



**COALITION**  
AGAINST ILLICIT TRADE

# Implementing digital solutions to address the issue of cross border illicit trade

November 2017

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The issue of illicit trade in counterfeit and smuggled products is one of the most lucrative criminal activities in the world, with the OECD estimating that counterfeiting brings in annual revenues of \$460bn, comfortably exceeding drugs trafficking, which is estimated to raise \$320bn.<sup>2</sup> It is an issue that affects almost all product sectors, from pharmaceuticals and food, to spare parts and perfume, and almost every market and region of the globe. A newly released report by OECD and EUIPO “Mapping the real routes of trade in fake goods”, shows once more the depth and breadth of international trade routes in counterfeit and pirated goods across the world<sup>3</sup>.

Furthermore, in addition to being a major source of criminal revenue, the illicit trade also deprives governments of the tax revenue and companies of profits they would receive from legitimately produced and traded goods. Fake medicines, beyond the high risk for health, costs European pharmaceutical companies 10.2 billion € every year<sup>4</sup>. The same amount is the estimated cost of the European illicit tobacco market alone for EU Member States in terms of lost tax revenue.<sup>5</sup>

As a result, many Governments and multi-state organizations are now bringing forward legislation that seeks to address the illicit trade and provide regulatory frameworks for implementing anti-illicit trade measures.

The complexity of a supply chain for any manufactured product subject to counterfeiting and smuggling, involving a variety of stakeholders and partners, requires carefully designed inter-connectable systems and a well-planned approach to supply chain security and consumer safety. The counterfeited and smuggled product around the globe has led to a rising demand for the tracking and

tracing of products using serialization technologies as a means of securing the legitimate supply chain.

However, different, complex, and contradictory requirements across the globe do not always provide additional supply chain security, but drive up costs for all supply chain participants in regulated markets. Moreover, the uncertainty caused by misaligned serialization requirements contradicts the fundamental purpose for implementing those requirements in the first place by introducing additional risk to the system.

Regulatory developments will impact positively on the anti-counterfeiting, brand protection and security packaging market in developed economies provided that they adhere to well recognized and actionable international standards. The adequacy of mandatory traceability standards will help to ensure efficient and effective implementation of serialization requirements, promote interoperability, facilitate cross-border communication and trade, and help markets to tailor their traceability requirements to those that provide the highest level of security for the lowest amount of time and capital investments by public authorities and economic operators directly involved in the process from manufacturing to retail.

This paper is a collective efforts of CAIT members and desk field research carried out by the secretariat. CAIT is a business coalition specialized in tracking, tracing and authentication services. Its members include Aegate, Atos Worldline, ArjoSolutions, Domino, Essentra, Fata Logistic Systems, Fracturecode, Nano4U, Scan Trust and Viditrust. The view expressed in this paper do not reflect necessarily the views of the individual member companies. For more information visit: [www.coalitionagainstillicittrade.org](http://www.coalitionagainstillicittrade.org).

<sup>2</sup> OECD, *Converging Criminal Networks*, 2016

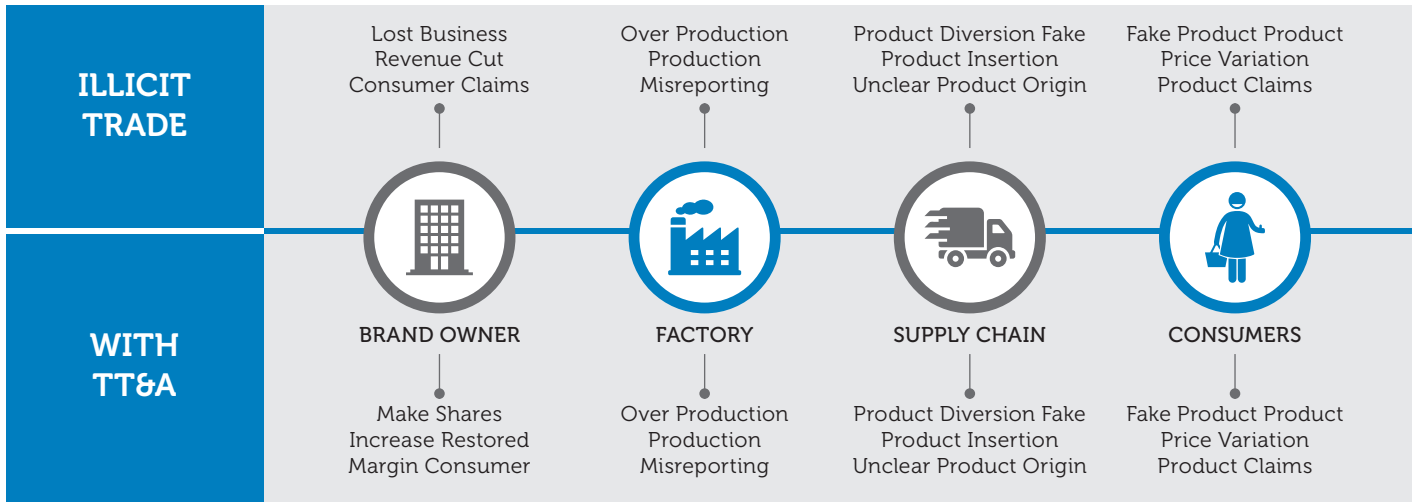
<sup>3</sup> OECD-EUIPO Joint report 2017 available at <https://euipo.europa.eu/ohimportal/en/web/observatory/mapping-the-real-routes-of-trade-in-fake-goods>

