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Hashemite Kingdom of Jordan

JORDAN T&T SYSTEM PRIMARY REQUIREMENTS

DOCUMENT HISTORY

Version	Release Date	List of Changes
1.0	March 1, 2021	Initial version.
1.1	April 30, 2021	§1.4 added: documentary prevalence. §1.6: Documentation reference update. §2.6.1: Section header added "Factory Operations." §3.2: List of business event requirements updated plus Delivery Note added. §3.4: replace invalid reference to "Sales Order" with "Shipment Note." §3.5: Transmission constraint for Delivery Note added + information update.
1.2	June 26, 2021	§ 2.7: section updated to reflect June 2021 discussion regarding last scanning point. §3.2: description of business events updated. §3.3: requirements specification for factory "waste" and "not for sales" product. §3.4.4: requirements specification for returned products updated.
1.2.1	September 20 th 2021	§2.9 : endpoint access information updated.
1.2.2	September 30 th 2021	§3.3.24 added : Finished Goods idempotence §3.4.4 updated with further descriptions of returns management §3.4.2 section updated with new pack commissioning requirement for export
1.2.3	December 1 st 2021	§3.6 updated : products validation extended to all messages

TABLE OF CONTENTS

Document History	2
Table of Contents	3
1 Background Information	5
1.1 Introduction.....	5
1.2 Important Note: Documentation Prevalence	5
1.3 Jordan T&T Regulation	5
1.4 Key Provisions	5
1.5 Abbreviations & Glossary of Terms	6
1.5.1 Abbreviations.....	6
1.5.2 Definitions.....	7
1.6 References	8
2 Business Process Overview.....	9
2.1 Theory Of Operations	9
2.2 Gov Central Information System (Gov CIS)	10
2.3 Generation Scheme of Unit-Pack Codes For DVV	10
2.4 Tracking Events Transmission to Gov CIS For Full T&T	11
2.5 Tobacco Product Marking	12
2.6 Tobacco Pack Commissioning	12
2.6.1 Factory Operations	12
2.6.2 Deployment Timeline for Product Commissioning.....	13
2.7 Last Tracking-Point Specification	13
2.8 Master Data of The System.....	13
2.8.1 DVV Master Data.....	13
2.8.2 T&T Master Data	13
2.9 Data Transmission.....	14
2.9.1 API Endpoint.....	14
2.9.2 Methods.....	14
2.9.3 Secured Communication.....	15
2.9.4 Access To The Governmental Repository Interface	15
3 Traceability System Requirements Description.....	16

3.1	Integrity of Aggregation Data.....	16
3.2	T&T Events Requirements	16
3.3	Factory Operations	17
3.3.1	Factory Tracking Events	17
3.3.2	Production Waste Management	18
3.3.2.1	Theory of Operations	18
3.3.2.2	Case Post-Commissioning and Pre-Finished Goods.....	19
3.3.2.3	Case Post-Finished Goods.....	19
3.3.2.4	Finished Goods Idempotence.....	19
3.3.2.5	Factory Quality Control.....	20
3.3.3	Not-For-Sale Products	20
3.4	Tobacco Products Distribution.....	21
3.4.1	Factory Warehouse & Supply Chain Events	21
3.4.2	Domestic Production & Distribution	22
3.4.3	Export Market	22
3.4.4	Import.....	23
3.4.5	Returned Products.....	24
3.4.5.1	Return from the Market to Last Tracking Point.....	24
3.4.5.2	Return from the Last Tracking Point to the Manufacture	24
3.5	Message Transmission Timing.....	25
3.6	EPCIS Messages Validation	26
4	ANNEX 1 – Infrastructure Requirements For Inextor Factory Service Deployment.....	28
5	ANNEX 2 – Inextor Compatible Printers	30

1 BACKGROUND INFORMATION

1.1 INTRODUCTION

This document specifies the key principles and processes for the establishment and operation of a traceability system for tobacco products to be deployed in the Hashemite Kingdom of Jordan. This document is intended to any economic operators involved in the tobacco manufacturing and distribution who will have to implement the solution in accordance with the Jordan regulation.

1.2 IMPORTANT NOTE: DOCUMENTATION PREVALENCE

Information communicated in this document sets out the official requirements that apply for the Jordan traceability project and shall prevail over any conflicting technical specifications and requirements set forth in the technical documentation listed in section §1.6.

1.3 JORDAN T&T REGULATION

ISTD has been exclusively appointed by the Ministry of Finance of the Hashemite Kingdom of Jordan (Government) to implement a mandatory system for volume control and tracking and tracing of Tobacco Products sold in the Territory, pursuant to:

- The Prime Minister's letter No.(13A/11/1/15016) dated April 3, 2019;

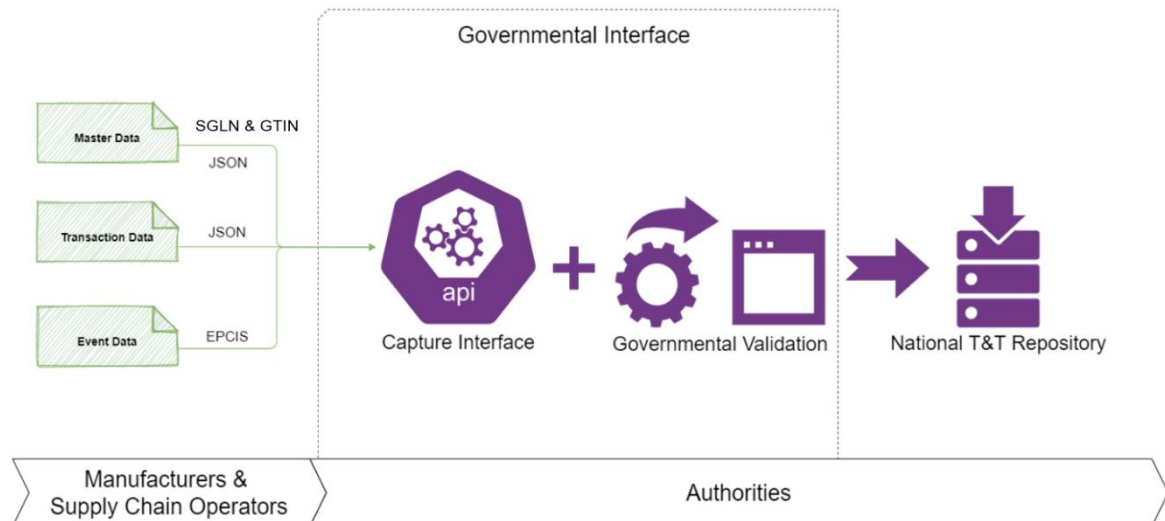
The official statement from His Excellence the Minister of Finance numbered 1/3/2291 dated February 18, 2020.

The traceability system foreseen to address illicit trade of tobacco products in Jordan aims at providing the necessary means to:

- Comply with the Protocol to Eliminate Illicit Trade in Tobacco Product (ITP) released by the WHO Framework Convention on Tobacco Control (FCTC);
- Implement the provisions of the law: Implementing Regulations No. (8) for 2020.

1.4 KEY PROVISIONS

- a) All unit packs of tobacco products manufactured in and destined for the Jordan market will be required to bear a unique identifier (refers as Jordan unique code in this document) in accordance with the coding recommendations set out in [R1]: Jordan TnT Gov - Digital Pack Coding specifications.
- b) Their movements must be recorded throughout the distribution chain: from the tobacco manufacture up to the last tracking point as specified in section §2.7 of this document and [R5].
- c) All tracking events recorded at the factories and throughout the supply chain will be stored on a central National T&T Repository administrated and accessible by the Jordan authorities. (The graph below presents data categories reported to the National T&T Repository.)



1.5 ABBREVIATIONS & GLOSSARY OF TERMS

1.5.1 Abbreviations

3PL	Third Party Logistic
DTV	Digital Tax Verification
DVV	Digital Volume Verification
EPC	Electronic Product Code / Electronic Package Code
EPCIS	Electronic Product Code Information Services
FCTC	Framework Convention on Tobacco Control
GDTI	GS1 Global Document Type Identifiers https://www.gs1.org/standards/id-keys
GZIP	Data compression method
HTTP	Hypertext Transfer Protocol
ISA-95	Instrument Society of Automation
ITP	FCTC protocol to eliminate illicit trade of tobacco products
SFTP	Secure File Transfer Protocol
SGLN	GS1 Global Location Number (with or without extension) https://www.gs1.org/standards/id-keys
SGTIN	GS1 Serial Global Trading Identification Number https://www.gs1.org/standards/id-keys
SSCC	GD1 Serial Shipping Container Code https://www.gs1.org/standards/id-keys
TMO	Trademark Owner
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
UTC	Coordinated Universal Time
XML	Extensible Mark-up Language

1.5.2 Definitions

“Activated” State: Formalizes for the authorities the legal creation of the tobacco product and the specific point in time where that product is allowed to be sold in Jordan. A product is deemed to be activated by the Jordan authorities if its unique identifier has been generated with the governmental system, reported, and stored in the Gov Central Information System, as well as successfully “commissioned” during the manufacturing process.

Aggregated Packaging: Any outer packaging containing more than one unit packet of tobacco product.

Aggregation: Parent-child relationship between two different packaging units that allows, for instance, traceability of pallets without scanning all master cases, cartons, and packs that are inside that pallet.

Gov Central Information System (Gov CIS): Includes all business-related services, processes, and databases, deployed at level 4 regarding ISA-95 standard, that are administrated by the authorities and required to manage the T&T solution in Jordan.

Commissioning Event: Tracking event transmitted in EPCIS format to the National T&T Repository to notify a unit pack has been successfully commissioned.

Data Carrier: Means of representing a data string in machine-readable format.

Distributors & Wholesalers: Economic operators in charge of distributing and selling tobacco products.

Economic Operator: Any legal entity involved in the trade of Jordan tobacco products. This includes, but is not limited to, tobacco manufacturers (local and abroad), distributors, and 3PLs.

Importer of tobacco or related products: Owner of tobacco or related products that have been brought into Jordan.

INEXTOR Suite: Software services deployed at the factory level and on the production lines that oversee the tobacco pack serialization and code status transmission to the Gov Central Information System.

National T&T Repository: Generic term to name the database, controlled and oversighted by the authorities, storing traceability data by an economic operator.

Product Commissioning: Operation performed at a tobacco factory upon product serialization that proves a unique identifier has been successfully associated, and so applied, to a unit pack of tobacco.

Product Volume Verification: Secure monitoring and reporting of quantities of packaged excisable fast-moving consumer goods by means of reliably counting packs with a printed code, in compliance with applicable law.

