

TRADE FACILITATION PLATFORM (TFP)

WORKSHOP FOR KENTRADE

(13-Sept, 14-Sept & 15-Sept-2017)

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AGENDA

13-Sep-17 (Business)

- Introduction on TFP & Value Proposition for KENTRADE --- 1hr [10am to 11am]
- Demo on TFP (Functional Modules)
- Analytics Based Risk
- Task Force Report

- --- 2.5hrs [11:15 to 12:45] [2pm to 3pm]
- --- 40min [3pm to 3:40pm]
- --- 2hrs

14-Sep-17 (Technical/Business)

- Introduction on TFP Technical Architecture
- Demo on TFP (Technical Functionalities)
- Trade Visualization Statistics
- Task Force Report

- --- 1hr [9am to 10am]
- --- 2hrs [10:15am to 12:30pm]
- --- 1hr [2pm to 3pm]
- --- 2hrs [3pm to 4pm]

15-Sep-17 (Commercial)

- TFP Commercial & Plan for KENTRADE
- Task Force Report Conclusion
- AOB

- --- 1hr
- --- 2hrs
- --- 2hrs



INTRODUCTION ON

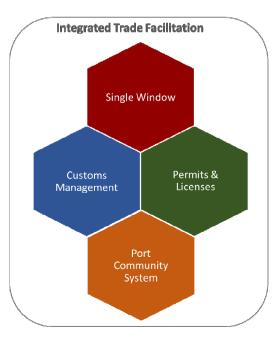
TRADE FACILITATION PLATFORM

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TRADE FACILITATION PLATFORM (TFP)

What is it?

- Web-based product suite that comprises Single Window, Customs Management, Permit & Licenses and Port Community Solution functions
- Built on an open and flexible architecture, governments/Customs can chose to install either the full or partial suite of functions
- Being the developer of the world's first National Single Window (TradeNet® in Singapore), and backed by an extensive global track record in Trade Facilitation, CrimsonLogic is able to incorporate international best practices and standards into the TFP.



KEY HIGHLIGHTS

Integrated Trade Facilitation Platform

- Full functions of Single Window (SW),
 Customs Management System (CMS)
 and Permits & Licenses for OGAs
- Seamless integration between all 3 functional areas. Coordinated processes between Customs and OGAs
- Platform serves as a main controller which coordinates and communicates between all stakeholders, eliminating any manual gaps or intervention

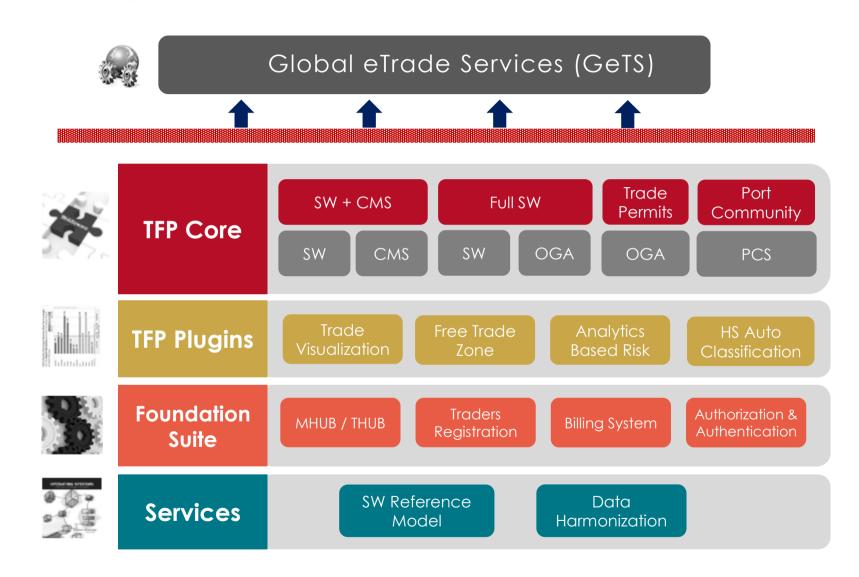
Commercial Off The Shelf (COTS) Product

- Over 25 years of Trade Facilitation experience and best practices embedded
- Faster Deployment
- Built on open and agile architecture, can be deployed to serve either SW, CMS, Permits & Licenses or all 3 of the functional areas
- Continuous Upgrades
- Supports Multi Language (Arabic etc.)