<sup>4</sup> EUIPO, *The economic cost of IPR infringement in the pharmaceutical sector. 2016. All sectorial studies by EUIPO* available at: <https://euipo.europa.eu/ohimportal/en/web/observatory/quantification-of-ipr-infringement>

<sup>5</sup> KPMG/RUSI, *Track and Trace: Approaches in Tobacco*, 2016

# 02

## Why we need regulation and enforcement fit for purpose



Some would argue that regulation is something that business should fight against and object to, that regulations impede progress and profitability and that free markets should just be allowed to regulate themselves.

Yet without adequate rules and common standards, manufacturers of legitimate, quality products will continue to suffer, whether that be by the diversion and smuggling of genuine products or by the creation of counterfeits. Such actions are criminal and crimes that are far from victimless.

Firstly, counterfeit products that are sold illicitly often fail to meet the quality requirements that genuine products are required to conform to. Dependent on the product that could range from an inconvenience, such as a poorly made item of clothing, to the downright dangerous, such as counterfeit pharmaceuticals and food. For products, which have been diverted from the regular supply chain, there are no guarantees on the fact that the product has been correctly handled and might not be spoiled or contaminated.

While some consumers knowingly buy illicit products, based on their lower cost, many others are duped into purchasing these untested products of varying quality, based on the misplaced belief that they are purchasing legitimate products.

This has a huge impact on brand owners, who have a clear commercial interest in fighting the illicit trade, whether that is counterfeit or contraband, where legitimate products are illegally diverted, reducing revenue. Government's also pay a heavy price as the illicit trade is most prevalent in high excise products like alcohol, tobacco and luxury goods, and circumventing legitimate sales channels thus reduces the amount of tax received.

According to INTERPOL, "The criminal networks behind trafficking in illicit goods and counterfeiting are complex and pervasive, reaching far beyond national borders."<sup>6</sup> Far from being a 'victim-less' crime, the supply and purchase of counterfeit and contraband funds some of the most serious crimes including drug and human trafficking and even terrorism. According to the World Customs Organisation "Trafficking in cigarettes is, next to

<sup>6</sup> INTERPOL, Against Organised Crime: Trafficking and Counterfeiting Casebook, 2014

trafficking in drugs, assumed to be one of main sources to fund terrorist activities in the sub-Saharan region where criminals involved in this trafficking closely cooperate with regional terrorist groups.”<sup>7</sup>

Regulation is therefore an important tool that can be used by Governments and multi-state actors, such as the EU and UN agencies, to develop protocols and processes that can help control and police supply chains and prevent the production and sale of counterfeit products. One of the challenges of such regulation is the international, cross-border nature of both the legitimate and illicit supply chains. The majority of the most frequently smuggled and forged products are products that are typically produced for export to other markets. Accordingly, regulation that is to be effective must reflect the need for implementation by different supply chain actors and the differing practices and requirements of national customs and policing.

## DIGITALISATION OF TRACKING AND TRACING: THE BENEFITS OF A TECHNOLOGY LED APPROACH

Tracking and tracing is often seen as the less innovative, more traditional element of the fight against the illicit trade; with the technology drivers focused on security features. However, this is not necessarily the case. New coding techniques are constantly being developed by solutions providers to meet the needs of the corporate world and industrial products and to help counter the illicit trade.

