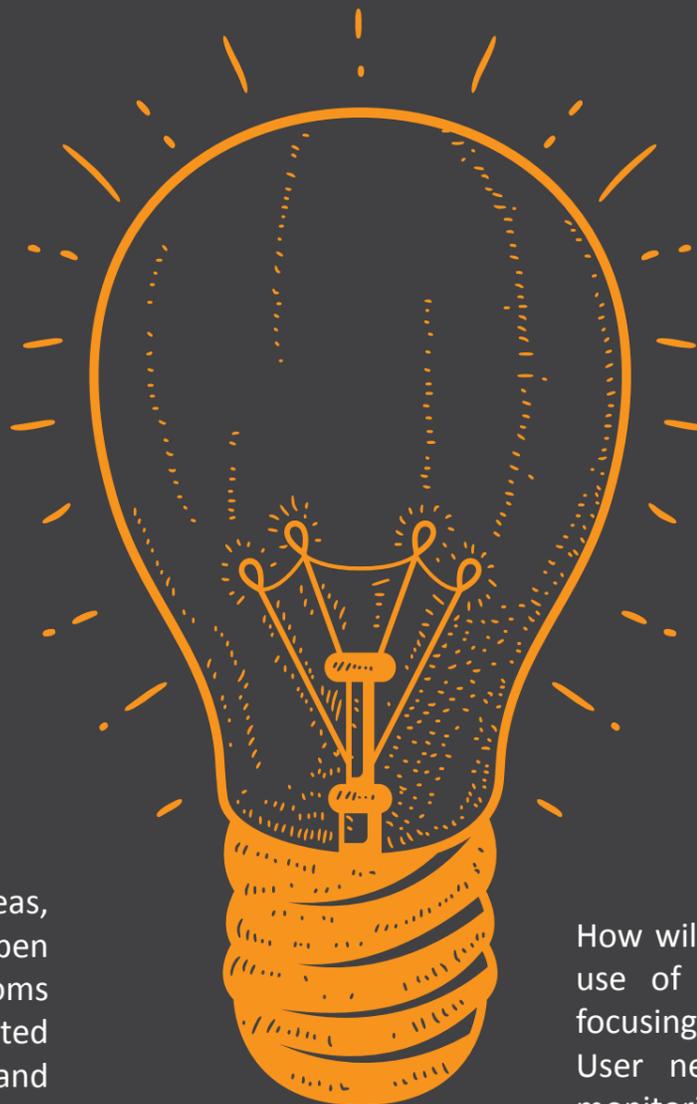
04

Future cooperation opportunities between PEN-CP and interested Customs2020 expert groups – how to make win-win cooperation happen; and how to avoid any pitfalls? – inputs for the article will be invited at least from Dutch, Lithuanian and Hungarian Customs; and anyone else who is interested in the topic.



02

Challenge-competitions, Hackathons, and more – how to make these open innovation approaches to work in customs environment? – inputs for the article will be invited at least from Austrian, Slovak, Macedonian, and Latvian Customs; and anyone else who is interested in the topic (nice background reading: <https://bit.ly/30bY8bN>)



05



How will we, in the (very) near future, make full use of the PEN-CP Online Platform (POP) – focusing particularly on Customs challenges & User needs (PUNIs), and Security innovation monitoring with solutions, projects, patents (PSIMs)? – UK and all customs partners who are willing to share their ideas on this crucial topic are invited to contribute to this article.

03



How can PEN-CP start supporting joint tendering and procurement activities in the future (e.g. between two or more Customs)? – inputs for the article will be invited at least from Norwegian, Albanian, Estonian and Irish Customs; and anyone else who is interested in the topic.

If you or your colleague is interested to contribute to any of the four articles (articles 2 to 5 above), to appear in Magazine 4, please send an email by 31.5.2019 to:

pen-cp@cross-border.org

And of course, you are always welcome to suggest additional topics and themes for the upcoming PEN-CP Magazines!

Follow PEN-CP online

Twitter: @PENCP_NET

LinkedIn group: <https://www.linkedin.com/groups/8183667/>

Researchgate: <https://www.researchgate.net/project/PEN-CP-EU-H2020>

URL: www.pen-cp.net

PEN-CP videos

Short video: <https://youtu.be/OXwQPHHS5Ls>

Long animation: <https://youtu.be/wq9y36J4ET8>

Read more about PEN-CP

WCO News:

<https://mag.wcoomd.org/magazine/wco-news-88/the-pen-cp-project/>

WCO RILOs ECE and WE:

<https://bit.ly/2Tp905y>

EU-C2020-CELBET:

<https://bit.ly/2T9cSrX>

Contact PEN-CP for additional information



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Skype [cbra_2014](https://www.skype.com/en/contacts/cbra_2014)