

# Directorate-General for the Organization of Health Care Institutions

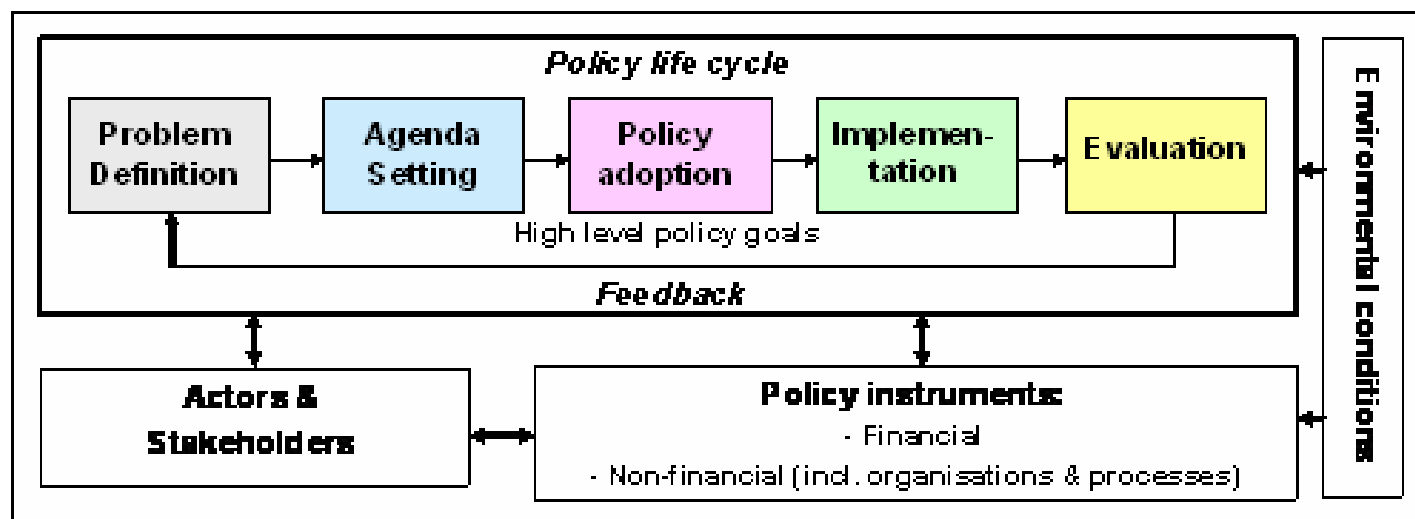
## **Building trust - step by step - in a federated system in Belgium**



Ehealth strategies  
Validation workshop  
16 September 2010  
Luc Nicolas  
Health Telematics Unit



## E-health: a project cycle?



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# Does it look like that?



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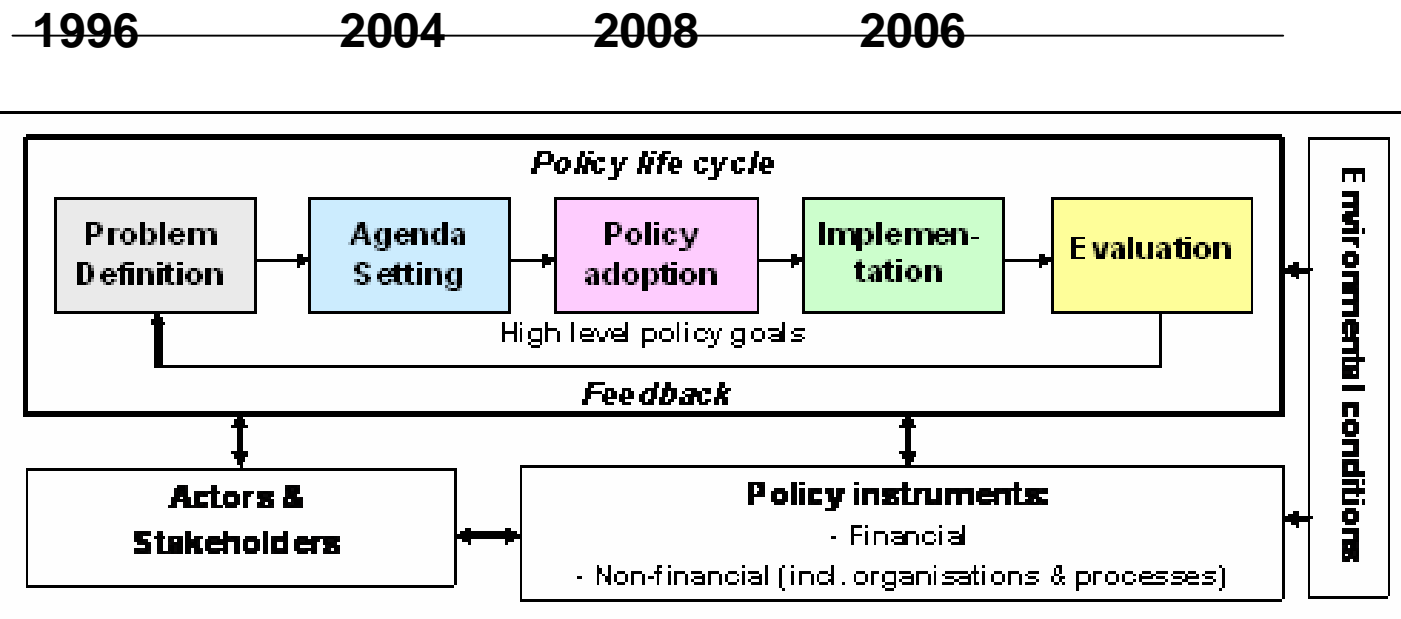


Or  
rather  
like  
that?



