

EESSI-PROJECT

General overview



DG Employment,
Social Affairs and
Equal Opportunities



EESSI – Overview



- **EESSI = Electronic Exchange of Social Security Information**
- Goal: Better secure the social security rights of the mobile citizen, by accelerating and making more accurate and timely the actual payment of social security benefits to the mobile citizen.
- EESSI is a core element in the new Regulations on social security coordination (Reg. 883/2004 and 987/2009):
- Involves to 27 + 4 countries



EESSI - Legal framework



- EESSI is prompted by Reg. 883/2004 and 987/2009
 - Institutions are to exchange information electronically under a common secure network
- Regulations become applicable on 1 May 2010
- Transitional period of two years to allow Member States to connect their national applications to the EESSI-system
- 1 May 2012 - All institutions are connected to and exchanging info via EESSI network





EESSI Project - Timeline

- 2007 – Feasibility Study
 - - Major architectural outline
- 2008 – The call for tender for EESSI Project
 - Siemens is selected to develop the EESSI System
- 2009– 2010
 - Implementation of the EESSI System
 - Software – Siemens (two years contract)
 - Central infrastructure setup - DG EMPL/DIGIT
 - Coordination of participant countries
 - 1 May 2010 - Production Date for EESSI - Directory Services
 - Q2 2011 - Production Date for EESSI Messaging
- 2011 – 2012
 - Countries/Sectors join EESSI network



EESSI Concept



- Originated in the Feasibility Study
- EESSI: an electronic network connecting institutions competent in social security sectors, for electronic data exchanges
- SED Message – the communication unit in EESSI
 - a XML file using a predefined structure in the sense of an XML schema (i.e the SED type)
- Flow – all related message exchanges to achieve some business goal (e.g. a pension claim)
 - They follow communication patterns (in a query-reply approach) prescribing which SED types to be used to achieve the goal



EESSI Concept II



- EESSI Model

- Contains SED types and Flow types definition
- Covers the “business” dimension of the EESSI Project
- It is dynamic
- It should reflect an agreed subset of business practices, common to all participating countries

- EESSI Messaging

- The components that ensure message exchange (central and peripheral)