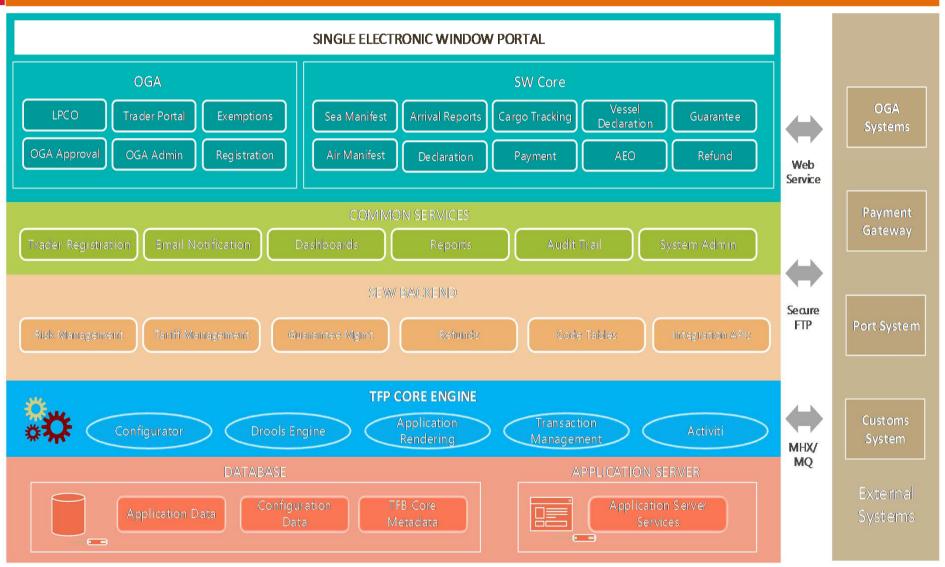
Lower Cost

- Lower Total Cost of Ownership (TCO)
- Lower implementation cost with efficient delivery
- Easier to maintain for business users

TFP PRODUCT ROADMAP



TFP Single Electronic Window (SW Core & OGA)



SINGLE WINDOW & OGA MODULES

Functions	Description
Sea Manifest	Submission of the sea manifest (master, co-loader, house, amendment, supplementary) through user interface and upload of EDI (Standard format of CUSCAR 95B)
Air Manifest	Submission of the air manifest through user interface and upload of IATA (CIMP format up to edition 15-30th)
Road Manifest	Submission of the advanced road manifest on a per truck basis with invoice and optional container details
Goods Declaration	Submission of goods declaration, amendment and cancellation
Cargo Tracking Dashboard	Dashboard showing the complete status of the cargo from manifest lodgment to final clearance
Trading Partner Registration	Registration of trading partners and the system user management and administration
Tariff for Declaration	Standard tariff configuration for declaration based on HS Codes nomenclature
Payment	Payment for declarations, manifest and OGA related documents using cashier functions.
OGA	Permits and license issued by Other Government Agency including submission, approval and configurations with dynamic onboarding of OGAs adopting the generic model
OGA Integration Conns	Standard XML format for permits and licenses for integration readiness
Trading Partner Registration	Registration of trading partners and the system user management and administration

Note: Refer technical white papers for more details

TFP - TECHNICAL FEATURES



Flexible technology stack options & free access to source code.



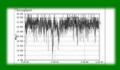
Framework on **Rich Internet Application (RIA)** standards with rich, interactive & productive user interfaces



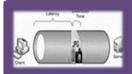
Reduced latency on page loads due to extensive use of AJAX.



Improved scalability & reduced load on server due to leverage on the powers of browsers



Higher throughput per CPU offering better scalability. Lower cost on infrastructure per transaction



Reduced bandwidth requirement at the datacenter due to lower higher throughput

TFP CORE ENGINE

A black box required to run the TFP application (SEW and ICMS)

Configurator

Provides for framework configuration to configure the forms, layout, UI components, data grids etc. in the application

Rule Engine

It includes an embedded rules engine which facilitates externalizing the rules and providing for users to amend and manage the rules

Application Rendering All application user interfaces are dynamically rendered through the TFP Core Engine

Transaction Handling It provides for all application transaction handling for all UI components rendered through the TFP Core

Business Process Management It includes an embedded BPM engine that provides for processing & routing of key documents

