# Advanced Aspects of Hospital Information Systems

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**WS 2012/13**

**Implementierungs Aspekte - epSOS**


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## epSOS

# Goals

- Smart Open Services for European Patients – epSOS

to develop a practical eHealth framework and Information & Communication Technology (ICT) infrastructure

secure access to patient health information between different European healthcare systems

# epSOS

- large scale European pilot
- co-financed by the European Commission
- Initial usecases: patient summary and electronic prescription
- 27 beneficiaries representing 12 EU-member states
- ministries of health, national competence centres and numerous companies
- launched on July 1, 2008

# Usecases

- Patient Summary (PS)
  - Compilation of Medical Data from the home country
  - Translation
- ePrescription (eP) and eDispensation (eD)
  - Choose the right ePrescription
  - Mark as dispensed (legal issues)

# Challenges (politics and legal systems)

- Political Interests
  - EU-Funding (pilot sites, beneficiaries)
  - International Reputation
  - Political Situation (national and international)
- Involved Legal Systems
  - Data Availability
  - Data Access Rights
  - Data Transmission Rights
- National Legal Competence Areas
- Project Management

# Challenges (technical)

- Involved Health Care Systems
  - Technical Implementation
  - Communication
- Infrastructure
  - Network
  - National Communication
- Large Scale Project
  - Usability & Integration
  - Reliability & Exception Handling
  - Scalability & Extensibility
  - Security
  - …

# Challenges (human resources)

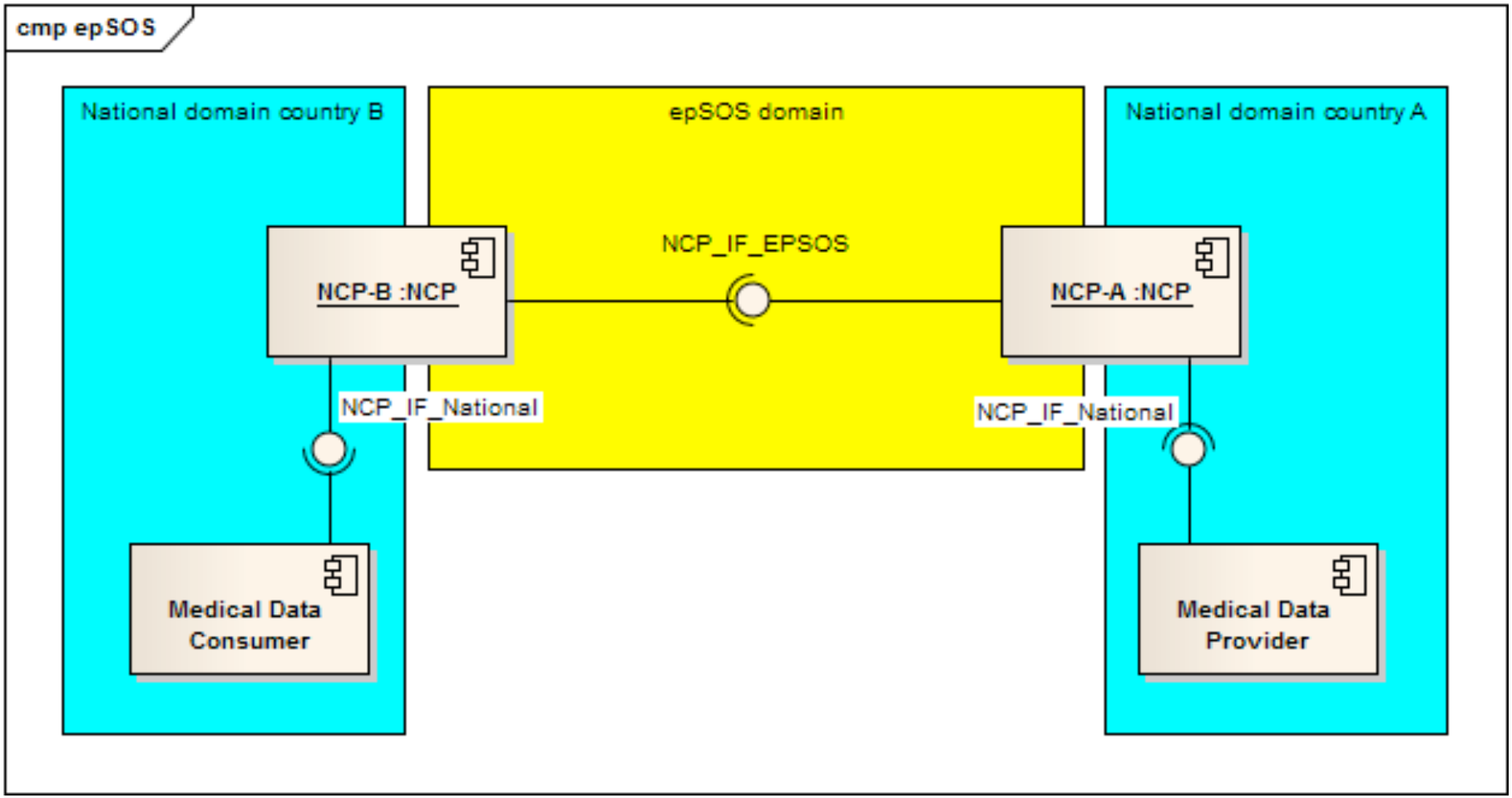
- Involved beneficiaries (national, international interests)
  - Ministries
  - Competence Centers
  - Industry Companies
- Involved Project Members (concrete persons respectively)
  - Views
  - Opinions
  - Interests
  - Approaches