Serialization Repository: Generic term to name the database, controlled and oversighted by the authorities, storing all data related to the serialization of tobacco products and digital volume verification.

Tobacco Manufacturers: Legal entity that manufactures or has a product designed and manufactured that is responsible for introducing the tobacco products into the Jordan distribution process.

Unit Pack: Smallest individual packaging level of tobacco product that is placed in the Jordan market.

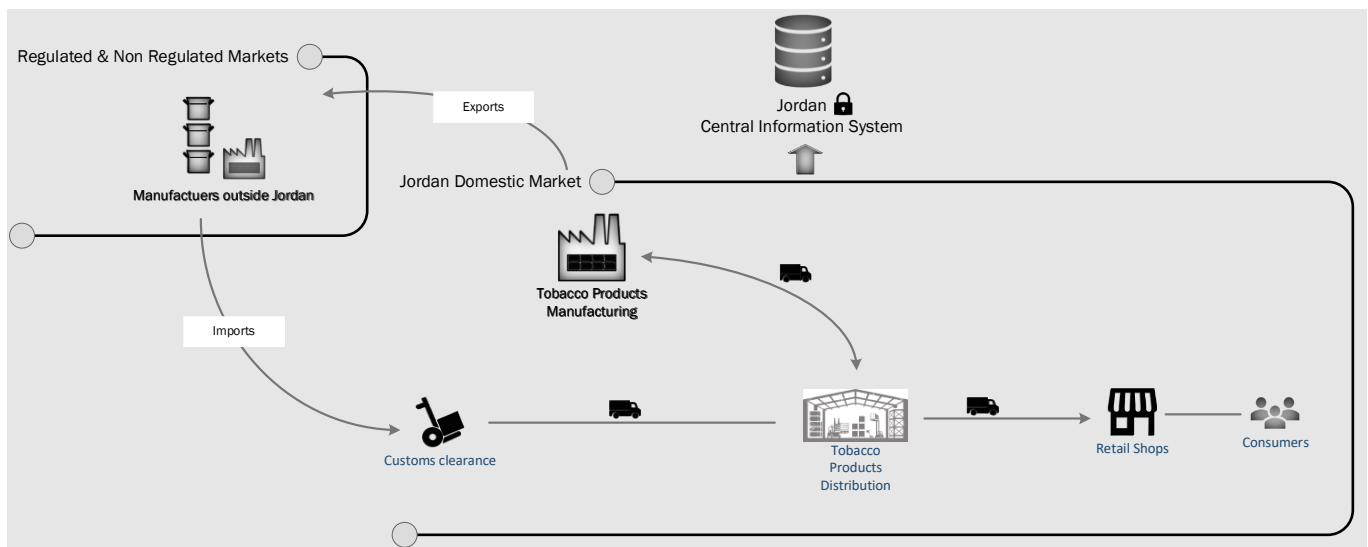
1.6 REFERENCES

Reference	Document	Version
R1	Jordan TnT Gov - Digital Pack Coding specifications	1.3
R2	INEXTO - INEXTOR - Concepts and Workflow	1.0
R3	Governmental Repository Interface	1.5
R4	"NEW Framework specs FINAL September 2019 (shared)"	<i>n/a</i>
R5	Jordan T&T Gov - Last Tracking Point Description	1.2

2 BUSINESS PROCESS OVERVIEW

2.1 THEORY OF OPERATIONS

The data-storage model implemented in Jordan aims at storing all production volume information, goods movements, and logistic events that are collected by the different economic operators, in a central repository controlled by the Jordan authorities. Both production and T&T data will be monitored by the authorities to improve the fight against illicit trade activities.



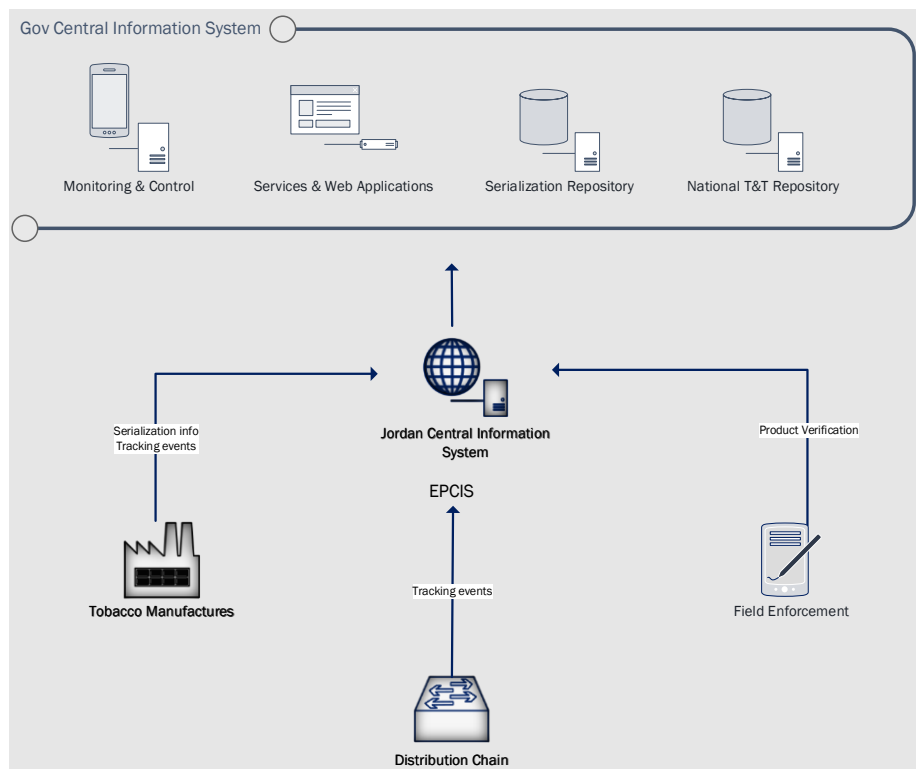
Governance model:

1. Registration: Tobacco manufactures register, under government supervision, in the Gov CIS during the commissioning process. Refer to [R2] §1.4 for more information.
2. Tobacco-pack volume verification for DVV: Pack unique identifiers (distinctive combination of numbers and letters) for tobacco packs (unit items) are generated at the factory, on the fly on the production line, when a production order is manufactured. Unique identifiers for tobacco are compulsorily provided by the INEXTOR code generator as described in document [R2].
3. Unique codes applied on the tobacco packs must be commissioned as specified in section §2.6 of this document.
4. Production aggregation: Tobacco manufacturers are responsible for deploying, through the solution of their choice, the product aggregation (unit packs to bundle and bundles to master case), in order to facilitate the tracking operations on the supply chain.
5. Any products (and thus codes) placed on the distribution chain must have been reported to the Gov CIS and successfully commissioned prior to leaving the manufacturing plant.
6. Distributors engaged in the wholesale trade are fully responsible for reporting information on goods movements and logistic operations during the distribution to the Gov CIS as specified in section §3 of this document.
7. Aggregation, code commissioning, and all mandatory tracking events must be reported to the Gov CIS via the Governmental Repository Interface exposed by the authorities.
8. All data generated during the manufacturing and distribution operations that is reported to the Gov CIS is the property of ISTD and can be accessed only by ISTD.

2.2 GOV CENTRAL INFORMATION SYSTEM (Gov CIS)

Jordan's Gov CIS hosts all the essential web applications, services, and databases required to operate the solution and communicate with the T&T infrastructure deployed on the field. Specifically, the Gov CIS is composed of:

1. Serialization repository that contains all production data and the list of unique codes generated and printed at the factory in the context of the production's digital volume verification (DVV) of tobacco products.
2. National T&T Repository established for the purpose of storing all traceability data relating to tobacco products (Full T&T).
3. Governmental Repository Interface (API) for tracking-data transmission to the Gov CIS.



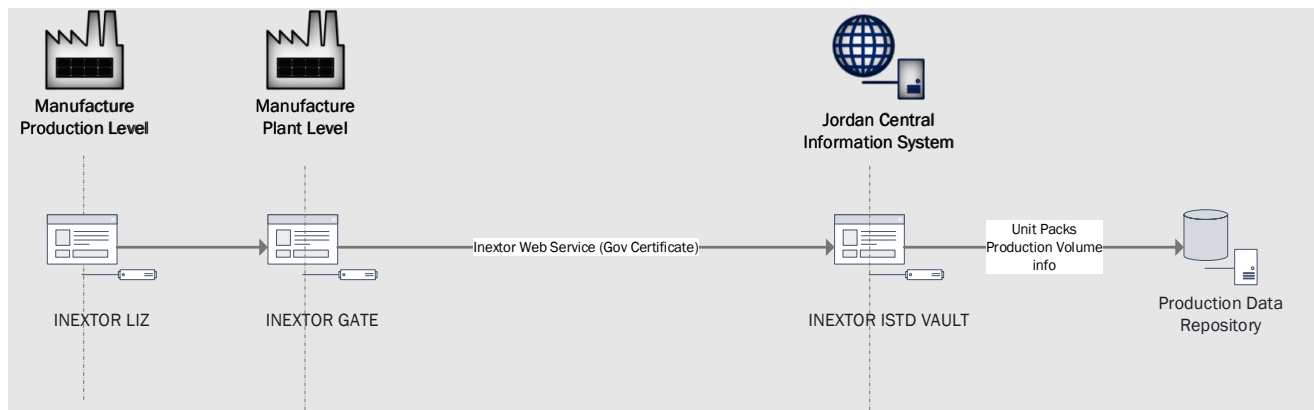
The traceability events are captured at the manufacturing plants and on the supply chain via an EPCIS interface and are securely stored in an independent National T&T Repository in compliance with the FCTC ITP. Only the Jordan authorities can access that repository to query and audit the data.

2.3 GENERATION SCHEME OF UNIT-PACK CODES FOR DVV

Tobacco manufacturers are required to deploy the INEXTOR suite (GATE & LIZ components) at the factory for the serialization of tobacco unit packs. Specific LIZ configurations may be required to manage export or import from a regulated market (refer to section §3.4.2). The Jordan unique identifiers for tobacco unit packs are generated on the fly, in real time on the tobacco production line, when a new production order is started by an operator. Refer to [R2] for INEXTOR's framework description.