- EESSI Directory Services

- a directory of institutions that make the EESSI network

- EESSI WEBIC

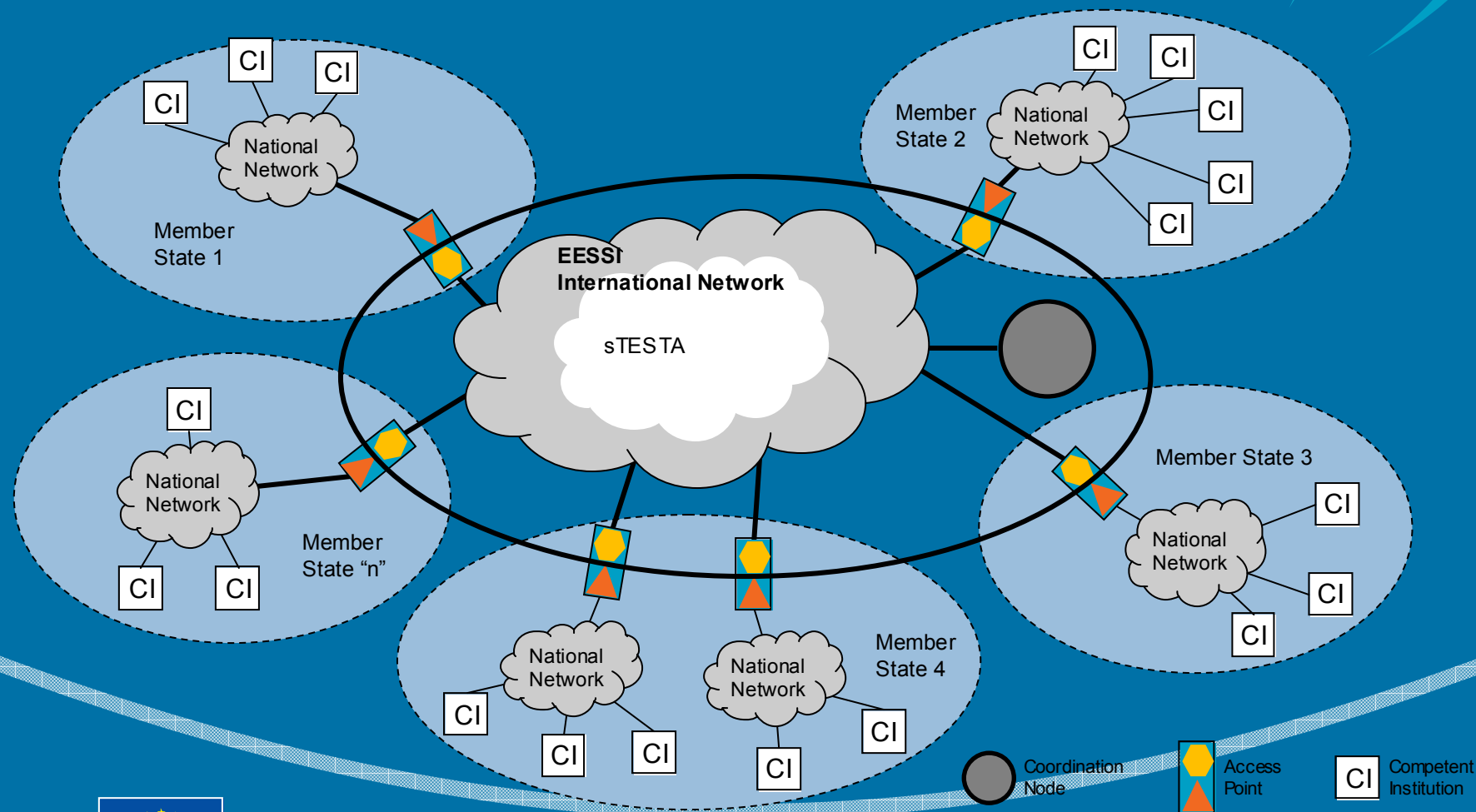
- A default messaging system

- EESSI Information Repository

- A platform of disseminating information to network members



