

Software Requirements Specification

Integrated Tea Trade System (iTTS)

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1. Introduction

1.1 Purpose

The purpose of this SRS document is to provide a detailed overview, description of the iTTS software product, its features, parameters and goals. This document describes the project's target audience, its user interface, hardware and software requirements. It defines how Tea Trade stakeholders, team and audience see the iTTS and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle (SDLC) processes.

1.2 Scope

Integrated Tea Trading System (iTTS) will allow data capture of tea from dispatch at the factory/producer to release of tea after payment of tea has been done. Below are the In-scope and out-of-scope functionalities.

1.2.1 In-Scope Functionality

Based on the requirements gathered, the following functionalities are considered to be within the scope of the project.

1. Membership management function to enable and control member registration, definition and management of member's roles and setting trade rules within iTTS.
2. Tea dispatch and receipt functions to enable confirmation of teas dispatched/ received
3. Tea Weight Note function to enable generation of Tea Weigh Note by warehouses
4. Tracking and reconciliation of tea inventory movement. Tracking will be in form of search screen to search and see the status of the Tea (whether dispatched / received at warehouse). Reconciliation of Tea will be in form of a statistical report of a warehouse.
5. Tea Offer/ Print Advise function to enable producers of tea to allocate teas for auction
6. Catalogue preparation and management function to enable and control the creation, management, access and aggregation of pre-auction catalogue/Closed Catalogue, auction catalogue/Evaluation Catalogue and post auction catalogue/Sale Catalogue by brokers.
7. E-Auction function to enable

- a) electronic auction of teas by brokers,
 - b) electronic bidding of teas by buyers,
 - c) Identification of out lots by the system based on non-participation of buyers i.e. without bids from buyers
 - d) declaration and reporting on split lots by system based on EATTA rules and eAuction Guidelines
 - e) Acceptance of the highest bid by system.
8. Auction organizer/Admin function to enable
- a) the setting and control of e-auction parameters used by the ITTS based on EATTA rule book
 - b) enable consolidation and publication of all catalogs for auction within specified timeline
9. Auction Results functionality to enable electronic access to auction results by stakeholders
10. Invoice functionality to enable tracking of invoices generated by brokers after the auction
11. Payment function to enable banks to confirm receipt of payment of teas from buyers
12. Tea Release Order function to enable generation and approval of Tea Release Order.
13. Reporting function to enable access to reports and statistics based on defined user roles in the system and the EATTA rule book.
14. Tea Trade business portal to act as a primary source of information for all stakeholders. It will also help to improve transparency through availability of general reports for public view.

1.2.2 Out of scope functionalities

1. A Functionality where private buying and selling of teas can take place
2. A functionality to generate export documentation i.e.; KRA, KPA & KEPHIS

1.3 Intended audience

This document is to be read by the development team, the project managers, and software quality assurance team and documentation writers. This document should be reviewed by various stakeholders including PIT committee members for better understanding of the system.

1.4 References

- Business Requirements Document
- EATTA Rule book
- EATTA Rate matrix
- EATTA Penalty & Settlement Matrix
- Standard Used -ISO/IEC/IEEE 29148:2011 - ISO/IEC/IEEE International Standard

2. Overall Description

2.1 Product perspective

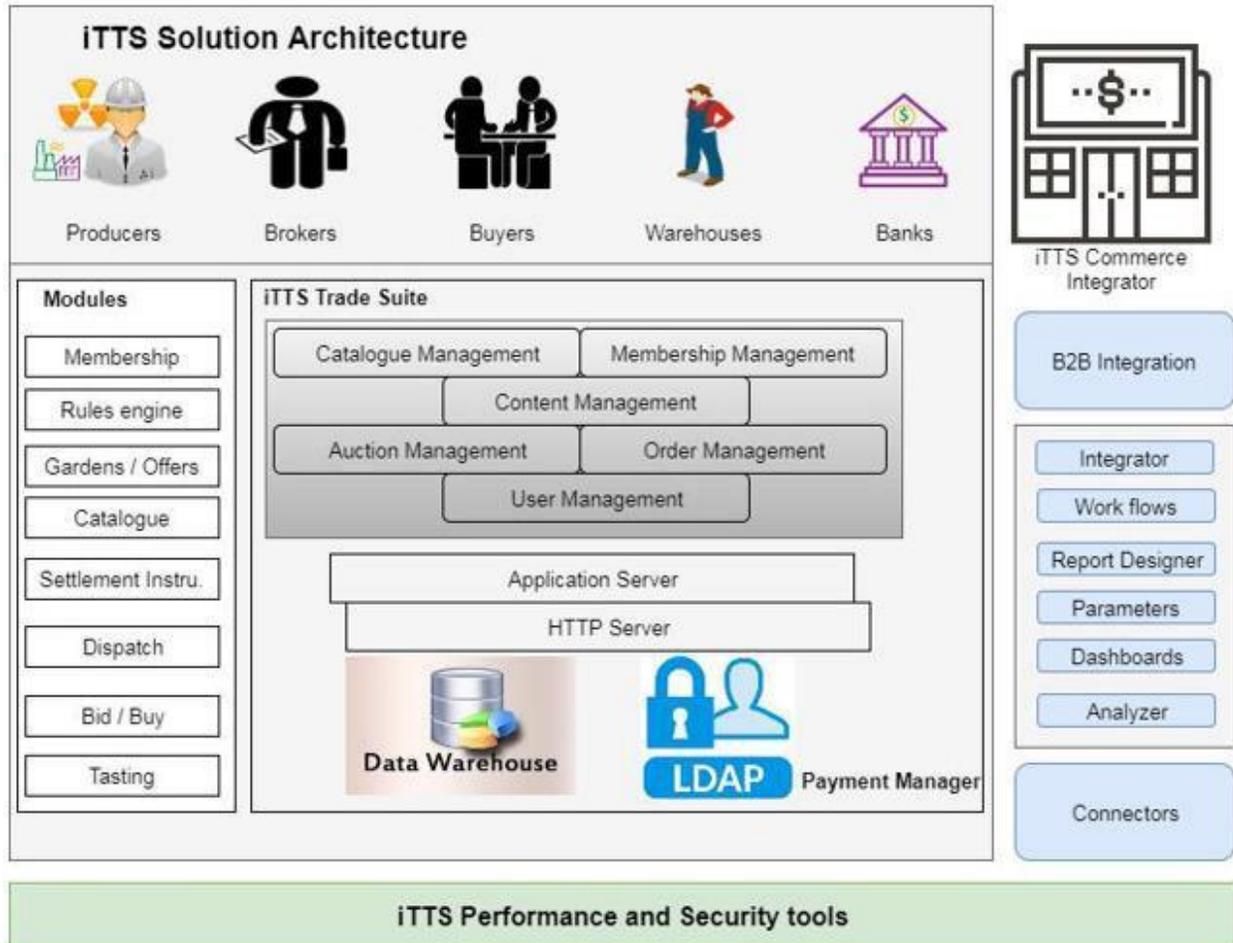
The Integrated Tea Trading Platform will possess a suite of business applications with unique capabilities and standards required to facilitate and streamline all pre-auction, auction and post auction tea trade transactions including the option of an electronic auction. The solution shall offer a selection of easy to use, highly available, standardized and secure B2B trade applications and e-auction capabilities. It will include business applications for Producers, Brokers, Buyers, Warehouses, Banks, Transporters and Packers to interact with the system and perform various tea trade functions and transactions. In addition, it will have the tools for site management, content management, business process definition and site administration. The solution will be built in a dynamic and scalable manner that includes all of the unique capabilities and standards required to manage and operate an effective business to business platform and e-auction system.

The integrated Tea Trade Platform is intended to achieve the following business Objectives:

- a. Reduce the period between receiving the printing advice and closing date.
- b. Reduce the period between Closing date and auction date
- c. Reduce the period between Auction date and prompt date
- d. Increase average auction speed of lots per minute.
- e. Reduce Catalogue preparation time/publishing costs
- f. Reduce Average call over time from 2-13 hours to real time

- g. Reduce time for Invoice preparation and statements
- h. Real time availability of data. currently data is available after 30 minutes and which will be real time after automation
- i. Increased transparency through built in audit trail reports and analytics
- j. Improved Time to make decisions through intelligent market reporting tools

Table 1 Product Overview



2.2 Product functions

Membership Module

This component will enable and control the registration, definition and management of members and roles within iTTS. The system will support the pre-registration of member organizations – (Producers, Buyers, brokers, warehouses, banks, transporters and Packers) individuals and administrators. Roles and attributes will be defined at the iTTS system level or organization level. Roles and other grouping (such as subscriptions, geography or organization) control access to resources and actions. Support for one level of approval for any or all actions or commands (such as Bid, Buy, and Sell) will be built in.

The module should support a robust governance framework where existing tea trade business rules relating to membership parameters will be built in to the system and administered.

Catalogue Module

This component will enable and control the creation, management, access and aggregation of Pre-auction catalog, Auction Catalogue and Post auction catalogue content by brokers.

The catalogue module will provide a unified view of the teas available for sale and the teas sold in the Mombasa tea auction. At the core of the system will be an aggregated catalogue that can provide different views to producers, brokers, buyers, EATTA and banks based on their current role in the chain. A robust price index exploration and search feature based on historical and other parameters to support pricing decisions. Any item in a closed auction catalogue can be made available for auction by EATTA using this module.

Brokers will view tea allocations available by producers on the e-business module and populate additional data for the 3 catalogue views manual entry using a catalogue creation GUI, or import data from their Systems. Brokers will define different views of the catalogue to producers and buyers. i.e Pre-auction/Closing catalogue, Auction/Evaluation Catalogue and Post Auction/Sale Catalogue. The system will track the different stages of catalogue publication and will have validation checks i.e the valuation of Tea at various levels. The Tea Catalogue Builder will have robust features for broker to add or import tea tasting and valuation information from third party systems information. Buyers will have a feature where they can view the catalogue and add their internal parameters like tasting results for purposes of comparison and decision making. Producers will confirm the catalogue created by broker after which broker will close and publish the auction catalogue to his e-auction floor. The Auction Organizer -EATTA will then view and avail the auction catalogue for sale to the broker's floor.

In addition to standard text and keyword searching, the auction catalogue will support other filtering mechanisms: tea attribute exploration, historical performance and product comparison. Product exploration will allow buyers to filter the catalogue by specified tea attributes or parameters. Product comparison will allow buyers to compare different teas offered in the catalog.

eAuction Module

This component will enable auction activity management and facilitate electronic auction of teas. It will also support managing parameters used by the auction organizer EATTA. It will contain an auction floor set up feature for each broker and an administration feature for EATTA to organize the auction activities. The main objective of the e-auction module will be to facilitate price discovery, enable matching between buyers and sellers and increase speed and efficiency of the auction.

It will have a feature for creation and management of auction floors for each broker. Each broker will have an auction floor where all settings and parameters will be managed. The current rotation in relation to brokers will be maintained. Each auction floor will have all gardens for sale, price and attributes with options for online bidding, time to complete the bid, no of buyers bidding.

The system will support the current rotation of brokers and ascending order auction model with an option for broker to set reserve price. It will have the option and parameters to receive online bids from buyers and accept Bid by brokers. It will reconcile all auction sales data including out lots and sale price. It will support reporting and historical analysis of all auction activity. The System will also follow the eAuction guideline and EATTA rule.

Business Module

This component will control the initiation and flow of all tea trade business transactions including tea offers/allocations, dispatch advice, receiving, catalog, sale order, delivery order, invoice, payment confirmation, TRD and reporting data through the platform. Using a notification feature all defined tea trade transaction documents and forms moving through the defined approval flow will be converted into appropriate e-business messaging formats and placed in the recipient's inbox as a notification.

This module will support dynamic distinct access functionalities for all trading partners including producers, buyers, brokers, warehouses and banks depending on their role. All transactions and activities from the other modules (such as auctions and catalog) will be logged and made available through the reporting tools.

The entire offer, dispatch, catalog, auction, order, fulfillment and payment process will be tracked through this module. This module will also control creation and listing of gardens, tea tasting results, and all associated attributes. It should allow for seamless integration with third party applications including banks through a robust integration framework architecture. It should be scalable, highly secure, and built on robust open architectures and global standards. It should contain rich features for workflows, designing and generating reports, business intelligence and data analytics.

2.3 User classes and characteristics

The following are the kinds of users of the iTTS system.

1. Administrators:

Administrators are the ones who adds or administers the parameters for each stakeholder's use of the system as defined below:

Super Admin – Has access and rights to the whole iTTS system. Super Admin assign roles that define and limit which tasks other administrators can perform.

Auction Admin – will administer and configure the Auction Module for the Brokers and Buyers to use

Producer Admin – will administer the producer use of the system as well as register producer users of the system

Warehouse Admin – will administer the warehouse use of the system as well as register warehouse users who will carry out business transactions at the warehouse

Buyer Admin – will administer buyer use of the system. The admin will create buyer users and assign them roles with regard to various transactions within the use of the system

Bank Admin – will manage the bank use of the system including managing users

2. **Producer User:** This user will enter transactional data such as Tea dispatch, generate Tea dispatch note among other tasks assigned by the Producer Admin.
3. **Broker User:** This user will do most transactions in the system such as receiving tea allocations, creating catalogues, adding valuations to catalogues among other tasks as assigned by the broker admin
4. **Warehouse User:** The warehouse user will receive tea from producer, generate Tea Arrival Note and Weight Note among other tasks as assigned by the warehouse admin
5. **Buyer User:** The buyer user will enter taster's comments, enter offline bids, bid for teas, enter loading instructions among other task as assigned by the buyer admin
6. **Bank User:** The bank user will be assigned roles within the system by the Bank admin to perform various tasks

2.4 Operating environment

Operating environment for the iTTS system is as listed below.

- distributed database
- client/server system
- Operating system: Windows or Linux
- database: sql+ database
- platform: vb.net/Java/PHP

2.5 User environment

- Desktop or Laptop computers
- Dedicated Internet connectivity
- Power supply

2.6 User Documentation

The following documentation will be delivered along with the software:

- User Manual
- Online help
- Tutorials

2.7 Design/implementation constraints

There are few constraints that the system should follow. They are:

All the inputs should be checked for validation and messages should be given for the improper data. The invalid data are to be ignored and error messages should be given.

