

WP8b Implementation

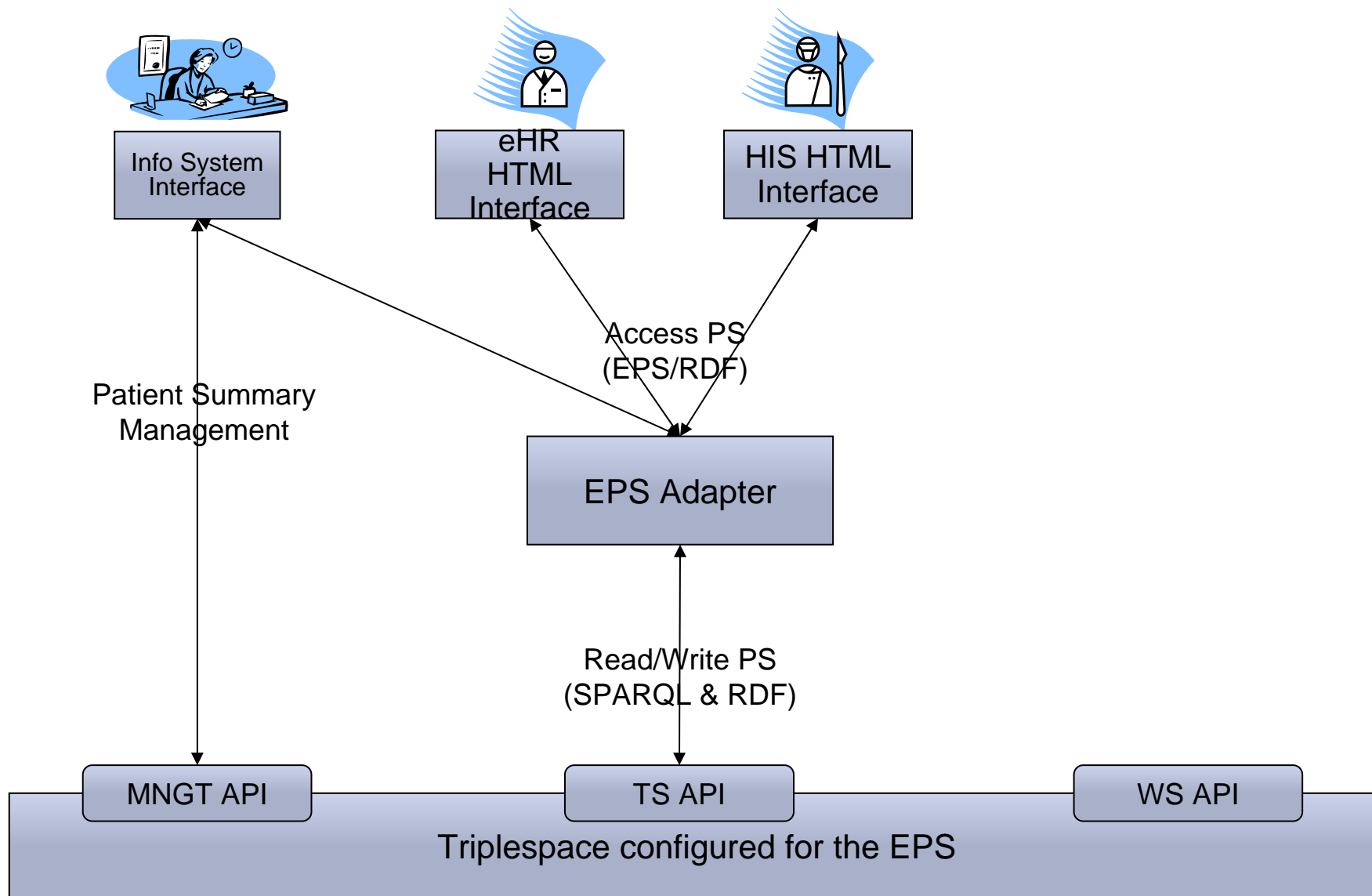


- Prototype Architecture
 - Over the TS
 - Hierarchy of Kernels
 - Patient Summary Subspaces, Roles and Policies