# Architecture – key words

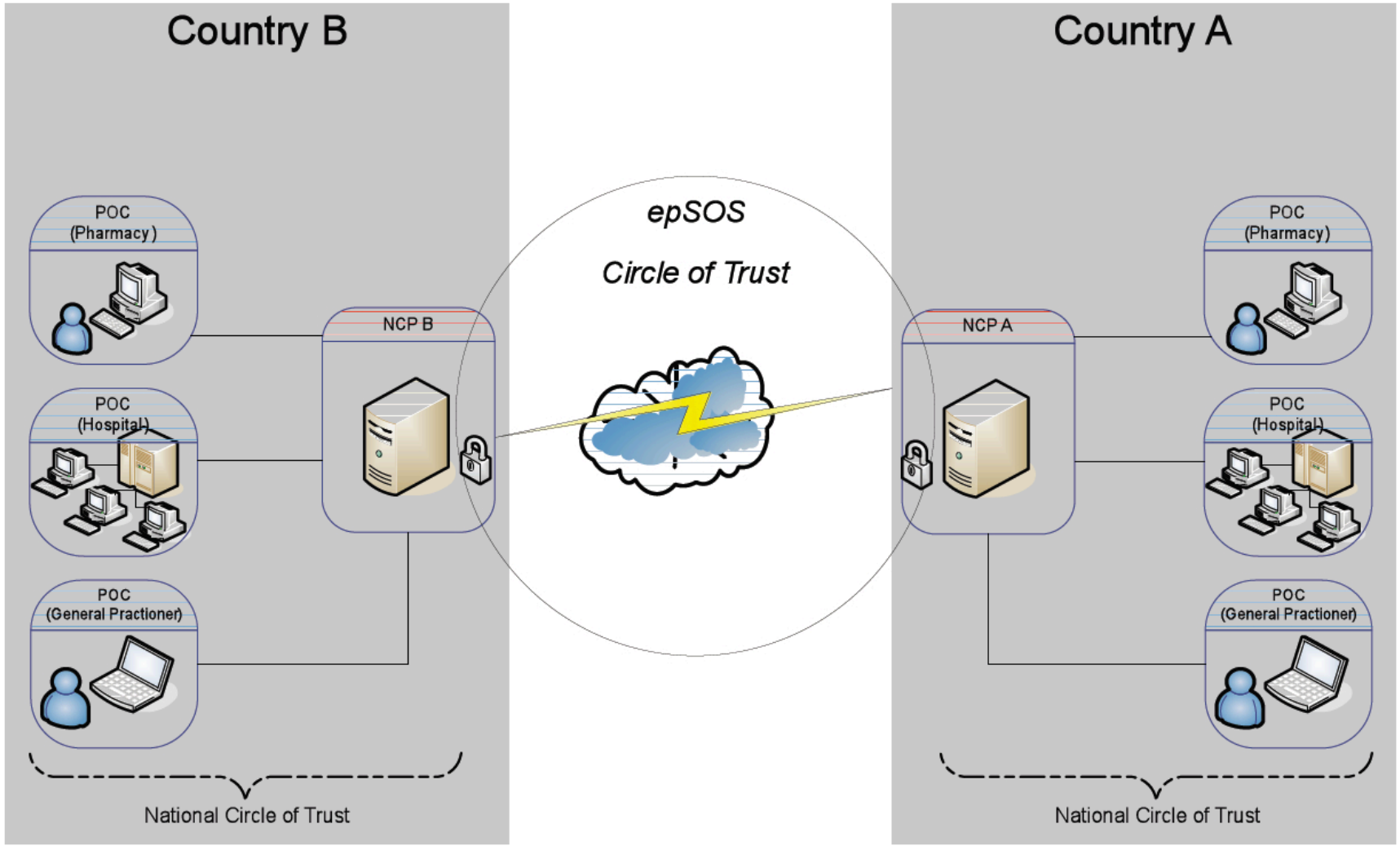
- National Contact Point
  - Interface to National Domain
  - Interface to epSOS Domain
- Security
  - Circle of Trust
  - Identification
  - Authentication
  - Patient Consent
- Main Roles
  - Patient
  - Health Care Professional (HCP)
  - Health Care Professional Organization (HCPO)
- Usecases
  - PS
  - eP