Details provided by the users during sign up should be stored in database.

While adding the data to the system, mandatory fields must be checked for validation whether the user has filled appropriate data in these mandatory fields. If not, proper error message should be displayed or else the data is to be stored in database for later retrieval.

2.8 Assumptions and dependencies

A number of factors that may affect the requirements specified in the SRS include:

- EATTA Rule Book changes with accordance to requirements
- The system will be a web-based system and requires internet connection for all stake holders
- Existing stakeholder's systems will run concurrently

3. External Interface Requirements

3.1 User interfaces

iTTS users will be required to have a computer that has an operation system and a web browser. iTTS will be support all major web browsers that will make it convenient for the user

to access the system with ease. The browsers to be supported include Internet Explorer, Mozilla Firefox, Google Chrome and Opera among others.

3.2 Hardware interfaces

The following servers may be deployed for iTTS:

- Database Server
- Transaction Server

3.3 Software interfaces

Sl. no	Category	Description
1	OS Required	Windows Server 2012 / Red Hat Linux 7.3
2	Application Framework	Java Spring Boot Framework, JPA, Spring Security, Thymeleaf
3	Database Server	MySQL
4	Web Server	Tomcat 8
5	Web Browsers	Internet Explorer(IE 11 and above), Firefox & Chrome

3.4 Communication protocols and interfaces

The iTTS shall use the HTTP protocol for the communication over the internet and for the intranet communication will be through TCP/IP protocol suite

4. System Features

The system features are categorized into 5 categories

- General system features
- Pre-Auction features
- Auction features
- Post-Auction features
- Reporting and Business Document Exchange Specifications

4.1 General system features

The General System features consists of the Membership Module which involves the process of Registration of various stakeholders like Producers, Brokers, Buyers, Warehouses, Banks, Packers and Transporters entities. It also consists of the creation of Admins for each entities of stakeholders. These Admins will look into every aspect of registration of the respective entities' users, updating of profile. There are also certain settings which Admin(Producer) will do in their account like "Tagging of Brokers" , "Tagging of Warehouses" , "Tagging of Transporters" .

4.1.1 Member Registration

4.1.1.1 Description and Process Flow

The following will be the process for Membership Registration

a) Exiting Users:

All existing users' data will be migrated into the iTTS system. Following which system generated credentials will be provided to them. All existing users will get certain days' time period to ensure their profile is updated by uploading mandatory certificates.

Following which EATTA super admin will lock their profile account and update the status to "Working". For those, who have not updated their profile, the status will remain as "Non-Working".

Prerequisite:

1. Existing Data of all stakeholders needed to create profile of them and provide user credentials.
2. Structure of existing data
3. Time Period for all stakeholders to update profile.

b) New Users:

On the transparency portal, any new entity who wants to be a part of Tea Auction process can be a part by registering themselves on the Portal. Upon registration, they will receive a temporary credential using which they can update their profile and submit all necessary documentations. An Acknowledgement number of that application will need to be submitted along with Physical documents of the certificates at EATTA. Upon submission, the application will be forwarded to EATTA membership user, who will do the initial verification. Upon confirmation from the Membership user, a request will be send to the registered user to make the payment online. Upon successful receipt of the payment, the application will be send to Board member user to approve the request. Upon approval system will update the status as "Working".

Prerequisite:

1. Listing of Mandatory documents for registration.
2. Online integration with Banks through online payment aggregator.

c) Renewal of Users:

EATTA will keep a track of all users Effective and Expiry date. EATTA will thus update the Renewal Costs breakdown and then submit a renewal payment due date. System will also allow EATTA to give the user a grace period for payments (in days). If the user do not pay within the given grace period, system will update the status of the user as "Non-Working member" and block the user from any activity in the system.

If the user pays within the given period then EATTA user to verify the payment and update the status of user as "Working member". EATTA user also to update the new Effective and Expiry dates for the user.

4.1.1.2 Functional Requirements

Feature Requirements: Member Registration (FR-MR)

Feature ID	Feature Name	Feature Description
FR-MR-1	Register member categories	The system shall enable registration of Member Categories <ul style="list-style-type: none"> i. Producer ii. Broker iii. Buyer iv. Producer Warehouse v. Broker Warehouse vi. EATTA (Super Admin / Auction Admin / Membership Admin User) vii. BANK viii. Transporter ix. Packers
FR-MR-2	Register members	The system shall allow registration for becoming EATTA members
FR-MR-3	Codification	Currently there is manual codification based on Stakeholders names System will allocate a unique code / identity through which each Stakeholder's trade information / transactions can be identified.
FR-MR-4	Update members profile	The system shall allow members to update their profile
FR-MR-5	Upload certifications	The system shall enable users to upload various certifications
FR-MR-6	Generation of Acknowledgement Number	The system shall be able to generate a new acknowledgement number for all new applications.
FR-MR-7	Update Status	The system shall allow EATTA membership user to update status of each members based on their application status
FR-MR-8	Verification and demand payment of fees	The system shall allow EATTA membership user to verify the details of each new user and demand the payment of applicable fees. If note meeting criteria then EATTA membership user will reject the application.
FR-MR-9	Subscription Rate Sheet	The System shall have the latest Rate sheet to pre-calculate
FR-MR-10	Forward of applications	The system shall allow EATTA membership user to check payment status and forward application for approval to the EATTA board user

FR-MR-11	Approval	EATTA board user will Approve the application after board approval.
FR-MR-12	Existing User Entry	System will allow EATTA user to add information of existing user to create their credential
FR-MR-13	Pending Payment dues	System shall allow EATTA user to request for pending payment dues and giving the grace period to pay.
FR-MR-14	Update user status / Block unblock user	System shall allow EATTA admin user to update a status of an entity. This screen can be used to suspend / block any user with comments.
FR-MR-15	Bank information update	System shall allow entity users to update bank details and upload bank information details. This will be verified by EATTA admin and approved. Upon approval, system will update the bank details in its system.

4.1.1.3 Notifications

1. Once all the stakeholders' information are updated in system, system will send SMS / email / system based notification on user credential to the registered mobile/email address / dashboard respectively.
2. There will be a reminder on updating of profile 3 days prior to the deadline.
3. Upon updating of status by the super admin, notification will be send to concerned stakeholders.
4. System will keep a check on expiry dates of license dates and remind the stakeholders on renew of licenses.

4.1.2 User Registration

4.1.2.1 Description and Process Flow

Upon successful registration of Stakeholders' Entity, each Entity will get a link to register its own users in the system. The Entity will act as an administrator for its users.

4.1.2.2 Functional Requirements

Feature Requirements: User Registration (FR-UR)

Feature ID	Feature Name	Feature Description
FR-UR-1	Register users	The system shall allow registration of users by the respective stakeholders' entity
FR-UR-2	Assign Roles	The system shall allow stakeholders' entity to assign Roles and links to their respective users.

4.1.2.3 Notifications

1. Upon successful registration of user, user will be notified on the credentials through SMS/ email.

4.1.3 User Roles

4.1.3.1 Description and Process Flow

The Entity will act as an administrator for its users whereby it will assign the various roles and links to the user to perform the daily activities.

4.1.3.2 Functional Requirements

Feature Requirements: User Roles (FR-USR)

Feature ID	Feature Name	Feature Description
FR-USR-1	Create user roles	The system shall allow Entity admin user to create and define roles
FR-USR-2	Assign user roles	The system shall allow Entity admin user to assign roles

4.1.3.3 Notifications

1. Upon successful registration of user, user will be notified on the credentials through SMS/ email.

4.1.4 Garden Registration

4.1.4.1 Description and Process Flow

Producers' Entity Admin can register gardens also known as marks. They can also update or delete them in case they are not used in the system. Upon registration of new gardens, they need to update the production start date of the Garden.

4.1.4.2 Functional Requirements

Feature Requirements: Garden Registration (FR-GR)

Feature ID	Feature Name	Feature Description
FR-GR-1	Add/Remove garden/mark	The system shall enable producer add/remove tea garden/mark
FR-GR-2	Update garden/mark details	The system shall allow producer update tea garden/mark profile

4.1.4.3 Notifications

1. Upon addition of new gardens, EATTA admin user will be notified on the garden and its estimated production date.
2. A Notification will also be sent to the associated Broker for that Producer.

4.1.5 Warehouse & Godown Registration

4.1.5.1 Description and Process Flow

Warehouses' Entity Admin can register Warehouse locations and also the godowns for each warehouse. They can also update or delete them incase they are not used in the system. These Warehouse listing will be available to Producer to appoint while dispatch of teas. Subsequently when warehouse receives the Tea, they can update in system , which godown it is allocated to. The information on Warehouse-Godown will be available across catalogues and also on post auction activities like Invoices, TRD, Delivery note as well as on Loading instructions.

4.1.5.2 Functional Requirements

Feature Requirements: Warehouse Registration (FR-WR)

Feature ID	Feature Name	Feature Description
FR-WR-1	Add/Remove Warehouse/godown	The system shall enable Warehouse Admin to add/remove Warehouse/godown
FR-WR-2	Update Warehouse/godown details	The system shall allow Warehouse Admin update Warehouse/godown profile

4.1.5.3 Notifications

1. Upon addition of new Warehouse or godown, Warehouse Admin as well as Producer associated with that warehouse will be notified.

4.1.6 Appoint Broker

4.1.6.1 Description and Process Flow

Producers Entity Admin will appoint brokers with which to sell teas through the auction. They can also enable or disable them

4.1.6.2 Functional Requirements

Feature Requirements: Appoint Broker (FR-AB)

Feature ID	Feature Name	Feature Description
FR-AB-1	Select broker(s)	The system shall enable producer entity admin to appoint broker
FR-AB-2	Enable/disable broker(s)	The system shall allow the producer entity admin to enable/disable their brokers

4.1.6.3 Notifications

1. A Notification will also be sent to the associated Broker for that Producer and the users of that Entity producer.

4.1.7 Appoint Warehouse

4.1.7.1 Description and Process Flow

Producers and buyers will appoint producer warehouses and buyer warehouses respectively to store and handle their teas. They will also enable or disable them.

4.1.7.2 Functional Requirements

Feature Requirements: Appoint Warehouse (FR-AW)

Feature ID	Feature Name	Feature Description
FR-AW-1	Select producer warehouse	The system shall enable producer entity admin appoint producer warehouse
FR-AW-2	Enable/disable Producer warehouse	The system shall allow producer entity admin enable/disable producer warehouse
FR-AW-3	Select buyer warehouse	The system shall enable buyer entity admin appoint buyer warehouse
FR-AW-4	Enable/disable buyer warehouse	The system shall allow buyer entity admin enable/disable buyer warehouse

4.1.7.3 Notifications

1. Upon updating by the producer entity admin, a notification will be send to the Producer warehouse.
2. Upon updating by the buyer entity admin, a notification will be send to the buyer warehouse.

4.1.8 Portal Features

4.1.8.1 Description and Process Flow

The system shall allow members access general information concerning the Trade

The system shall allow members access industry bulletins

The system shall allow members to communicate through chat groups (enabling support team to send messages to stakeholders)

The system shall allow members receive notifications from the Trade.

4.1.8.2 Functional Requirements

Feature Requirements: Portal Features (FR-PF)

Feature ID	Feature Name	Feature Description
FR-PF-1	Primary Links	The system shall allow Super Admin to Create / View and update Primary Links
FR-PF-2	Secondary Links	The system shall allow Super Admin to Create / View and update Secondary Links / Sub Links
FR-PF-3	Template based pages	The system shall allow Super Admin to Create / View and update Content in a template based page
FR-PF-4	Video Links embed	The system shall allow Super Admin to Create / View and update video links (ex: youtube)
FR-PF-5	PDF Upload	The system shall allow Super Admin to upload / Delete PDF files
FR-PF-6	Publish Unpublish content	The system shall allow Super Admin to set publish dates / remove the content by unpublishing
FR-PF-7	Target Stakeholders Notification	The system shall allow Super Admin to send target based notifications to various stakeholders

4.1.8.3 Notifications

1. Based on the target based notifications set by Super Admin, system will send notifications to all identified stakeholders.

4.2 Pre-Auction Features

The Pre-Auction features consists of the Catalogue Module as well as business module which starts from the Producers dispatching Tea to Warehouse , followed by Producers appointing broker to catalogue the tea. The broker involves tea- tasters to identify and catalogue the teas and derive the final price of the Tea. Brokers also send samples of Tea to Buyers. Once Brokers have settled the price of Tea with Producers, they prepare a final catalogue and submit to EATTA for eAuction.

4.2.1 Dispatch Tea

4.2.1.1 Description and Process Flow

Tea dispatch is done by the producer. It involves choosing the warehouse where Tea will be dispatched and by entering details of tea being dispatched to that producer warehouse. The following properties are currently entered:

Property Name	Property Description
Garden	The factory or producer where the tea has been produced and packaged
Invoice	Uniquely identifies the batch of tea packed at the producer
Grade	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Packages	Number of bags per Invoice / batch
Packaging Type	Type of packaging e.g. bags
Net Weight	Net Weight of the invoices/batch
Tare Weight	Tare weight of each invoice
Gross Weight	Total weight of each invoice including the tare weight
Pallet weight	Captures Pallet weight (in kgs)
Packaging Date	Date when the invoice/batch was packed
Dispatch Date	Date when the dispatch to warehouse is made
Dispatch #	Uniquely identifies the dispatch information
Kgs Per Package	Number of kgs per package e.g. kgs per bag
Base Sale Price	This is the Base price margin/Least price margin(per KG) updated by Producer. This is an indicative price for broker to set the tea valuation.
Warehouse	Destination – warehouse where the tea will be delivered to on dispatch which is usually a producer warehouse
Remarks	Remarks contain any free form text for the Dispatch Summary.
Transporter Info – Name	Name of the Transporter
Transporter Info – Address	Address of the Transporter
Transporter Info – Lorry #	Lorry Number of the Transporter

Transporter Info – Driver Name	Driver Name of the Lorry
Transporter Info – Driver ID Nos	Driver ID number of the Lorry
Transporter Info – TurnBoy Name	Turnboy Name of the Lorry
Transporter Info – TurnBoy ID Nos	Turnboy ID Number of the Lorry
Factory Supervisor Name	Name of Supervisor of the factory
Factory Manager Name	Name of Factory Manager of the factory

4.2.1.2 Prerequisite

1. Dispatch Tea format should be standardize across Producers.
2. Excel Format to upload Dispatch information from various producers to be standardize.

