



Responding to the Tobacco Products Directive

How tobacco stakeholders can start their journey to compliance with track and trace technology





Understanding the Tobacco Products Directive and its Impact

All organisations within the tobacco supply chain must ensure their operations are fully compliant with the Tobacco Products Directive (TPD) or risk facing financial and economic consequences.

When the directive was initially passed by the European Union (EU) in 2014, a series of new obligations were imposed on the tobacco industry, ranging from the sale of tobacco variations through to the ingredients used. More specifically, some of the regulations were implemented to avoid the circulation of counterfeit (fake) and contraband (no taxes paid) tobacco products in the supply chain across all 28 EU member states.

The measures aim to protect public health, state budgets and legal economic operators against the negative effects of illicit trade.

The TPD legislation, which officially comes into effect on 19th May 2019, therefore requires all tobacco stakeholders to implement *security features* on tobacco products and a *traceability system* that covers all stages of the supply chain.



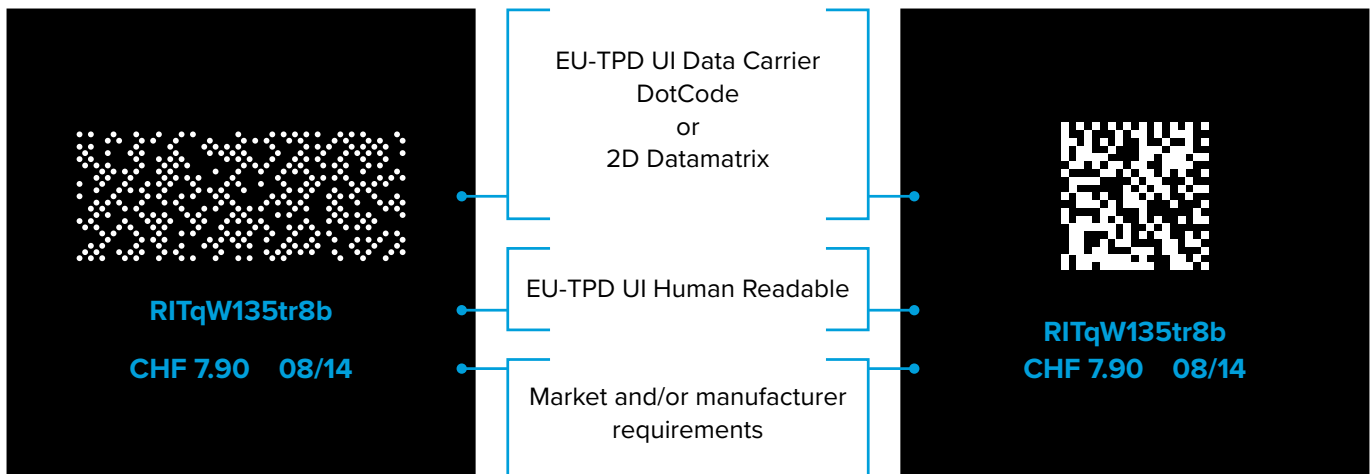
Measures for Achieving Compliance with New Legislation

From 19th May 2019, the new measures will affect cigarettes and roll-your-own tobacco products, followed by all other tobacco products under the same requirements from 2024.

Security Features

Under the security features system, all unit packets of tobacco products placed on the EU market (manufactured as well as imported) will be required to carry a tamper-proof security feature composed of visible and invisible elements, enabling authorities and consumers to verify their authenticity.

The visible part of these security features is a 2D data carrier (e.g. DotCode, Data Matrix) printed on each individual product and a specific data-set. This includes a unique serial number issued by a nationally appointed Unique ID Issuer, a location identifier, a date and timestamp.



Adapted from Digital Coding & Tracking Association

Traceability System

A traceability system in the new TPD legislation is designed to stop the sale of counterfeited tobacco products and to ensure that tax revenues are collected.