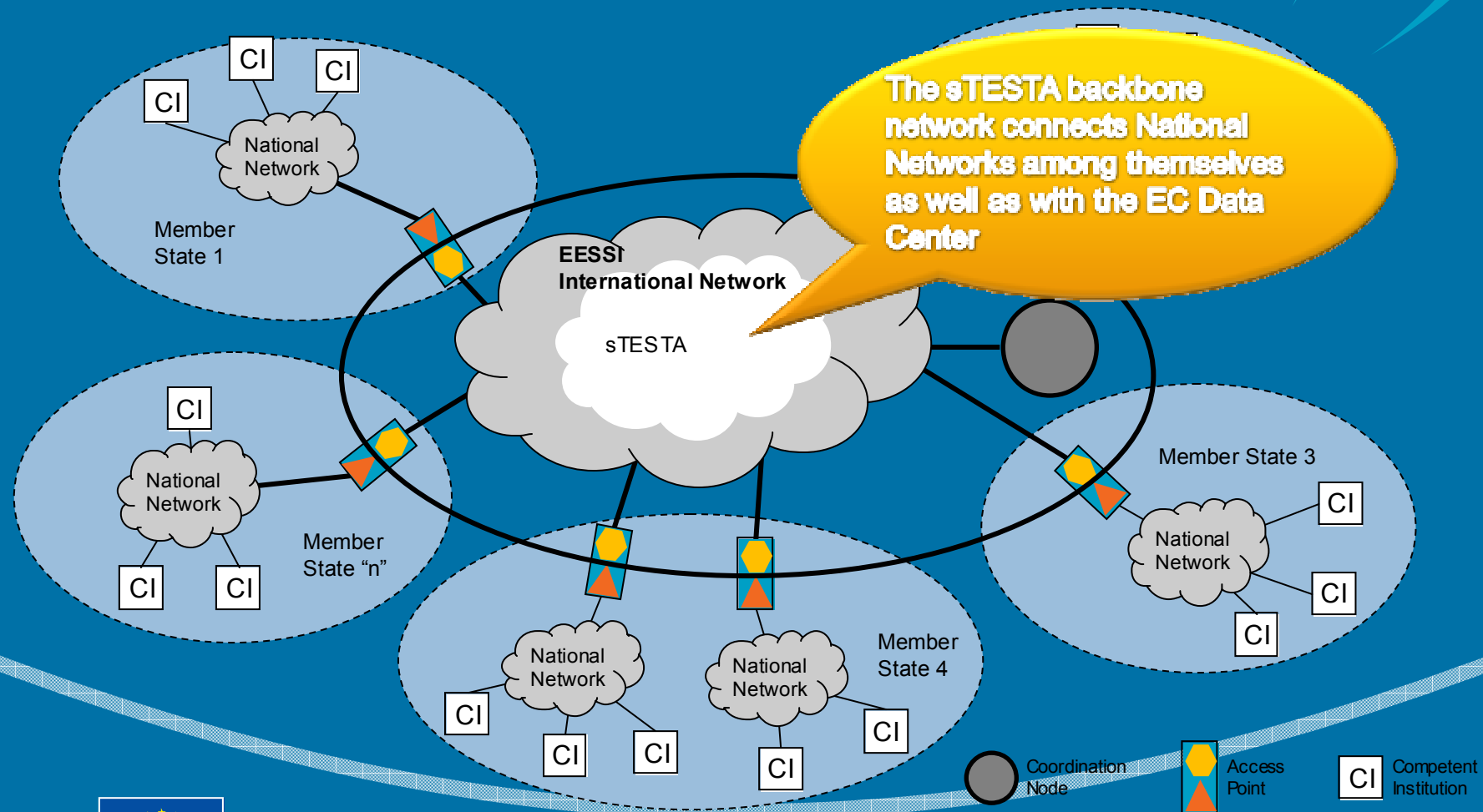
EESSI: High-level Architecture



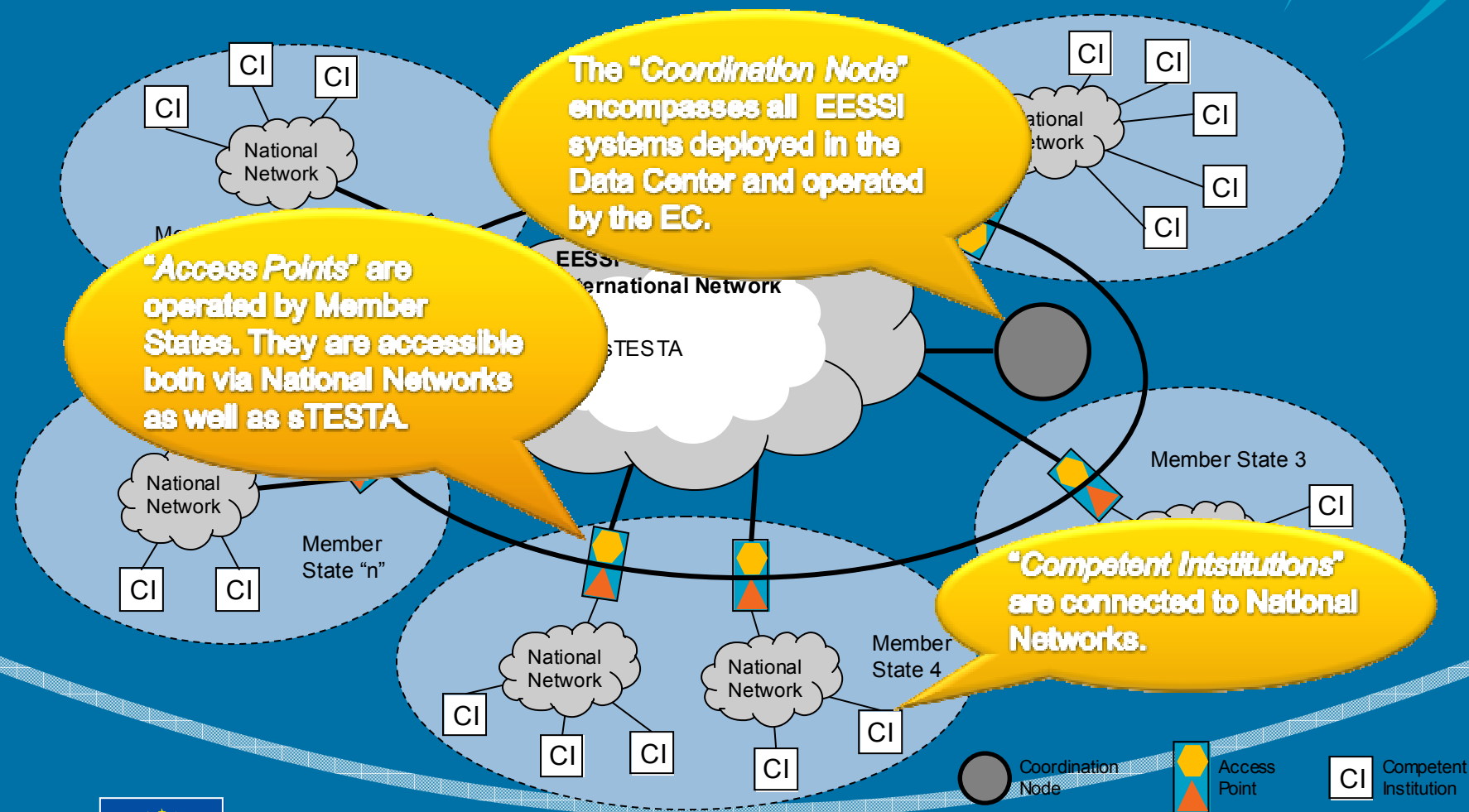


EESSI High-level Architecture

The International network and the National networks



EESSI High Level Architecture: Coordination Node, Access Points and Competent Institutions



