

ERS

Electronic Record Services B.V.

EPD

van **ICT** naar **Informatie**
verleden, heden, toekomst

gf

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Agenda

- Verleden - Groene Kaart
- Heden - Berichten
- Toekomst - Objecten, Generieke oplossing
- Gevolgen - van ICT naar **Informatie**
- Samenvatting

Agenda

Verleden - Groene Kaart

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Samenvatting

Groene Kaart

Hanteerbaar

Draagbaar

Onafhankelijk van electra infrastructuur

Veel geselecteerde informatie

Individueel aangepast

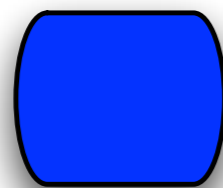
Berichten IHE

Presentatie

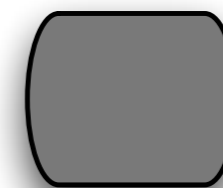
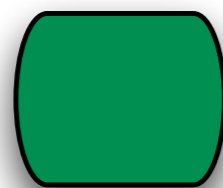
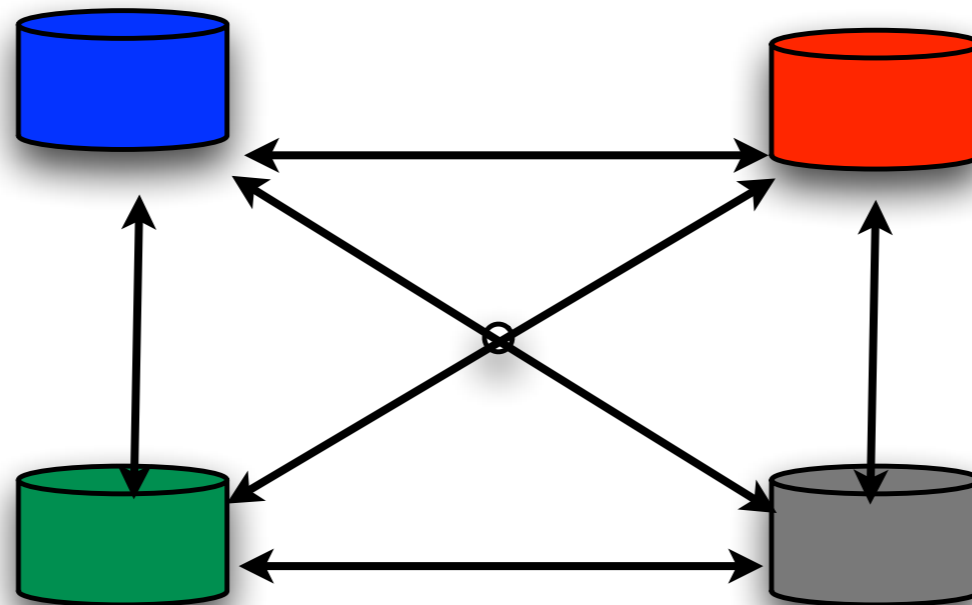
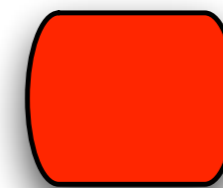
Functionaliteit

Code stelsels

Database



$$N = n * (n - 1) * r$$
$$12 = 4 * (4 - 1) * 1$$



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Samenvatting

Berichten

Proprietary systemen
(Presentatie, Rules, Documentatie,
Uitwisseling)