**Wassily Kandinsky: Harmonie tranquille**

# E-health: a project cycle?



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## Key facts about the Belgian healthcare system:

Healthcare Expenditure as % of GDP: 10.2% (OECD 2007)

WHO Ranking of Healthcare systems: rank 21

Public sector healthcare expenditure as % of total healthcare expenditure: 75.1% (OECD 2007)

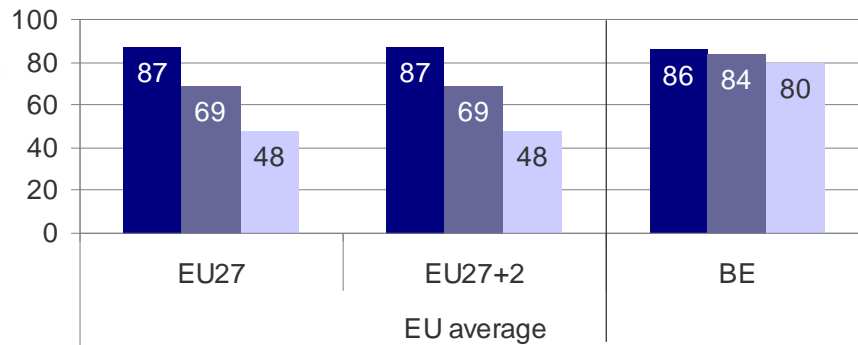


# Organisation:

<b>Political/administrative unit responsible for primary healthcare</b>	Organisational and regulatory: the Federal Ministry of Health. Regarding preventive care (also part of primary care): the regional health authorities. Financially: the National Health Insurance Institute.
<b>Consumer Choice</b>	Free choice and free access to primary care as well as to specialised and hospital care. There is a financial incentive to select one general practitioner as holder of your global medical record.
<b>Financing</b>	Free compulsive social security system, mandatory to all inhabitants. Largely funded by contributions of the citizens with some taxed-based state contribution for the elderly and social vulnerable persons.
<b>Public or private providers</b>	Self employed primary care providers solely. No publicly employed primary care providers at all.
<b>Gatekeeping function of the GP</b>	Free access to specialists and hospitals. Limited financial incentive for the patient when referred to the specialist.
<b>Integrating health: initiatives for coordination</b>	Public hospitals (large minority) are financially supported by the local authorities of patient's residence. Deficits of those hospitals are covered by patient's local authorities. Limited initiatives for local coordination between primary care and hospital care.

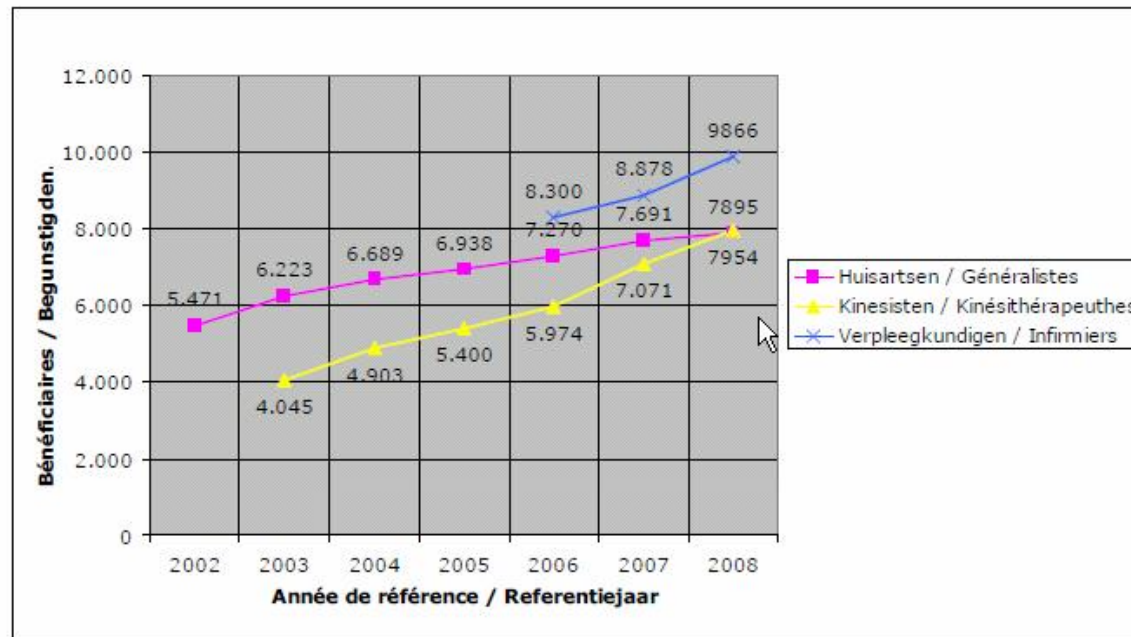


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■ Use of computers ■ Use of the internet ■ Use of broadband

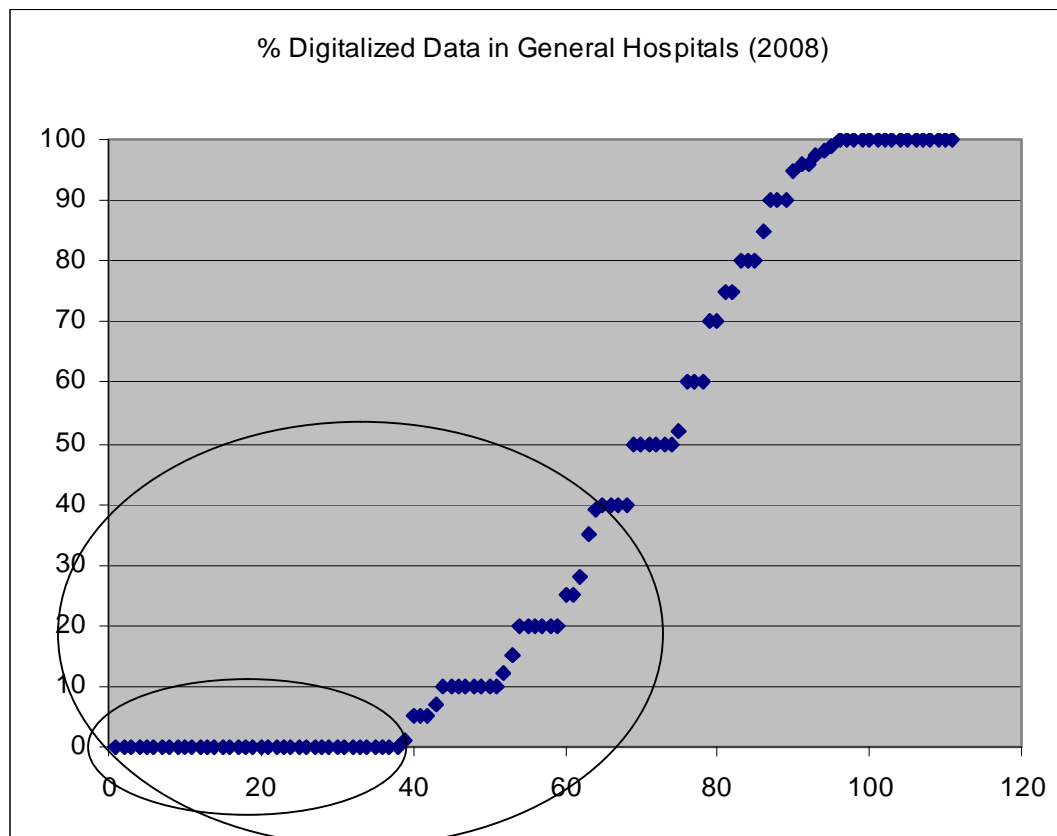
voor het gebruik van een gehomologeerde software  
Intervention de l'INAMI dans l'utilisation d'un logiciel homologué