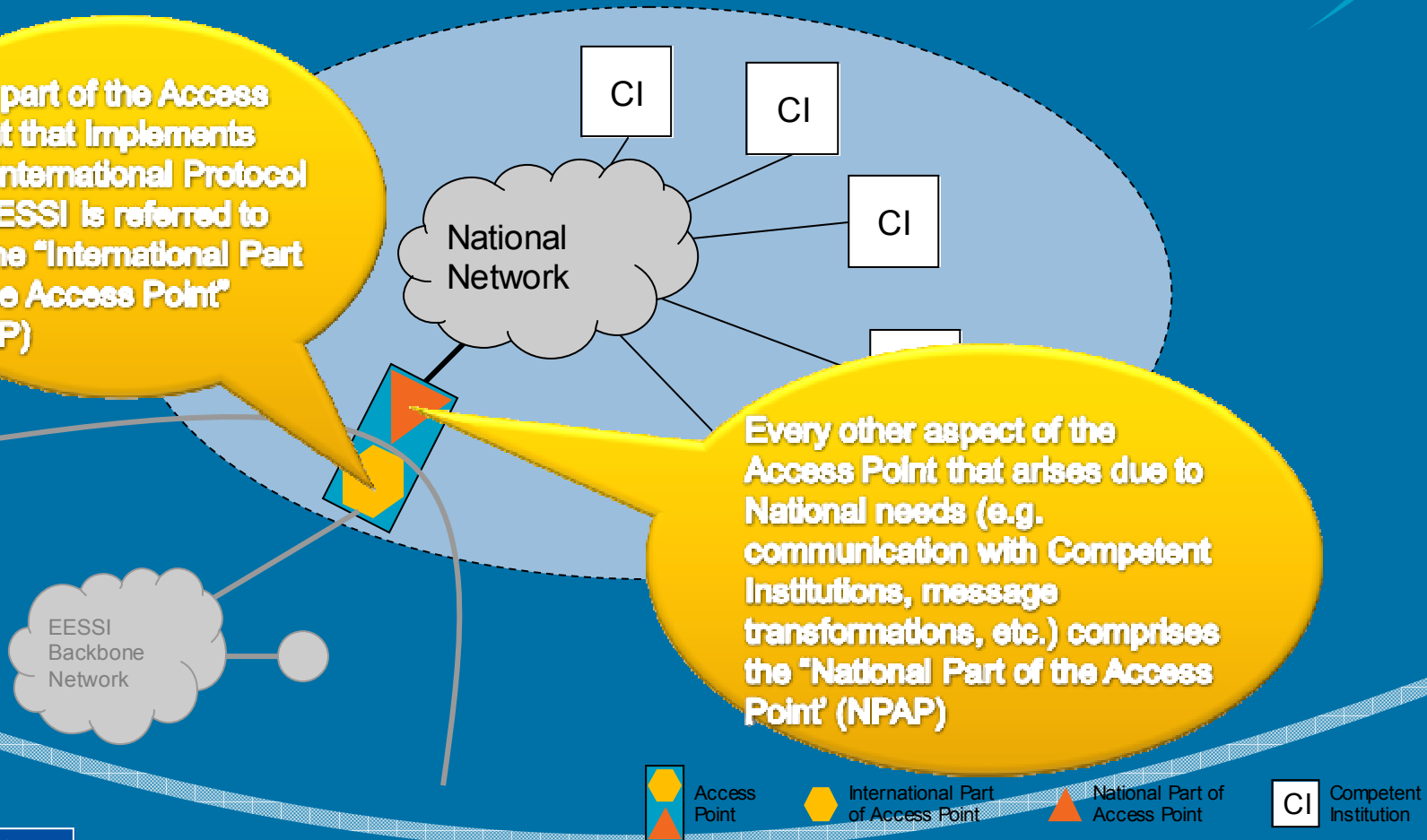
EESSI National Domain

Access Points: International & National Parts



The part of the Access Point that implements the International Protocol of EESSI is referred to as the "International Part of the Access Point" (IPAP)

Every other aspect of the Access Point that arises due to National needs (e.g. communication with Competent Institutions, message transformations, etc.) comprises the "National Part of the Access Point" (NPAP)



EESSI High Level Architecture



- EESSI International Domain
 - EESSI sTESTA backbone
 - EESSI Coordination Node
 - A set of components deployed centrally, namely the Central Message Relay, the Master Directory (presented in Directory Services), etc
 - EESSI Access Point – The International Part (IPAP)
- EESSI National Domain
 - EESSI Access Point – The National Part (NPAP)
 - Local IT systems of the competent institutions