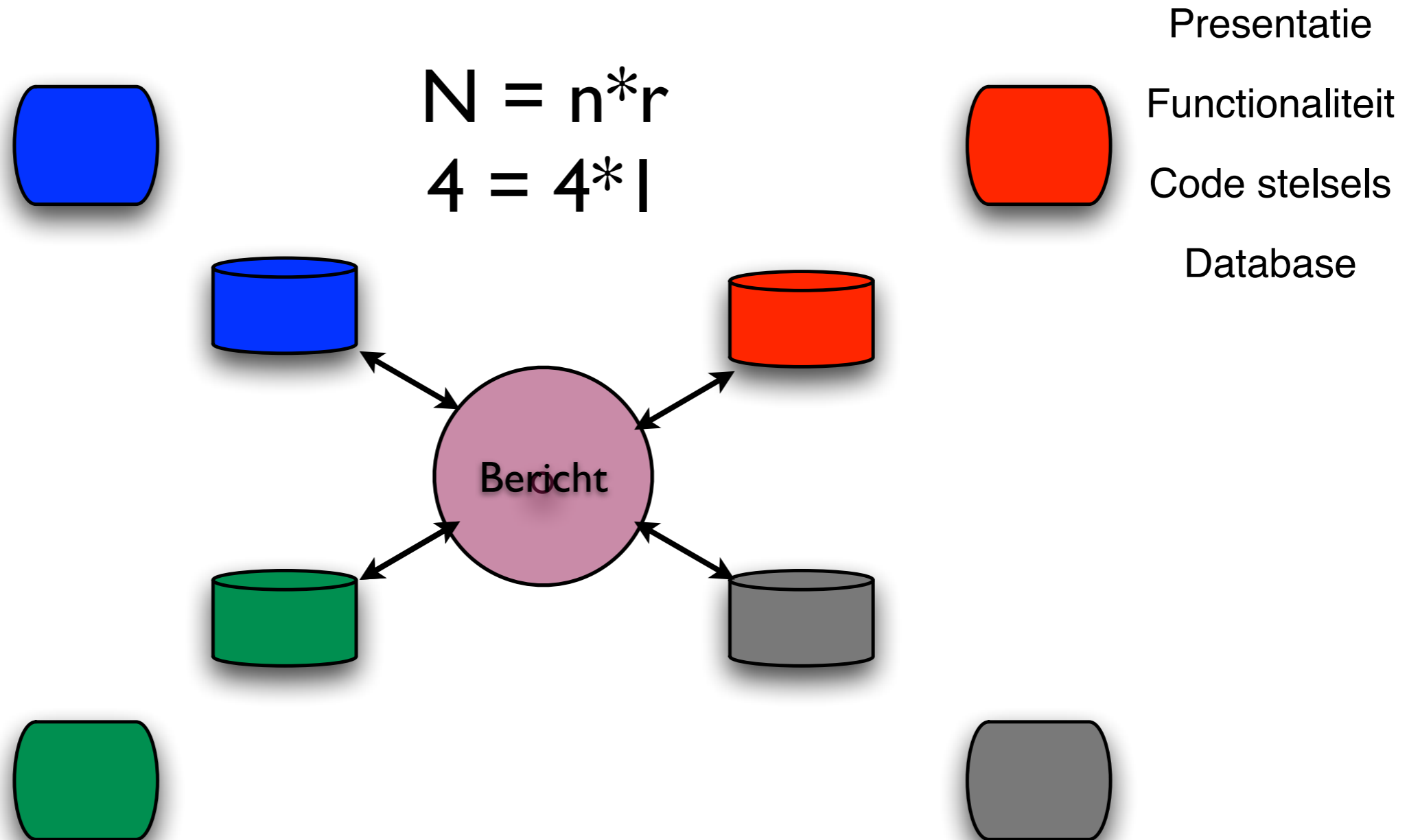
Cirkel met Berichten standaard

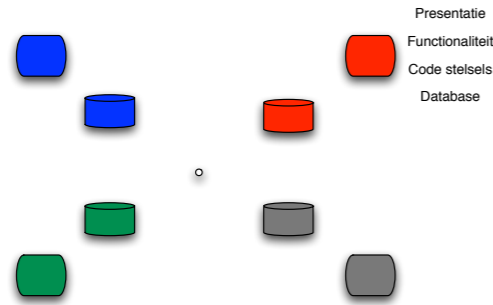
1- Geen berichten - chaos

2- berichten Edifact - HL7 v2 - HL7v3

3- Geen Innovatie, starheid, hoge kosten

Berichten IHE

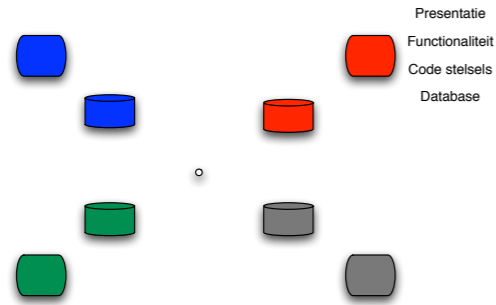




Berichten IHE

Message production implementation

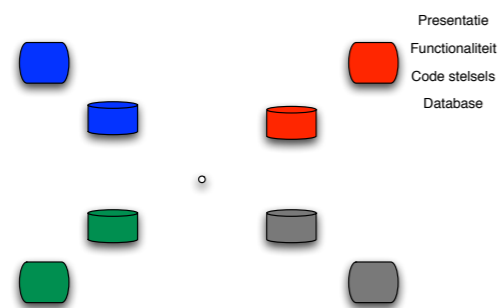
- message production - 3 years
- IHE implementable specification production and testing - 1.5 years
- Implementation for each vendor - .5-1 year



Berichten IHE

Message production implementation

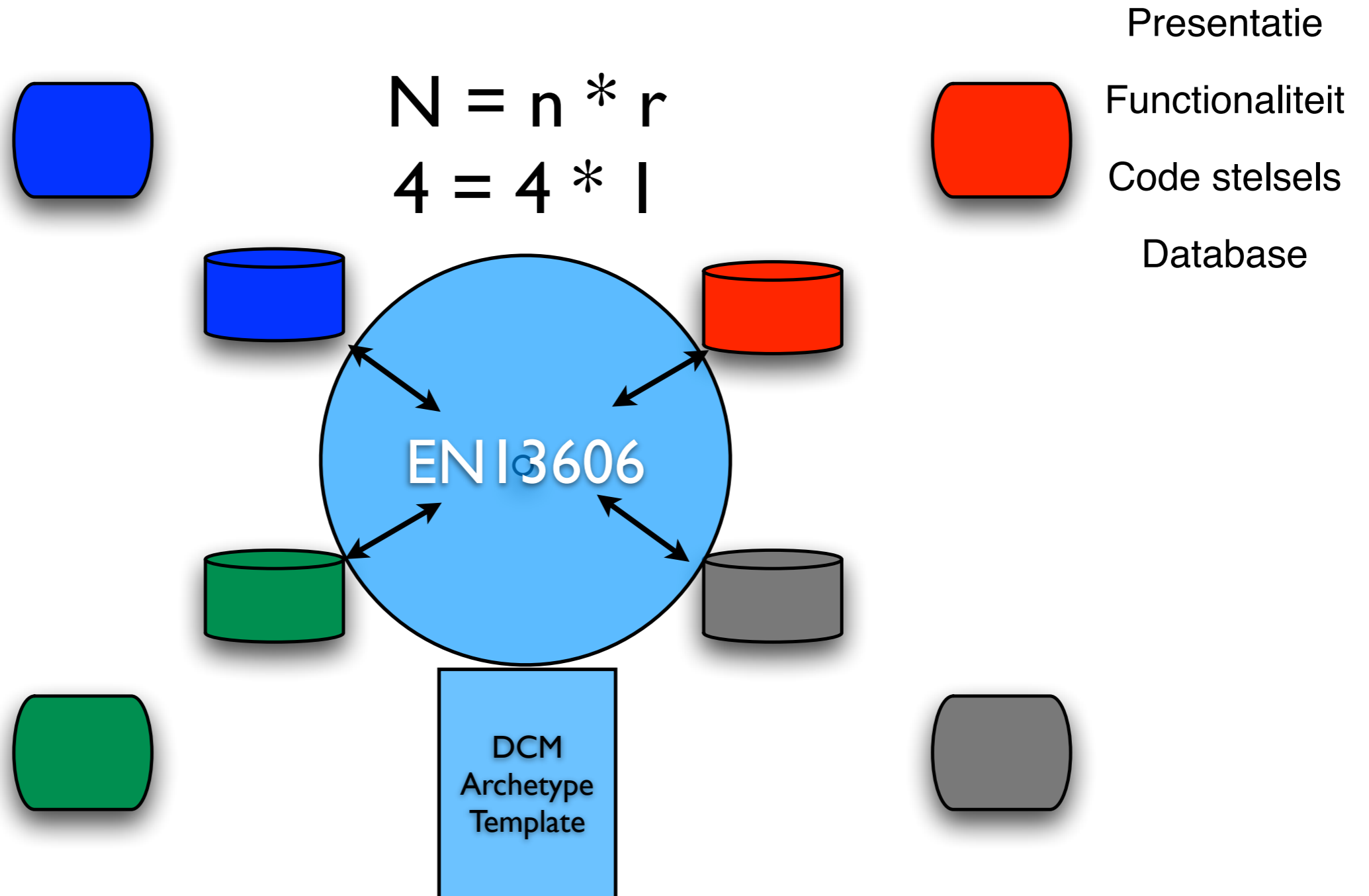
- duration years
- large implementation cost
- inflexible
- not supporting innovation



