



# BLOCKATHON REPORT

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## 1 THE BLOCKATHON

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6,8 % of all imports into the EU (European Union) are counterfeit and pirated goods, corresponding to an estimated EUR 121 billion in illegal trade <sup>(1)</sup>. A European Union Intellectual Property Office (EUIPO) analysis of the scope, scale and impact of intellectual property infringement in 13 sectors puts the total loss in the EU at EUR 100 billion <sup>(2)</sup>. The negative effects of counterfeiting are not just limited to economic loss, as they also cause major risks to consumer health and safety.

The EU is at the forefront of the fight against counterfeiting. At the end of 2017, the European Commission presented a comprehensive package of measures to deliver a balanced IP enforcement system responding to today's societal challenges <sup>(3)</sup>. It notably announced 'actions to support industry-led initiatives to combat IP infringements, such as (...) steps to better protect supply chains', as well as 'initiatives to strengthen the capacity of customs and other authorities to enforce IP rights' <sup>(4)</sup>.

The EUIPO plays a key role in the overall EU strategy against counterfeiting. Among many other initiatives it is looking into how innovative technologies can improve IPR enforcement, and the capacity of public authorities and all players involved in the supply chain to identify counterfeits <sup>(5)</sup>. Blockchain has clear potential in this respect, as it is a technology that can track and trace a product throughout its supply chain. In 2018 the EUIPO, together with the European Commission, organised the first ever anti-counterfeiting blockchain event as a first step to fully explore this potential.

### 1.1 THE CHALLENGE AND VISION

The rise of e-commerce is creating new challenges when it comes to identifying genuine and fake products, and in particular for consumers. In 2017, 10 % of EU consumers were tricked into buying a fake product, while 35 % wondered whether the product they had purchased online was real or fake <sup>(6)</sup>.

There are many tools and solutions currently used by businesses and public authorities to identify counterfeits but they work separately, are decentralised, have little synchronisation and there is no way to connect all the relevant players: the EU, intellectual property offices, governments, customs and other enforcement authorities, manufacturers, retailers, shipping companies, ports and airports and citizens.

A potential solution to this challenge is the kind of decentralisation and synchronisation blockchain technology can deliver to create a secure and collectively shared record of authenticity. This should allow the track and trace of an authentic product through the entire supply chain and empower all players involved to tackle counterfeiting more effectively. The vision is to use blockchain to develop the next level of anti-counterfeiting infrastructure, where anybody interested (producers, consumers, transport services, etc.) can easily check the authenticity of a product and alert rights holders when coming across a fake.

<sup>(1)</sup> OECD/EUIPO, Trends in trade in Counterfeit and Pirated Goods, 2019.

<sup>(2)</sup> EUIPO, Synthesis Report on IPR Infringement, 2018.

<sup>(3)</sup> [Communication from the Commission to the institutions – A balanced IP enforcement system responding to today's societal challenge](#), 29 November 2017.

<sup>(4)</sup> Ibid. p. 3.

<sup>(5)</sup> The EUIPO has already developed actual services in that field, notably with the Enforcement Database, that contains information on IP-protected products, and that police and customs officials from all Member States can access, making it easier for them to identify counterfeits and take action.