For example, the thread making business Coats has developed a “digital thread” with a security code embedded in the thread itself. It can be used for nearly any item made from fabric, so not only clothing but also items such as parachutes. It is invisible but can be scanned to verify both the authenticity of the fabric and can also include traceability information.

## REQUIREMENTS OF FAST MOVING CONSUMER GOODS

For fast-moving consumer goods, where a very low per-item protection cost is essential, small digital graphics can be inserted into the packaging during the production process, and printed with standard industrial printers. For example, one such type of secure graphic, called STAMPS (for “Secure Tracking and Authentication through Matrix Printing and Scanning”), has been developed to be mathematically impossible to copy and can be authenticated through an image capture with a mobile phone. Similarly, spectral techniques have been developed to increase information capacity, allowing sources of product diversion to be identified. Invisible laser-etched code inside a supplier’s manufacturing machines can verify the integrity of source down to the machine level.

One of the key elements that coding needs to allow for is the insertion of product information through the use of a GTIN number, a globally unique 14-digit number used to identify trade items, products, or services. These numbers are already used to provide supply chains with an easily identifiable set of product information and can be included in the regulated track and trace requirement through the use of an ISO structure that allows for the insertion of ‘markers’ between the different elements of a code, allowing for easy identification of the separate parts and increased readability.

ISO standard 12931 already exists to provide the performance criteria for authentication solutions, as well as other standards currently in preparation, and can guide brand owners in the selection of the most appropriate technologies for their needs. However, in their current form they remain accessible only to a small minority of authorized parties.

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<sup>7</sup> World Customs Organisation, Illicit Trade Report 2012, 2013

## USE OF ISO STANDARDS AND GTIN NUMBERS IN FALSIFIED MEDICINES DIRECTIVE

The EU's Falsified Medicines specifies that the unique identifier must contain the following:

- Product Code: ISO compliant (ISO 15459); < 50 characters; globally unique; issued by ISO compliant coding agencies
- Serial number: (max 20 characters; randomised)
- A national reimbursement or identification number (optional)
- Batch number
- Expiry date

The complete code should therefore look like the below:

➤ **UI also ISO-compliant (ISO 15418; ISO 15434).**

Product Code	Serial Number	Batch Number	Expiry Date
(01)09876543210982	(21)12345AZRQF1234567890	(10)A1C2E3G4I5	(17)180531

For a more radical and wide ranging application of open standards and technologies that may seem more basic, but are firmly established and accessible to the masses through their mobile phones. 2D barcodes for example can be high-capacity optical data carriers that offer a low cost of implementation and the convenience of easy scanning. They are also increasingly used for mobile marketing.

With numerous methods to represent data that could be a handicap for streamlining adoption, however this large number indicates continued and serious interest in the use of these technologies. The most popular formats—the QR (Quick Response) code and Data Matrix are free to use and based on open ISO standards. Open source code for encoding and decoding the symbols allows any programmer to launch a mobile phone barcode decoding application; assisted by improvements in the optics and processing power of mobile phones and consumers ability to read those barcodes as they shop. Furthermore, the need to download and use a specific app has been long identified as one of the barriers to QR Code adoption by consumers and it is about to be overcome, as the latest iOS11 integrates a native QR Code scanning in the camera app.

These codes can contain information that links to a web address and the decoding software

automatically redirects the user to the web page. If the codes are serialized, item-level traceability can even involve the end-consumer who can both verify and provide feedback connected to a specific product.

In fighting the counterfeiters and smugglers, it should be noted that 2D barcodes and RFID cannot be forged when they are encrypted or include coding that is randomly matched with a database; so a non-authorized party (such as a counterfeiter) cannot work out what would be a valid code. Yet these technologies do have a fundamental weakness: there is nothing that prevents them from being copied.

Counterfeiters typically use one or a few codes and massively replicate them. Counterfeit codes therefore generate an abnormally high number of scans, and can be automatically or manually blacklisted with the appropriate monitoring. Because retailers and consumers vastly outnumber the small investigation teams deployed by brand owners, they can potentially be a key element in tackling the illicit trade by creating a multiplying effect.

