



Electronic Record Services B.V.

Boundaries between structuring applications and messaging

Trondheim

Tuesday 21 September 2010

Gerard Freriks

Past chair CEN/TC251 wgl

Vice-president EuroRec

ERS b.v.





INFORMATION DOCUMENTATION

Agenda

1. 2LM Paradigm and Innovation

2. ENI 3606 and Innovation

3. Missing Semantic Interoperability Stack - INFOstructure

4. ENI 3606 Consortium/Association

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Two Level Modeling Paradigm and Innovation

2LM Paradigm - Innovation

Effect on Society

Easy access to
data, information
and knowledge

Instantly connecting,
synchronising people
and organisations

New Products



Old Products



2LM Paradigm - Innovation

Effect on Society

Easy speedy access to data, information, knowledge and people plus organisations

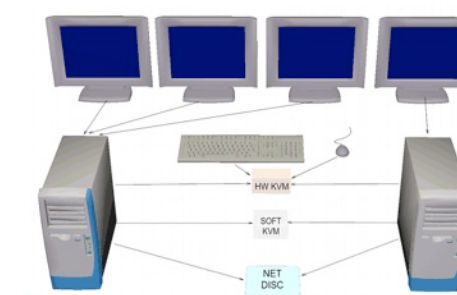
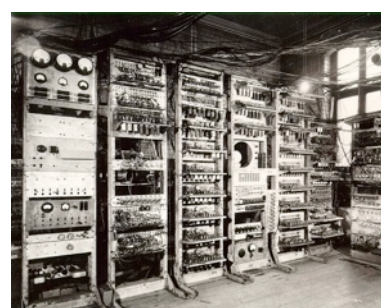
Instantly connecting, synchronising people, organisations and **business processes**

New Products



EHR-systems

Old Products



EMR-systems

2LM Paradigm - Innovation

Effect on society	-	Innovation
Infrastructure	-	Infrastructure
R&D - New products	One-off	Commodity

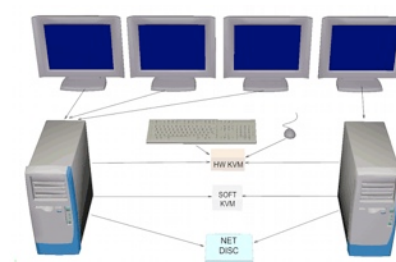
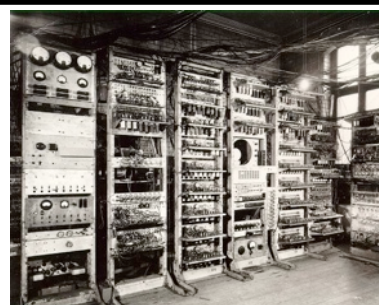
2LM Paradigm - Innovation

Effect on society	-	Innovation
Infrastructure	-	Infrastructure
R&D - New products	One-off	Commodity

**Digital
Agenda**

Infrastructure
Infostructure

Legislation
Standards



EMR

?

EHR

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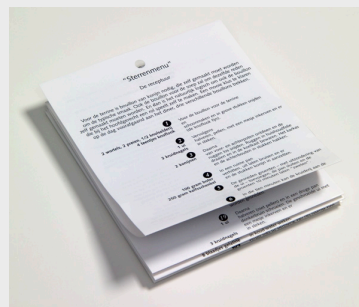
EN I 3606 Introduction (High level) and Innovation

Bakery

ERS

Electronic Record Services BV

Instructions



Ingredients



Moulds



Kitchen machines



Oven



Pastry

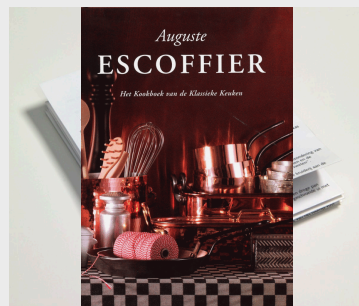


Bakery/EHR expectations

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Instructions



Ingredients



Moulds



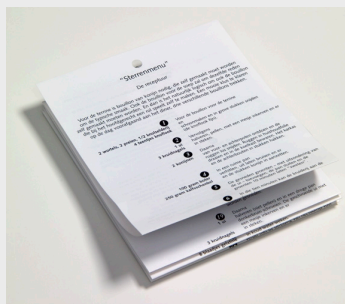
Kitchen machines



Oven



Pastry



Rules



Information



Presentation



Software



Hardware



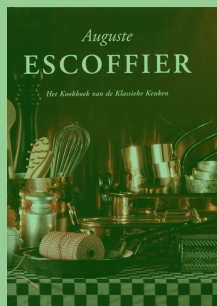
EHR

EHR's now

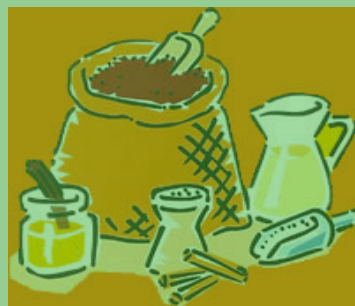
ERS

Electronic Record Services BV

Instructions



Ingredients



Moulds



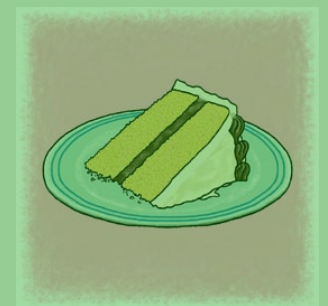
Kitchen machines



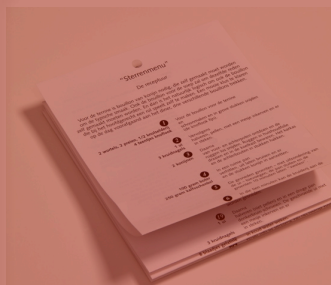
Oven



Pastry



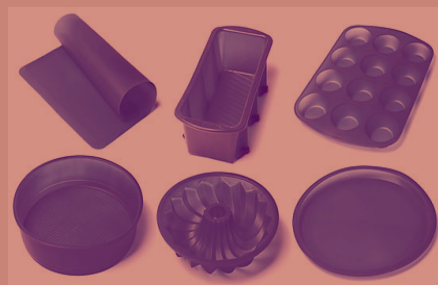
Rules



Information



Presentation



Software



Hardware



EHR



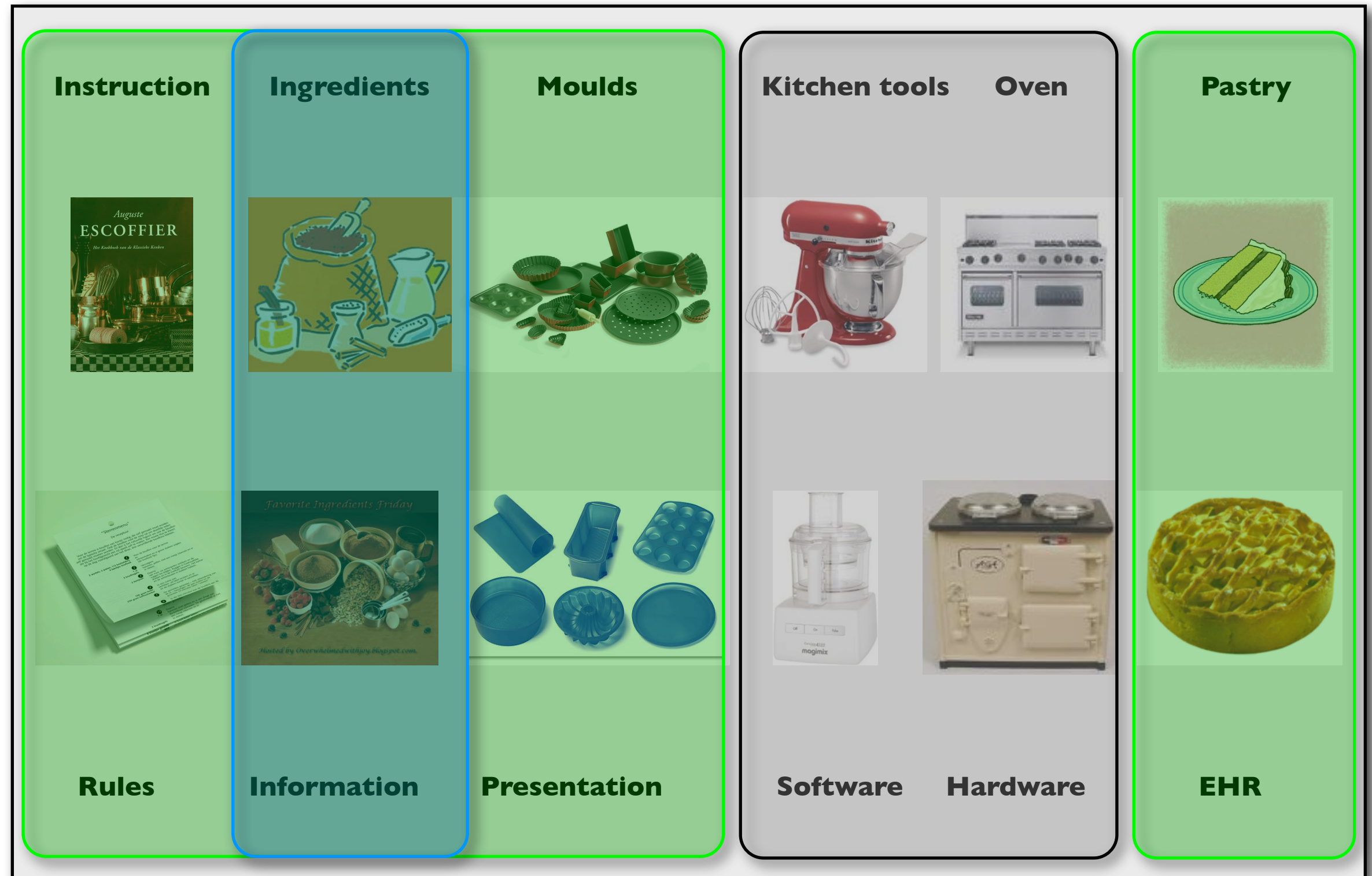
systems now



EHR-systems we need

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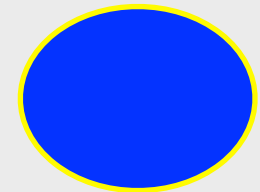
Electronic Record Services BV



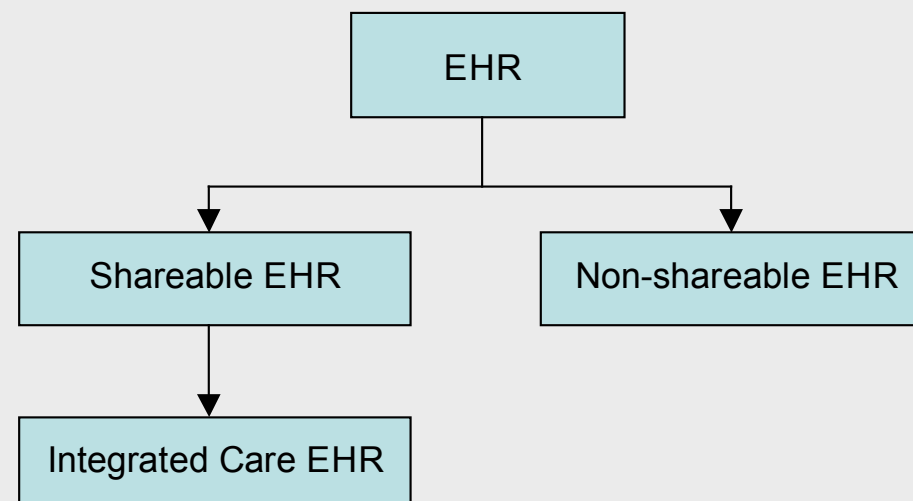
Integrated Care Electronic Health Record

