Tom de Jong, VZVZ
Product manager standards

former co-chair
HL7 Pharmacy WG

tom@nova-pro.nl

Medication documentation in the Netherlands

Practical experiences and future plans

22/5/2017

Topics

- **AORTA**: national infrastructure for health data
- **Medication Documentation**: past, present and future (shifting scope… shifting standards)
  - **Operational**: Electronic Medication Record (v3)
  - **Implementation**: Medication Process (CDA)
  - **Planned**: Personal Health Environment (FHIR)
- Building blocks for standards
- Lighting the FHIR…

83

AORTA: a brief history

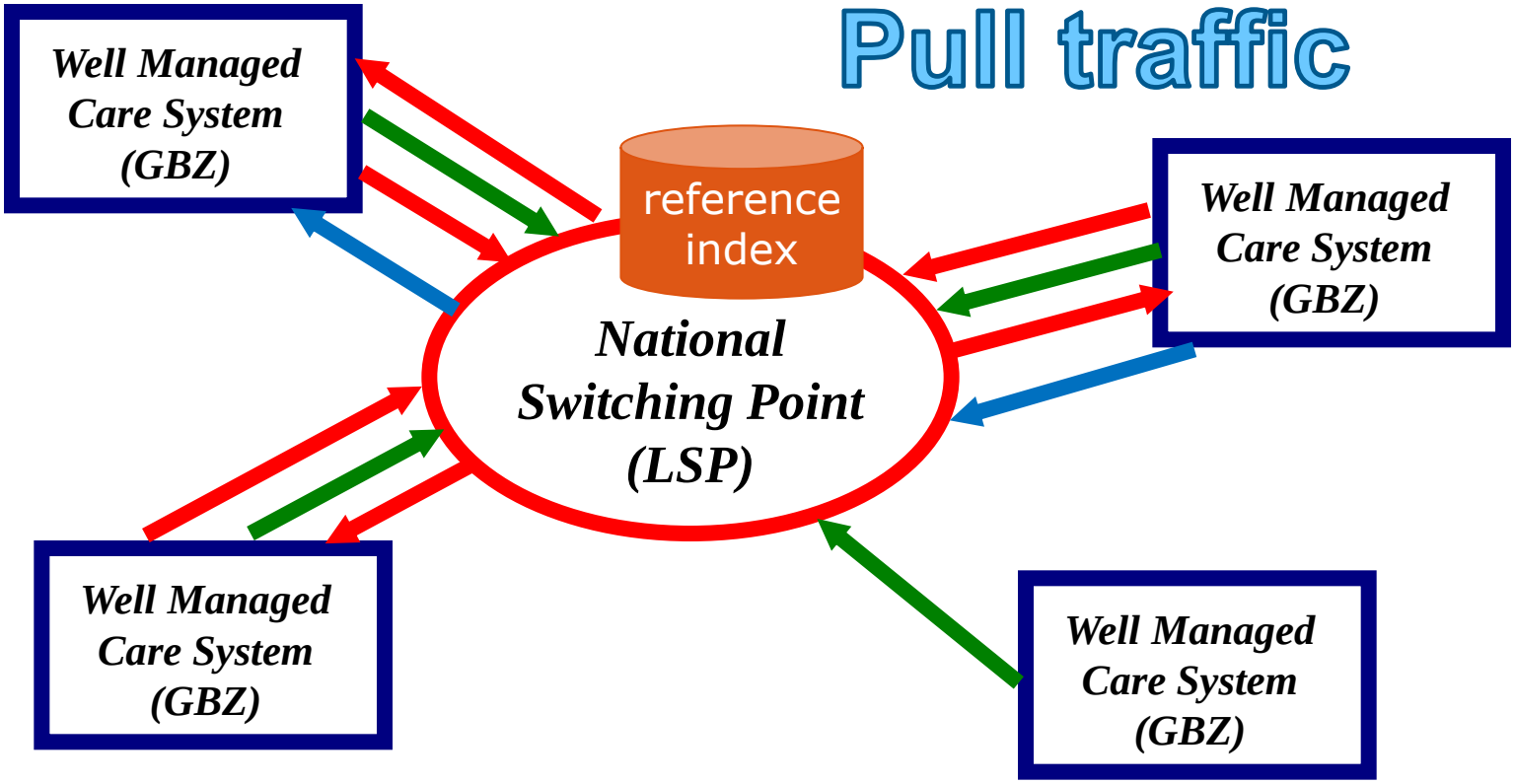
- National infrastructure for the standardized electronic exchange of healthcare data
- Initially funded by ministry of health
- Political crisis 2011 → government pulls out
- Since 2012: funded by private insurers
- Operated and innovated by VZVZ, an organisation of all healthcare providers
- Participation optional (patients and providers)