Berichten IHE

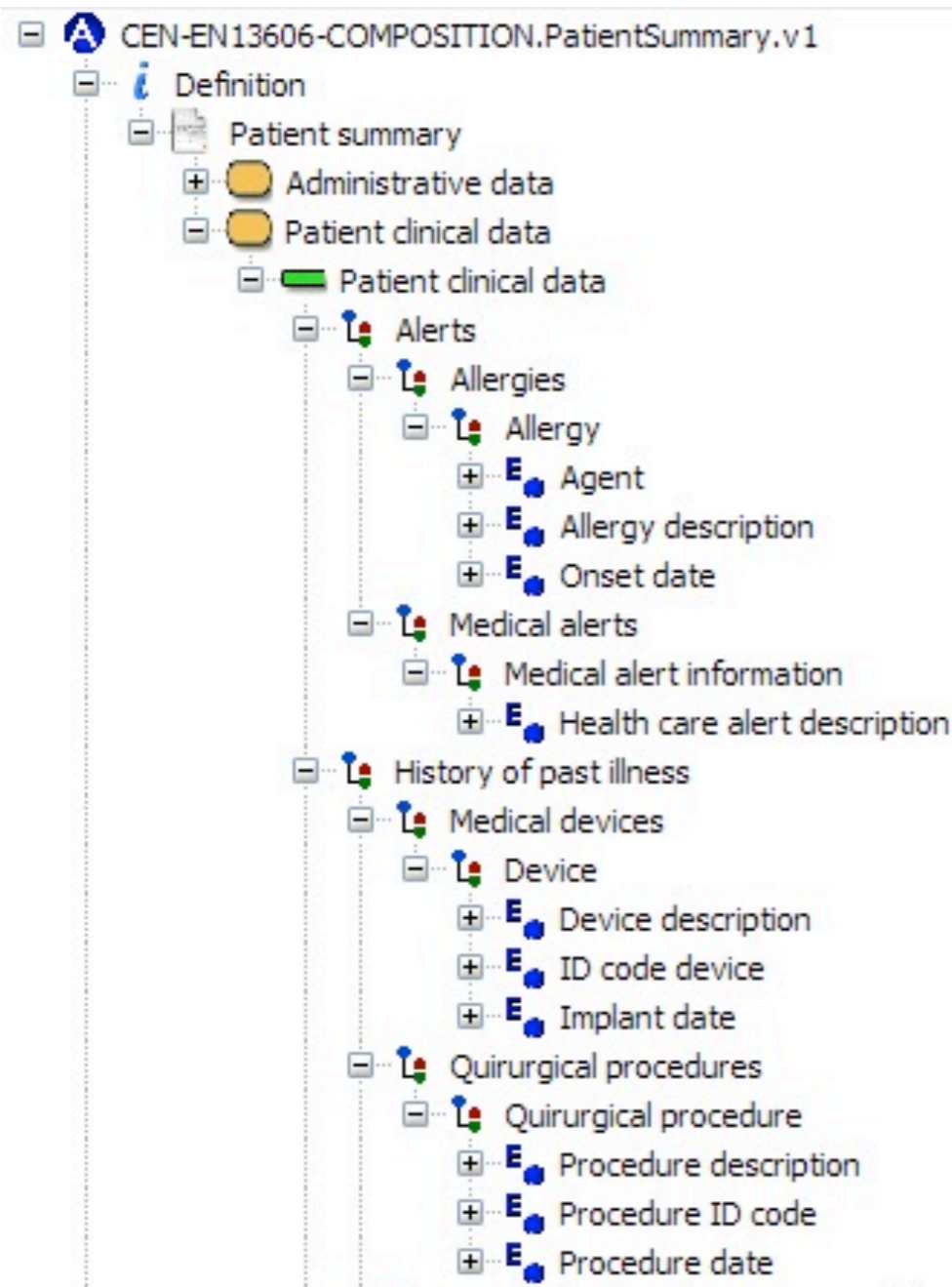


Berichten ENI3606





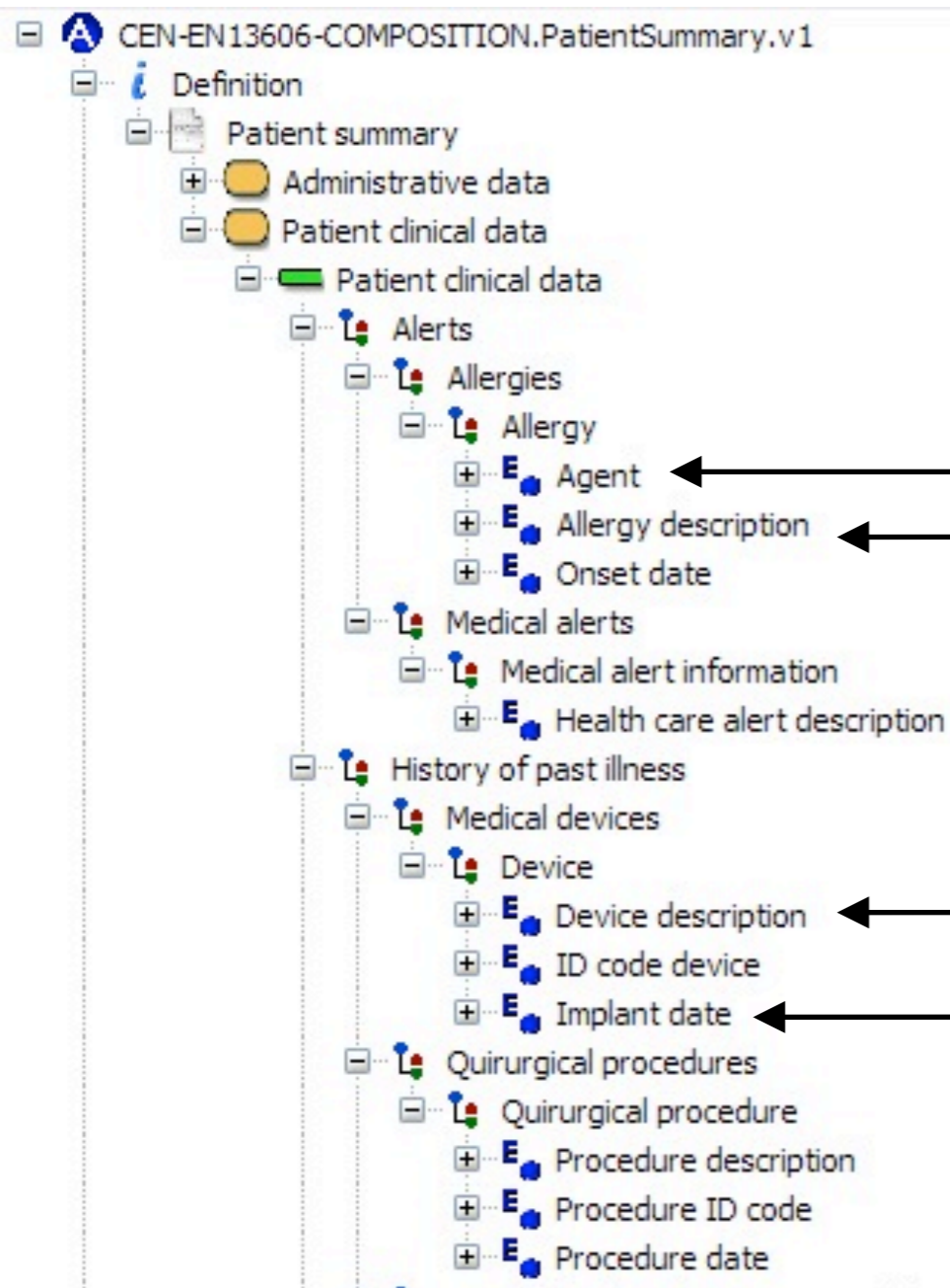
1. Agree a concept definition and define the archetype



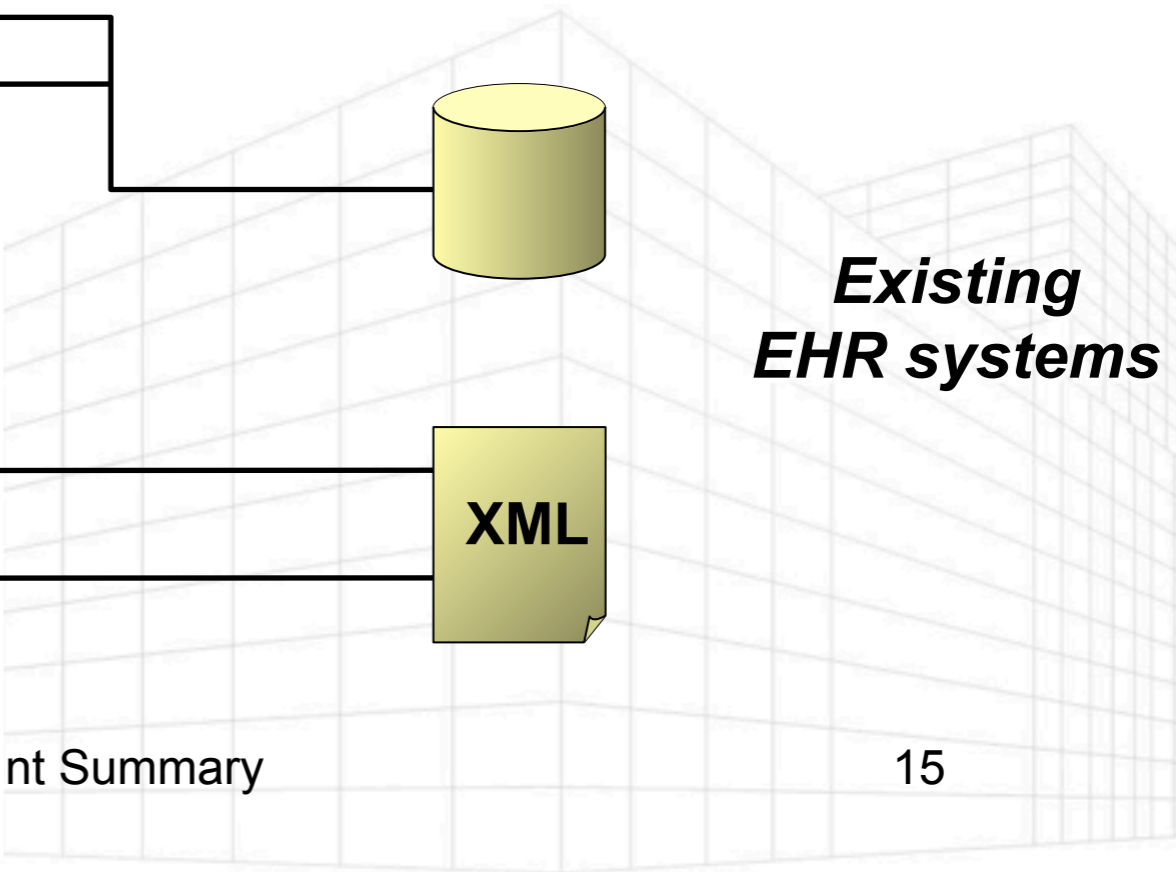
- We have used two different definitions
 - Spanish National Patient Summary
 - epSOS Patient Summary final dataset
- They can be **easily edited** or modified with open source archetype editors like LinkEHR-Ed