4.2.1.3 Functional Requirements

Feature Requirements: Tea Dispatch Note (FR-TD)

Feature ID	Feature Name	Feature Description
FR-TD-1	Create New Dispatch	The system shall enable the producer user to enter information of teas ready for dispatch
FR-TD-2	Tea Dispatch Note	The system shall enable the producer user to generate Tea Dispatch Note
FR-TD-3	Modify Tea Dispatch	The system shall enable the producer user to modify a dispatch note of that day.
FR-TD-4	View/Track/Reconcile dispatched Teas	The system shall allow the user to track and reconcile as well as view all dispatched teas
		The system shall provide EJB based API services to be called by Producer system to import information of teas for dispatch.
FR-TD-5	Import dispatch information	Another option of updating the information through standard excel upload format

4.2.1.4 Notifications

1. Upon generation of Tea Dispatch Note, notifications will be send to Producer admin, Producer user, Warehouse Admin, Transporter Admin and truck driver.

4.2.2 Producer Warehouse Tea Receive

4.2.2.1 Description and Process Flow

Producer warehouse receive tea dispatched from various producer factories. Once received, the tea invoices are weighed and the details entered into the system. The Warehouse men will allocate the particular godown for the arrived stock. Tea arrival advice is generated and is made available to the producer factory. Tea details from the Tea Dispatch are displayed on the receiving form and the following new properties are entered:

Property Name	Property Description
Date Received	The date when the tea is received
Warehouse-godown info	The Warehouse and godown information will be listed
Packages (Warehouse)	Number of bags per Invoice / batch
Net Weight (Warehouse)	Net Weight of the invoices/batch
Gross Weight (Warehouse)	Total weight of each invoice including the tare weight
Kgs Per Package (Warehouse)	Number of kgs per package i.e. kgs per bag
Remarks (Warehouse)	Remarks contain any free form text for the Dispatch Summary.
Gain/Loss	This will show the difference in figures of Gross weight of that invoice.
Type	This will show whether this Invoice is Reprint / New

4.2.2.2 Prerequisite

1. Warehouse receipt / Tea weight Note format should be standardize across Warehouses.
2. Warrant description to be standardized.

4.2.2.3 Functional Requirements

Feature Requirements: Producer Warehouse Tea Receive (FR-PWTR)

Feature ID	Feature Name	Feature Description
FR-PWTR-1	Create New Tea Receive	The system shall enable the warehouse to enter details of teas received
FR-PWTR-2	Tea Receipt Confirmation	The system shall allow the warehouse confirm receipt of teas by generating Tea Arrival Advice
FR-PWTR-3	Tea weight note generation	The system shall enable the warehouse to generate the Tea Weight Note and is made available to the broker

FR-PWTR-4	View/Track/Reconcile Received Teas	The system shall allow the warehouse user to track and reconcile as well as view all received teas
FR-PWTR-5	Import producer Warehouse Tea Receive information	The system shall provide EJB based API services to be called by Producer warehouse system to import information of teas receipt. Another option of updating the information through standard excel upload format

4.2.2.4 Notifications

1. Upon generation of Tea Dispatch Note, notifications will be send to Producer admin, Producer user, Warehouse Admin, Transporter Admin and Broker.

4.2.3 Tea Allocations

4.2.3.1 Description and Process Flow

Producers select and offer tea, for auction, to brokers in order for the broker to include the tea in the pre-auction catalogue. This process of Tea Allocation can only happen when the tea is already in the producer warehouse and the Tea weight note is generated through the system. The following properties are required for the tea allocation:

Property Name	Description	Comment
Invoice	Uniquely identifies the batch of tea packed at the producer	From Producer Tea Dispatch
Grade	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1	From Producer Tea Dispatch
Packages	Number of bags per Invoice / batch	From Producer Warehouse Tea Receive
Packaging Type	Type of packaging e.g. bags	From Producer Warehouse Tea Receive
Kgs Per Package	Number of kgs per package e.g. kgs per bag	From Producer Warehouse Tea Receive
Net Weight	Net Weight of the invoices/batch	From Producer Warehouse Tea Receive
Gross Weight	Total weight of each invoice including the tare weight	From Producer Warehouse Tea Receive
Packaging Date	Date when the invoice/batch was packed	From Producer Tea Dispatch
Allocation Date	Date when the tea allocation to broker is made	New property
Sale Number	Auction sale number represents the auction number the tea is	New property (selected from Auction sale list)

	offered/allocated for sale as defined by the auction organizer	
Broker	Broker company offered the tea for sale at the auction. Broker includes the tea on the auction Catalogue	New property (selected from registered brokers)
Auction Sale Type	The type of auction where the tea invoices are offered. i.e Primary or Secondary auctions	New property (Selected from Sale Types)
Remarks	Remarks contain any free form text for the Dispatch Summary.	New property

4.2.3.2 Prerequisite

1. Tea allocations can only be enabled after tea weight note is generated by the producer warehouse.

4.2.3.3 Functional Requirements

Feature Requirements: Tea Allocations (FR-TA)

Feature ID	Feature Name	Feature Description
FR-TA-1	Allocate Teas	The system shall enable producers to select teas for allocations to brokers
FR-TA-2	Tea Allocation Number	The System will generate a unique Tea Allocation Number to identify individual producers' allocations to Broker.
FR-TA-3	Update/Recall Tea Allocations	The system shall enable the producer update/recall tea allocations from brokers before the set time
FR-TA-4	View/Track/ Reconcile Tea Allocations	The system shall allow the producer track and reconcile tea allocations
FR-TA-5	Import Tea Allocations	The system shall provide EJB based API services to be called by Producer system to import information of teas receipt. Another option of updating the information through standard excel upload format

4.2.3.4 Notifications

1. Upon generation of Tea Allocation Number, notifications will be send to Producer admin, Producer user and Broker.

4.2.4 Pre-Auction Catalogue

4.2.4.1 Description and Process Flow

Broker creates Pre-Auction Catalogue, otherwise known as closed catalogue, based on tea allocations from the producers. All teas that have been offered to a particular auction sale are given lot numbers. These lot numbers can be reorder based on Broker choice. Once the Pre-Auction Catalogue is closed, no more allocations (new/modification) can be done. The following properties are required for Pre-Auction Catalogue:

Property Name	Description	Comment
Sale Number	Auction sale number uniquely identifies an auction as defined by the auction organizer	New property
Sale Date	This is the date when the auction happens	New property
Warehouse-godown	Warehouse – godown where the tea is stored	From Producer Warehouse godown Tea Receive
Lot	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.	New property
Grade	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1	From Producer Tea Dispatch
Invoice	Uniquely identifies the batch of tea packed at the producer	From Producer Tea Dispatch
Packages	Number of bags per Invoice / batch	From Producer Warehouse Tea Receive
Packaging Type	Type of packaging e.g. bags	From Producer Warehouse Tea Receive
Kgs Per Package	Number of kgs per package e.g. kgs per bag	From Producer Warehouse Tea Receive
Net Weight	Net Weight of the invoices/batch	From Producer Warehouse Tea Receive
Comment	Comment contains any free form text for the lot in the catalogue	New property

4.2.4.2 Prerequisite

4.2.4.3 Functional Requirements

Feature Requirements: Pre-Auction Catalogue (FR-PAC)

Feature ID	Feature Name	Feature Description
FR-PAC-1	Generate Pre-Auction Catalogue	The system shall enable the broker to generate Pre-Auction catalogue based on allocated teas

FR-PAC-2	Update/Edit Pre-Auction Catalogue	The system shall allow broker to edit/update Pre-catalogue before closing/publishing
FR-PAC-3	Reorder Pre-Auction Catalogue	The system shall allow broker to reorder the lots in the pre-auction catalogue
FR-PAC-4	Close/Publish Pre-Auction Catalogue	The system shall enable the broker to close/publish Pre-Auction catalogue
FR-PAC-5	Search/View Closed Pre-Auction Catalogue	The system shall allow member users to search/view closing catalogues
FR-PAC-6	Log Tea samples	The system shall enable broker to log and search tea samples. For Logging the samples, broker will have to choose Invoice and select the list of buyers, it is send to. System can track samples based on brokers, invoice, Buyers.
FR-PAC-7	Marking out lots for private sales	The system shall enable brokers to mark certain out-lots as “Sold Privately”. This will remove the Out lot from future tracking under Auction or Post auction process.
FR-PAC-8	Import Pre-Auction Catalogue	The system shall provide EJB based API services to be called by Broker system to import information of teas receipt. Another option of updating the information through standard excel upload format

4.2.4.4 Notifications

1. Upon generation of Pre-Auction catalogue, notifications will be send to Producer admin, Producer user, EATTA admin and Buyers.

4.2.5 Amend Pre-Auction Catalogue

4.2.5.1 Description and Process Flow

The broker will carry out any necessary amendments to the closed catalogue. This includes withdrawing and recalling lots to the catalogue.

4.2.5.2 Prerequisite

4.2.5.3 Functional Requirements

Feature Requirements: Amend Pre-Auction Catalogue (FR-APC)

Feature ID	Feature Name	Feature Description
FR-APC-1	Update Pre-Auction Catalogue	The system shall enable the broker to amend details of the Pre-Auction catalogue
FR-APC-2	Withdraw lot from Pre-Auction Catalogue	The system shall enable the broker to withdraw a lot from the Pre-Auction catalogue
FR-APC-3	Re-publish Pre- Auction Catalogue	The system shall allow the broker approve and re-publish amended catalogue

4.2.5.4 Notifications

1. Upon updating of Pre-Auction catalogue, notifications will be send to Producer admin, Producer user, EATTA admin and Buyers.

4.2.6 Add valuations and taster's comments to Pre-Auction Catalogue

4.2.6.1 Description and Process Flow

Broker adds valuations to lots in a catalogue. The prices from the preceding auction are a major determinant of the value of each and every lot in the pre-auction catalogue. Broker also adds taster's comments, in the taster comment field, on lots in the catalogue.

4.2.6.2 Prerequisite

4.2.6.3 Functional Requirements

Feature Requirements: Add valuations and taster's comments to Pre-Auction Catalogue (FR-AVP)

Feature ID	Feature Name	Feature Description
FR-AVP-1	Add valuations to pre-auction catalogue	The system shall allow the broker to add valuations to the Pre-Auction catalogue
FR-AVP-2	Enter taster's comments	The system shall allow the broker to enter taster's comments on lots in the Pre-Auction Catalogue. The taster's comment is solely for the Broker.
FR-AVP-3	Enable / Disable valuation and taster's comment visibility to Producer	System will provide an option to Broker to enable / disable taster's comments and valuation to producer.
FR_AVP-4	Import valuations and taster's comments	The system shall provide EJB based API services to be called by Broker system to import information of teas receipt. Another option of updating the information through standard excel upload format

4.2.6.4 Notifications

1. Upon updating of valuation, notifications will be send to Producer admin, Producer user if the setting to notify will be enabled by Broker.

4.2.7 Valuation Catalogue

4.2.7.1 Description and Process Flow

The broker user shall submit the ~~sale~~ valuation catalogue. Once the valuations and taster's comments have been entered, the pre-auction catalogue becomes the valuation catalogue. Once submitted, the Auction Admin publishes the ~~sale~~ valuation catalogues and becomes available to members of trade for viewing and comparison purposes. The taster's comments are not displayed to anyone except the broker.

4.2.7.2 Prerequisite

1. Valuation catalogue format should be standardize across Producers

4.2.7.3 Functional Requirements

Feature Requirements: Valuation Catalogue (FR-VC)

Feature ID	Feature Name	Feature Description
FR-VC-1	Submit valuation Catalogue	The system shall enable the broker submit valuation catalogue
FR-VC-2	Publish valuation catalogues	The system shall allow the Auction Admin to publish valuation catalogues
FR-VC-3	Search and view valuation Catalogues	The system shall enable member users to search/view valuation catalogues
FR-VC-4	Compare valuation Catalogues	The system shall enable member users compare valuation catalogues

4.2.7.4 Notifications

1. Upon submission of Valuation catalogue, notifications will be send to EATTA Admin.
2. Once Valuation catalogue is published by EATTA admin, notifications will be send to Producer admin, Producer user, EATTA admin and Buyers.

4.2.8 Buyer Valuations

4.2.8.1 Description and Process Flow

Buyers shall have an opportunity to enter their own offline valuations on lots in the published Sale valuation Catalogues. These valuations should only be visible to themselves. This will guide them when bidding for the teas at the auction. Buyers shall also enter taster's comments on various lots tasted. Buyers shall select and create a gallery of teas of interest and this will be ~~displayed on a separate window~~ highlighted to them when bidding.

4.2.8.2 Prerequisite

1. Taster's comments should be standardize for all Buyer's

4.2.8.3 Functional Requirements

Feature Requirements: Buyer Valuations (FR-BV)

Feature ID	Feature Name	Feature Description
FR-BV-1	Enter buyer valuations	The system shall enable the buyer to enter valuations on lots of interest
FR-BV-2	Enter buyer taster's comments	The system shall allow the buyer to enter taster's comments on lots
FR-BV-3	Create gallery of favorite teas	The system shall enable the buyer select and create a gallery of favorite teas from the Catalogue

4.2.8.4 Notifications

Upon updating of Valuation by Buyer, system will notify the Buyer admin.

4.3 Auction Features

The Auction features consists of the Auction Module which starts from EATTA admin creating the auction floor.

The Methods of Auction will be Sequence Based (for within compound auction) and Timing based (for outside compound auction).

Sequence Based Auction:

A Sequence based Auction is one whereby Auction Admin chooses the sequence or order of Broker based on existing rotation policy.

On the day of the auction, the Broker will login to system and click on “**START AUCTION**”. System will check for his sequence number and then will start the auction.

