



TRANSNET NATIONAL PORTS AUTHORITY

A DIVISION OF TRANSNET LIMITED

(Registration No.)

SCOPE OF WORK

Collation Process Automation Project

ABBREVIATIONS

Acronyms or Abbreviations	Descriptions
TNPA	Transnet National Port Authority
SAP CRM	Customer Relationship Management
SLA	Service level Agreement

1. PURPOSE

The purpose of this document is to define the scope of work for the analytics process automation tool required by the Transnet National Port Authority (TNPA) Finance department for the automation of their collation process.

2. BACKGROUND

Cargo Dues on all cargo i.e., all commodities or containers (full or empty) is levied at all Ports belonging to or controlled and managed by National Ports Authority. The purpose of cargo dues collation is to ensure revenue completeness (i.e., For all cargo landed or shipped cargo dues paid). Collation involves four journey steps which are the following:

- Data Gathering
- Exception Generation
- Mismatch Management
- Finalization.

The first two which are data gathering and exception generation are manual, making this process tedious, repetitive and time consuming.

This inefficient way of working has also created a backlog across the ports due to the manual and tedious collation exercise as depicted on the below table.

Category	Total No. of vessel files	April 22	May 22	June 22	July 22	Aug 22	sep 22	Oct 22	Nov 22	Dec 22
Total: All Ports										
Containers	328	0	2	5	9	15	32	30	101	134
Vehicles	252	7	9	15	33	44	42	30	31	41
Liquid Bulk	103	5	11	9	8	9	7	8	7	39
Dry Bulk	452	0	2	2	4	31	92	89	67	165
BreakBulk	367	1	1	7	20	41	44	43	79	131
	1502	13	25	38	74	140	217	200	285	510

If this challenge is not addressed there will be continued inaccessibility of information for key stakeholders in the organization which has an impact on decision making.

3. GOALS AND OBJECTIVES

TNPA requires an Analytics Process Automation solution that will cater for the automated collation process. This will enable the TNPA Finance Department to accurately track revenue and make data-driven decisions in a timely and efficient manner. The required automated solution will extract and convert the Terminal operator reports into outturn reports which will then be written into the SAP CRM system for finance reconciliation process.

The following are key objectives that the solution is aiming to achieve, but not limited to:

- The tool should have an end-to-end collation automation capabilities enterprise wide.
- The tool should have data blending capabilities (i.e., taking manifest, outturns and cargo due orders to create an exception report).
- The tool should have data preparation and profiling capabilities, combining the following datasets to produce the following reports: cargo dues orders, outturn report, manifests, and other supporting documents.
- The tool should have explainable Artificial Intelligence (AI) capabilities (i.e., the ability to read and integrate pdf data into the software).
- The tool should have the capability of generating exceptions reports.
- The tool should have the ability to do collation for all ports in a centralized manner.
- The tool should have a user-friendly interface that is easy to navigate and use.

4. CURRENT STATE

The purpose of cargo dues collation is to ensure revenue completeness (i.e., For all cargo landed or shipped cargo dues paid).

All cargo Dues Orders are captured into SAP with specific reference. For containerized cargo (both imports and exports) this reference is the container number.

For breakbulk /bulk imports the reference number is the Bill of Landing number and for exports it's the Mates receipts Number.

After the completion of a vessel the terminal operator (from Transnet Terminals) supplies an outturn report detailing all cargo landed and shipped.

The detail of the outturn report is uploaded into SAP CRM, and the outturn report is received electronically from NAVIS system (From Transnet Terminals). It is then interfaced with SAP. The collation report is run, detailing any discrepancies between cargo dues order and outturn report.

In instances where cargo appears on the outturn report for which TNPA has no order, a letter is sent to the respective vessel agent requesting cargo dues number and/or clearing and forwarding agent responsible for the payment of cargo dues.

An allowance of 15 days is given to them to reply. In the absence of a reply to their accounts will be debited with the relevant cargo due charges.

With regard to the incorrect vessel name, voyage number, incorrect container size, material, tonnage and incorrect number endorsed on respective cargo dues a letter is sent out informing client to pass an amending order. Failure to receive a reply to results in the collation staff passing an adjustment / amending fee to the account. The cargo dues order contains clauses which cover all the relevant charges.

The manifest clerk is responsible for receiving manifests. The manifests are due 24 hours prior to vessels arrival (imports) and 14 days after sailing for exports.

Once manifest details have been received and a receipt is issued to the agent for the manifest, a file is kept and opened according to arrival number.

The manifest details all cargo on the vessel and this documentation is prepared and maintained by the vessel agent.

The collation process matches the outturn report and CDO. Exceptions reports are generated for invoices where two-way match does not agree. The financial officers are responsible for following and resolving these exceptions.

Daily the manifest receipt clerk receives a "Ports Position Listing from Port control.