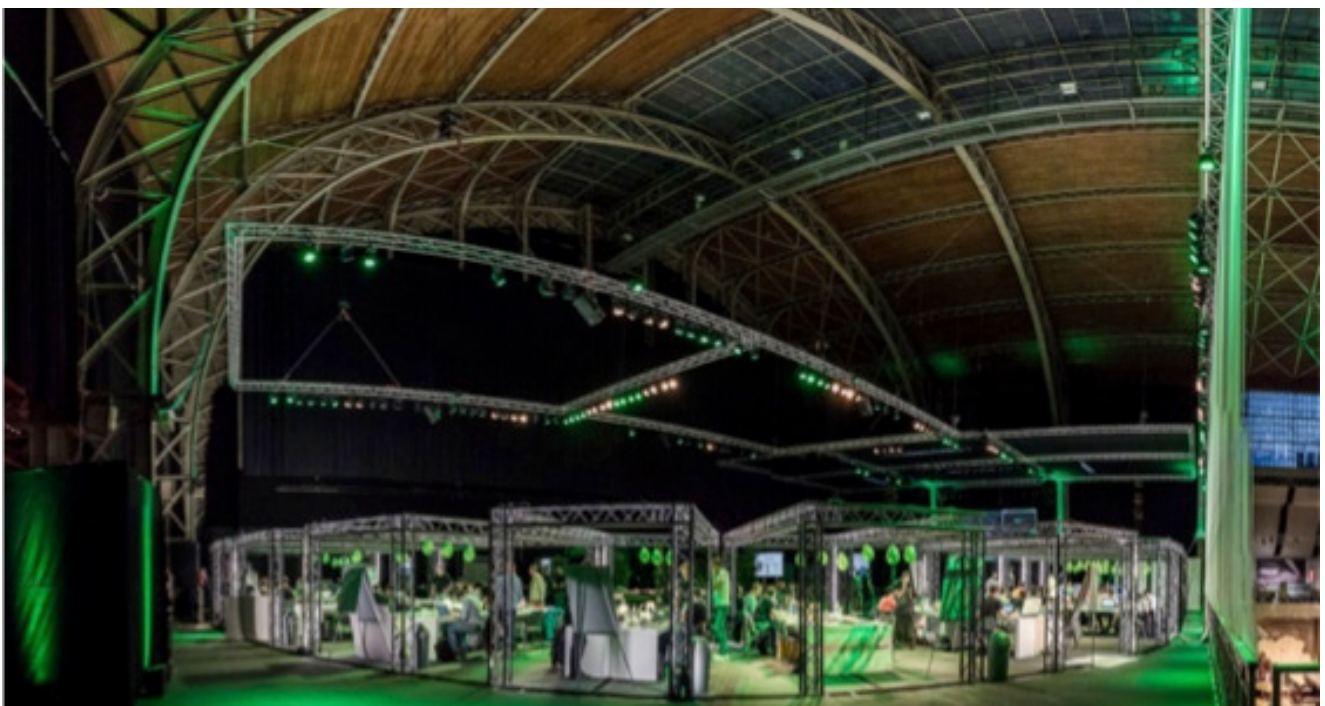
<sup>(6)</sup> <https://euiipo.europa.eu/ohimportal/en/web/observatory/ip-perception-2017>.



## 1.2 THE EVENT

The EU Blockathon took place in Brussels from 22 to 25 June 2018. For three days, some of the best teams worked on imagining and developing concrete ways to deliver this vision, by linking existing tracking systems with public databases of intellectual property via blockchain solutions.

The event was kicked off by Andrus Ansip, Vice President of the European Commission, Lowri Evans, Director General of DG GROW, and Christian Archambeau, Executive Director of the EUIPO. They opened the competition between eleven teams, who were challenged to design the best prototypes with the help of the EUIPO and a broad range of supporting partners and experts (See Annex 1).







### 1.3 THE CHALLENGES

The teams were presented with challenges affecting three categories of stakeholders:

#### **CONSUMER:**

the challenge was to provide consumers with solutions to guarantee the authenticity of a product delivered, or allow them to proactively check if it was authentic or fake by using a mobile, or other types of devices.

#### **CUSTOMS:**

the challenge was to find solutions for customs to validate the authenticity of parcels, or entire shipments so that they could be fast tracked through customs' checks. The teams also had to look into ways of supporting the trusted exchange of information between customs, rights holders and logistics operators to support risk assessment, decision-making and actions from customs.

#### **LOGISTICS OPERATORS:**

the challenge was to find solutions allowing logistics operators to get a trusted record and contribute to the tracking of authentic products passing from one operator to another, so that they could improve trust and transparency with customs.

## 1.4 THE WINNERS AND THE PROPOSED SOLUTIONS

### 1.4.1 TEAM CRYPTOMICE

[Cryptomice](#) was the overall winner of the EU Blockathon 2018 (EUR 25 000). The team also won the prize for the logistics operators challenge (EUR 15 000), the runner-up prize for the consumer challenge (EUR 10 000) and half of the runner-up prize for the customs challenge (EUR 5 000).

The solution proposed was to create a virtual twin for each physical product in a supply chain. As a product moves through the supply chain, its virtual twin moves through the information systems of the different players involved via a blockchain solution. The physical product is only accepted by the next operator in the chain if it is received by its virtual twin. The blockchain solution ensures the data on the virtual twins is exchanged in a trusted and secured environment and cannot be tampered. If physical goods are delivered without their virtual twins, a red flag is raised in a reporting system, facilitating the identification of bad actors in the distribution chain.



### 1.4.2 TEAM FIDES

Fides won first prize for both the consumer (EUR 15 000) and customs (EUR 15 000) challenges with its [GoodChain](#) solution.

