



Conceptualization and Design of Integrated IT-enabled Imported Food Safety System

Food Safety and Standards Authority of India (FSSAI)

Synopsis of Business Process Reengineering (BPR) Report

March 2010

Introduction



Background

Food Safety & Standards Authority of India (FSSAI) has appointed National Institute for Smart Government (NISG) to assist in conceptualization, design and implementation of an IT-enabled Food Import Information System (FIIS) for ensuring that safe food is imported into India.

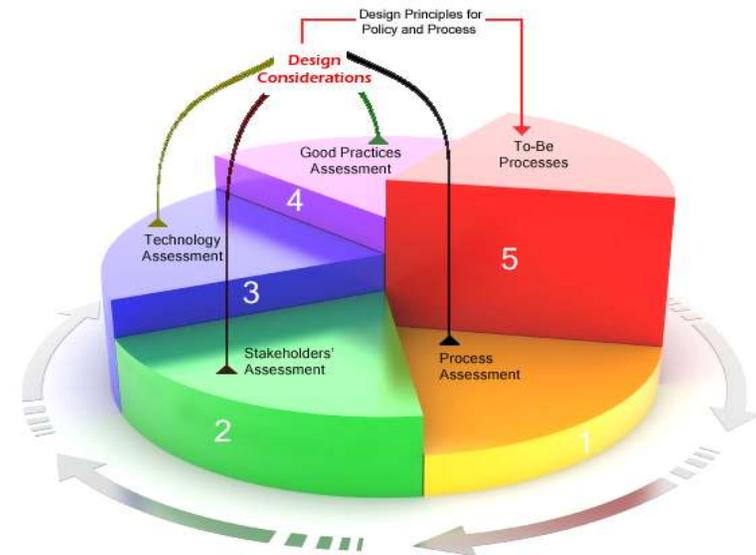
In this respect, NISG has been entrusted with following tasks:

1. Current State Assessment (of Policy, Process, People and Technology)
2. Stakeholders Assessment (to identify Stakeholders, their Needs and Gaps pertaining to them)
3. Good Practices Study (to identify best practices as applicable to the Indian context)
4. Business Process Reengineering (designing of “To-Be” Processes for FSSAI to enable imported food safety)
5. Designing the Solution Architecture (for systemic support of the redesigned processes)
6. Change Management Plan, Capacity Building Strategy and Communication Plan for Stakeholders
7. Designing Implementation Strategy (to explore and suggest engagement models)
8. Detailed project report (with Solution, Alternatives, Costs and recommendations for execution)
9. Request for Proposal (RFP) for selection of suitable Vendors to implement the proposed System

Till date, NISG has completed Tasks 1 to 3 and this document is the Synopsis of the 4th Deliverable, that is the BPR Report.

Approach adopted for BPR

Overall approach that has been adopted by NISG for BPR takes into consideration the Current State Assessment of Stakeholders, Processes and Technologies related to food imports ensuring that Safe Food (as per prescribed standard) is allowed into the Country . NISG has also done analysis of Good Practices that are being followed by other Countries for food imports.



To achieve BPR, existing Processes have been assessed and mapped cross-functionally upto sub-process / activity levels across 3 Phases, that is - Pre-Import, Import and Post-Import.



Simultaneously, meetings have been held with food import Stakeholders across the Country to understand role played by them, their Needs and challenges faced.

The processes and activities (to ensuring that Safe Food is imported into the Country) span across a multitude of Ministries and Agencies. As part of the study, it was essential to ascertain and then understand the existing policies, processes, people involved and Technology used (IT Systems in place) by stakeholders in food import process.

Some of the major findings from the As-Is study were:

- Importers have to get the mandated Pre-Import Permits from various Ministries separately
- No notice given to relevant Agencies / Officers at operational level upon granting of Import Permits
- No control and visibility over adherence to prescribed safety norms during transportation.
- Non-uniform procedures used for Initial Verification of Importer's Documents / Certificates.
- No special attention given to Food Imports at the point of initial interception and no Risk Assessment Framework in place.
- No mechanisms for faster processing of Repeat Consignments.
- Uniform Sampling Techniques not being followed at the points of entry.
- No real-time data flowing from Points of Entry to fine-tune Policies & Processes.

