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How to easily implement a compliant Track and Trace system for tobacco products?



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The Tobacco Products Directive (2014/40/EU) aims to improve the functioning of the internal market for tobacco and related products, while ensuring a high level of health protection for European citizens. The Directive, which is based on the proposal of the European Commission, entered into force on 19 May 2014 and became applicable in the EU Member States on 20 May 2016.

New measures intended to combat the illegal trade in tobacco products include an EU-wide tracking and tracing system for the legal supply chain, and a security feature composed of visible and invisible elements (e.g. holograms) which should help law enforcement bodies, national authorities and consumers detect illicit products. These measures will be introduced for cigarettes and roll-your-own tobacco in 2019 and to tobacco products other than cigarettes in 2024.

The practical implementation of the system combatting illicit trade which the European Commission is proposing for the Tracking and Tracing obligations under articles 15 and 16 of the Tobacco Products Directive should be as seamless as possible.

Worldline's global Center of Competence Track & Trace provides a range of end-to-end services and solutions to private and public sector customers to fight issues related to counterfeiting, smuggling and tax fraud. Its Track & Trace systems operate **over 700 million products per year**, ensuring the efficiency and integrity of supply chains. This extensive experience in Tracking and Tracing includes several industries, like tobacco products, and allows **our experts to examine the concrete proposals of the Commission** and look at examples of similar systems in operation, while taking into account the obligations under the WHO Framework Convention on Tobacco Control (FCTC) Protocol.

Background

The illicit trade in counterfeit and contraband goods affects us all. It is a problem of international scale and scope. The OECD and the EU's Intellectual Property Office (EUIPO) estimate that imports of counterfeit and pirated goods are worth nearly half a trillion dollars a year, or around 2.5% of global imports¹. Almost all fast moving consumer goods are affected, from pharmaceuticals and alcohol to jewellery and clothing. One of the most affected sectors is the tobacco industry, where high taxation and relative ease of smuggling has created a black market in illicit tobacco in the EU. This is costing national and EU budgets more than €10bn a year in lost public revenue, according to the latest estimates of the European Anti-Fraud Office (OLAF)².

According to the European Commission, the illicit tobacco trade is also a major source of funding for serious organised crime. It finances criminal gangs involved in narcotics and weapons smuggling, human trafficking and even terrorism. This was recognised by the European Commission in a study in February 2016³.

The European Commission is currently working with Member States to finalise the legislation on how to concretely implement a Track and Trace system in line with the requirements described in the Tobacco Products Directive. While the final decision is expected by autumn of this year, several options have been suggested by the European Commission as to how they would like to implement the system.

All options must be compliant with the FCTC Protocol, which the European Union ratified last year. It will enter into force as soon as 40 parties ratify it. This is expected to happen by 2018 at the latest.

Tracking and tracing obligations under the Tobacco Product Directive

Tracking and tracing requires stakeholders to record how an item moves through the supply chain. This allows the location of a product to be established, as well as the history of that item's movement through the supply chain.

Article 15 of the TPD requires all tobacco packs to be marked with a Unique Identifier. This identifier, which is a serialised code or number, is required to carry information on manufacturing location & time, destination market & shipment route, and must identify all purchasers up to the last economic operator before retail. This information is to be made electronically accessible for authorities by the involved supply chain operators. All data needs to be stored in a third party database, controlled by an external auditor, approved by the Commission and paid by the tobacco manufacturers. The TPD (and FCTC) also recommends the use of aggregation data, to facilitate for the supply chain operators the recording of all unit packets into their possession. The European Commission is therefore studying the possible data carriers at different packaging levels to accommodate this.

1. Report on Trade in Counterfeit and Pirated Goods. Mapping the Economic Impact, OECD, Paris, 2016.

2. Euractiv, [EU anti-fraud official: «Tobacco smuggling is 'major source' of organised crime»](#), interview with Margarete Hofman, director of policy at OLAF, 7 february 2017

3. [Technical Assessment of the Experience Made with the Anti-Contraband and Anti-Counterfeit Agreement and General Release of 9 July 2004 among Philip Morris International and affiliates, the Union and its Member States, European Commission, 24 February 2016](#)

How much progress has the Commission made?

Based on an initial impact assessment of the different Policy Options, the Commission organised a Public Consultation and a Stakeholder Workshop last year on how to best implement articles 15 and 16. Worldline participated to both.

From this workshop and the presentations, it was clear that the Commission and its advisors have ensured that all options under discussion are compliant with the provisions of the FCTC protocol. The Commission and its consultant expressed a clear preference for a mixed governance model. Under this model, Governments will have the necessary controls while allowing for easy and effective implementation by the solution providers and the industry, and within their current manufacturing processes. The mixed model would also allow to keep to the challenging timeframe as set by TPD (full operational implementation by May 2019).

The legislative framework needs to deliver a tracking and tracing system that can be operational within that time frame, and compliant with all of the requirements. Ultimately, the system should provide public authorities and law enforcement with a key tool to keep track of products entering the EU and circulating within it.

