



The eHealth platform as a support of high quality healthcare and administrative simplification

Frank Robben
General Manager eHealth platform
Sint-Pieterssteenweg 375
B-1040 Brussels
E-mail: Frank.Robben@ehealth.fgov.be
eHealth platform website: <https://www.ehealth.fgov.be>
Personal website: www.law.kuleuven.be/icri/frobben

Structure of the presentation

1. some evolutions in healthcare
2. overall objective and missions of the eHealth platform
3. vision and strategy
4. basic architecture
5. current status of the basic services
6. current status and future priorities of the value-added services
7. current status and future priorities of the authentic data sources
8. advantages of the eHealth platform for patients and healthcare providers
9. read more

1. Some evolutions in healthcare

- more chronic care instead of merely acute care
- remote care (monitoring, assistance, consultation, diagnosis, operation, ...), including home care
- multidisciplinary, transmural and integrated care
- patient-oriented care and patient empowerment
- rapidly evolving knowledge => need for reliable, coordinated knowledge management and accessibility
- threat of excessively time-consuming administrative processes
- reliable support for healthcare policy and research requires reliable, integrated and anonymous information
- cross-border mobility

1. Those evolutions require ...

- collaboration between all actors in healthcare, not necessarily based on centralized data storage
- efficient and safe electronic communication between all actors in healthcare
- high quality electronic patient records, across specialties
- technical and semantic interoperability
- optimized processes
- guarantees for
 - information security
 - privacy protection
 - respect for the professional secrecy of healthcare providers
- trust of all stakeholders in the preservation of the necessary autonomy and the security of the system

2. Overall objective of the eHealth platform

- how?
 - through a well-organised, mutual electronic service and information exchange between all healthcare actors
 - with the necessary guarantees in the area of information security, privacy protection and professional secrecy

- what?
 - optimization of healthcare quality and continuity
 - optimization of patient safety
 - simplification of administrative formalities for all healthcare actors
 - reliable support of healthcare policy and research

2. Missions of the eHealth platform

- development of a **vision** and a **strategy** for effective, efficient and secure electronic services and information exchange in healthcare, with respect for privacy protection and in close cooperation with the various public and private healthcare actors
- documentation of useful IT related functional and technical **norms, standards, specifications and basic architecture** for the use of IT to support this vision and strategy
- verification that software packages managing electronic patient records comply with established IT related functional and technical norms, standards and specifications, as well as **registration** of these **software packages**

2. Missions of the eHealth platform

- creation, development and management of a **cooperative platform** for safe electronic data exchange with the **corresponding basic services** (see below)
- **agreement** on a **task division** regarding the collection, validation, storage and availability of data exchanged over the cooperative platform and of the quality norms with which this data must comply, and verification of continued compliance with these quality norms
- promotion and coordination of the realisation of **programmes and projects** which reflect the vision and strategy and use the cooperative platform and / or the corresponding basic services

2. Missions of the eHealth platform

- management and coordination of IT related aspects of **data exchange** in relation to **electronic patient records** and **electronic medical prescriptions**
- role as an **independent trusted third party** (TTP) for the **coding and anonymising** of personal healthcare data **for certain organisations, listed by law** to support scientific research and policy
- **promotion** of necessary **changes** for executing the vision and strategy
- organisation of **cooperation with other public services** working on the coordination of electronic services

3. Vision and strategy

- no central storage of personal healthcare data
- safe electronic data exchange between all actors in healthcare
- if the patient wishes so, gradual referencing to places where his / her personal health data are available, without being able to deduce from those references any intrinsic information about health
- unrestricted application of law concerning
 - privacy protection
 - professional secrecy
 - patient rights
 - the exercise of medicine

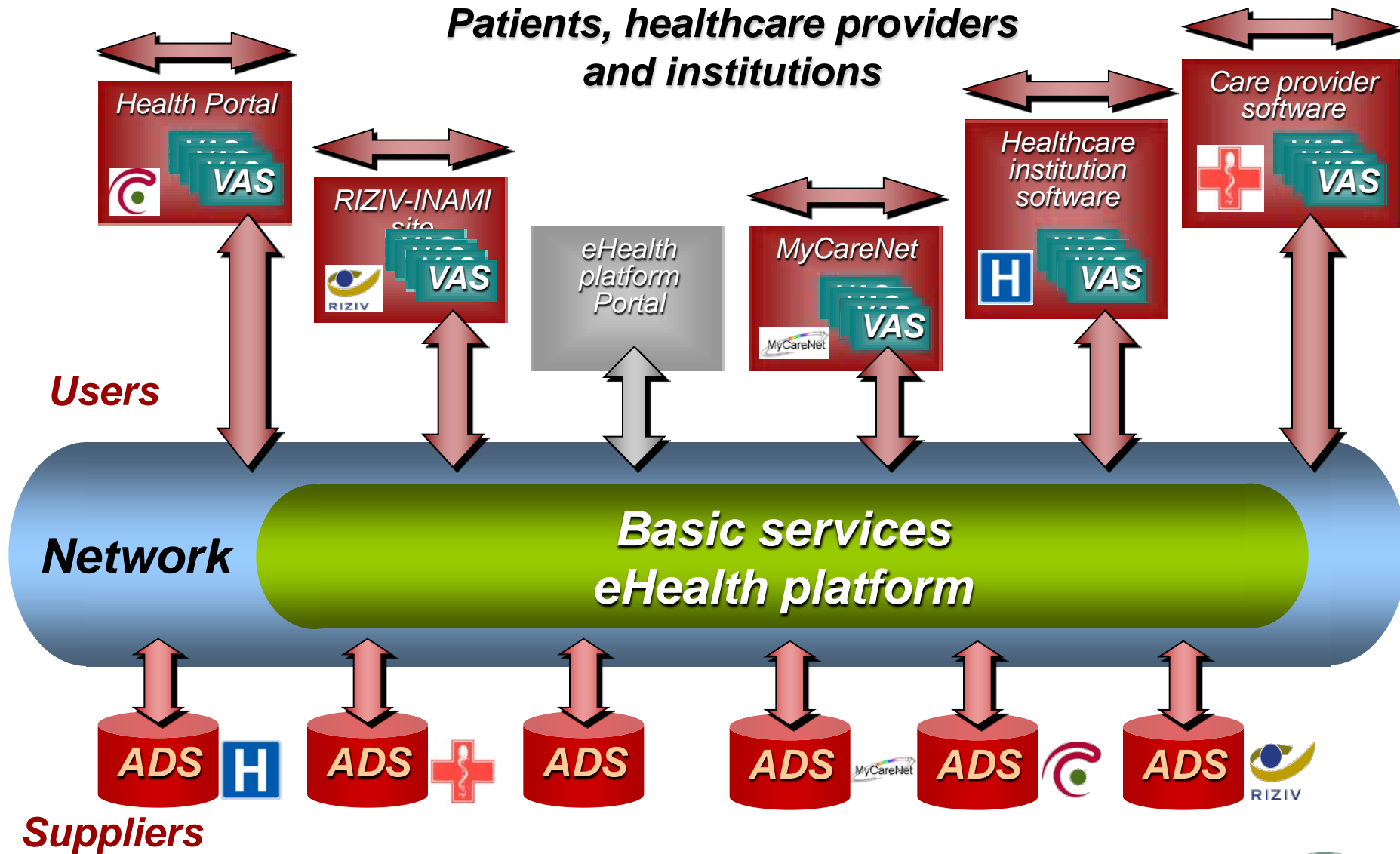
3. Vision and strategy

- special attention to information security and privacy protection
 - end-to-end encryption of exchanged personal health data
 - very thorough preventive access control
 - personal health data can only be exchanged through the eHealth platform with permission provided legally, by an independent Sectoral Committee of the Privacy Commission or by the patient
 - logging of electronic services performed (who, what, about whom, when – not exchanged personal health data !)
 - information safety policies and advisors
- respect for and support of
 - existing local or regional initiatives regarding electronic cooperation in healthcare
 - private initiatives regarding electronic service to healthcare actors

3. Vision and strategy

- use of the eHealth platform is optional, not mandatory
- platform is managed by the representatives of the various healthcare actors
- respect for the therapeutic liberty of healthcare providers
- the eHealth platform does not change the intrinsic task division between the various healthcare actors
- control of safe operation of the eHealth platform by an independent Sectoral Committee of the Privacy Commission
- the eHealth platform does not perform studies itself and provides no intrinsic policy support in the area of healthcare

4. Basic Architecture



4. Basic Architecture

- value-added service (VAS)
 - a service made available to patients and / or its healthcare providers
 - the provider of a value-added service can for this purpose use the basic services offered by the eHealth platform
- basic service
 - a service developed and made available by the eHealth platform, which can be used by the provider of a value-added service in developing and offering that value-added service
- authentic data source (ADS)
 - a database containing reliable information that can be accessed via the eHealth-platform
 - the database manager is responsible for the availability and (organisation of) the quality of the information made available

4. Task division

- 9 multifunctional basic services are provided free of charge by the eHealth platform
- the development and maintenance of the value-added services and of the authentic data sources is the primary responsibility of other actors
- the eHealth platform acts as the developer or hosting platform for certain value-added services or authentic data sources not containing personal health data concerning patients
- the choice was made to work as much as possible based on open standards or, at least, open specifications in order to prevent dependence on one or a limited number of suppliers