It is also important to consider the application of these codes when thinking about how best to guarantee a track and trace system that is as hard to corrupt as possible. Printing or marking directly

onto the product is undoubtedly the safest method as this ensures the code is integral to the product (or its packaging). The alternative, which is typically the printing of the unique code onto a sticker or stamp that is applied to the products risks two things. Firstly, it is easier for counterfeiters to create a fake stamp or sticker than it is to create a product that has the code as an integral part of the packaging or even product itself. Secondly, there is a danger that if the codes are printed on stickers, these labels themselves may be subject to diversion and subsequently applied to contraband or even counterfeit products, giving them false legitimacy.

To prevent this, regulatory frameworks must facilitate the integration of code application within the production process, allowing brand-owners the ability to fully integrate serialization within the manufacturing process. In certain industries, like e.g. tobacco or pharmaceuticals, which are particularly affected by illicit trade, authorities might consider additional measures such as overseeing the generation of secure codes or setting up a

reporting structure, but in all cases it is only workable when the manufacturers are able to choose from a variety of solutions providers and use their judgement and experience to best integrate the printing or application of codes into their manufacturing process, which will vary considerably based on the product category, how it is packaged and the production speed.

We also must remember that there is a need to create a compelling ROI for brand owners that encourages the integration of traceability and authentication into its products and processes, and for "digitalizing" their products. To maximize their ROI, brand owners might want to be able to create new modes of interactions with consumers. This means, for example, allowing users to access relevant Web content through scanning the 2D barcode, which should contain a unique Web address to make the access convenient. This also means that the regulatory environment for managing user data with respect to data privacy and security laws needs to be clarified.

## 03

### Creating digital footprints and fingerprints

The convergence of mass smartphone communication, digital product tracking, and authentication will empower a much larger number of stakeholders to access relevant traceability information. Creating a feedback loop each time a product is checked reinforces the system that is created. However, the fact that a manufacturer adds a code or label to the product does not in itself guarantee that all the product-claimed attributes are respected. How is reliable traceability information created in the first place?

For a number of product categories, the nature of the supply chain can have a crucial effect on the quality of the product and thus also has to be

monitored, which brings additional complexity. This is typical of cold chains for vaccines and medical products, frozen food, and agricultural produce. Solutions can simply involve placing time-temperature indicators that change colour to signal the occurrence of a potentially damaging heat or freeze event, or the presence of food-borne pathogens. However, more sophisticated digital systems are also being developed and introduced including the use of RFID sensors to identify location, monitor or record temperature, and report back on other events—such as a container opening—at any point along global distribution channels.

One of the initial growth sectors for this advanced digital tracking and tracing has been fine wine, where poor distribution can have a significant effect on the value. Indeed, according to experts, 10 to 25 percent of the wines sold in America are damaged during transport because of their exposure to extreme temperatures.<sup>8</sup> Similar issues exist with other gourmet consumables shipped internationally, such as arctic shellfish or Japanese beef.

While basic monitoring systems can improve product safety, a full digital footprint has a much greater positive impact because it creates conditions for continuous accountability, as each stakeholder in the supply chain receives objective feedback on his performance. Digital reporting therefore has the ability to create substantial improvements in the way our supply chains operate, going further than just fighting illicit trade.

And it is not just a digital footprint that can be created for a product, each individual product can now have a unique digital fingerprint created through its very make-up<sup>9</sup>.

## COMPLIANCE CHALLENGES

While a company can introduce best-in-class digital solutions, there remains the challenge of ensuring that a complex supply network, across several jurisdictions, is also playing its role in ensuring a correct tracking and tracing of the product throughout the distribution chain. Therefore, the application of a code or tag on a product by a brand owner does not necessarily fix all problems within the supply chain, but it can be a good basis to start from.

What works is the use of technology in a process that records relevant traceability information, holds the supplier accountable, and makes successful

fraud much more difficult because the coherence of the digital trail must be maintained. At each stage in the supply chain the tag provided and assigned to each supplied component must be recorded and reported, with quality control procedures that can be digitally recorded and validated by reading the tag, thereby leaving a permanent trace. In doing this, the act of scanning or reading a tag/code can be made equivalent to a digital signature, and can validate that the supplier has respected a specific quality-control procedure.

Regulators must be mindful, however, that the requirements must also be realistic for the supply chain to implement.

In the USA, the FDA (Food and Drug Administration), after already having gone back to the drawing board, after a previous regulatory attempt proved impossible to implement, had to grant extra delays for the implementation of some of the requirements of the Drug Supply Chain Security Act (DSCSA) due to concerns from manufacturers and supply chain operators. They had flagged that "unforeseen complications with the exchange of the required information may result in disruptions in the pharmaceutical supply chain, and ultimately this could impact patients' access to needed prescription drugs."<sup>10</sup>

Specifically, the decision granted manufacturers, wholesale distributors, and repackagers an extension of the deadline by which they have to start providing or capturing the transaction information, transaction history, and transaction statement required under the DSCSA.