What the European Commission proposes

1. A Mixed Governance Model

- **Generation of the Unique Identifier, scanning and verification is under the control of the public authorities.**
- Additional tamper free devices controlled by the public authorities may verify the correct application of the codes.
- **The Unique Identifiers, including aggregation of the codes, are applied to the packaging by the manufacturers** who also scan them.
- The manufacturers **store the data** at 3rd Party provider **and report to a central database.**

2. Combined Data storage Model based on EU central database

- **Controlled by independent auditors** approved by the European Commission
- **Accessible to public authorities and law enforcement**

3. Real time or near real time reporting of all movements of tobacco products

4. A limited amount of approved and internationally recognised data carriers, to ensure interoperability

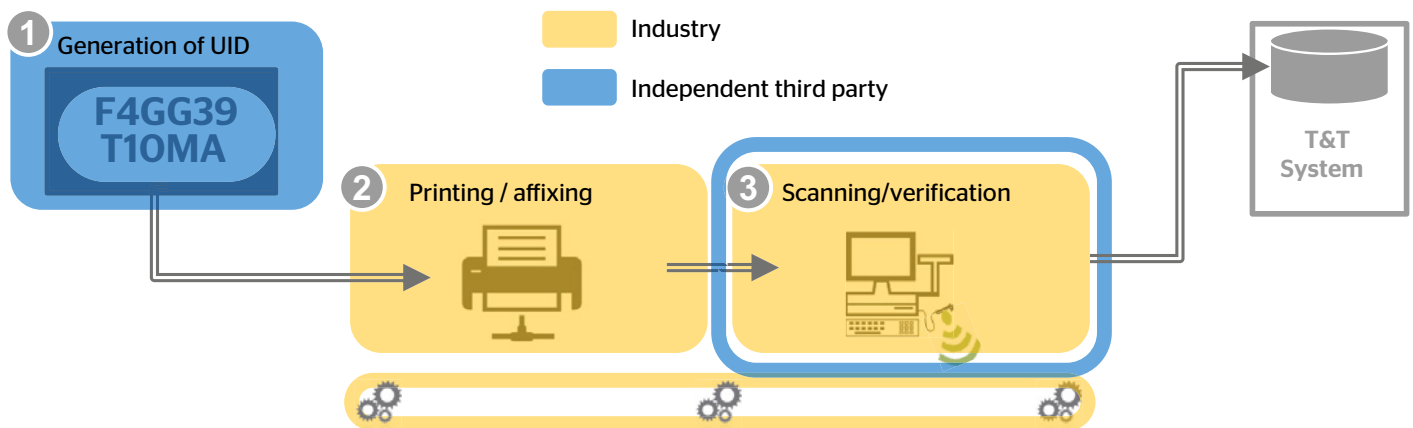
5. Security feature: allowing any method for the application of the security feature providing enough flexibility to ensure innovation, evolution and competition between solution providers

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What does the Commission mean by a Mixed Governance Model?

At this stage it is difficult to interpret with absolute certainty what a mixed governance system would entail. However, based on the options recommended by the Commission and its experts and shared with stakeholders, the favoured system is a sensible compromise based on active government control over the generation and practical application of the Unique Identifier.

The responsibility for generating the Unique Identifier (UID) code resides with the Government or any third party service provider it contracts. The code is then printed and affixed by the manufacturer on the products. Verification and scanning of the codes into the system is again under the control of the Government (or its contractor). At that point the codes containing the required information are reported to a centralized data storage facility. The centralized storage facility becomes the point of reference for compiling all information on the movement of the products, as supplied by the rest of the supply chain operators.



Source: Eversis presentation to Stakeholder Workshop, 12 December 2016

This means the manufacturers would remain responsible for the application of the Unique Identifier and the subsequent scanning, holding them responsible and liable in case of non-compliance with the Tracking and Tracing requirements.

What are the advantages of a mixed model?

1. Government control

- Control over the generation of the codes for the Unique Identifier: Member State Governments will control the generation of the codes, by either generating the codes themselves or appointing a third party to generate the codes for them.
- Automatic controls on the correct application of the Unique Identifier: in addition to existing control measures, a tamper free device could be installed on the production line under the control of the public authorities (or their third party contractors) to verify that the Unique Identifiers are applied correctly during the production process.

2. Ease of implementation: the production lines operated by manufacturers run at very high speed. This system ensures a very thorough verification, without substantial impact to the production process.

3. Reasonable amount of extra costs: the addition of extra steps in the verification process will require extra investments in the production lines, but would cost less than the other models.

4. FCTC compliant: the Government oversight and control of this mixed model ensures compliance with the FCTC protocol as Governments retain full control over the code generation and the correct application of the Unique Identifiers, which fulfills the requirement of keeping control over the system.

Combined Data storage Model based on EU Central Database

The most complex aspect of the model is likely to be how the data is scanned, verified and stored. Once the UIDs are applied on the goods as per generation, these can then be used to verify the movement of the goods throughout the supply chains.

The favoured model foresees an EU Centralized Surveillance system, providing efficient access to the global view of data, and a number of local Data storage systems, providing efficient data processing and writing.