4. Norms, standards and specifications

- norms are established for registration of the software packages for GPs
- a number of technical interoperability standards have already been defined
 - KMEHR (Kind Messages for Electronic Healthcare Records) with message structure in XML
 - X.509 (certificates)
- in a number areas, semantic interoperability standards have been defined
 - hospitals: ICD-9
 - GPs: ICD-10 and ICPC2
 - physical therapists: ICF
 - clinical laboratories: LOINC

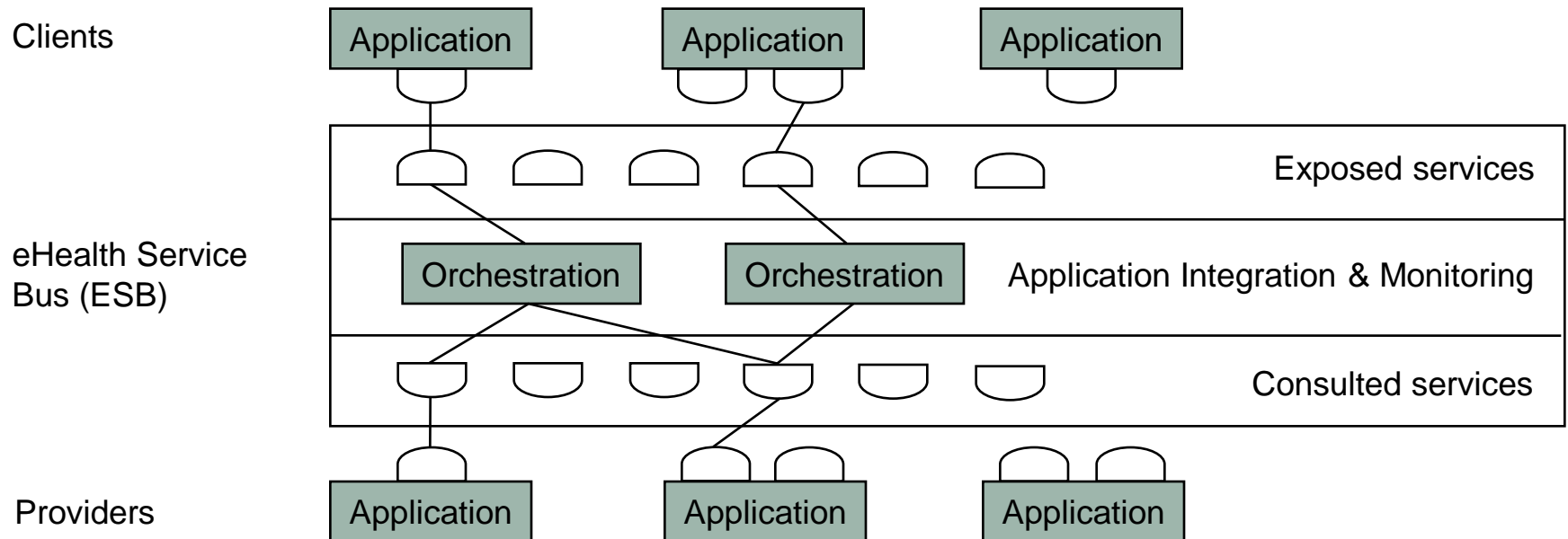
5. Basic Services

- fully operational
 1. coordination of electronic processes
 2. web portal (<https://www.ehealth.fgov.be>)
 3. integrated user and access management
 4. logging management
 5. 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
 6. personal electronic mailbox for each healthcare supplier with basic features
 7. electronic time stamping
 8. coding and anonymizing

5. Basic Services

- operational by the end of 2010
 - 9. reference directory (“metahub”)
- operational by the second quarter of 2011
 - 6. personal electronic mailbox for each healthcare supplier with extended features

5. Coordination of electronic processes



5. Web portal

NL FR

Forum - Links - Contact

Zoeken :

be

U bent niet aangemeld [\[Aanmelden\]](#)



Home | My eHealth

Vind een On-line dienst

De keuzelijst hieronder geeft een overzicht van alle beschikbare on-line diensten. Kies de dienst die u wil gebruiken en klik op GO.

on-line diensten:

Nieuws

De homologatiecriteria van de medische softwarepakketten zijn beschikbaar !

(08/12/2009)

[Meer info](#)

Het website met betrekking tot de Kmehr-standaarden is online !

(08/12/2009)

Voor de communicatie tussen zorgsystemen en de definiëring van communicatieberichten...

[➔Meer nieuws](#)



LOGIN

Hoe krijgt u toegang tot eHealth?

Welkom op de portaalsite van het eHealth-platform

Het **eHealth**-platform is vooreerst een openbare instelling, opgericht bij wet, die een veilige elektronische informatie-uitwisseling wil bevorderen en ondersteunen tussen alle actoren in de gezondheidszorg (artsen, ziekenhuizen, apothekers, patiënten, ...) met respect voor de bescherming van de persoonlijke levenssfeer en voor het medisch beroepsgeheim. Bedoeling is om daardoor o.a. de kwaliteit van de gezondheidszorg-verstrekking te optimaliseren en de administratieve formaliteiten voor alle actoren te verlagen. Meer informatie over deze openbare instelling vindt u hiernaast.

Eén van de diensten die het **eHealth**-platform aanbiedt is deze portaalsite, waarop actoren in de gezondheidszorg informatie en concrete on-line diensten vinden die hen van dienst kunnen zijn bij de uitoefening van de gezondheidszorg. Om deze on-line diensten te gebruiken, klikt u [hier](#).

eHealth-platform

- › [Missie](#)
- › [Organisatie](#)
- › [Vacatures](#)
- › [Wetgeving](#)
- › [Basisdiensten](#)
- › [Diensten met toegevoegde waarde](#)
- › [Gevalideerde authentieke bronnen](#)
- › [Standaarden](#)
- › [Homologatie van de medische softwarepakketten](#)
- › [Technische bibliotheek](#)
- › [Veelgestelde vragen](#)
- › [Contact](#)
- › [Forum](#)

eHealth-portaalsite

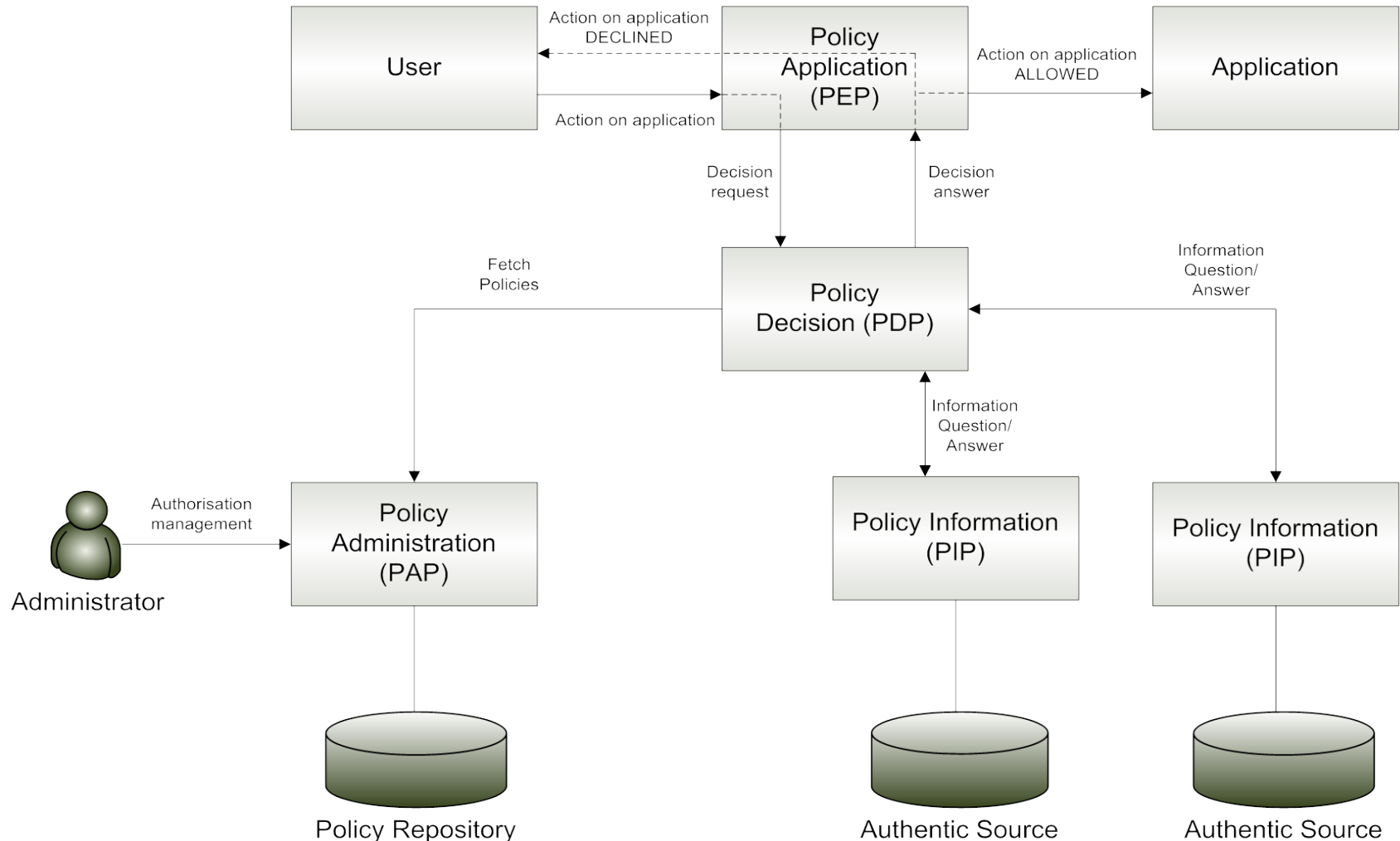
- › [Doelgroepen](#)
- › [Toegang tot de eHealth-portaalsite](#)
- › [On-line diensten](#)
- › [Contact](#)