<http://www.linkehr.com>

2. Map the archetype to original/legacy data



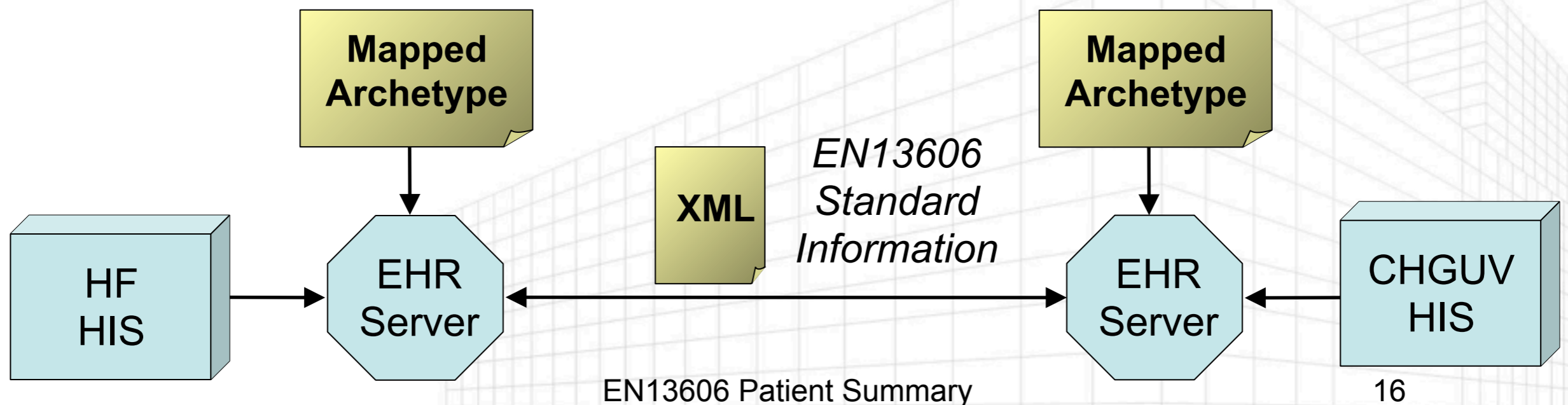
- With these mappings we can **automatically generate** transformation programs for the EHR system.



nt Summary

3. Deploy the transformation program in the EHR server

- Set up a standard EN13606 extract server in both hospitals to generate and communicate the standardized information
 - Transformation is applied on demand
 - Web-service based
 - Includes a standard EN13606 web viewer



```

?xml version="1.0" encoding="UTF-8"?<?xml-stylesheet type="te
<COMPOSITION>
  <name xmlns:xsi="http://www.w3.org/2001/XMLSchema-inst
    <originalText>Patient summary</originalText>
  </name>
  <archetype_id>CEN-EN13606-COMPOSITION.PatientSummary
  <rc_id xmlns:xsi="http://www.w3.org/2001/XMLSchema-inst
    <root xsi:type="OID">
      <oid>CEN-EN13606-COMPOSITION.PatientSummary.v1@/
    </root>
  </rc_id>
  <meaning xmlns:xsi="http://www.w3.org/2001/XMLSchema-
    <codingSchemeName>CEN-EN13606-COMPOSITION.Patient
    <codeValue>at0000</codeValue>
  </meaning>
  <synthesised>true</synthesised>
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    <ehr_system xsi:type="II">
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  </committal>
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      <originalText>History of past illness</originalText>
    </name>
    <archetype_id>CEN-EN13606-COMPOSITION.PatientSummar
    <rc_id xsi:type="II">
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      </root>
    </rc_id>
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    <parts xsi:type="CLUSTER">
      <name xsi:type="SIMPLE_TEXT">
        <originalText>Resolved, closed or inactive problems</ori
      </name>
      <archetype_id>CEN-EN13606-COMPOSITION.PatientSumm
      <rc_id xsi:type="II">
        <root xsi:type="OID">
          <oid>CEN-EN13606-COMPOSITION.PatientSummary.v1
        </root>
      </rc_id>