# Architecture – Circle of Trust (overview)

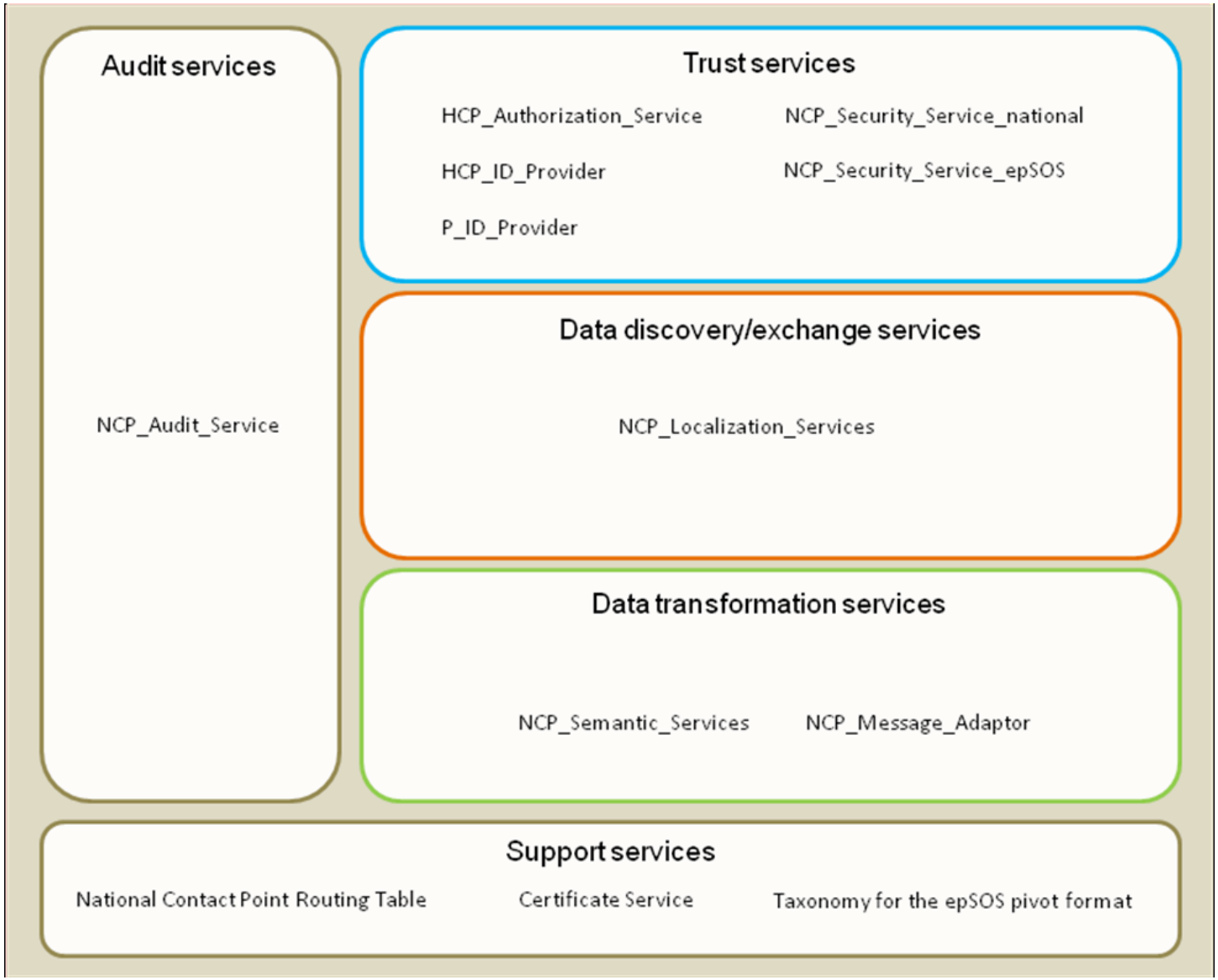
# Architecture – Abstract