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Overview Presentation on Registry Procurement and Specifications

Workshop "Building Registries to Support the Next Generation of Carbon Markets"
Partnership for Market Readiness

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Introduction

- The Background Paper n°3 aims at **facilitating the procurement of a registry,** as compared to starting from a blank page

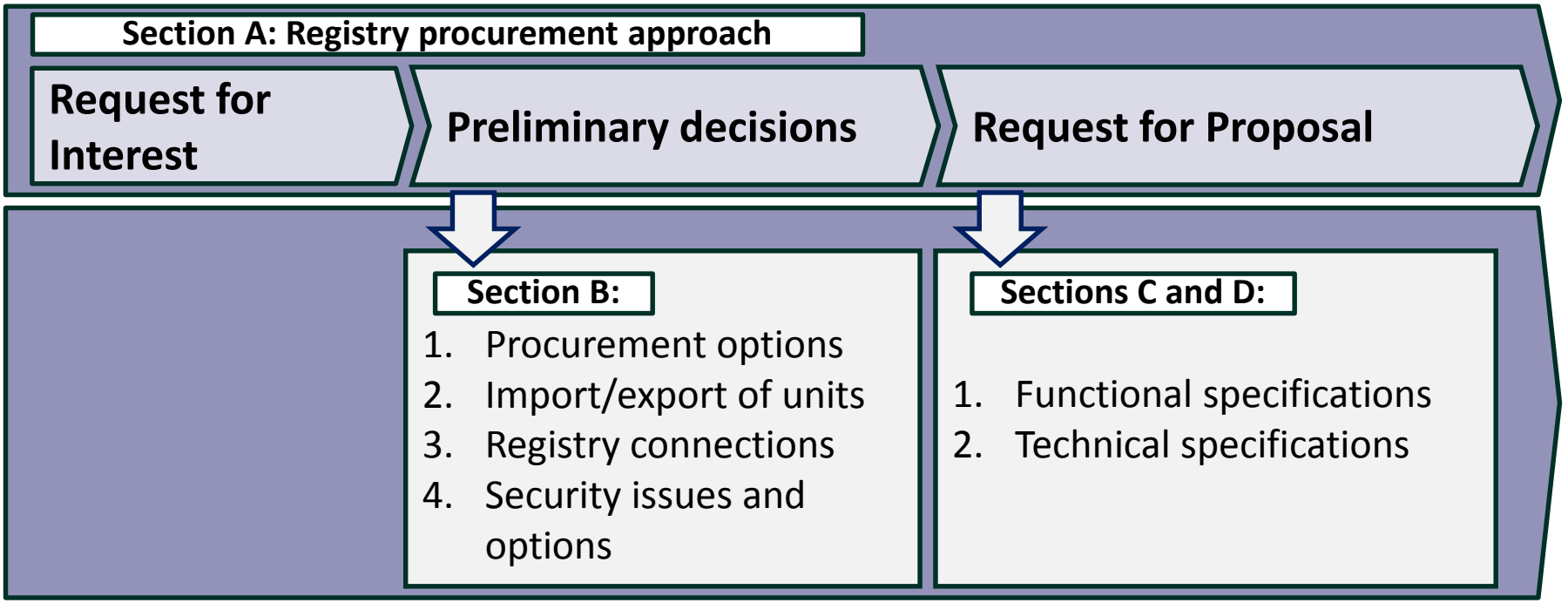
- The level of details provided in the specifications sections, to be adapted to each specific market mechanism, aims at **reducing the workload associated with registry implementation projects**

- This document also **takes benefits from experience with existing registries** in various market mechanisms

Purpose and structure of the Background Paper n°3

A stepwise approach to the procurement of a registry IT

- A decision helping document
- Propositions, to be adapted to the specificities of each market mechanism



Request for interest (RFI)

A RFI to improve knowledge of existing offers and their suppliers

- Issue a RFI to potential registry suppliers, to:
  - Improve expertise on **existing offers and prices**
  - Evaluate the quality of suppliers **project management**
  - Registry IT implementation takes months: estimate suppliers' ability to work in **close relationship** and using a common **working language**
  - Assess the **suitability of different delivery models** :
    - Share
    - SaaS
    - Off-the-shelf
    - Development from scratch

Preliminary decisions can take benefits from the outcome of the RFI.

Preliminary decisions

1- Procurement options

Share: One single IT platform for several market mechanisms

- To mutualize costs and IT complexity
- Requires a shared vision (Regulation, MRV, IT Security…)

Develop from Scratch

- To fit to specific requirements

"Off-the-shelf" or adapted from open source solutions

- To adapt and implement an existing solutions

SaaS (Software As A Service): Pay a subscription for all IT aspects of the registry

- To outsource management and costs related to IT and human resources

If the priority is on reduced costs, rapid delivery, low workload and low level of internal expertise, then "Share" or "SaaS" options could be favored.

Preliminary decisions

2- Accounting for import/export of units

Definitive transfer: credible, but irreversible

- Cancel units in the exporting registry, issue units in the importing registry
- No double counting
- Credits cancelled can no longer be traded

Mirror Accounting: reversible but raises credibility concerns

- Hold units in the exporting registry, reflected in the importing registry
- Can be compared to the way currencies are accounted for by Banks
- Credits exported are not cancelled: they can be imported again
- Double-counting risk

Mirror accounting requires stronger cooperation between the two market mechanisms, and a common reconciliation process.

Preliminary decisions

3- Registry connections

IT infrastructure:

- **Peer-to-peer:** each registry is connected to each other registry
- **Central hub:** each registry is only connected to a central hub

Language for connection: a communication protocol

- Imposes **registry design constraints** (e.g. workflows, data nomenclature, IT security)
- Enhances consistency: **real time checks and transaction execution/cancellation**

The possibility to connect registries can be anticipated in the early phases of registry development especially impacting registry design and security.