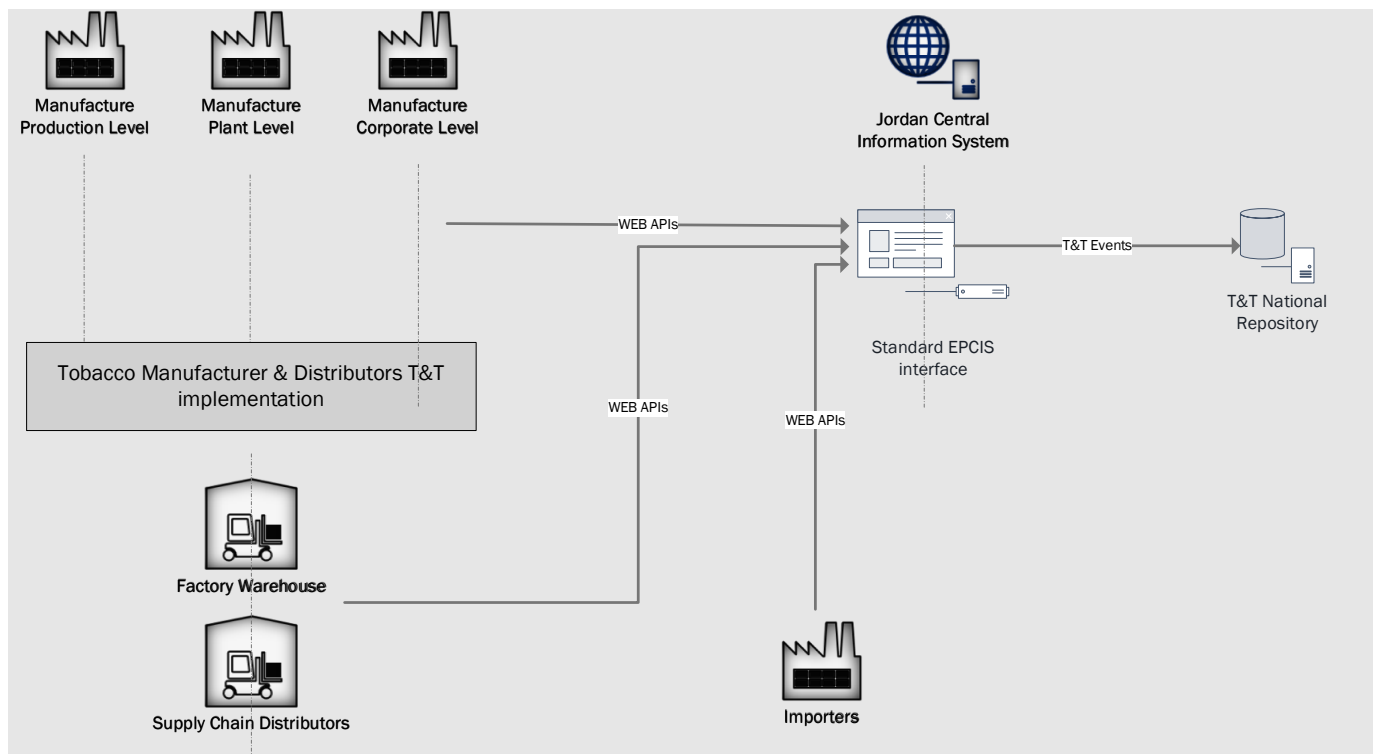
The unique identifiers are not ordered and downloaded in advance from a central web portal. All activities related to the generation of codes that occur at the plant level are automatically reported to the Gov CIS by the INEXOR GATE.

Data flow across the infrastructure deployed at the factories for DVV and Gov CIS is organized as follows:



2.4 TRACKING EVENTS TRANSMISSION TO GOV CIS FOR FULL T&T

Data communication between the T&T infrastructure (deployed at the factory for Full T&T) and Gov CIS is organized as follows:



As for the Jordan T&T regulation, economic operators must obtain the equipment and T&T infrastructure for recording tobacco-pack commissioning and product movements, as well as implement the transmission to the National T&T Repository by means of the Governmental Repository Interface.

2.5 TOBACCO PRODUCT MARKING

Tobacco products subject to the Jordan T&T regulation must be marked with a unique identifier as specified in [R1] “Jordan TnT Gov - Digital Pack Coding specifications”. That document sets out the data structure authorized to generate the data carrier for specific packaging levels and the symbols that can be used. Tobacco manufacturers are requested to deploy the INEXTOR suite at the factory for tobacco pack serialization. Refer to [R2] for the concepts and solution workflow.

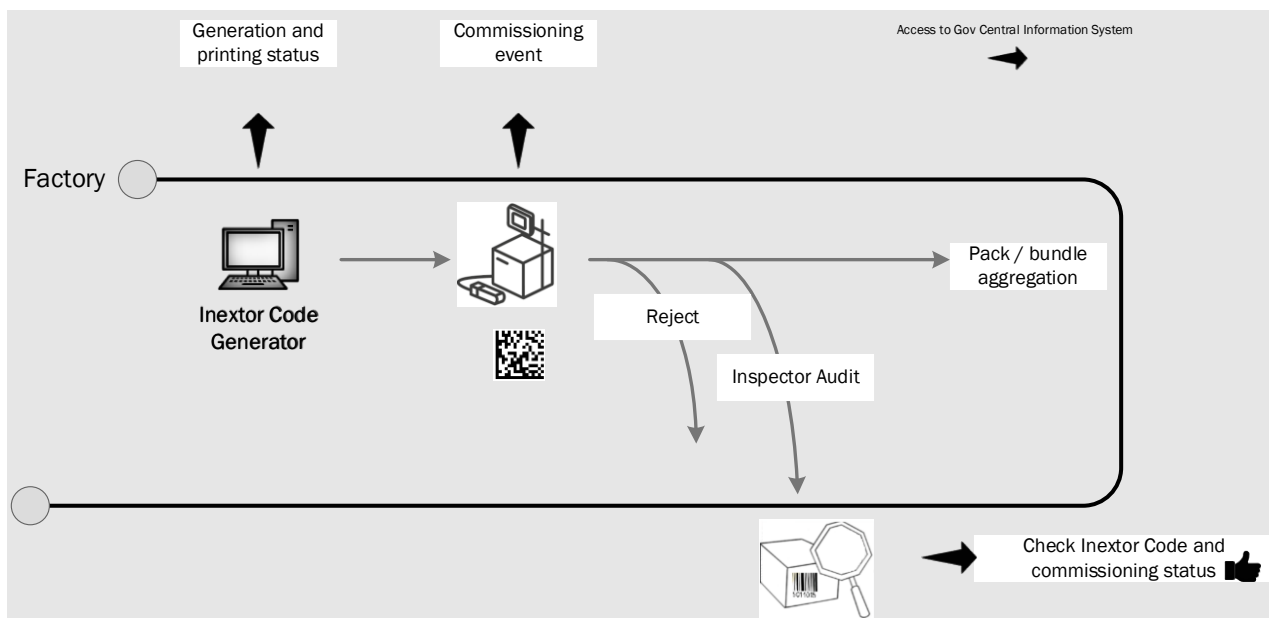
2.6 TOBACCO PACK COMMISSIONING

2.6.1 Factory Operations

A tobacco pack is considered as activated by authorities, and so allowed to be placed on the Jordan market, after its unique identifier has been generated, commissioned, and finally reported to the Gov CIS. The code commissioning is used to ultimately guarantee that the data carrier has been successfully applied to the product.

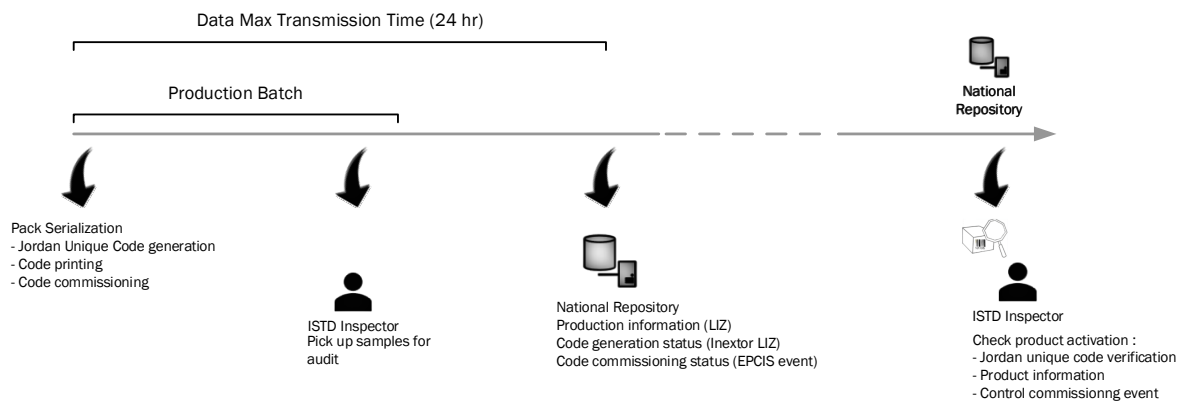
100% of the products must be commissioned during the packs' serialization operation. The commissioning event must be transmitted to the National T&T Repository via the Governmental Repository Interface in max. 24 hours (under normal production and operating conditions) so that a mandated inspector can audit the production in order to control products' activation status. The message structure of the commissioning event is specified in [R3] §2.5.

The graph below visualizes a scenario when the authorities audit a pack upon its commissioning.



Tobacco pack audit protocol:

Local authorities could audit series of tobacco products collected at the factory and check the product activation (code generation status & commissioning status) with a mobile device running a specific verification application connected to the Gov CIS.



2.6.2 Deployment Timeline for Product Commissioning

Implementation of the product commissioning, item aggregation, and event transmission to the National T&T Repository is expected during phase 2 (Full T&T) of the project. Product commissioning is not required and remains optional for phase 1 (DVV): “code generation” or “sent to printer” status generated by the INEXTOR LIZ will be used as enforcement evidence. Implementation phases from DVV to Full T&T:

- Phase 1, DVV (Volume Control) will be print status based.
- Phase 2, Full T&T will be tobacco-pack codes commissioning based.

2.7 LAST TRACKING-POINT SPECIFICATION

The Jordan T&T regulation, in accordance with the FCTC ITP, is requesting the goods intended to the domestic market be tracked by the economic operators up to:

- The full discharge of Jordan's “Special Tax”.
- The moment when the product is sold to the first non-affiliate customer.

A complete case-by-case analysis for the Jordan market is presented in [R5].

2.8 MASTER DATA OF THE SYSTEM

2.8.1 DVV Master Data

Master data related to the code production of unit packs for DVV is administrated at the factories using the INEXTOR GATE. The master data may include certificates, connections to the Gov CIS, GATE identity, tax levels, various calculated properties, printer drivers, layouts, and templates.