The team created an incentive scheme for consumers to verify the authenticity of products. A unique QR code is given to each product as its digital identity. The GoodChain blockchain ensures the immutable storage of digital identities and tracking of data for each product. The QR code can be scanned with a mobile phone for a consumer to verify its authenticity. Each time a consumer identifies an authentic product he or she receives points that can be awarded to a social project of choice (humanitarian, environmental, etc.), which will be converted into a monetary contribution by the relevant brand.



### 1.4.3 TEAM PIRATE BUSTERS

Pirate Busters won half of the runner-up prize for the customs challenge (EUR 5 000). Its TrustTrack project is designed to support customs and applies, at manufacturer level, a unique QR code of a near-field communication (NFC) chip and a temper-evident seal. When the seal is intact, the product can be easily handled and fast tracked by customs in order to improve efficiency and effectiveness of the resources. The system can be integrated with various existing infrastructures and blockchains.



### 1.4.4 TEAM SEAL

Team [Seal](#) won the runner-up prize for the logistics challenge (EUR 10 000).

Its solution was the creation of self-sovereign digital twins and parcels for secure shipments (called 'Rootbox'). With this solution, products are embedded with an authentication NFC chip that is registered on the blockchain, creating a digital twin of the physical product.

The NFC chip, providing a secure link between the physical object and its digital twin, allows customs to check the content of the parcels without opening them.



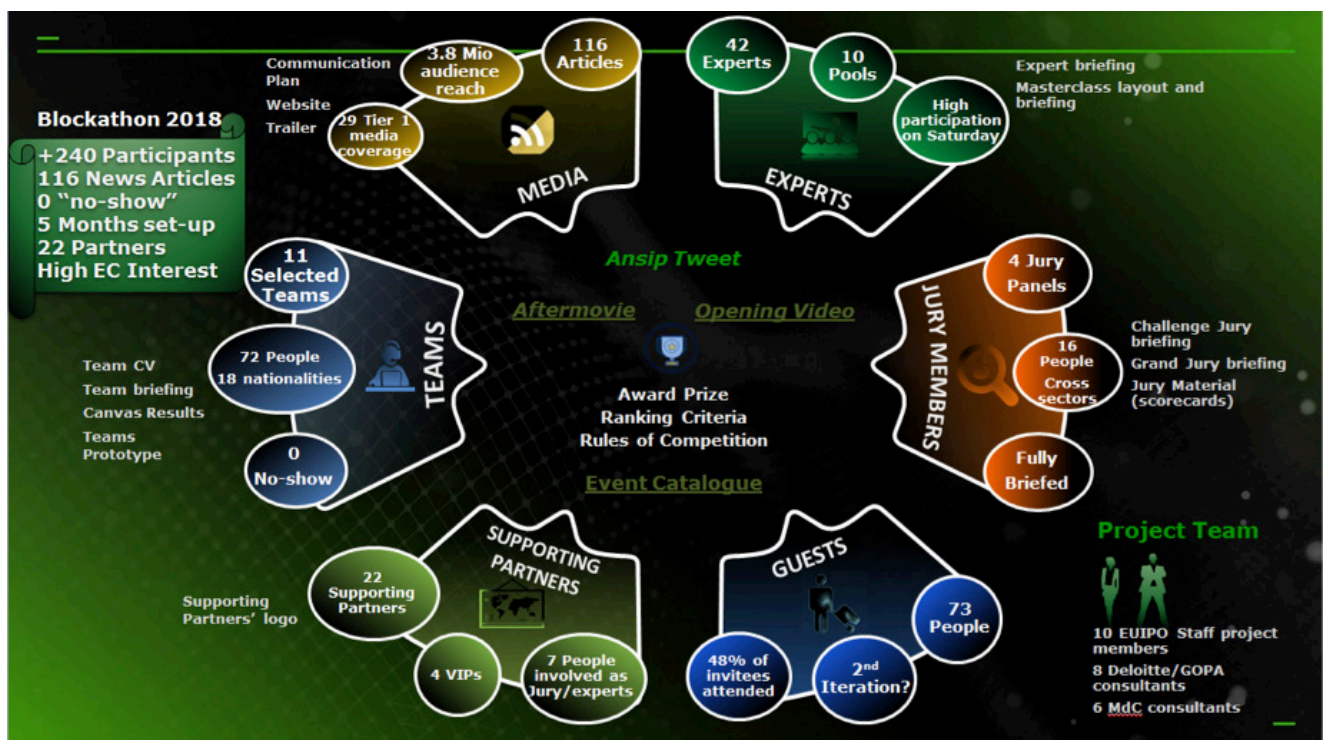


## 1.5 KEY ACHIEVEMENTS

The EU Blockathon 2018 was a unique opportunity to get the blockchain community to look into the potential of this technology to undermine counterfeiting, with the help of field experts such as customs officers, business representatives, policy makers and other relevant players.