Definition

(ISO/tc215 20514: EHR - Definition, Scope and Context)

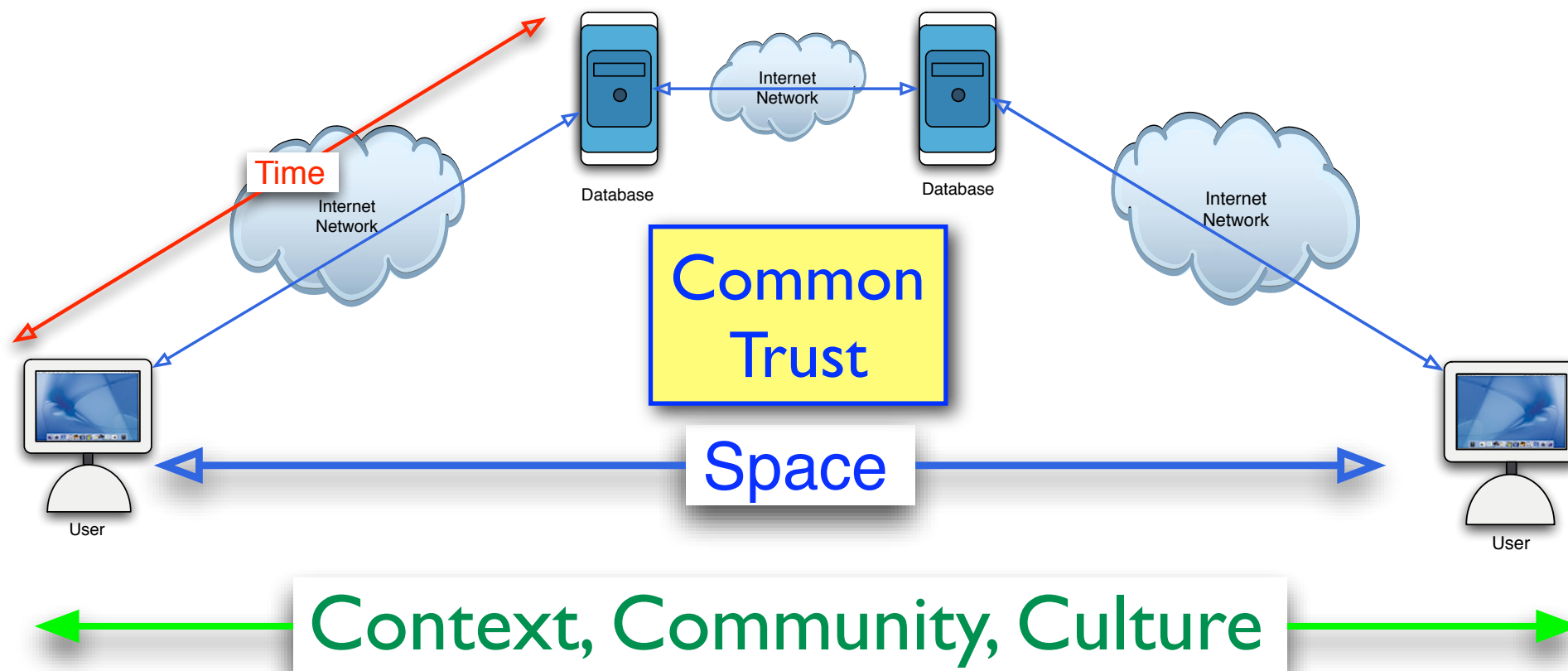


The IC-EHR has a standardised **information model**, which is **independent** of EHR systems. Its primary purpose is the support of continuing, efficient and quality integrated healthcare and it contains **information** which is **retrospective, concurrent and prospective**.