2.8.2 T&T Master Data

Master data in the National T&T Repository describes products and scanning locations in human-readable format. This gives meaning to the codes received from manufacturers and supply chain operators through the Governmental Repository Interface.

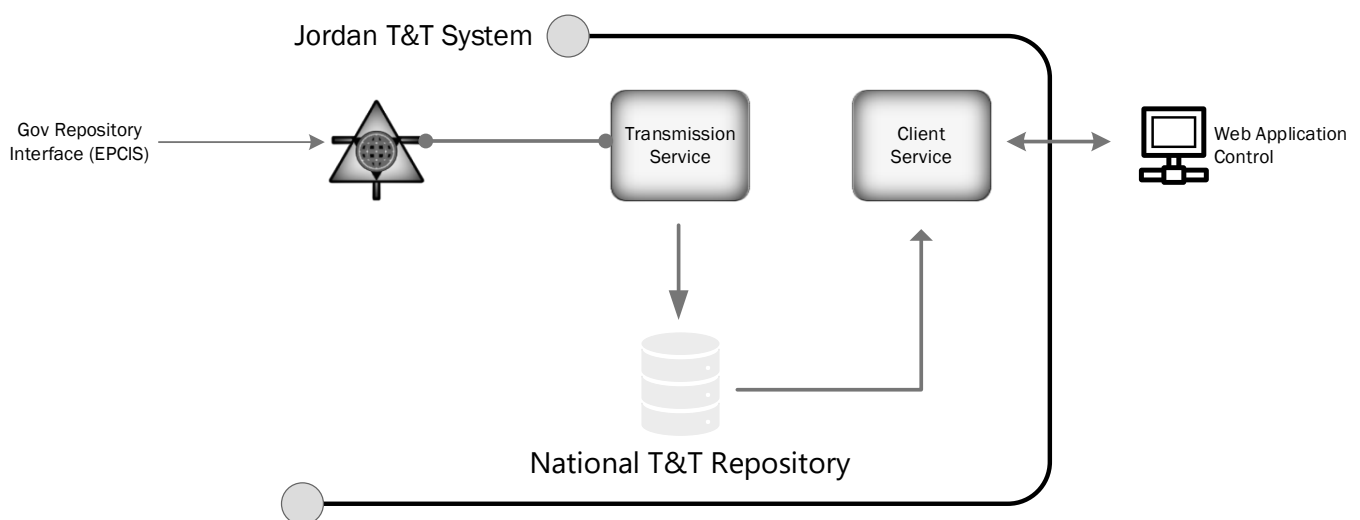
Master data is more static than event and transaction data: The master data for a given product or scanning location changes very slowly (if at all), and the quantity of master data only increases as new products and scanning locations are created, not merely because existing products and scanning locations participate in business processes.

Note that the National T&T Repository validates both products and scanning locations received in event data. That means the master data for a specific product/scanning location must be already inserted with dedicated requests before using that product/scanning location in an event. Otherwise, the National T&T Repository rejects the event with an error. Refer to [R3] for detailed specifications.

2.9 DATA TRANSMISSION

The detailed specifications regarding reporting data to the National T&T Repository are available in [R3]. The document [R3] provides an exhaustive list of tracking events supported by the Governmental Repository Interface and describes the structure of the specific messages.

However, only tracking events listed in the "T&T Events Requirements" section of this document are required and must be collected in the scope of the Jordan T&T regulation.



2.9.1 API Endpoint

Events: The Governmental Repository Interface provides a REST endpoint with XML binding over SSL. The EPCIS standard (XML format) is used to transmit tracking events to the National T&T Repository.

Transactional documents & master data: The JSON format is used.

2.9.2 Methods

POST method must be used for events.

PUT method must be used for master data and transactional documents.

2.9.3 Secured Communication

Any system (e.g., of a manufacturer or importer) reporting data to the National T&T Repository must obtain the following to be allowed to communicate with the Repository:

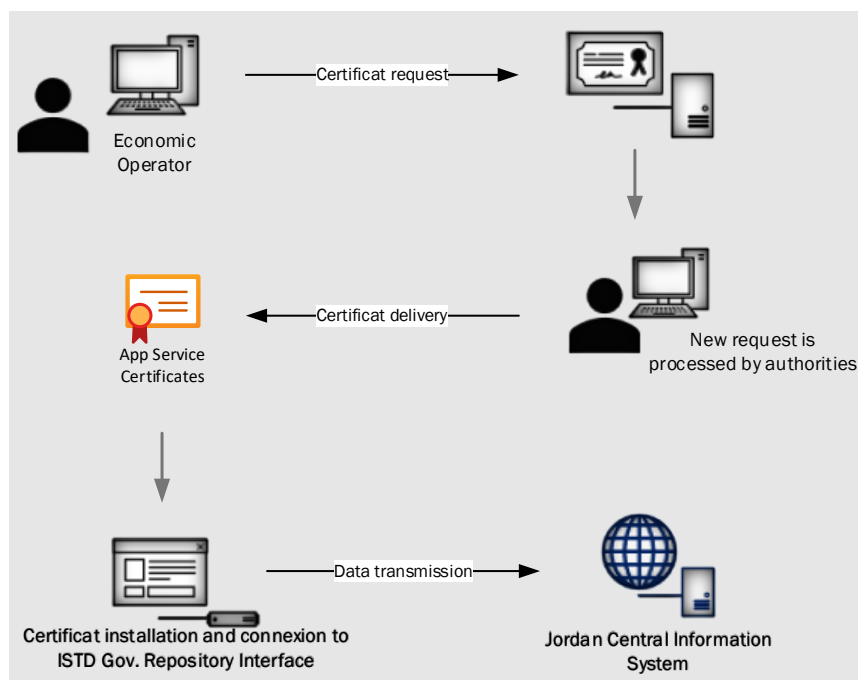
- **A client certificate.** It's a PFX file protected by a password. The certificate is a means to authenticate a transmitting system to the National T&T Repository and confirm the source of the transmitted data.
- **Ocp-Apim-Subscription-Key.** It's a string that needs to be forwarded in the header (called `Ocp-Apim-Subscription-Key`) along with each request to the National T&T Repository.

A client certificate and an Ocp-Apim-Subscription-Key must be used to authenticate every data transmission to the National T&T Repository. Without them no communication between an external system and the National T&T Repository is possible.

A transmitting system should request the authorities for both a client certificate and Ocp-Apim-Subscription-Key.

2.9.4 Access To The Governmental Repository Interface

The economic operators have to request by email directly to the authorities the client certificate and subscription key to connect with the National T&T Repository.



3 TRACEABILITY SYSTEM REQUIREMENTS DESCRIPTION

3.1 INTEGRITY OF AGGREGATION DATA

Code reuse policy: A serialization code generated and applied on an aggregated unit cannot be reused, for any reason, during the manufacturing and distribution process.

Idempotence: The exact same EPCIS event, generated at the tobacco factory or on the supply chain, can be transmitted again to the Jordan National T&T Repository.

Item aggregation update: The parent-child association established during item aggregation cannot be modified without regenerating a new parent code and transmitting a new aggregation event to the National T&T Repository. For example, in case of a bundle replacement in a shipping case, a new shipping-case code must be generated and a new aggregation event reported to the National T&T Repository.

Incorrect association: A pack code mistakenly associated several times with a parent item must be detected at the factory and reworked.

3.2 T&T EVENTS REQUIREMENTS

The National T&T Repository aims at providing the authorities with a high-performance tool to monitor movements of tobacco products across their production and distribution processes. ISTD has exposed the Governmental Repository Interface (refer to [R3]) to enable the data capture and management in a consistent format across all economic operators involved in the operations.

Refer to the following tables for events & transactional documents that are mandatory for the Jordan market and must be transmitted to the National T&T Repository. This information shall prevail over any conflicting technical specifications set forth in [R3].

Events

Tracking Event	Description	Requirement
Commissioning	Associates a unique code to a physical tobacco pack.	Mandatory
Aggregation	Reports a parent-child relationship.	Mandatory
Disaggregation	Removes a parent-child relationship.	Mandatory when applicable
Shipment	Reports goods' shipment to a given location.	Mandatory
Receipt	Confirms goods' reception at a given location.	Mandatory
Finished Goods	Reports goods' transmission from a manufacturing area to a factory warehouse.	Mandatory
Decommissioning	Terminates a unit-level pack code due to damage to the pack before leaving the factory.	Not required

Importing	Reports the list of imported goods.	Mandatory when applicable
Tax Registration	Reports the tax payment status.	Not required
Destruction	Terminates a unit-level pack code due to physical destruction of the pack after it has left the factory.	Mandatory when applicable

Transactional documents

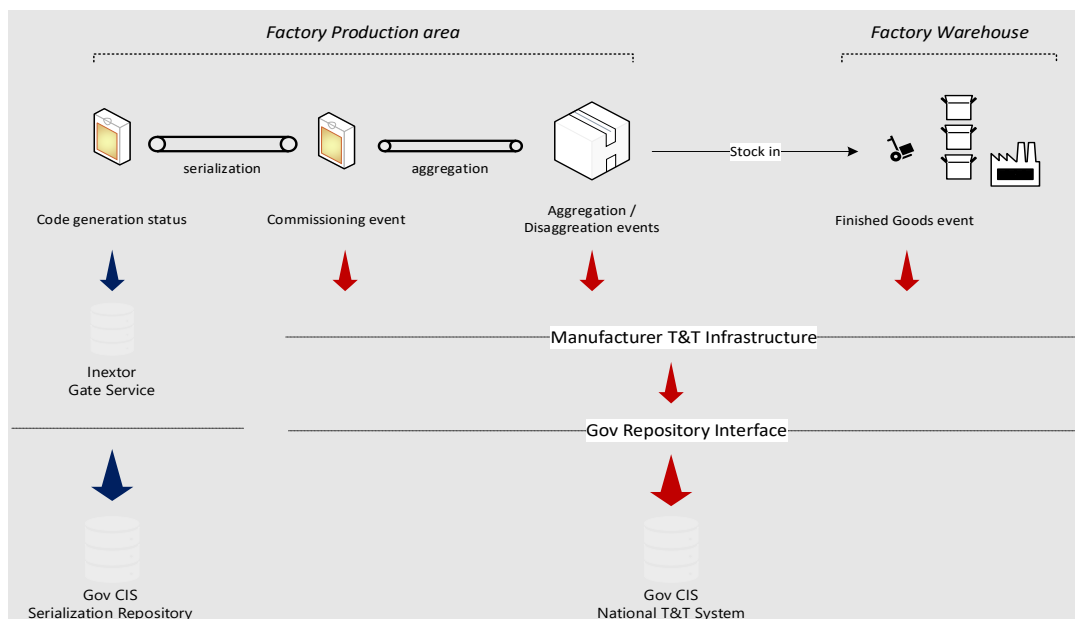
Transactional Data	Description	Requirement
Delivery Note	Accompanies a shipment of goods by outlining the description, quantity, etc.	Mandatory
Sales Order	Reports a sales order with the final customer that receives the goods (not an inter-company sales order).	Mandatory
Invoice	Describes the seller and buyer information.	Mandatory
Payment Receipt	Describes the recipient and payer information.	Mandatory

Important note: Status of the “Not required” events will be reviewed by the authorities and is subject to change, once the FCTC ITP has been ratified by the Jordan government.