Secondly, to bring out some of the good practices being followed by various Countries/ Regions related to food imports, a secondary research was carried out against Canada, United Kingdom (UK), Jordan, European Union (EU), Singapore, Australia. The above mentioned countries were selected based on the inputs of FSSAI, volume of import, geographical spread etc.

Considering the variety and volume of food imports into the country - 100% inspection regimes are costly, inefficient deployment of resources and increase port congestions. The 'smart' way to do handle imports is to balance 'self compliance measures' with 'oversight measures'. This requires the Monitoring, Surveillance and Evaluation Module [SME]. The secondary research supported the above mentioned logic, which lead to the following design Principles (in accordance with the findings of the As-Is study):

- Mandatory Licensing for Food Importers
- Accreditation of Certification Agencies at Source
- Accreditation of Labs at Source
- Voluntary Certification Scheme for Exporters
- Mandatory Pre-shipment Clearance at Source
- Mandatory filing of Pre-arrival Notification by Importers
- Port Restrictions for High-risk Items
- Capacity Building Plans for Labs under FSSAI
- Accreditation of Private Labs
- Deployment / deputation of Officers at Points of Entry
- Coordination with Foreign and Domestic Agencies
- Deployment of mechanisms for Traceability / Recall



These principles were discussed and brain-stormed at various levels with :

- FSSAI
- Core Group (Ministry of Agriculture, Ministry of Commerce, Central Board for Excise & Customs and FSSAI)
- Other key stakeholders during the National Visioning Workshop (NVW) held on February 24, 2010 in New Delhi.

The aim of NVW was to bring various stakeholders on to a common stage to validate and add their views on the findings, key challenges, possible solutions for the issues identified.

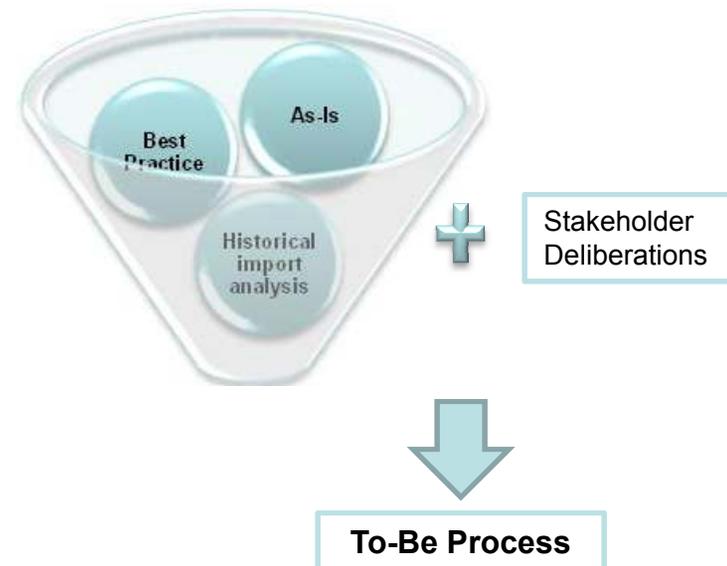
Representatives from FSSAI, Ministry of Health & Family Welfare, Directorate General of Foreign Trade (DGFT), Ministry of Agriculture, Central Board for Excise & Customs (CBEC), State Food and Drug Authority, Central Food Lab (CFL), Export Inspection Council (EIC), Bureau of Indian Standards (BIS), Federation of Indian Chambers of Commerce and Industry (FICCI), Confederation of Indian Industry (CII), Quality Council of India (QCI), Importers' Association, Central Warehousing Corporation (CWC) were some of the key participants.