ENI3606

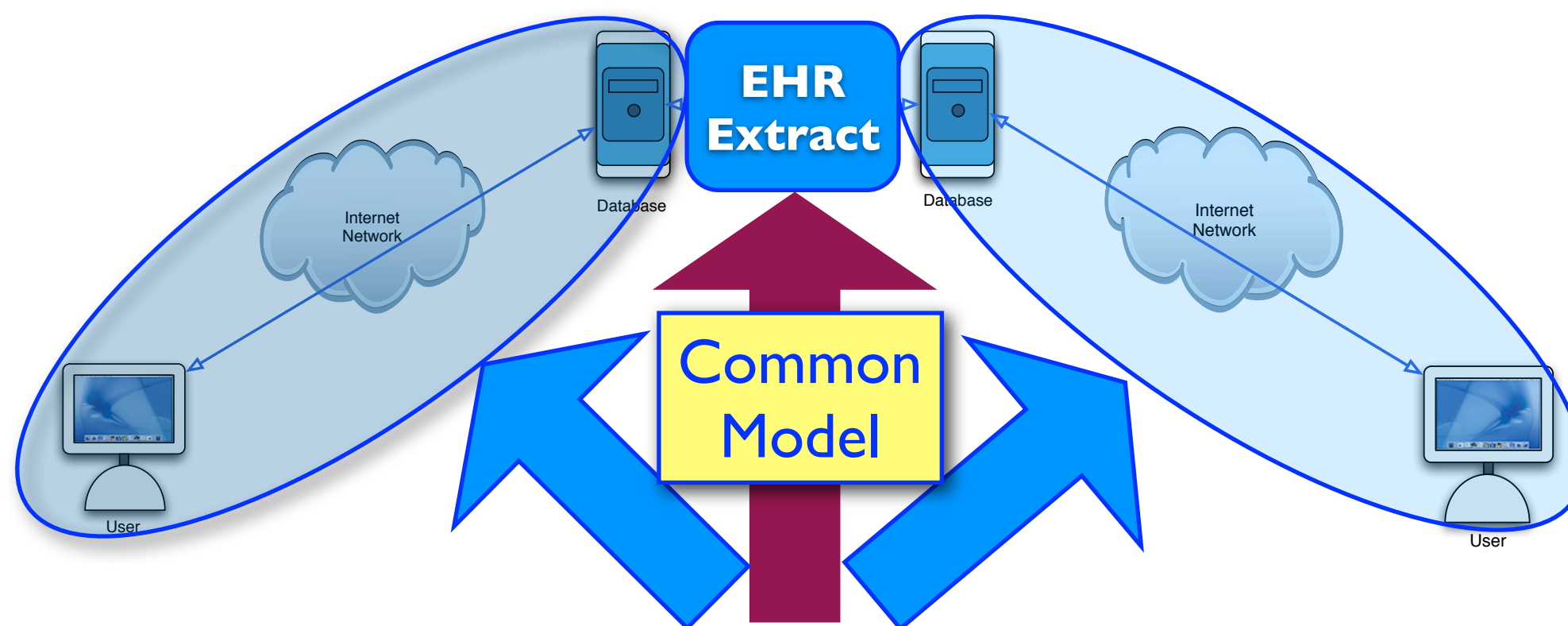
Basics



ENI3606

Basics

Many, many unique identifiers

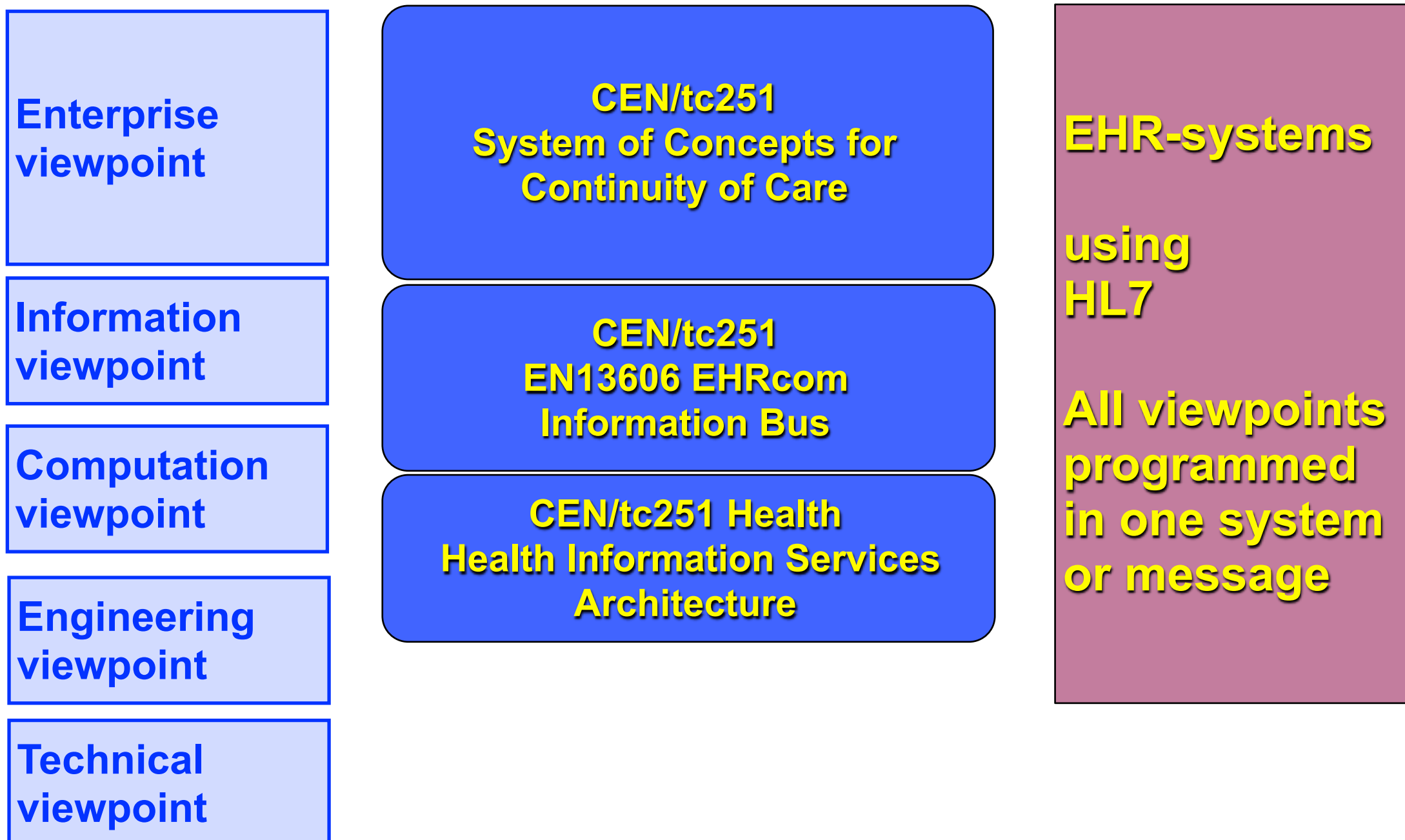


Documentation
Archiving

Documentation
Archiving

EN13606

Basics



ENI 3606

Basics

Paradigm: Two-Level-Model

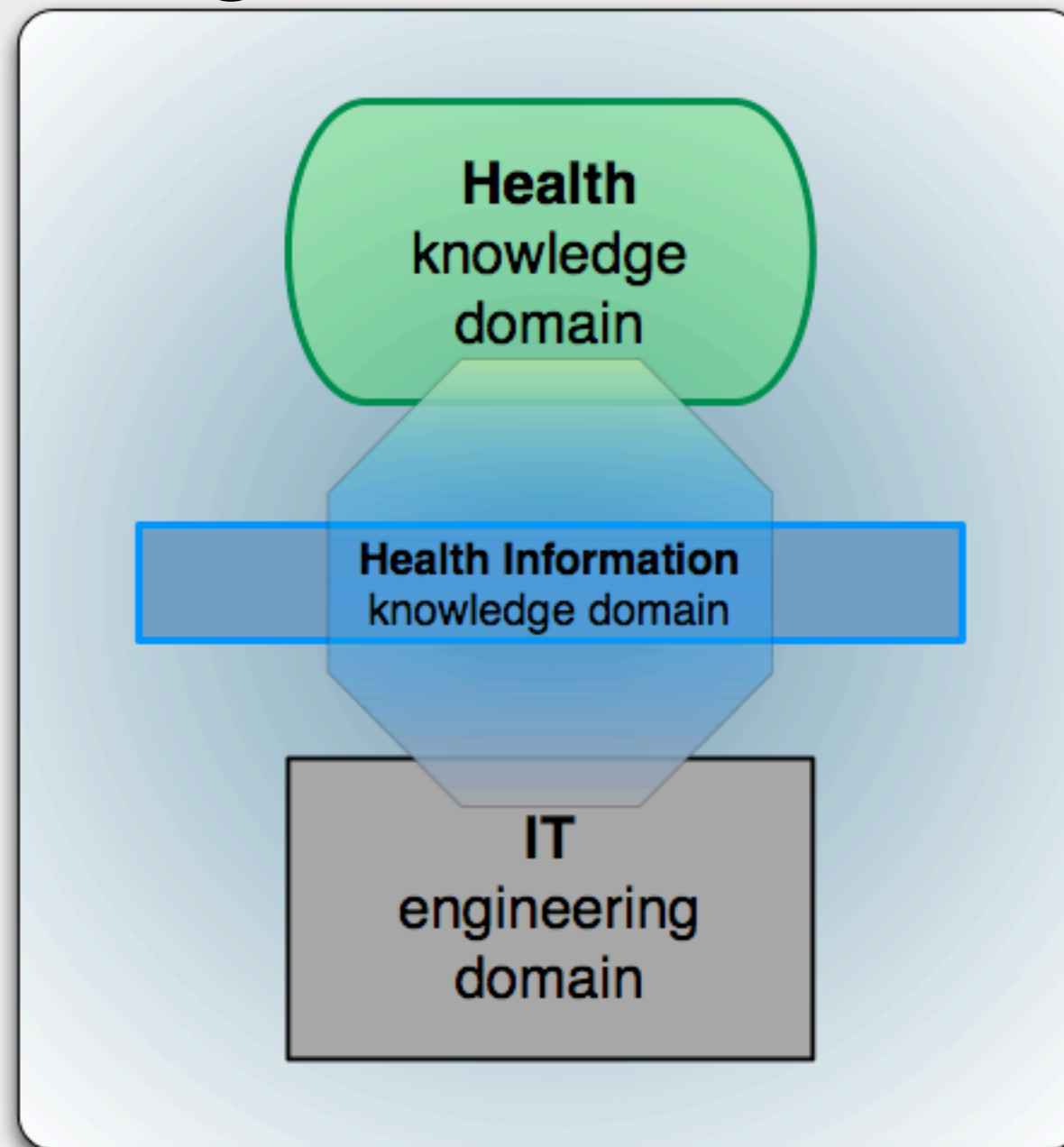
Coding systems
Archetypes
Templates
Rules