Architecture



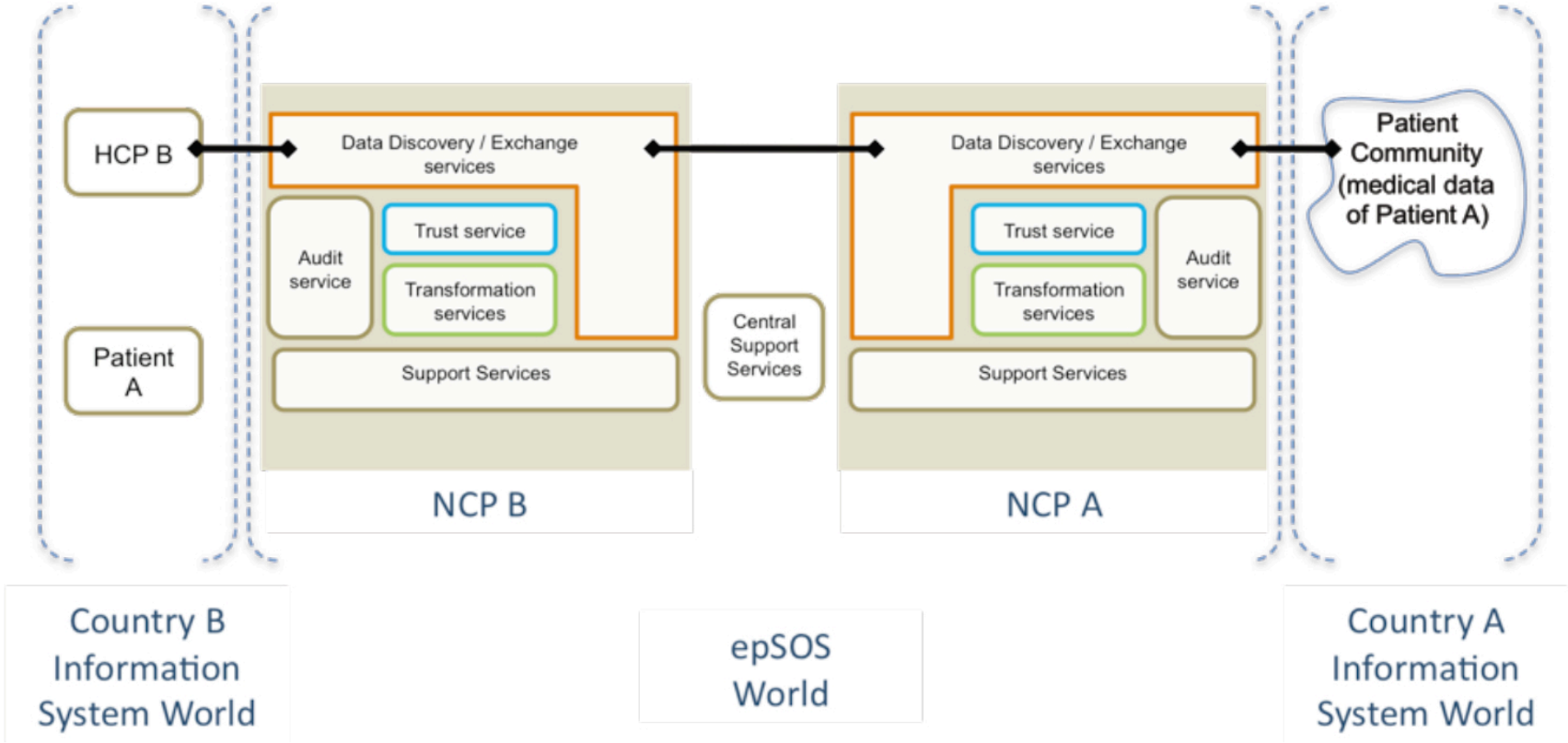
# Architecture – Circle of Trust (detail)