The system will display the list of lots for auction starting with 1st lot in the broker’s catalogue. The time duration for each lot will be 30 seconds (configurable). Buyers can bid during this 30 seconds time period. When a Buyer (say X) bids, the booking period is set at 10 Seconds (configurable). if no bidder bids within that 10 seconds then Buyer (X) wins.

Similarly if a bidder (Y) had bid, then system gives another 10 seconds to all buyers.

Similarly the auction continues. After Lot 1 is over, auction moves to Lot 2.

In cases, where no bidder are showing interest to bid, then Broker can reduce the base price for that lot within the stipulated 30 seconds to attract buyers else as soon as 30 seconds is elapsed, system will update the lot as an OUT lot.

Timing Based Auction:

A timing based Auction is one whereby Auction Admin chooses the start time of the Auction as well as sequence of the brokers.

System will then derive the slots of auctions for the broker’s based on a formula as listed below:

Ex: Auction admin sets the Auction to start at 7:30 AM with Broker A followed by Broker B (rotation) and system will derive the timing as such.

Broker	Lots Count	Time needed	Auction Start time	Auction End Time
Broker A	100	100*30secs = 3000 Secs = 50 Mins + Grace Period 20 mins (20 mins / 100 lots)	7:30	8:40
Broker B	150	150*30Secs = 4500 secs = 75 mins + Grace Period 30 mins (20 mins / 100 lots)	8:45	10:30
Broker C	75	75*30Secs = 2250 secs = 38 mins + Grace	10:35	11:28

		Period 15 mins (20 mins / 100 lots)		
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After this on the time as mentioned in the above setting system will auto start auction for the respective buyer (A) catalogue.

The system will display the list of lots for auction starting with 1st lot in the broker's catalogue. The time duration for each lot will be 30 seconds (configurable). Buyers can bid during this 30 seconds time period. When a Buyer (say X) bids, the booking period is set at 10 Seconds (configurable). If no bidder bids within that 10 seconds then Buyer (X) wins.

Similarly if a bidder (Y) had bid, then system gives another 10 seconds to all buyers.

Similarly the auction continues. After Lot 1 is over, auction moves to Lot 2.

In cases, where no bidder are showing interest to bid, then Broker can reduce the base price for that lot within the stipulated 30 seconds to attract buyers else as soon as 30 seconds is elapsed, system will update the lot as an OUT lot.

If there is a scenario whereby there are few lots left to be auctioned and the time period fixed has elapsed then all the said lots will move to a consolidated Lots (Pending Lots) section.

The Pending Lots section will start only after all Brokers sequence has finished. The process of auctions of all Pending Lots will work as explained above.

Split Lot

As per the EATTA rule 34, For CTC Main Grades, the minimum quantity of packages for a lot will be 40, and for Secondary Grades, the minimum quantity of packages for a lot will be 20. There will be no division of lots consisting of for 40 packages, however, lots of 60 packages can be divided between two Buyers and lots of 80 packages or more, among three Buyers.

During eAuction, the system will work in the following manner:

For Lot of 60 packages,

1. If there is a buyer (X) who bids, say 2.5 \$ and if no one else bids then Buyer (X) wins the entire 60 packages.
2. If another buyer (Y) also bids the same price, 2.5 \$ then system will give Buyer(X) 40 and buyer (Y) 20.
3. If another buyer (Z) also bids the same price, 2.5 \$ then system will give Buyer(X) 20 and buyer (Y) 20 and buyer (Z) 20.
4. System will not allow any other bidder to quote 2.5 \$. They may bid more than 2.5

\$. For Lot of 80 packages,

5. If there is a buyer (X) who bids, say 2.5 \$ and if no one else bids then Buyer (X) wins the entire 80 packages.
6. If another buyer (Y) also bids the same price, 2.5 \$ then system will give Buyer(X) 60 and buyer (Y) 20.
7. If another buyer (Z) also bids the same price, 2.5 \$ then system will give Buyer(X) 40 and buyer (Y) 20 and buyer (Z) 20.
8. If another buyer (A) also bids the same price, 2.5 \$ then system will give Buyer(X) 20 and buyer (Y) 20 and buyer (Z) 20 and buyer (A) 20.
9. System will not allow any other bidder to quote 2.5 \$. They may bid more than 2.5 \$.

Single Sign-on

1. In order to protect from unwanted spikes during the peak period of auction, system will allow only a single session of a user credential to work.
2. If the User (Buyer A) has already logged in and is again trying to login, then system will warn him that there is already an active session of that user.
3. System will then ask him whether he wants to Kill the other session or logout himself.
4. If the user (Buyer A) Kills the other session, then the previous logged in user (Buyer A) will be logged out and the current user will continue to work.
5. If the user (Buyer A) logs out then there will be no effect on the active session of previous logged in user (Buyer A).
6. This feature will not be limited to only Buyer but to EATTA Admin, Producer Admin, Producer User, Broker Admin and Broker User as well during the auction days.
7. The login will also be restricted to OTP based login.

Configurable Settings:

1. Settings in system to start an auction as Sequence based / timing based.
2. Settings in system to display X number of lots to buyers.
3. Settings in system to change each Lot time limit for that day's auction. Default is 30 seconds.
4. Settings in system to change booking period after a buyer bid. Default is 5 seconds.
5. Settings in system to change grace period. Default is 20 mins per 100 lot or 0.2mins/lot.
6. Settings in system to change GAPS between 2 catalogue auctions. Default is 5 mins.
7. Settings in system to maintain anonymity of Buyer. Default is set as "Not Visible".
8. Settings in system to set increment / decrement values (+10 cents, +20 cents etc).
9. Settings in system to show 1 lot / multiple lots for auction at certain time.
10. Settings in system to allow multiple buyer users from one entity.

4.3.1 Auction Administration

4.3.1.1 Description and Process Flow

Auction Admin (AA) will create auctions and allocate them sale numbers and dates. Buyer bidding floors shall also be created by the Auction Admin as well as broker auction floors based on rotation and auction rules. AA will also set auction configurations such as the auction type, auction session time, lot time, booking period, grace period, Gaps between Auction catalogue, Increment and decrement list of values, buyer anonymity/known options.

4.3.1.2 Prerequisite

1. List of configurable Settings to be finalized.

4.3.1.3 Functional Requirements

Feature Requirements: Auction Administration (FR-AA)

Feature ID	Feature Name	Feature Description
FR-AA-1	Create Auction details	The system shall enable the Auction Admin to create Sale No and Sale Date information
FR-AA-2	Create Buyer bidding floor	The system shall enable the Auction Admin to set/create buyer bidding floors
FR-AA-3	Create Broker bidding floor	The system shall enable the Auction Admin to set/create broker auction floors based on rotation and auction rules
FR-AA-4	Set Auction Type	The system shall allow the Auction Admin to set auction type: 1. Sequence Based Auction 2. Timing based auction
FR-AA-5	Display lots per catalogue	The system shall allow the Auction Admin to set The count of lots to be displayed in a catalogue to all buyers.
FR-AA-6	Set Lot time out	The system shall enable the Auction Admin set Each lots time limit for that day's auction. Default is 30 seconds
FR-AA-7	Set booking period	The system shall enable the Auction Admin to change booking period after a buyer bid. Default is 5 seconds
FR-AA-8	Set Grace Period	The system shall enable the Auction Admin to change grace period. Default is 20 mins per 100 lot or 0.2mins/lot
FR-AA-9	Set buyer anonymity or known	The system shall enable the Auction Admin to set buyers anonymous or known

FR-AA-10	Set Gaps between auctions	The system shall enable the Auction Admin to change GAPS between 2 catalogue auctions. Default is 5 mins
FR-AA-11	Set Increment / Decrement Values	The system shall enable the Auction Admin to set increment / decrement values (+10 cents, +20 cents etc).
FR-AA-12	Single Sign on	The System shall trigger Single Sign on Functionality during auction process

4.3.1.4 Notifications

4.3.2 e-Auction system – Broker floor

4.3.2.1 Description and Process Flow

Broker shall start the auction based on rotation and auction rules. Broker shall view and monitor the bidding process, adjust ask price either downwards or upwards. Broker can lower price to attract more buyers if no buyer is showing any interest for a Lot. Lots without any bids will automatically become out lots when the Lot time is elapsed.

4.3.2.2 Prerequisite

4.3.2.3 Functional Requirements

Feature Requirements: Broker Floor (FR-BF)

Feature ID	Feature Name	Feature Description
FR-BF-1	Start the Auction	The system shall enable the broker to log into auction floor and START the auction (Sequence based auction)
FR-BF-2	View bidding process	The system shall allow the broker to view bidding progress
FR-BF-3	Adjust ask price	The system shall allow the broker to adjust ask price upwards or downwards
FR-BF-4	Single Sign on	The System shall trigger Single Sign on Functionality during auction process

4.3.2.4 Notifications

4.3.3 e-Auction system – Buyer floor

4.3.3.1 Description and Process Flow

The buyer will log into the bidding floor, view the lots for sale and place bids. The buyer shall adjust the bid upward when he/she is outbid. When bidding, the buyer shall an indicator to display favorite lots. The buyer shall get his share of split lots based on the system logic provided above.

The Buyer dashboard will be segregated to sections.

1. Live Auction details
2. Favorite Auction List
3. Buyer’s Current auction details
 - a. Total Lots won
 - b. Total Qty Won
 - c. Total Money Spent
 - d. Breakdown by Grade
4. Auction history

The buyers will have 2 to 3 user logins for Auction users. This is based on EATTA setting for each buyer. Based on this the Buyer Entity admin must create the allowed number of users.

Once users are created, system shall allow Admin to segregate Lots for upcoming auctions for these users. These can be segregated by Grade, by Brokers, or by lots. Based on this, on the day of auction, the users will see the “Live Auction details” based on the Lots which is assigned to them. If no setting is set by Buyer Admin, then the first user will only see all list of auctions and no other will see the list.

4.3.3.2 Prerequisite

1. eAuction guideline need to be released as an EATTA rule.

4.3.3.3 Functional Requirements

Feature Requirements: Buyer Floor (FR-BYF)

Feature ID	Feature Name	Feature Description
FR-BYF-1	Log in to buyer bidding floor	The system shall enable the buyer to log in to their bidding floor, view the teas for sale and asking price
FR-BYF-2	Enter bids	The system shall allow the buyer to enter their bid for teas per lot
FR-BYF-3	Adjust bids	The system shall allow the buyer to adjust their bid price upwards

FR-BYF-5	Display highest bid	The system shall allow the buyer to view highest bid for each lot
FR-BYF-6	Highlight buyer's favorite tea lots	The system shall highlight buyer's favorite tea lots
FR-BYF-7	Split lots	The buyer shall get his share of split lots based on the system logic provided above
FR-BYF-8	Single Sign on	The System shall trigger Single Sign on Functionality during auction process
FR-BYF-9	Buyer Admin Create multiple users	The system shall allow buyer admin to create multiple buyer users.
FR-BYF-10	Assign Lots	The system shall allow Buyer admin to assign lots to each buyer user based on Grade / Broker / Lots
FR-BYF-11	Buyer Dashboard	The system shall show unique dashboard to separate buyer users.

4.3.3.4 Notifications

4.3.4 e-Auction system – Producer View

4.3.4.1 Description and Process Flow

Producers shall log in and view the auction as it happens. They shall view results of their tea immediately after the auction sessions are over.

4.3.4.2 Prerequisite

4.3.4.3 Functional Requirements

Feature Requirements: Producer View (FR-BYF)

Feature ID	Feature Name	Feature Description
FR-PV-1	Producer Log in and view auction	The system shall allow the producer to log in and view auction as it happens
FR-PV-2	Display producer lots results	The system shall display the producer lots results after the auction sessions
FR-PV-2	Single Sign on	The System shall trigger Single Sign on Functionality during auction process

4.3.4.4 Notifications

4.3.5 e-Auction system – Out lots system

4.3.5.1 Description and Process Flow

When there is no interest shown in a lot during the auction, then upon expiry of the lot time, system will automatically set the lot to be an Out lot. These out lots can be bought to Re-Auction on the following day. The process of auction will still remain the same.

4.3.5.2 Prerequisite

1. EATTA must clarify on the Out lot flow.

4.3.5.3 Functional Requirements

Feature Requirements: Out lots system (FR-OS)

Feature ID	Feature Name	Feature Description
FR-OS-1	Out lots	The system will automatically set a lot to be an out lot if no interest in bids is submitted within the lot time period.
FR-OS-2	View Out lots	The system shall allow the producer and trade to view out lots
FR-OS-3	Auction Out lots	The system shall allow the broker to auction out lots
FR-OS-4	Add Out lots to a catalogue	The system shall allow the broker to add out lots to a catalog
FR-OS-5	Mark Outlots as Private Sale	The system shall allow the broker to set outlots as privately sold.

4.3.5.4 Notifications

4.3.6 e-Auction system – Auction Results

4.3.6.1 Description and Process Flow

When the auction is over, members of trade will log in and view auction results. Auction history and statistics will also be available to members. Search criteria based on auction parameters will enable the members search and view auction history in different views. Each Auctioned Lots audit trail report will also be available for view by the Trade.

4.3.6.2 Prerequisite

4.3.6.3 Functional Requirements

Feature Requirements: Auction Results (FR-AR)

Feature ID	Feature Name	Feature Description
FR-AR-1	View Auction Results	The system shall enable trade, buyers and producers to log in and view auction results
FR-AR-2	View Auction History and statistics	The system shall allow trade to log in and view auction history and statistics per broker/buyer/garden Mark/producer
FR-AR-3	View Auctioned lots Audit Trail	The system shall allow trade to log in and view the auctioned lots audit trail report.