Tools

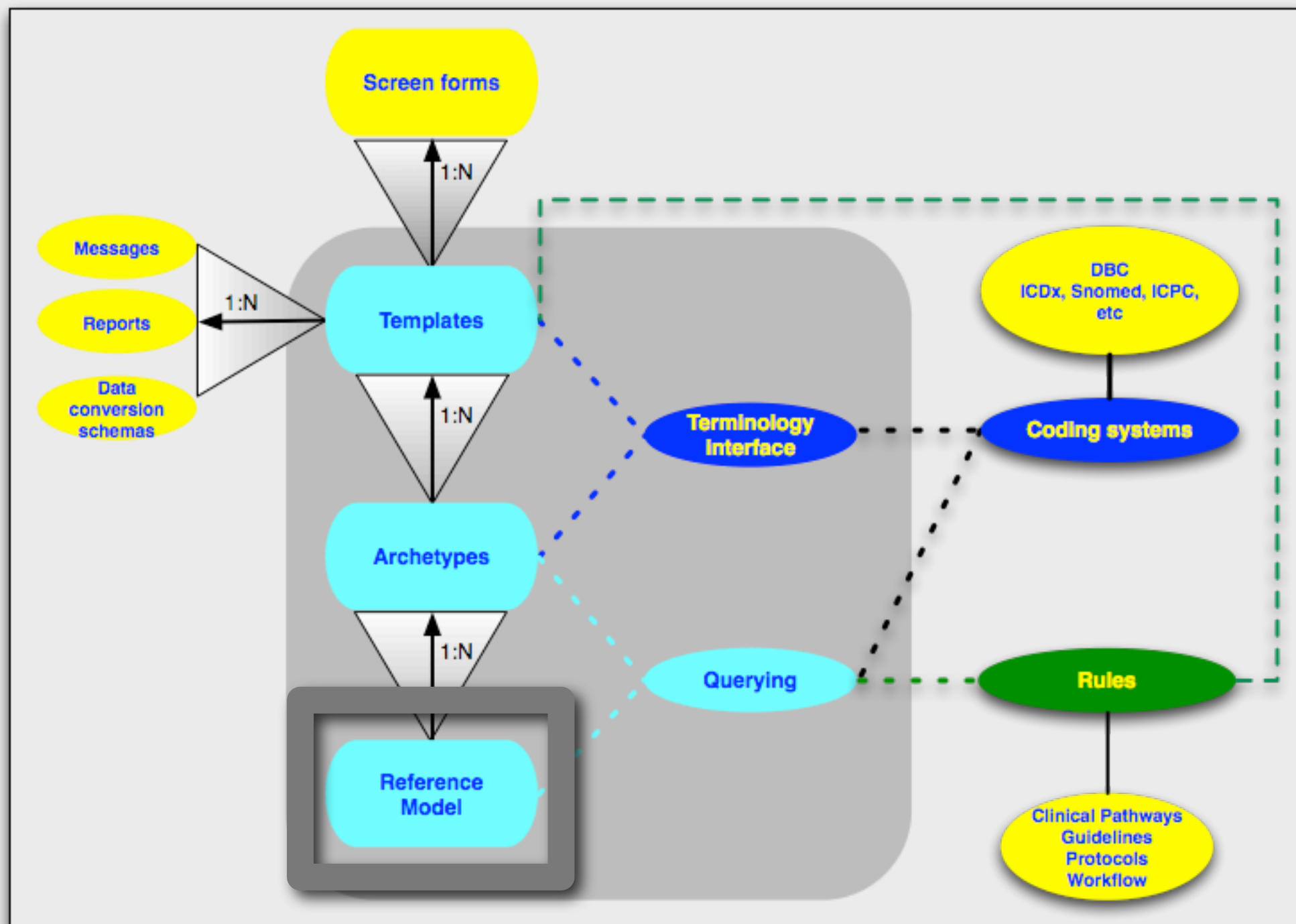
Software
Tools
Services

ENI 3606-2

ENI 3606-1



Archetypes/Templates



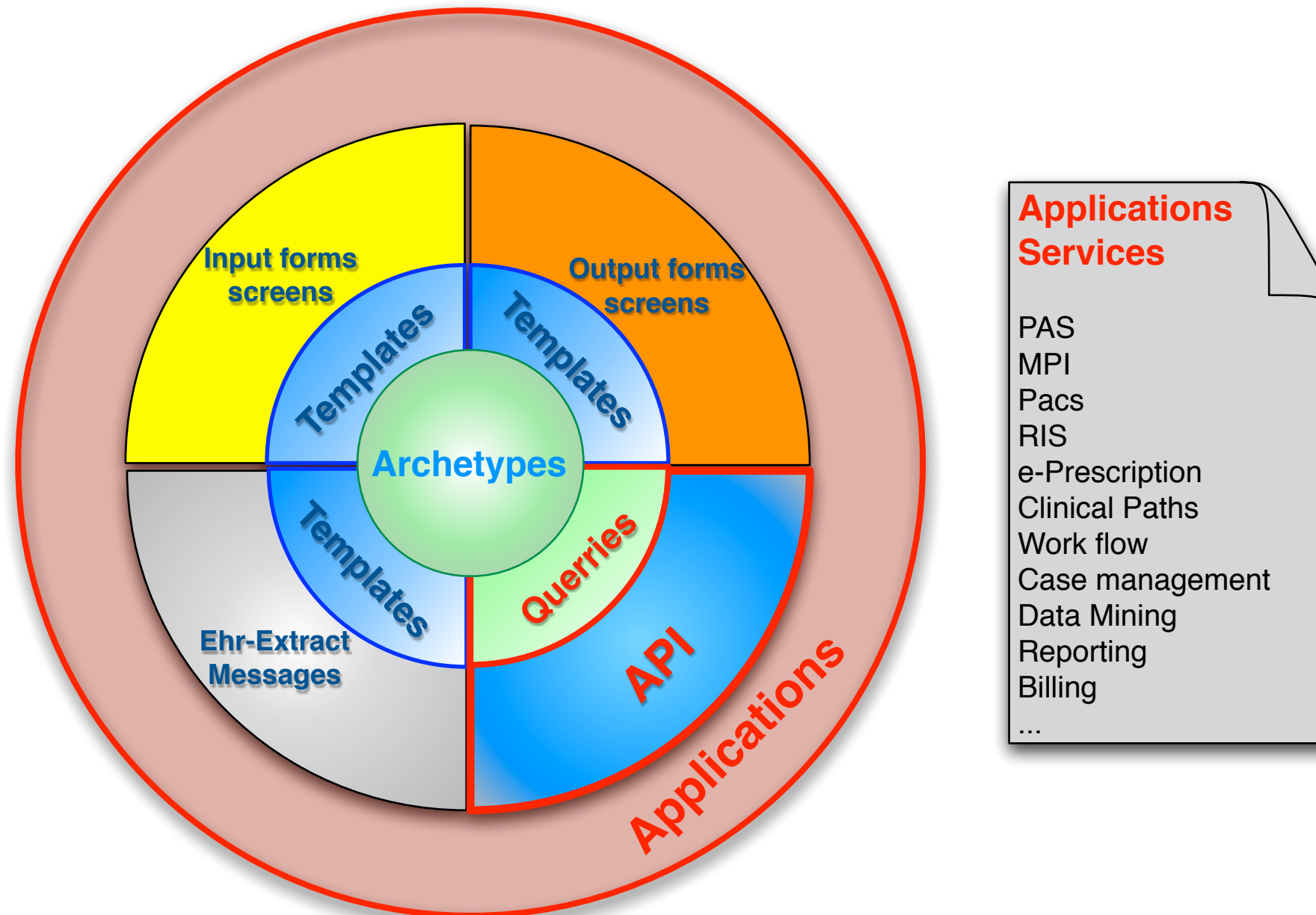
ENI3606

Basics

Archetypes/Templates

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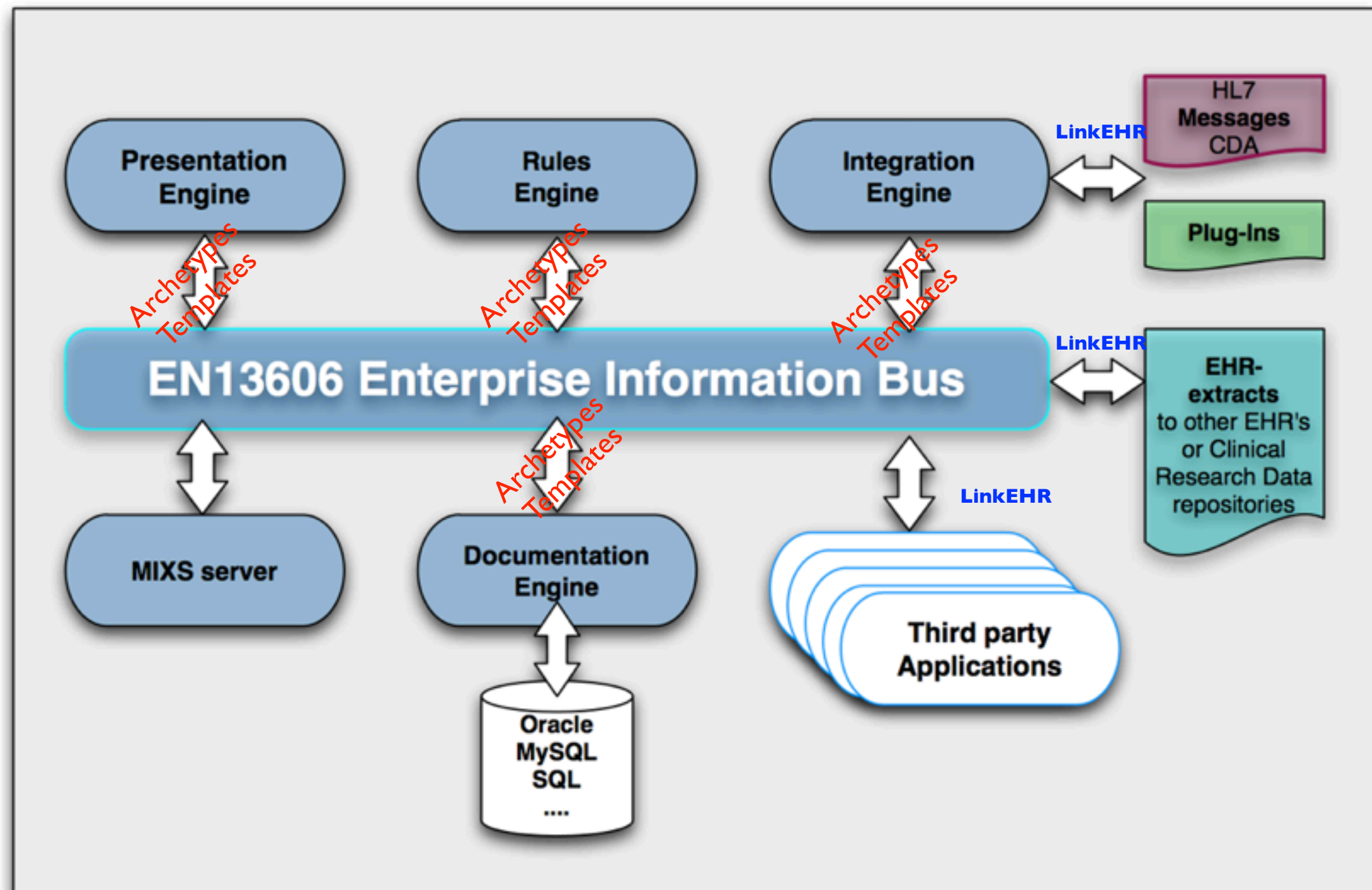
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EN13606

Basics

IC-EHR Architecture



HL7

Virginia Lorenzi (2009)

How long did/does it take?

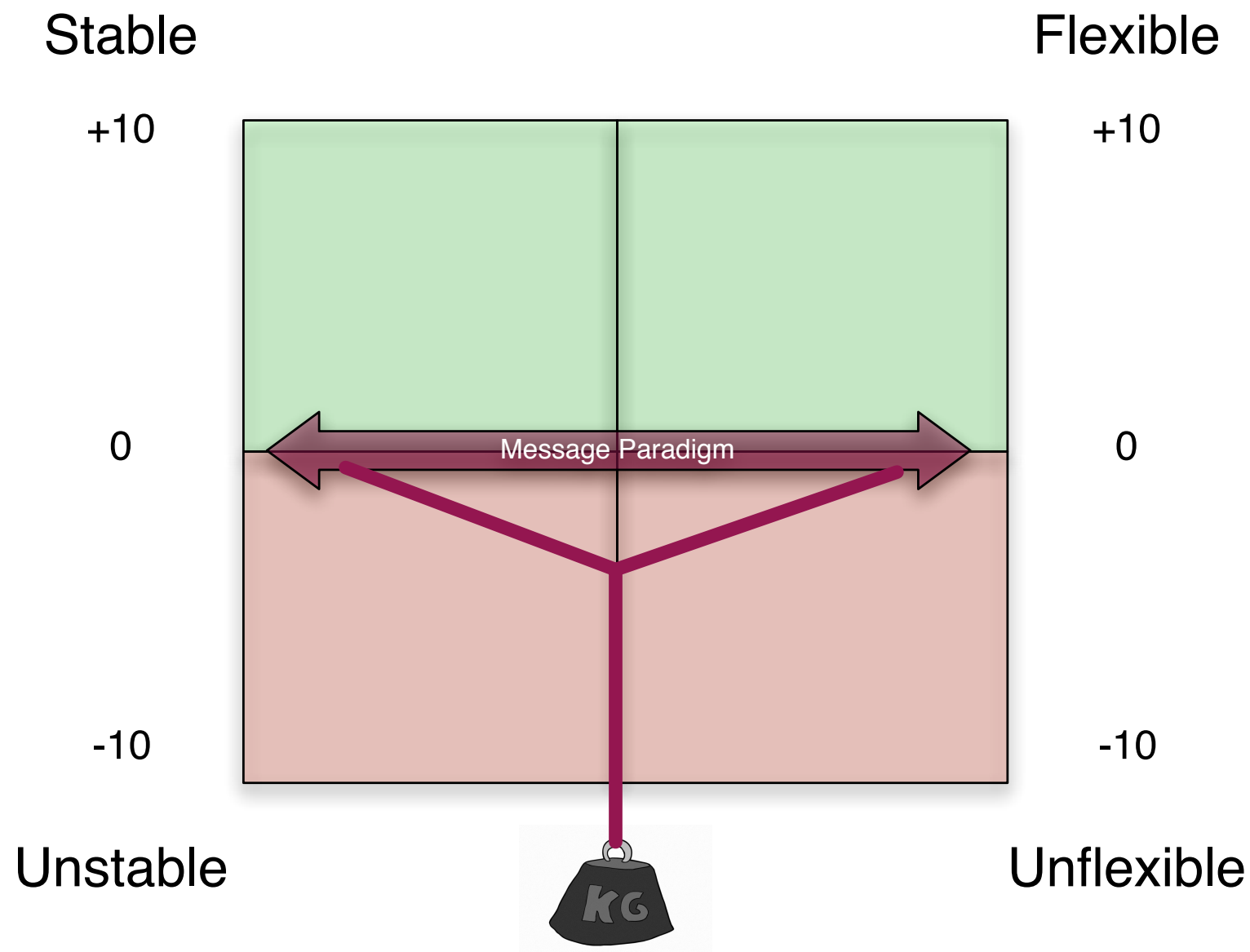
- Interface Engine preparation
 - about 18 man-months
- Proprietary to/from HL7
 - 3 to 7 man-months.
- HL7 to HL7
 - 1 to 3 man-months
- Estimates include
 - time for design, development, testing, production planning, and production move.
 - time for communication.

Message based paradigm versus Archetype based paradigm

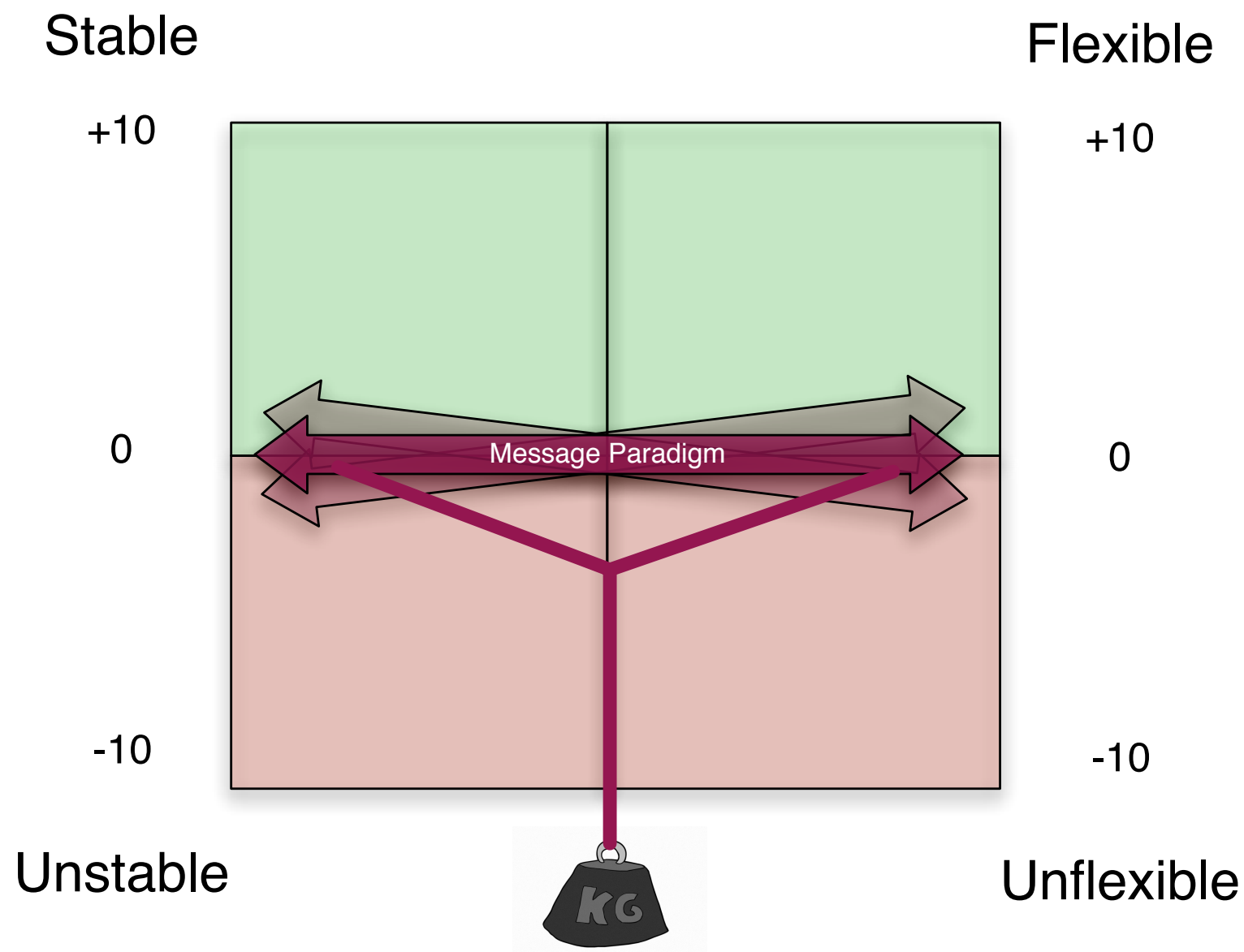
	Message based EHR-systems	Archetype based EHR-systems
Production of message	1-3 years	Minutes
IHE process Programming	1-2 years 1-2 years	nil nil
Roll Out	1 year	nil
Total	YEARS	MINUTES