```

Patient summary

Patient clinical data

Patient clinical data

Alerts

Allergies

Agent	Allergy description	Onset date
NO CONOCIDAS		06/12/1948 0:00:00

History of past illness

Resolved, closed or inactive problems

Problem description	Problem ID code	Onset time	End date
FIBROMA PENDULAR	- [CIAP::S79]	29/10/2004 0:00:00	20/01/2006 0:00:00
DOLOR TORACICO MUSCULO ESQUELETICO (NC)	- [CIAP::L04]	20/01/2004 0:00:00	20/01/2004 0:00:00
METEORISMO	- [CIAP::D08]	15/10/2004 0:00:00	15/10/2004 0:00:00
LITIASIS BILIAR INTERVENIDA	- [CIAP::D98]	04/06/2005 0:00:00	20/01/2006 0:00:00
COLECISTITIS	- [CIAP::D98]	15/07/2005 0:00:00	20/01/2006 0:00:00
VAGINITIS NC	- [CIAP::X84]	01/07/2006 0:00:00	11/07/2006 0:00:00
SINTOMA, QUEJA, SIGNO MAMA NC	- [CIAP::X21]	26/09/2006 0:00:00	17/11/2006 0:00:00
FARINGOAMIGDALITIS AGUDA (EXC ESTREPTOCOCICA)	- [CIAP::R76]	17/11/2006 0:00:00	17/11/2006 0:00:00
AFONIA	- [CIAP::R23]	28/02/2007 0:00:00	06/03/2007 0:00:00
IRA (INFECC. RESPIR. ALTA)	- [CIAP::R74]	06/02/2008 0:00:00	19/02/2008 0:00:00
AFONIA	- [CIAP::R23]	10/02/2009 0:00:00	10/02/2009 0:00:00

Current history

Active problems/Diagnosis

Problem/Diagnosis description	Problem ID code	Onset time
ACTIVIDADES PREVENTIVAS	- [CIAP::]	06/12/1948 0:00:00
MENOPAUSIA	- [CIAP::X11]	20/01/2004 0:00:00
HTA (NO COMPL.)	- [CIAP::K86]	02/01/1992 0:00:00
VERTIGO BENIGNO PAROXISTICO	- [CIAP::N99]	28/04/2004 0:00:00
ARTROSIS CERVICAL	- [CIAP::L84]	07/08/2004 0:00:00
OBESIDAD	- [CIAP::T82]	01/04/2004 0:00:00
ENFERMEDAD DIENTES, DE LOS NC	- [CIAP::D82]	10/07/2007 0:00:00
INCONTINENCIA URINARIA DE ESFUERZO	- [CIAP::U04]	10/12/2008 0:00:00
HIPOACUSIA CRONICA	- [CIAP::H86]	19/12/2008 0:00:00

Medication summary

Brand name	Active ingredient	Date of onset of treatment
PARACETAMOL KERN PHARMA 1 G COMPRIMIDOS, 40 COMPRIMIDOS	PARACETAMOL - [NOMENCLATOR::N02BE01]	14/02/2008 0:00:00
AMOXICILINA SANDOZ 750MG 24 COMPRIMIDOS REC EFG	AMOXICILINA - [NOMENCLATOR::J01CA04]	13/07/2006 0:00:00
AMOXICILINA ARDINE 500MG 24 CAPSULAS EFG -	AMOXICILINA - [NOMENCLATOR::J01CA04]	20/11/2005 0:00:00
NASONEX SPRAY 50MCG/NEB 140 NEBULIZACIONES NASALES -	MOMETASONA - [NOMENCLATOR::R01AD09]	20/11/2005 0:00:00
BUDESONIDA MERCK 0,1 MG 200 DOS 10ML AER NAS EFG -	BUDESONIDA (NASAL) - [NOMENCLATOR::R01AD05]	09/03/2006 0:00:00
TOSEINA 10MG/5ML 250ML SOLUCION ORAL	CODEINA - [NOMENCLATOR::R05DA04]	04/04/2007 0:00:00
AMOXICILINA SANDOZ 750MG 24 COMPRIMIDOS REC EFG	AMOXICILINA - [NOMENCLATOR::J01CA04]	22/02/2007 0:00:00
BOLTIN 2.5MG 28 COMPRIMIDOS	TIBOLONA - [NOMENCLATOR::G03CX01]	28/02/2005 0:00:00
PAROXETINA MERCK 20MG 28 COMPRIMIDOS RECUB EF	PAROXETINA - [NOMENCLATOR::N06AB05]	10/01/2003 0:00:00
TEPOX-CAL 3750(500)MG/SOBRE 30 SOBRES GRANULA -	CALCIO PIDOLATO - [NOMENCLATOR::A12AA91]	15/01/2004 0:00:00

- The project was developed in July 2009.
- The **archetype definition** took approx. **4h**
- The **archetype mapping** and generation of EN13606 standardized data, just **one day**.