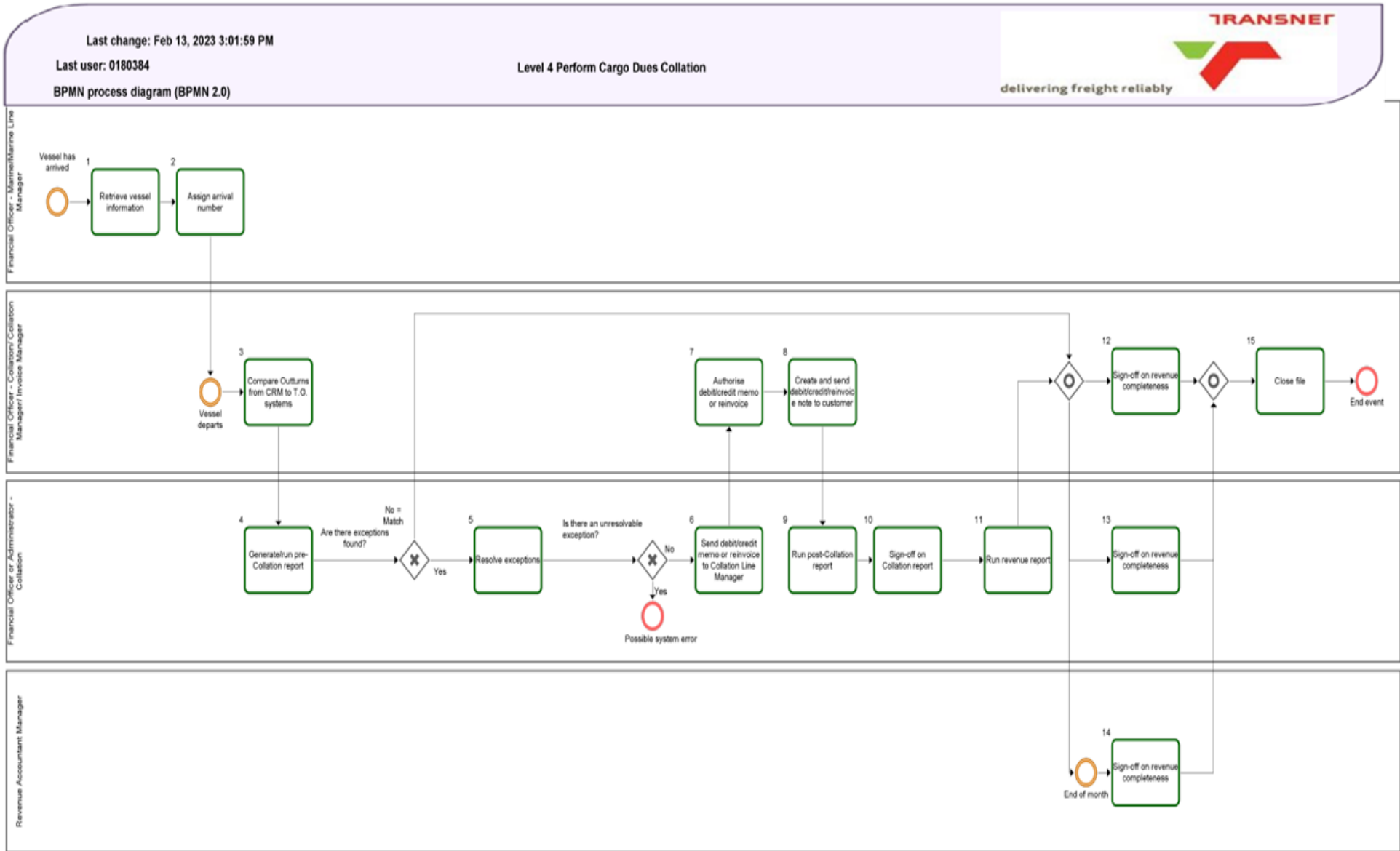
This report details:

- The various vessels that are in the port
- The berths they are positioned at.
- The purpose of call
- Type of cargo they have been working.
- Name of agent

These listings are captured on a spread sheet called Marine report control sheet for all vessels.

The control sheet details all the above information as well as the arrival number and it is arranged in the arrival order. The ship file is drawn, and a report is run which details all orders pertaining to an arrival number.

Below is the current as-is process for the collation process:



5. PROBLEM STATEMENT

The challenge when determining the completeness of revenue arises when customers submit cargo dues orders. The data gathering and exception generation phase involves verifying the cargo dues orders against the outturn report received from the port terminals. If exceptions are picked up, an exception report is generated via the Customer Relationship Management (CRM) system.

Currently the capturing of the cargo dues order data into the CRM system is done manually. This is a tedious and repetitive task that makes this process time consuming as the data is captured per arrival.

The greatest challenge is around the fact that there is a high volume of data that needs to be captured which varies in complexity from commodity to commodity, making the verification process time consuming and inefficient.

