



TAX STAMP AND PRODUCT  
TRACEABILITY FOR  
GOVERNMENT AUTHORITIES





# CHALLENGE

## ILLICIT TRADE

With nearly 3% of the annual global economy being drained by illicit trade, it goes without saying that the trade in counterfeit and smuggled taxable goods is a global challenge that requires a multi-level stakeholder approach to solve.

### UNCTAD Illicit Trade Forum 2020.

Governments around the world are challenged to combat tax revenue loss from counterfeit and smuggled taxable goods including tobacco, alcohol, and pharmaceuticals. Most notably, emerging African markets are struggling with the effects of illicit trade. In fact, it creates safety risks for consumers and reduces (fiscal) income, which poses for the most part, an obstacle to achieving the country's Sustainable Development Goals (SDGs).

## Illicit trade can be in the form of:

- Counterfeited products (products that imitate authentic brands);
- Diversion and contraband (smuggling);
- Under or false declaration of production.

## The impact of illicit trade on achieving the SDGs

- According to the World Economic Forum, economic leakages from illicit trade create an annual drain on the global economy of US\$2.2 trillion – nearly 3% of the world's economy. If illicit trade was a country, its economy would be larger than Brazil, Italy, and Canada – and as large as Mexico and Indonesia combined. **UNCTAD Illicit Trade Forum 2020.**
- This lost revenue is affecting advancement on SDG 1: no poverty, as fewer funds are available to invest in schools, infrastructure, and other vital public services.
- Counterfeit and pirated goods are produced outside the normal channels of commerce with little regard to environment, health, safety regulations and standards. As a result, it poses risks to consumer health, livelihoods, and the environment (SDG 3: Good health and well-being).
- All types of illicit trade threaten sustainable economic growth and significantly hinder the achievement of SDG 8: Decent work and economic growth.

# DAMAGING EFFECTS OF ILLICIT TRADE FOR GOVERNMENTS, MANUFACTURERS AND CONSUMERS



## GOVERNMENTS

- Reduces Government revenues due to tax evasion.
- Stunts economic growth.
- Redirects funding that could be spent on development. Limits investment in infrastructure. Provides funding for crime and terrorism.
- Grows black and grey (diversion) markets.

## MANUFACTURERS

- Reduces brand value and damages brand reputation.
- Reduces size of legitimate goods market.
- Increases fraudulent claims and returns.
- Discourages reinvestment into innovation and limits investment in jobs and skill development.

## CONSUMERS

- Threatens consumers' well being as a result of illicit manufacture.
- Leads to lack of consumer trust.
- Increased use of unsafe products e.g. hardware, electronics, alcohol, consumables can lead to public health threats.

# SOLUTION

## DIGITAL TAX STAMPS

Tax stamps are paper-based labels or markings with complex multi-layered security features. With over 200 billion tax stamps printed every year, a growing number of Governments are adopting tax stamps as an effective way to reduce tax losses and fight illicit trade.

Historically, tax stamps have mainly been used on taxable alcohol and tobacco products. In the first place, a tax stamp provides visible proof that (excise) tax has been paid. Besides, it allows potentially harmful counterfeit products to be distinguished from genuine, certified products. Driven by advancements in printing technology and digital security innovation, the modern-day tax stamp is being applied to a growing number of product categories. More Governments are also adopting tax stamps to adhere to international regulations that require traceability of products such as tobacco. (EU Tobacco Products Directive and the WHO's Protocol to Eliminate Illicit Trade in Tobacco Products).