These assessments and deliberations led to the prioritization of Principles and on the basis of the same, the To-Be Processes to ensure that Safe Food is imported have been suggested in the form of the BPR Report.

Based on the :

- **As-Is** Assessment
- **Secondary research** (understanding **good practices** followed by other countries)
- **Deliberations** amongst various **stakeholders** at various levels
- **Data** on historical **food imports** (in terms of types of imports, volume, value, country of origin etc)
- Need to evolve a **risk analysis system** for imported food products whereby the mitigation of food safety risks takes place effectively whilst offering faster food import clearances.

the Design Principles were prioritized to ensure safety and compliance of imports into the country.

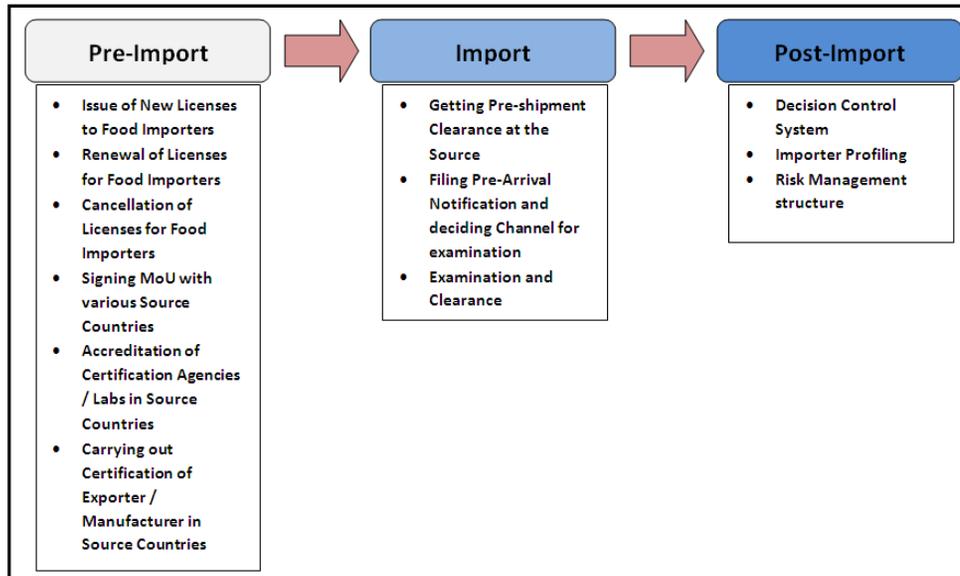


The To-be processes have been explained in the subsequent sections.

Overview of To-Be Processes



The figure below is a snapshot of the proposed To-Be Processes across the three phases of food import life cycle. It may be noted here that these processes are not sequential and that the priority would primarily be on the processes in import clearance phase wherein FSSAI has a direct control.



Under the Pre-import Phase two processes have been proposed for redesigning ,namely:

- ❖ **Licensing of Food Importers:** Enable FSSAI to capture and verify food importer’s credentials and issue an Unique ID, if satisfied
- ❖ **Certification of Exporters and Manufacturers at Source Country:** Enables FSSAI to control food safety at the source country by certifying the Exporters / Manufacturers to export food to India as per stipulated guidelines

Under the Import Clearance Phase three processes have been proposed for redesigning , namely:

- ❖ **Pre-shipment Clearance at source** - Enables FSSAI to authorize agencies and labs to endorse and certify food exports to ensure they meet Indian safety standards, thus reducing clearance time and effort sin India
- ❖ **Pre-arrival notification** - Enables FSSAI to coordinate and deploy the appropriate resources to receive, examine and commence the clearance process quickly
- ❖ **Risk-specific assessment, sampling and testing of the imported food consignments-** Enables FSSAI to streamline and proactively plan on resource utilization, infrastructure availability and provide timely information to facilitate the interlinked activities of the import process to ensure faster clearance.