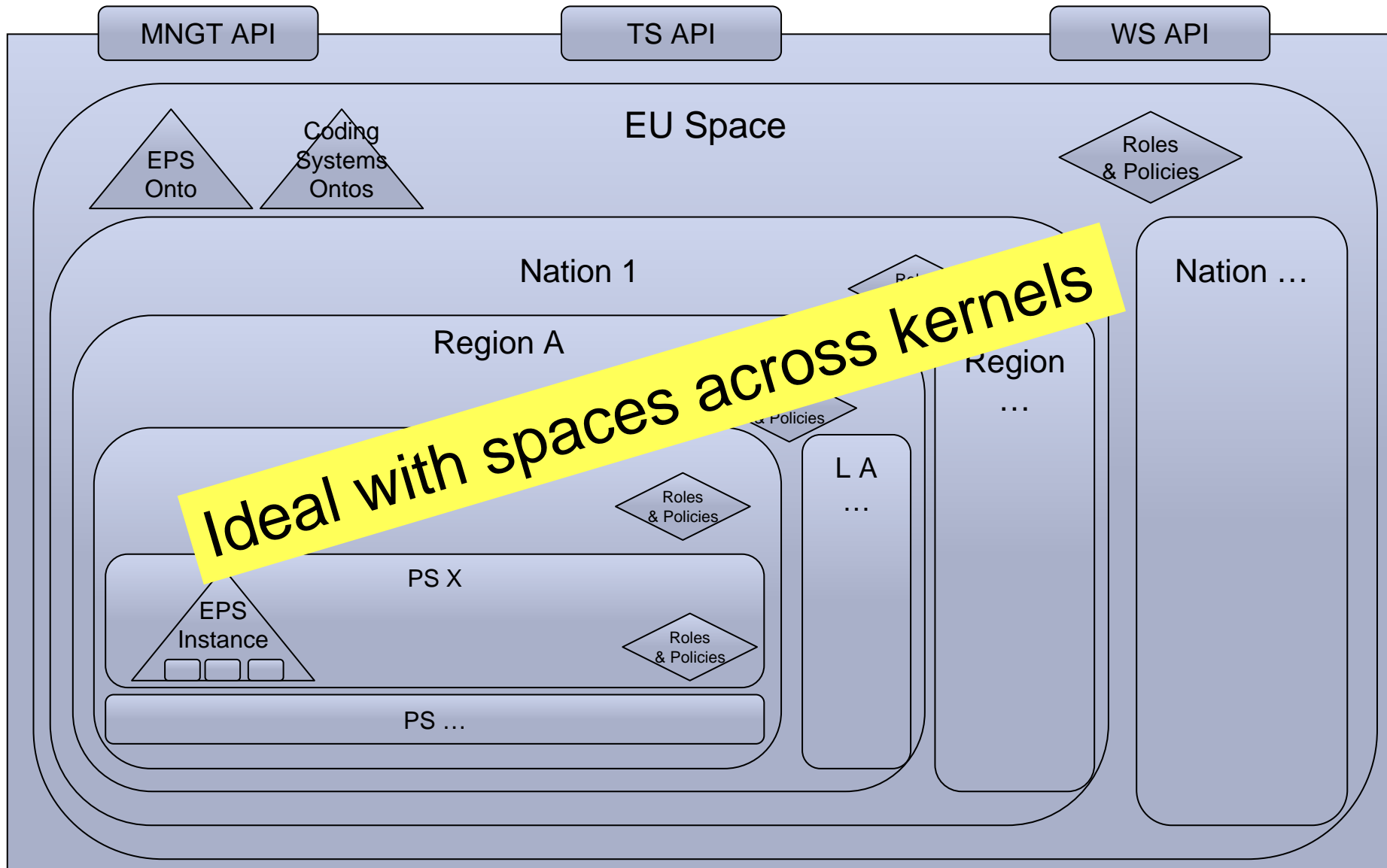
- Use Case Interactions

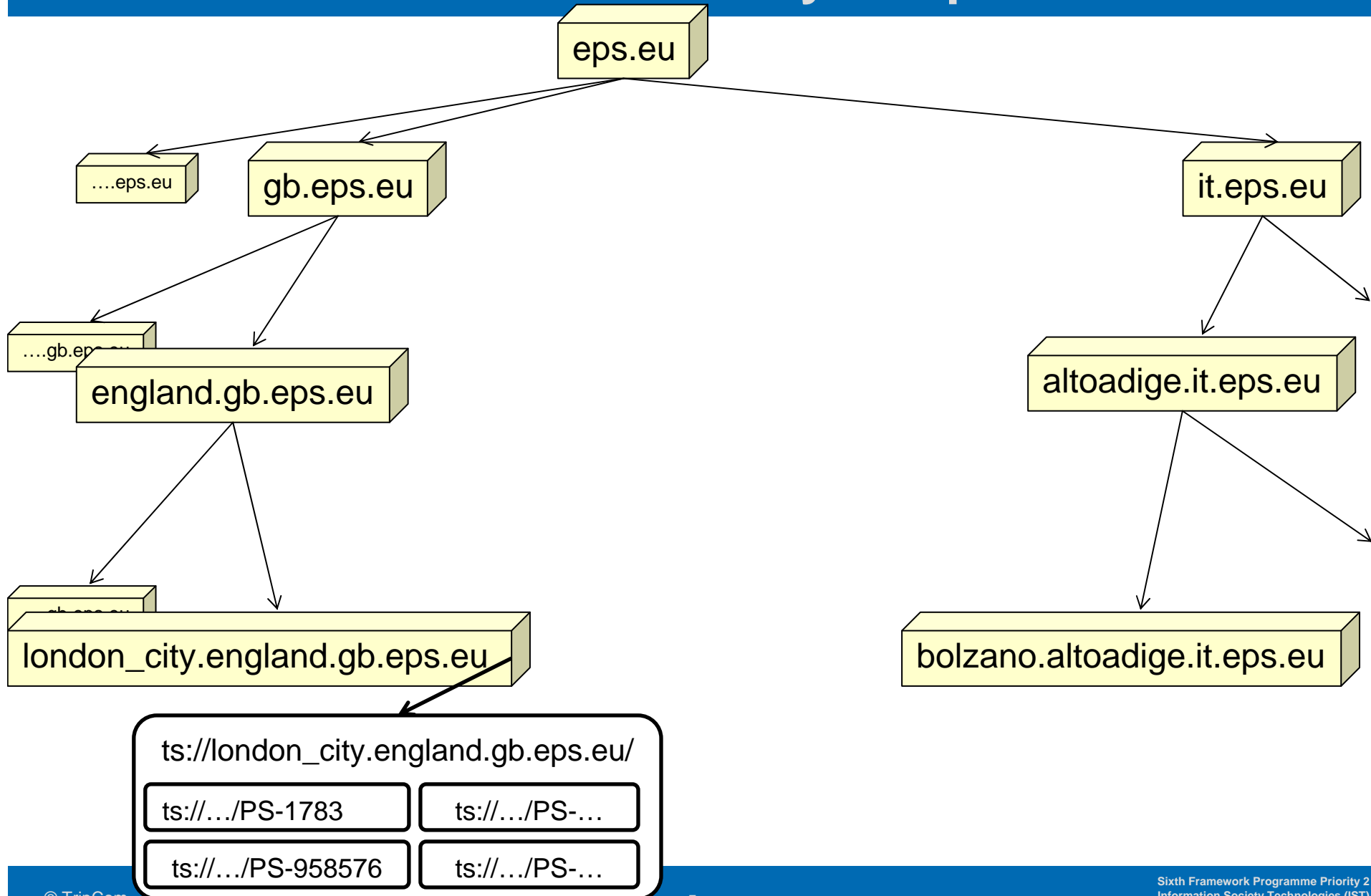
- Open Issues

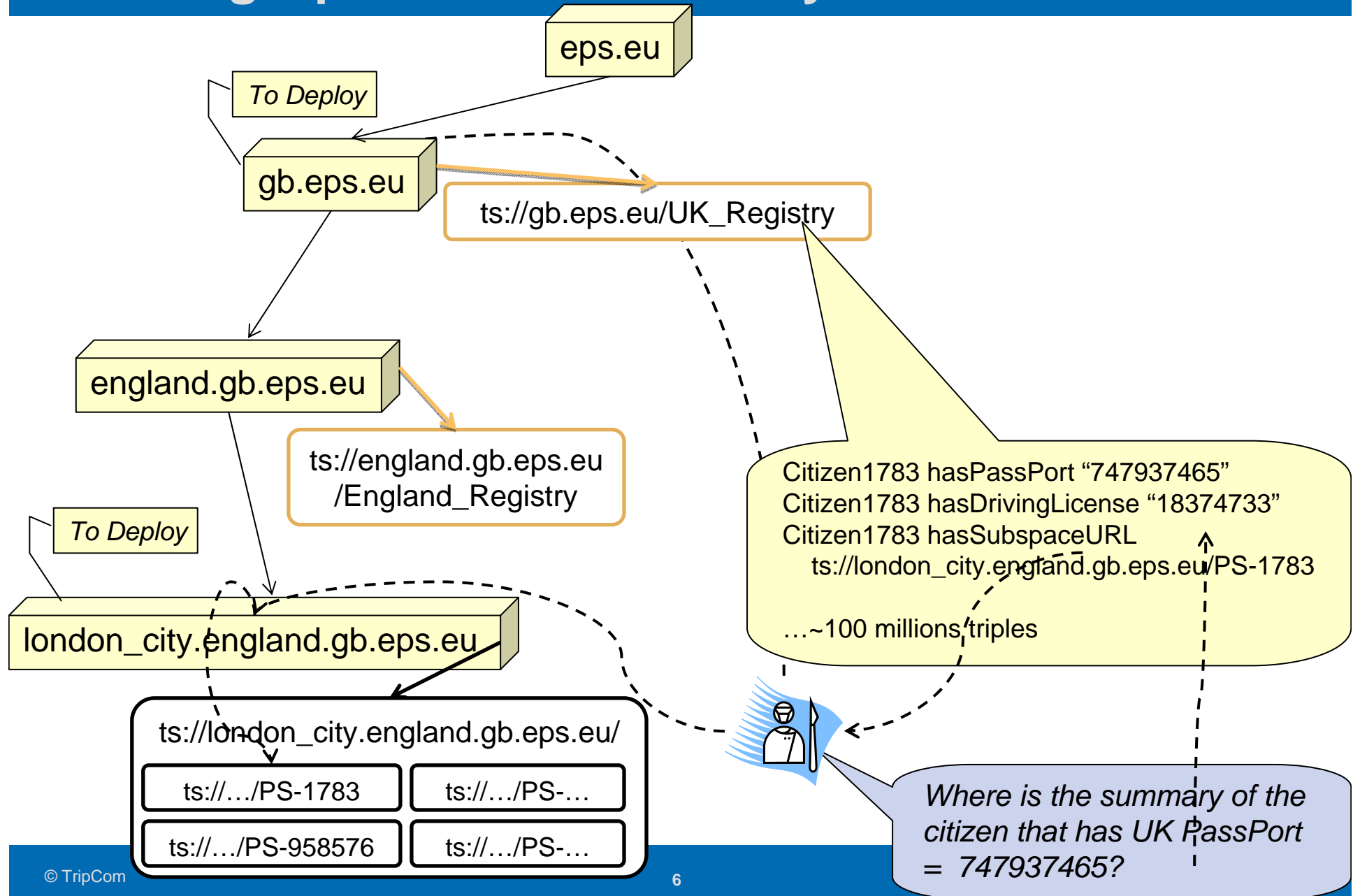
Prototype Architecture Over the Triplespace



Prototype Architecture Inside the Triplespace



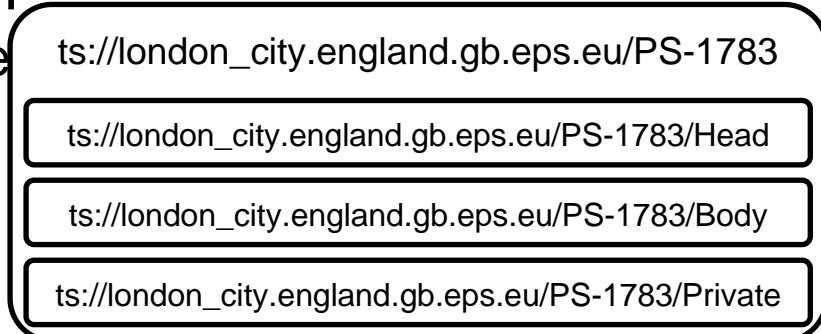






- The Subspaces of a single PS space

- **Head**: For administrative accesses
- **Body**: For clinical accesses
- **Private**: To restrict access to some data



