WORLD BANK GROUP
Climate Change

pmr | PARTNERSHIP FOR MARKET READINESS

Connecting registries

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

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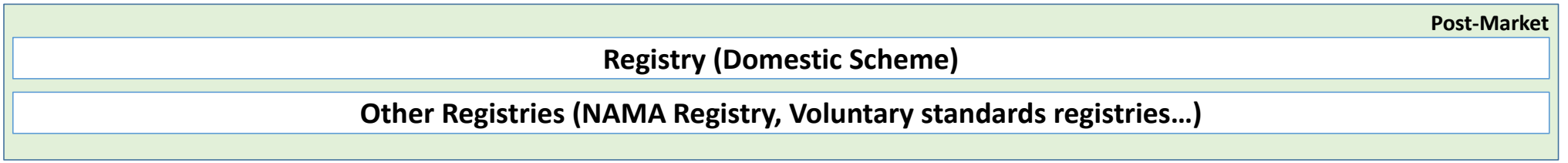
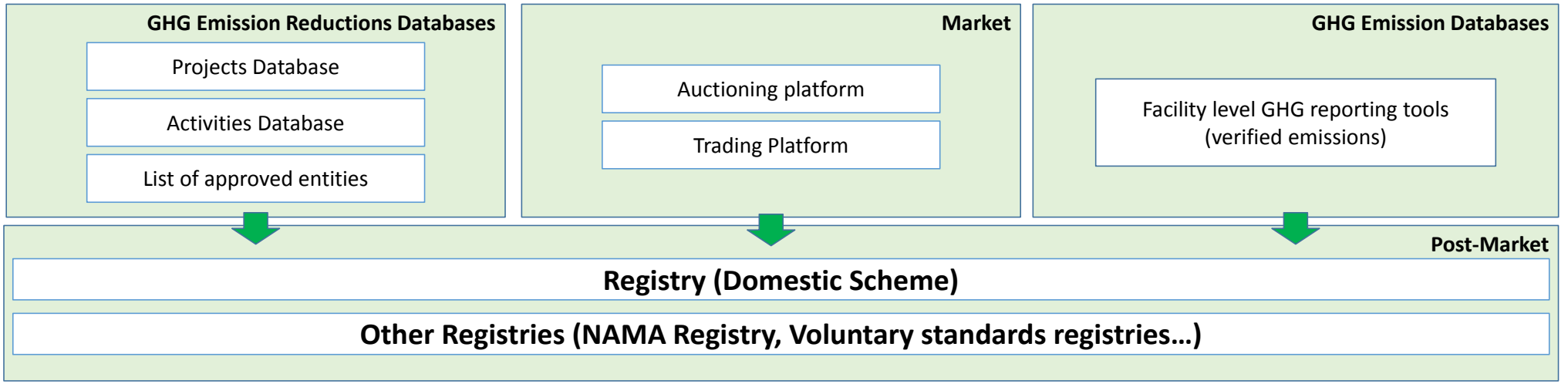
Content

1. Placing the registry in its environment
2. Accounting for inter-registries transfers
3. Connecting registries
4. Communication protocols
5. Transaction logs