► Zorgverlener

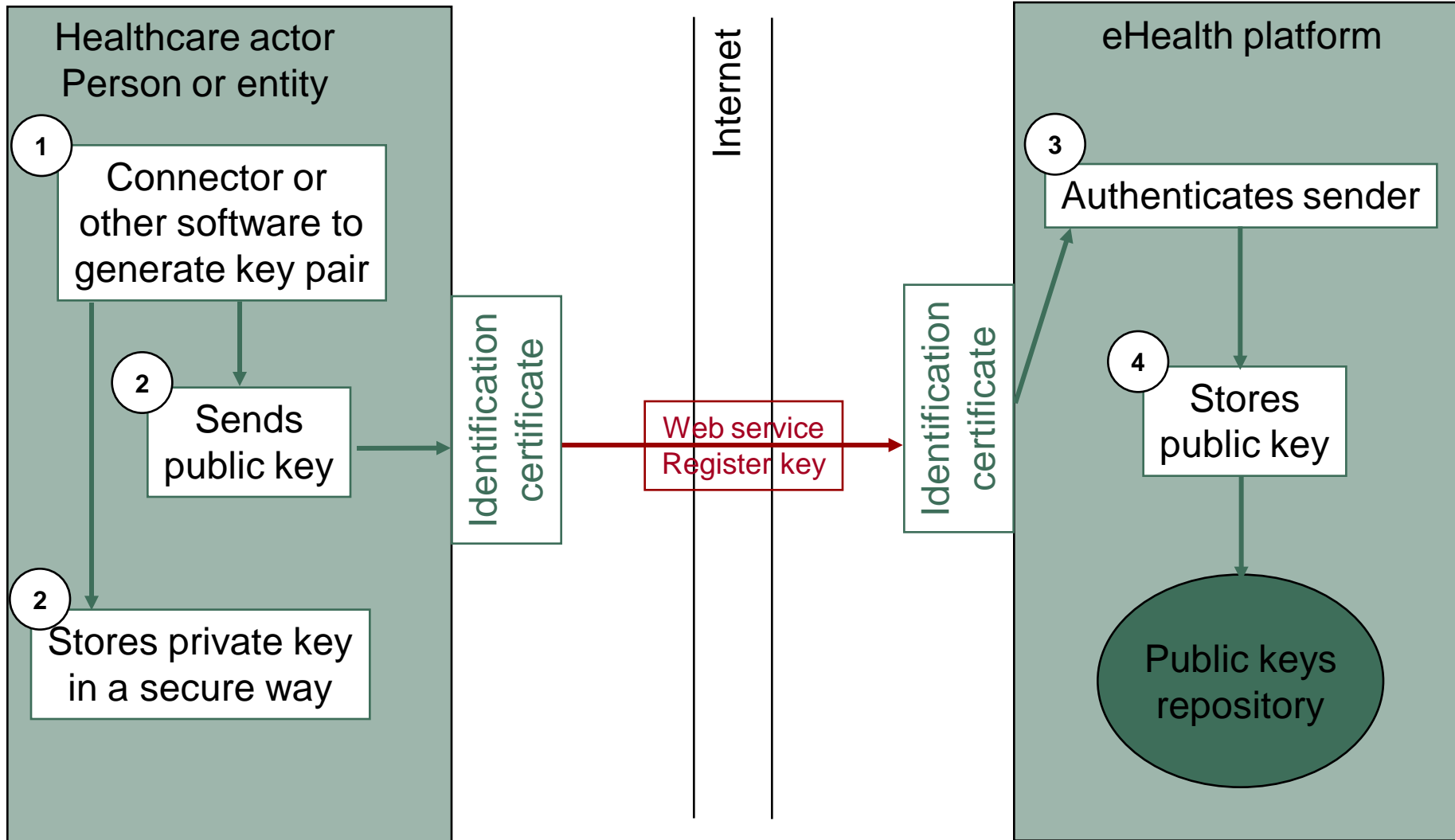
► Zorginstelling of -groepering

► Andere instelling

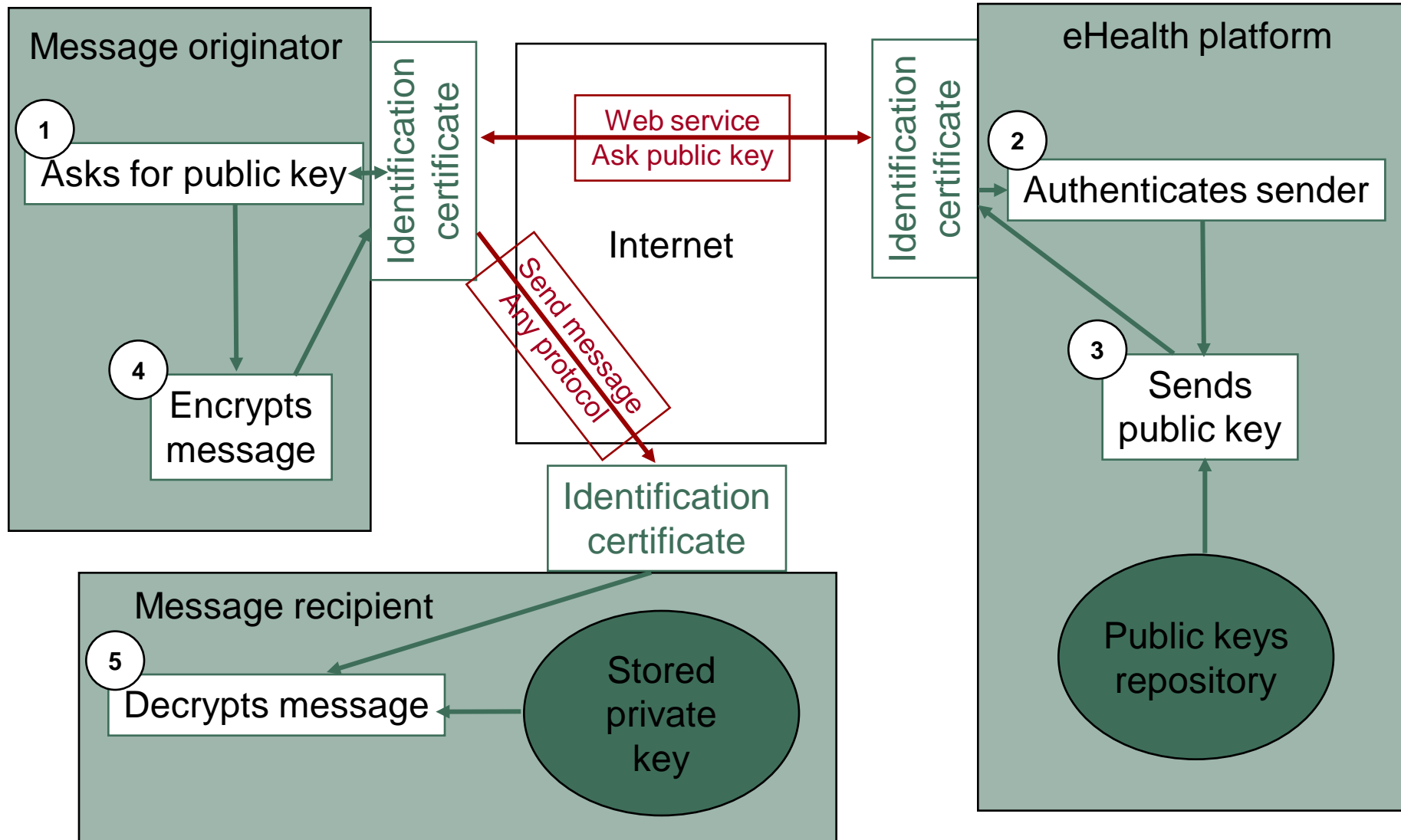
5. User and access management



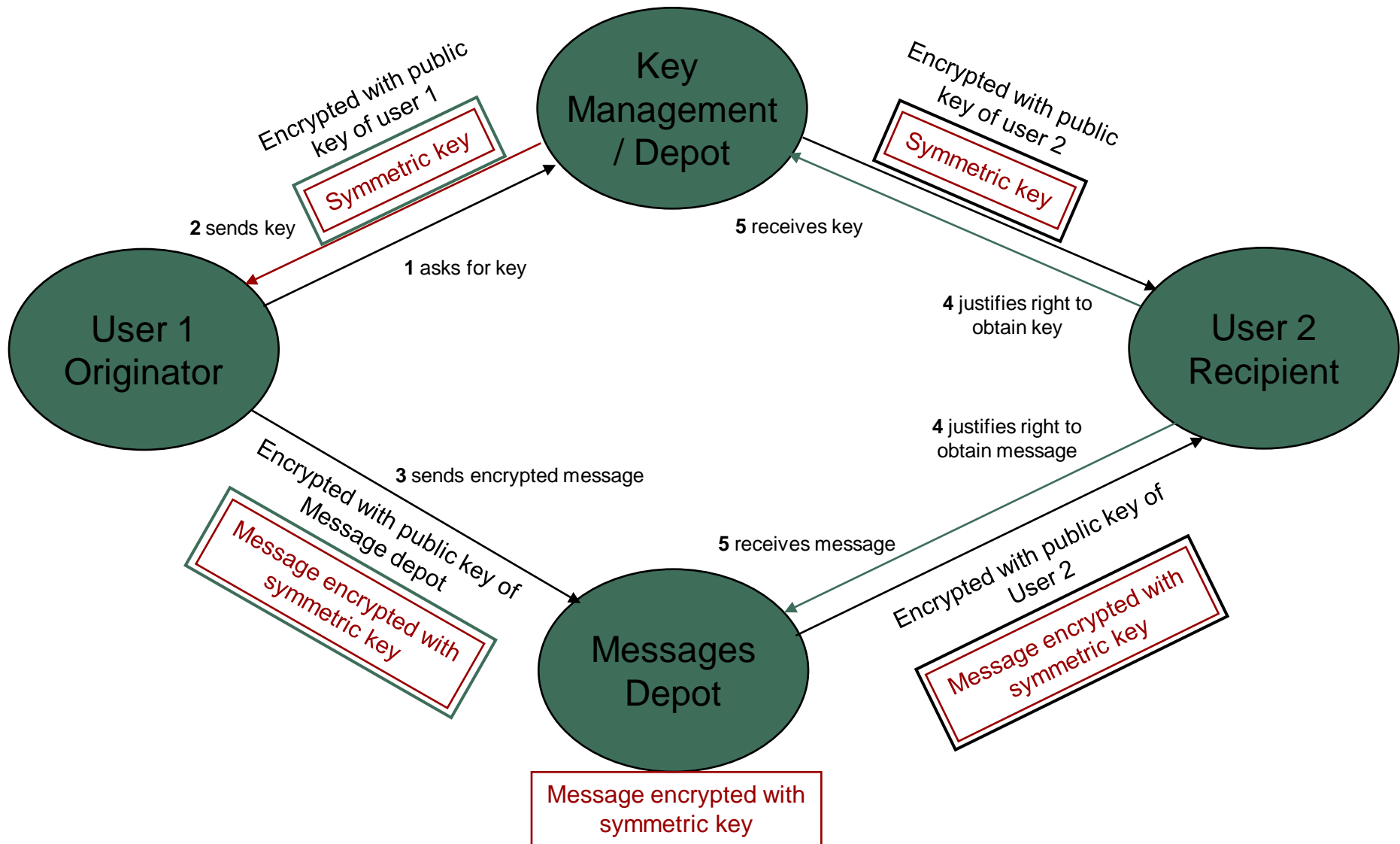
5. Encryption



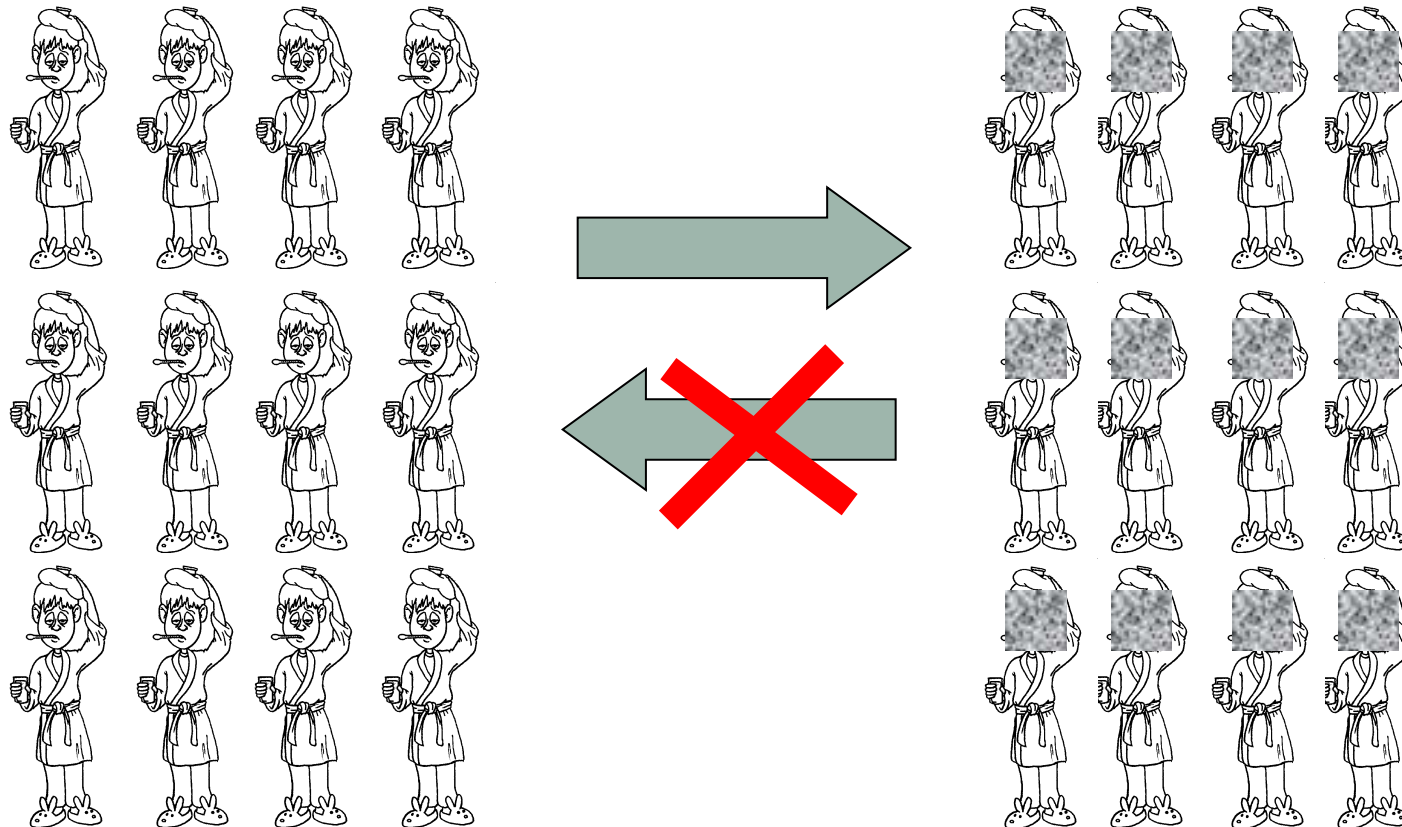
5. Encryption



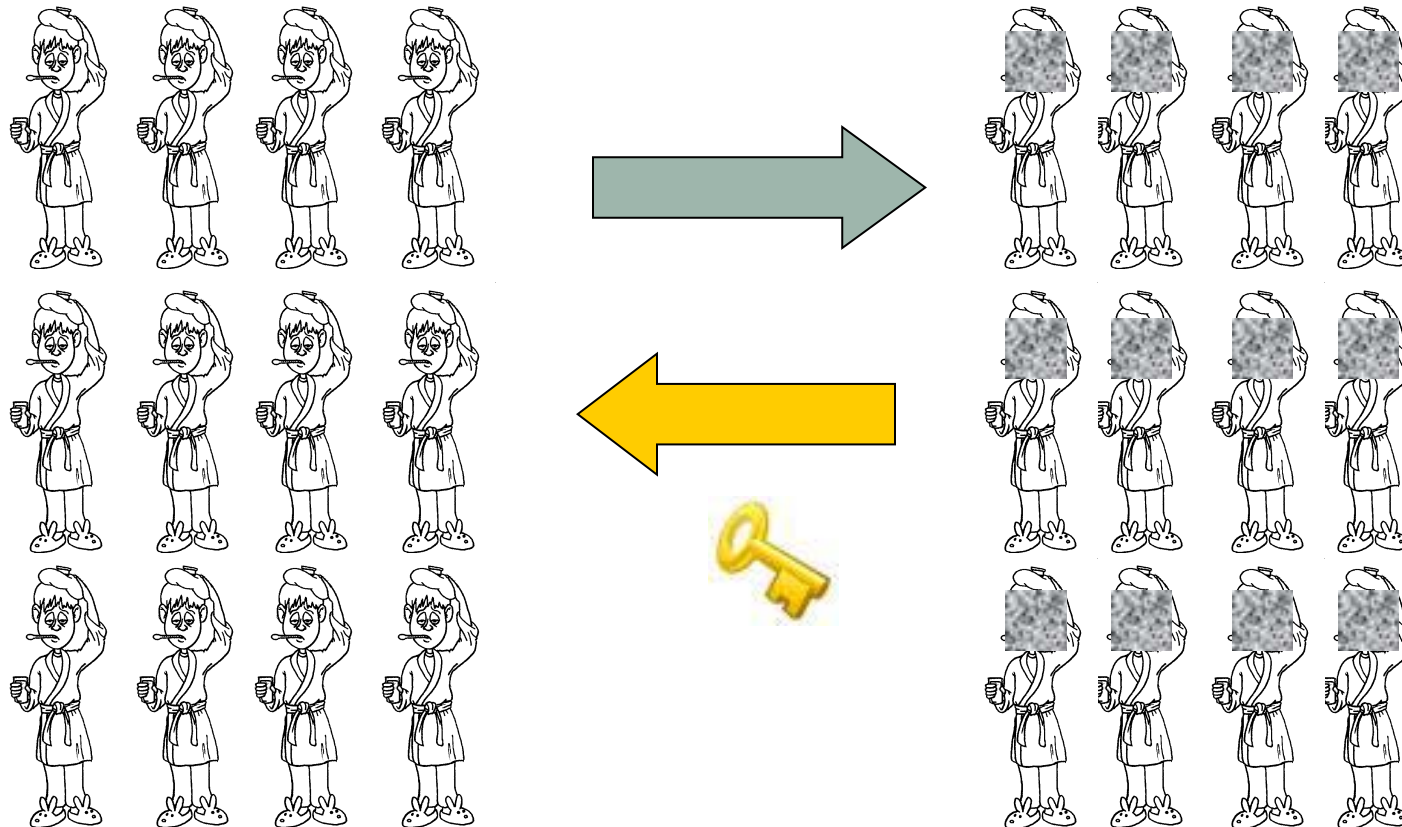
5. Encryption



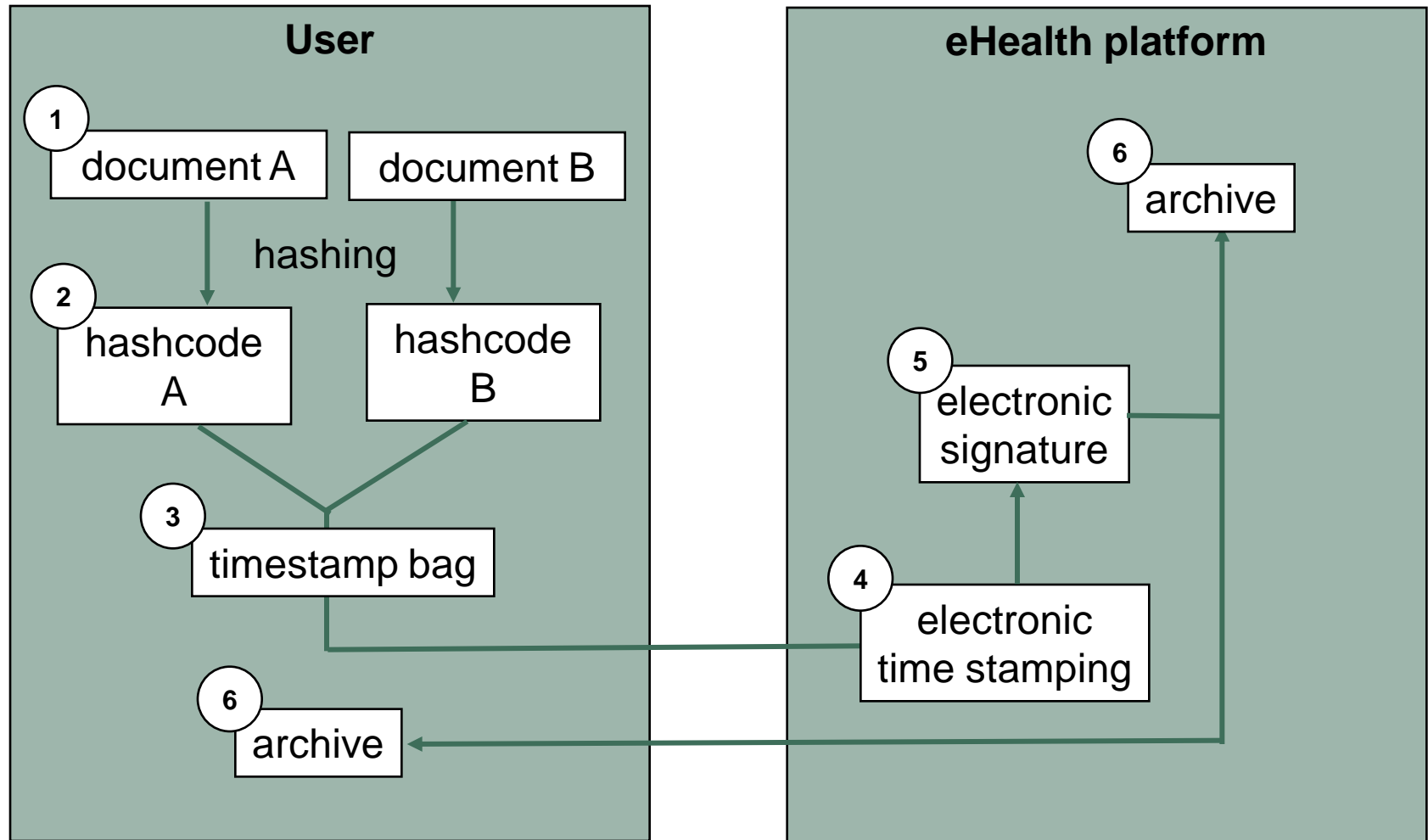
5. Coding and anonymizing



5. Coding and anonymizing



5. Electronic time stamping



6. Value-added services

- in production
 - support of electronic care prescriptions in hospitals (basic service 7)
 - downloadable, supportive software for the drafting and management of pharmacotherapeutic hospital forms (PharmaFormulary) (basic service 2)
 - registration in and consultation of the Cancer registry (basic services 2 and 3 – currently encryption by system specific to the Cancer registry)
 - PROCARE RX (Project on Cancer of the Rectum – Central Image Repository) where radiologists can upload and send anonymous X-rays and accompanying information to experts for review or a second opinion (basic services 2 and 3)



6. Value-added services

- in production