4.3.6.4 Notifications

1. Once the Auction is over for the day, notifications will go to trade to login and view auction details.

4.4 Post-Auction Features

The Post-Auction features consists of the business module which starts from the Brokers / Producers/ Buyers / Warehouse / Admin / Bank downloading the result from the auction. The system will provide options for downloading these reports:

1. Sale Catalogue
2. Total Out lots
3. Out Lots per Producer
4. Out Lots per Producer per mark
5. Total Sale Confirmation
6. Sale confirmation per Producer
7. Sale Confirmation per producer per mark

The brokers will also be able to generate Sale invoice from the system by choosing the lot won by the buyer. These invoices will be available to be viewed by the Bank and respective buyers. The invoices will be

1. Broker-Buyer Specific invoice report
2. Buyer Specific consolidated invoice report

Payment:

Once, the Buyer makes the payment through online payment gateway and can check for payment confirmation, once payment is confirmed, a notification will go to respective brokers of that Buyer to check the online status of the payment of the invoice. Once the status of invoice shows as settled (*meaning the money is distributed between brokers and producers*), system shall allow Broker to generate the TRD document which is based on invoice.

Alternate Solution (Payment):

Once, the Buyer makes the payment to the bank. Bank will need to update status of payment for each invoice. Once the status of invoice shows as settled (*meaning the money is distributed between brokers and producers*), system shall allow Broker to generate the TRD document which is based on invoice.

Once TRD is generated, Broker can generate the Dispatch Order. This dispatch order will be available for buyer's to generate the Loading Instructions. A Loading Instruction can consist of Multiple Delivery order from the same warehouse-godown. or 1 Dispatch order can generate 1 loading instruction. This loading instruction will be needed to release tea from Producer's Warehouse to Buyer's Warehouse. The Producer warehouse will generate a Tea Release Certificate which will be the end of Tea Post Auction Process.

Pre-Requisite

1. Bank to make online payment gateway live.
2. Bank to facilitate APIs for Confirmation of Online payment (thorough Transaction number)

3. Bank to facilitate Settlement APIs to confirm payment done to brokers and producers based on Invoice.
4. Committee to finalize whether the option to check invoice status to be only with broker or can be given to Buyer as well.
5. Committee to finalize whether TRD / Delivery Order be generated by Buyer themselves or need Broker to release.

4.4.1 Sale Confirmation

4.4.1.1 Description and Process Flow

Sale confirmation is basically producer's lots results in the auction showing the buyer and the price at which the lots were sold. After auction ends, system will show this report whereby Producer can check all his lots sold or out lot details. This can be segregated Mark/Garden Wise. A producer can view other Producers sold and out lot details

4.4.1.2 Prerequisite

4.4.1.3 Functional Requirements

Feature Requirements: Sale Confirmation (FR-SC)

Feature ID	Feature Name	Feature Description
FR-SC-1	View Sale confirmation	The system shall enable the producer/buyer view sale confirmation automatically as Generated by the system after eAuction ends.

4.4.1.4 Notifications

1. Once the Auction is over for the day, notifications will go to trade to login and view auction details.

4.4.2 Sale Invoice

4.4.2.1 Description and Process Flow

Brokers will generate sale invoices from the system by choosing the lot won by the buyer and submit to buyers to enable them arrange for payment of tea bought in the auction. The invoices are lot wise. (See 4.6 Requirement Specifications for Business Documents and Notifications BT-1.6 – Sale Invoice)

4.4.2.2 Prerequisite

4.4.2.3 Functional Requirements

Feature Requirements: Sale Invoice (FR-SI)

Feature ID	Feature Name	Feature Description
FR-SI-1	Generate Sale Invoice	The system shall enable the broker to generate an invoice based on lot (1 Lot = 1 Invoice)
FR-SI-2	View Sale Invoice	The system shall allow the buyer to view and get Invoice. The Buyer can get the consolidated sale invoice report too.
FR-SI-3	Download Sale invoice list	The system shall allow the bank to login and get the entire invoice data for payment settlement
FR-SI-4	Get Payment status of each invoice	The system shall allow Brokers/Producers/Buyers to get the status update of each invoice.

4.4.2.4 Notifications

1. Once the Broker has generated the invoices, notifications will go to respective Producers, Broker Admin, respective Buyers and Bank to login and view invoices details.

4.4.3 Issue settlement Instructions

4.4.3.1 Description and Process Flow

The producer will set and issue settlement instructions per Sale Invoice through the system and thereafter the bank will respond to that through payment settlement. Producer can always check status of payment through each Sale Invoice Payment status.

4.4.3.2 Prerequisite

1. All producers must have bank account.

4.4.3.3 Functional Requirements

Feature Requirements: Settlement Instructions (FR-SEI)

Feature ID	Feature Name	Feature Description
FR-SEI-1	Issue payment instructions	The system shall enable the producer to set payment parameters/fees and instructions per Sale invoice
FR-SEI-2	View Payment Instructions	The system shall allow Brokers / bank and respective Producer to view Payment Instruction.
FR-SEI-3	Download Payment Instruction	The System shall allow bank user to download the payment instruction of each invoice.
FR-SEI-4	Get Payment status of each invoice	The system shall allow Brokers/Producers/Buyers to get the status update of each invoice.

4.4.3.4 Notifications

1. Once the producers has set the payment instructions per Sale Invoice , notifications will go to respective Broker Admin and Bank to login and view details.

4.4.4 Bank Access and Payment Confirmation

4.4.4.1 Description and Process Flow

Banks shall log into the iTTS system and access settlement instructions from the producers. Banks shall also access invoices and post-sale catalogue. After buyers have made payments to the Sale Collection Account online, banks will transfer payments as per the settlement instructions and update payment confirmations per Sale Invoice.

4.4.4.2 Prerequisite

4.4.4.3 Functional Requirements

Feature Requirements: Bank Access and Payment Confirmation (FR-BAPC)

Feature ID	Feature Name	Feature Description
FR-BAPC-1	Access settlement instructions	The system shall allow the bank to log in and get settlement instructions
FR-BAPC-2	Access Sale Catalogue	The system shall enable the bank to access the sale catalogue
FR-BAPC-3	Access sale invoices	The system shall allow the bank to get Sale invoices
FR-BAPC-4	Confirm Settlement of tea	The system shall enable the bank to confirm payment of teas per Sale Invoice
FR-BAPC-5	View payment confirmation	The system shall allow the producer, Buyer and broker to view/get payment confirmation based on each Sale Invoice
FR-BAPC-6	Interface with bank system	The system shall provide EJB based API services to be called by Bank system to update payment information. Another option of updating the information through standard excel upload format

4.4.4.4 Notifications

4.4.5 Tea Release Document

4.4.5.1 Description and Process Flow

Once payment has been confirmed, broker shall generate Tea Release Document (TRD). The TRD shall be authenticated and made available to the buyer. TRD will be invoice specific. (See 4.6 Requirement Specifications for Business Documents and Notifications BT-1.7 – Tea Release Document)

4.4.5.2 Prerequisite

1. TRD will generate for those invoice whose payment status shows confirmed.

4.4.5.3 Functional Requirements

Feature Requirements: Tea Release Document (FR-TRD)

Feature ID	Feature Name	Feature Description
FR-TRD-1	Generate TRD	The system shall enable the broker to generate Tea Release Document (TRD) based on payment confirmation
FR-TRD-2	Authenticate TRD	The system shall authenticate the TRD and make it available to the buyer i.e TRD will generate for those invoice whose payment status shows confirmed
FR-TRD-3	View TRD	The system shall allow Buyer to view and download the TRD.

4.4.5.4 Notifications

1. Once the Broker generates the TRD, Notification will be send to the Buyer admin and Buyer user.

4.4.6 Delivery Order

4.4.6.1 Description and Process Flow

Once TRD is generated, broker shall generate DO against that TRD. The DO shall be Invoice specific and made available to the buyer. (See 4.6 Requirement Specifications for Business Documents and Notifications BT-1.7 – Delivery Order)

4.4.6.2 Prerequisite

2. DO will generate for those invoice whose TRD is generated.

4.4.6.3 Functional Requirements

Feature Requirements: Delivery Order (FR-DO)

Feature ID	Feature Name	Feature Description
FR-DO-1	Generate DO	The system shall enable the broker to generate Delivery Order (DO) based on Tea Release Document (TRD)
FR-DO-2	Authenticate DO	The system shall authenticate the DO and make it available to the buyer i.e DO will generate for those invoice whose TRD is generated.
FR-DO-3	View DO	The system shall allow Buyer to view and download the DO.

4.4.6.4 Notifications

2. Once the Broker generates the DO, Notification will be send to the Buyer admin and Buyer user.

4.4.7 Loading Instructions

4.4.7.1 Description and Process Flow

Buyer will generate loading instructions by selecting from list of DO and send to the producer warehouses. Loading instructions shall be accompanied by a copy of TRD and DO. 1 Loading instruction can be generated from 1 DO or 1 Loading Instruction can be generated from multiple DO provided all the DO have same warehouse-godown.

4.4.7.2 Prerequisite

4.4.7.3 Functional Requirements

Feature Requirements: Loading Instructions (FR-LI)

Feature ID	Feature Name	Feature Description
FR-LI-1	Generate Loading Instructions	The system shall allow the buyer to generate Loading instructions to warehouse on handling of teas bought. 1 Loading instruction can be generated from 1 DO or 1 Loading Instruction can be generated from multiple DO provided all the DO have same warehouse-godown.
FR-LI-2	Double Verification	The Loading instruction generated by Buyer User will be send to Buyer Admin for approval.
FR-LI-3	View TRD,DO, Loading Instruction by buyers, Producer Warehouse	The system shall enable the TRD, DO and Loading Instruction available to the producer warehouse for release of teas
FR-LI-4	Import loading instructions from buyer system	The system shall provide EJB based API services to be called by Buyer system to update Loading Instruction. Another option of updating the information through standard excel upload format

4.4.7.4 Notifications

- Once the Loading instruction is generated, Notification will be send to the Buyer admin and Buyer user and producer warehouse.

4.4.8 Release of Tea – Producer Warehouse

4.4.8.1 Description and Process Flow

Upon receiving loading instructions, TRD and Delivery Order producer warehouse shall release tea as instructed by the buyer.

In cases, where Producer warehouse and Buyer Warehouse are the same entity then the producer warehouse will do a Book transfer. In this case, no weighing of Tea is done and the information from the loading instruction is passed from Producer warehouse to buyer warehouse.

Release Certificate will be given to the buyer. This is the end of Tea Post Auction Process.

4.4.8.2 Prerequisite

1. Warrant description to be standardized.

1.1.1.1 Functional Requirements

Feature Requirements: Release of Tea – Producer Warehouse (FR-RTPW)

Feature ID	Feature Name	Feature Description
FR-RTPW-1	Permission of Release	The system shall allow Producer Warehouse admin to enter the loading instruction number and allow for release. Upon allow, the loading instruction information will be visible to Producer Warehouse user.
FR-RTPW-2	Producer warehouse release teas	The system shall enable the producer warehouse to confirm, release and dispatch teas against buyer loading instructions and TRD by updating outgoing weight and Other details.
FR-RTPW-3	Track all incoming and outgoing teas	The system shall allow the producer warehouse to report and track all incoming and outgoing Teas
FR-RTPW-4	Book Transfer	System shall allow Book Transfer only if Produce warehouse and Buyer warehouse are same. in this the entire information of that Loading instruction will be transferred from Producer warehouse to buyer warehouse.

FR-RTPW-5	Release Certificate	System shall allow Producer warehouse to generate a release certificate to the Buyer warehouse
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1.1.1.2 Notifications

1. Once the Release of Tea is done by the Producer Warehouse, Notification will be send to the Buyer admin and Buyer user and producer admin and Producer warehouse.

2. Requirements and Content for Business Documents and notifications

2.1 Business Transaction – Tea Dispatch

Form	Business Transaction
Form Id	BT-1.0- Tea-Dispatch
Identifier	Barcode
Description	Provides a list of teas sent to warehouse by the producer and requests the warehouse to confirm receipt, where the warehouse is expected to weigh the teas and confirm the weight and quantity delivered.
EATTA Rule(s)	Pre-sale regulations 13 and 14
Pattern	Send / Confirm
Business activities and associated authorized roles	Product-Dispatch
Constraints	1. All T-Paks must be marked 2. The weight on The Factory Dispatch Note should not exceed The total net weight.
Requesting Partner Type	Producer/Vendor
Requesting Activity Role	Product Dispatch
Requesting Activity Document	Factory Dispatch Note
Responding Partner Type	Warehouse
Responding Activity Role	Warehouse Tea Receipt
Responding Activity Document(s)	Tea Arrival Advice Warehouse Tally Sheet

2.2 Business Transaction – Tea Weight Note

Form	Business Transaction
Form Id	BT-1.2 - Tea Weight Note
Identifier	Barcode
Description	This indicates the individual pallet tea weight, including any excess/short weight. Tea Weight Note is the basis of the catalogued weight and does not exceed the weight indicated on the packaging.
EATTA Rule(s)	Pre-Sale Regulations 15,16
Pattern	Notification
Business activities and associated authorized roles	Pre-auction cataloguing
Constraints	Must be made available by a week before sale
Requesting Partner Type	Producer Warehouse
Requesting Activity Role	Tea Warranty
Requesting Activity Document	Tea Weight Note
Responding Partner Type	Broker
Responding Activity Role	Product Catalogue
Responding Activity Document(s)	Pre-Auction Catalogue

2.3 Business Transaction – Pre-Auction Catalogue/Closed Catalogue

Form Id	BT-1.3 - Pre-Auction Catalogue/Closed Catalogue
Identifier	
Description	Provides the accepted list of offered teas for sale. Teas offered for sale are allocated auction sale number and lot number. Pre-Auction catalogue or closed catalogue does not have valuation.
EATTA Rule(s)	Pre-sale regulations 18
Pattern	Send / Confirm
Business activities and associated authorized Roles	Product-Catalogue
Constraints	<ul style="list-style-type: none"> - Pre-Auction catalogue shall close on Thursday at 1700h East African Time - Closed catalogue should be available to members by Friday noon
Requesting Partner Type	Broker
Requesting Activity Role	Generate Pre-Auction Catalogue
Requesting Activity Document	Pre-Auction Catalogue
Responding Partner Type	Members
Responding Activity Role	Auction preparation, Buyer-Tea Tasting, Broker-add Valuation
Responding Activity	NONE