AORTA: how it works

Push traffic

Index updates

Pull traffic



The Electronic Medication Record

- Retrieval of **medication dispense data** from pharmacies by pharmacies, GPs and hospitals
- Includes allergies and contra-indications
- Replaced existing regional infrastructure
- Standard: based on **HL7v3 messaging**
- Currently 200.000+ messages per week

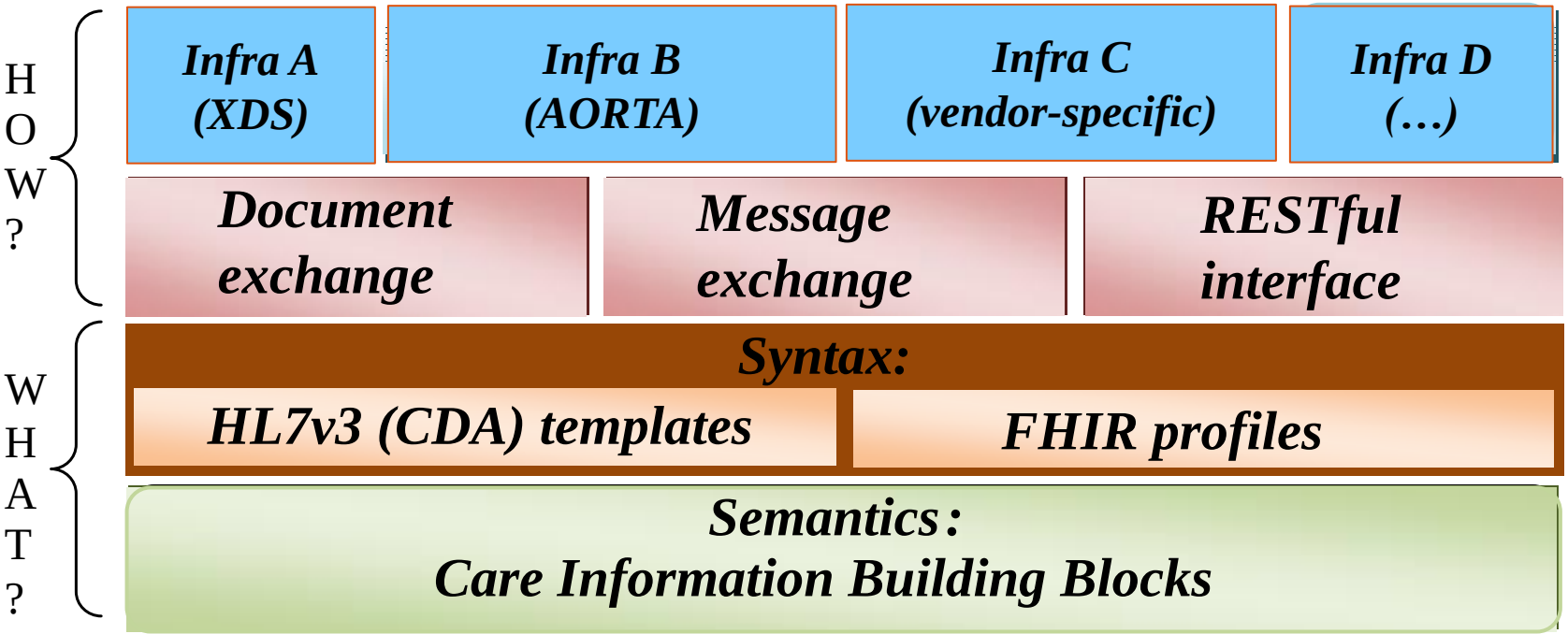
Medication Process
(current national program)