This delay however was modest, compared to the current problems around the key requirement of the DSCSA, which requires manufacturers to affix or imprint a unique product identifier at both the package and secondary homogenous case level

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<sup>8</sup> World Economic Forum, *Illicit Trade, Supply Chain Integrity, and Technology*, Justin Picard and Carlos Alvarenga, 2012

<sup>9</sup> See for example ArjoSolutions patented technology Signoptic™A technology based on a vision system converting the texture of a product into a unique signature thanks to a proprietary algorithm

<sup>10</sup> FDA, *DSCSA Implementation: Product Tracing Requirements – Compliance Policy*, 2014



before the product enters the supply chain. Originally due to come into force 27 November 2017, manufacturers now have been granted an additional year long 'discretionary' period following feedback that a number of manufacturers would not be ready to meet the serialization deadlines. During this discretionary period, manufacturers will not be inspected or penalized but the FDA will expect full compliance by 28 November 2018.

While there is confidence US pharmaceutical providers should be able to meet the requirements following this extended implementation period, greater concerns remain about the ability of foreign producers who currently supply the US market to comply.

North America is the destination for more than a quarter of India's pharma exports, for example and reports claim half of all India's pharma companies face losing market share in the US because they are unlikely to meet US medicine traceability requirements.

Arjun Guha Thakurta of Life Science Consulting told Indian trade journal Pharmabiz that with the deadline for implementation of the second phase of US Drug Supply Chain Security Act (DSCSA) drug makers are struggling to meet the level 3 (site level software and hardware) and level 4 (business logistics systems) requirements.<sup>11</sup> Restricting access to producers from India and other fast-growing Asian economies is likely to have a significant impact on the availability and price of pharmaceuticals in the US.

It does appear this is something the FDA is examining, with the launch of a pilot program to test issues involved in establishing the long-sought global interoperable electronic system for drug tracing and identification. This pilot initiative was included in DSCSA and discussed at a public workshop in April 2016. FDA states it hopes that large and small manufacturers, dispensers and distributors will be able to propose projects able to evaluate product identifier management, barcode quality, system interoperability, data exchange, error handling, and methods for investigating illegitimate products.

Furthermore, the FDA is collaborating with other regulatory authorities to devise methods for better securing the international medical product supply chain. An initiative supported by the 21-nation Asia-Pacific Economic Cooperation (APEC) has developed a Supply Chain Security Toolkit for Medical Products. The aim is to help manufacturers and distributors detect and deal with substandard and falsified drugs in Asia and other regions

What is important to note here is the need for regulators to engage with industry during the process of creating and refining regulation, ensuring that the requirements mandated are realistic and that those required to implement them are able to do so in a timely manner. Furthermore, if a product category relies on a global supply network then the need for regulation based on interoperable, open standards becomes even more important.

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<sup>11</sup> Securing Industry, *India's Drug makers will struggle to meet DSCSA deadlines*, 25/10/16

One emerging digital technology that looks set to change the way we track and trace products is Blockchain. The technology – essentially a digital database of time-stamped records or transactions – can be used to track supply chains and identify e.g. the origin of any contaminated or counterfeit food.

Blockchain is the distributed ledger technology underpinning virtual currency Bitcoin, and interest is growing in using it to track the provenance of goods as they move through the global supply chain. Rather than relying on a paper trail or traditional electronic systems, blockchain-based record keeping produces a permanent chain of ownership and records that is extremely difficult to alter.

There is excitement about the use of blockchain for supply chain security and traceability – with start-ups such as Everledger and Chronicled looking at applying the technology for authenticating products, and major corporates like IBM throwing their weight behind enterprise-level platforms.

Food traceability is seen as potentially an early application for blockchain. Walmart, IBM and Tsinghua University have already signed an agreement to explore food supply chain security using the technology and to improve the way food is tracked, transported and sold to consumers across China, where concerns over provenance and contamination of food products are very high.