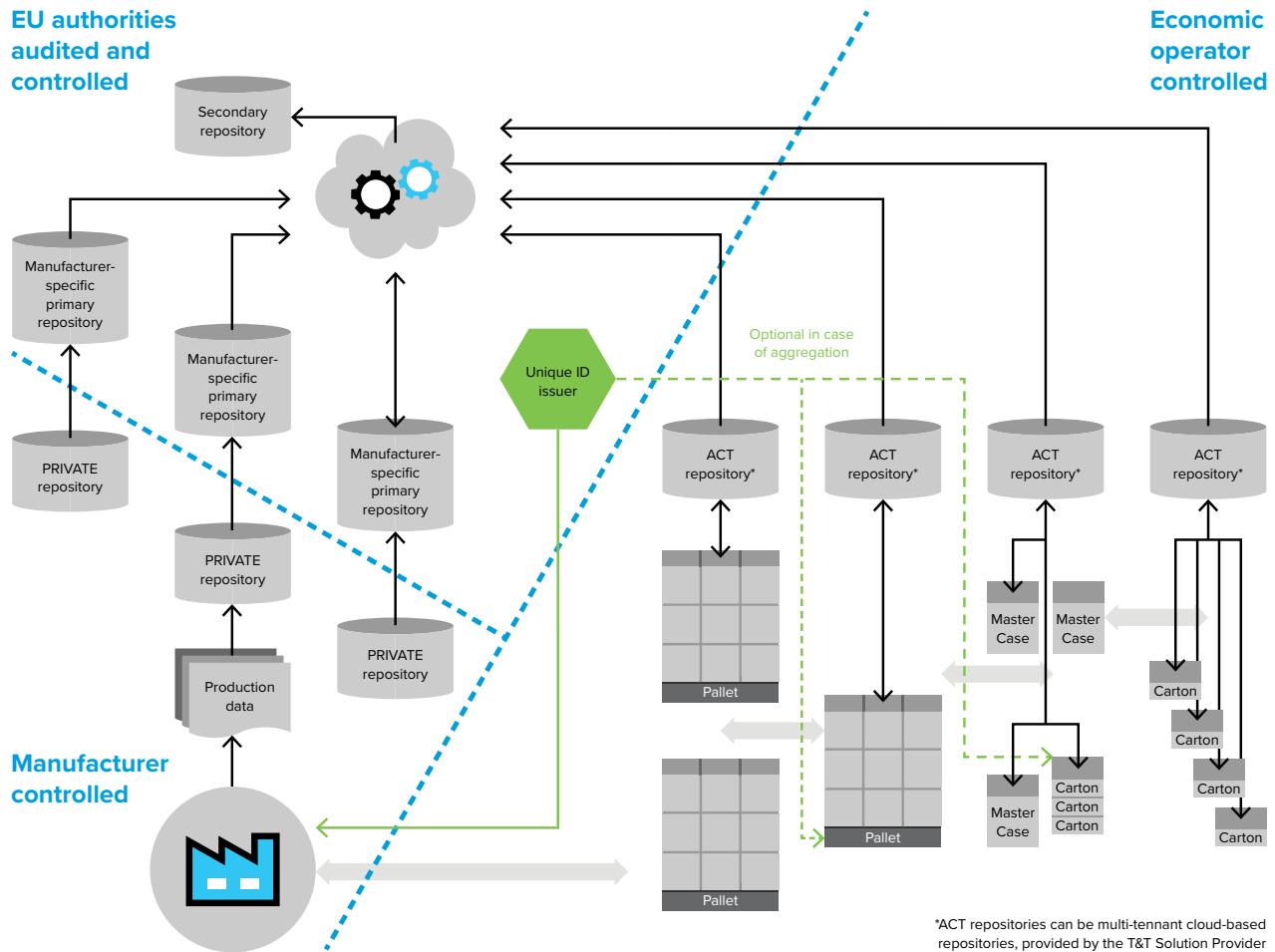
Under the traceability system:

- All unit packets of tobacco products must be marked with the unique identifier
- Relevant economic operators (namely tobacco supply chain operators) involved in tobacco trade will be required to record the movements of these packets throughout the supply chain and transmit the related information to an independent provider. Data storage contracts will be approved by the European Commission.
- The data will then be made accessible to the authorities of EU countries and to the European Commission for enforcement purposes.