- Exchange of a **complete medication overview between care providers**
- Covers the complete medication cycle
- Based on new conceptual building blocks
- Standard: **CDA-compliant templates** (implementable building blocks)

MedMij: linking the Personal Health Environment

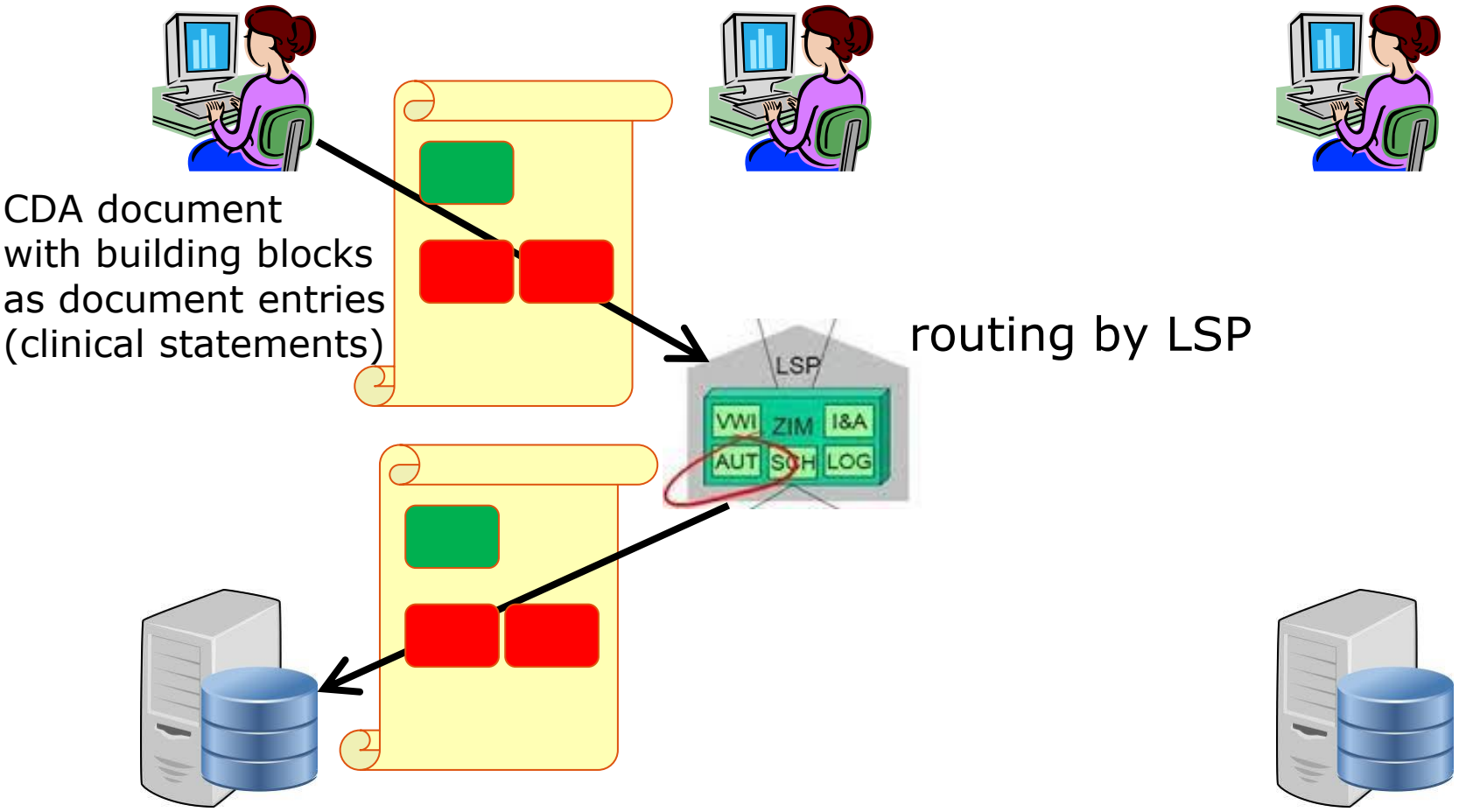
- Bidirectional exchange of information **between patients and their providers**
- Scope initially medication, allergies, lab and self-testing (later expanded to other data)
- Based on same conceptual building blocks
- Standard: **profiles for FHIR resources** (implementable building blocks)