When applied to the food supply chain, digital information such as the original farm or producer, batch numbers, factory and processing data, expiration dates, storage temperatures and shipping detail can be digitally connected to food items with the information entered into the blockchain at each step of the process

Business advisory firm EY has also developed a blockchain-based traceability and authentication

system for wines with the help of Italian tech start-up EZLab. It is estimated that the Italian wine industry lost an estimated €2m to counterfeiting in 2015. Aside from the impact on the producers and loss of tax revenues for governments, the falsified wines can expose consumers to health and safety risks.

The technology – dubbed *Wine Blockchain EY* – has been developed as part of EZLab's AgriOpenData cloud-hosted farm management software platform. It will store records with details about the wine's cultivation, supply chain and geographical origin, and allow customers to access those details by scanning a QR code on the bottle with their smartphone.

IBM has been leading the charge in developing blockchain traceability systems, stating the food chain's lack of access to information on the supply chain and general product traceability, especially in light of any contamination or adulteration, as a key driver.

In an interview with CNBC, Brigid McDermott, vice president for blockchain business development at IBM, said: "We're trying to use [blockchain] to get that transparency across the whole system so that we can find the problem, so that we can make it easier for people to run safer systems, run safer food supply chains."

"In the case of the global food supply chain, all participants – growers, suppliers, processors, distributors, retailers, regulators, and consumers – can gain permissioned access to known and trusted information regarding the origin and state of food for their transactions."

Other companies joining the IBM consortium to employ the technology are Dole, Driscoll's, Golden

State Foods, Kroger, McCormick and Company, McLane Company, and Tyson Foods.

"A blockchain food safety programme is tremendously good because it provides transparency into the food system, which means that in the event that there is a problem like a recall, you're able to quickly, effectively, surgically deal with that problem," McDermott said.

Pharmaceuticals too are looking to use block-chain technology to improve the security of the chain. Hyperledger envisages using blockchain tracking and time stamps to make it easy to establish exactly when and where a medicine was produced.

Backed by the Linux Foundation, Hyperledger is a collaborative effort created to advance blockchain technology by "identifying and addressing important features for a cross-industry open standard for

distributed ledgers that can transform the way business transactions are conducted globally."

While blockchain is best known as the technology that underpins the Bitcoin system, it can equally be applied to recording the movement of goods through the supply chain, with each transaction verified via the blockchain network.

The provenance of the product and its components as well as any transfer of ownership is recorded in the distributed ledger and can be verified by anyone with access - making it easy to track and identify fake, diverted or stolen goods.

The counterfeit medicines project is one of several 'use cases' in play at the Hyperledger working group, which along with Accenture includes the likes of Cisco, Intel, IBM, Blockstream and Bloomberg, amongst others.

## 05

## Authenticating Products in the 21<sup>st</sup> century

There are now digital, technology-led authentication solutions for any type of product. Luxury goods such as high-end watches can be assigned a Smartcard, and can be authenticated instantly through the internet via a Smartcard reader that is provided to customers.

In developing economies counterfeit pharmaceuticals are a major problem that often costs lives as users typically are unaware that they are not buying genuine product and that the product they buy may have little or no health benefits.

One way that is being trialled to help empower consumers in these markets is the use of simple scratch codes, like those that are typically found on lottery scratch cards. Companies including mPedigree in Ghana, Sproxil in Nigeria, and

PharmaSecure in India are proposing to use such codes as a simple solution to the scourge of fake pharma. As a consumer buys a product, he or she can reveal the code beneath the packaging and by sending through a short message service (SMS) to a toll free phone number, they receive feedback on its authenticity within seconds. As the codes are random and "verify once," they cannot be guessed or reused by counterfeiters. Similar 12-digit codes are used by the tobacco industry to address the problems of tax avoidance, smuggling, and counterfeiting and have proven very effective in the EU and beyond.

Furthermore, mobile technology can also enable and encourage the use of solutions in which the security feature is directly linked to the unique identifier and can be verified through a mobile phone scan. This would allow to follow the main

objective of ISO norm 16678:2014, which is to "simplify access and delivery of accurate identity information to trusted agents (inspectors) in the process of authenticating objects". This is also needed to encourage interoperability and usability of security features.

User convenience and consumer adoption are clearly key to the success of any consumer-based anti-fraud system, and typing a code on a mobile phone or through an online service might in the

end be slightly too inconvenient for integration into consumer habits. RFID chips automate the scanning process, and the idea of using them on products at the item level has been around for years. Although they are still too expensive for many product categories, the main limiting factor today is that globally only a small number of mobile phones are equipped with near field communication (NFC) readers. As NFC enabled smartphones proliferate in all markets, placing RFID chips on higher-end products will start to become more common.