TECHNOLOGY STACK SUPPORTED

Optional Base BI Visualization using Out of box dashboards Visualization and Tableau Dashboard Elixir Reports Elixir Report JBOSS EAP Middleware JBOSS EAP Oracle WebLogic **Business Process** Embedded (BPM) Management ❖ SOA Platform (optional) Oracle Database Oracle PosGreSQL Solaris Unix (SPARC) Operating System RHEL (Intel based) ❖ AIX Unix, Linux

DEPLOYMENT OPTIONS

Option A – Cloud Deployment

 No 3rd party hardware & software

• Subscription fee

Option B – On-Premise Deployment

- BOQ can be provided on all 3rd Party hardware & software for Customer to purchase & maintain
- License & maintenance fee

TFP - CONFIGURATION DRIVEN APPROACH

Dynamic User Interface

- •UI Generated from configurations
- •Changing UI (without new fields) can be done using configurations
- All functional UI pre-configured

Generic Hooks in Request Cycle

Generic hooks made available to add project specific customizations

Business Logic

• All functional business logic integrated through Biz rules engine

Self service enabled customization possible

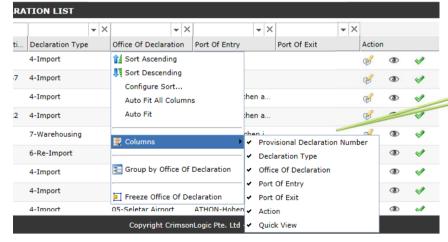
Users can customize functions (limited)

TFP - TECHNICAL FEATURES

Fully based on RIA (Rich Internet Application) framework using AJAX

Search Grids with Excel like sorting, filtering, column freeze







TFP - TECHNICAL FEATURES

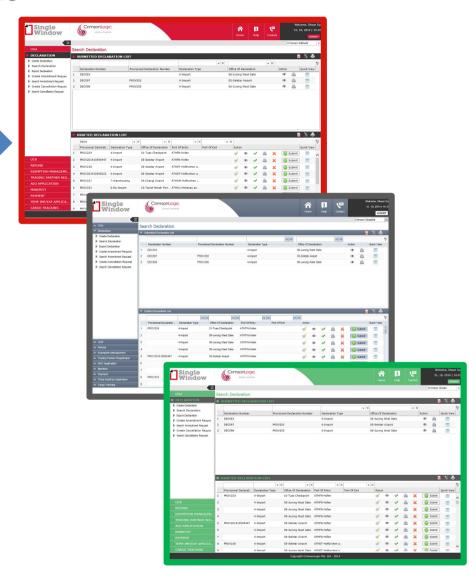
Fully based on RIA (Rich Internet Application) framework

User configurable Multi Theme Layout

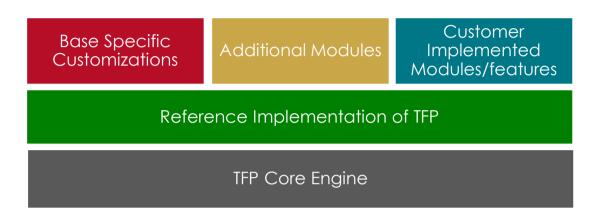
Dashboard with operational stats, my task list, alerts etc.

States triy tas ion along elo.





TFP - SOURCE CODE SHARING APPROACH



- TFP is designed flexibly so as to share codes to customer
- The TFP core engine is required to run all application codes. TFP Core engine needs to be licensed and is restricted to the no. of servers/cores. If additional servers are required customer need to purchase additional licenses.
- Reference implementation refers to the TFP implementation based on best practices
- Base country specific customization refers to the customizations & localizations that is done
 as part of the license enablement & default system implementation
- Additional customizations for country specific modules, process, integrations etc.
- Customer Implemented Features The enhancements & developments done by the customer (not covered under maintenance)