### Tax stamp function



#### Fiscal verification

### Advantages

- Secure tax compliance
- Combat tax evasion and smuggling
- Recovered tax revenue to be invested in schools, infrastructure and other vital public services



#### Product identification and authentication

- Consumer protection against fake and potential harmful products
- Promotion of local production



#### Supply chain visibility

- Supply chain control through real-time products' monitoring from the manufacturing lines to the final points of sale

# Legit Verify™

## PRODUCT AUTHENTICATION & TRACEABILITY

Integrated with Legacy XP's secure Labels, Legit Verify™ is a turn-key anti-counterfeit solution that gives Governments a powerful and dynamic tool to authenticate and trace brands throughout the supply chain. The aim is to uniquely identify and then track legitimate products from a registered and vetted manufacturer or vendor to the end consumer. This helps Governments to regain control over the goods that are sold in their territory as they provide visible proof that taxes have been paid. Besides, it allows potentially harmful counterfeit products to be distinguished from genuine and certified products. Governments can use information about the product's origin, and the route by which it reached the point where it is being examined, to identify suspicious or criminal activity in the supply chain.

Legit Verify™ is compliant with industry best practices and meets the mandate of global standards.

## Our Offer

Legit Verify™ offers the following modular solutions for supply chain monitoring and Secure Label tracking:

1. **Production of Secure Label** of the highest market standards, including several layers of innovation in digital security;
2. **Multi-level serialization and unique identifiers** are incorporated on every Secure Labels to enable track and trace;
3. **Product authentication** and product location information are captured on the consumer and authority level through proprietary mobile applications;
4. **One centralized track and trace management system** brings stakeholders together and safely stores track and trace data into a centralized database.

Legit Verify™ offers two fully customizable platforms for Governments that work hand in hand with Legacy XP's Secure Stamps:

1. **Web:** Centralized track and trace management system
2. **App:** Authentication applications



ISO 9001: 2015  
ISO/IEC 27001

QUALITY MANAGEMENT SYSTEMS  
INFORMATION SECURITY MANAGEMENT

# IMPLEMENTING A TAX STAMP PROGRAM

**Through a stakeholder participatory approach, Governments can decide the type of program that best suits their sector needs, along with the level of support and ownership. Any tax stamp program, whether developed from scratch or upgraded to align with the latest innovations, requires seamless integration with the industry. Legit Verify™ makes it as easy as possible for taxpayers to implement the desired solution, namely through detailed capacity building and onboarding.**

## **Key elements that can be part of a partnership with Legit Verify™;**

- Secure delivery of tax stamp with track and trace security features;
- Set-up of a secure warehouse and distribution center;
- The development of a Tax Stamp Management System where manufacturers can order stamps, while authorities can track all the data concerning the program;
- Development of a data center and customer support center;
- Support on factory preparation, such as the installation of tax stamp applicators and audit systems;
- Development and deployment of inspector authentication tools;
- The tracing and tracking of products and safe storing of all program statistics;
- Development of public authentication tools for consumers, to empower them to verify product authenticity;
- Creation of consumer campaigns and public communication tools, including media buying and PR support;
- Deployment of a team on the ground for local capacity building within the Government. This ensures the knowledge transfer and sustainability of the project;
- Any other service needed to guarantee successful program implementation.

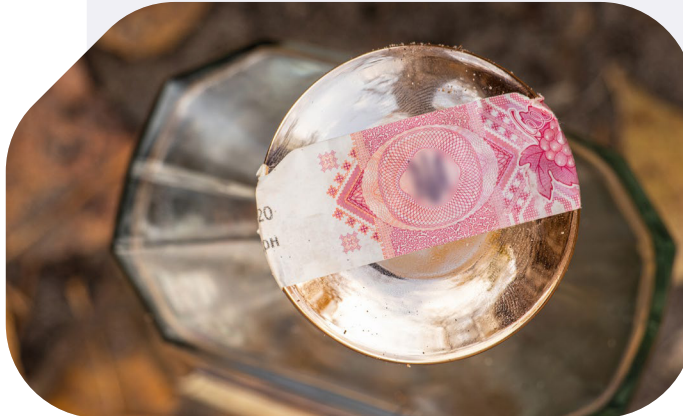
# SMART STAMPS

**Legit Verify™ offers tax stamps of the highest industry standards. As per international guidelines, the tax stamps give assurance of easy authentication so that counterfeit, or otherwise fraudulent tax stamps, can be detected.**

**The following two key functions are considered to create a robust and safe tax stamp: 'revenue collection' and tracking, tracing and monitoring'.**

## 1. REVENUE COLLECTION

- Tax liability is created at the tax stamp's point of application to the taxable product.
- The (revenue) authority is enabled to monitor and, where necessary, control the local production or importation of taxable goods through the number of tax stamps that are activated on premises. This has been successful in reducing the number of false declarations.