This broad network of experts should continue to grow and contribute to the development of blockchain solutions for IPR enforcement.

The event was also an opportunity to raise awareness of the risks of counterfeiting, and the need to work on innovative solutions to address the issue. It received wide media coverage, with 116 press articles reaching over 3.8 million people, as well as extensive social media impressions.





### 1.5.1 LESSONS LEARNED

Key take-aways from the event were:

#### **START AND SUPPORT THE DEVELOPMENT OF AN ECOSYSTEM:**

there is a clear need to bring public and private players together with blockchain experts, to identify the challenges posed by counterfeiting and how blockchain can address them. This supports truly innovative and effective blockchain solutions, based on market reality and public authorities' needs. The network created has the potential to fasten blockchain innovation and solutions and needs to be maintained and further developed, aiming notably to support the development of the solution from the prototype stage to the working one.

#### **MIX EXPERTISE:**

industry participants and experts were not just there to be 'supporting partners of the event'. They brought their expertise in the field of IPR enforcement, supporting the teams' thinking and development of their projects. In exchange they gained a better understanding of the potential of blockchain technology to deliver the next level of anti-counterfeiting infrastructure.

#### **COMPLEX ENVIRONMENT:**

the exercise showed how complex the problem of IPR infringement is and how diverged the interests, knowledge and strategies are with multiple stakeholders on board. Therefore, a strong lead needs to be initiated in order to bring all parties successfully to the table.



## 2 FOLLOW-UP OF THE EU BLOCKATHON 2018

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### 2.1 THE POST-BLOCKATHON WORKSHOP

A Blockathon follow-up workshop took place in Alicante at the EUIPO Observatory on 25 September 2018. It brought together public and private stakeholders representing logistics operators, customs, blockchain companies and experts, to keep the momentum initiated by the Blockathon going and get the network to think about the next steps. This was an opportunity to revisit and prioritise the challenges that counterfeiting raises for consumers, customs and logistics operators, and how blockchain projects should continue to contribute to them.

### 2.2 RESULTS

The following points and next steps emerged from the discussions.

- In the current complex blockchain landscape there is a need to join the dots between various initiatives to give visibility to what is being worked on among the various actors and to take advantage of synergies, notably with the [EU blockchain Observatory](#) and EC initiatives.
- The EUIPO could play a role in maintaining the anti-counterfeiting ‘community/forum’ that came together for the Blockathon and the workshop and find a means to facilitate connections between all parties.
- The anti-counterfeiting use case arising from the Blockathon, further structured with the objectives and priorities discussed in the workshop, which aims for interoperability, standardisation and proof of authenticity, could be further developed and presented as a candidate for a pilot and as a submission to the European Commission for European-wide implementation.

## 3 NEXT STEP – THE BLOCKATHON FORUM

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Building on the momentum created by the EU Blockathon 2018 and the calls to further support the development of a community of experts looking into concrete blockchain solutions to tackle counterfeiting, the EUIPO, together with the European Commission, launched the Anti-Counterfeiting Blockathon Forum, aiming to gather interested parties and stakeholders to follow-up on those discussions and identify specific contributions.

The forum was unveiled on 7 February and focused on drafting and defining the anti-counterfeiting use case, [now published online](#) and related pilot to be defined. Experts in blockchain and IP enforcement are now invited to join the forum to work on delivering the next level of anti-counterfeiting infrastructure based on blockchain. This infrastructure will focus on interconnecting the existing systems on the market rather than replacing them. It is open to all interested stakeholders. More information can be found on the [www.blockathon.eu](http://www.blockathon.eu)

## ANNEX 1

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### 1 SUPPORTING PARTNERS

Hereinafter a detailed overview of all the partners involved in the Blockathon:





## 2 JURY MEMBERS

Hereinafter a detailed overview of the jury members of the Grand Jury and of the specific challenges:

GRAND JURY	CONSUMER JURY	CUSTOMS AUTHORITY JURY	LOGISTICS OPERATORS JURY
CHARLES WRIGHT	EIRINI ZAFEIRATOU	ANDREA DI CARLO	CHRISTOPHER FERRIS
CHRISTIAN ARCHAMBEAU	JASON LAW	MATTHEW BASSIUR	GEOFFREY BELBOOM
PAULO SANTOS	PAUL MAIER	RODOLPHE GINTZ	NELLIE SIMON
VINAY GUPTA	ROMAIN MALLET	SIÂN JONES	TIM DE KNEGT
		VASILY SUVOROV	



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