- Roles and Policies (a possible example)

	Head	Body	Private
Health Authority	RD, OUT, Mngt	Mngt	Mngt, RD, OUT
General Practitioner	RD	RD, OUT	RD, OUT
Paramedic	RD	RD	-
Specialist	RD	RD, OUT	-
Emergency Doctor	RD	RD, OUT	RD

Number of Triples (for the EPS specific Data)



■ Ontologies

■ EPS	552 triples
■ ICD 10	234
■ ICD 9	306
■ LOINC	586
■ MESH	1423
■ UMLS	2275
■ NCI	765
■ RXNorm	162
■ TOTAL:	6303 triples

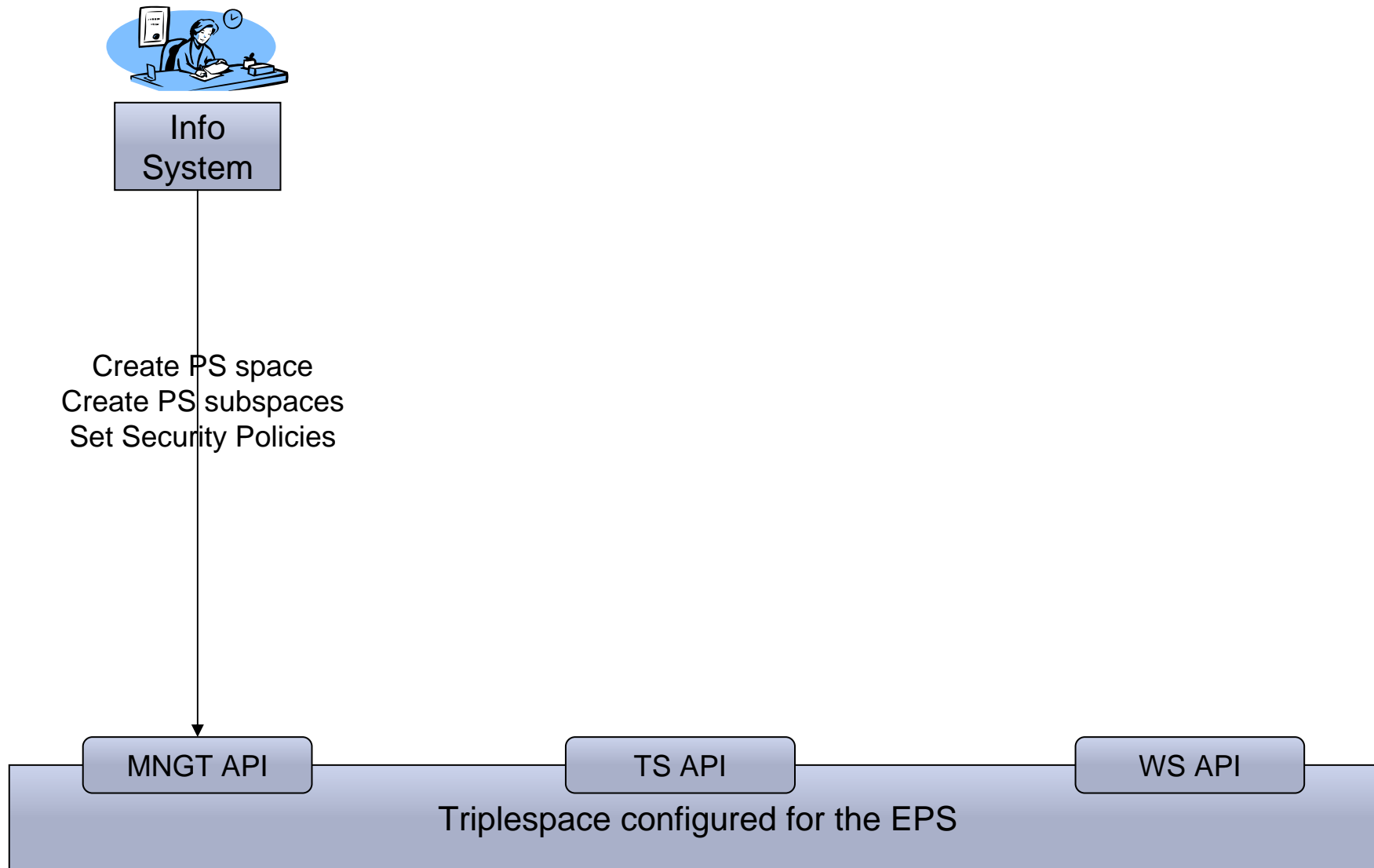
■ Instances

- 100-1000 triples per summary
- Tool to generate thousands of summaries per kernel