TFP IMPLEMENTATION APPROACH

Phases POST-LIVE BUILD & **GO-LIVE ANALYSIS** INITIALIZATION **SUPPORT ADOPTION** Activities Planning TFP reference product TFP product Rollout activities Post live application configurations based on . support for ongoing setup Project Initiation & Setup Production application **CBP** rollout Gap analysis against TFP setup **Implementation** product & reference Customizations based Application bua- Production data Methodoloay model fixes/data patches on CRS walkthrough preparation TFP blue print with UAT Training (ToT) Application Monitoring Scope prioritization Performance & Security localization business (Optional) Development of Testina Technical briefing rules & configurations External Integrations Knowledge Transfer Data Migration (if any) Compendium of best Code tables & Set-up of the TFP practice references Pilot rollout to selected references **Customized Application** ports/customs offices Customization Re-validation of the Integration setup & dry requirements including configurations & External Interface customizations through System Admin Training Requirements UAT Adjustments to Software Deliverables • TFP Configuration blue Rollout plan with Project Plan Acceptance Test Plan Application operations and UAT Test Scripts activities print (CBP) manual ✓ Implementation Plan, Ora Chart etc. TFP Product Database Design Performance and ✓ Critical activities **Specifications Specifications** Security Test Reports charter Customization User Guide for Training ✓ Customer activities. Requirement infra procurement, Specifications (CRS) resource requirement External Integration etc. Specifications ✓ Project milestones

TFP IMPLEMENTATION APPROACH

Phases POST-LIVE BUILD & GO-LIVE **ANALYSIS** INITIALIZATION **SUPPORT ADOPTION** Responsib<u>iliti</u>es Customer Customer project org • SMEs participate in SME's verify the test plan Lead rollout activities & Ongoing application chart and project workshops to validate and scripts support CL level1 support & help the gap analysis manager desk Provide UAT infra Stakeholder SME's validate TEP blue Setup team with SME environment & infra Assian dedicated team engagement, (Subject Matter Experts) print with localization for Knowledge Transfer team contact sensitization, user for analysis phase and trainina etc. with pre-requisite skills business rules & Provide environment for adoption configurations Application & infra training (ToT) Production data Project objectives, SME's validate the monitoring preparation Validate, test scope prioritization. customization application & report Lead pilot rollout stakeholders, reporting requirements defects Call/support center & & key success factors Initiate infra help desk, data center Project Kick-off procurement as per etc. desian Assian team for External Stakeholder operation support engagement to provide requirements Exit Criteria Sign off Project Plan Sian off TFP Acceptance Test (UAT) Rollout plan sign off Configuration blue print Sign off Performance and (CBP) Security Test Reports Sign off Customization Acceptance Requirement Successful pilot and Specifications (CRS) launch Sian off External Integration **Specifications**

IMPLEMENTATION - ANALYSIS PHASE

Customer

PM, Subject Matter Experts

CrimsonLogic

PM. Lead & Product Team

ANALYSIS PHASE Validation of Reference Size and scope efforts for Configuration Blue Print Gap Analysis Implementation *customizations* Walkthrough of the TFB Validate the configuration Identify areas not met through Size the customizations needs reference model, process requirements and update all configuration, localization or based on CRS templates business rules. Demo and detailed Review and validate the walkthrough of system with Gap analysis of the TFB customizations with SMEs Templates provided for reference processes **SMEs** definition of business rules for all Prioritize the customizations Identify the configurations, major modules [manifest, Requirements for new Re-visit and re-validate the localization & business rules modules/specialized country declaration] in line with TFB CRS. specific requirements process Sign off the CRS Document the gaps & new Templates for input of tariff, risk, Sian off the CBP modules in Customization preferential tariff, CPC, CPC Requirement Specification aroups, etc. (CRS) Internalization (if required) Document Configuration Blue template will be provided Print (CBP) Roles and access matrix template Template for service fee charges computation

IMPLEMENTATION - ANALYSIS PHASE

Customer

CrimsonLogic

PM, Subject Matter Experts

PM, Lead & Dev Team

BUILD AND ADOPTION PHASE

Configuration Implementation & Localization

- Home page development (login, content, logo, etc.)
- Internationalization (Translation to be provided by Customer)
- Product Setup (Repository, build, development envt., database setup etc.)
- Implementing business rules from configuration blueprint in TFB using rule engine [No coding]
- Setup of code tables (country specific)
- User group, roles creation & privileges setup based on configuration blueprint
- Minor UI changes through configuration, business rules & BPM deployment/flow configuration change without major java code changes & adaptation with local country [No coding]
- Regression testing of the application (rewrite of test cases & executions)

Customization Development & Build

- Development of the customizations & additional modules as per the CRS
- Development & testing of the external system interfaces
- build, Development of the test script for the etc.)
 - Update of the design, user guides and database design specifications

System Setup, Deployment & Testing

- Infra application setup [infra environment to be ready as pre-requisite as per BOM provided]
- Deployment of application in UAT/Trial environment
- User testing of configurations and end to end processing, bug fixes etc.
- User Training [Train the trainer] 1 week
- External system interfaces testing with external stakeholders/vendors