Building blocks for standards



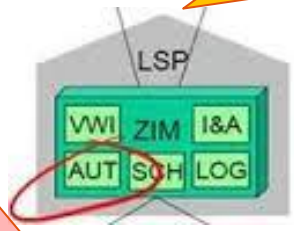
AORTA 8:
infrastructure for the exchange of standardized building blocks of health data

Push mechanism
CDA documents



Pull mechanism
query messages

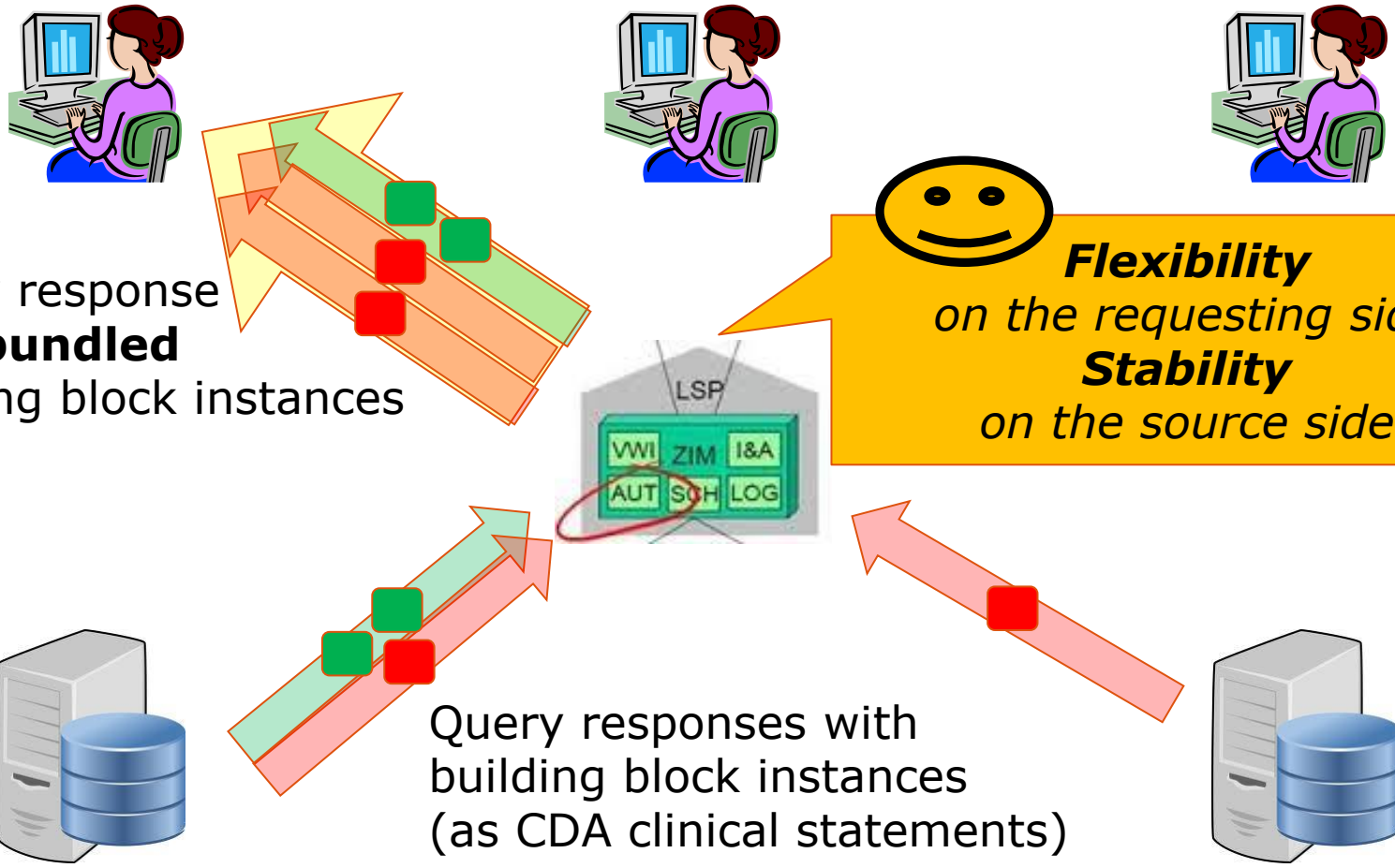
Generic query with "context"
parameters:
Patient, Context [, Period, Source]
(= Who? What? When? Where?)