3.3 FACTORY OPERATIONS

3.3.1 Factory Tracking Events

This section focuses on the set of events that must be recorded at the tobacco factory during the manufacturing process in order to comply with the Jordan T&T regulation.



The production event mandatory for the DVV implementation :

Event	From System	Transmission to Gov CIS
Code generation status	Generated by the LIZ during serialization code production.	Automatically transmitted to the serialization repository via the INEXTOR GATE.

List of tracking events mandatory for the Full T&T implementation :

Event	From System	Transmission to Gov CIS
Commissioning	Generated by the manufacturer's T&T infrastructure as specified in section §2.6 of this document.	Transmitted by the manufacturer to the National T&T Repository via the Governmental Repository Interface.
Aggregation / disaggregation	Generated by the manufacturer's T&T infrastructure.	Transmitted by the manufacturer to the National T&T Repository via the Governmental Repository Interface.
Finished goods	Generated by the manufacturer's T&T infrastructure.	Transmitted by the manufacturer to the National T&T Repository via the Governmental Repository Interface.

The aggregation event is mandatory for packs and bundles (packs to bundle, bundles to master case), and remains optional for master cases to pallet.

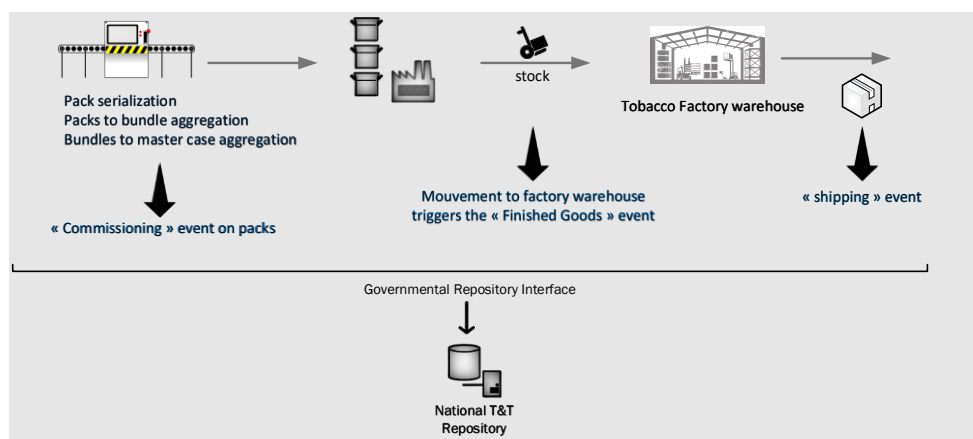
The finished goods event must be reported by a tobacco manufacturer:

- When the goods exit the manufacturing area (usually the secondary area of the factory) to be placed in stock (factory warehouse).
- Within a maximum of 72 hours after the commissioning of the unit packs.

3.3.2 Production Waste Management

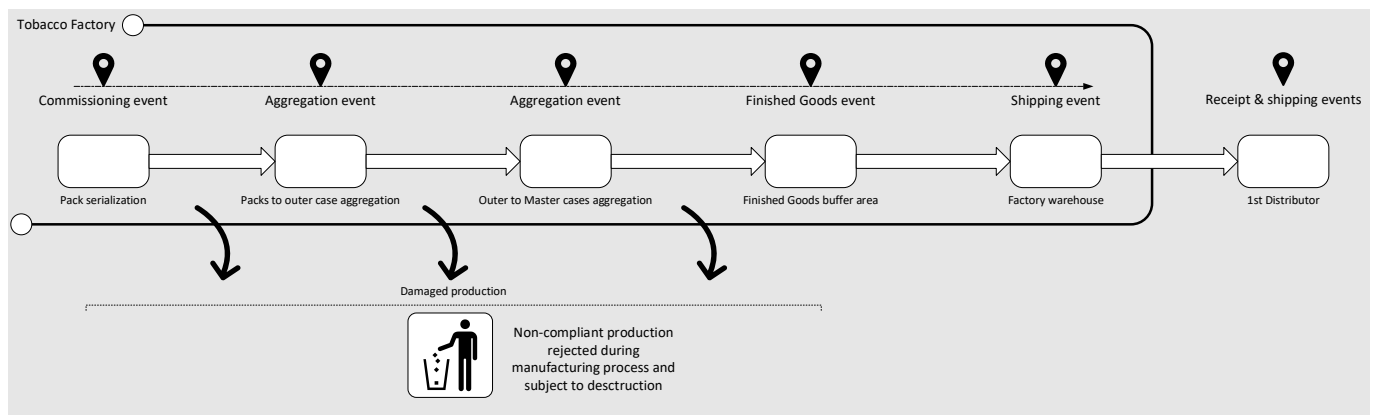
3.3.2.1 Theory of Operations

Production wastage will be determined by the difference between the volume of commissioned packs that have been reported to the National T&T Repository and the number of packs exiting the manufacturing area (Finished Goods).



Two scenarios must be considered: pre-finished goods and post-finished goods event transmissions.

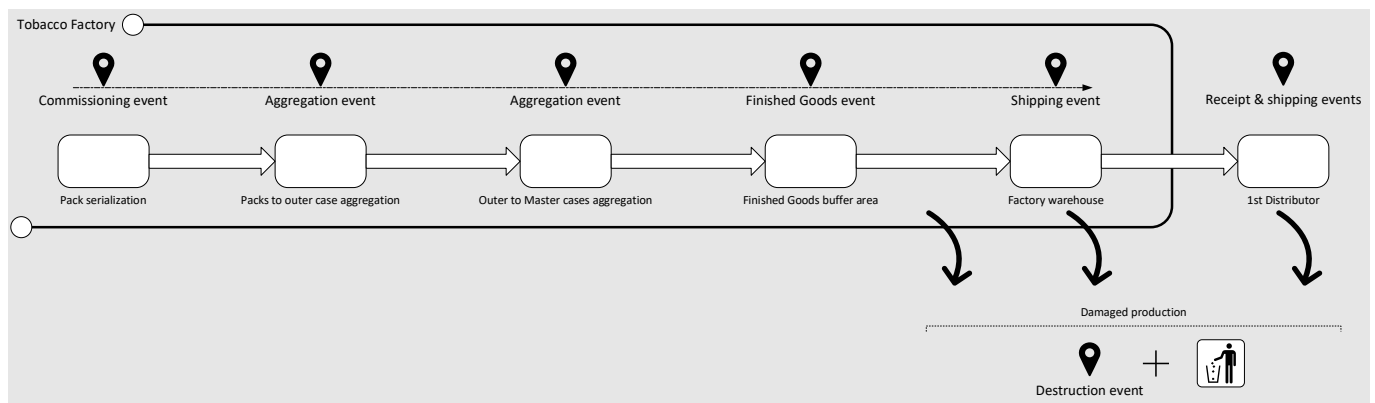
3.3.2.2 Case Post-Commissioning and Pre-Finished Goods



In this case, no specific tracking event is captured nor returned (e.g., decommissioning) to the National T&T Repository. Cigarettes are unpacked and then tobacco packaging destroyed. The production waste is automatically retrieved from the difference between the actual number of finished goods and the number of pack codes commissioned. This metric is directly computed and extracted from the National T&T Repository.

Important note: Production waste is to be closely monitored and analysed during the operations of phase 1 (DVV) to prepare and consolidate the data that will be used by the government (ISTD) as of phase 2 (Full T&T). Series of in-depth analysis will be conducted on different productions during phase 1 to set the key indicators and metrics that will be used as a reference for phase 2.

3.3.2.3 Case Post-Finished Goods



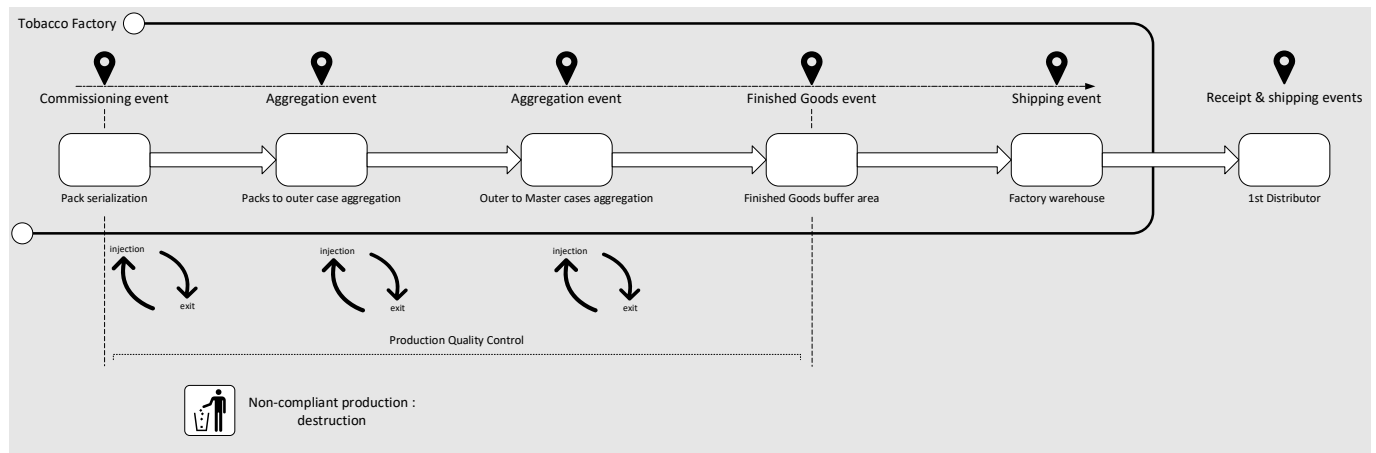
Any production damaged after the transmission of the finished goods event must be declared to the National T&T Repository. This operation is reported within a **destruction** event. This requirement applies to all goods stored in manufacturers and distributors' warehouses that are subject to destruction during logistic operations.