TFP - VALUE PROPOSITION FOR KENTRADE

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VALUE PROPOSITION FOR KENTRADE

Modern user friendly user interface

- Rich Internet Application
- Better technology, performance and response

Additional Features out of the box

Technical & Functional (Refer next slide)

Well Defined Product Roadmap

- Product will be continuously upgraded (functionality and technology wise) in line with changing Trade landscape
- KENTRADE entitled for continuous upgrades. For e.g. CargoXML support
- Entitled for new modules need to pay only for professional service

Lower Cost of Ownership for KENTRADE

- Single product base Lower maintenance costs
- Lower operating costs due to self-services capabilities & co-development
- Well defined product support team

Co-develop & Source code sharing

KENTRADE can develop and enhance modules

NEW FEATURES IN TFP FOR KENTRADE

Technical

- RIA with dashboard, themes, personalization
- Dashboard (User configurable)
- New dashboards system admin defined
- Rich Table with excel like features, export to PDF/excel
- Mobile & Tablet Support
- Configurable Print Templates
- Configurable Business Rules
- TF Core Engine Configurations
- TF Core Code Generator

Functional

- Unified Single Submission (WIP)
- Flexible User Administration & Roles/Rights Management
- Role based dashboard for users
- Improved Risk Management Module based on WCO - with score based assessment
- Improved OGA Module with additional flexibilities
- Referral based approvals in OGA and unlimited referrals
- Dashboards for OGAs
- Additional Modules out of the box like refund, credit payment, notification, vessel declaration
- Enhanced User Registration
- Enhanced Authentication support for 2F Authentication



TFP - SEW DEMO

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SYSTEM SETUP/CONFIGURATIONS

- ✓ Crimson Page Layout
 - Container for the screens in TFB
 - To configure core components
- ✓ Crimson Section
 - Setup of the TFB screen dividers
- ✓ Crimson Table
 - Configuration of the List grid
 - Link list grid to DB table
- ✓ Crimson Dynamic Form
 - Configuration of screens for data entry or view
 - Link screen to DB table
- ✓ Crimson Tab
 - Setup tab header of the form
- ✓ Crimson Popup
 - Setup Popup Form
- ✓ Button Layout
 - Setup form with custom button
- ✓ Crimson Config
 - Configure Global Key Value pair to be used at system level



USER SETUP

- ✓ User Groups
 - Predefined in TFB
- ✓ Role
- Role associated with User Groups
- CRUD operations
- ✓ Party
 - Creation of Party for CMS / SEW User Groups
 - CRUD operations
- ✓ CMS User
 - Creation of User for Customs
 - CRUD operations
- ✓ SEW User
 - Creation of User for SEW User Groups
 - CRUD operations



CODE MAINTENANCE

System Code Setup

- Module
- Menu
- Regime
- Vessel / Aircraft
- Ports
- Bond Category/ Class
- Currency
- Currency Exchange
- Country
- Country Group
- Customs Office
- Payment Modes
- UOM
- Container Types
- Incoterms



MANIFEST PROCESSING

Manifest Approval

- Supports master and house manifest approval of manifestss submmited by shippers
- Supports configuration if to enable Manifest approval process. If not enabled, manifest approval is not required.

Manifest Amendment

- Supports the approval of manifest amendment request made by shippers
- Supports the approval of amended manifest
- Supports optional amendment fee charges

Manifest Risk Assessment

 Manifest is integrated with CMS Risk module and for approved manifest they will be subjected to risk assessment for clearance

Business Rules Engine

Notifications



BOND MANAGEMENT

Register Guarantee

 Supports guarantee registration in CMS that has been issued by the Bank.

Approve Guarantee

- Supports the Guarantee Manager can either to approve or reject guarantees.
- Supports that guarantee registration and approval processes cannot be performed by same officer.

Amend Guarantee

- Supports guarantee amendment by Guarantee Officer/Manager to modify the approved guarantee.
- Supports customs broker or importers to amend or correct the data and resubmit guarantee.