Bron: RIZIV - Source: INAMI



# DATA DIGITALIZATION

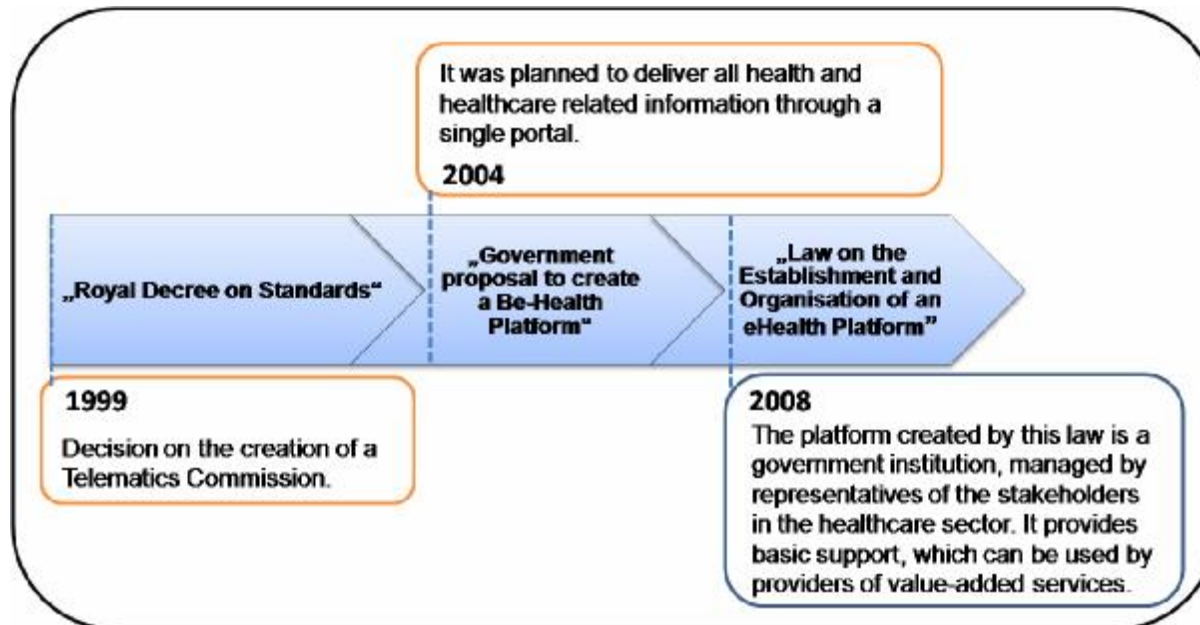


**39 General Hospitals  
« Paperfull »**

**More than 50%  
of Belgian  
Hospitals less  
than 50%  
digitalized  
data**



# PROBLEM DEFINITION



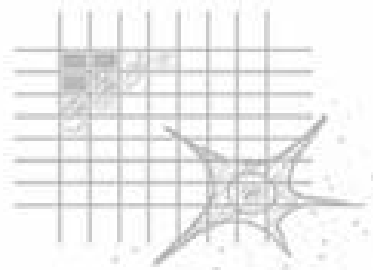
## 2001: All started with a recommendation...

Recommendation nr 4 of the Commission

"Telematics Standards in relation to the Health Sector"

Working group 'Data=Messages+Records'

Approved by the 24/4/2001 session of the plenary committee




Electronic Health Care Messages



# The legacy



Content (Ambulatory care)  
Network (Hospitals)  
Communication and Incentives



**Label DMlg**

**Kmehr**

**Sumehr**



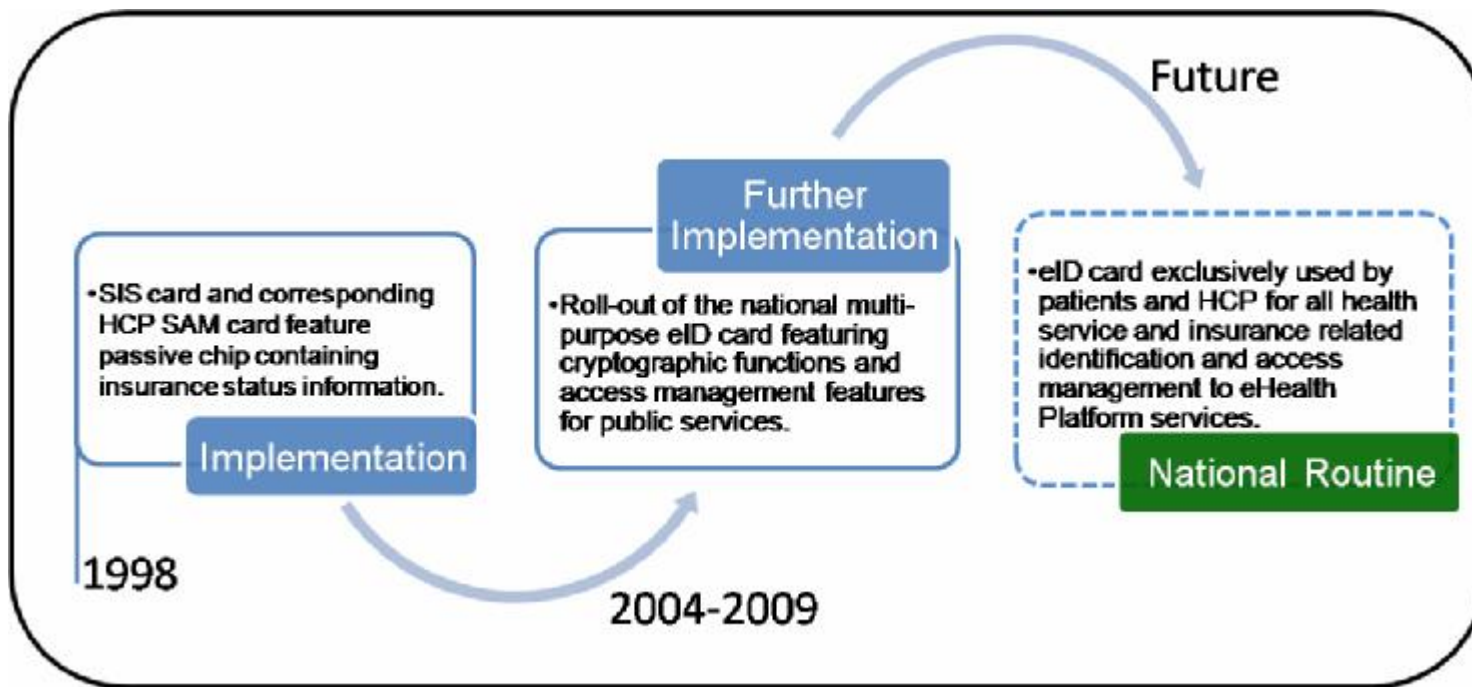
RIZIV




**Incentive of 800 €Y  
for each HCP using a  
labelled EHR:  
20 millions + €Y**



# E-Gov



## ACTH + ALTEM + ANATEM + MEDITEL + UMT + (ATMB)



SPF Santé publique, Sécurité de la Chaîne alimentaire et Environnement  
Cellule Informatique, Télématique et  
Communication dans le secteur des Soins de Santé