Exchange HL7		DCM	EN13606 Exchange			EN13606 EHR-system
Message to exchange between proprietary databases NOT conformant to ISO18308	Scope		EHR Extract Reference Model describing documentation of: Structure of a document, archiving, digital signatures patient mandate, semantic links Conformant to ISO18308	Scope	Reference Model En13606-1	EHR-System Reference Model describing documentation of: Structure of a document, archiving, digital signatures patient mandate, semantic links Conformant to ISO 18308
			Model describing how to make constraints on EN13606-1		EN13606-2	Model describing how to make constraints on EN13606-1
			Patient Mandate for complete record or any part of it		EN13606-4	Patient Mandate
Not specified						
		DCM	Describing what gets documented about: Information components/concepts			Describing what gets documented about: Information components/concepts
			EN13606 representation of DCM		Archetype	Definition of how a topic is stored in a conformant database
Message Reference Information Model to produce statements	RIM					
Model describing a knowledge domain	DMIM		Describing the information needs in a domain for exchange		Archetype Library	Domain Information that can be stored in a database
Model describing according to the scope of the specific messages	RMIM / CDA / (Templates)		Model describing local context the exchange: structure domain content		Template	Description of the structure and content used in a local context for a report, screen
Standard Message Technical representation	XML-Schema		Defines the content of the exchange	EHR-Extract	EHR-Extract/ Archetype/Template	Defines the content of the record
Describing model/tech spec of messages with all degrees of freedom removed	IHE profile		Not necessary because of EN13606			Not necessary because of EN13606-1
IT-vendors adapt software in a region/ country leading to database conversions	Implementation		Immediate implementation of the extract without re-programming need. No database conversions are needed	Implementation	Implementation	Immediate implementation of the extract without re-programming need. No database conversions are needed
Install with all users in a region in a country	Roll-out		Immediate automatic implementation of the extract and its describing archetypes/template	Roll-out	Roll-out	Immediate automatic implementation of the extract and its describing archetypes/template
Not possible	Local adaptability		Possible	Local adaptability	Local adaptability	Possible

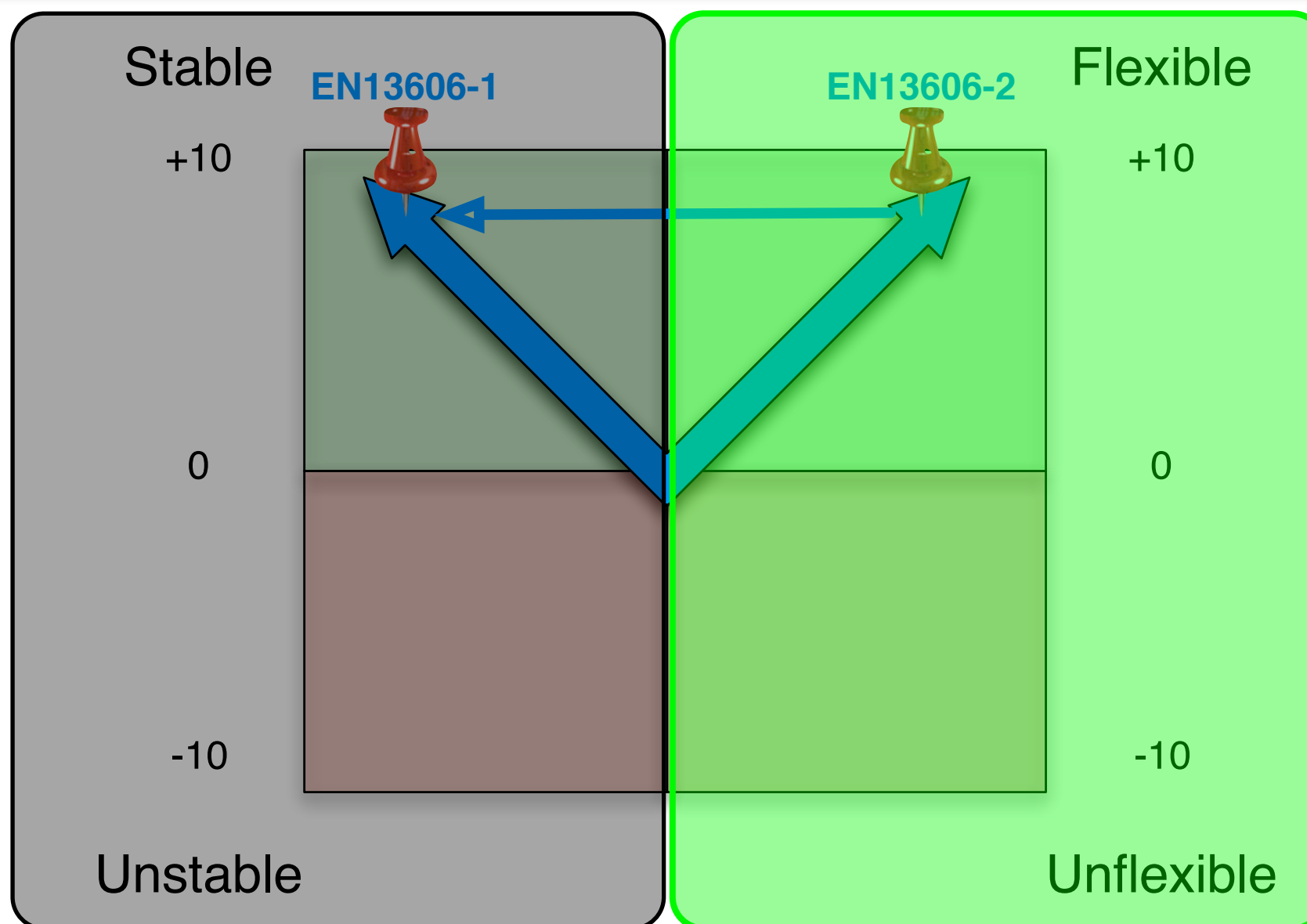
Message based paradigm versus Archetype based paradigm



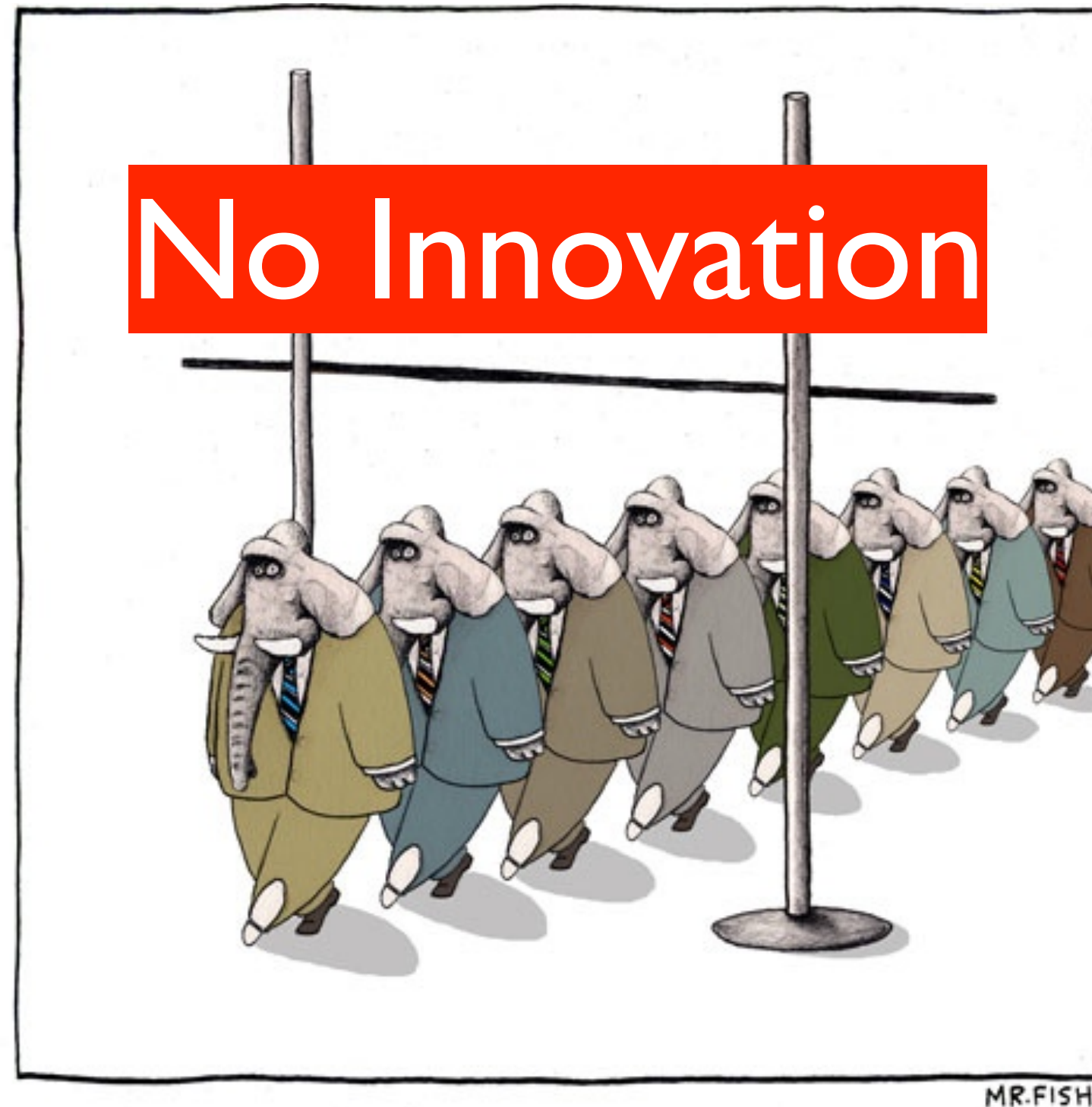
Message based paradigm versus Archetype based paradigm