 - registration in and consultation of the registry of hip and knee prostheses (Orthopride – Orthopedic Prosthesis Identification Data) (basic services 1, 2, 3, 4 and 5)
 - registration in and consultation of the registries of care provided for cardiac implants, including with a focus on obtaining authorisation for reimbursement of such implants (Qermid) (basic services 1, 2, 3, 4 and 5)
 - reports on MUG interventions (Smureg) (basic services 2, 3 and 4)
 - consultation of wills regarding euthanasia (basic services 2, 3 and 4)
 - elections for medical doctors (basic service 3)



6. Value-added services

- in production
 - online registration system for hospitals in case of contamination with H1N1 virus (basic services 2, 3, 4 and 8)
 - online registration system for coded data on vaccination against the H1N1 virus (basic services 2, 3, 4 and 8)
 - feedback to hospitals on the healthcare they provide and its costs (basic services 2, 3 and 4)
 - electronic management of on-call GP and dentist shifts (Medega) (basic services 2, 3 and 4)
 - opening of digital library developed by Center for Evidence Based Medicine (basic service 2)
 - electronic third party invoice transfer by nurses (nurse groups) to sickness funds (basic services 2, 3 and 6)



6. Value-added services

■ in production

- electronic consultation of health insurance coverage of patients by nurses (nurse groups) (basic services 2, 3 and 6)
- coding and anonymizing of personal data for various federal actors in health care (basic service 8)
- platform for data exchange between the Flemish Agency for Care and Health and its subsidiated institutions (VESTA) (basic services 2, 3 and 4)
- online registration system for private services in the Special Youth Welfare sector in Flanders (basic services 2, 3 and 4)
- resident assessment instrument (BelRAI) (basic services 2, 3 and 8)



6. Value-added services

■ in production

- electronic registration in and consultation of the evaluation of disabled persons in the information system (Medic-e) of the Federal Public Service Social Security (basic services 2 and 3)
- electronic registration of birth (eBirth) (basic services 1, 2, 3, 5 and 8)
- SARAI care portal of the Antwerp Hospital Network (ZNA) in support of (basic services 2 and 3)
 - collaboration between GPs, specialists and care teams throughout the care pathways of the RIZIV-INAMI (diabetes and renal insufficiency)
 - contribution of GPs during the multidisciplinary oncology consultation
- online electronic ordering of attestations of provided care (Medattest) (basis service 2)