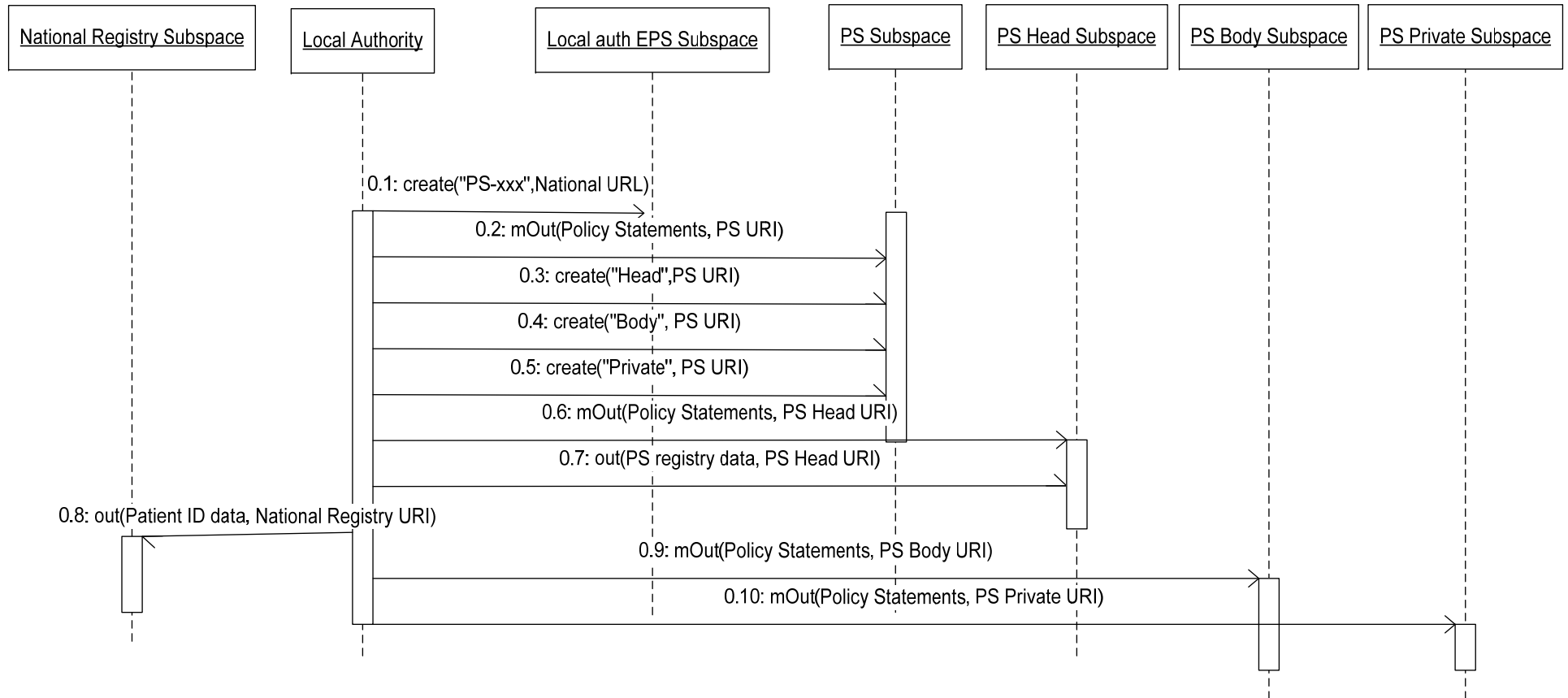
- Multidisciplinary caregivers **care the same** citizen
 - Strong need to share and access the same citizen data (time, location, reference and schema)
 - Respect security and privacy regulations

- **Use case steps**
 - 0-1: The Initialization of the Patient Summary in UK
 - 2: The Toothache and the visit to a Dentist while abroad
 - 3: The Laboratory Examination for Additional Control
 - 4: The Surgical Operation at a Regional Hospital
 - 5: The Notification of the General Practitioner in UK

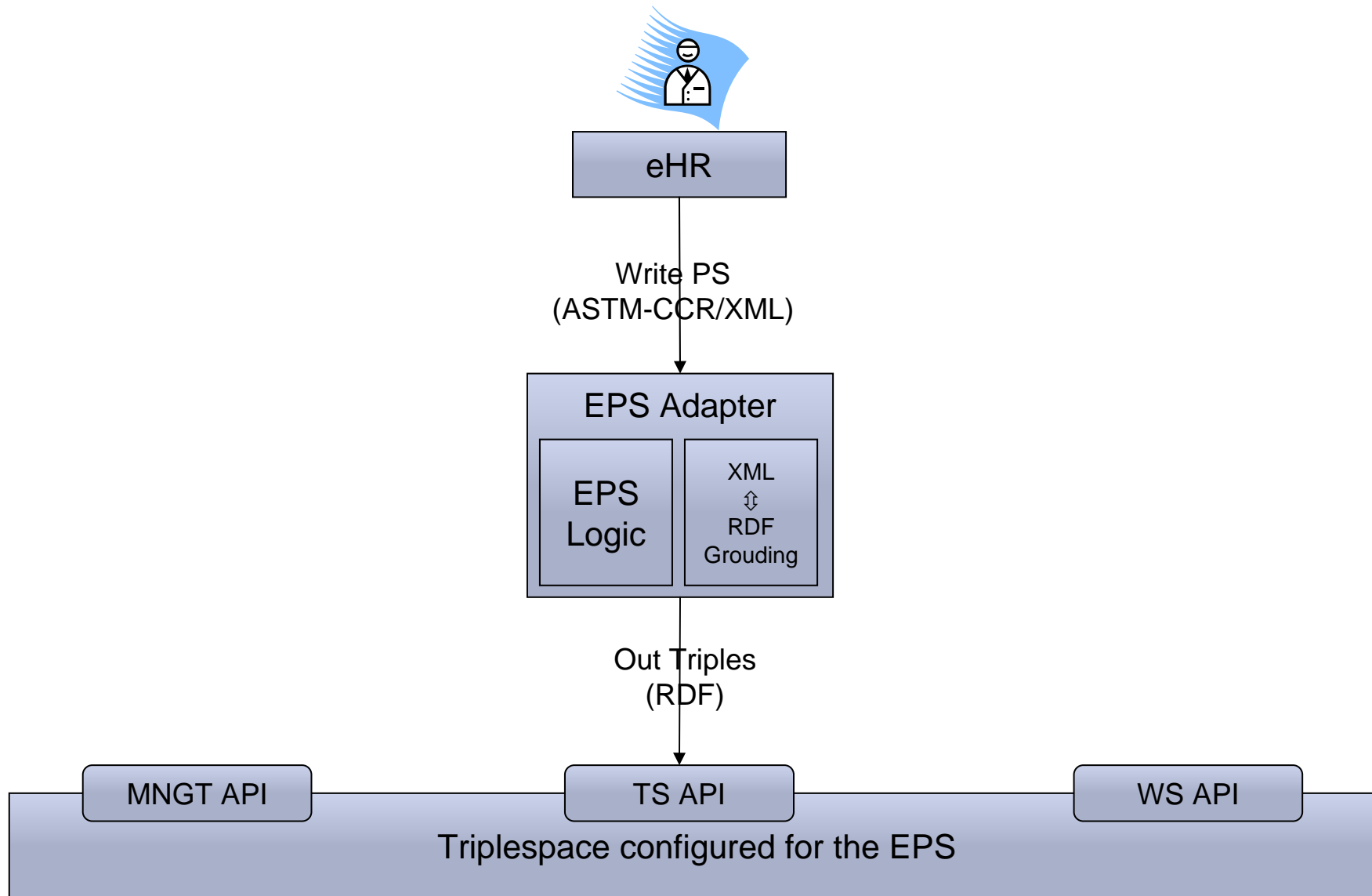
Step 0: The Initialization of the Patient Summary in UK