✓ Create / Search Bond

- Fixed
- Revolving
- ✓ Approval process for Bond
 - Guarantor
- ✓ Supplement Bond
 - Approval process

Forfeit Guarantee

- Supports guarantee
 Officer/Manager to forfeit the
 guarantee due to any irregularity.
- The Forfeit action closes the guarantee in the system. CMS does not follow up with Bank for the forfeited guarantee and guarantee amounts. The Customs has to do the recovery of the guarantee amount manually.
- The irregularities for forfeiting a Guarantee in the declaration can be: (1) Discovery of Suspect goods during inspection for Transit or Warehouse declarations. (2) Irregularities in quantities of items or HS Codes in a declaration at Port of Exit in Transit Declaration.

Refund Guarantee

- Supports guarantee refund i.e. guarantee amount used by the declaration will be re-credited into the original guarantee account under following scenarios:
- For Warehousing Declaration, the goods admitted into the warehouse have been partially or fully released from the warehouse.
- For Transit Declaration, all goods have been cleared and released from the exit port.
- For Temporary Import
 Declaration, all goods that are
 temporarily imported have been
 re-exported out.

Cancel Guarantee

- Supports Declarant to put up cancellation request to cancel the existing guarantee account.
- Supports the Guarantee Officer to approve the cancellation of guarantee

✓ Retire/Cancel Bond

- Retire / Cancel Approval process
- ✓ Bond Usage
 - Credit and Debit details



TEMPORARY IMPORT / EXPORT

Temporary Import Export Request (TIER)

- TIER Pre-requisite to Declaration
- TIER Request
- TIER Request Approval
- TIER Extension Request
- TIER Extension Approval



DECLARATION

Declaration Preparation

- Support declaration creation, update, delete and draft
- Supports declaration file upload through backend system
- Supports copy existing declaration for new declaration creation
- Supports generic declaration printing

Declaration Submission

- Supports rulebased declaration validation upon submission
- Supports manifest reconciliation and report generation
- Supports duties and taxes calcuation and payment
- Send validated and paid declaration to Customs Management System

Declaration Amendment

 Supports the declaration amendment request to Customs for approval

Declaration Cancellation

 Supports the declaration cancellation request to Customs for approval

Declaration Query

 Supports the collobration process between declarants and customs to answer queries raised by customs

Declaration Submission

- ✓ Submission in SEW
- ✓ Approval in CMS
- ✓ Amend Request in SEW
- ✓ Amend Approval in CMS
- ✓ Amend Submission in SEW

Declaration Cancellation

- ✓ Cancel Request in SEW
- ✓ Cancel Approval in CMS
- ✓ Declaration Query



DECLARATION, CPC & HS CODE CONFIGURATIONS

DECLARATION CONFIGURATIONS

Single/Multiple Invoice per declaration

Single/Multiple CPC per declaration based on CPC group

Bill of Lading can be used by single declaration or multiple declarations

All fields configurable as mandatory or optional based on regime/CPC

UCR Mandatory or Optional defined at the regime level

CPC CONFIGURATIONS

CPC Grouping – based on level (Regime, CPC Group or Declaration Type and CPC)

Flexible CPC configuration supporting scenarios like FTZ to import, WH to import, transit to import or export

Single/Multiple CPC per declaration based on CPC group

Dynamic fields are allowed to be added into declaration (Header and Item level) based on CPC

Supporting Documents configurable and based on CPC

HS CODE CONFIGURATIONS

Commercial Names or Brands can be configured at HS Code level

Commercial Names/Brands taken into consideration in Valuation

Dynamic Fields based on HS Subheading

Flexible Tariff Configuration with Tax Types with ad valorem or absolute or both

PAYMENT

Payment Transaction

- ✓ List Payment Instructions
- ✓ Pending Payment Transactions
 - Payment by Bank Counter
 - Customs Counter
- ✓ Approval by Verification Officer
- ✓ Configure Biz Transaction Types
- ✓ Configure Payment Modes



RISK MANAGEMENT (RULES BASED)

Setup Risk Profile

- Configure criteria for profile based on fields
- Configure notification
- Assign Lane

Risk Assessment

- Declaration Risk Assessment
- Manifest Risk Assessment

Risk Area Management

- Supports the definition of risk targeting systems such as Declaration, Manifest or Permits and License.
- Example for the risk area can be Terrorism, Narcotics, Health Hazards, Endangered Species, Arms Smuggling, under valuation of goods etc.

Lane and Blacklist Management

- Supports the defintion risk level as lanes (e.g. Red, Yellow, Green) to associate with risk consequences (High, Medium, Low etc.).
- Supports blacklist high risk importer/exporters

Risk Action Management

- Supports the definition of counter measures when risk presents
- Examples for the action can include a Routine Check, Health Check, Quarantine Check, or Document Check.