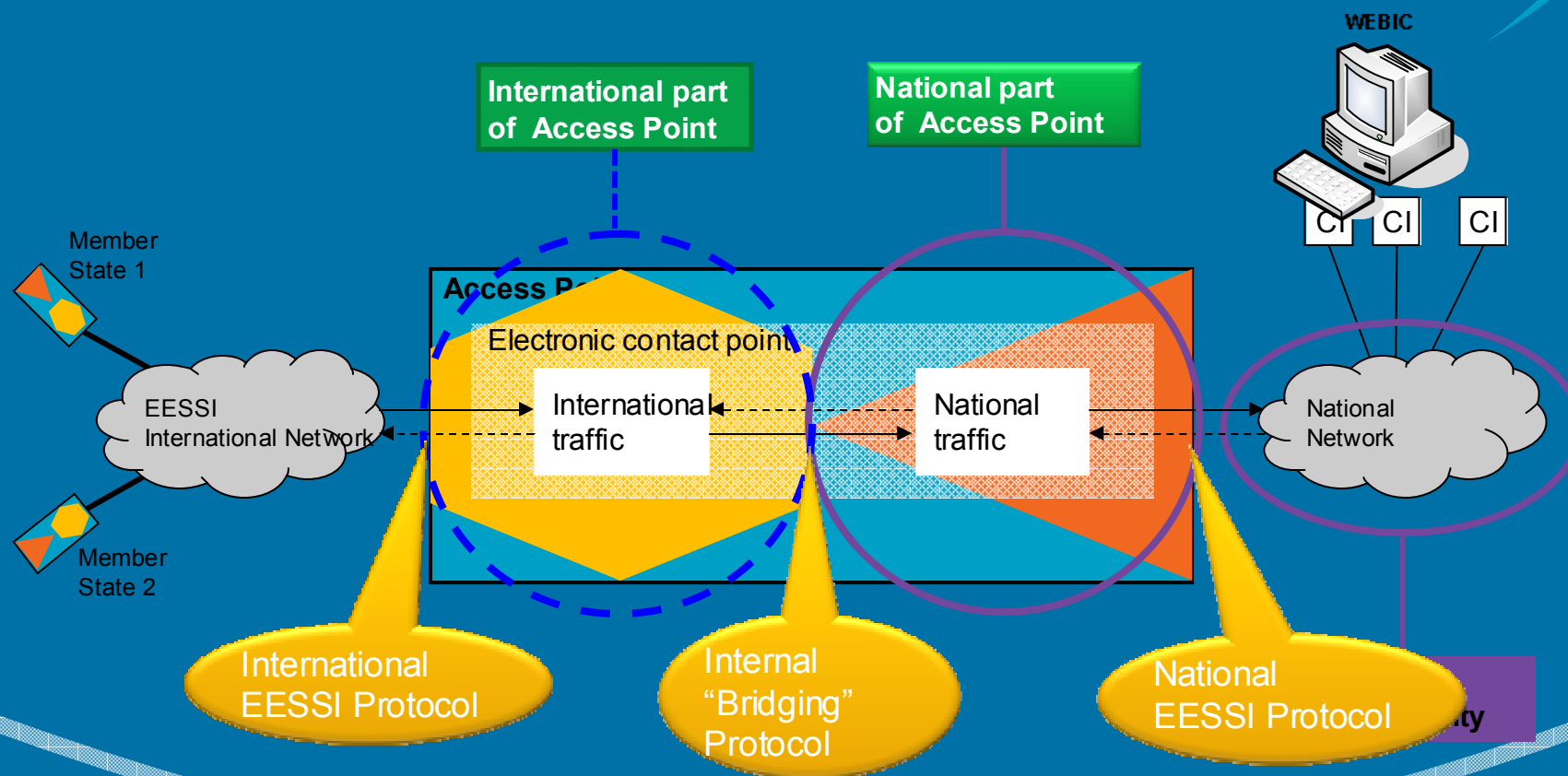
EESSI Messaging



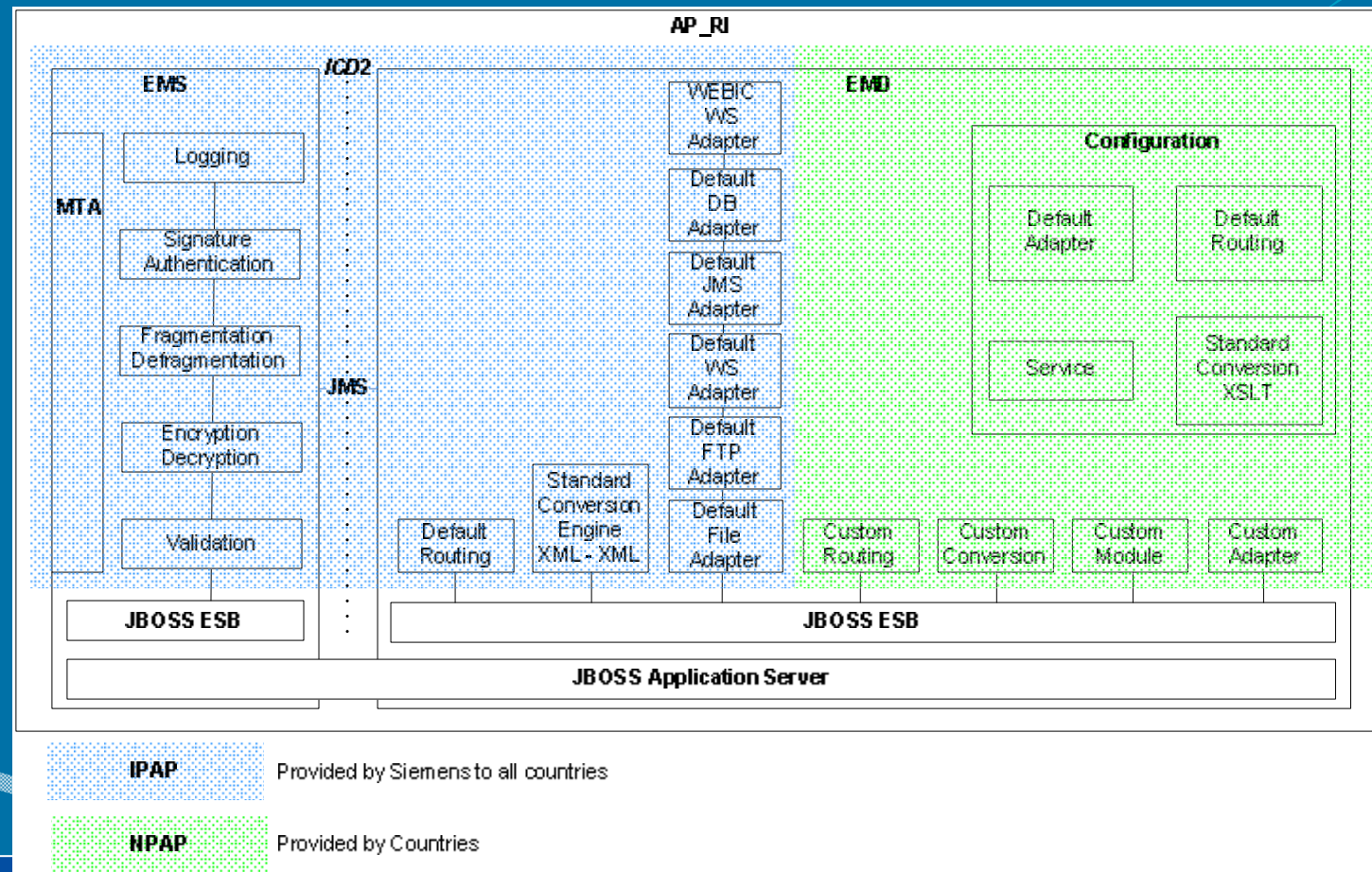
- Central Node
 - The Central Message Relay
 - The Monitoring Logging and Statistics console
- Access Point
 - The IPAP – common part
 - The NPAP – national specific elements
- Siemens delivers software components the central elements and the IPAP
- Central components are hosted in the EC Data Centre
- Access Point components are hosted by countries in their local offices



