



The **epsos** Principle

EUROPEAN PATIENTS
SMART OPEN SERVICES

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Cooperation Assembly

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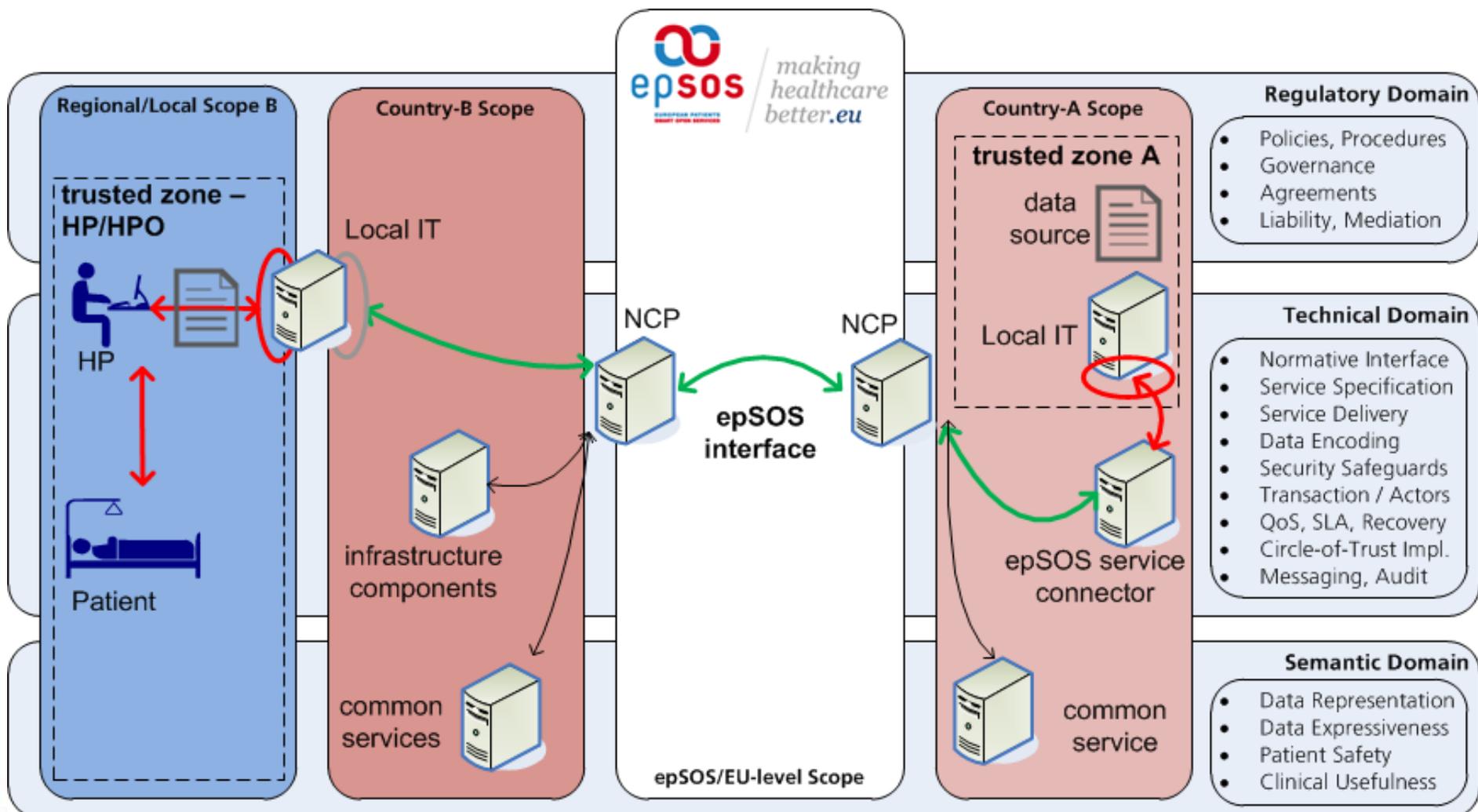




- non-intrusive towards sovereign health infrastructures:
 - acknowledgment of disparity between regulatory domains
- decoupling of Business and Security Architecture:
 - strong separation through layering of architecture concerns
 - brokered trust paradigm, security demands by countries
- Service Orientation and alignment to InterOp Profiles:
 - architecture abstraction through layering, profile focus
- high flexibility concerning component orchestration:
 - self-sustained, interchangeable components
 - interceptor model for introduction of extended components



epSOS Architecture Composition



„Heart“ of epSOS: National Contact Point (NCP)