As a result, the introduction of an effective traceability system will also serve to track and trace the movement of legal tobacco products and allow public authorities to determine when and where products are diverted into the illicit market.

The Complete Picture for TPD: Identifying the Involved Parties

The involved parties in the traceability of tobacco under the TPD can be segmented as follows: the manufacturers and their contracted parties, the authorities and their contracted parties and the economic operators and their contracted parties.



The Authorities

The local governments at member-state level will appoint a dedicated party to issue and manage the unique ID's with the manufacturers and economic operators who are involved in the data-aggregation process within the supply chain. The EU authorities will also contract to host the secondary repository in which the consolidated supply chain information will be stored and to which they will have access for audit purposes. A routing-function will also be established to ensure the data gathered from connected economic operators and manufacturers will be appropriately diverted to the correct repositories for further consolidation.

The Manufacturers

The manufacturers will be required to purchase a series of unique ID's from the party appointed by local governments and serialise their production with the 2D data carriers, including the location identifier, a date and timestamp. The Unique ID's have a validity of 6 months from the time they were acquired until they are effectively used to identify a tobacco product.

In addition to this, a private repository must be established by the tobacco manufacturers with a subset of production-data in line with the requirements of 3rd party repositories. A standard agreement, as reviewed and approved by the EU legislator, must be created between the manufacturer and an independent 3rd party to replicate their private repository data into a primary repository that is hosted on their behalf. The data must be aggregated and child-parent-grand-parent relationships maintained when individual serialised products are packed and palletised for future distribution.

Economic Operators

Under the umbrella of the economic operators, the TPD legislation includes all parties who are in any way connected to the supply chain of tobacco products from the point of manufacturing up to the final delivery to the retailer. The sale of the tobacco product to the end user is not part of the directive). The range of organisations impacted include:

- Distributors
- Wholesalers
- Retailers
- Mobile Sales Operators (Direct Store Delivery)
- Merchandisers (Vending Machine Refills)
- 3rd Party Contracted Logistics Service Providers

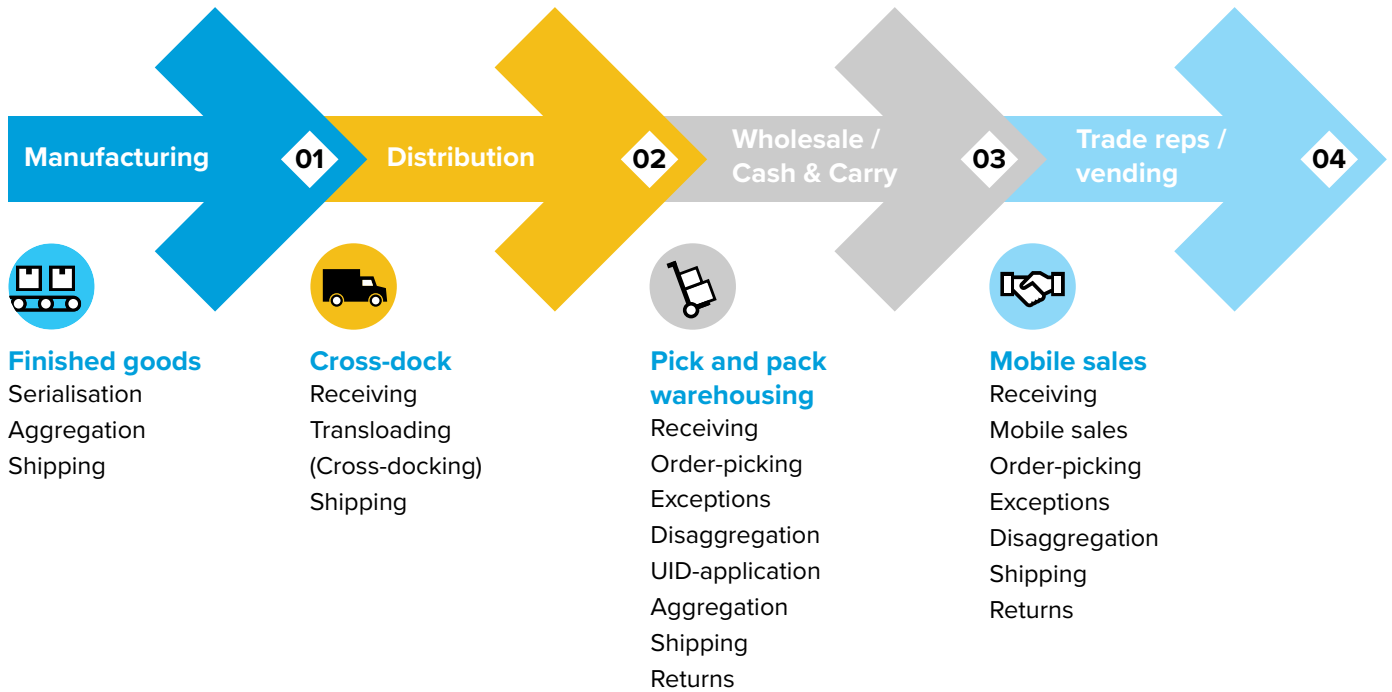
These parties need to acknowledge receipt of tobacco products and record the point of delivery (POD) to ensure compliance, and thereafter all changes and manipulations to the products and their packing units must be tracked across their operations. This track and trace data must be consistently uploaded into the primary repository within 24 hours, recording all crucial events prior to the ultimate point of sale.