EESSI Messaging – Access Point



EESSI Messaging – IPAP and NPAP



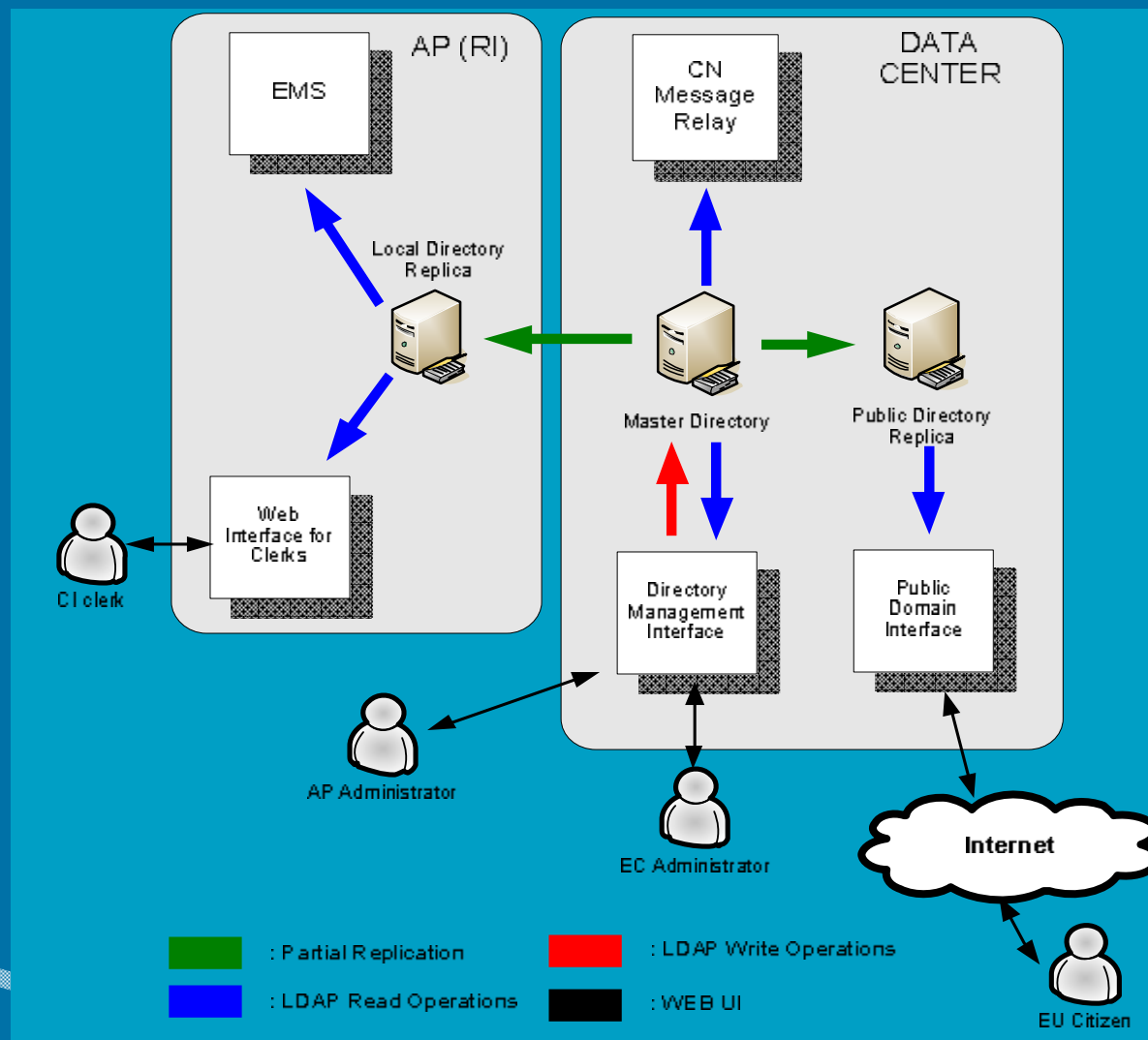
EESSI Directory Services



- Institution registry with double purpose
 - Publishing the registry to the citizen
 - Supporting message addressing and routing
- It is maintained centrally (the Master DS)
- It is disseminated to Access Points (the National DS)
 - For routing performance
 - For any local exploitation
- Access Point administrators need to edit the institutions registered under their respective AP



EESSI Directory Service – The Replication



EESSI WEBIC



- WEBIC – Web Interface for Clerks
- A default messaging system, equivalent to a local IT system of a competent institution
- Operates on Flows and SED-s dynamically based on the EESSI Model
- It is a basic, one size fits all application, meant for low usage, last-resort use, yet entailing significant complexity



EESSI Webic - Flows



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WEBIC

[Create a New Flow](#) [Self-Assign Flows](#) [Assign Flows](#) [Unassign Flows](#)
[Open XML Message/Form](#)

Search

☒ Advanced ☐ Filter Flows pending on me ▾

Advanced Search

Benefits Category: Unemployment ▾

Flow ID:

Flow Type: Any ▾ Flow Status: Any ▾

SED Type: Any ▾ SED Status: Any ▾

Assignee: Dupont ▾

Owner Country: Any ▾ Owner Institution: Any ▾

Counterparty Country: Any ▾ Counterparty Institution: Any ▾

Start Date From: To:

Creation Date From: To:

Last Mod. Date From: To:

Urgency: ☐ Yes ☐ No ☒ Any

Required Action: ☐ Local ☐ Remote ☐ None ☐ Both ☐ Any

Search Clear


List of Flows

<input type="checkbox"/>	Timer	Status	ID	Type	Benefits Category	Country	Owner	Assignee	Start Date
<input type="checkbox"/>			de01-100011	Exchange of Periods	Unemployment	Germany	Deutsche Rentenversicherung Bund (DRV)	Dupont	10/2/2009
<input type="checkbox"/>		Error	de01-100012	Notification Family	Unemployment	Germany	Deutsche Rentenversicherung Bund (DRV)	Dupont	1/2/2009
<input type="checkbox"/>		Challenged	be01-100051	Exchange of Periods	Unemployment	Belgium	National Employment Office	Dupont	11/11/2009
<input type="checkbox"/>			de01-100072	Notification Family	Unemployment	Germany	Deutsche Rentenversicherung Bund (DRV)	Dupont	6/7/2009



EESSI WEBIC – Flow Detail

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WEBIC

[Edit Flow](#) [Move Flow](#) [Close Flow](#) [Return To List](#)
[Open XML Message/Form](#) [Create Free Text](#)

Flow Header

Benefits Category: Unemployment
Type: Exchange of Periods
Status: Created
Id: be01-100051
Owner Institution: National Employment Office
Country: Belgium
Assignee: Etienne Dupont
Creation Date: 11/11/2009
Start Date: 11/11/2009
Close Date:
Last Modification Date: 5/2/2010

Memo:

Flow Status Panel

Exchange of Periods					
Optional	Request	Nb Sent/Nb Received	Reply	Required Replies	Multicast
NO	UB Request Insurance Record	2/1	UB Insurance Record	All	Counterparties only
YES	UB Request Salary Info	2/0	UB Salary Info	All	Counterparties only
YES	UB Request Family Info	1/0	UB Family Info	All	Counterparties only