Selection and Determination Service
Context + Authorisation
→ selection of building blocks from source systems

Queries for building blocks
parameters: Patient [, Period],
filters based on context and authorisation

Pull mechanism
response messages



Query response with **bundled** building block instances

Flexibility
on the requesting side
Stability
on the source side

Query responses with building block instances (as CDA clinical statements)

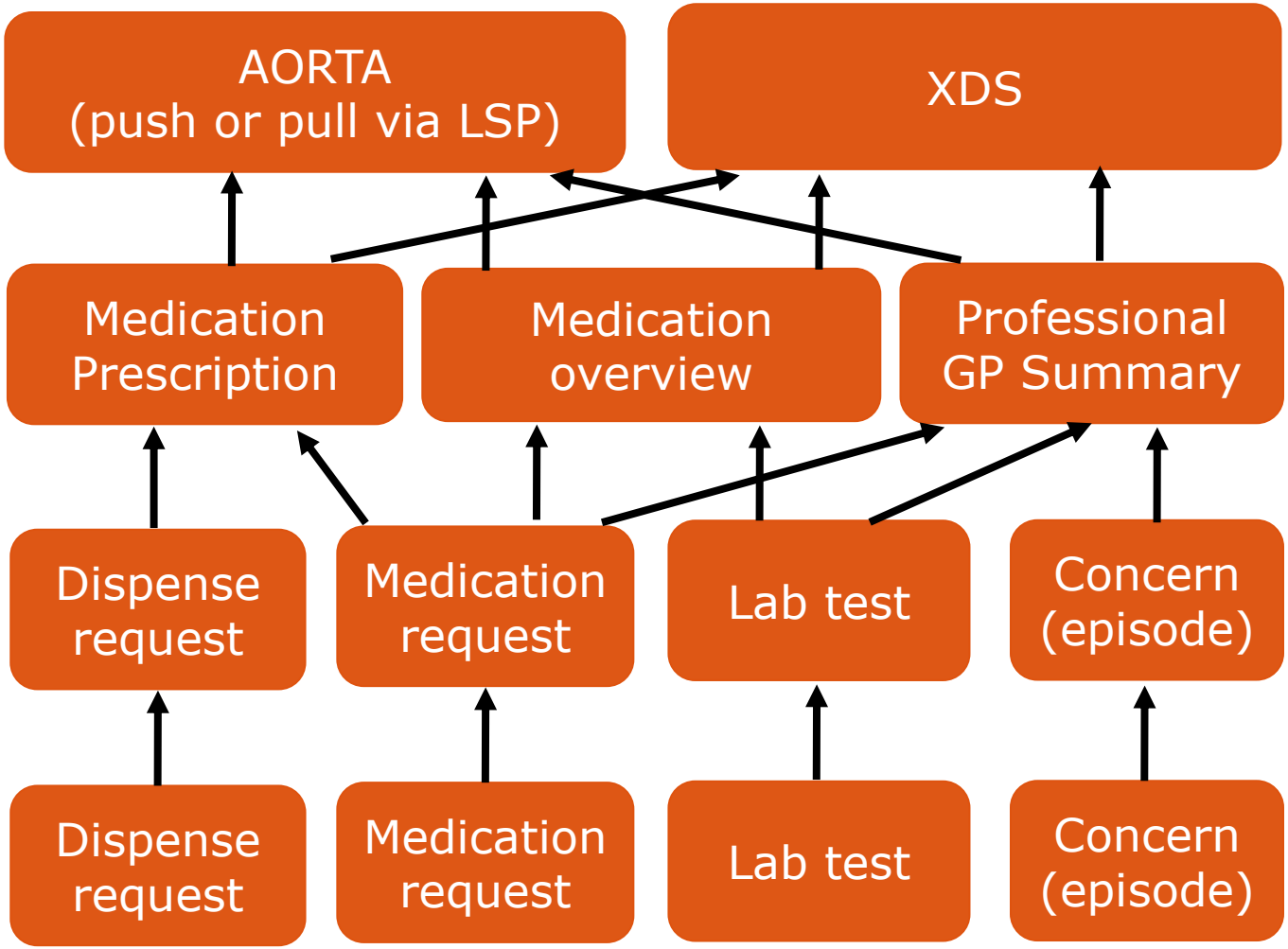
Levels of building blocks

Infrastructural:
More and more content-agnostic

Exchangeable:
Context-specific information sets

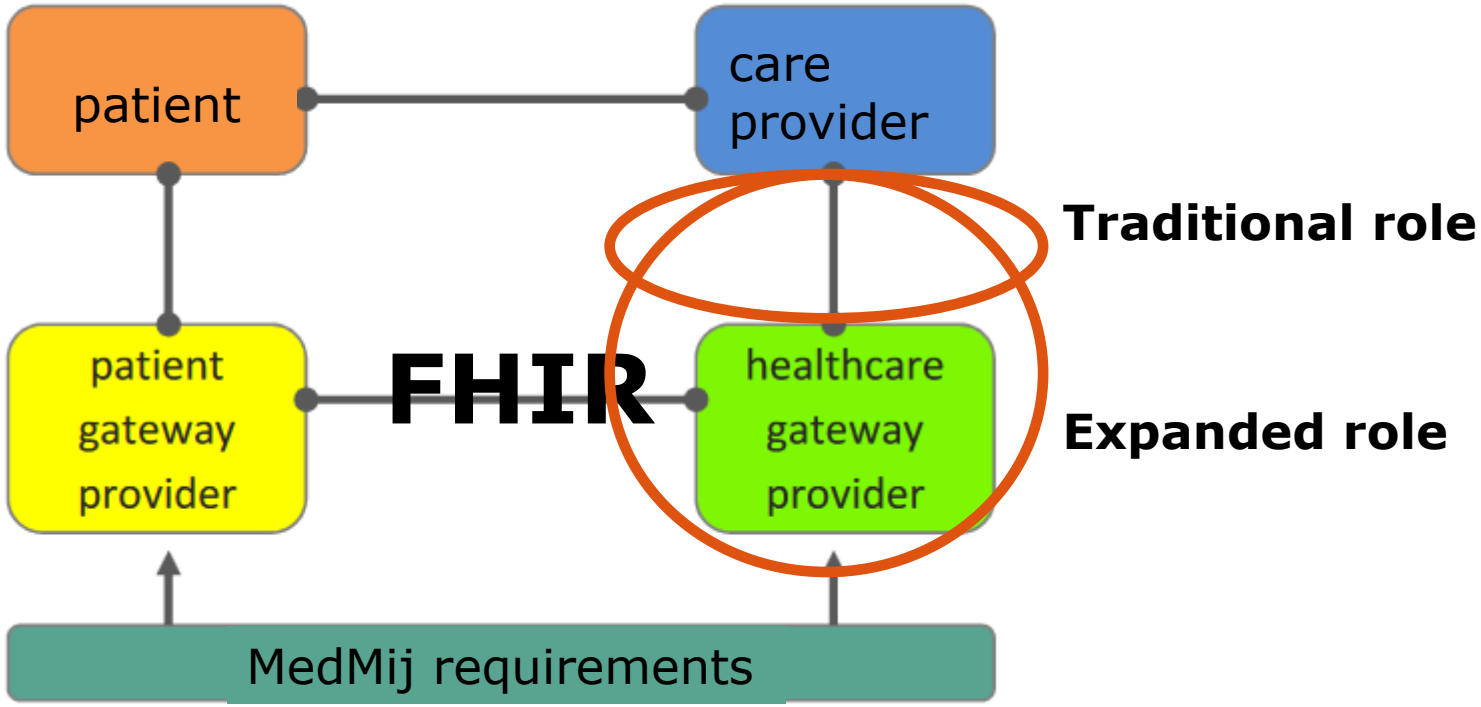
Implementable:
HL7 templates or FHIR profiles