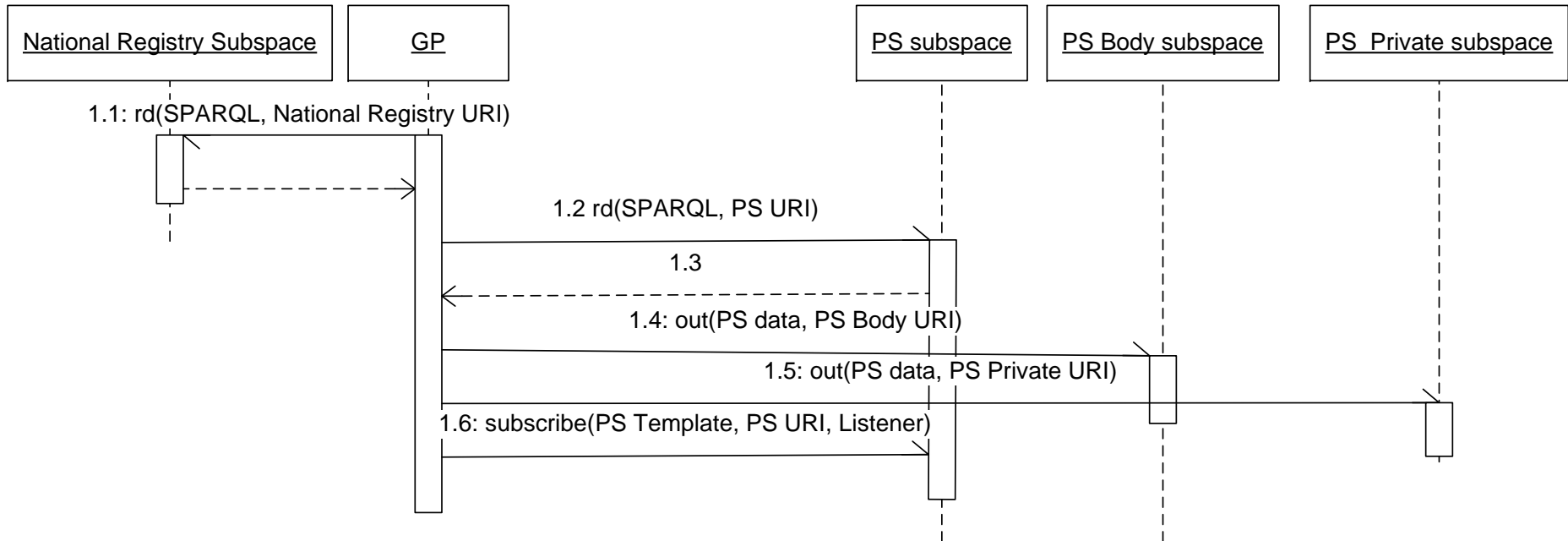
Step 0: The Initialization of the Patient Summary in UK (will not be shown)