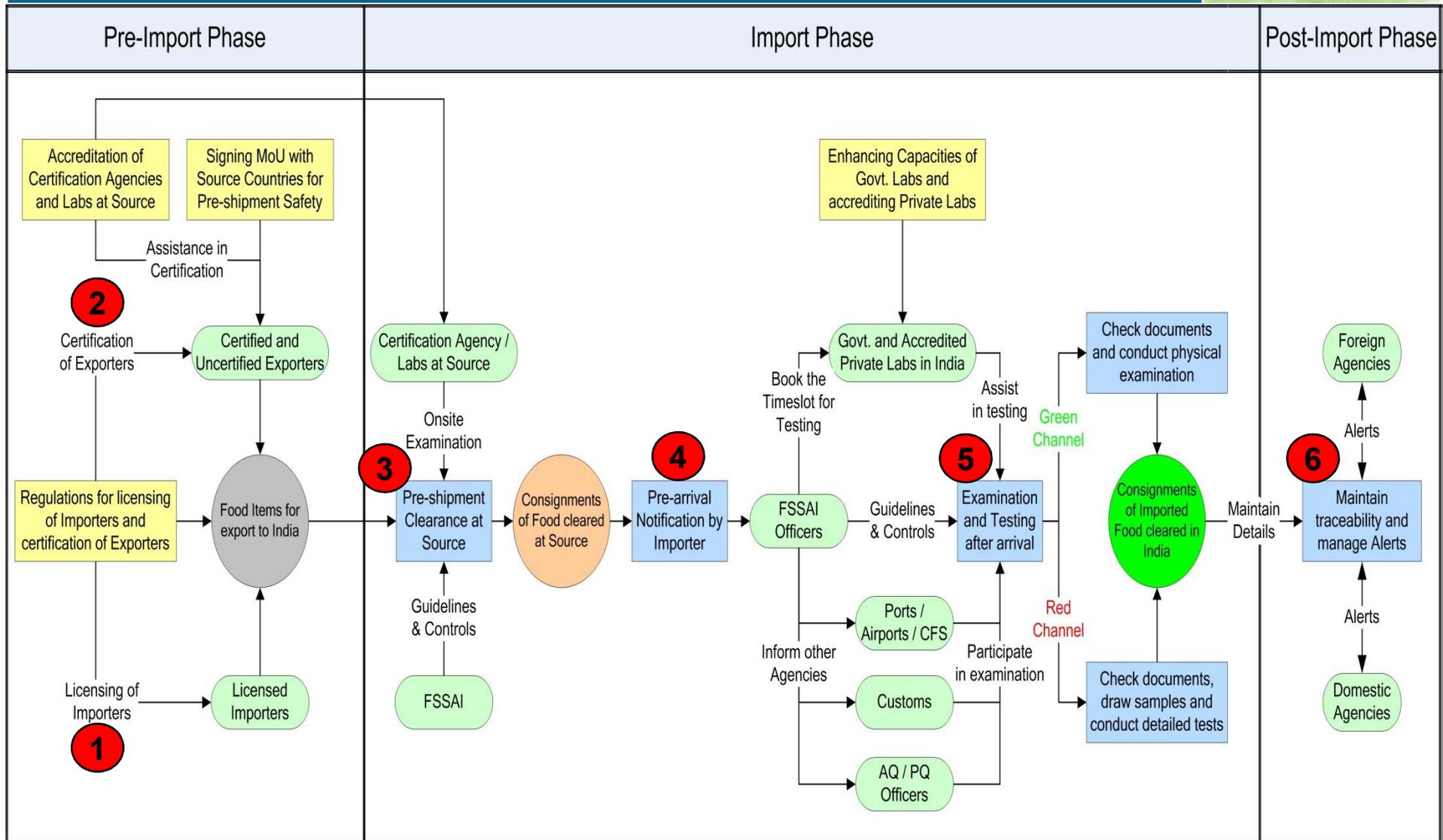
Under the Post-import Phase, two processes have been proposed for redesigning, namely:

- ❖ **Traceability and Alerts-** Enables FSSAI to profile importers and capture relevant credentials and consumption information along the food supply chain to ensure effective traceability and recall.
- ❖ **Risk Management Data** - Enables FSSAI to create an information system that would continuously feed and update the risk management framework.