Preliminary decisions

4- Security issues and options

Assess risks (financial, market, reputation…)

- Based on estimated volumes and prices
- Assess consequences and costs of an interruption of registry services or a fraudulent activity

Identify appropriate risk mitigation measures

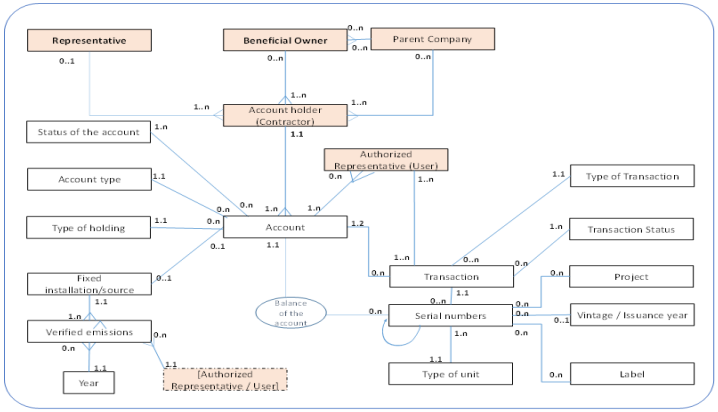
- Regulation and agreements (e.g. limitations of liabilities)
- Registry Administration (e.g. staff training)
- Registry functions (e.g. workflow design, checks and notifications)
- Registry IT (e.g. security infrastructure)

Assessing risks and associated costs can help to adopt proportionate security measures.

Request for Proposal (RFP)

1- Functional specifications

Entity relationship diagram



Transactions Workflows

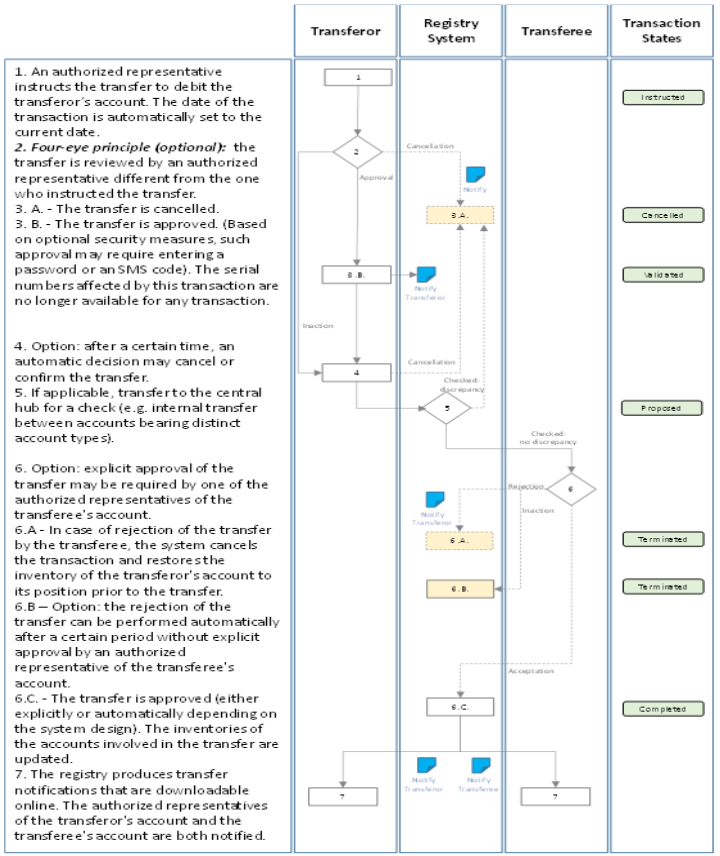
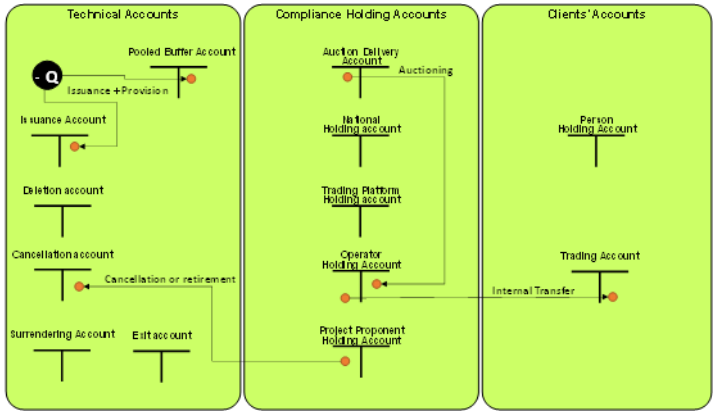


Chart of Accounts and accounting models



Functional specifications list business rules, data and functions

Request for Proposal (RFP)

2- Technical specifications

- **Technical requirements**
  - Location of hosting
  - Environments
  - Performance and volumes
  - Availability
  - Data exchange between the registry and other systems…
- **Security requirements**
  - Authentication, session expiry
  - Integrity and confidentiality of data
  - Traceability
  - Security incidents management and security audits

Technical specifications include IT requirements, and requests for commitment by the supplier, regarding IT security and IT service level.

Conclusions

- A request for interest can help to make a decision between theoretically preferred options, and practically available solutions

- Security has a cost: a business impact assessment based on estimated volumes and prices may help to adopt proportionate security measures. Other decisions also have to be made prior to issuing a RFP: registry connections, or import/export of units

- A request for proposal contains functional and technical specifications. The document issued by the PMR provides a detailed and comprehensive template, to be adapted to each market mechanism specificities

Thank You for Your Attention

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