## 2. TRACKING, TRACING AND MONITORING

A key requirement during the collaborative design process of any tax stamp solution, is the inclusion of track and trace capabilities within the stamp design and program implementation. The aim of track and trace technology is to uniquely identify and then track legitimate products from a registered and vetted manufacturer or importer to the consumer. Authorities can use information about the product's origin and the route by which it reached the point where it is being examined to identify suspicious or criminal activity in the supply chain.

### Requirements that make effective supply chain monitoring and tax stamp tracking possible:

#### Product identification to enable traceability

Every tax stamp has a unique serial number and QR code, non-cloneable or re-printable. The QR code data contains both public primary information (for consumers) and hidden secondary information (for authority inspection).

#### Product and batch information

Product and batch information is created by manufacturers and importers via the Tax Stamp Management System and stored securely in the centralized database. This information is retrieved when codes are scanned by either consumers or inspectors.

#### Individual marking of every unit and code activation

Before going to the market, every product included in the program will be affixed with a tax stamp. The unique codes are activated by manufacturers and importers via the Tax Stamp Management System. Thus, the product is now accounted for and can be tracked throughout the supply chain.

#### Monitoring and enforcement

When consumers or inspectors scan the code, the system captures the details and compares them with database records. In case of suspicion, alerts go to both the manufacturer and authority. The Digital Tax Stamp Management System has in-depth track and trace modules for all stakeholders: manufacturers, importers and authorities. The 'alert management' module captures nationwide fraudulent codes and suspicious scanning activity. An interactive portal helps to assign cases to specific field officers as their reports are shared in real-time.

# TAX STAMP SECURITY FEATURES

**A combination of authentication features and security levels are always carefully considered when deciding on the tax stamp design. Security disciplines may include:**

- Security design with complex graphic and variable features
- Selection of specialized security inks
- Use of tamper-proof substrate (non-peel)
- Encoding for the serialization and unique identifiers
- Inclusion of authentication and track and trace features



# TAX STAMP AUTHENTICATION

One of the most critical functional layers of a physical tax stamp is the ability to authenticate the product. The following interdependent components can be considered when customizing your tax stamp authentication program.

## AUTHENTICATION FEATURES ON THE STAMP

- Security paper
- Security ink
- Copy protected QR code

Talk to us about the possible options we can propose.



# AUTHENTICATION EQUIPMENT

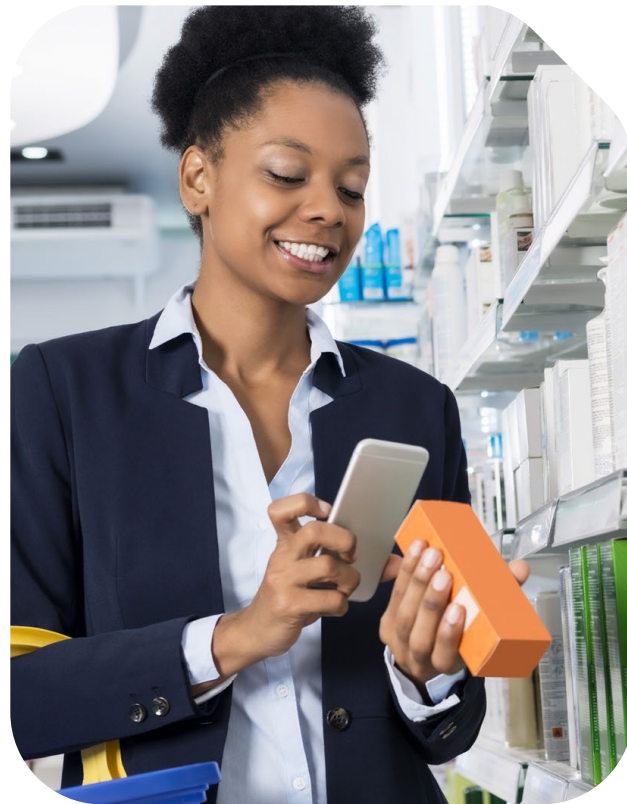
Legit Verify™ provides customizable mobile applications used by consumers, distributors, retailers and authorities for reading, authenticating, and tracing of unique codes attached to tax stamps. All authentication programs come with detailed capacity building of key stakeholder. Available applications for customization:

- Legit Verify™ consumer application
- Legit Verify™ inspector application

## AUTHENTICATION ON THE CONSUMER LEVEL

Legit Verify™ consumer application is a smartphone software designed for consumers, distributors, and retailers to verify product authenticity and trace products monitored by the system. It enables these target groups to scan the QR Code and authenticate the security labels applied to the products. It also verifies the information security of the labels, while retrieving product-related information associated with the unique code.

Once the product information is displayed, the application will ask the users to confirm product characteristics. In case of a mismatch, the user will be able to report the product as suspicious.



This information will be visible to relevant authorities on the digital tax stamp management system for follow-up and further action.

This first level of authentication is aimed at consumer empowerment and reassurance that the product they are buying is genuine and safe for use. An added value is the data collection on the consumption of taxable products.

With Legit Verify™ consumer application, consumers can:

- **Download the application for free via Android and IOS.**

- » The interface of the application is fully customizable to the relevant authority.

- **Scan the QR code on the tax stamp and receive a binary answer 'Authentic' or 'Not authentic'.**

- » Offline SMS authentication is enabled for areas with low connectivity to the internet.

- **See the product journey and receive product and manufacturer information.**

- **Report fraud, product defects, or otherwise suspicious tax stamps.**



## AUTHENTICATION BY LAW ENFORCEMENT INSPECTORS

Legit Verify™ inspector application is a secure mobile application for reading, authenticating, and tracing of unique codes attached to tax stamps. The application is patented and specifically developed to securely collect and display information from scanning activity by enforcement officers. It allows restricted login (law enforcement only), code decryption, and data extraction.

The application is also used to follow up on alerts (suspicious cases or consumer alerts) and can be used to assign cases to inspectors in respective areas. Reports will be made, stored on the device and shared with the right authority automatically.



### LEVELS OF EXAMINATION

**Level 1:** inspection by human senses using easily identifiable overt features.

**Level 2:** examination of covert (hidden) features by trained inspectors.

**Level 3:** authentication of encoded unique identifiers using Legit Verify™ inspector application. The efficiency of the individual inspector can be monitored by the Authority through personalized login credentials.

**Level 4:** forensic laboratory authentication (upon request).



# DIGITAL TAX STAMP MANAGEMENT SYSTEM

The digital tax stamp management system by Legit Verify™ is a modular management platform that brings all stakeholders together on one central digital workspace.

The digital tax stamp management system:

- Is a secure way for taxpayers to order and pay for tax stamps;
- Collects and stores all track and trace information related to the implemented products, including reports on all forms of illicit activity;
- Allows authorities to make data-driven decisions based on the platform's aggregated data intelligence;
- Provides centralized data storage for all modules in highly secure data centers, compliant with ISO 27001 (Information Security Management);
- Is fully customizable and able to integrate with existing authority systems (for example tax payment systems);
- Is easily accessible via laptop, desktop, tablet, and mobile phone.



**The digital tax stamp management system includes the following modules that can be used as building blocks**

**DIGITAL TAX STAMP MANAGEMENT SYSTEM:**

- Order management
- Track and trace
- Supply chain
- Business intelligence
- Data management
- Enforcement

## **1. ORDER MANAGEMENT**

The order management module, used by taxpayers, integrates the following processes.