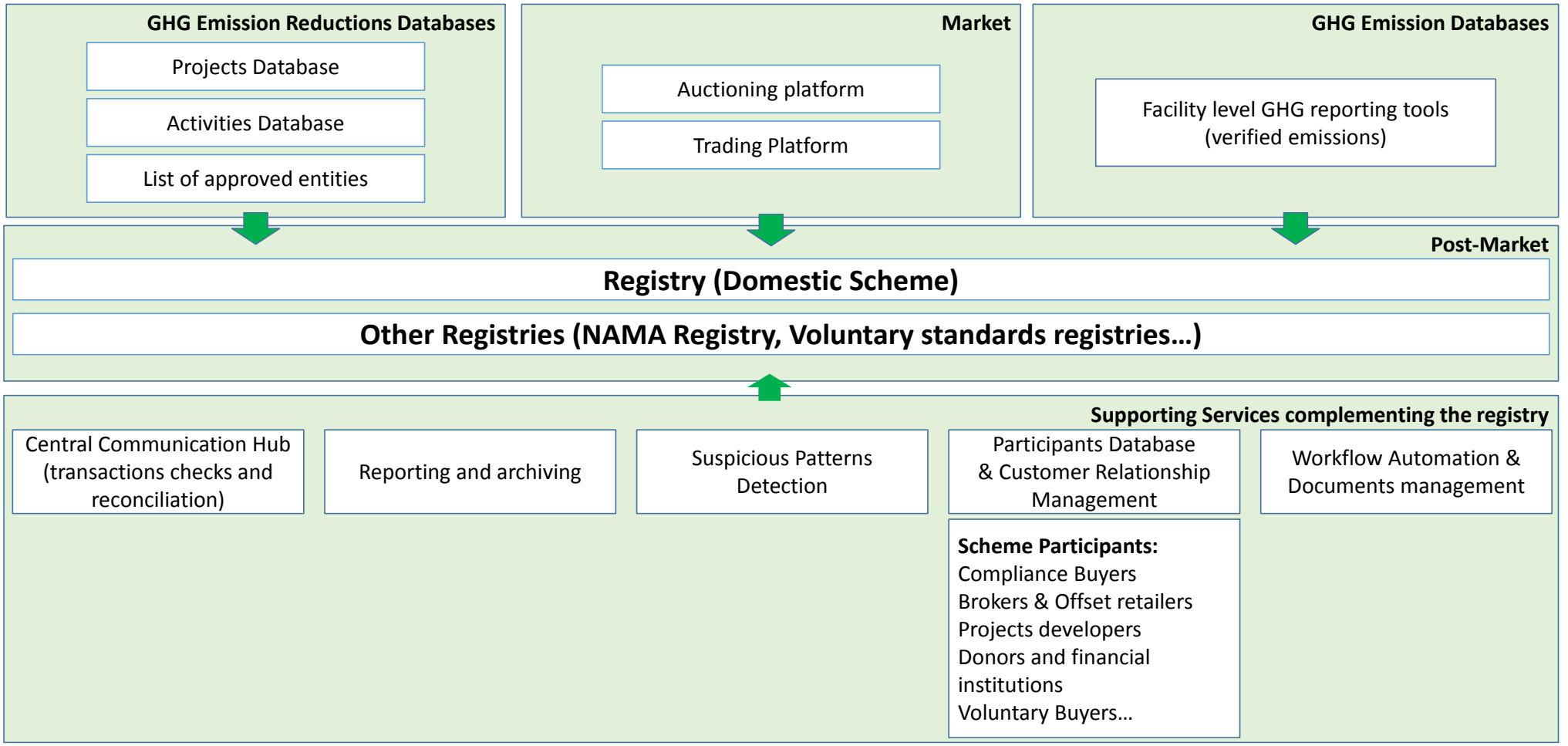
Placing the registry in its environment



Placing the registry in its environment



Placing the registry in its environment



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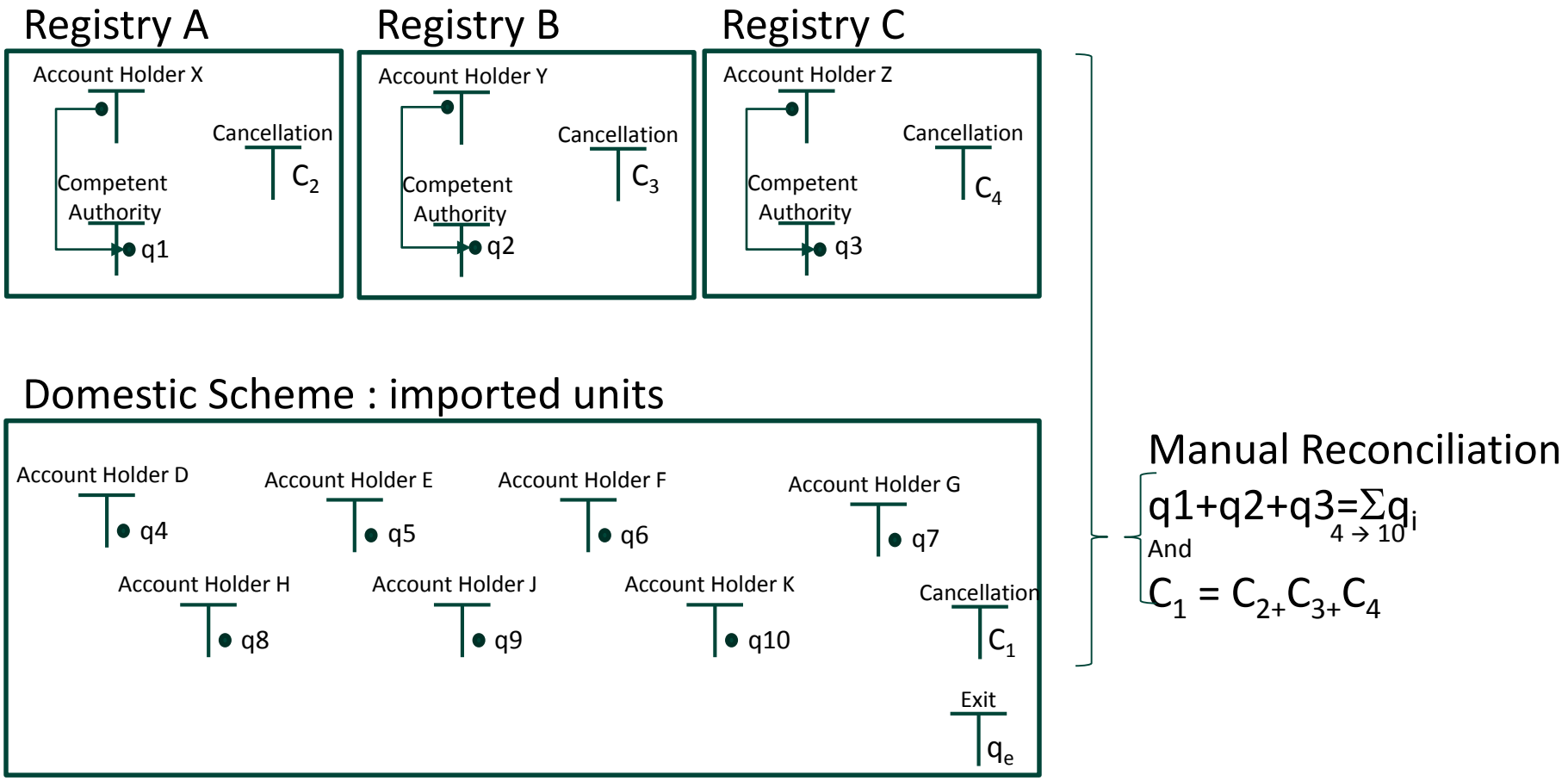
Accounting for inter-registries transfers

- **Internal (same platform):** e.g. CITSS
- **Linking (bilateral):** Units can be transferred from one registry to the other, and vice versa e.g. Kyoto registries
- **Definitive transfer:** consists of canceling the units in the exporting registry to re-issue it in the importing registry. Such re-issuance may be done against a “proof of cancelation” generated by the exporting registry (administrator) to avoid double counting issues. E.g. Ax1 to VCS
- **“Mirror" accounting:** units are stored in a special account of the exporting registry and are virtually reflected in the importing registry where it can then be subject to transfer and/or cancelation operations.
  - For example, this is how accounting is managed for the VCS program when transfers take place between the two VCS registries: unit actually never leave the registry in which they were initially issued, and where they will be cancelled.