Respond to the Challenge and New Process Changes

In general, all processes are impacted as every tobacco product is scanned throughout the supply chain and their movements are recorded within the data repositories. This requirement is needed from the point of manufacturing through to the shipment of goods and up to their ultimate point of sale. This would also include a mobile van-sales operator fulfilling direct store deliveries or a 3rd party contractor shipping to retailer outlets.

The data captured from the movement of tobacco products throughout the supply chain can be contextualised as follows:



But there's more...

Unfortunately, it is not as simple as it looks. As tobacco products move throughout the supply chain, pallets are broken down, master cases are opened, and individual cartons are distributed as part of mixed orders. In addition to this, the record for each tobacco product also needs to be processed and updated as part of any returns process. This all has a huge impact on track and trace requirements, as the hierarchy of Unique ID's need to be maintained and all repositories must be updated within the 24-hour timeframe.

Aggregation of Data

This refers to the moment in which master cartons are removed from a pallet. Each master carton needs to be identified and all records (including the Unique IDs) need to be updated properly. When orders are being picked as part of the shipping process, a new compliant pallet-ID also needs to be created and all underlying entities and units need to be scanned onto the pallet. This enables the full hierarchy of carriers and products to be uploaded and reported to the repositories.

Support for Returns Goods Processing

As goods are returned and transported back through the supply chain, the reverse processes need to be supported as well. When scanning individual units at the point of packing into cartons and master cases, all Unique ID's need to be issued and the records of each tobacco product must be updated in line with all new information linked to the new Unique ID's. The returns process is only required for tobacco products that will be put back on sale.



The Minimum Solution Requirements for Compliance

The changes imposed by the tobacco product directive will place an additional burden on Economic Operators. However, compliance is mandatory to be able to continue to participate in the Tobacco supply chain.

As a response to the legislative requirements, a Basic Compliant Solution would consist of the following minimum elements:

1. Hardware

Mobile devices capable of reading the 2D data carrier (e.g. dot code, data matrix, linear bar code).

Zebra is offering the TC75, TC56 and MC33. They are durable, handheld mobile computers that are designed for Enterprise customers and are capable of scanning the required codes.



TC7x



TC5x



MC33xx

2. Software Application

A combination of intelligent software, applications and utilities to allow Economic Operators to identify products and packaging, check their validity, record the business process step and transmit the data to the relevant data-repositories.



Additional Solution Requirements to Maximise Efficiency

However, simply equipping manufacturing and logistics facilities with a Basic Compliant Solution is unlikely to achieve operational and efficiency goals, even if the software supports all the required business process steps of the traceability system.