Projets de promotion de la communication entre l'hôpital aigu, les  
médecins généralistes et les autres institutions et prestataires de soins.

**200.000Bef > 5.000€ > 10.000€ > 12.000€**



## 2005-2006: Change of strategy

Key question: **Trust**

- Centralised EHR versus federated EHR? -> Web services
- Patient ID: Unique or different?
- Security and legal certainty.

S3 (Serveur des Soins de santé) is « given » as « food for thought » to local telematics associations.



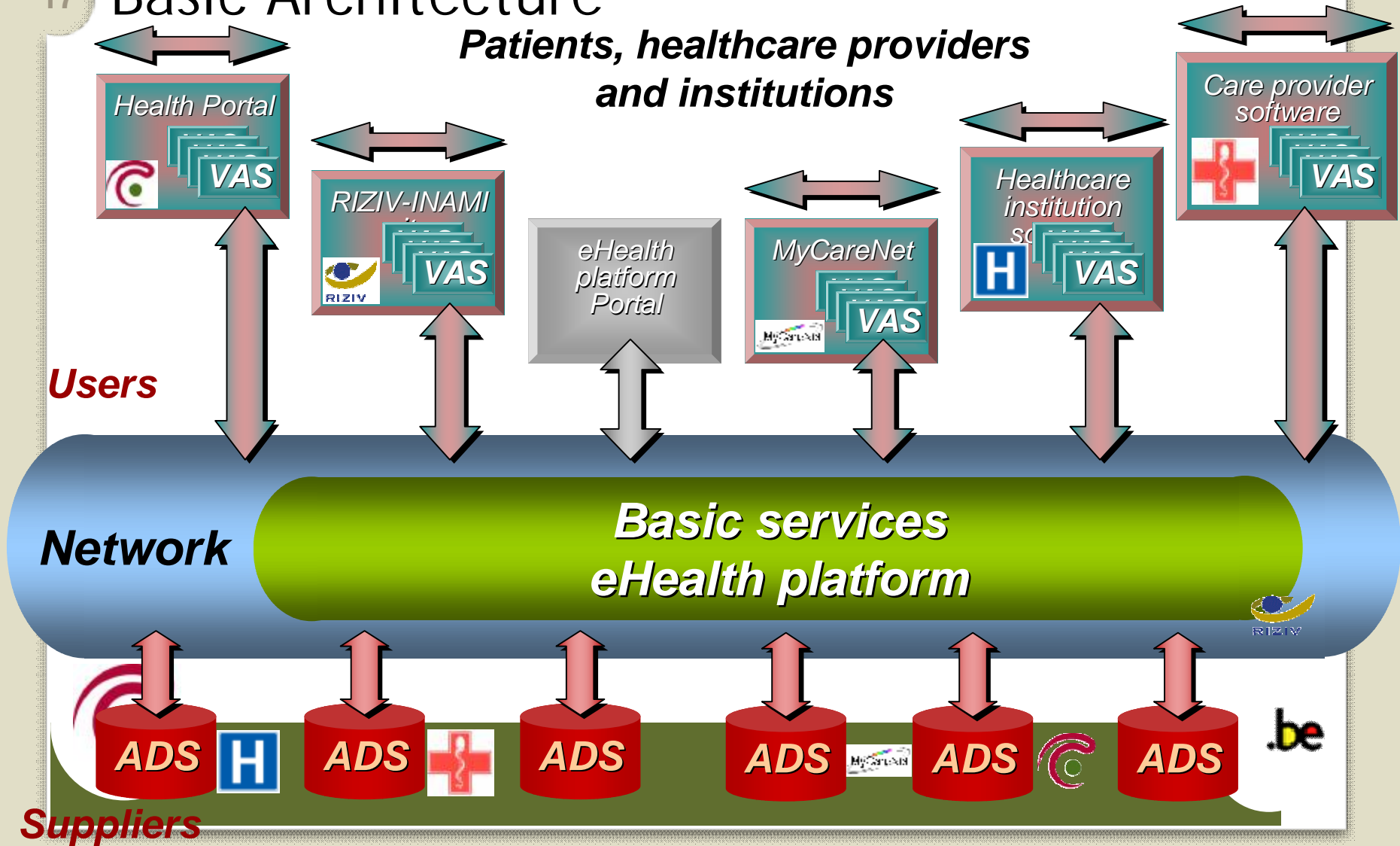
## PRINCIPLES ADOPTED at FEDERAL LEVEL

- ü **No central storage** of personal healthcare data: Exchange from system to system is the main rule.
- ü **Only central location service** (with patient consent).
- ü **Unrestricted application of law** (privacy, secrecy, patients rights, free choice) with Special attention to information security and privacy protection
- ü **Respect for and support of**
  - \* existing local or regional initiatives
  - \* private initiatives regarding electronic service to healthcare actors
- ü **Use of the eHealth platform is optional**, not mandatory
- ü **Platform is managed by the representatives** of the various healthcare actors
- ü **Federating rules** (Consent, therapeutic relationship...)