Accounting for inter-registries transfers

Domestic "mirror" accounting: reconciliation issue



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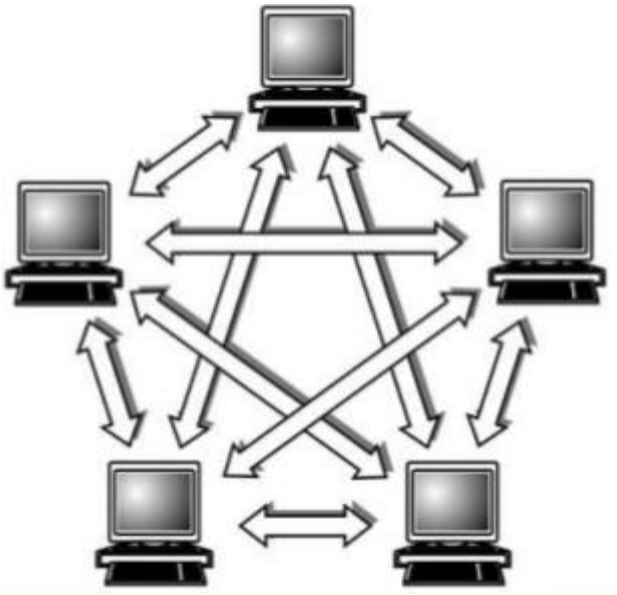
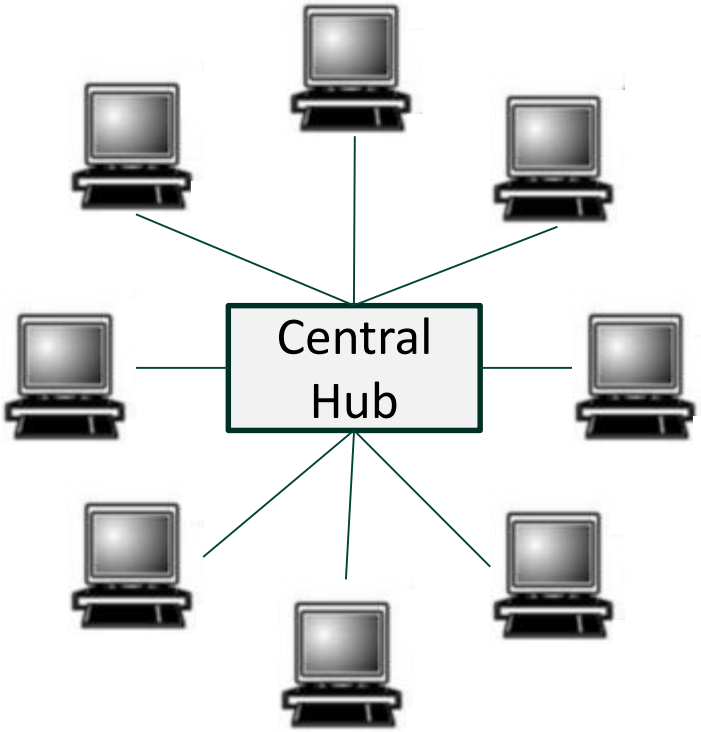
IT Architecture connecting registries

- **Shared Registry (single IT platform)**

IT Architecture connecting registries

- **Peer-to-peer vs. Central Hub**





- **Security? Scalability? Reconciliation process?**

IT Architecture connecting registries

Peer-to-peer vs. Central Hub

	Advantages	Disadvantages
Central hub	- Scalability - Same treatment for all transactions - Easier reconciliation - Cost and complexity are centralized and mutualized - Imposes a same level of security to all registries - Availability of the DES	- Sovereignty on data - High costs if few registries are connected
Peer-to-peer	- Enables specific modes of exchange with certain registries - Potentially lower cost and less complex if only two registries are connected without automation	- Increasing the number of registries connected increases complexity and costs and reduces responsiveness to change - A security flaw in the connection between two registries poses a risk to the whole system - Complex reconciliation process

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Communication protocols

- Definition
  - A system of rules enabling registries to communicate
  - **Standardized (central hub) or potentially specific (peer to peer)**