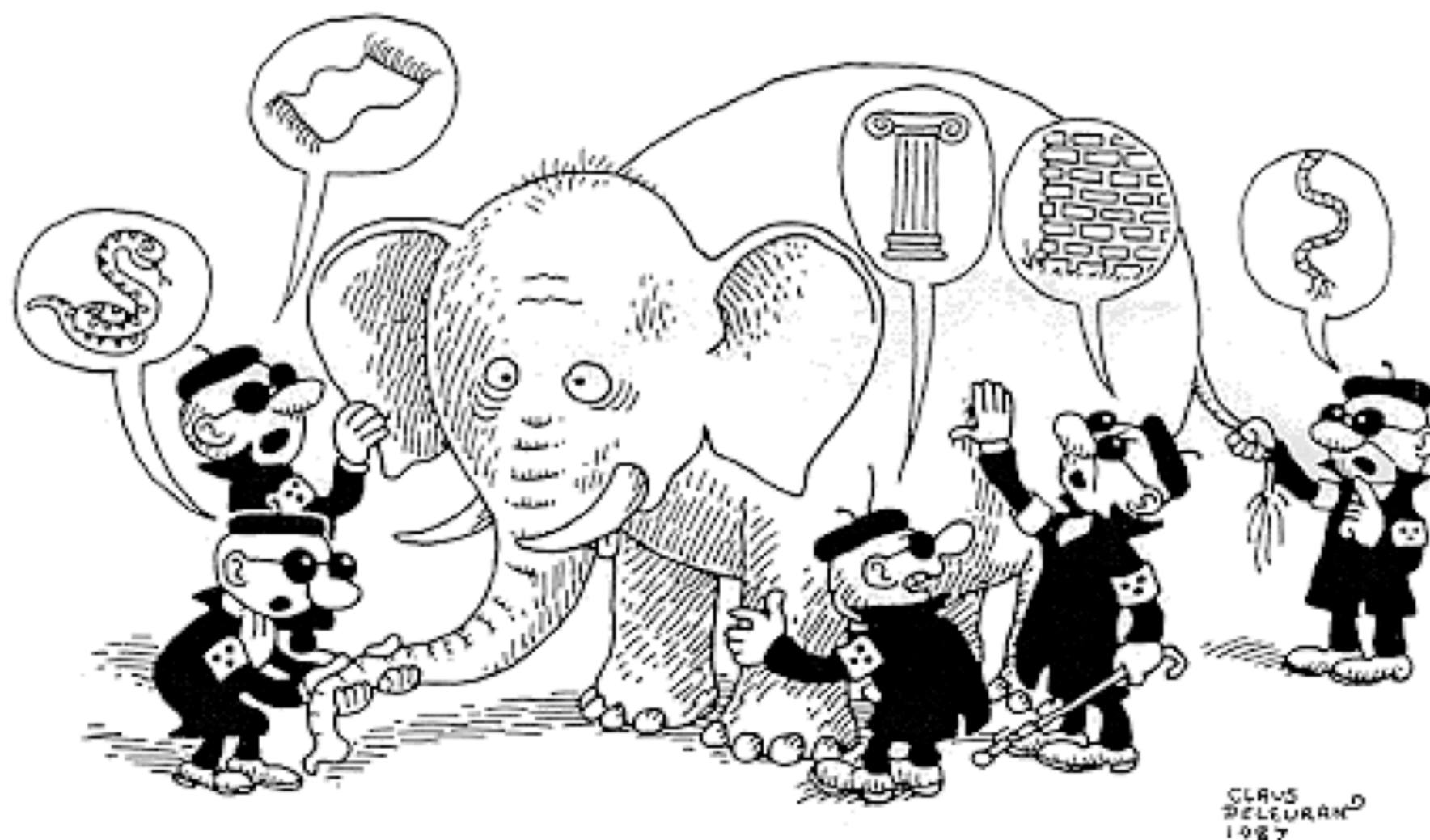
Message based paradigm versus Archetype based paradigm



Message standards: Edifact, HL7, IHE

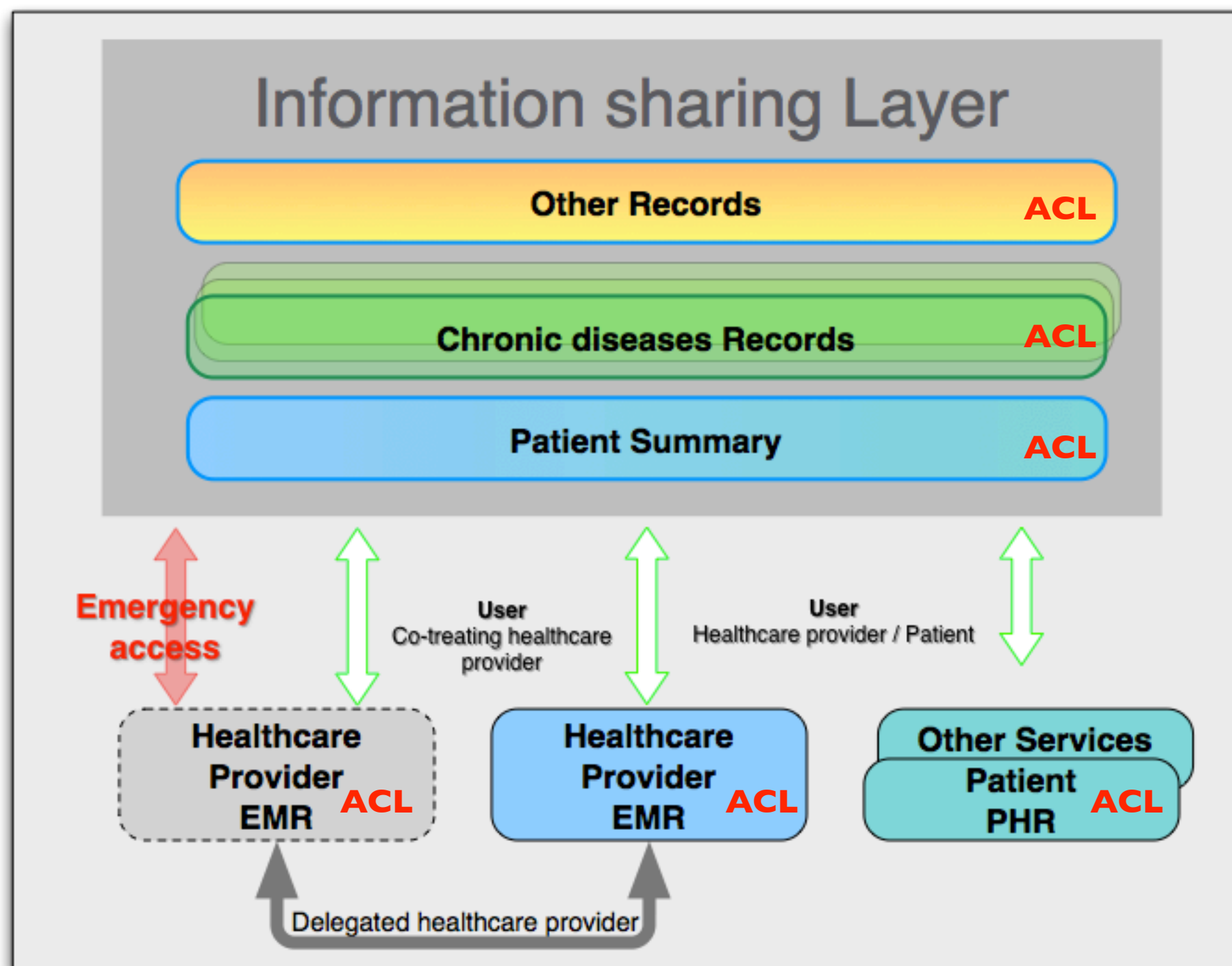


What is an EHR?



Slide kindly provided by *Søren Vingtoft*

What is the EHR? eHealth Infrastructure?



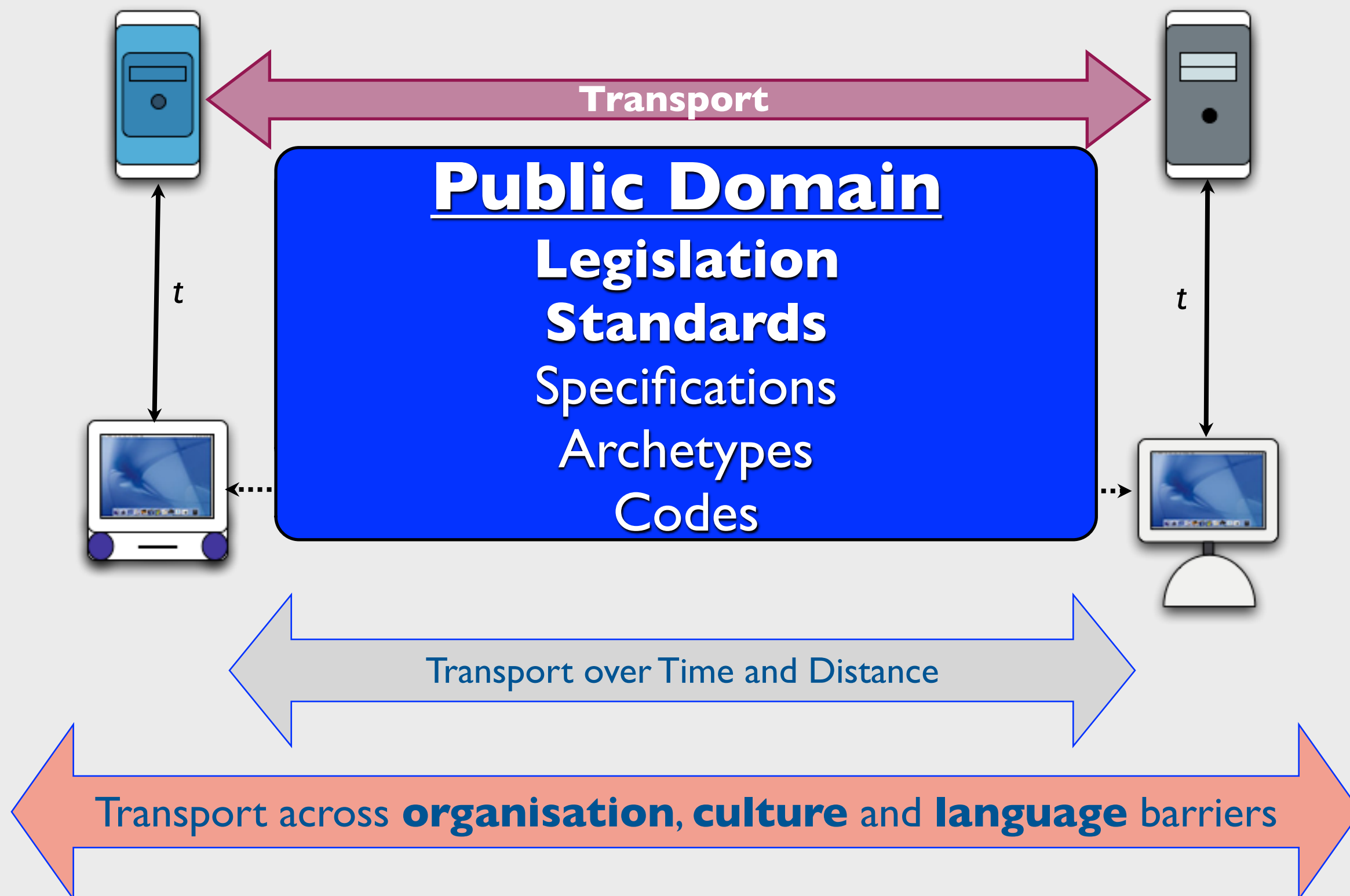
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What is missing: the Semantic Stack as INFOstructure

What is needed

- 1. Legislation**
- 2. the Semantic Stack
as a (European) Service**
a shared quality assured library of:
 - Archetypes, Templates
 - Terminologies/Codes and
 - Ontologies
- 3. Quality Assurance**
- 4. Shared IPR and Licenses**
- 5. Accountable organisation(s)**

What is needed



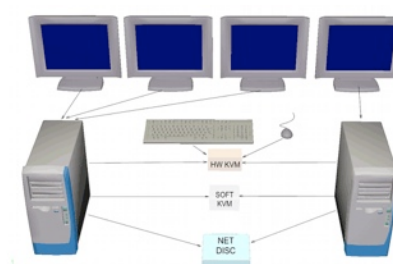
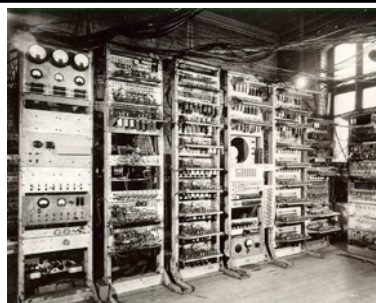
R&D - Innovation Digital Agenda