Risk Profile Management

- Supports the placeholder settings of risk assessment criteria of each risk area and its corresponding risk action
- Examples can be an Anti-Terrorism risk profile with risk areas like arms smuggling, safety etc and risk action like baggage check, travel document check, physical check etc

Risk Monitoring and Review

- Supports the monitoring and review of risk assessment results.
- Support dashboard charts



RESOURCE MANAGEMENT

Resource Management Setup

- Setup Calendar / Work Week / Shift
- Config Shifts for user
- Configure Task

Assign Resource

- Auto assign resource for Document Check and Physical Examination
- Assignment Algorithm supported
 - Round Robin
 - Least Busy
 - Most Productive
- Due Date feature for each Task
- List Assigned Resources
- Reassign Resource



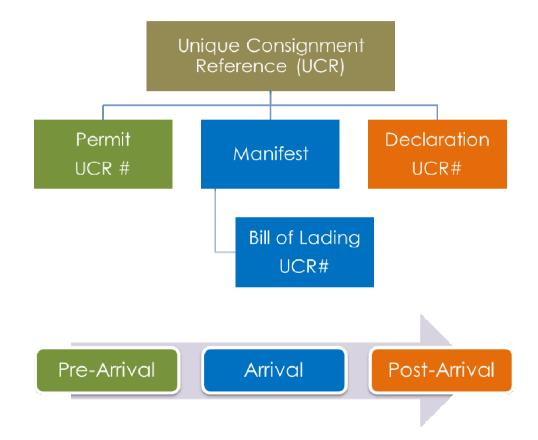
OGA System

TFP - PERMITS & LICENSING APPLICATION

Master Permit UCR Application Decision Tree Permit Application Permit Processing

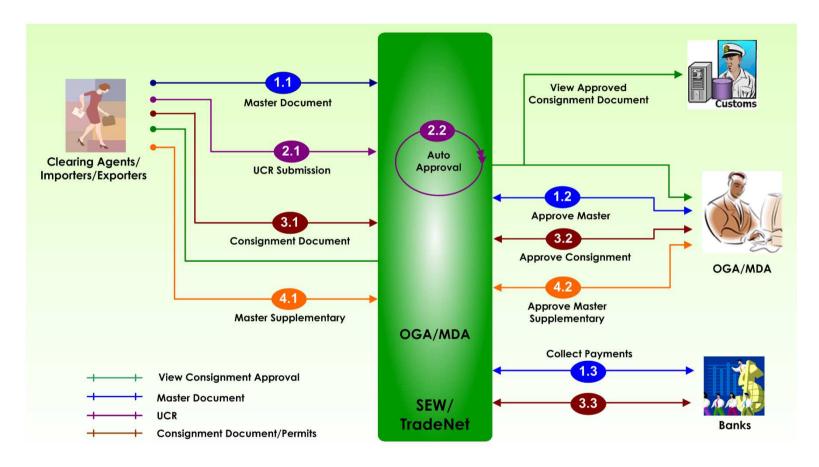
- ✓ Trade Permit Application & Processing
 - Master Document
 - Unique Consignment Reference (UCR)
 - Decision Tree
 - Consignment Permit Application
 - Consignment Permit Processing
- ✓ OGA Administration (Configuration)
 - OGA On-boarding
 - OGA Process/Step Configurations





- UCR WCO Best Practice
- Unique Number across the complete supply chain
- Used for Tracking Purpose by importers, consignee, etc.
- Can be used in cross country transit cargo
- Can be used for trade financing reconciliation

OGA – GENERIC PROCESS



- UCR Unique Consignment Reference. Unique for the import cycle. Linked to BL->Declaration->Consignment Permits
- Master Document is a blanket license approved based on time, quota, value For Ex Importer may be permitted to import XXX tons of goods for 1 year
- Consignment Document Permit applied at per consignment. It is linked to master document. Its is linked to BL & Declaration (1:1)

PERMITS & LICENSING - DEMO

Master Permit UCR Decision Permit Permit Application Tree Application Permit Processing

- ✓ Trade Permit Application & Processing
 - Master Document
 - Unique Consignment Reference (UCR)
 - Decision Tree
 - Consignment Permit Application
 - Consignment Permit Processing
- ✓ OGA Administration (Configuration)
 - OGA On-boarding
 - OGA Process/Step Configurations

Thank You