- Benefits of a communication protocol
  - **Integrity:** Inter-registry transfers are completed or cancelled consistently in both registries
  - **Reliability:** Common processes and rules for transfers and for error detection (e.g. timeouts and retries)
  - **Comparability**:
    - Standardized messages and sequences
    - Shared data format and nomenclatures

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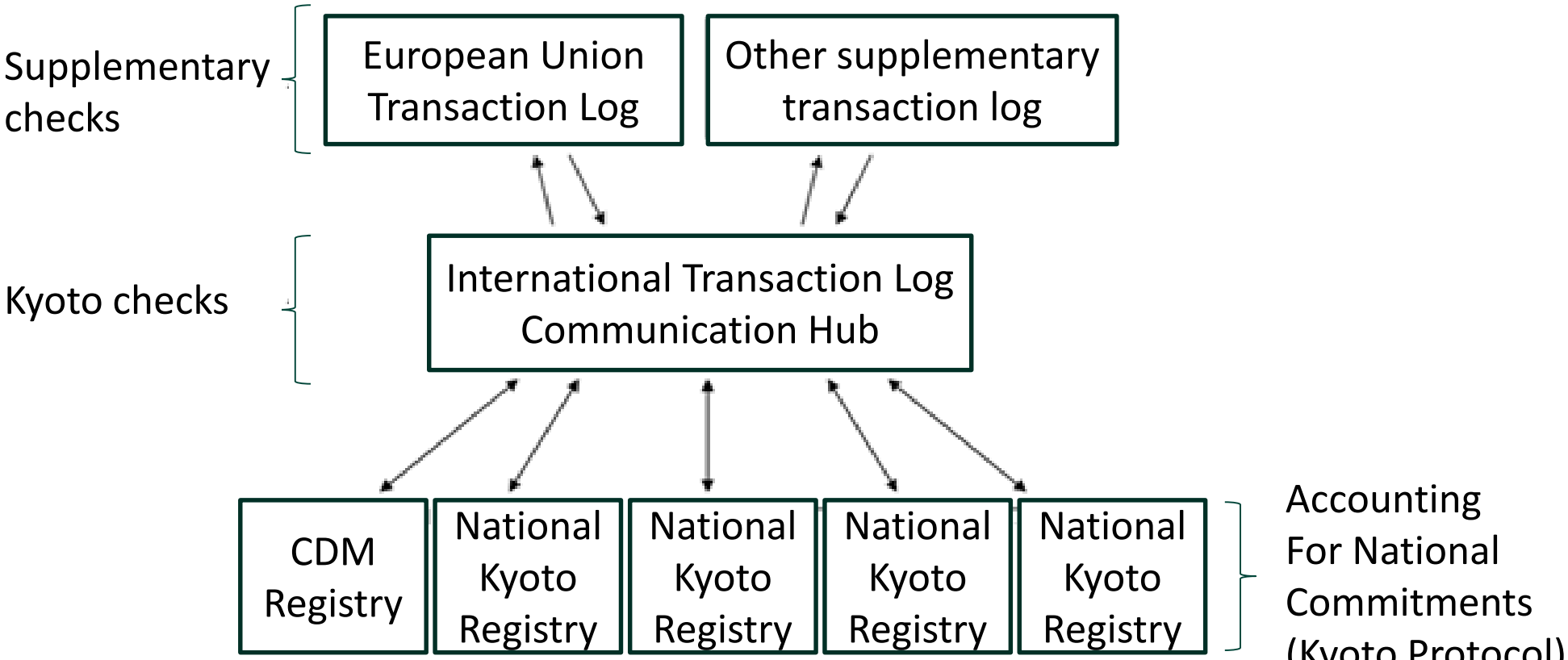
Transaction logs

- **Purpose**
  - **Checking** for accounting consistency, network-wide
  - **Record Keeping**

- **Main Benefits**
  - **Real time checks**, and **error solving** processes
  - **Traceability** of all transactions
  - **Archiving**