- Tax stamp ordering and payment via a secure web portal (offline and online payment can be enabled).
- Order history and order status for taxpayers to track their order from payment to pick-up/delivery.
- Notifications alert taxpayers on outstanding payments, payment confirmation updates, and order status updates.
- Payment approval is done on the same portal by authorized authority users that have access to payment verification information. All orders are traceable to their invoice, shipment, and corresponding manufacturer or importer.



## 2. TRACK AND TRACE

The digital tax stamp management system is designed to centrally control and monitor the track and trace technology. Its function is to identify, authenticate and track and trace products through the supply chain.

### Track and trace modules for taxpayers

#### 1. Product and batch management

This is the module where taxpayers capture product and batch information that, upon activation, will be linked to the unique codes on the tax stamps. This information will also be shown to consumers and authorities when they use either the 'consumer application' or the 'authority application' to scan the unique QR code.

#### 2. Code activation

Once the stamps are affixed to the products, code activation marks the final step in the process. Code activation simply means that the QR code that is attached to a certain product will be activated and accounted for in the system. Once the consumer or authority scans the activated code, all product and batch-related information will now appear. The system can activate tax stamps by web (online activation), or via the installed camera systems on the production lines.

#### 3. Scan history and alerts

This is the page where taxpayers can see all the scans that are done involving their products, including their geographical location. They can use this module to assign cases of suspicious scans to their internal inspectors for follow-up.

#### 4. Report damaged/lost/stolen stamps

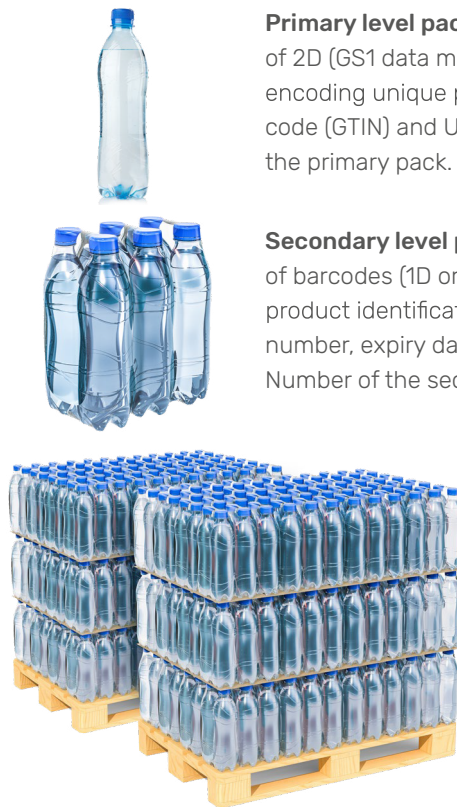
This module logs and reports damaged, lost, or stolen stamps. Damages can happen during production, or stamps may be lost or stolen from the production site. In this case, stamps have to be de-activated permanently to avoid misuse.



### 3. SUPPLY CHAIN

Legit Verify™ can generate multi-level serialization (or aggregation) to support track and trace in the supply chain. This means that the platform is able to create unique covert layered codes that are readable by specific and authorized users through mobile authentication applications. The unique variable serialization is assigned to a batch of specific variable data numbers using barcode technology as per GS1 Global Standards according to a “father-sons” hierarchy.

#### Multilevel packaging



**Primary level packaging:** incorporation of 2D (GS1 data matrix) barcodes, encoding unique product identification code (GTIN) and Unique Serial Number of the primary pack.

**Secondary level packaging:** incorporating of barcodes (1D or 2D) encoding unique product identification code (GTIN), batch number, expiry date and Unique Serial Number of the secondary pack.

**Tertiary level packaging:** incorporating of barcodes (1D) encoding unique product identification code (GTIN), batch number, expiry date and Unique Serial Number of the tertiary pack (shipper/carton).