6. Value-added services

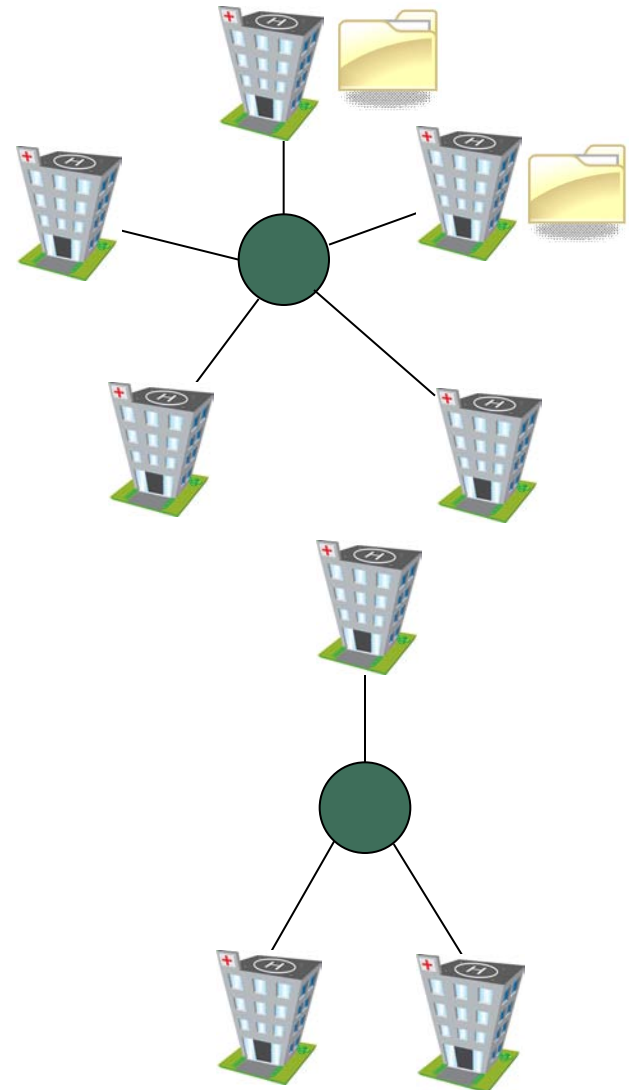
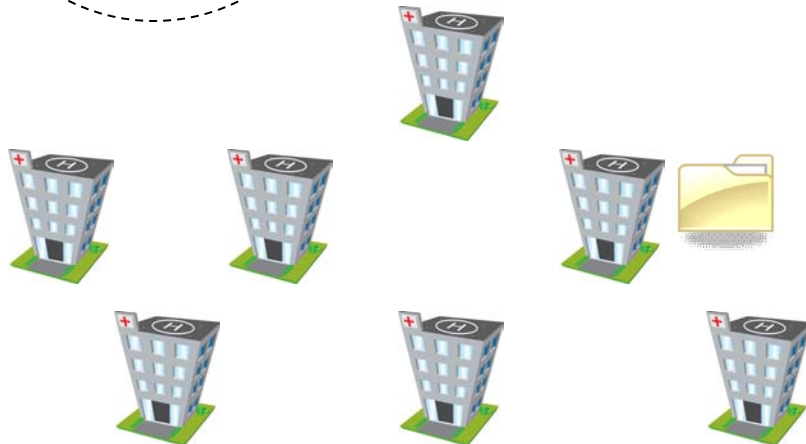
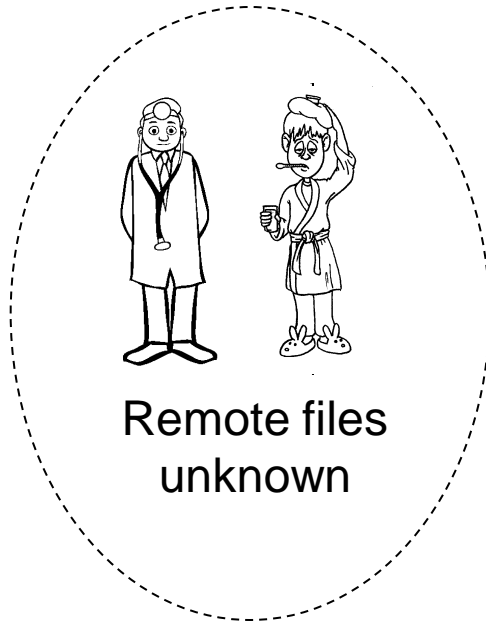
- being tested
 - registration in and consultation of the shared electronic arthritis file, including electronic processes for reimbursement of anti-TNF medication (Safe – Shared Arthritis File for Electronic use) (basic services 1, 2, 3, 4 and 5)
 - electronic transfer of medical administrative documents (request for fixed fees, toilets, palliative patients, technical dispensations) by home nurses to sickness funds (basic services 2, 3 and 6)



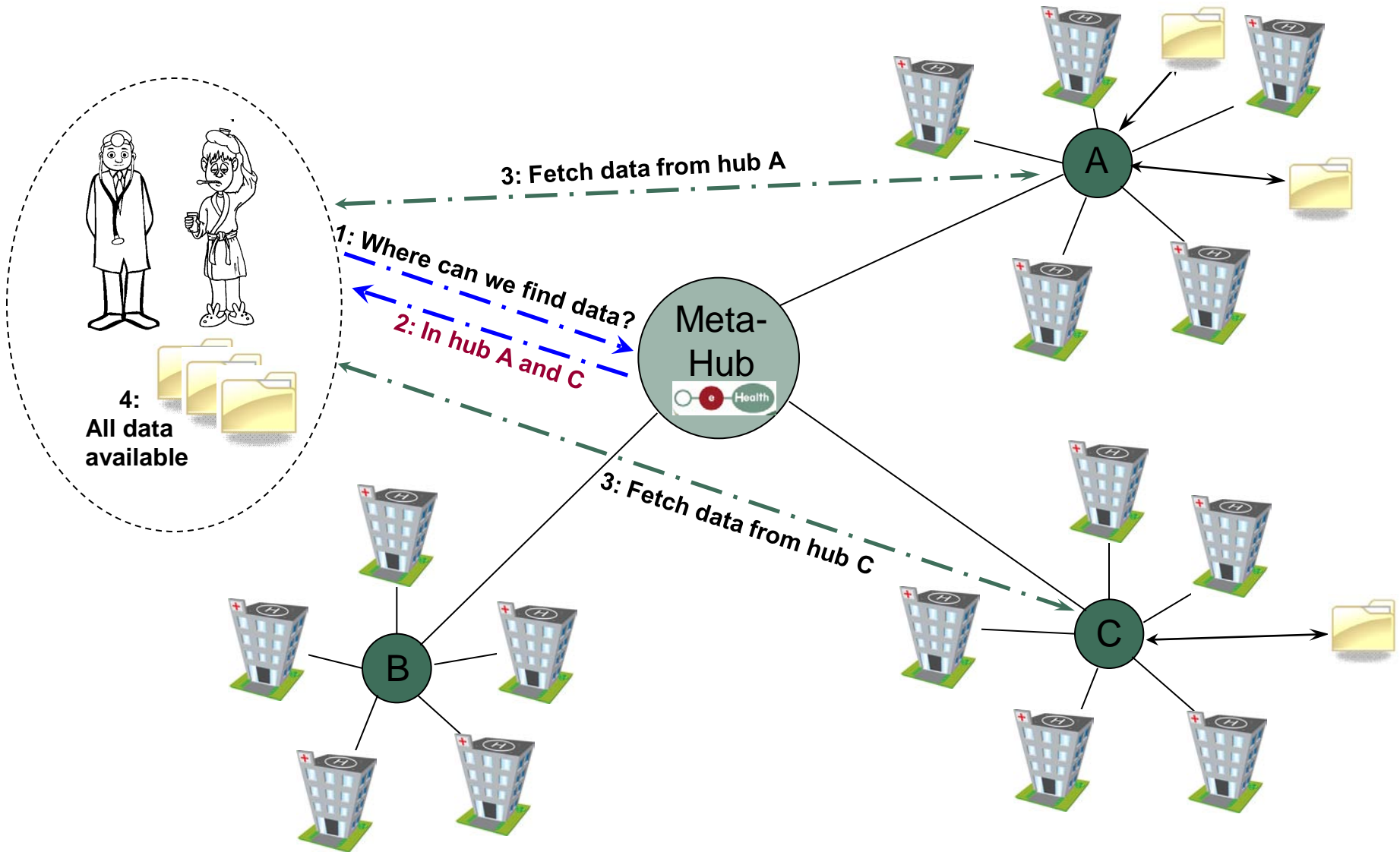
6. Value-added services

- under construction
 - mutual electronic exchange of relevant information in electronic patient records between (regional and local networks of) healthcare institutions and/or healthcare providers (basic services, 1, 3, 4, 5 and 9)
 - the overall basic architecture has been defined
 - all (sub)regional networks work together
 - "Group 19" elaborates
 - the technical and semantic interoperability standards
 - the web services to be developed
 - the Board of Directors of the eHealth platform and the Sectoral Committee elaborate
 - the manner in which the informed consent of the patient is obtained
 - the manner in which a therapeutic relationship between a patient on the one hand and a healthcare institution or provider on the other is demonstrated
 - the eHealth platform developed the metahub as well as a fictive test hub to test the electronic exchange of data between