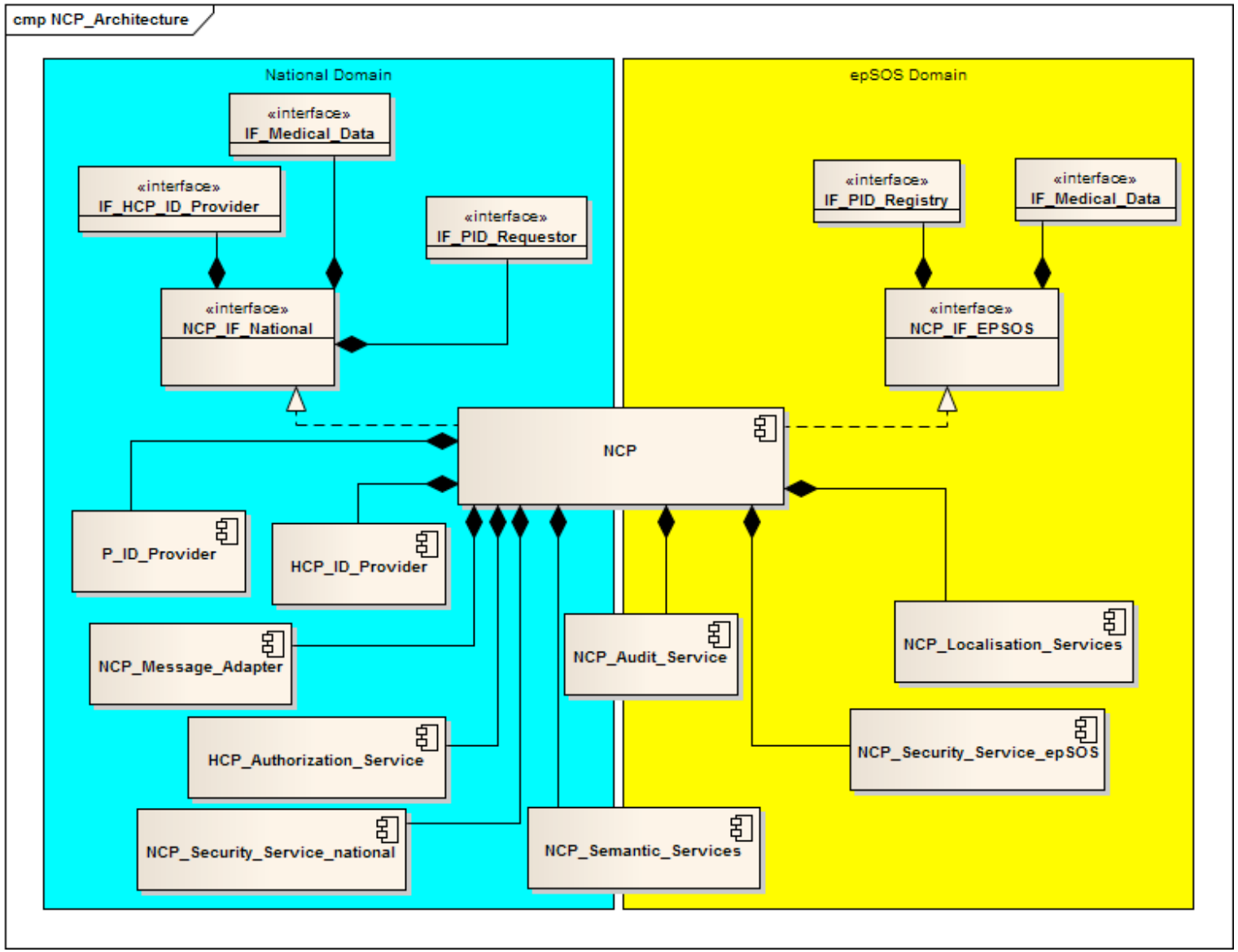
# Architecture – NCP-Services



# Architecture – Logical View



# Architecture – NCP components



# epSOS Future – epSOS 2

- **Started late 2011**

- **More participating countries (non EU):**
  - Switzerland
  - Turkey
  - …

- **More UseCases**
  - E.g. foreign prescription and dispensation

# Relevance to HIS

- How to minimize workflow impact on the medical team?
- Special connectors for seamlessly integrating foreign medical data.
- epSOS is heavily IHE based – IHE conformity of HIS is not necessarily provided.
- How to deal with security aspects?