The figure on the next page provides the overview of the proposed To-Be Processes across the three phases of the food import lifecycle.

Overview of To-Be Processes

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Details of the To-Be Processes (represented by Numbers in this Flow) are provided in the next Section.

Detailed Description of To-Be Processes



Process #1: Licensing of Importers

This is a new process and it could be termed as a “**Must-Have**” as it is a mandatory requirement for food importers to apply for license (per the Food Safety & Standards Act, 2006. implications from this particular process).

The **Objectives** of this process are:

- ❖ Enhanced regulation of Food Importers
- ❖ Verifying the credentials of Importers who desire to import Food Items
- ❖ Profiling of Importers for use in subsequent stages of import

The **Proposed Flow** of this process would be as follows:

- ❖ Mandatory Licensing of all Importers of Food Items
- ❖ For the first time, License to be issued for 1 year and thereafter the renewal of Licenses to be directly linked with the track-records and profiles of the Importers
- ❖ Option to apply Online (through internet) or manually (via Facilitation Centre) for issue of Licenses
- ❖ Categories of Food Items that the Importer desires / plans to import have to be specified while applying
- ❖ Payment of Fee for New Licenses and for renewal - to be fixed by FSSAI
- ❖ FSSAI to reserve the right to cancel / suspend the License of an Importer as necessary

The **Envisaged Outcomes** of this process would be:

- ❖ All import of Food Items are carried-out only by Licensed Importers with Unique IDs
- ❖ FSSAI is able to capture various details regarding Importers / Prospective Importers of Food Items

The **Roles & Responsibilities** of various Participants under this process would be:

Importers	<ul style="list-style-type: none"> ○ To apply for license ○ To provide all the supporting documents and necessary Details as mandated along with the application for issue of license ○ To start utilizing the Unique Food Importer ID issued after successful licensing with FSSAI
FSSAI	<ul style="list-style-type: none"> ○ To receive and validate the applications for issue and renewal of Licenses of Food Importers ○ To establish Facilitation Centers for receiving the Applications for issue / renewal of License ○ To issue Unique ID to all Licensed Food Importers
Facilitation Centers	<ul style="list-style-type: none"> ○ To receive and validate Applications and the supporting documents from Importers desiring issue / renewal of a Food Importer License ○ Providing guidance to the importers



Process #2: Certification of Exporter / Manufacturer

This would be a new process and it could be termed as a “Nice-To-Have” as even though it has direct implications on the quality of food items being tested at source, the time and effort that would be required to enable this would be quite considerable.

The **Objectives** of this process would be:

- ❖ Enhanced regulation of Food Exporters / Manufacturers at Source
- ❖ Certifying operations of these Exporters / Manufacturer
- ❖ Capturing various details of these Exporters / Manufacturers for use in subsequent stages of import

The **Proposed Flow** of this process would be as follows:

- ❖ FSSAI to sign MoU with Source Countries for ensuring pre-shipment safety of Food Items intended for India
- ❖ As MoU could be a time-consuming process, FSSAI to also accredit suitable private Certification Agencies / Labs at Source for assisting in Certification of Exporters / Manufacturers
- ❖ Certification to be voluntary but the risk-assessment of Certified Exporters / Manufacturers to be adjusted appropriately after their Certification
- ❖ Facility to apply Online for certification to be provided for the Exporters / Manufacturers

The **Envisaged Outcomes** of this process would be:

- ❖ FSSAI is able to check if the operations of Exporter / Manufacturer are as per stipulated Guidelines
- ❖ Exporters get Unique IDs which would be used in all activities during import

The **Roles & Responsibilities** of various Participants under this process would be:

Exporters / Commission Agents at Source Country	<ul style="list-style-type: none"> ○ To apply for Certification ○ To provide all the Supporting Documents and necessary Details as mandated ○ To provide assistance to FSSAI-accredited Certification Agency / Lab during onsite assessment
FSSAI	<ul style="list-style-type: none"> ○ To accredit Certification Agencies and Labs in various Countries to receive Applications for Certification from Exporters / Commission Agents ○ To process and validate the applications for Certification and issue Unique ID to all Certified Food Exporters / Commission Agents at the source country
Accredited Certification Agency / Lab	<ul style="list-style-type: none"> ○ To carryout Onsite Assessment of the operations of Exporters / Commission Agents who have applied for Certification



Process #3: Pre-shipment Clearance of Food Consignments

This would be a new process and it could be termed as a “Nice-To-Have” as even though it has direct implications on the quality of food items leaving Source Countries for India, the amount of time and effort that would be required to enable this would be quite considerable.

The **Objectives** of this process would be:

- ❖ Providing lead-time to Agencies at Designated Points of Entry regarding consignments of Food Items due
- ❖ Providing FSSAI with facility to check workloads of its Testing Facilities and accordingly schedule the arrival of Imported Food
- ❖ Importers have option to choose date for arrival in India

The **Proposed Flow** of this process would be as following:

- ❖ Pre-shipment Clearance to be mandatory for all Food Shipments intended for India. Once the MoU with source country is signed or FSSAI has accredited some private agencies
- ❖ FSSAI to utilize accredited Certification Agencies / Labs at Source for pre-shipment examination
- ❖ If a consignment is cleared after pre-shipment examination, it would be assigned a Unique Consignment ID and allowed to be sent to India
- ❖ If consignment fails the pre-shipment examination, it would not be allowed for export to India

The **Envisaged Outcomes** of this process would be:

- ❖ All Food Items that are shipped to India meet the safety standards as stipulated by FSSAI

The **Roles & Responsibilities** of various Participants under this process would be:

Exporters / Importers	<ul style="list-style-type: none"> ○ To apply for Pre-shipment Clearance ○ To provide all the Supporting Documents and necessary Details as mandated ○ To provide assistance to FSSAI-accredited Certification Agency / Lab during onsite examination of Food intended for India ○ To use Unique Consignment ID issued after successful clearance of the Consignment
FSSAI	<ul style="list-style-type: none"> ○ To receive Applications for Pre-shipment Clearance from Exporters / Importers ○ To accredit Certification Agencies and Labs in various Countries to carry-out onsite examination of Food intended for India ○ To issue Unique ID to all cleared Food Consignments
Accredited Certification Agency / Lab	<ul style="list-style-type: none"> ○ To carryout onsite examination of Food intended for India at Source



Process #4: Receiving Pre-arrival Notifications

This would be a new process and it could be termed as a “Nice-To-Have” as in many cases it would not be possible for the Importers to accurately establish the dates of arrival of their Consignments in India

The **Objectives** of this process would be:

- ❖ Providing FSSAI with details regarding the type and volume of Food Items intended for import to India before their arrival

The **Proposed Flow** of this process would be as following:

- ❖ Filing of Pre-arrival Notification to be mandatory for all Food Shipments coming into India
- ❖ Facility for Online (through internet) Filing of Pre-arrival Notification
- ❖ Importer to select the desired date for arrival in India and specify the Point of Entry where the Pre-cleared Consignment would arrive
- ❖ Upon receiving a Pre-arrival Notification, FSSAI to first check workloads of its Testing Facilities and then confirm to the dates to the Importer
- ❖ After confirming dates to Importers, FSSAI to inform other Agencies for enabling their resource allocation

The **Envisaged Outcomes** of this process would be:

- ❖ Sufficient lead-time is provided to Agencies at Designated Points of Entry
- ❖ Workload of Test Facilities are better managed
- ❖ Dwell-time for Consignments of Food during examination is as less as possible

The **Roles & Responsibilities** of various Participants under this process would be:

Importers	<ul style="list-style-type: none"> ○ To file Pre-arrival Notification (with expected date and port of arrival in India) ○ To provide all the Supporting Documents and necessary Details as mandated
FSSAI	<ul style="list-style-type: none"> ○ To fix Service Levels for Labs ○ To receive Pre-arrival Notification from Importers and book the time with Labs accordingly ○ To notify all other Agencies at Port / Airport / CFS regarding the arrival date of the Consignment ○ To decide if the Consignment would be diverted to Red Channel or Green Channel as per the associated Risks
Labs under FSSAI	<ul style="list-style-type: none"> ○ To reserve time and resources for testing of the Consignment according to the date of arrival as indicated by the Importer



Process #5: Examination and Testing of Imported Food Items

This would be a revised version of the existing process of Examination and it could be termed as a **“Must-Have”** as it is essential to have the forward as well as backward traceability of Imported Food Items after their Clearance and till their safe and uneventful consumption in domestic markets

The **Objectives** of this process would be:

- ❖ To ensure that only safe Imported Food is allowed to enter the domestic markets in India

The **Proposed Flow** of this process would be as following:

- ❖ 2 Channels / Flows for examination of imported Food based on associated risks - Green Channel for Low-risk food Items and Red Channel High-risk food Items
- ❖ FSSAI designated / deputed Officers to be focal during examination of imported Food Items
- ❖ For Green Channel Items, these Officers to check the Documents and carry-out physical examination
- ❖ For Red Channel Items, these Officers to check Documents, carry-out physical examination, draw samples and send for testing to designated Lab
- ❖ Online System to be used for receiving test results and for other communications

The **Envisaged Outcomes** of this process would be:

- ❖ FSSAI is able to utilize its resources in accordance to the associated risks of the imported food items
- ❖ Domestic Consumers have access to only safe imported food

The **Roles & Responsibilities** of various Participants under this process would be:

Airports / Ports / CFS / ICD	<ul style="list-style-type: none"> ○ To provide unloading and storage facilities for Food Consignments arriving in India as per the Item-wise Guidelines issued by FSSAI
Customs Officers	<ul style="list-style-type: none"> ○ To share information with all the stakeholders associated with the entire food import lifecycle
FSSAI-authorized Officers	<ul style="list-style-type: none"> ○ To check the Documents accompanying the Consignments, carry-out physical examination and if Red Channel Item, draw samples for testing by FSSAI accredited Labs
Labs under FSSAI	<ul style="list-style-type: none"> ○ To carryout testing of Samples of Food Items as forwarded by FSSAI-authorized Officers and send back the Results via Online System
Importers	<ul style="list-style-type: none"> ○ To facilitate examination and assessment



Process #6: Ensuring Traceability and facilitating Recall of Imported Food Items

This would be a revised version of the existing process of Examination and it could be termed as a “**Must-Have**” as it is the base for the entire solution as perceived for ensuring that only Safe Imported Food reaches the domestic consumers.

The **Objectives** of this process would be:

- ❖ Allow FSSAI to effectively and efficiently collaborate with various Stakeholders (foreign counterparts, Central Agencies, State FDA, etc.) for ensuring traceability and facilitating recall of imported food , in case required

The **Proposed Flow** of this process would be as following:

- ❖ FSSAI to maintain all the records pertaining to Imported Food Items cleared after examination
- ❖ FSSAI to also establish suitable linkages with foreign as well as domestic agencies for receiving alerts regarding imported food items
- ❖ Upon receiving an Alert regarding recall of a particular Item, FSSAI to alert State FDA and Importers for recall, and the Agencies at Points of Entry to stop the inflow
- ❖ Upon receiving an Alert regarding revision of the risks associated with a particular Item, FSSAI to alert accredited Labs at source as well as agencies at points of entry to start adopting specific protocols

The **Envisaged Outcomes** of this process would be:

- ❖ FSSAI is able to handle all the Global and Domestic Alerts regarding Imported Food Items
- ❖ FSSAI is able to collaborate and work closely with Foreign and Domestic Agencies for ensuring that Indian Consumers have the safest food items available from around the world