6. Exchange of patient data: now



6. Exchange of patient data: future



6. Reference directory

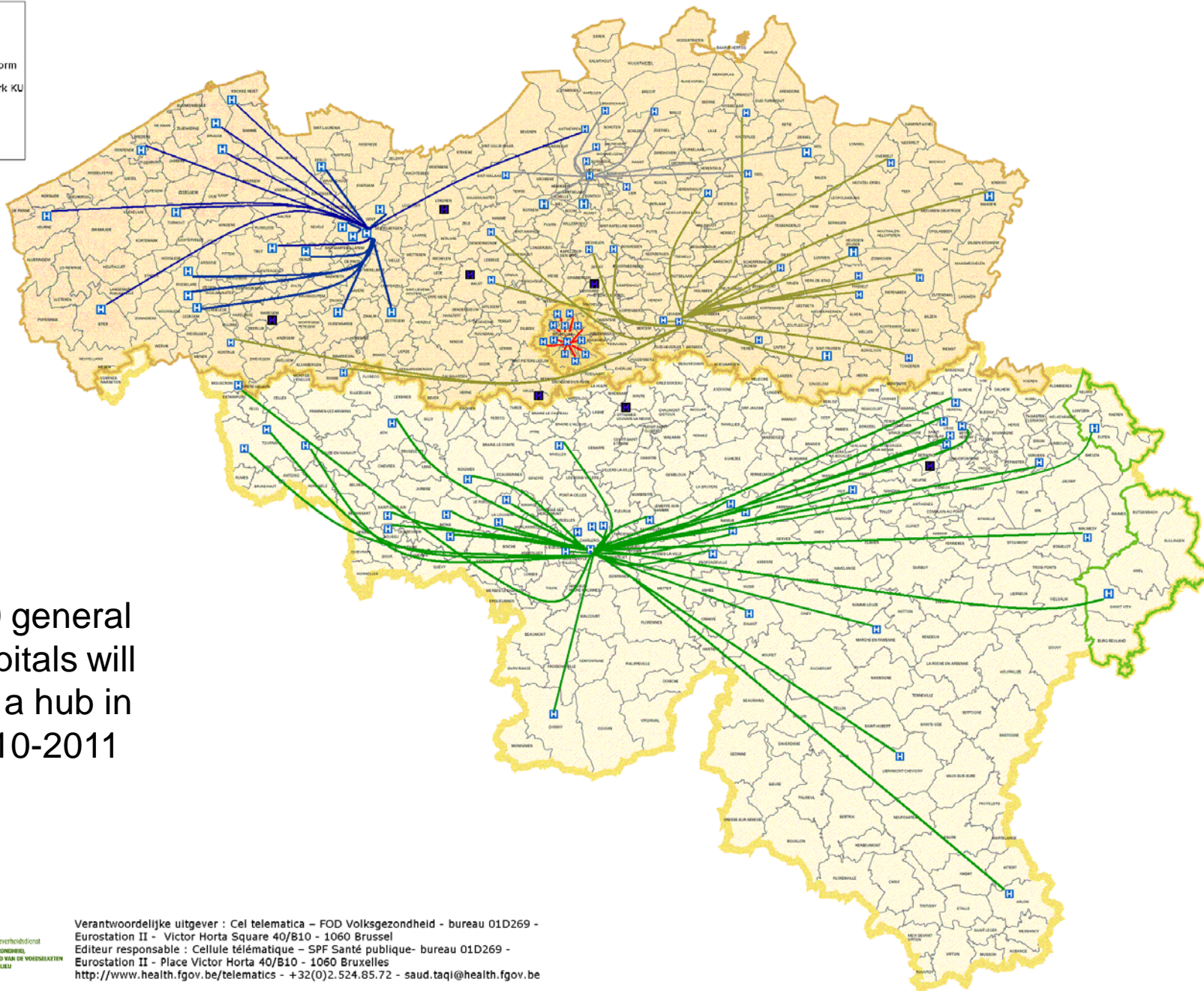
- is developed through a trapped system
 - reference to the care provider(s) or care institution(s) where one or more electronic documents are available for a patient is, with the informed consent of the patient, stored in a local or regional reference directory (a so-called "hub")
 - the reference directory managed by the eHealth platform (the so-called "metahub") only contains references to the hub(s) where references for a patient are stored
- development through a trapped system
 - respects the organisation of regional and local networks between care providers and/or care institutions
 - avoids the possibility that health information about the patient can be deduced from the information stored in the reference directory managed by the eHealth platform

6. Reference directory

- publication of the reference in a hub and the metahub requires the informed consent of the patient concerned
- access to information to which reference is made in a hub requires a therapeutic relationship between the requesting care provider and the patient concerned
- a guidance committee has been created within the Consultation Committee of the eHealth platform

Hubs 2010

-  ABruMeT
-  Antwerps regionaal platform
-  Vlaams ziekenhuisnetwerk KU Leuven
-  Réseau Santé Wallon
-  Regionale Hub Gent