Conceptual:
Care Information Building Blocks

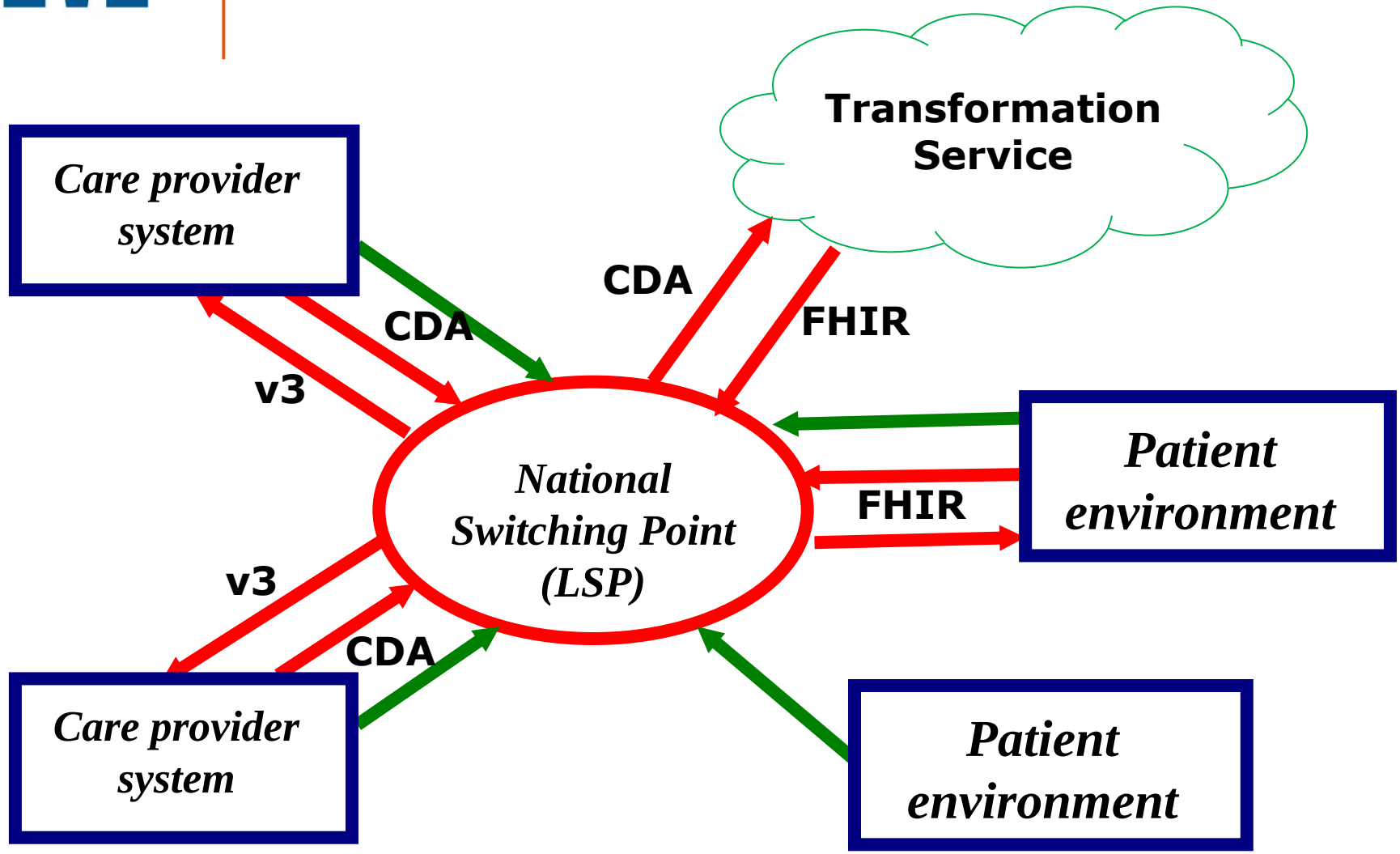


MedMij (patient interface): finding a role for AORTA

MedMij 4-corner model



LSP with transformation service



The bottom line for the Netherlands

- Dutch advantages:
  - national infrastructure AORTA
  - universal coding system for medication
- Dutch challenges:
  - install base of existing interfaces
    - gap between ‘old’ and ‘new’ system vendors
    - co-existence of v3 messaging, CDA and FHIR
    - need for transformation until full migration
  - lack of coordination in standards development
    - investment in projects without a shared strategy