2.4 Business Transaction – Auction Catalogue/Evaluation Catalogue

Form Id	BT-1.4 – Auction Catalogue
Identifier	
Description	This provides the catalogue to be used at the auction. It is basically Auction catalogue with valuation.
EATTA Rule (s)	Pre-Sale Regulations 27
Pattern	Notification
Business activities and associated authorized roles	Present-Auction Catalogue Members
Constraints	Auction catalogue should be available to members including the secretariat the Friday prior to the auction, by 1200h noon.
Requesting Partner Type	Broker
Requesting Activity Role	Broker
Requesting Activity Document	Invoice
Responding Partner Type	Members
Responding Activity Role	Buyer – Prepare for auction, enter internal valuations Auction Admin- upload all broker sale catalogues
Responding Activity Document/Notification	NONE

2.5 Business Transaction – Sale Catalogue

Form Id	BT-1.5 – Sale Catalogue
Identifier	
Description	This provides the sale catalogue with buyer indicated and the value at which the tea lots were sold at the auction.
EATTA Rule (s)	Post-Sale Regulations 43
Pattern	Notification
Business activities and associated authorized roles	Present – Post-Sale Catalogue Broker
Constraints	The Post-Sale catalogue should be available to members by 1000hrs the following day of the sale
Requesting Partner Type	Broker
Requesting Activity Role	Broker
Requesting Activity Document	Sale Catalogue
Responding Partner Type	Members
Responding Activity Role	Buyer – Prepare to make payment
Responding Activity Document/Notification	NONE

2.6 Business Transaction – Sale Invoice

Form Id	BT-1.6 – Sale Invoice
Identifier	Barcode
Description	This is the brokers’s invoice to the buyer for teas whose bids have been accepted by broker
EATTA Rule (s)	Post-Sale Regulations 43
Pattern	Notification
Business activities and associated authorized roles	Present-Invoice Warehouse
Constraints	<ul style="list-style-type: none"> ■ The invoice shall reflect the sale and Tea Weight Note details
Requesting Partner Type	Broker
Requesting Activity Role	Broker
Requesting Activity Document	Invoice
Responding Partner Type	Buyer
Responding Activity Role	Payor – Make payment to Payee/Producer Payee Bank- Receive Payment /Confirm Payment
Responding Activity Document/Notification	Payment confirmation

2.7 Business Transaction – Tea Release Document

Form Id	BT-1.7 – Tea Release Document (TRD)
Identifier	Barcode
Description	This document is generated by the broker after payment confirmation has been received. It authorizes the buyer to make arrangements and collect tea, he/she has bought and paid for, from the producer warehouses.
EATTA Rule (s)	Post-Sale Regulations 50
Pattern	Notification
Business activities and associated authorized roles	Present-TRD Broker
Constraints	TRD is generated only after payment confirmation from the bank
Requesting Partner Type	Broker
Requesting Activity Role	Broker
Requesting Activity Document	Tea Release Document
Responding Partner	Buyer
Type	
Responding Activity Role	Buyer – Prepare Delivery Order
Responding Activity	Delivery order
Document/Notification	

2.8 Business Transaction – Delivery Order

Form Id	BT-1.8- Tea-Delivery Order
Identifier	Barcode
Description	Once TRD is generated, broker shall generate DO. The DO shall be Invoice specific and made available to the buyer
EATTA Rule(s)	Pre-sale regulations 50 and 52
Pattern	Send / Confirm
Business activities and associated authorized roles	Present Broker-Delivery Order
Constraints	1. All DOs will be invoice specific
Requesting Partner Type	Broker
Requesting Activity Role	Broker
Requesting Activity Document	Delivery Note
Responding Partner Type	Buyer
Responding Activity Role	Buyer – Prepare Loading Sheet
Responding Activity Document(s)	

2.9 Business Transaction – Loading Instruction

Form Id	BT-1.9- Tea-Loading Instruction
Identifier	Barcode
Description	Buyer will generate loading instructions and send to the producer warehouses. Loading instructions shall be accompanied by a copy of TRD and DO.
EATTA Rule(s)	
Pattern	Send / Confirm
Business activities and associated authorized roles	Present Buyer- Loading Instruction
Constraints	1 Loading instruction can be generated from 1 DO or 1 Loading Instruction can be generated from multiple DO provided all the DO have same warehouse-godown.
Requesting Partner Type	Buyer
Requesting Activity Role	Buyer – Receive Tea
Requesting Activity Document	Loading Instruction
Responding Partner Type	Producer Warehouse
Responding Activity Role	Producer Warehouse – Prepare Release certificate
Responding Activity Document(s)	

2.10 Business Transaction – Release Certificate

Form Id	BT-2.0- Release Certificate
Identifier	Barcode
Description	Producer warehouse will release tea when they receive TRD, DO and Loading Instruction. Along with this they will send Release certificate
EATTA Rule(s)	
Pattern	Send / Confirm
Business activities and associated authorized roles	Present Warehouse- Release Certificate
Constraints	It will contain the warrant which will transfer from Producer Warehouse to Buyer.
Requesting Partner Type	Producer Warehouse
Requesting Activity Role	Producer Warehouse – Release Tea
Requesting Activity Document	
Responding Partner Type	Buyer
Responding Activity Role	
Responding Activity Document(s)	

3. Content Description

3.1 Content Description – Tea Dispatch

Form Id:		BT-1.0- Tea-Dispatch		
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Garden	0..1	Text	TBD	The factory or producer where the tea has been produced and packaged
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Packages	0..1	Number	TBD	Number of bags per Invoice / batch
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Gross Weight	0..1	Number	TBD	Total weight of each invoice including the tare weight
Packaging Date	0..1	Date	TBD	Date when the invoice/batch was packed
Dispatch Date	0..1	Date	TBD	Date when the dispatch to warehouse is made
Kgs Per Package	0..1	Number	TBD	Number of kgs per package e.g. kgs per bag
Warehouse	0..1	Text	TBD	Destination – warehouse where the tea will be delivered to on dispatch which is usually a producer warehouse.
Remarks	0..1	Text	TBD	Remarks contain any free form text for the Dispatch Summary.

3.2 Content Description – Tea Weight Note

Form: Content Description				
Form Id:	BT-1.2- Tea Weight Note			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Warranty Number	0..1	Number	TBD	
Weight Note Date	0..1	Date	TBD	This is the date when the Tea Weight Note is created
Garden	0..1	Text	TBD	The factory or producer where the tea has been produced and packaged
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Packages	0..1	Number	TBD	Number of bags per Invoice / batch
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Gross Weight	0..1	Number	TBD	Total weight of each invoice including the tare weight
Warehouse-godown	0..1	Text	TBD	Destination – warehouse-godown where the tea is delivered to on dispatch which is usually a producer warehouse and its godown
Broker	0..1	Text	TBD	Broker company issued with the Tea Weight Note

3.3 Content Description – Pre-Auction Catalogue/Closed Catalogue

Form: Content Description				
Form Id:	BT-1.3- Pre-Auction Catalogue/Closed Catalogue			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Sale Number	0..1	Number	TBD	Auction sale number uniquely identifies an auction as defined by the auction organizer
Sale Date	0..1	Date	TBD	This is the date when the auction happens
Warehouse-godown	0..1	Text	TBD	Warehouse & godown where the tea is stored
Lot	0..1	Number	TBD	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Packages	0..1	Number	TBD	Number of bags per Invoice / batch
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Kgs Per Package	0..1	Number	TBD	Number of kgs per package e.g.
				kgs per bag
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Comment	0..1	Text	TBD	Comment contains any free form text for the lot in the catalogue.

3.4 Content Description – Auction Catalogue/Evaluation Catalogue

Form: Content Description

Form Id:	BT-1.4 – Sale Catalogue			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Sale Number	0..1	Number	TBD	Auction sale number uniquely identifies an auction as defined by the auction organizer
Sale Date	0..1	Date	TBD	This is the date when the auction happens
Warehouse-godown	0..1	Text	TBD	Warehouse & godown where the tea is stored
Lot	0..1	Number	TBD	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Packages	0..1	Number	TBD	Number of bags per Invoice / batch
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Kgs PerPackage	0..1	Number	TBD	Number of kgs per package e.g. kgs per bag
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Value	0..1	Number	TBD	Value of the tea lot.

3.5 Content Description – Sale Catalogue

Form: Content Description

Form Id:	BT-1.5 – Post-Sale Catalogue			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Sale Number	0..1	Number	TBD	Auction sale number uniquely identifies an auction as defined by the auction organizer
Sale Date	0..1	Date	TBD	This is the date when the auction happens
Warehouse-godown	0..1	Text	TBD	Warehouse & godown where the tea is stored
Lot	0..1	Number	TBD	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Packages	0..1	Number	TBD	Number of bags per Invoice / batch
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Kgs Per Package	0..1	Number	TBD	Number of kgs per package e.g. kgs per bag
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Value	0..1	Number	TBD	Value of the tea lot.
Sale Price	0..1	Number	TBD	Price at which the lot is sold
Buyer	0..1	Text	TBD	Buyer who won the bid or has bought the tea
Sale Packages	0..1	Number	TBD	Number of packages bought. Packages in a lot can be shared among buyers

3.6 Content Description – Sale Invoice

Form: Content Description

Form Id:	BT-1.6 – Sale Invoice			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
Sale Number	0..1	Number	TBD	Auction sale number uniquely identifies an auction as defined by the auction organizer
Sale Date	0..1	Date	TBD	This is the date when the auction happens
Prompt Date	0..1	Date	TBD	Date when the buyer is supposed to have made payment of tea purchased and as per the sale invoice
Invoice Date	0..1	Date	TBD	Date when the Sale Invoice is created
Invoice Number	0..1	Number	TBD	The unique identifier of the Sale Invoice
Lot	0..1	Number	TBD	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Mark	0..1	Text	TBD	Represents the factory/producer/garden where the tea came from.
Warehouse-godown	0..1	Text	TBD	Warehouse & godown where the tea is stored
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Sale Packages	0..1	Number	TBD	Number of packages bought.
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Kgs Per Package	0..1	Number	TBD	Number of kgs per package e.g. kgs per bag
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Sale Price	0..1	Number	TBD	Price at which the lot is sold
Buyer	0..1	Text	TBD	Buyer who won the bid or has bought the tea
Brokerage Fee	0..1	Number	TBD	Fee charge by the broker per lot sale
Total Amount	0..1	Number	TBD	Total Amount contains the total

price for the entire invoice.

3.7 Content Description – Tea Release Document

Form: Content Description

Form Id:	BT-1.7 – Tea Release Document (TRD)			
Element/Component Name	Occurs	Data Type	Field Width	Semantic Description
TRD Number	0..1	Number	TBD	Uniquely identifies the TRD
TRD Date	0..1	Date	TBD	Date when the TRD is created
Invoice Number	0..1	Number	TBD	The unique identifier of the Sale Invoice
Sale Number	0..1	Number	TBD	Auction sale number uniquely identifies an auction as defined by the auction organizer
Sale Date	0..1	Date	TBD	This is the date when the auction happens
Warrant Number	0..1	Number	TBD	Represents the number of the warranty document that describes the details of the tea at the warehouse
Lot	0..1	Number	TBD	Uniquely identifies the lot at the auction sale. Each tea invoice is allocated a lot number for a given auction.
Invoice	0..1	Number	TBD	Uniquely identifies the batch of tea packed at the producer
Mark	0..1	Text	TBD	Represents the factory/producer/garden where the tea came from.
Warehouse-godown	0..1	Text	TBD	Warehouse & godown where the tea is stored
Grade	0..1	Text	TBD	Grade type of Tea e.g. BP, PF1, F1, PD, DUST1
Sale Packages	0..1	Number	TBD	Number of packages bought.
Packaging Type	0..1	Text	TBD	Type of packaging e.g. bags
Kgs Per Package	0..1	Number	TBD	Number of kgs per package e.g. kgs per bag
Net Weight	0..1	Number	TBD	Net Weight of the invoices/batch
Sale Price	0..1	Number	TBD	Price at which the lot is sold
Buyer	0..1	Text	TBD	Buyer who won the bid or has bought the tea

BrokerageFee	0..1	Number	TBD	Fee charge by the broker per lot sale
Total Amount	0..1	Number	TBD	Total Amount contains the total price for the entire invoice.

4. Reporting Specifications

The system shall allow the Trade to log in and access relevant reports and statistics.