3.3.2.4 Finished Goods Idempotence

The finished goods event can be generated several times on the same unit pack codes without any incidence on the National T&T Repository.

3.3.2.5 Factory Quality Control

This category includes all products that left the production chain and are subject to the manufacturer's quality control. This operation takes place in the manufacturing area (i.e., products do not leave the factory).

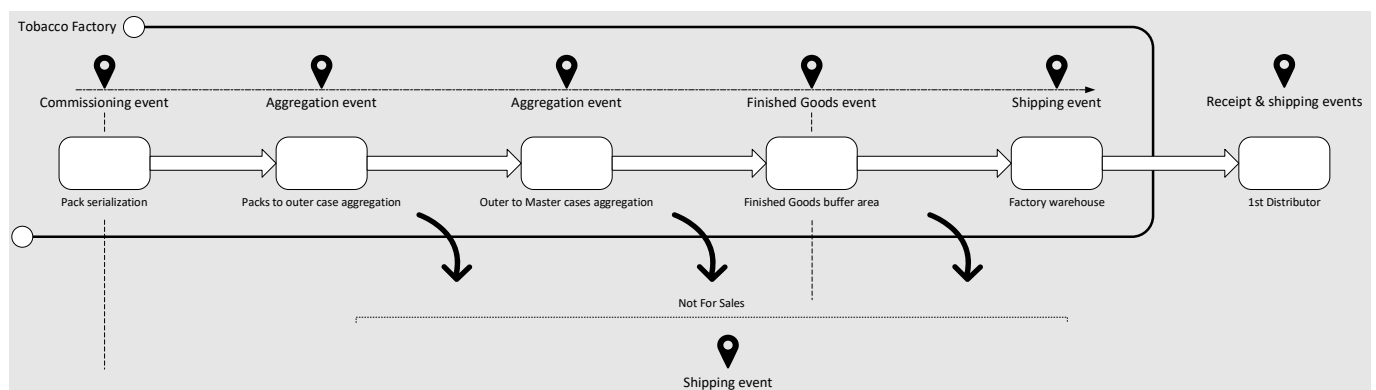


Possible scenarios :

Use Case	Event Reported	Comment
Compliant production	none	Product re-injected in production line.
Compliant-production QA samples for archives	none	Managed as waste: no declaration
Non-compliant production	none	Managed as waste: no declaration.

3.3.3 Not-For-Sale Products

Not-for-sale products correspond to those leaving the tobacco manufacturing area but are not intended to be sold on the Jordan market. This includes marketing samples and items subject to external audits (authorities, laboratories, etc.).



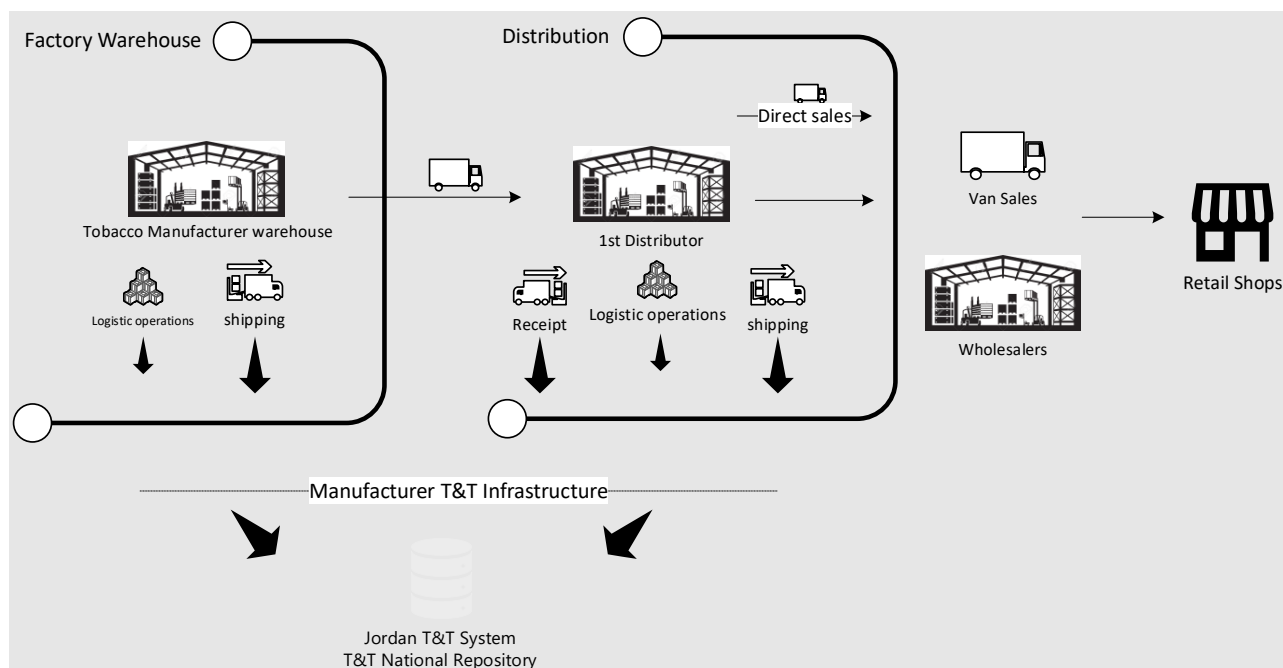
In this case, the manufacturer is requested to send a **shipping** event to the National T&T Repository to report this operation.

Series of “virtual” business locations will be registered in the system and shall be used to generate the corresponding event. This information can be also used to adjust the volume of waste production calculated based on the finished goods event. Jordan authorities will so keep track of all product movements outbound from the factory.

3.4 TOBACCO PRODUCTS DISTRIBUTION

3.4.1 Factory Warehouse & Supply Chain Events

This section specified the tracking information to be collected in the tobacco factory warehouse and on the supply chain. Different distribution scenarios have been identified and must be covered by the regulation. The direct distribution being fully operated by the tobacco manufacture and the indirect distribution involving a local distributor for distributing and selling the products. And finally, the import scenario. In all cases, goods will be tracked up to the last tracking point as specified in section §2.7.



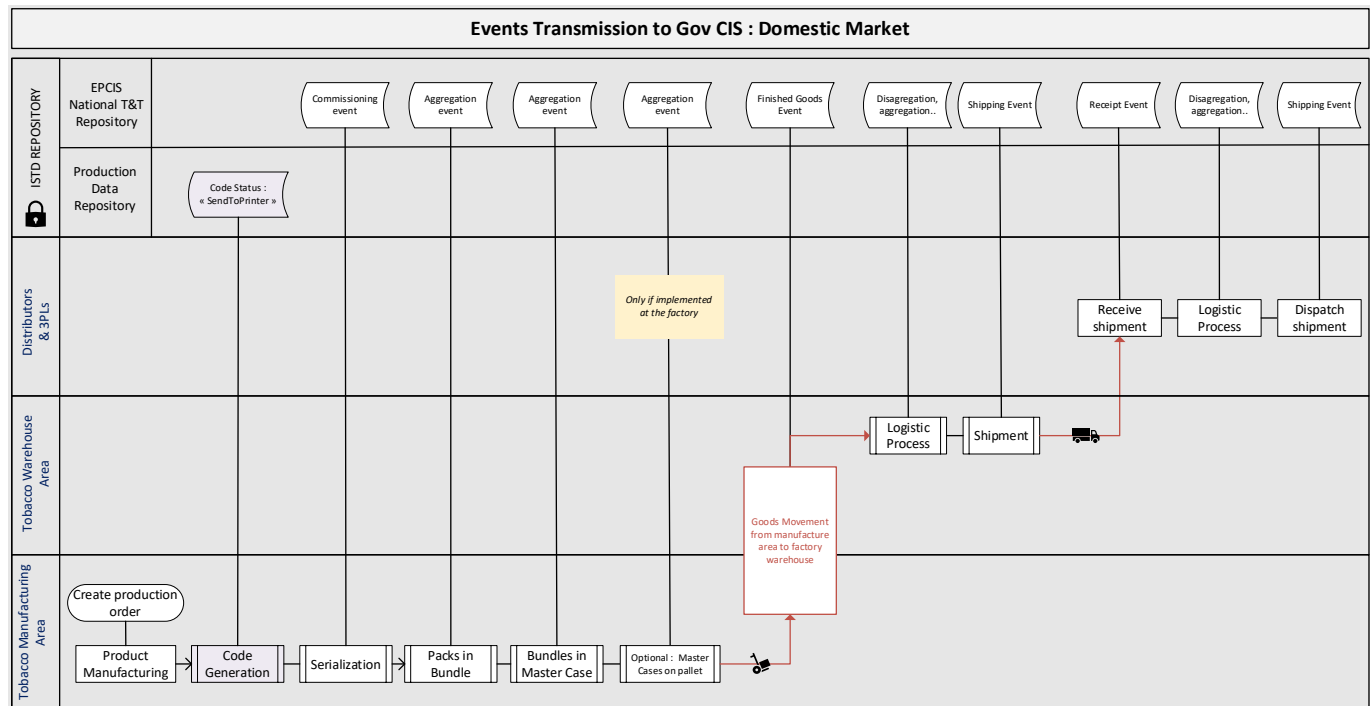
Economic operators are responsible for capturing events and transactional documents during the logistical operations and their transmission to the National T&T Repository.

List of tracking events and transactional documents mandatory for the Full T&T implementation:

Type	Event	From System	Transmission to Gov CIS
Event	Aggregation / disaggregation	Generated by the economic operator's T&T infrastructure. Item aggregation is mandatory for packs and bundles: packs to bundle, and bundles to master case. It remains optional for pallet: master cases to pallet.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.
Event	Receipt	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.
Event	Shipment	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.
Document	Delivery Note	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.
Document	Sales Order	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.

Document	Invoice	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.
Document	Payment Receipt	Generated by the economic operator's T&T infrastructure.	Transmitted by the economic operator to the National T&T Repository via the Governmental Repository Interface.