- epSOS is founded on a partial brokered trust paradigm:
 - each MS only directly trusts its **own** NCP and **own** HP's
 - each medical disclosure decision is **always** made in country-A
 - double-role mapping for **expressing legitimate prof. authorisation**
- the NCP's act in several roles:
 - injection point: **harmonising layer of commonality** between PN's
 - enforcement point for **x-border procedures and governance**
 - **legal umbrella** for each Member State, delimiting its boundaries
 - trust anchors and terminators:
 - as brokered “mutual” AuthN providers, trust assurances, and audit trail
 - technical “**glue**” for national interfaces, protocols, and formats
 - as “**semantic bridges**” that perform schema and code translation



Why and where is an InterOp need?



Country-B

Country-A

local IT at PoC

Gateway-B /
NCP-B

Gateway A /
NCP-A

National eHealth
Infrastructure

HP, HPO Authentication

XFRM

Ident. Data Provision

Patient Identification & Data Localisation

Consent Creation, HP Authorisation

XFRM

XFRM

Consent Validation & HP Acceptance

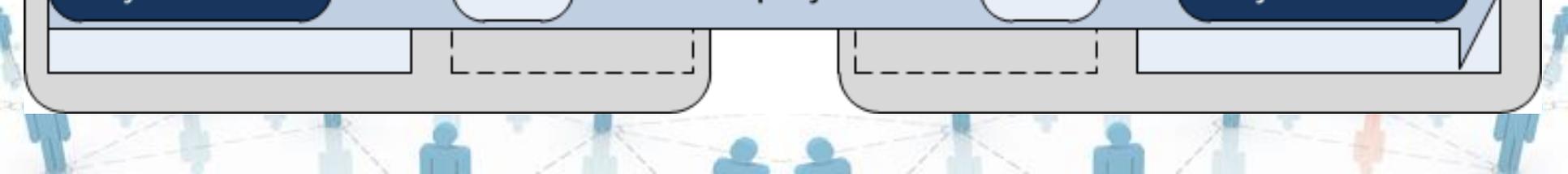
Policy Enforcement

XFRM

medial data query & retrieve

XFRM

Policy Enforcement

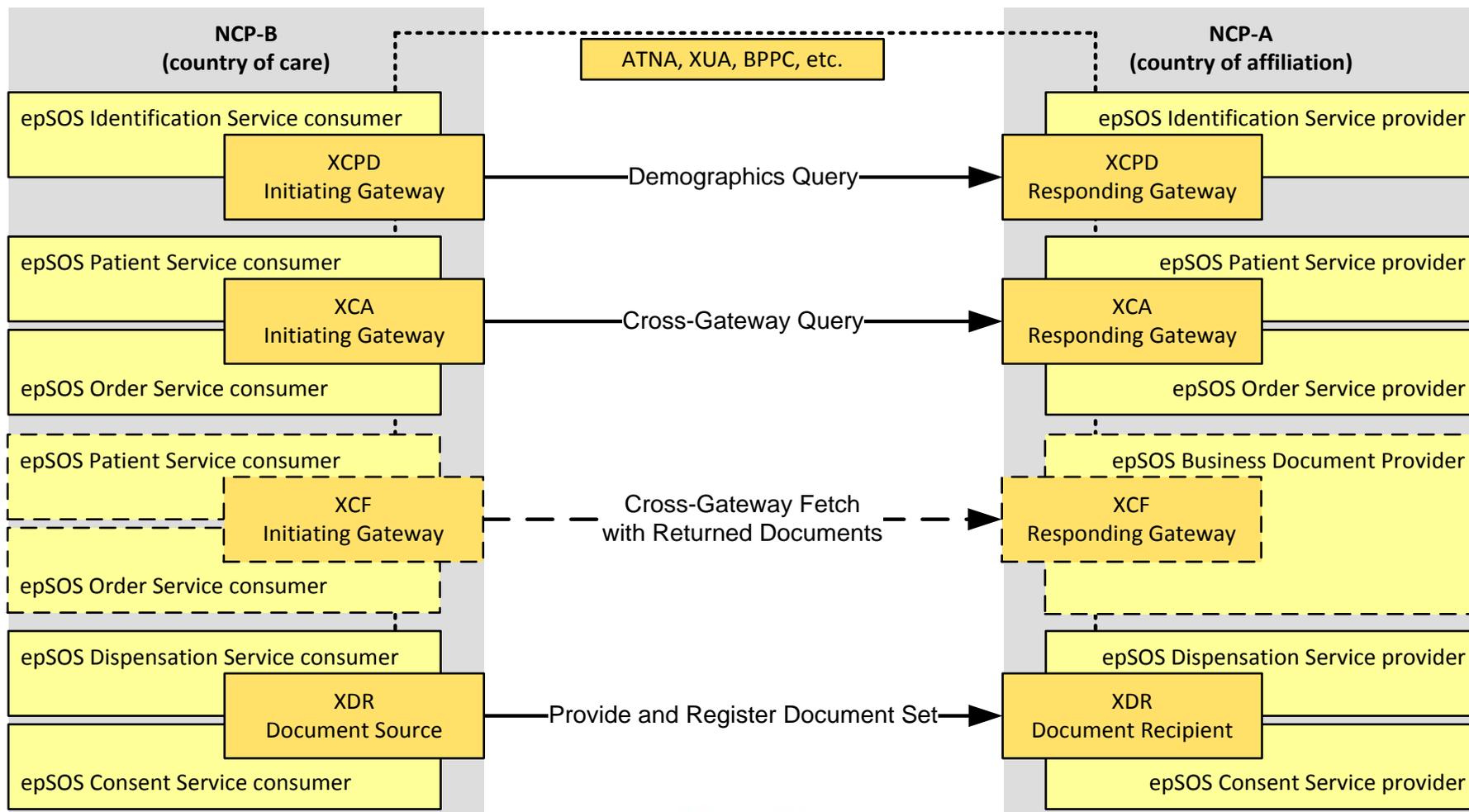


Path to technical InterOp: Profiling

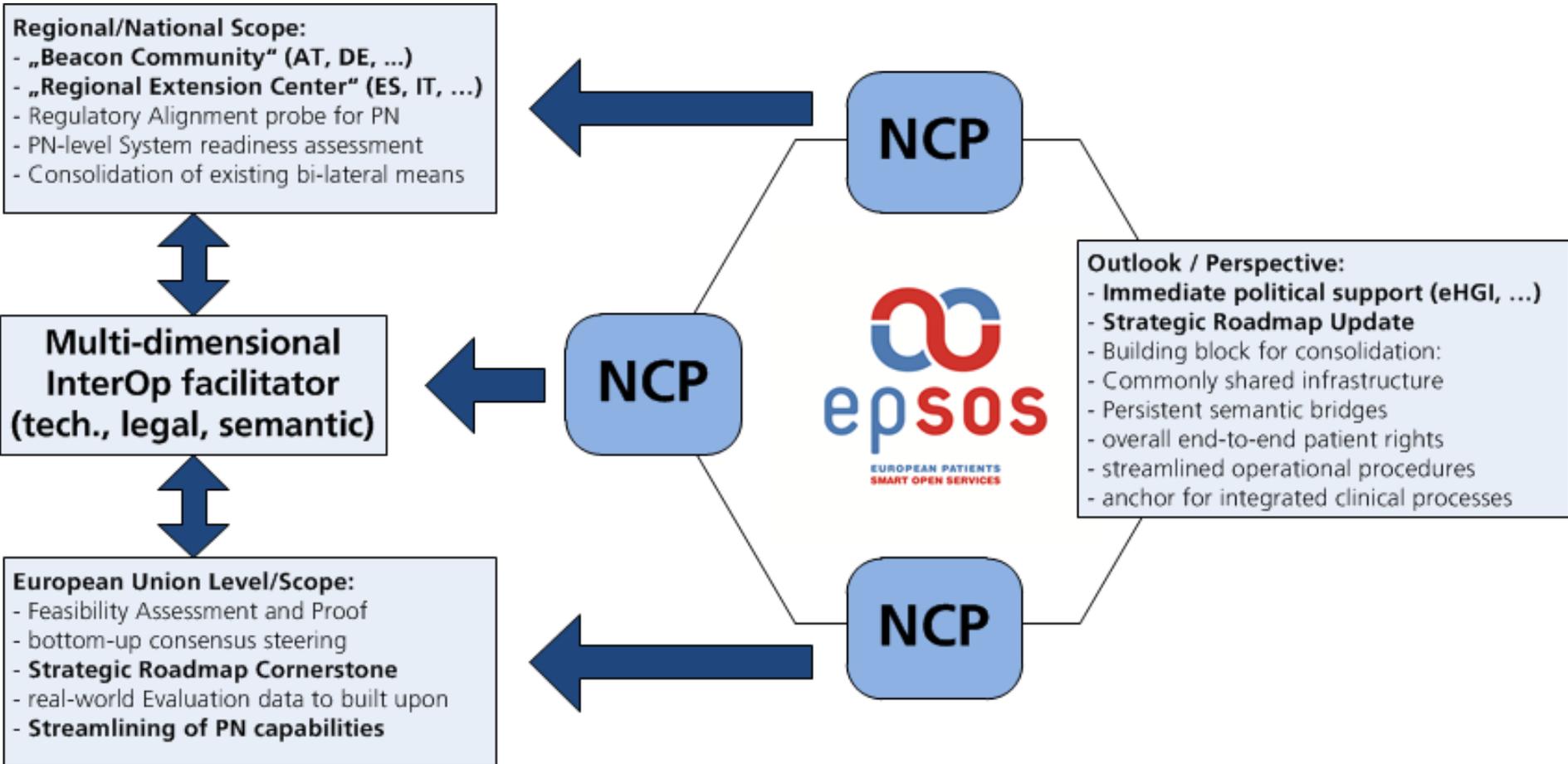


- common services within epSOS were profiled for:
 - interoperability assurances across systems and countries
 - „testability“, substitutes, and certification streamlining
 - exploiting already existing InterOp test-beds and activities
 - benefitting from off-the-shelf and plug-in components
- candidates for immediate application within epSOS:
 - XCPD, XDR, ATNA, BPPC, CDA, XACML, XSPA, TSL, etc.
 - reality check of new approaches: NSL, template consent
- candidates with adaption needs:
 - XCA, XUA, BPPC, community agreements, trust elevation
 - epSOS tried hard to reuse, not to replace or deprecate
 - however, epSOS was facing challenges (RLUS, Security)
 - motivating adaptations by innovation, and new profiles

Profiles in epSOS: Example IHE



InterOp impact and benefit of epSOS



What is achieved:



- establishment of EU-wide “**mediation beacons**”:
 - 11 operational NCP’s with exchange of real data
 - more within pre-pilot NPC’s in final tests
 - inclusion of non-EU countries (TR, CH, etc.)
- technical InterOp between Participating Nations:
 - **possible, feasible, and beneficial**
- stimulation of PN extensions to InterOp ecosystem:
 - DK, GR, FR: HP portal usability enhancements
 - ES: regionally distributed system and data
 - FR: smart-card security for HP AuthN/AuthZ
 - DE, AT: cross-border patient-centric security

What is in progress:



- organisational/regulatory streamlining:
 - alignment of x-border **SOP**, security, privacy provisions
 - addressing of identified **x-border legal obstacles**
 - establishment of **persistent InterOp facilitators**
- infrastructure innovation and advanced piloting:
 - piloting of “on-top” services, like “medical data update”
 - exceptional circumstances: x-border trust elevation
- Stimulation of a sustainable ecosystem:
 - eHGI (etc.) for PN penetration and patient acceptance
 - Industry for sustainability and market development
 - Open Source initiative for accessibility (OpenNCP)



- eHealth-centric technical Interoperability achieved:
 - consolidation assessment into cross-sector shared services
 - implementation of sustainability safeguards
 - “triple-down” engagements for stimulating regional cooperation
 - in process: traversal from Proof-of-Concept towards service
- political/organisational/regulatory alignment:
 - update of Strategic Roadmaps based on real-world input
 - implementation of coordination entities to avoid diverging tracks
 - increased x-border data exchange awareness and acceptance:
 - patient-centric authentication and authorisation (commonly ref. e-ID)
 - simplification of clinical data retrieval and avoidance of redundancies
 - specific infrastructure provision for cooperative care scenarios in border region





Thank You!

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