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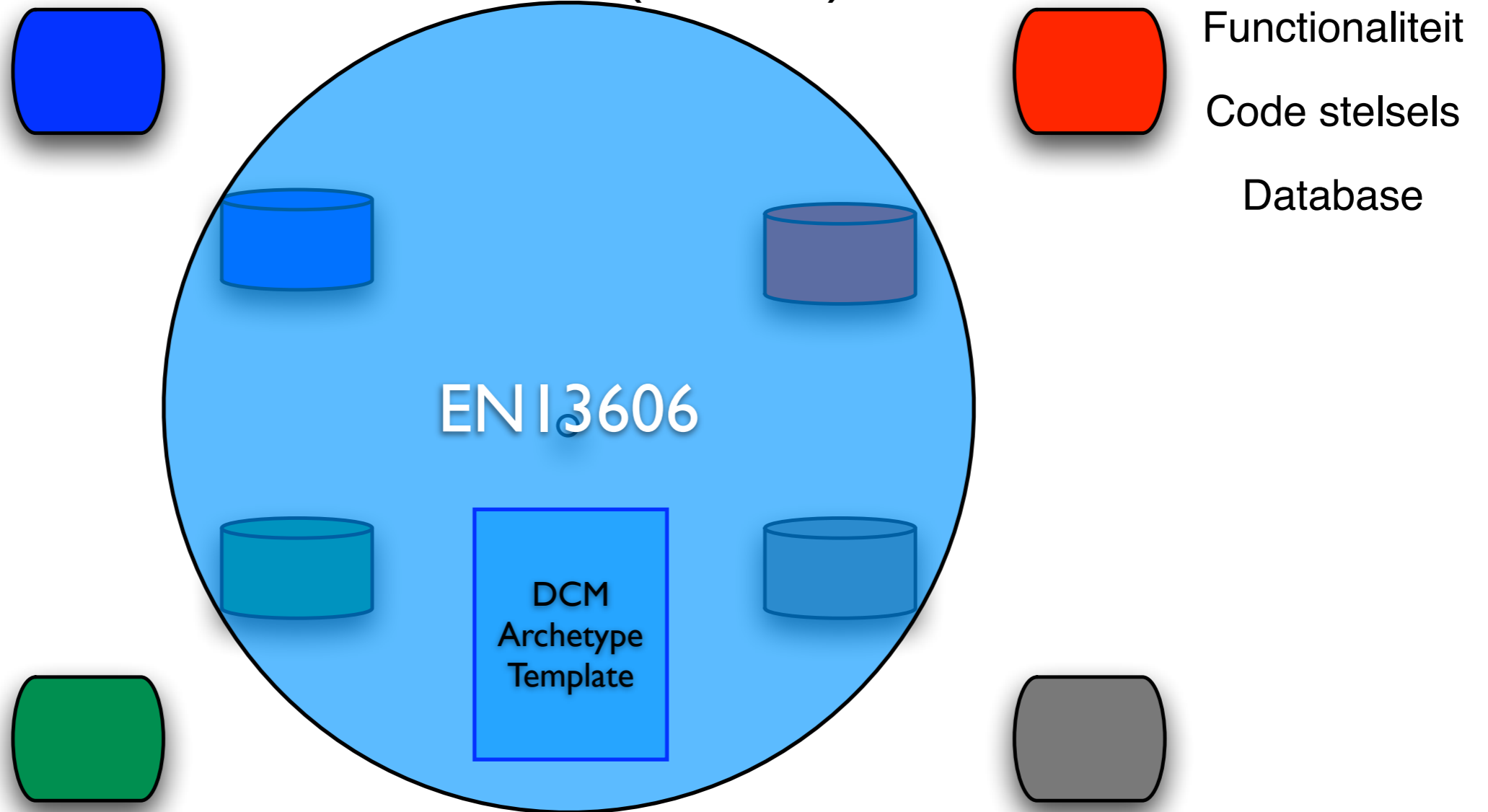
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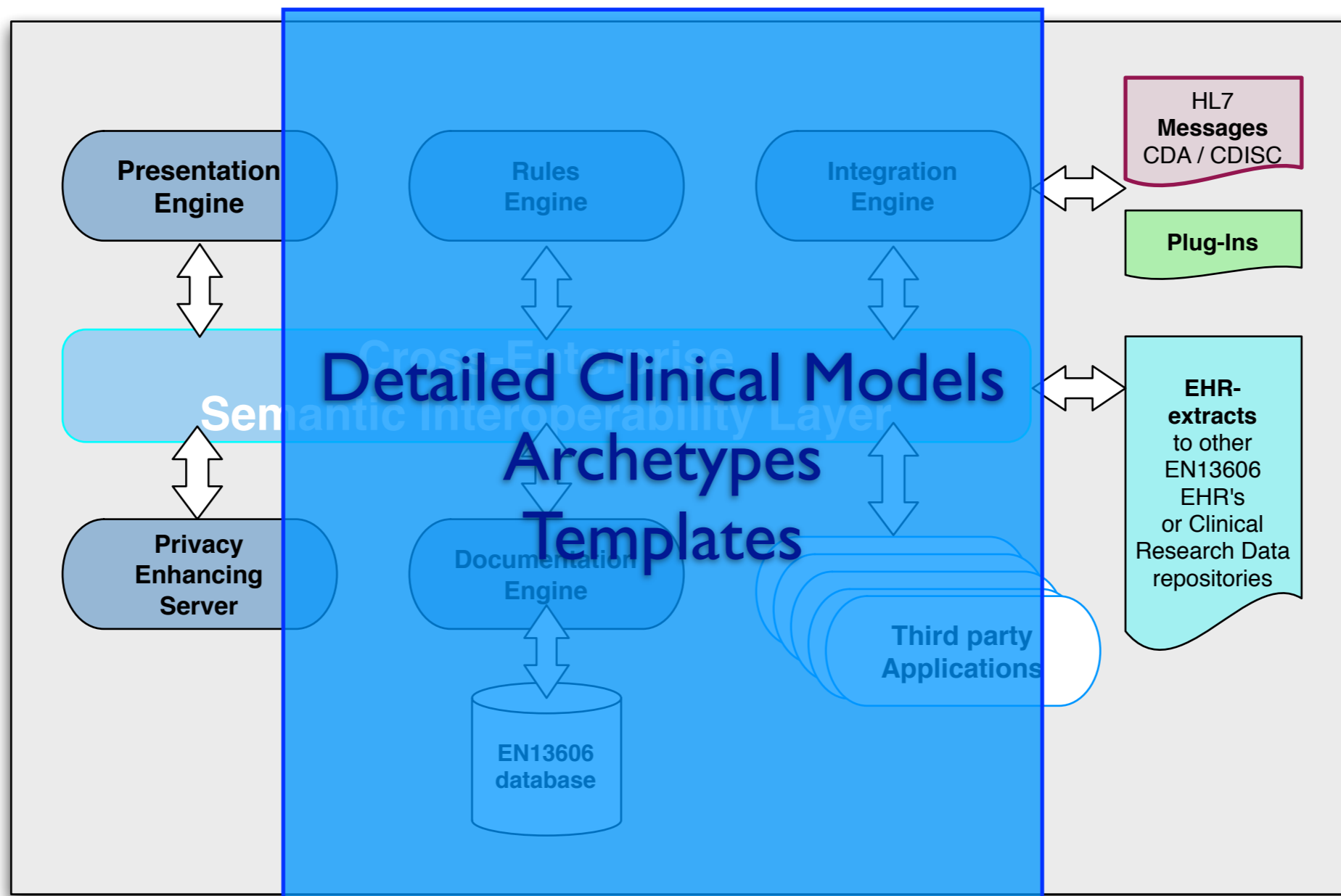
Samenvatting