# 17 Basic Architecture

*Patients, healthcare providers  
and institutions*

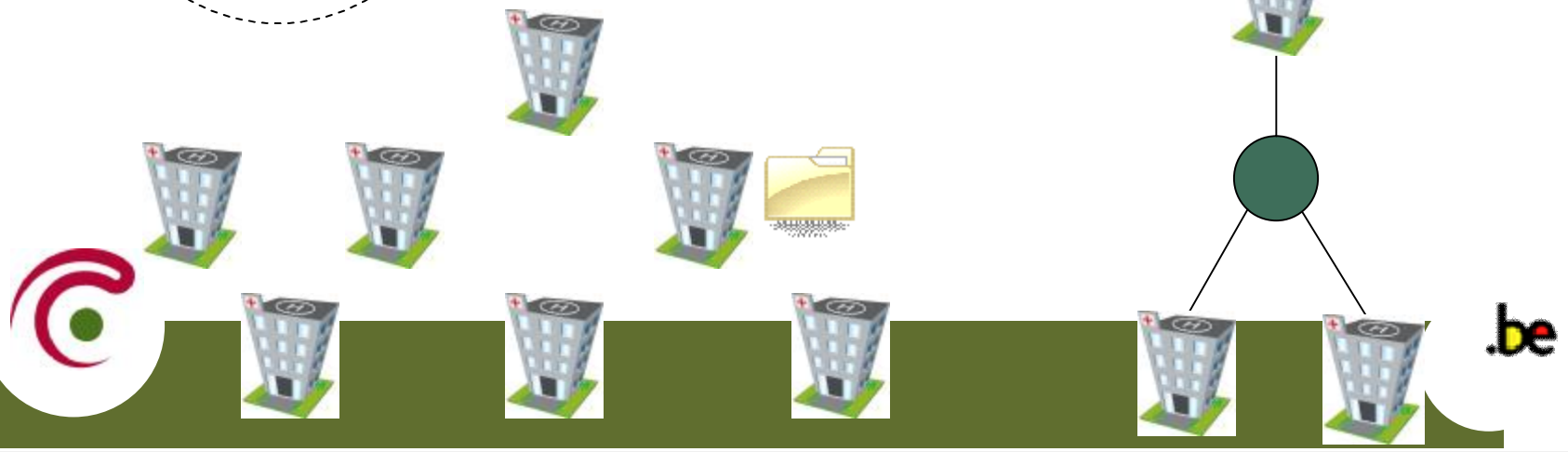
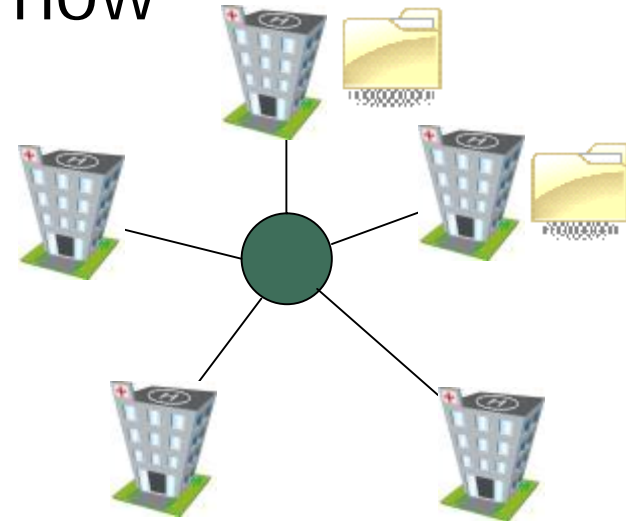
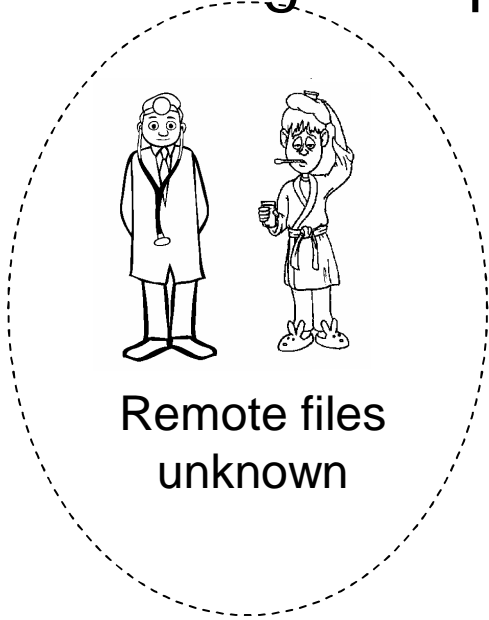


## E\_Health platform: Basic Services operational

- Coordination of electronic processes
- Web portal (<https://www.ehealth.fgov.be>)
- Integrated user and access management
- Logging management
- System for end-to-end encryption
  - for communication of data to a recipient known at the time of the encryption
  - for communication of data to a recipient not known at the time of the encryption
- Personal electronic mailbox for each healthcare supplier with limited features
- Electronic time stamping
- Coding and anonymisation