3.4.2 Domestic Production & Distribution



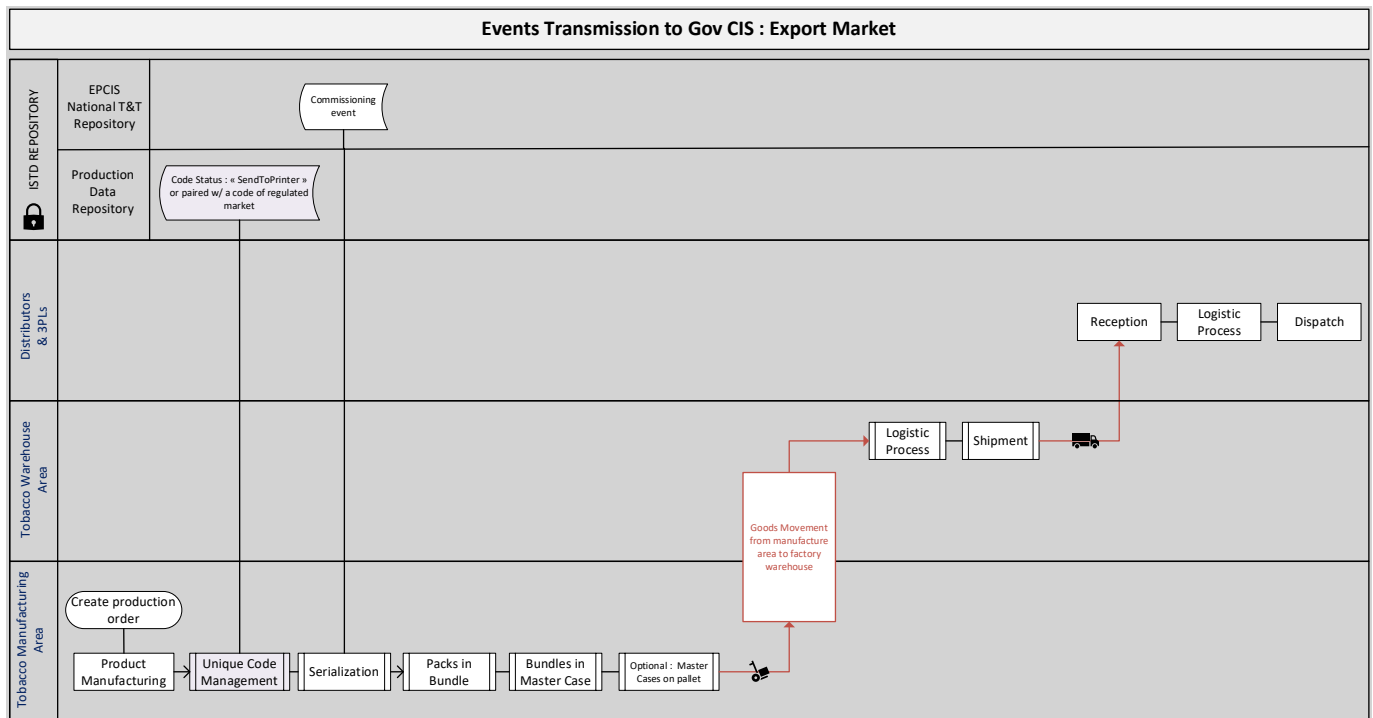
3.4.3 Export Market

The production volumes for an export market must be reported by the manufacturer to the Jordan authorities. The Jordan regulation does not require all T&T events (aggregation, finished goods, etc.) to be communicated to the National T&T Repository. For an export market, only the volume of Jordan codes generated (DVV system) and the pack commissioning event must be captured and reported respectively to the serialization and T&T repositories. Two distinct scenarios must be considered for pack serialization:

Case non-regulated market: The destination market is not regulated and no specific requirements have been expressed by the local authorities regarding tobacco pack serialization. For that case, the Jordan unique codes are generated for the export market by the LIZ and applied on the tobacco packs. The production is then automatically reported, via the GATE, to the National T&T Repository the exact same way it is done for domestic production.

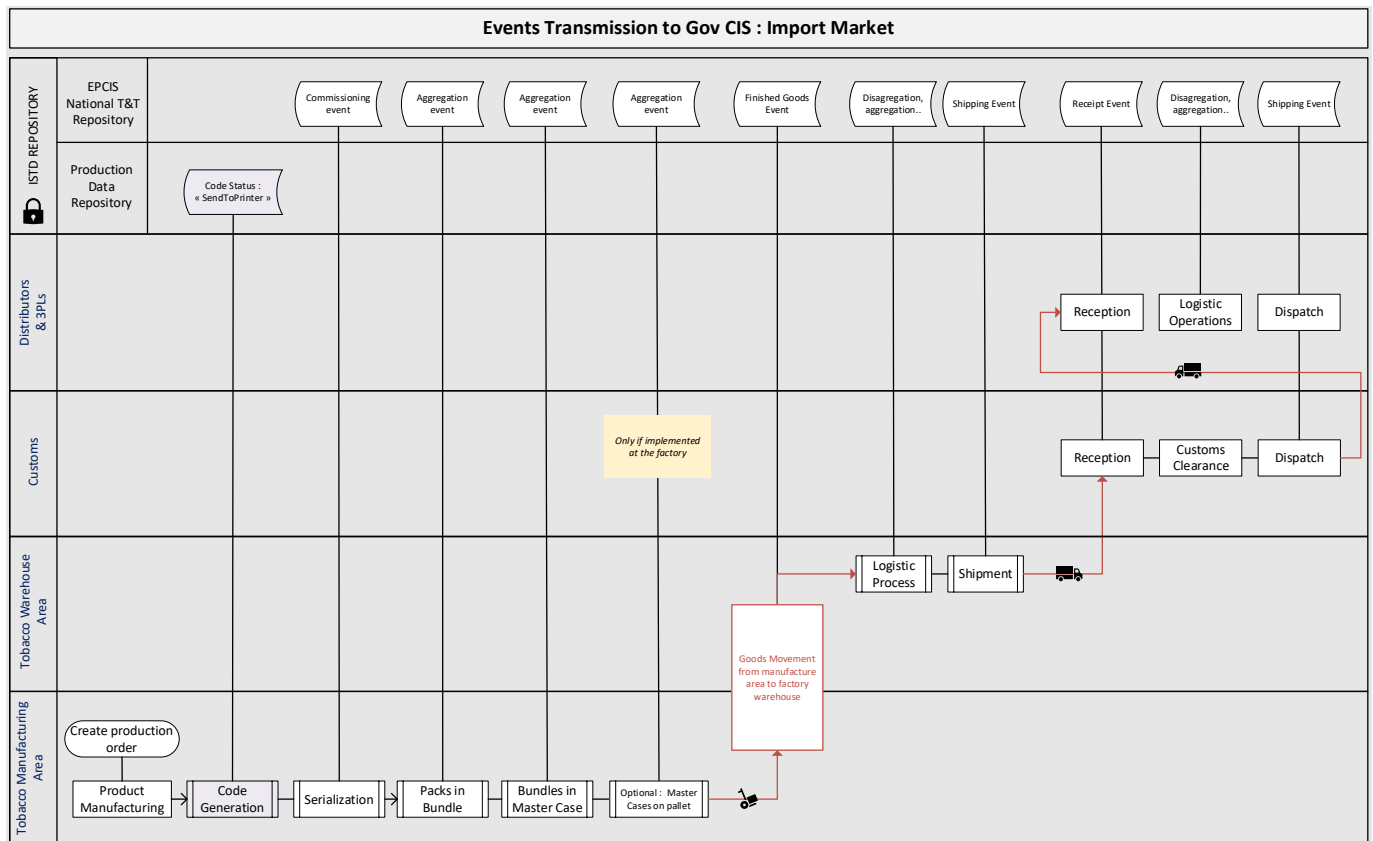
Case regulated market: The destination market is regulated and a specific identification code is to be applied on the tobacco pack to comply with the regulation of the intended market. For that case, only the code of the destination market will be applied to the product as per destination market regulation. These codes are handled as external codes by the LIZ. The production is then automatically reported, via the GATE, to the National T&T Repository the exact same way it is done for domestic production.

Both production volume information and the pack commissioning event are communicated to the Gov CIS:



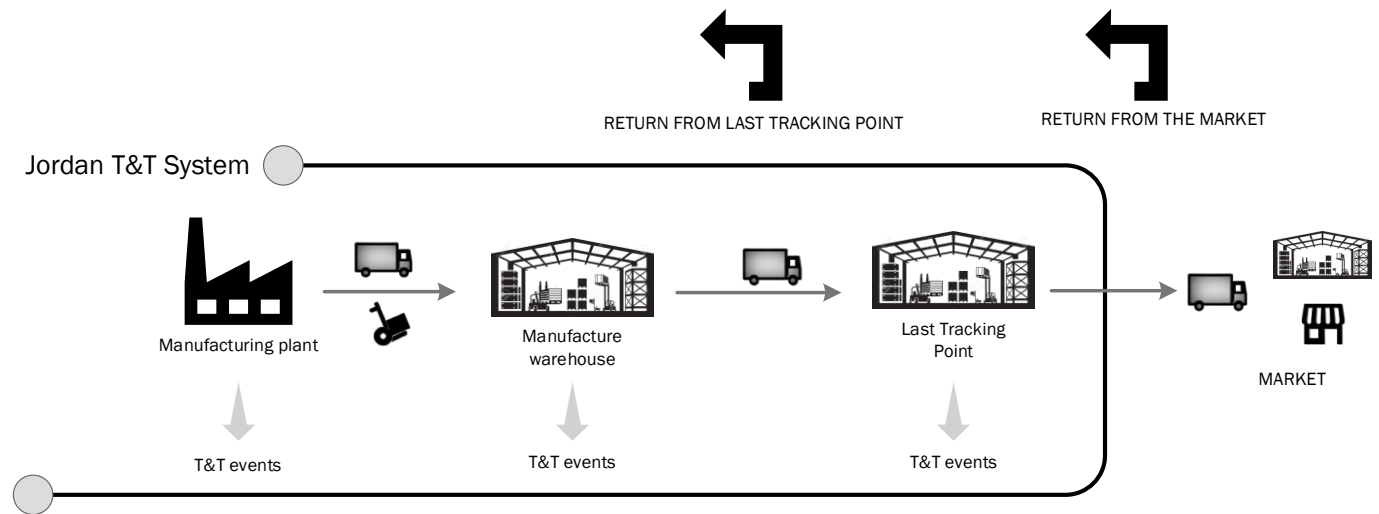
3.4.4 Import

For imported goods, extra tracking operations are required at the Jordan customs.