6. SCOPE OF WORK

6.1 TECHNICAL SCOPE

ID	Goal	Description
TS001	On-Premises	Provision of subscription licenses for an On-premises solution for Collation Process automation tool. The vendor must provide a proposal for a 3-year Subscription services for Remote & Onsite Support, Enhancement & Systems Resolution. Provision of a minimum of five user licenses.
TS002	Security Controls	Comprehensive user account and access management with role-based access with adequate segregation of duties. Provides role-based security to support multiple users and user types and also ensuring that users view and access only what is assigned to their roles.
TS003	Quality Control	The solution must have the capability to demonstrate that data migration is done in an auditable manner with “Before” and “After” reconciliation records that comply with audit requirements.
TS004	Interface	The Service Provider must align with SAP Best Practices for integration and create interfaces with the following SAP and non-SAP systems:

		<ul style="list-style-type: none"> • SAP CRM, • SAP BW 4/HANA, • Other external Transnet Operational Systems <p>The integration should be bi-directional and allow for the reading from and writing to the SAP tables/ modules.</p>
TS005	System Landscape	The solution must provide at least a 3-tier landscape, (Development, Quality assurance and Production)
TS006	Backup and Disaster recovery	<p>The successful bidder must propose backup and restoration capabilities based on the TNPA's backup and storage strategy.</p> <p>The successful bidder must also perform error and omission-free backups with Transnet's 7-year data retention requirements.</p> <p>The successful bidder shall provide on demand evidence of disaster recovery and back up testing during the project life cycle</p>

6.2 FUNCTIONAL SCOPE

ID	Description
FS001	The tool should have data blending capabilities (i.e., taking manifest, outturns and cargo due orders to create an exception report)
FS002	The tool should have data preparation and profiling capabilities, combining the various datasets to produce the following reports: cargo dues orders, outturn report, manifests, and other supporting documents
FS003	The tool should have end-to-end collation automation capabilities enterprise wide
FS004	The tool should have explainable Artificial Intelligence (AI) capabilities which include the ability to read and integrate .pdf data into the software.
FS005	The tool should have the ability to do collation for all Ports in a centralized manner to give a TNPA view of the reconciled revenue
FS006	The tool should have a user-friendly interface that is easy to navigate and use, with clear instructions and minimal technical jargon
FS007	The tool should allow Finance teams to create and customize workflows to meet their specific needs. This could include workflows for data entry, collation, reporting, or other financial processes.

FS008	The tool should be able to integrate with other software solutions, such as SAP ERP systems, or other financial planning and analysis tools
FS009	The tool should adhere to industry-standard security and compliance regulations and have features such as encryption, access controls, and audit logs
FS010	The tool should be able to handle a large volume of financial data and be able to scale as the Finance Department grows and its needs change
FS011	The tool should have analytics and reporting capabilities that allow finance teams to monitor and analyze financial data, identify trends and patterns, and generate reports that can inform decision-making.

6.3 NON- FUNCTIONAL SCOPE

ID	Description
NFS001	Availability - The solution must be available all times (365/24/7). This must adhere to current SLA to maintain system availability.
NFS002	Skills Transfer - The Service provider must ensure that there is a skills transfer process in place. This includes ensuring the operational manuals are in place. Number of users to be trained or skills transferred must be a minimum of five power users.
NFS003	Scalability - Ensuring that the desired solution handles high process volumes
NFS004	Performance - The solution is expected to improve customer experience.
NFS005	Security - Ensuring client information is safe and always secured.

7. CHANGE CONTROL PROCESS

TNPA follows **IT-Service Management & Change Release Management** process for change control, system access, permission, and the service provider will adhere to these processes before implementing any solutions within the ICT landscape. The Change Control established at the TNPA ICT environment is based on a 3-tier system architecture which includes the following:

- Pre-Dev and Development (DEV) Environment
- Quality Assurance (QA) Environment

- Production (PRD) Environment

8. CHANGE MANAGEMENT

The Project will require a level of business transformation and process re-engineering in-order to change from existing business processes to global best practice processes. Re-engineering activities always require extensive employee change management to successfully deliver the new best practice business capabilities required.

The Service Provider will be required to formulate and execute a Change Management plan that is based on best practices to add to the success of the project and adoption of the new system. For all changes, end users must be trained on how to use the system that works a bit differently that it did before.

9. SKILLS TRANSFER

Training Requirements in order to achieve the project objectives and benefits, extensive training of users will need to be undertaken. The Service Provider will be required to develop a training plan implemented solution with associated training material, manuals, and assessments to ensure the relevant competency level is achieved. The intended audience for training includes the system end-users, super-users, management level users and the TNPA SAP Support team.

The proposed training plan will cater for at least the following training capabilities:

- a) End user training – these users will use the new system to perform their daily duties in line with new processes and will therefore require extensive training on these processes. Training for end users must be role-based and each end user's role in the overall process must be demonstrated.
- b) Super-user training – These users will become first-line support in operations and require detailed training on processes, common problem areas and proposed solutions.
- c) Train-the-Trainer training – The SAP Functional team and Business Process Owners normally provide training in the relevant business areas and will need to be upskilled to ensure training will continue post project implementation.
- d) The service provider must commit to knowledge transfer to internal TNPA ICT employees, in terms of the technical skill set required to maintain the solutions going forward.