#### 4. BUSINESS INTELLIGENCE

Customized dashboards with real-time reports are available via the business intelligence module. These reports can always be changed according to the requirements and needs. They can be downloaded at any time to Excel or Business Intelligence applications. The system provides a secure API (Application Programming Interface) that allows it to share information with other external authorized systems. For example:

- Notifications, alerts, secure labels ordered/activated/in stock, payment status, delivery status, scan alerts and scan location on map;
- Pending payment approvals, pending registration approvals, payment status, delivery status supplier, supply locations, national code status (stamps in circulation), regional code status (per province) and stock situation;
- Top local manufacturers and their location, total scans to date/month, total alerts, total seized products, total Registrations -national/per province;
- Total scans to date/months, total alerts, total seized, alert location, payment status;
- Delivery status supplier, supply location, code status, registrations, total user types (like number of inspectors and their location).
- Data harmonization within the authority's general ledger and accounting systems.

## 5. DATA MANAGEMENT

Legit Verify™ provides secure storage and reporting tools to support the system operations.

- The data is secured and only accessible by authorized personnel via the dedicated web portal.
- The reporting tools can provide near real time data, covering all events associated to products applied with Tax Stamps. The reports can be generated on-demand and on regular time intervals per schedule to be determined by the client.
- The reports assist the authorities in decision making; especially in the areas of risk profiling and market surveillance inspection and enforcement.
- The data is protected against intrusion attempts by monitoring inbound and outbound communications between the central system and un-trusted networks. All communication with the Central Data Management System is encrypted.
- The system has built in business intelligence capability where risk rules can be defined and automatic alerts can be sent on emails and SMS.







## 6. ENFORCEMENT

Authorities have access to several track and trace modules that will help with data-driven decision-making and targeted enforcement.

The **centralized control and monitoring module** can verify accurate declarations by comparing the number of stamps that are bought by taxpayers, with the number of activated codes. Any discrepancies can trigger an investigation or action to deactivate certain codes. Numerous reports can be exported on demand.

In the **scan history and alert management module**, authorities have access to real-time information about scanning activities from consumers and inspectors, nationwide or by selected province.

The digital tax stamp management system comprises as well a sophisticated alerts and app report module that uses smart algorithms and data analysis to generate alerts for authorities (for example the revenue authority). Authorities receive reports on suspicious activities and can follow up on these alerts by assigning inspectors to the case. The system uses geo-tagging to record exact and real-live location recording.

In the **app reports module**, issues are reported on possible fraudulent activities or counterfeit products by consumers using the mobile application. The authority can for example know where counterfeit products are circulated in the market (in real-time).

Finally, **the lost/damaged stamp module** helps the authorities track and monitor all the damaged, lost, or stolen stamps and act on individual cases.

# OUR UNIQUE APPROACH

Legit Verify™ combines strong secure paper-based marks with software track and trace technology. This blend enables authorities around the world to benefit from real revenue mobilization and compliance. At the same time, it allows brands to protect their intellectual property all along the supply-chain, preventing grey and dark trade. Finally, Legit Verify™ operates as a strong mechanism of consumer protection, ensuring the product meets the expectations of the buyer and of the seller alike, at all stages of distribution.

## GOING FURTHER

Legit Verify™ technology is fully customizable to your sector-specific needs. We bring a robust team of local and global experts that offer solid and proven experience in security printing with the latest technology and trends in the field of authentication and traceability programs. We promise:

- trustworthy and secure delivery of the highest standards of tax stamps, with flexible and fully customizable security features based on the latest innovation;
- in-house and fully customizable track and trace technology that is in line with Global Standards, including the possibility to incorporate blockchain;
- in-depth implementation support based on a true understanding of the local context, including detailed onboarding and training as well as full agency support from our sister company Legacy XP;
- the most competitive partnership package in the market. Legit Verify™ is determined to change the status-quo towards truly transparent and Africa-based partnerships.

As an old African proverb says “If you want to go fast, go alone. But if you want to go far, go together”. It is the combination of the best digital technology, our versatile expertise and above all the passion to forge sustainable partnerships that makes us the most suitable partner for any Government to go far – together.



## GET IN TOUCH

Legit verify™ is a product of :



Talk to our team of experts for further information about Legit Verify™.

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