#### CASE STUDIES: Premium alcohol producers use 'Smart' bottle to tackle counterfeiters

Rémy Martin in China rolled out a 'smart bottle' with opening detection technology to guarantee the authenticity of the product after a spate of counterfeit alcohol in China.

Developed by Selinko, the NFC tag features a "100% secure" authentication of the bottle's provenance and can detect a formerly opened bottle. The high security NFC chip, along with asymmetric encryption, detects the opening of the bottle and remains active from then onwards.

Users must have the Remy Martin smartphone application already downloaded on their mobile devices. They may then tap the bottle cap with their device to display if the bottle has been resealed in the past. Once the guest opens the bottle, the NFC tag will transmit the information to the app to indicate that the purchase has been opened.

In addition to authentication, the smart bottle also incentivizes consumers who want to earn more points towards the alcohol brand's engagement platform, by rewarding them with extra points every time they perform another bottle tap with their smartphone.

Similar technology has also been used by Diageo Technology Ventures which worked with ThinFilm, a printed electronics company, to roll out the first smart bottle for its Johnnie Walker Blue Label using ThinFilm's OpenSense NFC tags. The OpenSense tags work similarly to Selinko's tags and are permanently attached to the bottles and cannot be reproduced or modified. Previous authentication technology has tried to use QR codes, which can be difficult to read and easy to copy.

### The Remy Martin Connected bottle in action



Counterfeiting and smuggling of illicit goods is a growing, worldwide phenomenon, which hits almost all sectors. Improving cooperation is thus a compulsory step toward limiting it. More cooperation is required between companies and authorities, between countries of origin and destination, between independent standard setting bodies, economic operators in the supply chain, regulators and enforcement authorities, especially given the complexity of international supply chains.

Major manufacturers are also often unwilling to even talk about the issue of diversion and counterfeits, in case it is seen to damage their brand. As such, Governments, international organisations and regional blocs, like the EU, have a role to play. But the involvement of all these levels of government, makes it sometimes hard to see the wood for the trees. They all also have a natural tendency to only focus on the problem within their own borders, ignoring the cross border implications.

We cannot therefore rely on each country or operator to tackle the problem; we need to think about cross-border solutions that ensure the necessary inter-operability among systems and operators, while recognizing that different markets have different needs and abilities to enforce.

Well-designed principle-based regulatory frameworks or voluntary technical standards at a multi-state or global level can be instrumental to apply more effective and widely spread tracking, tracing and authentication solutions, making life much more difficult to criminals.

Public authorities at the national and international level, when designing policy and enforcement strategies or statutory requirements, should take the following points into consideration. In this way they

can better play a strategic role that encourages and enables business engagement, promote best in class innovation and fair market competition. This is also an opportunity for the EU to better protect its industrial assets and for European service providers to lead the development of innovative tracking tracing and authentication solutions that work in practice.

- Identifying methodological standards for applying traceability and authentication solutions (TT&A) to production-supply chain processes, although these may be product-specific.
- Defining policy principles and technical standards only for basic elements of the TT&A process.
- Monitor the consistent application of defined standards to the products to be tracked, traced and authenticated.
- Supporting, or at least encouraging, producers and supply chain operators to select the most appropriate technologies to fulfil TT&A standards, which best fit their respective industrial environments.
- Allowing outsourcing of the TT&A applications to “certified” third parties.
- Promoting competition and innovation through the establishment of an accreditation/ certification mechanism for systems deemed compliant with the regulatory requirements or the internationally agreed standards both for the provision of data and technical standards, irrespective of the technology providers.
- Promoting overarching technological architectures, which would enable interoperability across technological platforms, geographies and industry sectors.

- Assessing and benchmarking the cost effectiveness of optional solutions taking into account the value of the products they “protect” and the industry specific objectives in tracking and tracing.
- Considering the affordability of initial TT&A investments required for every company and operator in a given industry and market sector, with a view to avoid discriminatory entry barriers for companies due to lack of investment capabilities.
- Promoting the need to include layered solutions of security features and track and trace systems for the best levels of security to be achieved.

For further information on the Coalition  
Against Illicit Trade:  
<http://www.coalitionagainstillicittrade.org/>

If you wish to support CAIT or participate  
to future activities, please contact us at:  
[enquiries@coalitionagainstillicittrade.org](mailto:enquiries@coalitionagainstillicittrade.org)