Step 1: The Initialization of the Patient Summary in UK



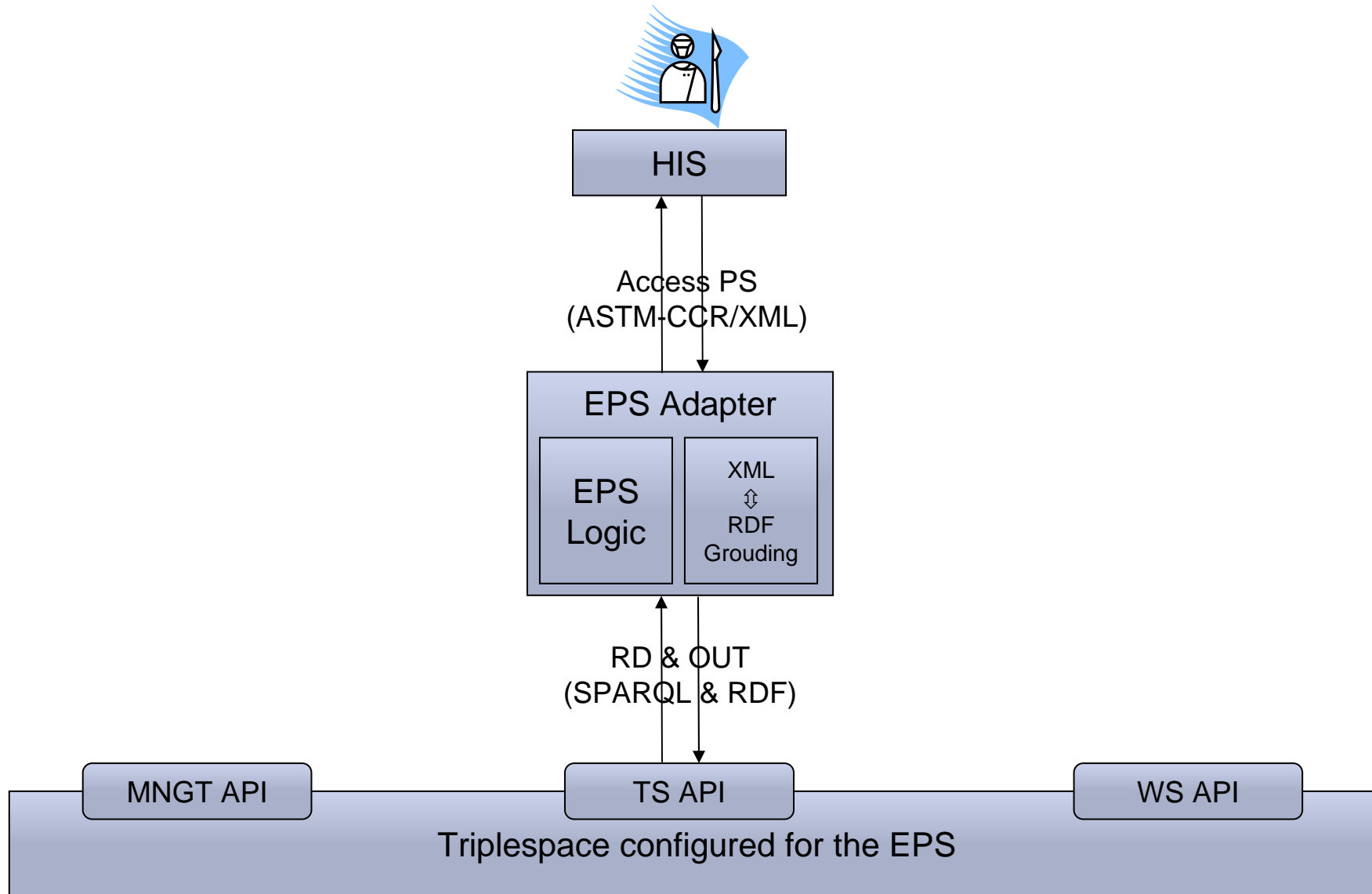
Step 1: The Initialization of the Patient Summary in UK



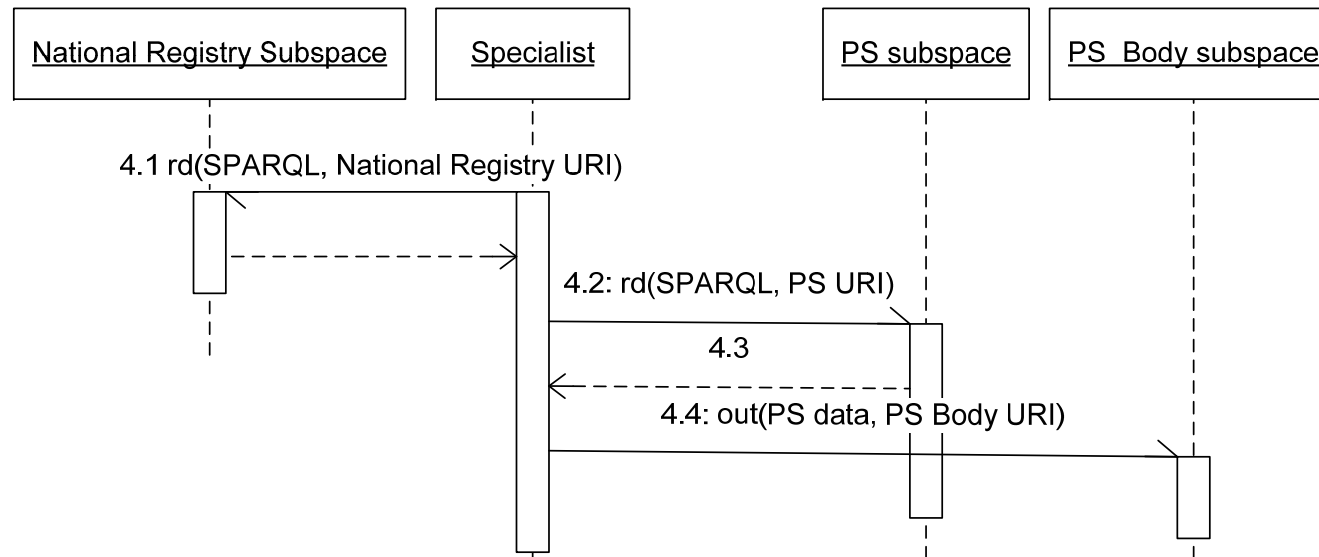
SPARQL: Read all triples currently in the summary

- How to verify if an Out operation really added triples in the Triplespace
 - Any result?
 - Exception on failure?
 - ...