Effect on society	-	Innovation
Infrastructure	-	Infrastructure
R&D - New products	One-off	Commodity

**Digital
Agenda**

Infrastructure
Infostructure

Legislation
Standards



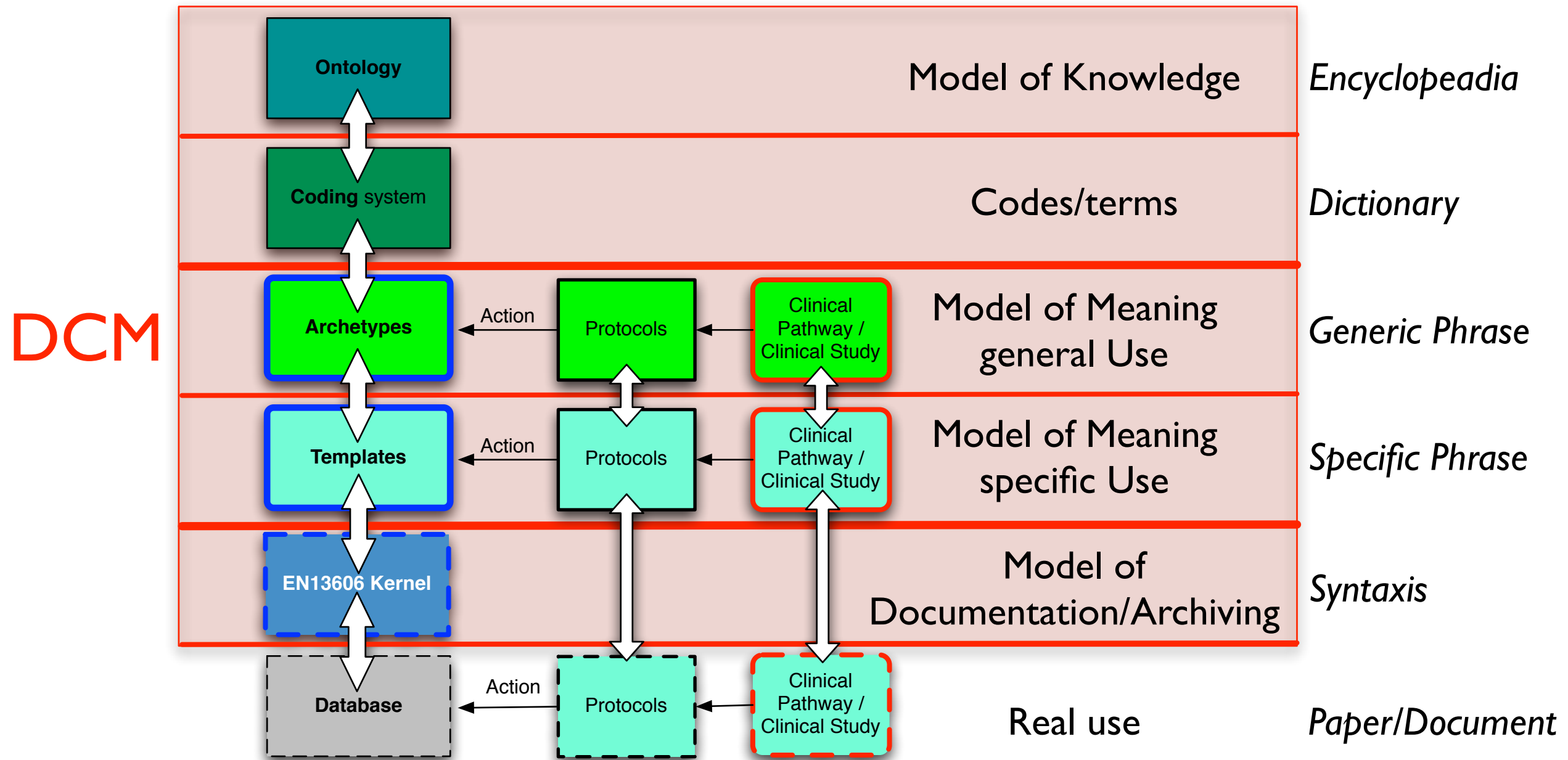
EMR



EHR

What is needed

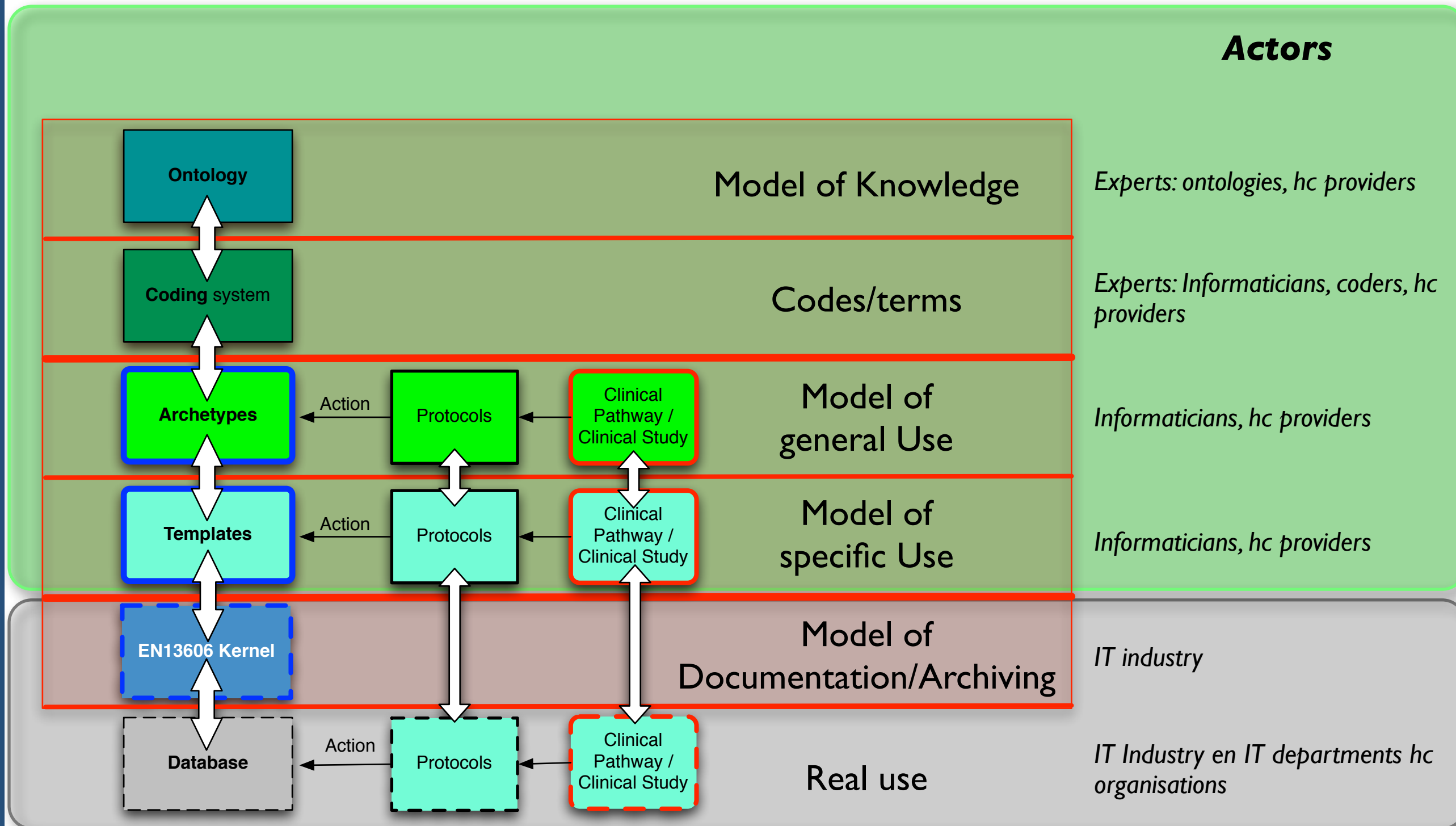
Semantic Interoperability Stack



What is needed

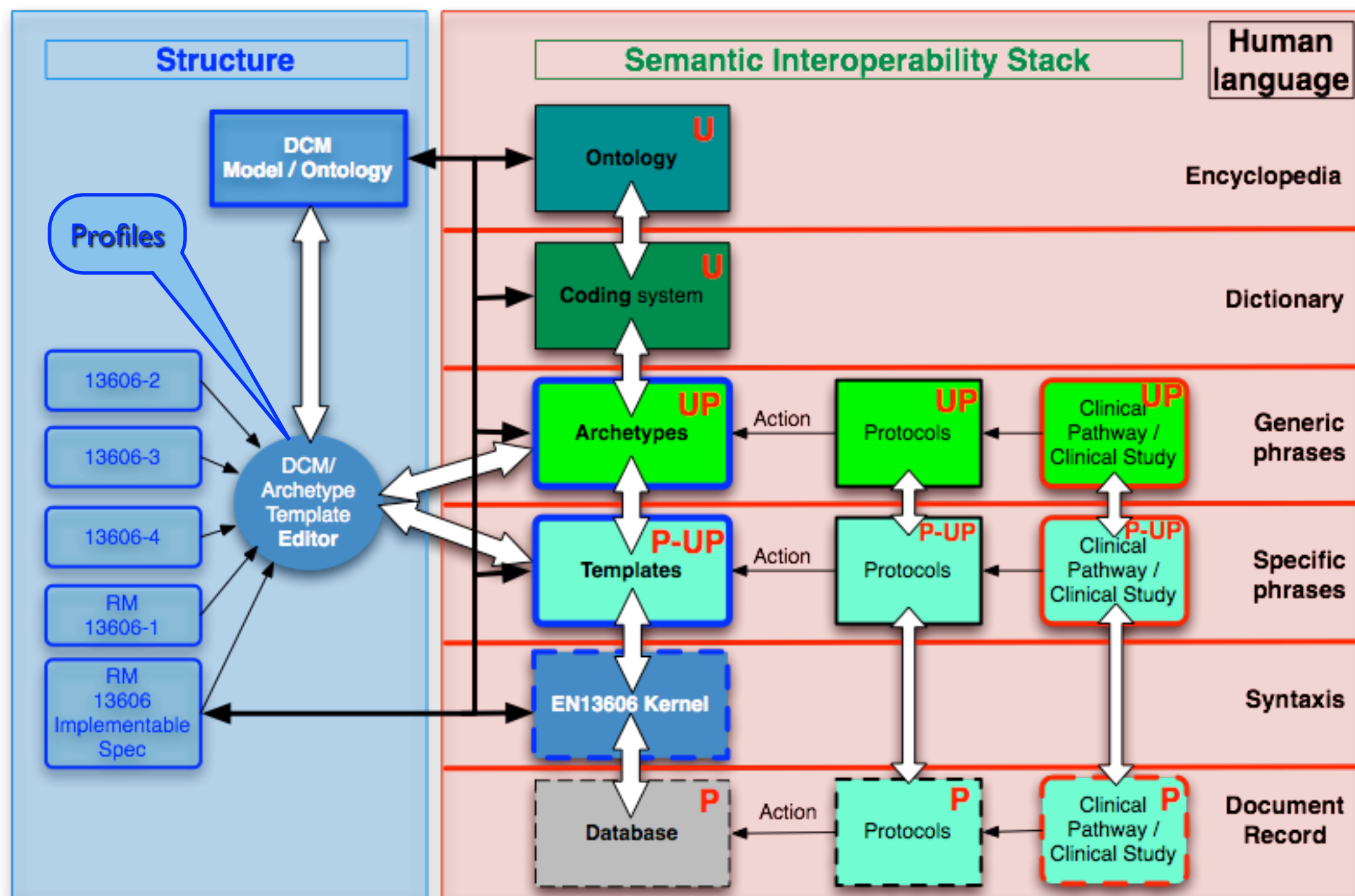
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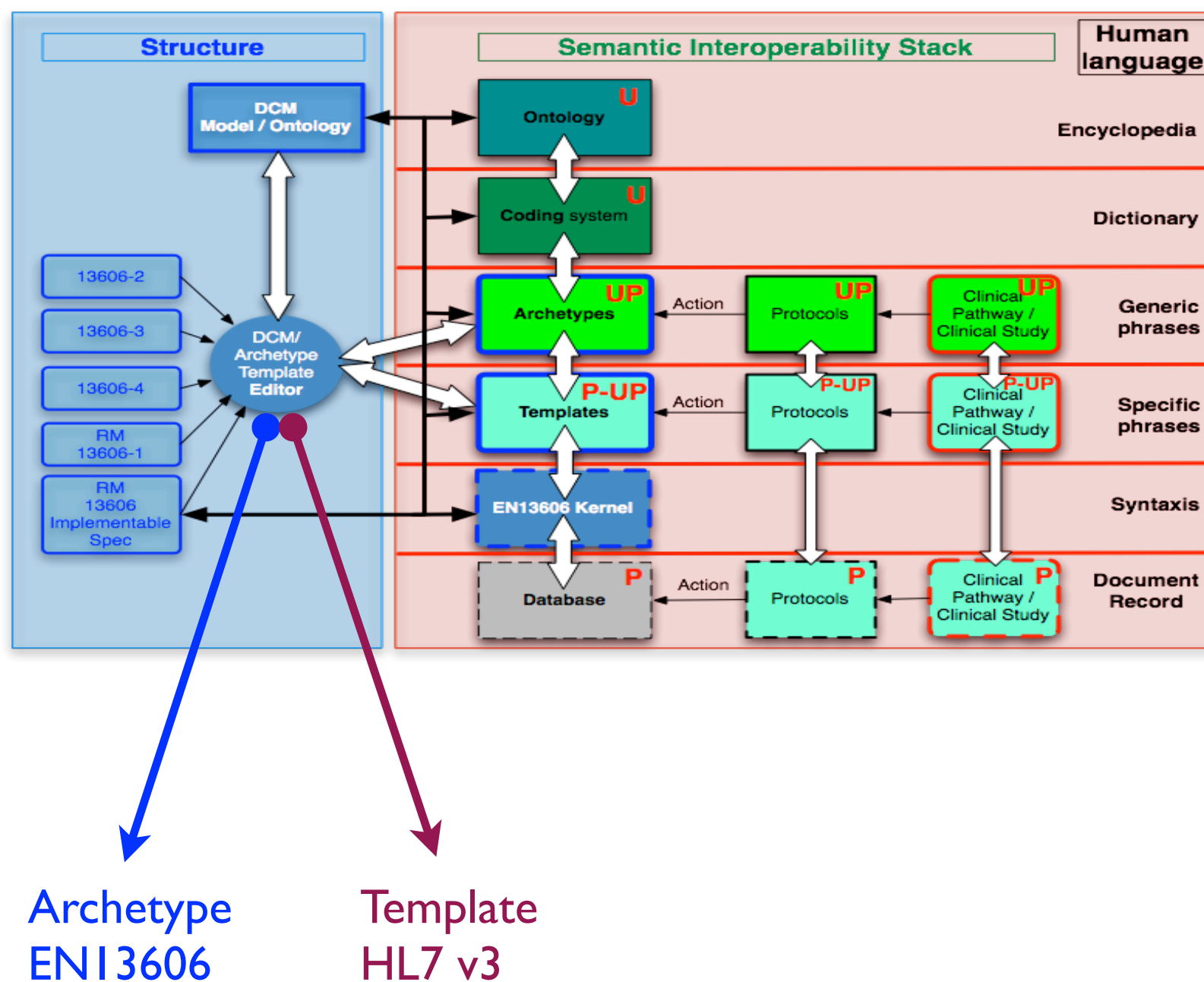
Concept

Semantic Interoperability Stack



Concept

Semantic Interoperability Stack



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EN I 3606

Consortium/Association

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The CEN/ISO EN13606 Information Site

Home

search...

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- Semantic interoperability
- CEN/ISO EN13606 standard
- Archetypes and DCM
- Resources
- Discussion forum
- EN13606 Workshop, Madrid, June 2010

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Supporters

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Electronic Record Services



The CEN/ISO EN13606 Information Site

Welcome to the EN13606 Information site

The main aim of this website and community is to become the prime source of information about the CEN/ISO EN13606 EHR standard for healthcare providers, hospitals, IT-vendors and regional and national projects. At the same time, to pave the way for a next release of the CEN/ISO EN13606 EHRcom standard based on existing implementation experiences.

We can think of many topics that can be discussed:

- Creation of a user community around EN13606
- Sharing of experiences, implementations and tools
- Extension of the present EN13606 with implementable specifications like an XML-schema
- Addition of new features like: genomics, service interfaces
- Detailed Clinical Models and documentation (modeling) patterns for DCM's (Archetypes)
- Governance and certification of specifications and produced Archetypes/DCM's/Templates
- Documentation
- Archetype modeling
- Renewal of the present EN13606
- Development roadmap for the CEN/ISO EN13606 EHR standard

