Building registries to support robust accounting

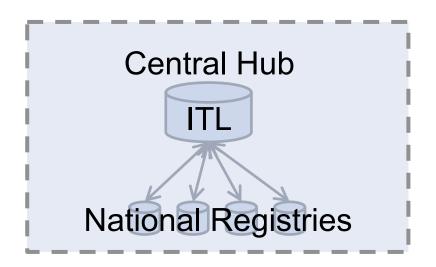
Oct. 17<sup>th</sup> 2016 Munetaka KIMURA NTT DATA CORPORATION





# (1) Registry systems under the Kyoto Protocol





## **Characteristics**

- -Centralized
  - -Closed
  - -Strict spec and periodic review for compliance

Securing overall consistency

# (1) National Registry of Japan for the Kyoto Protocol



	Functional Requirement	Non-functional requirement	Operation & Maintenance	
Specification control	-Common specifications (UN Decisions, DES(Data Exchange Standards))			
Reliability	-Reconciliation -Logging	-Redundancy -Backup	-Info. Disclosure (eg. SEF report)	
Security	-ID & Password -2 eye principle	-Secure connection	-Use of datacenter -Human check -RSA authentication	
Usability	-Electronic application -Payment system connection			

# (2) Tracking of carbon units under the Paris Agreement



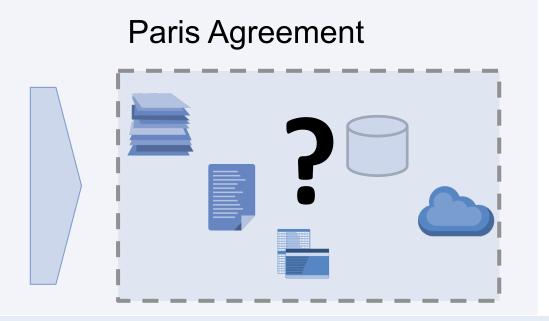
### <u>Characteristics</u>

- -De-centralized
- -Diversity
- -Minimum principle (may need to be followed)

# Importance of Transparency

- -Credit information + additional information
- -Traceability architecture
- -Security

# Central Hub ITL National Registries

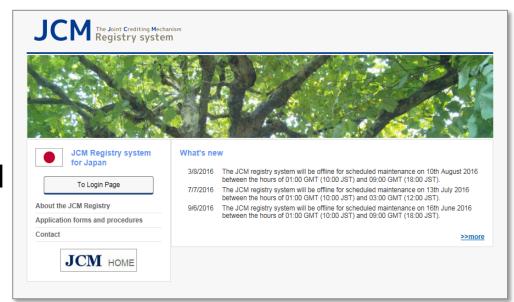




# (3) Joint Crediting Mechanism (JCM) Registry System



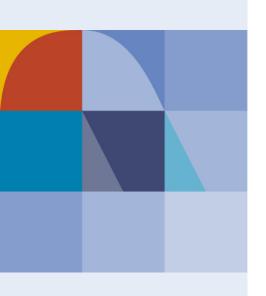
- JCM Registry System has the following major functions to ensure reliability of JCM credits
  - Allocating a <u>unique identification number to each JCM credit</u> (1 t-CO2 eq.) which specifies the host country, country of issuance and reference number of the project
  - Opening and managing accounts for holding credits
  - Managing <u>transaction history</u> of credits
- Common specifications agreed with each partner country are followed.
- Each partner country is expected to implement their own registry.



# (3) JCM Registry System



	Functional Requirement	Non-functional requirement	Operation & Maintenance	
Specification Control	-Custom Specification			
Reliability	-Logging	-Redundancy -Backup	-Confirm by JC (Joint Committee) -Info. Disclosure	
Security	-ID & Password -2 eye principle -2 step authentication	-Secure connection -Other security measure	-Use of datacenter -Human check	
Usability		-Web-based		



# NTT Data Global IT Innovator