In order to efficiently integrate the solution into the existing operational flows, further equipment and services should be considered as part of a complete solution value stack for TPD:

- Label-printers to correctly mark re-packaged units
- Data-infrastructure to connect the users to the internet
- Integration into existing operations and software systems to minimize the impact on the operation's productivity
- Device staging so it is ready to work out of the box
- Asset visibility to enable you to manage your devices efficiently
- Device security to extend the lifecycle of your investment
- Ensuring added services, ongoing repair and support for all devices and solutions



ZD620



Zebra DNA



Lifeguard
for Android

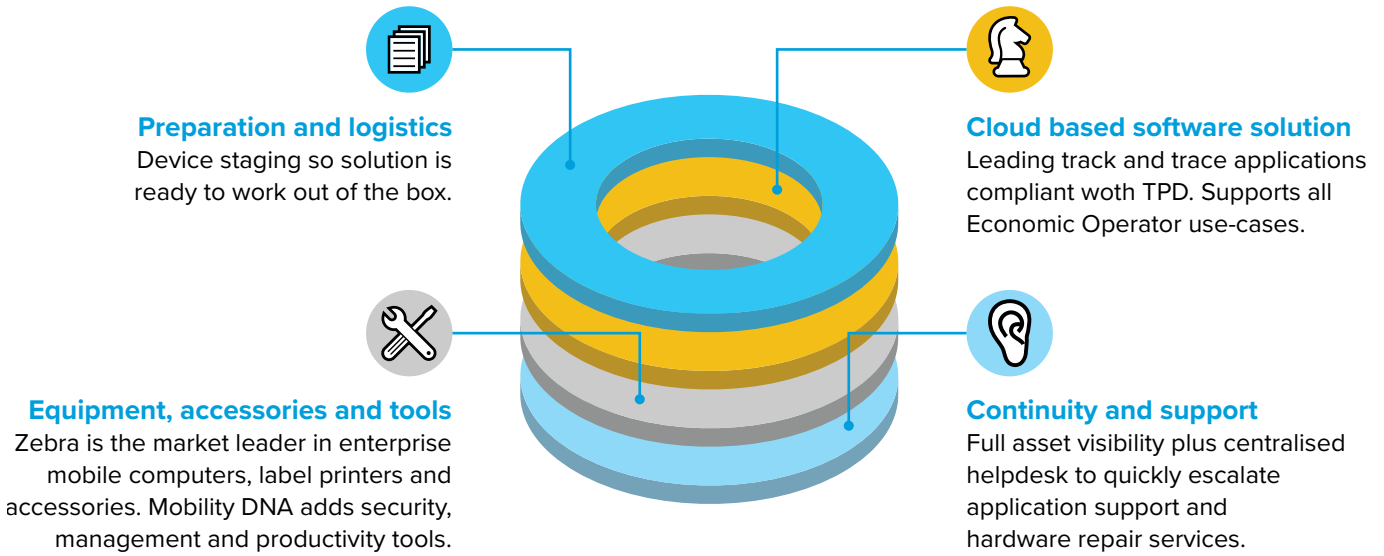


Zebra OneCare



Solution Value Stack

Zebra and its Channel Partners will be able to offer a complete solution including hardware, accessories, cloud-based software and supporting services.



Zebra provides devices that can scan all required symbology that are authorised for use within the tobacco supply chain under the new regulations: linear barcode, data-matrix, QR-codes and of course the 2D dot-code that is used on individual packages.

The performance of the scanning capabilities is particularly crucial. As the Tobacco Products Directive adds an extra process at each point in the supply chain, it is important that each scan can be done as quickly and accurately as possible to minimise any possible disruption.



Support from our Channel Partner Ecosystem

We understand the importance of working together to build and achieve great things. That is why we've carefully constructed our Channel Partner network to serve a broad array of customers. The companies we collaborate with bring value to our mutual customers through distinct offerings and experience in many different technologies and markets.

Together with our Channel Partners, Zebra can provide a solution to meet the requirements of the Tobacco Products Directive.

[Click here to contact us >](#)

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Please refer to the tobacco product directive for full details.