We invite you to sign-up for a discussion, start-up a discussion yourself or contribute texts and opinions.

The EN13606 Information Site Team

New EN13606 wiki

Written by Administrator
Monday, 06 September 2010 10:40

A wiki for the EN13606 community has been created and has free access for all users. Main contents and organisation of the wiki is still in development.

You can visit it at <http://wiki.en13606.org>

CEN/ISO EN13606 invitational workshop, Madrid, June 2010

Written by Administrator
Tuesday, 20 April 2010 09:51

CEN/ISO EN13606 Invitational Workshop
June 23rd and 25th 2010
Madrid, Spain

We are delighted to present CEN/ISO EN13606 complex interoperability workshop to be held in Madrid in June 2010. By invitation only. Limited capacity.

www.EN I 3606.org

Helmholtz Zentrum münchen
German Research Center for Environmental Health

ENI 3606 Consortium Uptake

UK

Sweden

Spain

Slovakia

Australia

Germany

Norway

Ireland

USA

Netherlands

Brazil

New Zealand

Serbia

USA

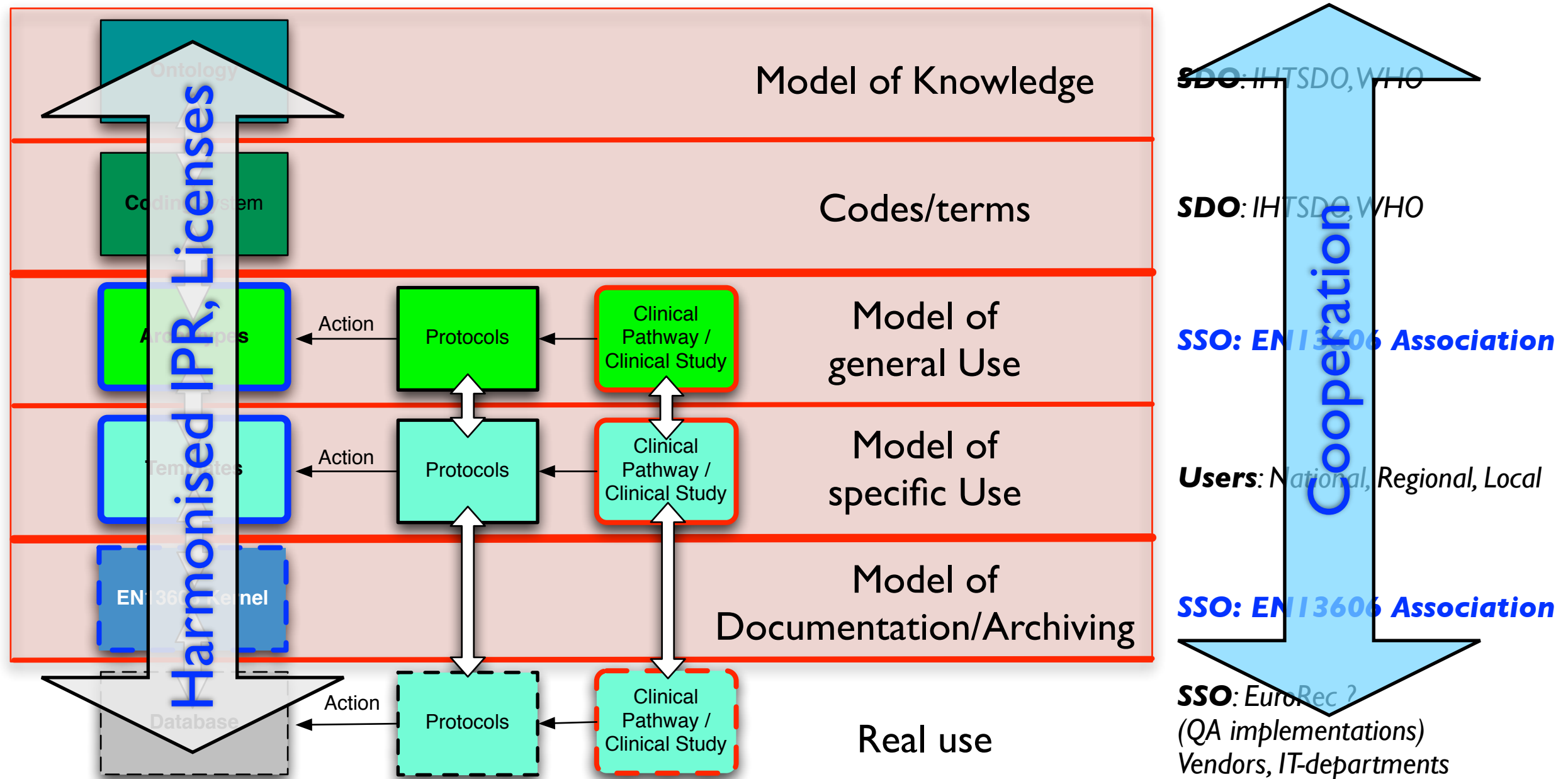
Singapore

What is needed

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Actors



SDO's and EN 13606 Consortium

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Proposal: IPR, Licensing and the EN13606 Consortium

1. The EN13606 Consortium is founded to own, produce, maintain and publish artefacts derived from the **Open Standards CEN/ISO EN13606** and needed for the implementation of the Two Level Modelling paradigm.
2. Authors of original works -to their discretion- can hand over IP Rights to the EN13606 Consortium.
3. The EN13606 Consortium publishes artefacts, with an IP owned by others or itself, that pertains to the ***human readable parts***, only.
4. The Licensing policy that will be used by the EN13606 Consortium for all artefacts owned, produced, maintained and published will be the **Creative Commons license: CC-BY-SA**.
5. The EN13606 Consortium needs a legal entity that can hold IP Rights and execute the Licensing policy and be able to enter into agreements with SDO's and SSO's.
6. The EN13606 Consortium will establish an **Association** as the legal Public entity.

END