Registry connections in practice

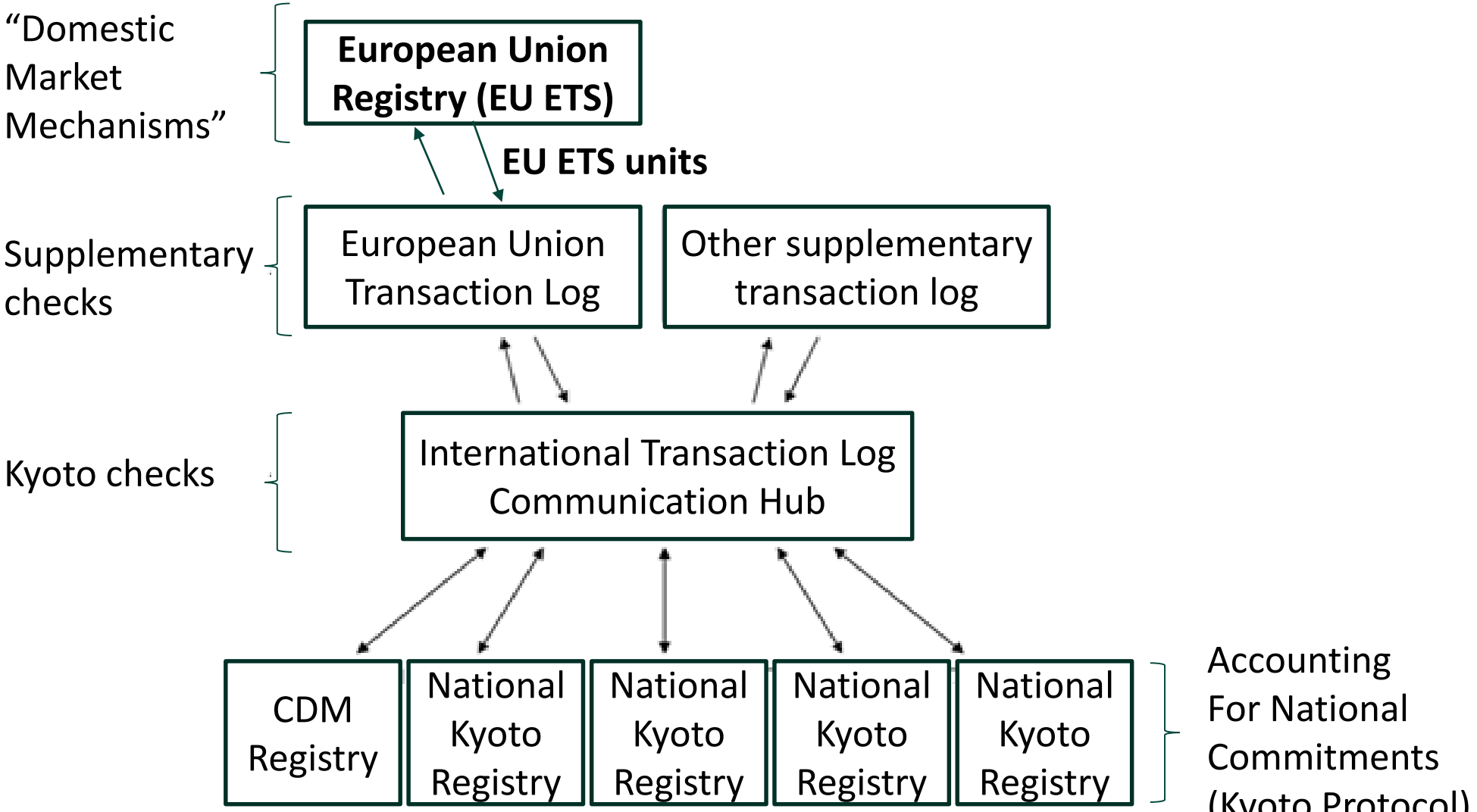
- **Examples: ITL and EUTL**



Source: Unfccc

Transaction logs

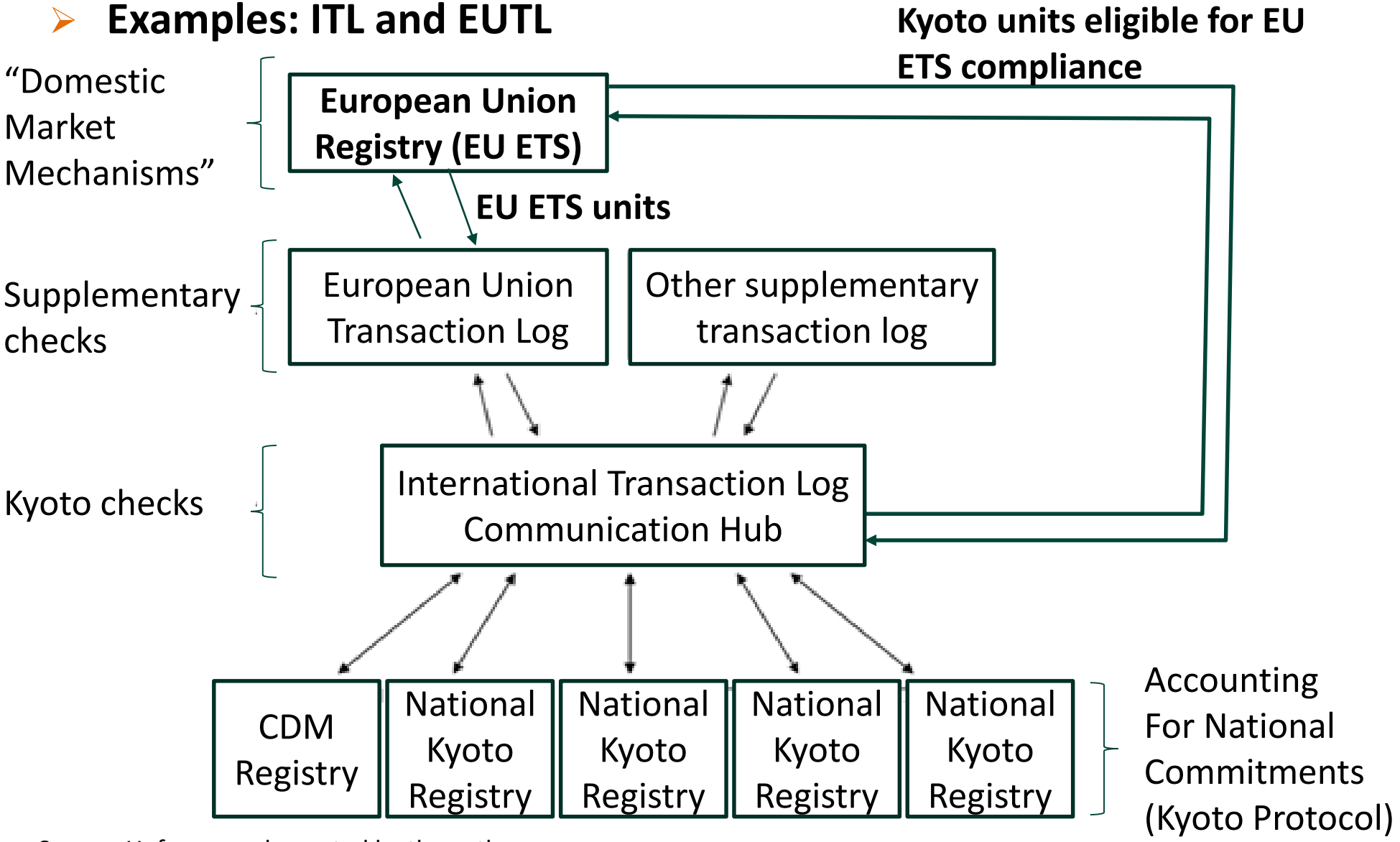