Objecten

$$N = n * (r/r)$$
$$4 = 4 * (10/10)$$



Objecten



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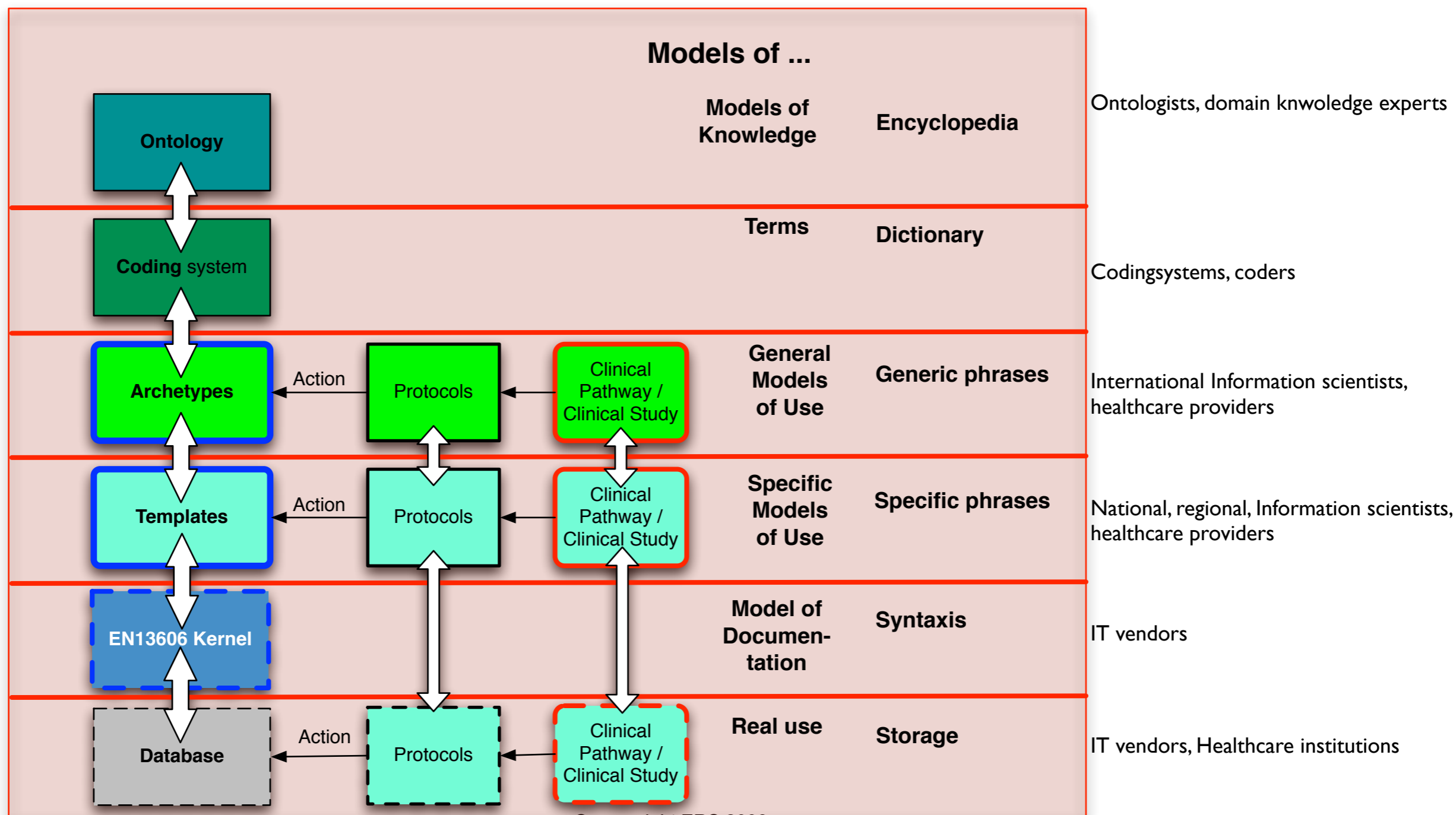
Toekomst - Objecten, Generieke oplossing

Gevolgen - van **ICT** naar **Informatie**

Samenvatting

Gevolgen

Actors



Gevolgen

Zorgverlener

Zorginstelling

Wetenschappelijke verenigingen

ICT sector

Informatiekundigen

Documentatie/archiveringsspecialisten

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