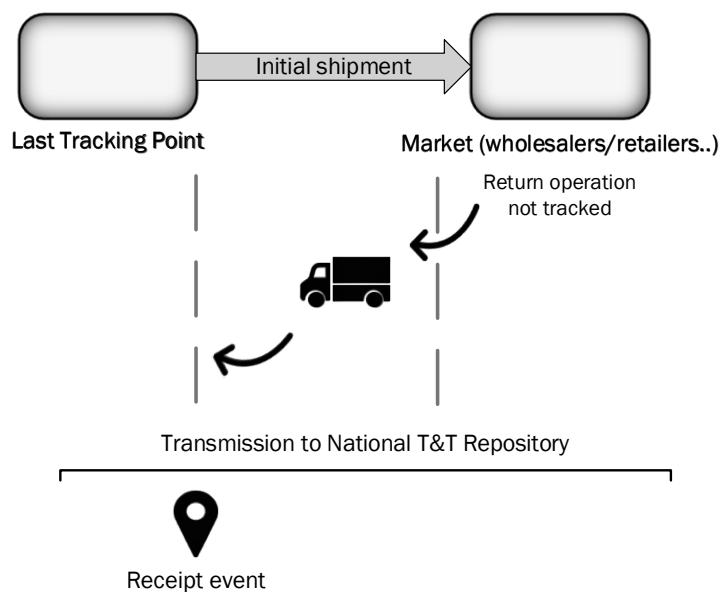
3.4.5 Returned Products

Under specific circumstances, tobacco products can be returned by an economic operator back to their seller. Returns can potentially happen after or before the goods have been dispatched from the last scanning point.



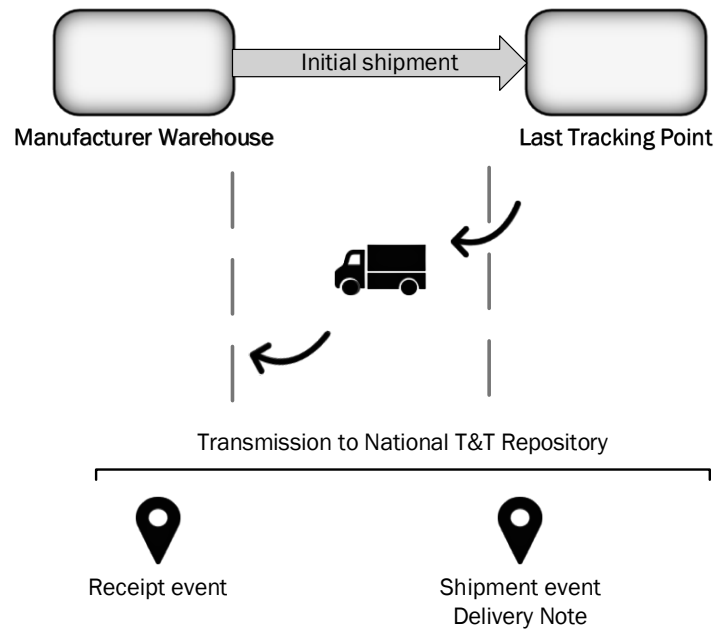
3.4.5.1 Return from the Market to Last Tracking Point

Movements of tobacco products that are returned from the market to the last tracking point must be recorded using a receipt event upon reception only.



3.4.5.2 Return from the Last Tracking Point to the Manufacture

Movements of products that are returned from the last tracking point to the manufacturer's warehouse must be recorded with both a shipment (from the last tracking point) and receipt events at goods reception.



3.5 MESSAGE TRANSMISSION TIMING

Economic operators must submit all information to the National T&T Repository within a timeframe, that should guarantee the consistency of the collected data for enforcement to conduct their actions.

Time frame for transmission of required information : the economic operators may transmit the information referred in section 3.4 in the time lag specified in the tables 3.5.a and 3.5.b. the maximum lag is calculated from the time set in the reported event and corresponding to the event occurrence.

Events:

Event	Max. Transmission Timing	System Acknowledgement
Commissioning	+24 hours after event capture	Successful: HTTP status 200 Error: HTTP status 400
Aggregation	+24 hours after event capture	
Disaggregation	+24 hours after event capture	
Finished Goods	+72 hours after commissioning event	
Shipment	+24 hours after event capture	
Receipt	+24 hours after event capture	

Table 3.5.a

Transactional documents:

Event	Transmission Timing	System Acknowledgement
Delivery Note	-24 hours prior to shipment event	Successful: HTTP status 200 Error: HTTP status 400
Sales Order	+30 days after customer Purchase Order	
Invoice	+30 days after shipment event	
Payment Receipt	+90 days after invoice event	

Table 3.5.b

3.6 EPCIS MESSAGES VALIDATION

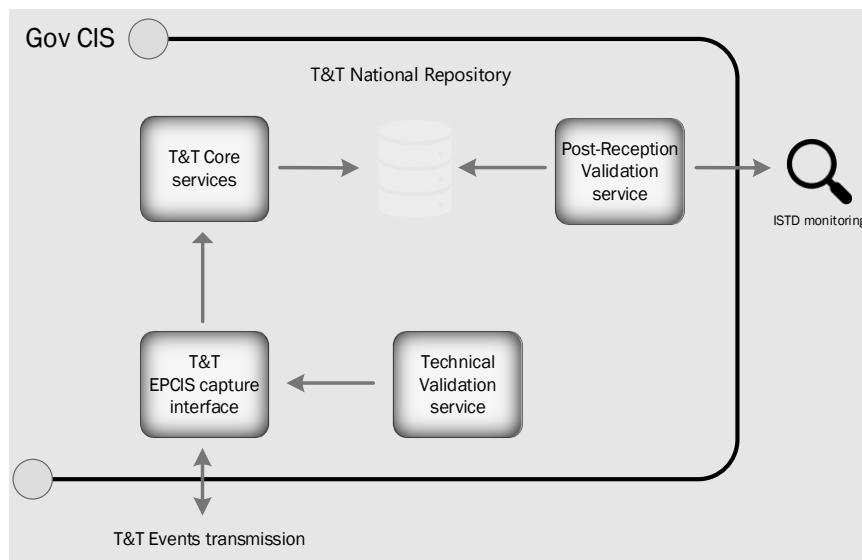
The validation principles described in this section concern only the events reported to the National T&T Repository.

A series of validation mechanisms are implemented to ensure the system meets the Jordan T&T regulation requirements and objectives. A two-step verification is performed:

Technical validation upon event reception and post-reception validation once the data has been received by the National T&T Repository.

Technical validation checks whether the event format complies with the Governmental Repository Interface specifications as set out in [R3], as well as whether reported data corresponds to the master data.

Post-reception validation verifies if all operations are done in accordance with the Jordan T&T regulation. Outcomes of post-reception validation will be analyzed by the authorities and could possibly be used during the operations to reinforce the T&T requirements in case too many deviations are observed.



1. **Message structure validation:** Checks whether the event reported to the National T&T Repository follows the Governmental Repository Interface specifications [R3].
2. **Sequencing:** No formal technical validation of the transmission sequence will be performed upon message reception. However, a post-analysis will be performed later by the central T&T service to monitor that all expected events have been transmitted.
3. **Message timeliness:** No formal technical validation of the transmission timing (event time compared with reception time) will be performed upon message reception. It's under the economic operators' responsibility to report the required events to the National T&T Repository in the specified timeframe.

4. Product verification: The National T&T Repository verifies whether the product information (GTIN) reported in the event has been registered in the master data.
5. Scanning location verification: The National T&T Repository verifies whether the scanning location reported in the event has been registered in the master data.
6. Aggregation items verification: The National T&T Repository verifies whether the number of children items reported in the aggregation event conforms with the product (GTIN) and quantity definition of their parent item (parent-children relationship from an aggregation event must match the master data structure).

Message validation:

Type	Severity	Events	Validation Type
Message structure	Blocking	All	Technical validation
Message sequencing	Non-blocking	All	Post-reception validation
Message timeliness	Non-blocking warning	All	Post-reception validation
Product verification	Blocking	All	Technical validation
Scanning location verification	Blocking	All	Technical validation
Aggregation items verification	Blocking	Aggregation	Technical validation

Refer to the detailed specifications of the Governmental Repository Interface [R3] for error codes returned on message validation.

4 ANNEX 1 – INFRASTRUCTURE REQUIREMENTS FOR INEXTOR FACTORY SERVICE DEPLOYMENT

Components	INEXTOR GATE
Location	Tobacco Factory
Role	Management system that allows the user to control all serialization aspects of product manufacturing from the factory side, including managing system registration and communication with Serializers and central information system
Virtual Environment	HyperV, VMWare and KVM
Operating System	Windows Server 2016 or above Client: Windows 8, Windows 8.1, Windows 10
Database	SQL Server 2016 (database can be installed on remote SQL server)
Architecture	x86, Recommended x64
Platform	.NET Framework 4.5.2 : Inextor v10 .NET Framework 4.6 : Inextor v10.1
Network	1 Ethernet NIC The server should be able to access the different Vaults through MPLS /Internet/intranet Minimal bandwidth: 12.0 Mbit/s, 1.3 Mbit/s
Storage	Minimum 50 GB Recommended : 200 GB+
CPU	3.3 GHz or higher - up to 20 lines : current generation of 4 Core server - from 21 to 30 lines : current generation of 8 Core server - more than 30 lines : current generation of 12 Core server
RAM	Application server: - up to 20 lines : 8 GB - from 21 to 30 lines : 32 GB - more than 30 lines : 64 GB

Components	INEXTOR LIZ
Location	Tobacco Lines
Role	The software component that generates INEXTOR codes and sends them to the connected printers
Virtual Environment	Not Supported
Operating System	Windows 10
Database	Built-in SQL Server Compact
Architecture	x86, Recommended x64
Platform	.NET F.NET Framework 4.5.2 : Inextor v10 .NET Framework 4.6 : Inextor v10;1
Network	2 Ethernet NICs
Storage	40 GB of free space
CPU	1.5 GHz or higher
RAM	8 GB RAM or higher
Screen Resolution	800x600 high-color 32-bit display

5 ANNEX 2 – INEXTOR COMPATIBLE PRINTERS

Equipment per vendors

	Continuous Ink Jet (CIJ)	Laser	Labeller	Drop on demand (DoD)	Thermal Ink Jet
Domino	A-Series (200, 300, 400) Warning: A420i and Ax550i are not compatible.	D-Series (D320i, D620i)	M-Series		G-Series Gx
MarkemImaje	(9450s partial support)	SmartLase	2000, 2200, SmartDate X40/X60		
Videojet	Excel & Willet families: 1610, 1620, 1620 UHS, 1650, 1710	Altec CO2 (3330, 3340, 3640)	9550 <i>Dataflex 6420</i>	Wolke M600 / M610	
KBA-Metronic	KBA-AlphaJET	KBA-Laser			
Zebra			PAX4 i110 ZT410 ZT610 ZE500		
Logopak		Laser Encoder (LEAP 3)	510 Rotary (LEAP 3), PL3, PL6		
Reajet		REA JET CL Laser		REA JET HR	
Sato			S84ex		