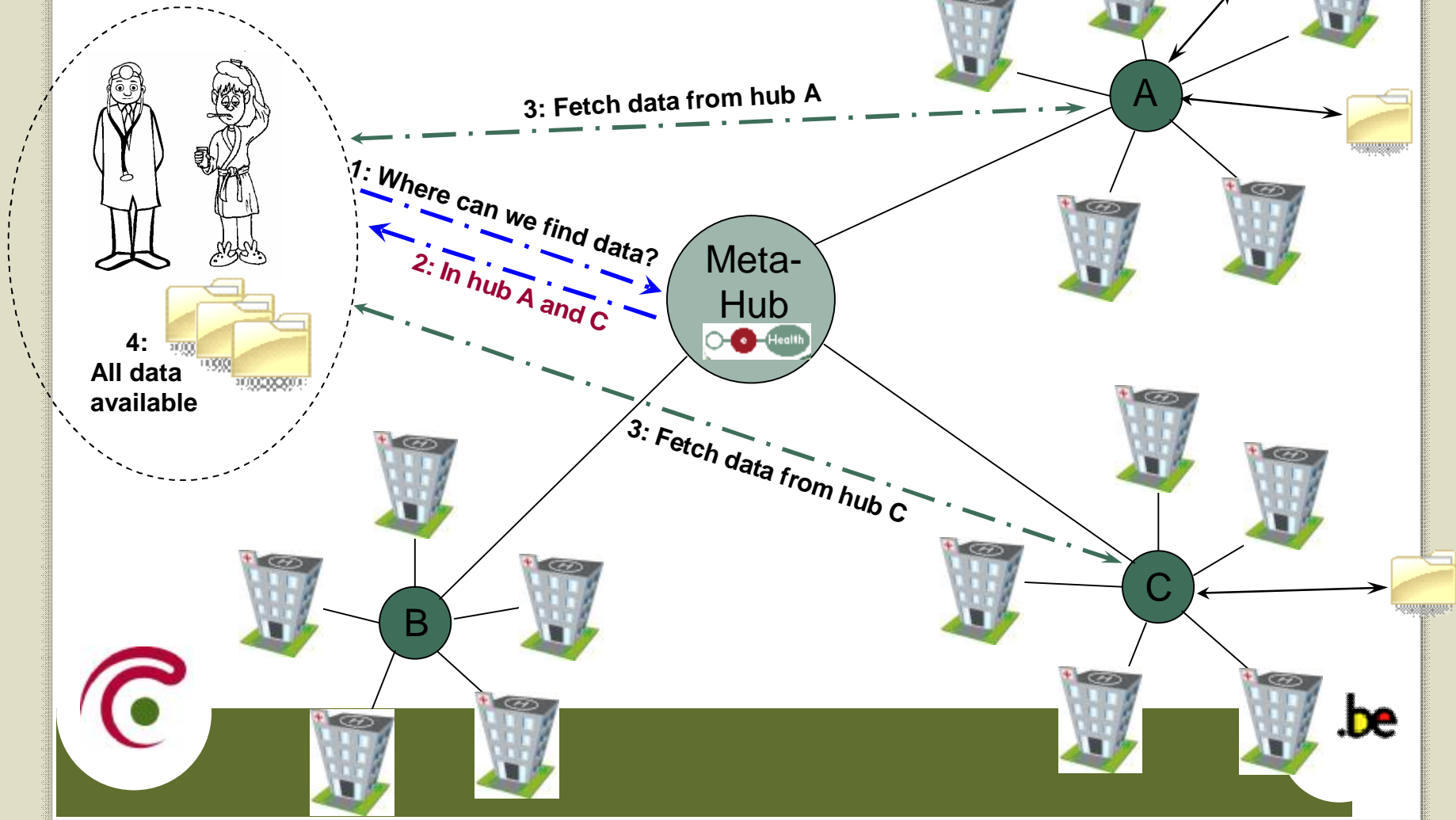


# 19 Exchange of patient data: now









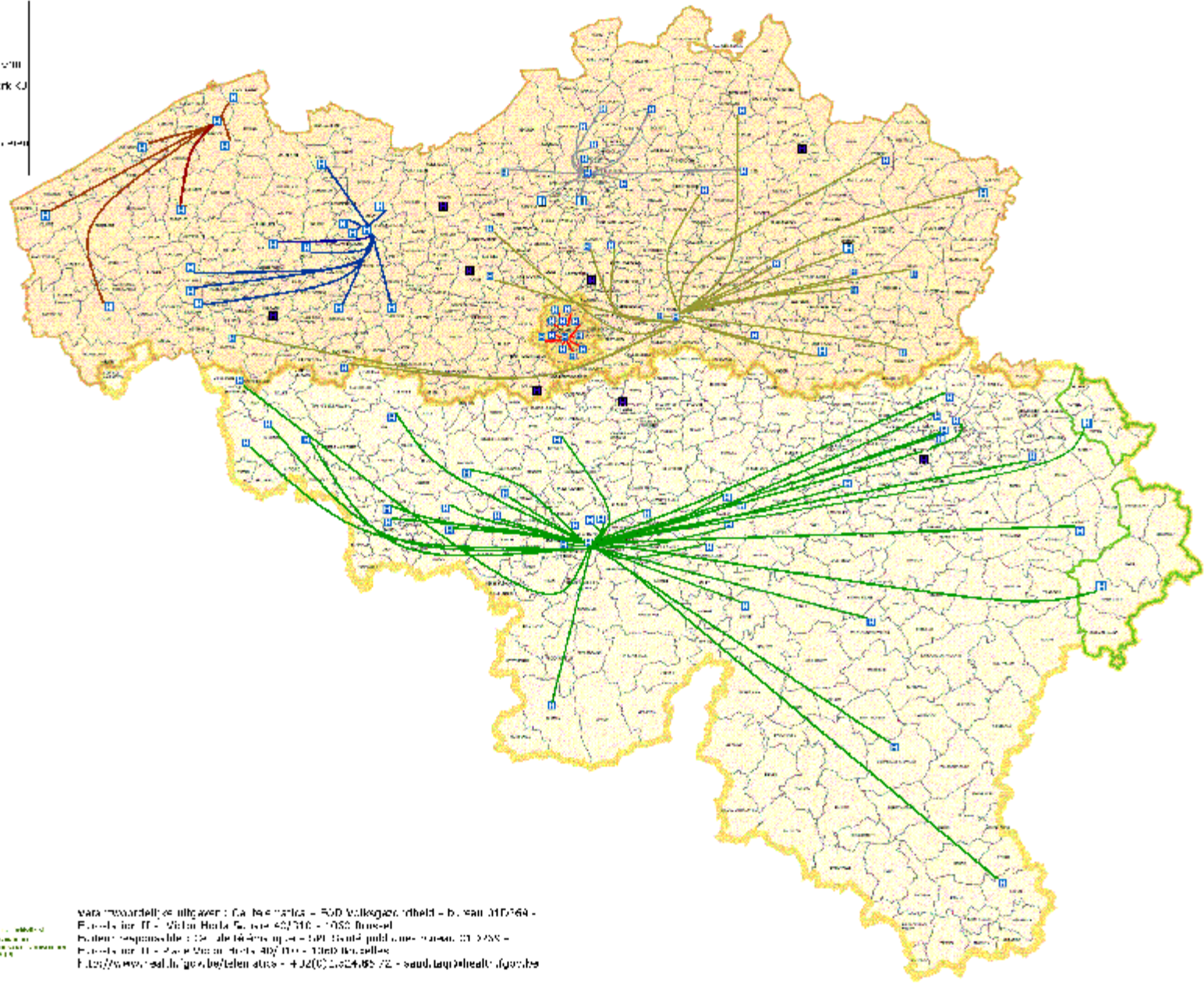
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# Exchange of patient data: Coming soon



Hubs 2010

-  AS MHZ
-  Activiteit Reg. gebied plukpunt
-  Naams district netwerk (J. Leunen)
-  Réseau Euro-Valon
-  Zie ziekenhuisnetwerk
-  Regionale Pub. Cent.



Vlaamse Waardelijke Uitgeverij: De Persgroep - 500 Vollegraafvlied - b. van 310764 -  
 Flanders for IT - 90100 Herestraat 49/50 - 3000 Brussel  
 Public Responsibility: 12 - 1000 Herestraat 49/50 - 3000 Brussel  
 Flanders for IT - 2000 Herestraat 49/50 - 3000 Brussel  
 F.12://www.e-health.be/telefonat - +32(0)2624.85.72 - sand.lap@health.fgov.be

# FRATEM & RSW : Looking back and forward

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## Coming From....

1995: 5 « Informal » associations

2000: 5 associations with non profit status.

- Ⓜ More « Global » and local-regional platform
  - Ⓜ Enlarging to other (Non Hospital based ) stakeholders
  - Ⓜ A shared secured internet messaging system
    - ↓ Development costs
    - Better leverage with industry
  - Ⓜ Forum of exchange: Health telematics
- Ⓜ Formal status for legal and contracting certainty and visibility.