Each local Data Storage System will process data exclusively related to a certain (or group of) manufacturer(s)/importer(s), and will receive data from the manufacturers and importers, the public authorities responsible for the generation of the Unique Identifiers, and the Centralized Surveillance System which routes traceability and trade reporting events coming from the Supply Chain operators.

Once that data has been successfully consolidated and checked by the local Data Storage System, it is sent to the Data Repository of the Centralized Surveillance System. The Data repository contains serialised UIDs from all markets and tobacco manufacturers and offers a comprehensive overview of all relevant data.

The Centralized Surveillance System publishes interfaces to the Competent Authorities and the External Auditors, to ensure full control of the integrity of the data and give them visibility on all movements of tobacco products.

How could such a system work in practice?

Under the TPD, the Unique Identifier may be printed directly onto the pack or onto another element (label or stamp) that is affixed to the pack and made tamper proof. One way of doing this is by printing the Unique Identifier directly on the pack, usually under the form of a Dot Code.

In this case, the Unique Identifier would be generated by the Government (or an external contractor they assign), and then sent to the manufacturer which applies it to the packaging. The correct application of the Unique Identifier is often double checked by the government, after which the packages are scanned and all data is sent to the central database.

Several EU countries are already running pilot projects which are based on the Mixed Governance Model the European Commission is proposing for the implementing acts of the TPD. Worldline is currently assisting different public authorities in EU for running pilot and rollout projects.

- Worldline assists these governments in generating the Unique Identifier via a bespoke software solution. These codes are then transmitted to the manufacturers, which apply them directly on to the packs and scan them. In some cases, the correct application of the codes on the production line is also verified afterwards using an independent tamper proof camera.
- Tax stamps to be affixed to tobacco packs are also proposed to carry the Unique Identifiers. A unique number is generated and printed on the stamp by the government (or an external contractor they assign). The stamps are transported to the production facility, where the manufacturer applies them on the production lines to the packages. The codes are then scanned and manufacturing information is linked to the Unique Identifier (i.e. time and location of production, which machine made it, its destination ...) which is then stored in the local Data Storage System.

Critics often question the use of affixing tax stamps carrying the Unique Identifiers as being costly, impractical and not tracking the package itself but the label (since it is not an integral part of the package). Tax stamps remain for the time being the system of choice for many European countries. Germany for example operates a mixed governance system, where the federal printing house, Bundesdruckerei, is generating human readable codes that are applied in conjunction with the machine readable technology from the manufacturers. Another example of a mixed governance system is Turkey, often cited by the FCTC and NGOs as an example of best practice on how to apply UIDs to tobacco products.^{4,5}

Conclusion

Given the limited time frame of TPD, it is important that the European Commission continues to make swift progress. The system design should not only comply with the requirements of the FCTC, but also needs to provide the public authorities with a key tool to fight back on illicit trade, while providing the necessary guarantees that it has been tested in the real world.

Worldline is currently working on several pilot projects across Europe with Member State Governments on track and trace models. Worldline assists them with the generation and control of the application of the UIDs, system management & audits, and adequate reporting. So far the results are encouraging, with authorities stating that the solutions meet their requirements for control, ease of use and effectiveness.

Its experience with these projects also shows that these systems can be easily implemented. With the implementing acts coming into force by May 2019, it is essential that the recommendations are not only effective but also workable for all involved stakeholders: Member States and Competent Authorities, and all businesses actors involved in the supply chain. The Commission seems aware of these requirements and Worldline is confident that, alongside other solutions providers, it can be part of the ultimate solution.

⁴ <http://www.who.int/fctc/protocol/faq/en/index3.html>

⁵ Interview with Vinayak Prasad, head of the WHO's Tobacco Free Initiative, praising the independent track and trace system set up by Turkey in just three years as an example for the EU. [Politico 13/5/2016](#).

About Worldline

Worldline [Euronext: WLN] is the European leader in the payments and transactional services industry. Worldline delivers new-generation services, enabling its customers to offer smooth and innovative solutions to the end consumer. Key actor for B2B2C industries, with over 40 years of experience, Worldline supports and contributes to the success of all businesses and administrative services in a perpetually evolving market. Worldline offers a unique and flexible business model built around a global and growing portfolio, thus enabling end-to-end support. Worldline activities are organized around three axes: Merchant Services & Terminals, Mobility & e-Transactional Services, Financial Processing & Software Licensing including equensWorldline. Worldline employs more than 8,600 people worldwide, with estimated revenue of circa 1.5 billion euros on a yearly basis. Worldline is an Atos company.

Worldline is processing every year about 6 billion ATM and POS payments and managing over 100 million payment cards.

Worldline's Global Center of Competence Track & Trace works with tobacco manufacturers, supply Chain operators and authorities across Europe, helping them with assessing and implementing serialisation technology and tracking and tracing systems.

Our parent company Atos SE (Societas Europaea) is a leader in digital transformation with circa 100,000 employees in 72 countries and pro forma annual revenue of circa € 12 billion. Serving a global client base, the Group is the European leader in Big Data, Cybersecurity, Digital Workplace and provides Cloud services, Infrastructure & Data Management, Business & Platform solutions.

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