Step 4: The Surgical Operation at a Regional Hospital



Step 4: The Surgical Operation at a Regional Hospital

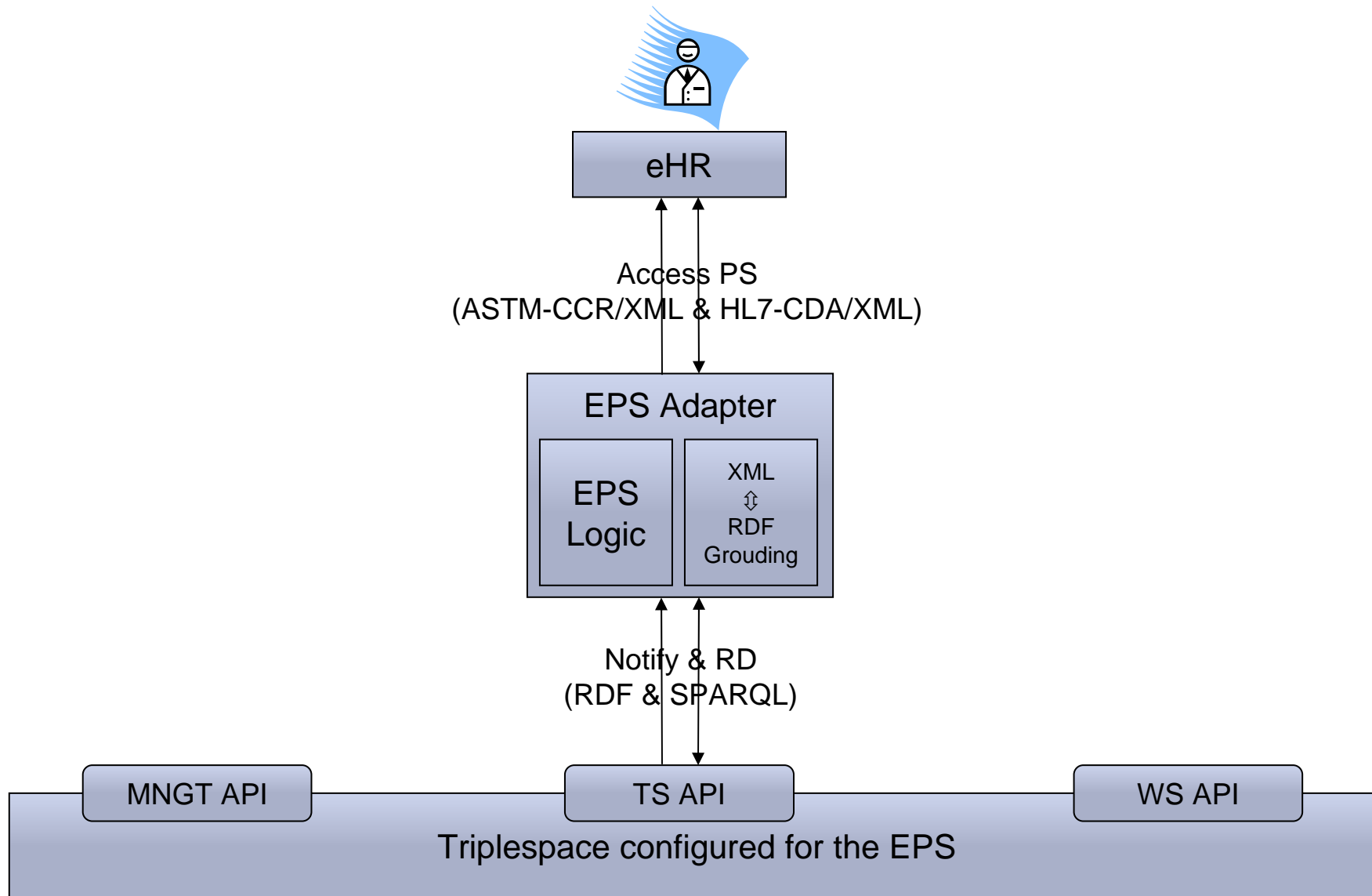


1st SPARQL: Where is the summary of the citizen that has UK PassPort = 747937465?

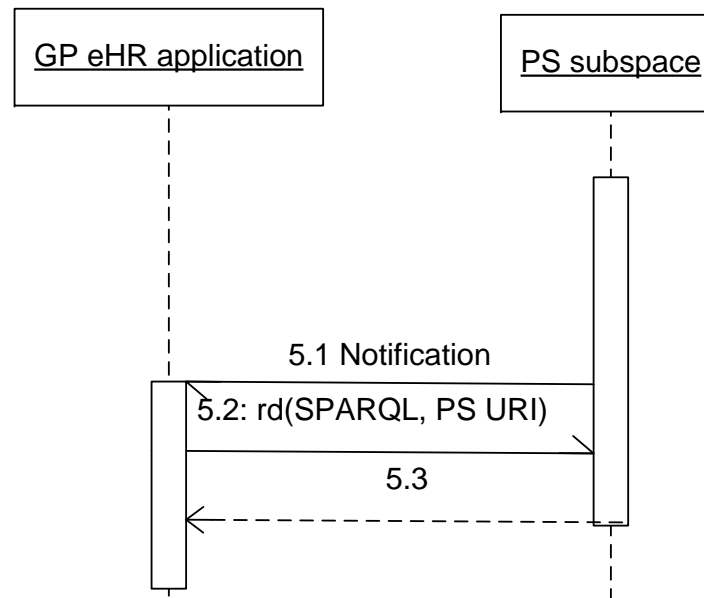
2nd SPARQL: Read all triples currently in the summary space
(It doesn't return triples in the private subspace)

- Does querying a space returns results also from its child subspaces?

Step 5: The Notification of the General Practitioner in UK



Step 5: The Notification of the General Practitioner in UK



SPARQL: Read the last encounter record

Open Issue: Notification & Callback



- Is the notification available in the prototype?
- A Callback is an in-memory object for the client
 - If the client shuts down and then restarts, is the callback still valid?
 - How does it combine with the style chosen for accessing TS remotely (RMI, WS, ...)?
- Does the callback bring the new triples that match the query?