4.1 Report Description – Producer

Form: Report Description

Stakeholder: Producer

Report Id:	Report Name	Objective	Description	Report Design Notes
ProdRPT-01	List of Teas dispatched	Enables tracking of teas dispatched on a given period to various warehouses	Displays list of teas dispatched from the factory on a specified time length	User to select start date, end date, grouped by destination warehouse
ProdRPT-02	Tea stock at Warehouse	Provides the producer with the stock balance of tea dispatched to the warehouse	Displays list of teas that have not been offered for sale	
ProdRPT-03	List of Tea sold	Enables tracking of teas sold over a given period of time	Displays list of teas sold on a specified time length	User to select start date, end date
ProdRPT-04	List of unpaid Teas	Enables tracking of teas that have been bought but not paid	Displays list of teas that have been bought by buyers but have yet to be paid for	

4.2 Report Description – Broker

Form: Report Description

Stakeholder: Broker

Report Id:	Report Name	Objective	Description	Report Design Notes
BrokRPT-01	List of Tea Allocations	Enables tracking of teas allocated to broker over a specified period time	Displays list of teas that have been allocated to broker over a given period	User to select start date, end date and All/factory
BrokRPT-02	List of Tea sold	Enables tracking of teas sold over a given period of time	Displays list of teas sold on a specified time length	User to select start date, end date
BrokRPT-03	List of unpaid Teas	Enables tracking of teas that have been bought but not paid	Displays list of teas that have been bought by buyers but have yet to be paid for	
BrokRPT-04	List of Out lots	Enables the broker to track out lots on a given auction	List of Teas that have been declared out lots on a given auction sale	User to select Sale Number

4.3 Report Description – Buyer

Form: Report Description

Stakeholder: Buyer

Report Id:	Report Name	Objective	Description	Report Design Notes
BuyerRPT-01	List of Tea bought	Enables tracking of teas bought over a given period of time	Displays list of teas bought on a specified time length	User to select start date, end date
BuyerRPT-02	List of unpaid Teas	Enables tracking of teas that have been bought but not paid	Displays list of teas that have been bought but have yet to be paid for	
BuyerRPT-03	Producer warehouse List of Tea	Enables the buyer track teas that have been bought and paid for but not collected at	Displays list of teas that have been bought and paid for	
	available for collection	the producer warehouse	but not collected at the producer warehouse	

4.4 Report Description – Producer Warehouse

Form: Report Description

Stakeholder: Producer Warehouse

Report Id:	Report Name	Objective	Description	Report Design Notes
PdwseRPT-01	List of received Tea	Enables the warehouse to track teas received from producers over a given period of time	Displays list of teas received from producers over a specified period of time	User to select start date, end date and All/factory
PdwseRPT-02	List of Tea Allocations	Enables tracking of teas allocated to broker over a specified period time	Displays list of teas that have been allocated to broker over a given period	User to select start date, end date and All/factory
PdwseRPT-03	Warehouse Stock	Enables tracking of all teas in the producer warehouse	Displays list of teas in the warehouse	Grouped by factory
PdwseRPT-04	List of dispatched Tea	Enables tracking of teas dispatched over a given period of time	Displays list of teas that have been dispatched from the producer warehouse	User to select start date, end date and All/destination

4.5 Report Description – Buyer Warehouse

Form: Report Description

Stakeholder: Buyer Warehouse

Report Id:	Report Name	Objective	Description	Report Design Notes
ByrwiseRPT-01	List of received	Enables the warehouse to	Displays list of teas	User to select start date, end
	Tea	track teas received from producer warehouse over a given period of time	received from producer warehouse over a specified period of time	date and All / producer warehouse
ByrwiseRPT-02	Warehouse Stock	Enables tracking of all teas in the buyer warehouse	Displays list of teas in the buyer warehouse	Grouped by buyer
ByrwiseRPT-03	List of dispatched Tea	Enables tracking of teas dispatched over a given period of time	Displays list of teas that have been dispatched from the producer warehouse	User to select start date, end date and All/destination

4.6 Report Description – EATTA

Form: Report Description

Stakeholder: EATTA

Report Id:	Report Name	Objective	Description	Report Design Notes
EATTARPT-01	List of Tea Sold	Enables tracking of teas sold in the auction over a specified period time	Displays list of teas that have been sold through the auction over a given period	User to select start date, end date
EATTARPT-02	List of dispatched tea	Provides input to statistics on tea produced countrywide	Displays list of teas that have been dispatched to warehouses over a given period of time	User to select start date, end date
EATTARPT-03	List of shipped tea	Provides input to statistics on exported tea	Displays list of teas that have been shipped to various destinations over a given period of time	User to select start date, end date and All/destination

4.7 Report Description – BANK

Form: Report Description

Stakeholder: BANK

Report Id:	Report Name	Objective	Description	Report Design Notes
BankRPT-01	List of sale invoices	Enables the bank to track invoice details for payment transfer purposes	Displays list of invoices and their details based on a auction sale	User to select Sale number

5. Other Non-functional Requirements

5.1 General Requirements

ID	Requirements
NFR-G-001	The System will allow the user to review and update information if there are correctable errors
NFR-G-002	The System will contain a "help" function on each screen as needed to provide users with instructions on how to perform functions, descriptions of data elements and/or other information
NFR-G-003	The System may provide access to "rules/regulations documentation" via the System for look up and reference in the relevant context of the screen/process.
NFR-G-004	The System will maintain a record (e.g. audit trail) of all changes made to data in the System - system initiated changes or user initiated changes. This should be readily searchable by user ID, system ID or beneficiary ID. This must include but is not limited to: <ul style="list-style-type: none"> i. The user ID of the person who made the change or system ID if the change was system generated ii. The date and time of the change iii. The information that was changed iv. The data before and after it was changed v. The data source if the change was system generated

5.2 Interoperability

ID	Requirements
NFR-I-001	iTTs will provide support for integrating with applications with SOA and event-driven architectures in a manner that supports the following implementation strategies: ' Web Services: Web Services Interoperability (WS-I) Organization-compliant implementation of basic Web services standards, including SOAP, WSDL and Universal Description, Discovery and Integration (UDDI), as well as higher-level Web services standards, such as WS-Security. 'Representational State Transfer (REST): Support for XML-based messages, processing and HTTP, and XHTML.
NFR-I-002	The iTTS System will seamlessly work with the technology and programs that act as glue, transforming among protocols, connecting to databases and linking pre-SOA Application Programming Interfaces (APIs) to the SOA backplane.
NFR-I-003	The iTTS System will have the capability to work with security policy manager for Web services that allows for centrally defined security policies that govern Web services operations (such as access policy, logging policy, and load balancing)

5.3 Security

ID	Requirements
NFR-S-001	The iTTS System will allow for controlled access to beneficiary records. Users will be able to view beneficiary data within the System at the State-defined levels of access based on user security privileges.
NFR-S-002	<p>The System will maintain a level of security that is commensurate with the risk and magnitude of the harm that could result from the loss, misuse, disclosure, or modification of information.</p> <p>The system will provide for the highest level of digital encryptions and/or e-signature capabilities</p>
NFR-S-003	The System will provide protection to maintain the integrity of data during concurrent access.
NFR-S-004	The System will enforce a limit of (configurable) consecutive invalid access attempts by a user. The System will protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).
NFR-S-005	The System will provide the capability to prevent database administrators from seeing the data in databases they maintain.
NFR-S-006	The System will provide the ability to create and maintain a directory of external providers to facilitate communication and information exchange.
NFR-S-007	The System will provide more-advanced session management abilities such as prevention of duplicate logins, remote logout and location-specific session timeouts.
NFR-S-008	The System will provide the capability to monitor events on the information system, detect attacks, and provide identification of unauthorized use of the system

5.4 Usability

ID	Requirements
NFR-U-001	The System will speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
NFR-U-002	The System's User Interface will be simple, consistent, and use familiar terminology.
NFR-U-003	The System's navigation will be familiar and consistent, and all user actions will be predictable and reversible.
NFR-U-004	The users will be able to easily navigate to a variety of functions available to them without having to move sequentially through excessive menus and screens.
NFR-U-005	The System will follow standardized conventions. Users should not have to wonder whether different words, situations, or actions mean the same thing.

5.5 Performance

ID	Requirements
NFR-P-001	<p>The system shall accommodate 400 users during the Auction sessions, with estimated average session duration of 50 minutes.</p> <p>Responses to queries shall take no longer than 5 seconds to load onto the screen after the user submits the query.</p> <p>The system shall display confirmation messages to users within 4 seconds after the user submits information to the system.</p>
NFR-P-002	iTTS should scale correctly and load balance to support high traffic loads

5.6 Standards Compliance

ID	Requirements
NFR-SC-001	<p>The system shall support latest open messaging standards. The standard should have been published and the current standard specification document available either freely or at a nominal charge at the time of implementation. There should be no constraints on the re-use of the standard.</p> <p>Standards may Include but limited to, ISO/ UN/CEFACT-ebXML , GS1 XML and Universal Financial Industry Schema – UNIFI/SWIFT (ISO 20022) ISO 9362 Business Identifier Code BIC, to identify parties, and the ISO 10383 Market Identifier Code (MIC), The standards should support messaging Guidelines, stylesheets, archiving and sample client/document formats.</p> <p>At a minimum should have core message components for e-mandates, e-auction/e-ordering, e-invoicing, e-catalogue, e-notification.</p>

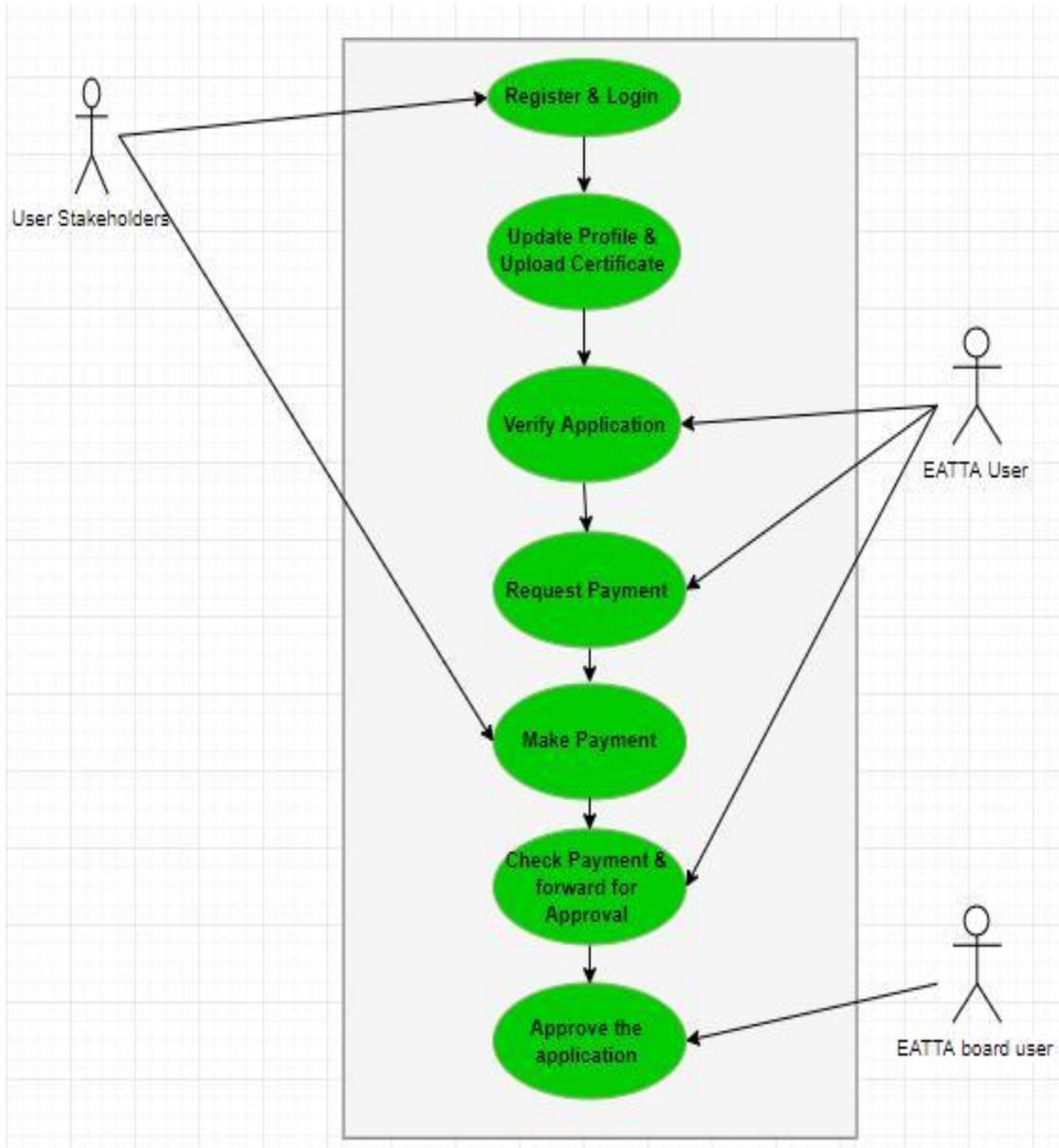
6. Appendix A: Glossary

iTTS	Integrated Tea Trade System
SRS	Software Requirements Specification
ERD	Entity Relationship Diagram
EATTA	East Africa Tea Trade Association
B2B	(Business-to-Business), also known as e-biz, is the exchange of products, services or information (e-commerce) between businesses, rather than between businesses and consumers
HTTP	HyperText Transfer Protocol. HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.
Members	East Africa Tea Trade Association members
ISO	International Organization for Standardization
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
ebXML	E-Business Extensible Markup Language
ISO/IEC/IEEE 29148:2011	A standard which contains provisions for the processes and products related to the engineering of requirements for systems and software products and services throughout the life cycle
SAP	SAP is an acronym for Systems, Applications and Products
ERP	Enterprise Resource Planning
AA	Auction Admin
TRD	Tea Release Document
Rainforest Alliance	The Rainforest Alliance is a non-governmental organization working to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior

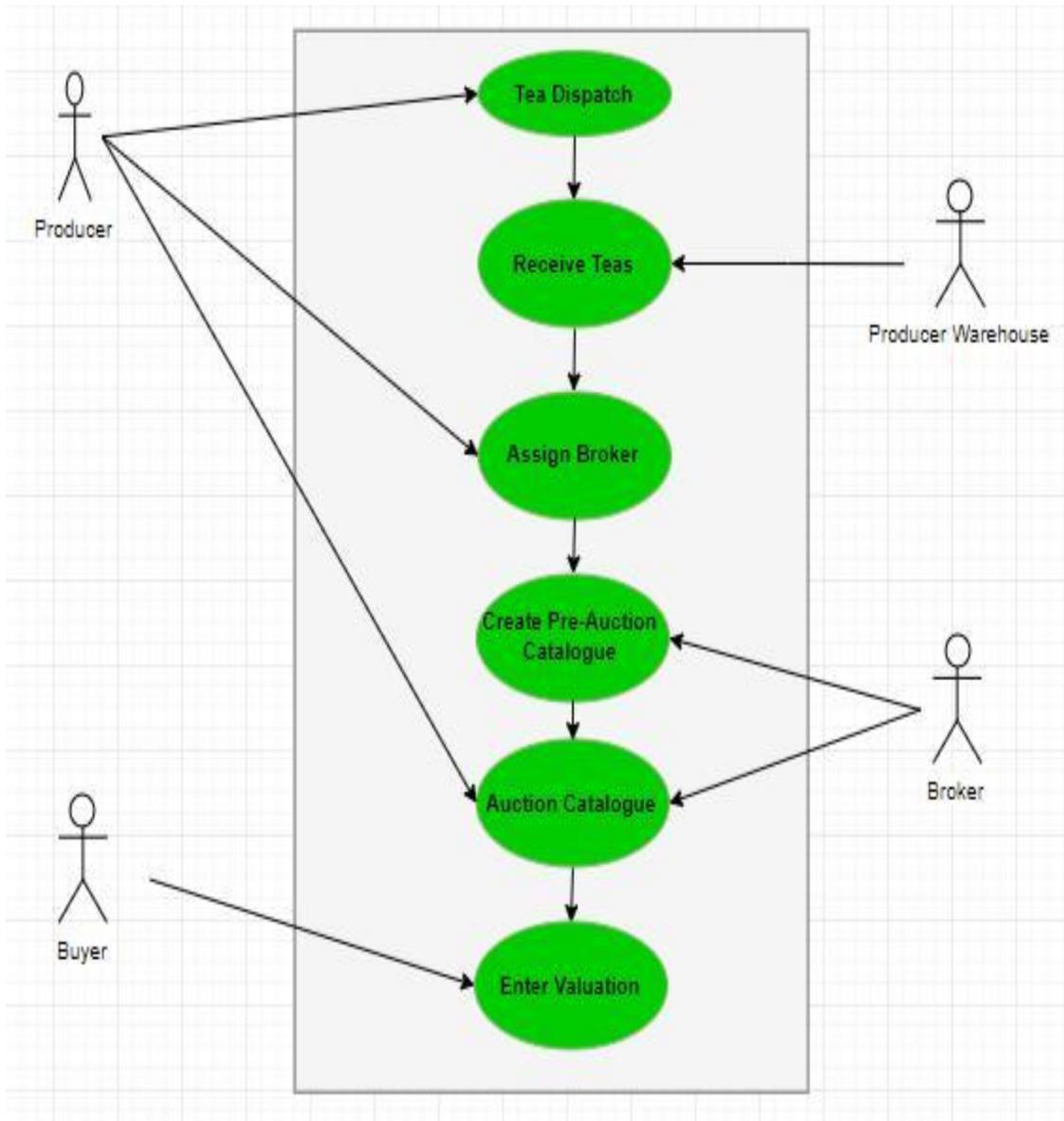
7. Appendix A: Analysis Models

7.1 Use Case Diagrams

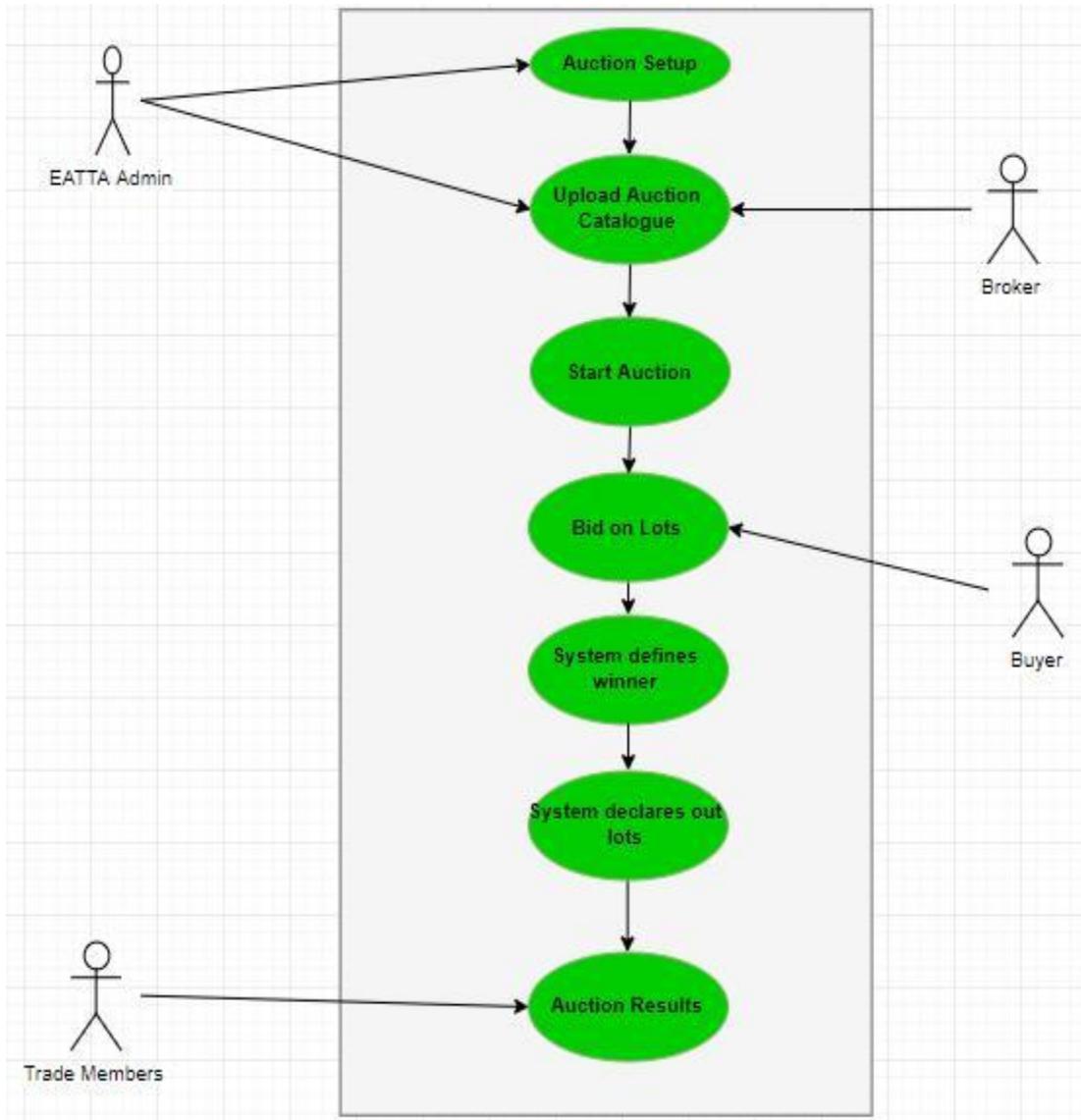
7.1.1 Membership Module



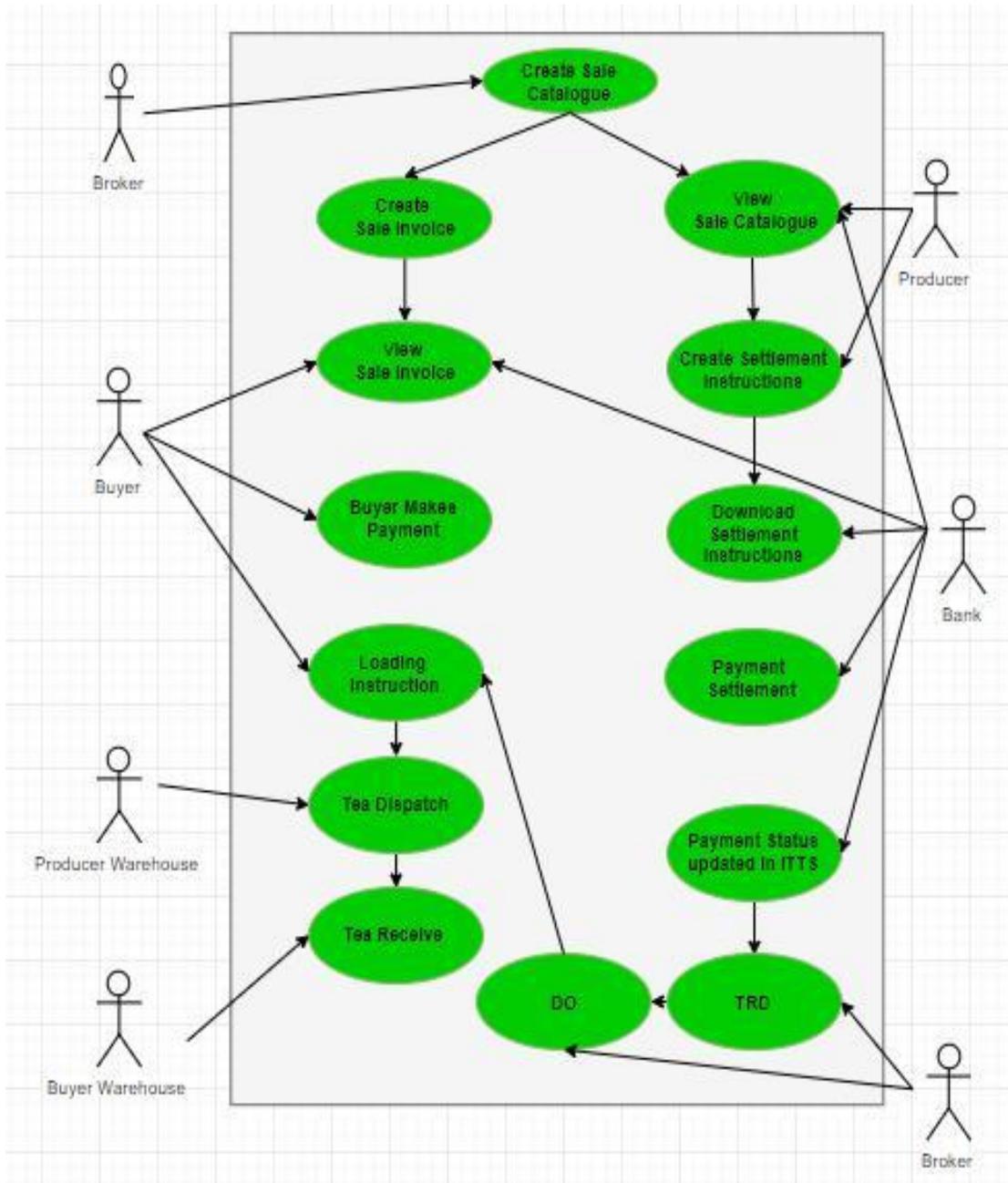
7.1.2 Catalogue Module



7.1.3 Auction Module

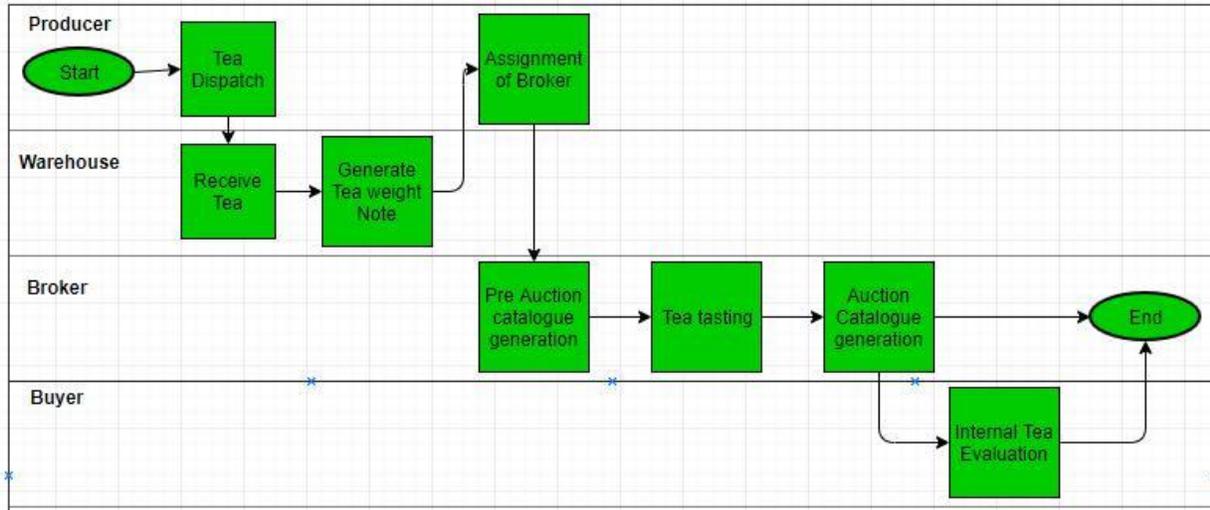


7.1.4 Business Module

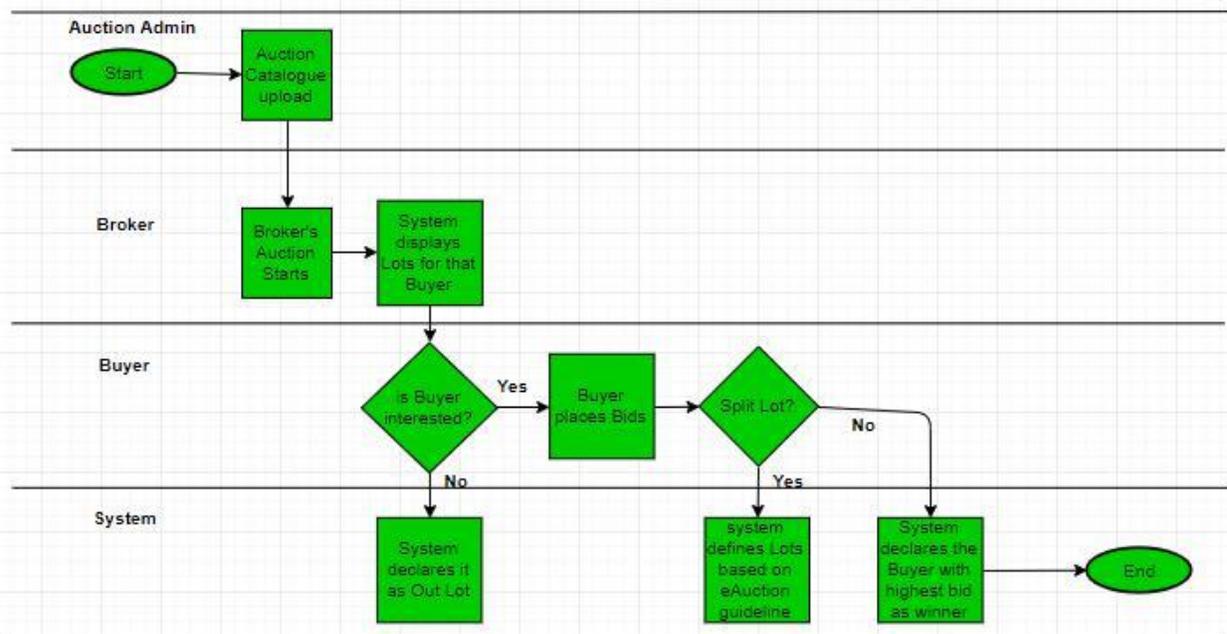


7.2 Data Flow Diagrams

7.2.1 Pre-Auction



7.2.2 Auction



7.2.3 Post-Auction