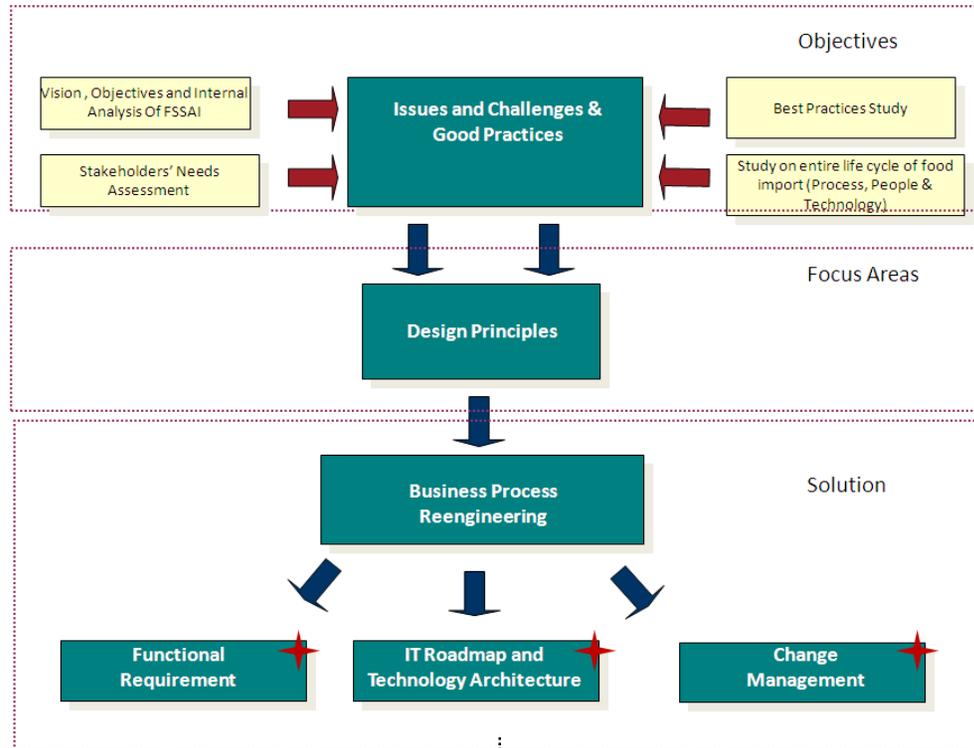
The **Roles & Responsibilities** of various Participants under this process would be:

International / domestic Agency	<ul style="list-style-type: none"> ○ Send various Alerts pertaining to Food Items to FSSAI
FSSAI	<ul style="list-style-type: none"> ○ Sensitize the Accredited Agencies / Labs at Source, various Agencies at Operational level within India and Importers / Exporters if Alert is regarding revision of Risk associated with an item, ○ Stop the inflow of the item if the Alert advises the same and also sensitize various Agencies at Operational level to stop allowing the item and Importers / Exporters to stop bringing it and to recall stocks already released in domestic markets ○ Start the inflow of the item if the Alert advises the same and also sensitize various Agencies at Operational level to allow and Importers / Exporters to start bringing that particular item

Way Forward



After redesigning the process for each of the three phases of the import life cycle, next steps would be to prepare functional specifications, IT Roadmap, technology architecture and change management covering the aspects as depicted in the figure below and detailed subsequently:



- ❖ Functional Requirement Specifications: In the next stage, based on the to-be processes, the functional architecture and the functional requirements of system shall be defined
- ❖ IT Roadmap for the Organization: IT Roadmap for FSSAI would cover IT Strategy, Technology related aspects, and Roadmap for integration with stakeholders

- ❖ Integrated Solution Design: This would cover building a comprehensive IT solution in line with new processes
- ❖ Change Management: Under this, a detailed plan for addressing the issues that the stakeholders would face and also the ways and means of training, motivating the individuals for ensuring the success of the project.