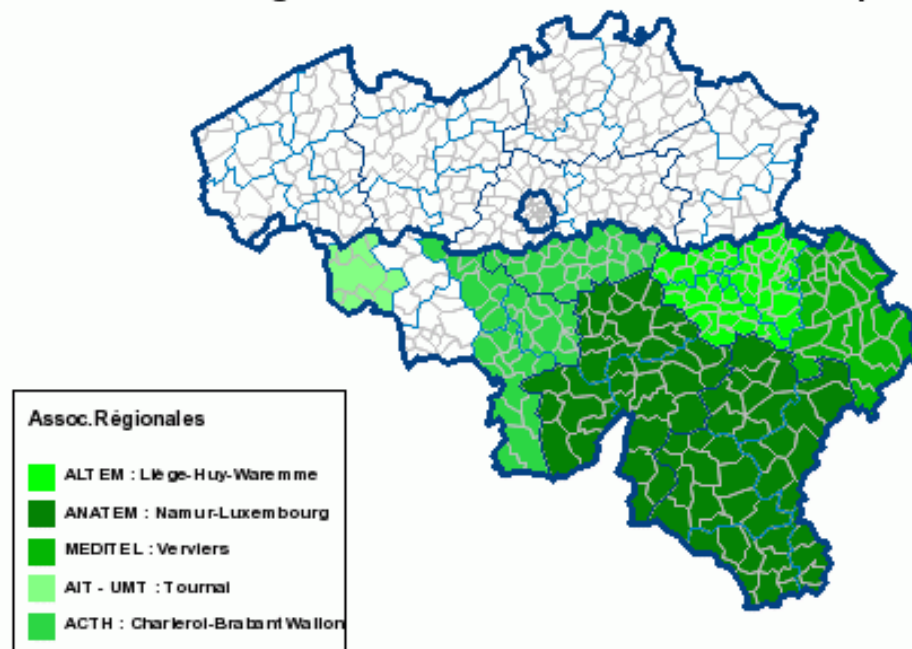
***CREDO: ANSWERING TO NEEDS IN A LOCAL CONTEXT, with LOCAL ACTORS  
in a shared common history.***



## 2006: Federating to create an operational network.

### FRATEM

Fédération Régionale des Associations de Télématique Médicale



## KEY PRINCIPLES : How to create « trust »...

### Subsidiarity :

Investment should take place at the most appropriate level giving priority to users needs, perceptions and cost-efficiency.

### Mutualisation :

Available ressources are pooled together and distributed according to needed under the control of the board.

### Transparency :

All information is available and transparent for all. Decisions are always documented.

### Ownership:

Health professionals (and GPs in particular) are highly involved at all stages and own the system..



# Réseau Santé Wallon web portal

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Accueil - Réseau Santé Wallon - Windows Internet Explorer

https://www.reseausantewallon.be/default.aspx

File Edit View Favorites Tools Help

Accueil - Réseau Santé Wallon

Réseau Santé Wallon

Accueil Espace Patient Espace Professionnel Espace Développeur

Afficher tout le contenu du site

**Accueil**

- Les acteurs - Les statuts
- L'objectif
- Le plan d'action
- Les contacts

**Documents**

- Références
- Rapports d'activités
- Divers
- Demandes à la Fratem

**Espaces**

- Administration
- Développeur
- Patient
- Professionnel

**Infos**

- Calendrier

**Discussions**

- Forum

Site de gestion des différents composants actifs du réseau de santé régional

## Bienvenue sur le Réseau Santé Wallon

Grâce à l'échange électronique sécurisé des documents médicaux des patients inscrits, le Réseau Santé Wallon facilite leur prise en charge hospitalière et leur suivi médical.

Ne soyez pas le dernier à profiter de cette percée technologique. Inscrivez-vous maintenant!

**Inscription Patient avec lecteur de carte d'identité et signature par saisie du code PIN**

**Inscription Professionnel avec lecteur de carte d'identité et signature par saisie du code PIN**

**Inscription Patient par envoi de courrier à la Fratem**

**Sponsors**

- SPF Santé publique
- Région wallonne
- Dell

**Annonces**

Aucune annonce n'est actuellement active.

**Evènements**

23/09/2010 09:15	Conseil d'Administration Fratem
28/10/2010 09:15	Conseil d'Administration Fratem
25/11/2010 09:15	Conseil d'Administration Fratem
23/12/2010 09:15	Conseil d'Administration Fratem

Hôpital 1

Hôpital 2

Réseau Santé Wallon

Internet 100%

start 13 Microsoft Offi... symposiums Accueil - Réseau S... 4 Microsoft Offic... 2 Microsoft Offic... 17:06

.be

**7 YEARS PLAN 6 WORK GROUPS INVOLVING 100 STAKEHOLDERS:**

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**Creating trust**

**Problem definition**

**2006:** Technical and functional specifications approved

**Agenda**

**3 phases**  
**2007-2013**

**Policy adoption**

**Creation of FRATEM asbl**

**Implementation**

**Privacy – security**  
**Certification of systems**  
**Roll out : Opt in**

→ **Pooled resources:**  
12.000 €/Y/Hosp  
Federal and regional limited support  
Basic federal services  
Authentic sources



## IMPORTANT MILESTONES:

### February 2009

Privacy agreement approved by the National Order of Doctors.

-> Establishment of surveillance and piloting committees.

### 2010:

External audit of security system: bluecrypt

Creation of a function of mediator.

Full opt in both for patients and health professionals.

Designing a specific but phased integrated plan for integration of primary care actors with support of all circles of general practice:

-> Smooth links with Industry (Co-Gen: plug-in)

-> Gradual Development of specific platform.

### DUPLICATION and FERTILISATION

Helping other networks to be set up (Brussels)

Helping to establish common rules and norms (With E-Health platform).

Integrating the meta-hub in the picture

Developing new functionalities (PACS,..)



## Where are we now?

### Architecture based on Mutual Trust and web-services but ....need of flexibility.

- Ø Different standard used within hub(Kmehr web-sevrices/IHE)
- Ø Key services such as E-Prescription also developed with stakeholders.
- Ø Limited Inclusion of « other stakeholders » (Nurses, kines, social workers)
- Ø Discussion on patient access to data only starting.
- Ø Co-existence of « shared EHR » under « Hub coverage ».
- Ø Encouraging industry to invest in web-based applications for individual HCP
- Ø Different visions co-exist for ambulatory care platforms (HUBS\_-Central regional- Per HCP- Private)-> Need for stocking validation criteria).