Primary Conversation

Timer	Status	ID	Type	Direction	Country	From/To Institution	Sent	Due Date
	Delivered	10001	Notification Free Text	OUT	Germany	Deutsche Rentenversicherung Bund (DRV)	1/2/2010	
	Challenged	10002	UB Request Insurance Record	OUT	Germany	Deutsche Rentenversicherung Bund (DRV)	1/2/2010	30/04/2010
	Draft	10004	UB Request Salary Info	OUT	France	Agence Nationale pour l'Emploi	1/2/2010	30/04/2010
	In Approval	10005	UB Request Family Info	OUT	Germany	Deutsche Rentenversicherung Bund (DRV)	1/3/2010	1/04/2010
	Draft	10006	UB Request Family Info	OUT	France	Caisse Primaire d'Assurance Maladie	1/3/2010	30/05/2010
	Sent	10007	Notification Free Text	OUT	Germany	Deutsche Rentenversicherung Bund (DRV)	1/2/2009	
	Received	10010	UB Insurance Record	IN	Germany	Deutsche Rentenversicherung Bund (DRV)	4/2/2010	
	Sent	10011	UB Request Salary Info	OUT	Germany	Deutsche Rentenversicherung Bund (DRV)	4/2/2010	30/5/2010
	Delivered	10013	UB Request Insurance Record	OUT	France	Agence Nationale pour l'Emploi	4/2/2010	30/6/2010

Secondary Conversation

Timer	Status	ID	Type	Direction	Country	From/To Institution	Sent Date	Due Date
	Error	10008	System error	OUT	France	Agence Nationale pour l'Emploi	1/2/2009	
	Read	10009	System Notification	IN	System Administrator			
	Received	100012	Request for Information	IN	France	Caisse Primaire d'Assurance Maladie	2/2/2010	



EESSI – Information Repository



- A platform to disseminate:
 - General EESSI information to stakeholders (AP administrators, clerks, members of governance forums, etc)
 - Distributing software updates
 - New components' releases
 - New EESSI model releases
- Will consist of
 - An informational site
 - Generated EESSI Model documentation
 - Design documents
 - FTP services for downloading the software/model updates (via sTESTA for security reasons)



EESSI Security



- Security requirements
 - 2008 – An assessment was done in line with commission emerging methodology for security management.
 - Confidentiality is rated as Limited-strictly (out of Public/Limited/Limited-strictly/Secret/Top-Secret)
 - Integrity and availability is critical (out of Moderate/Critical/Strategic)
- AP-s are interconnected via CN using sTESTA backbone
 - HTTPS (Transport layer encryption) is used from AP to CN
- SED payload travels encrypted AP to AP
 - The AP encrypts the SED payload using IDABC PKI
 - Access Points and national domain security is within national responsibility
- Siemens prepares a security risk assessment and security policy in line with the security requirements



EESSI within sTESTA



- Access Points should be connected to sTESTA network
 - The list of sTESTA contact persons in each participant country has been communicated to AP point of contacts
- EESSI requires following network services in sTESTA
 - FTP URL for Directory Service replication
 - FTP URL for publishing software updates to Access Points
 - HTTPS URL for AP Administrators to access the Directory Services' Master Management Interface (MMI)
 - HTTPS service to access DS' Public Access Interface (ACCEPTANCE environment only)
 - HTTPS URL service for messaging
 - All URL-s unless specified otherwise, should be duplicated for ACCEPTANCE and PRODUCTION environment
 - The list may not be comprehensive



EESSI - Challenges



- EESSI is highly integrative effort
 - It bridges 31 countries across all social security sectors
 - Variance in business practices (legislation, modus operandi)
 - Variance in IT systems that have to be connected
 - Data semantics variance
 - Technology variance
 - Sophisticated governance
 - Administrative Commission – Political forum (31 delegations), focused on legislation aspects
 - Technical Commission – Political, focused on technical aspects
 - Task Force – executive forum based on volunteers from above forums– focused on project execution
 - The Secretariat – DG EMPL – focused on coordination
 - Security (shared data, practice variance, etc)



EESSI: Challenges II



The size of the business

- 200 E-forms currently used for communication between institutions (e.g. E-101 for posting of workers) to be superseded by EESSI
- EESSI Model size
 - 85 business flows identified
 - 300 SED identified
- The EESSI Model requires common agreement from end users



EESSI Challenges III



- The size of the end-users population
 - 67 Access Points (can increase to 150 Aps)
 - 10,000-15,000 institutions to be inter-connected
 - Agreeing on a common EESSI Model
 - Supporting business adaptations efforts towards certain common practices
- Technology variance
 - Making EESSI flexible to technology variance
 - Supporting development efforts to connect national applications to EESSI