- **Examples: ITL and EUTL**



Source: Unfccc complemented by the author

Transaction logs

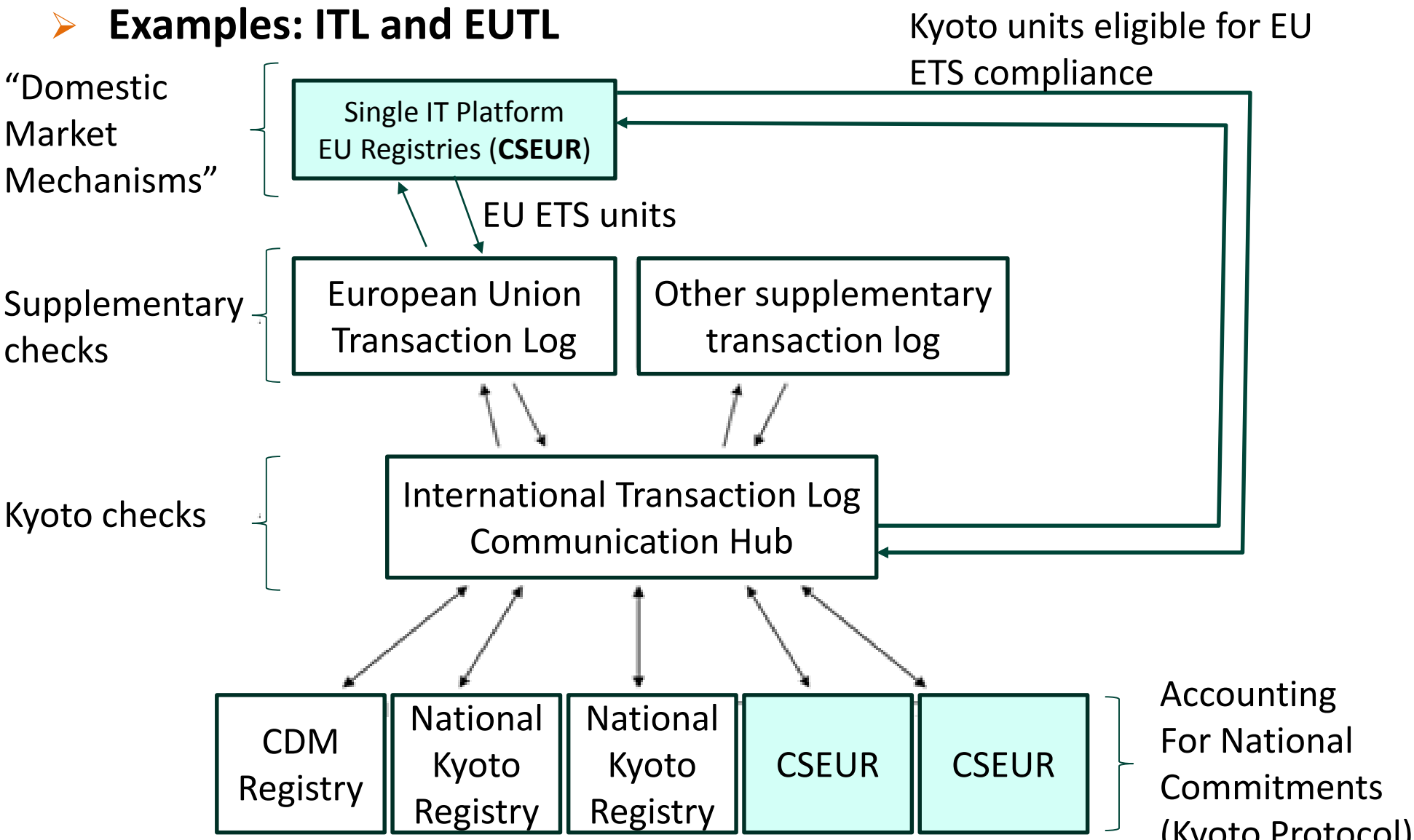
- **Examples: ITL and EUTL**



Source: Unfccc complemented by the author

Shared IT for registries

- **Examples: ITL and EUTL**



Source: Unfccc complemented by the author

Thank You for Your Attention

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