## Where are we now?

### Federal strategy:

- > Focusing on essentials (services, norms-rules-law and DB) and administrative simplification.
- > Defining Semantic interoperability strategy.
- > Integrating EPSOS
- > Seeking cost-efficiency (No duplication of investment).
- > Pushing innovative models (eg: Home hospitalisation).

### Need to be adressed asap:

Ø Training strategy.

Ø Global Evaluation strategy.

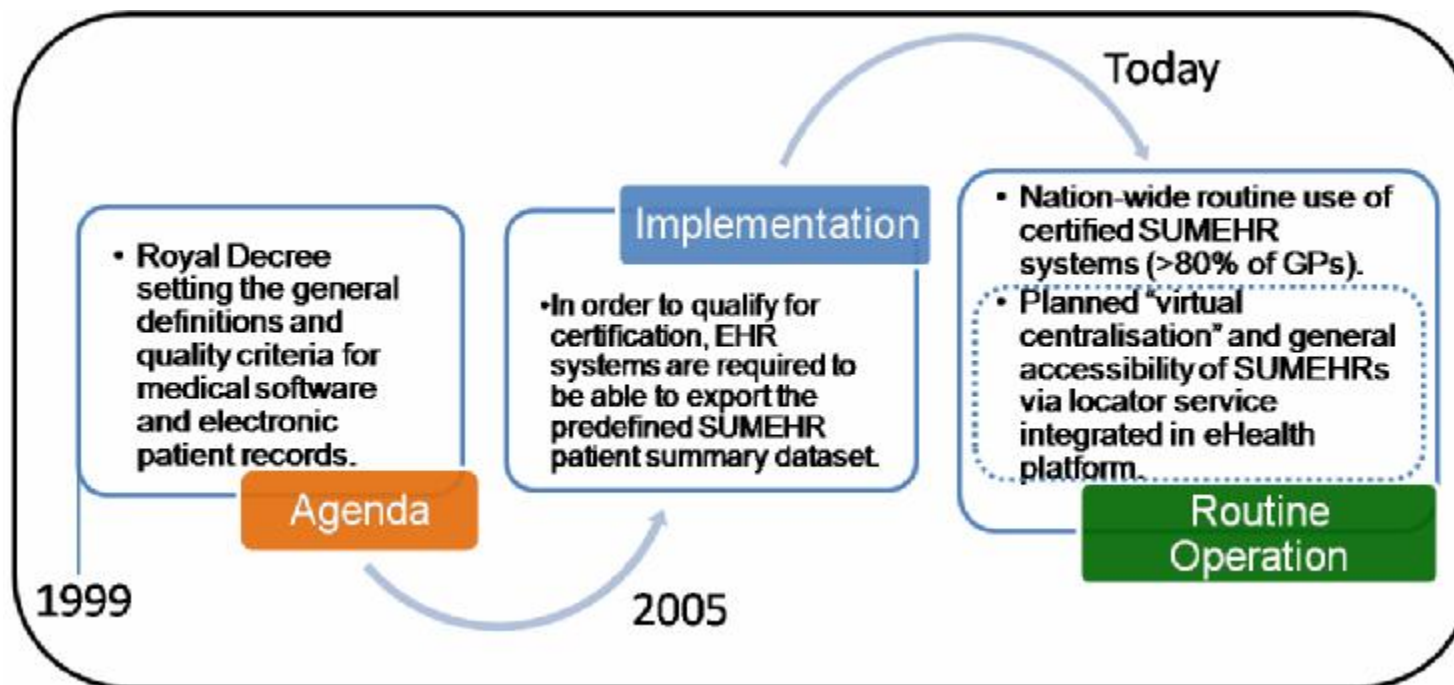
Ø Funding:

Ø Looking for overall « routine financing plan » (Stop ad hoc financing).

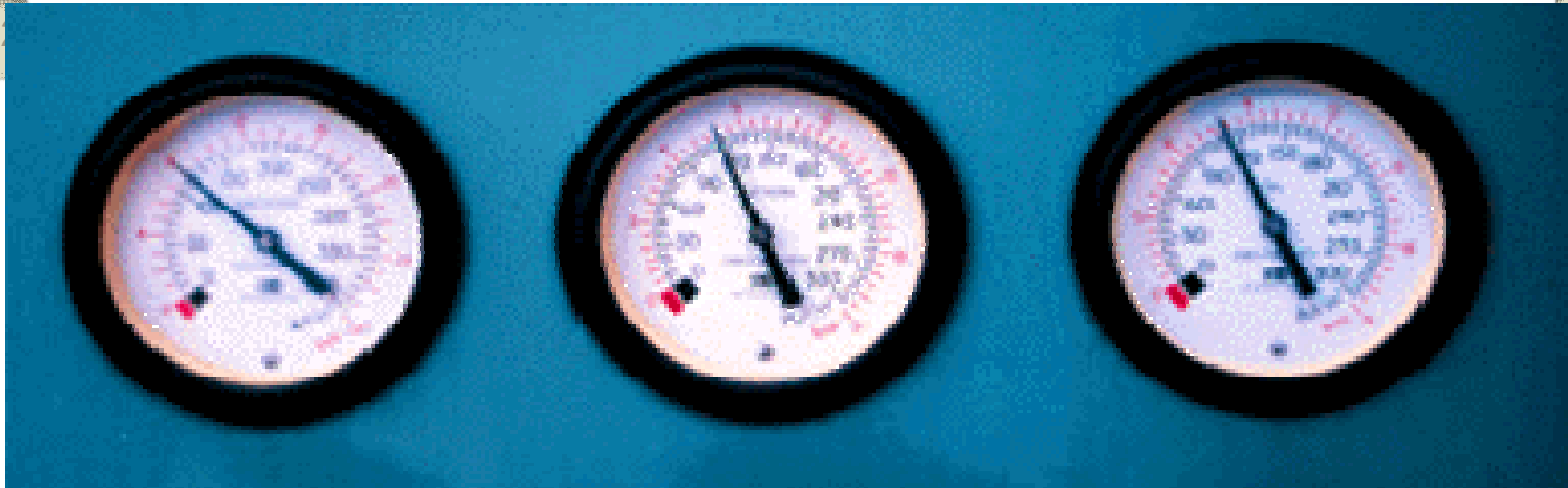
Ø Towards « Meaningfull Use »? Link with reimbursement?



# PATIENT SUMMARY



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**Thanks for your attention!**

**Useful links:**

<http://www.ehealth.fgov.be>

<http://www.health.fgov.be/telematics>

<https://www.reseausantewallon.be>



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