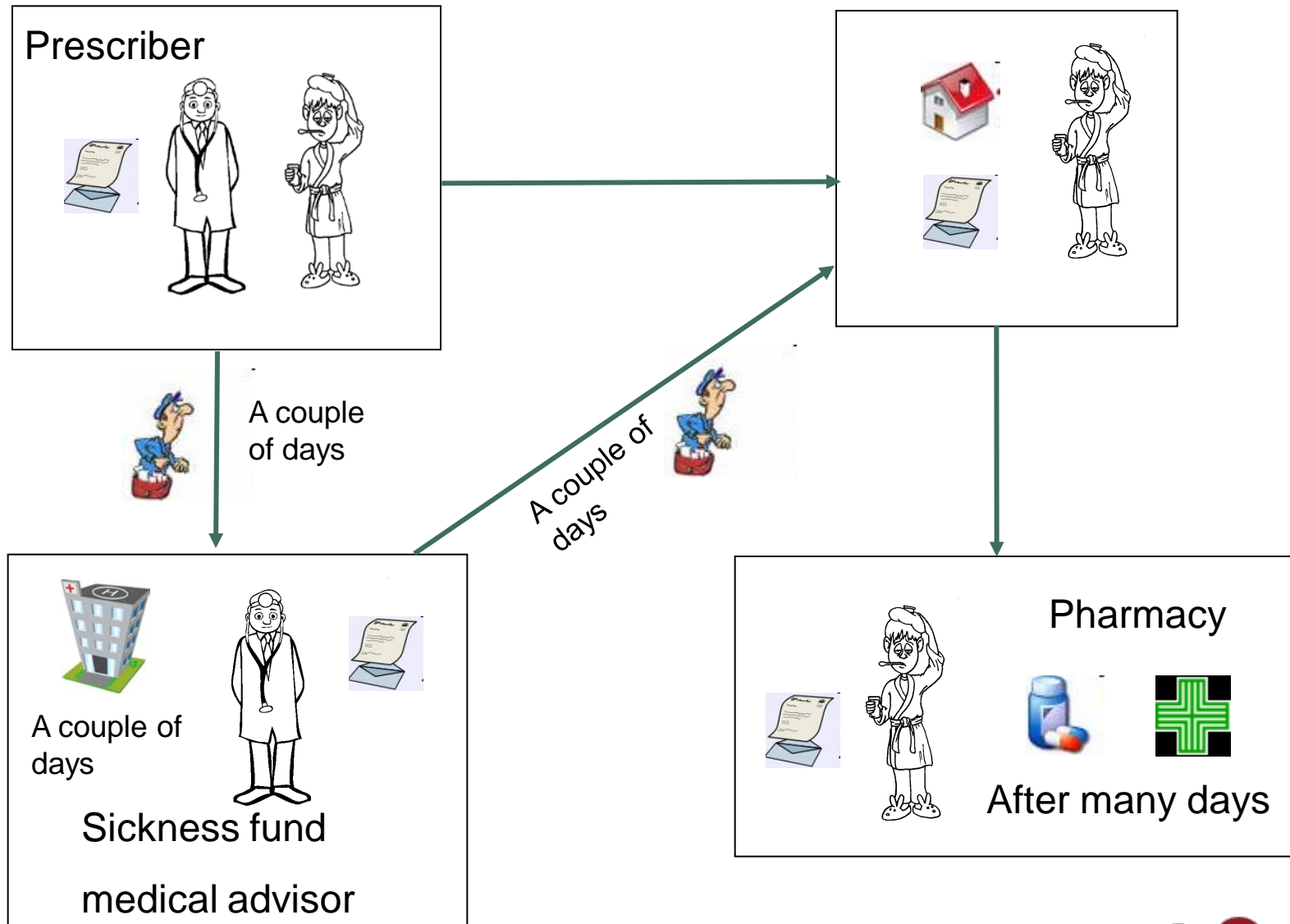


>110 general hospitals will join a hub in 2010-2011

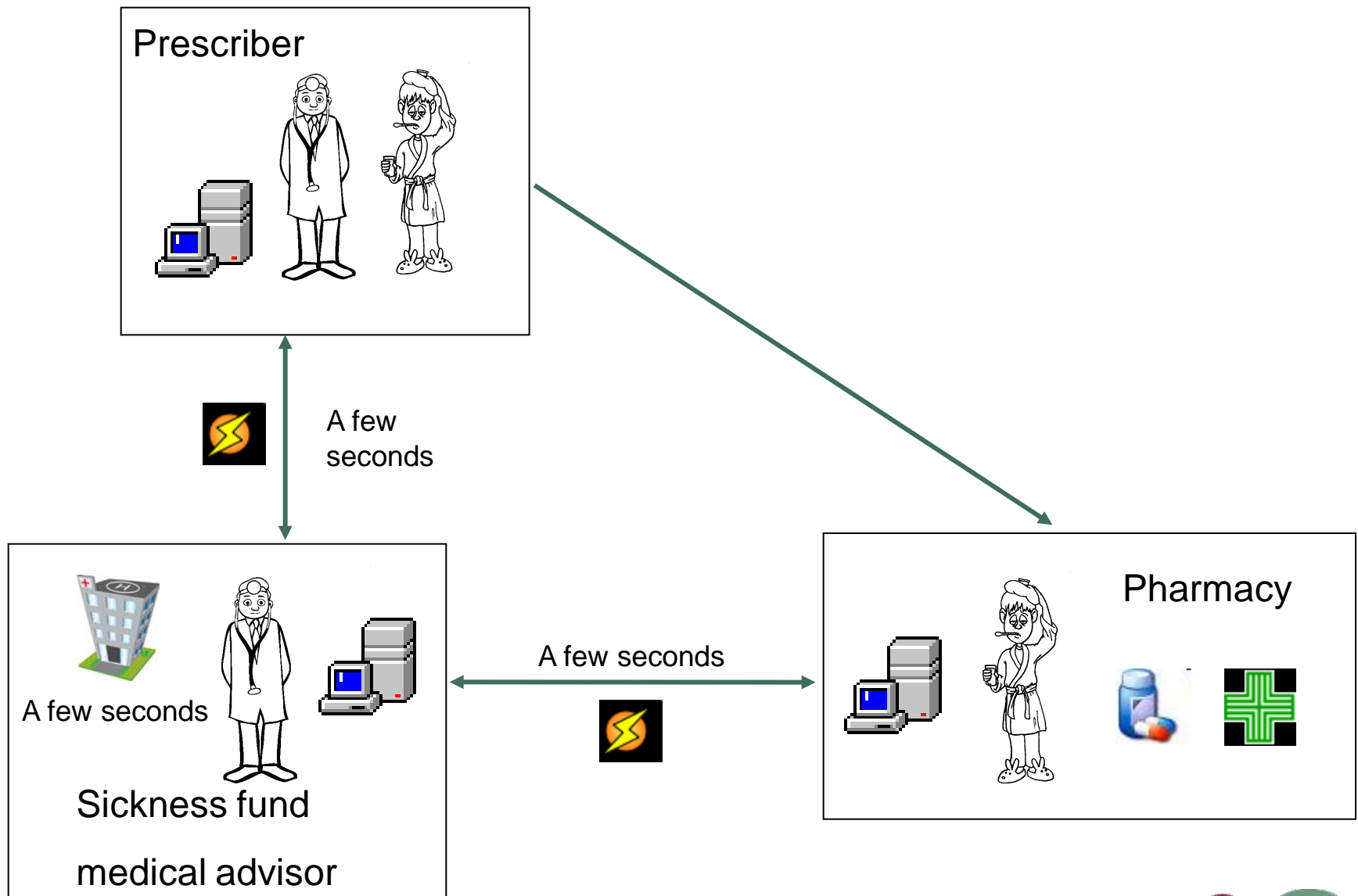
6. Value-added services

- under construction
 - simplification and computerisation of the administrative formalities of healthcare providers and institutions
 - optimized electronic processes to obtain access to reimbursement of certain healthcare costs (chapter IV): complex programme with several stakeholders and projects
 - authentic source pharmaceutical products, including reimbursement conditions (FAGG, RIZIV-INAMI, BCFI)
 - creation and dispatch of requests (software packages for prescribers and web application)
 - processing of requests and database of approvals (sickness funds and NIC)
 - consultation of approvals and dispensation of pharmaceutical products (software packages for pharmacists)

6. Simplification of Chapter IV requests



6. Simplification of Chapter IV requests



6. Simplification of Chapter IV requests

Paragraaf 4610000

a) De volgende specialiteit wordt vergoed indien ze aangewend wordt voor de symptomatische behandeling van een chronisch stabiele angor bij patiënten met een normaal sinusritme en die een contra-indicatie vertonen of intolerant zijn aan bètablokkers en aan bradycardiserende calciumantagonisten. De terugbetaling wordt toegestaan aan patiënten bij wie een contra-indicatie of een intolerantie op de volgende wijze vastgesteld werd:

- minstens één van de zes criteria vermeld onder 1.1 tot 1.6 in de rubriek « 1. Bètablokkers » EN
- minstens één van de twee criteria vermeld onder 2.1 en 2.2 in de rubriek « 2. Bradycardiserende calciumantagonisten »

1. Voor de bètablokkers:

- ☐ 1.1. Een gedocumenteerd persisterend astma;
- ☐ 1.2. Een COPD met een contra-indicatie voor of een intolerantie aan bètablokkers, zelfs de cardioselectieve;
- ☒ 1.3. Een met insuline behandelde diabetes en met risico op hypoglycemie;
- ☐ 1.4. Een ernstige arteriële aandoening van de onderste ledematen – stadium III (pijn bij rust) en IV (trofische letsels of gangreen);
- ☐ 1.5. Een AV-blok van de tweede of derde graad;
- ☐ 1.6. Het stoppen van de behandeling als gevolg van een ernstige bijwerking onder bètablokkers (koude ledematen, AV-geleidingsstoornissen, depressie, impotentie, cutane reactie type psoriasis, claudicatio intermittens) gedocumenteerd in het omstandige verslag van de specialist die de behandeling initieert.

2. Voor de bradycardiserende calciumantagonisten:

2.1. Contra-indicatie voor bradycardiserende calciumantagonisten (verapamil, diltiazem):

- ☐ - een AV-blok van de tweede of derde graad;
- ☒ - hartinsufficiëntie;
- ☐ 2.2. Het stoppen van de behandeling als gevolg van een ernstig gedocumenteerde bijwerking onder een bradycardiserende calciumantagonist (hoofdpijn, malleolaire oedemen), gedocumenteerd in het omstandig verslag van de specialist die de behandeling initieert.

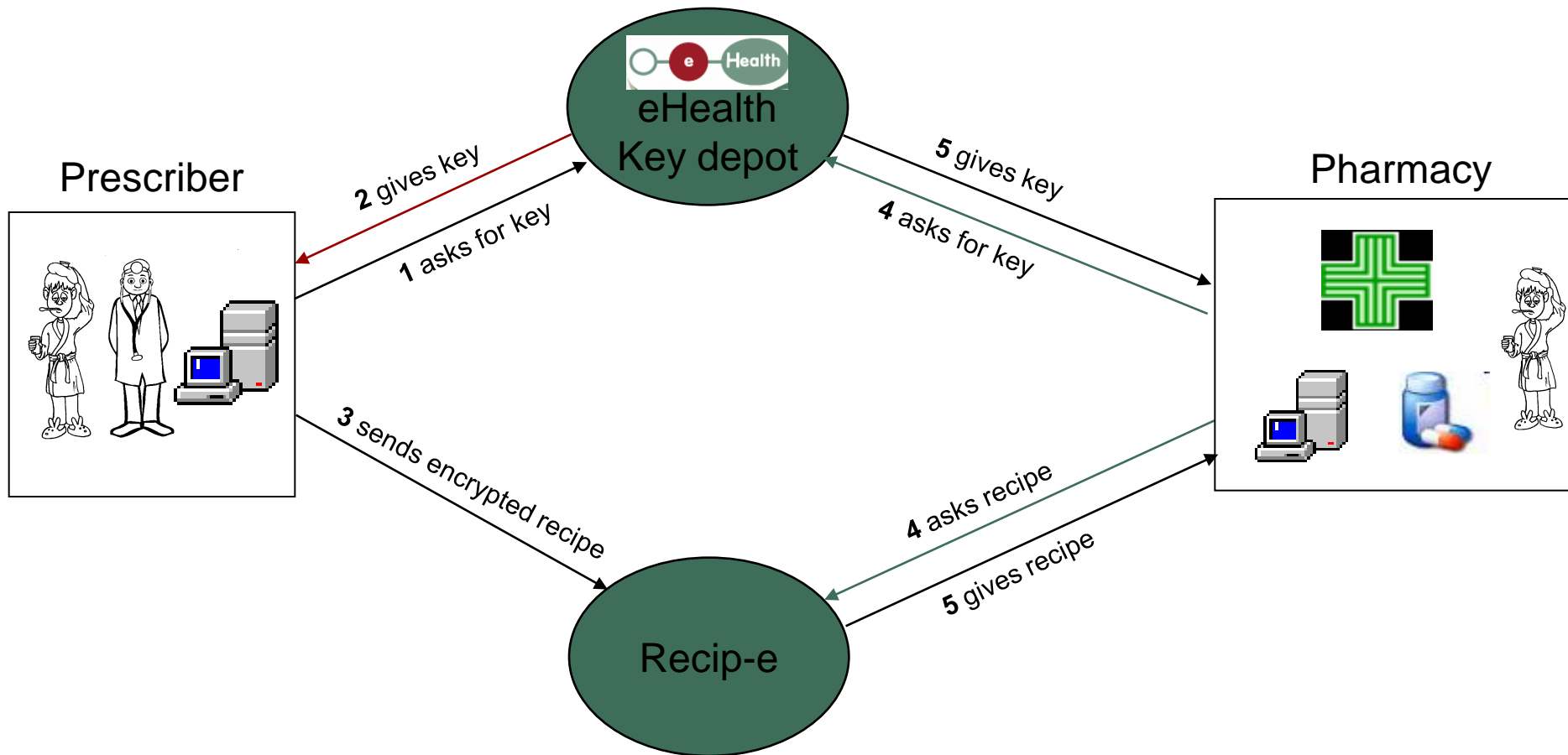
b) Het aantal vergoedbare verpakkingen zal rekening houden met een maximale posologie van 2 x 7,5 mg per dag.

c)

6. Value-added services

- under construction
 - electronic accessibility of health insurance coverage status and of other relevant administrative information about the patient for pharmacists, laboratories and rest home and care institutions (basic services 2 and 3)
 - system for out-patient electronic prescriptions for pharmaceutical products (basic services 1, 3, 4, 5 and 7)
 - the use cases have been determined
 - the interoperability standards have been determined
 - the Recip-e consortium has been created
 - the mission for temporary storage of encrypted prescriptions has been contracted out by the Recip-e consortium, with the support of the eHealth platform, to an IT service provider

6. Out-patient electronic prescriptions



6. Value-added services

- under construction
 - PROCARE Data Entry with which the data on rectal cancers can be entered online (basic services 2 and 3)
 - entry of several pieces of data registered by emergency rooms in hospitals to allow the government to take the necessary measures in the event of an emergency situation (UREG) (basic services 5 and 8)
 - electronic referral of patients between healthcare providers / institutions
 - revision of the application for supplying an organ donation authorisation (Orgadon) (basic services 2, 3 and 4)
 - interactive website for Ethics Committees regarding trials in Belgium (basic services 2 and 3)



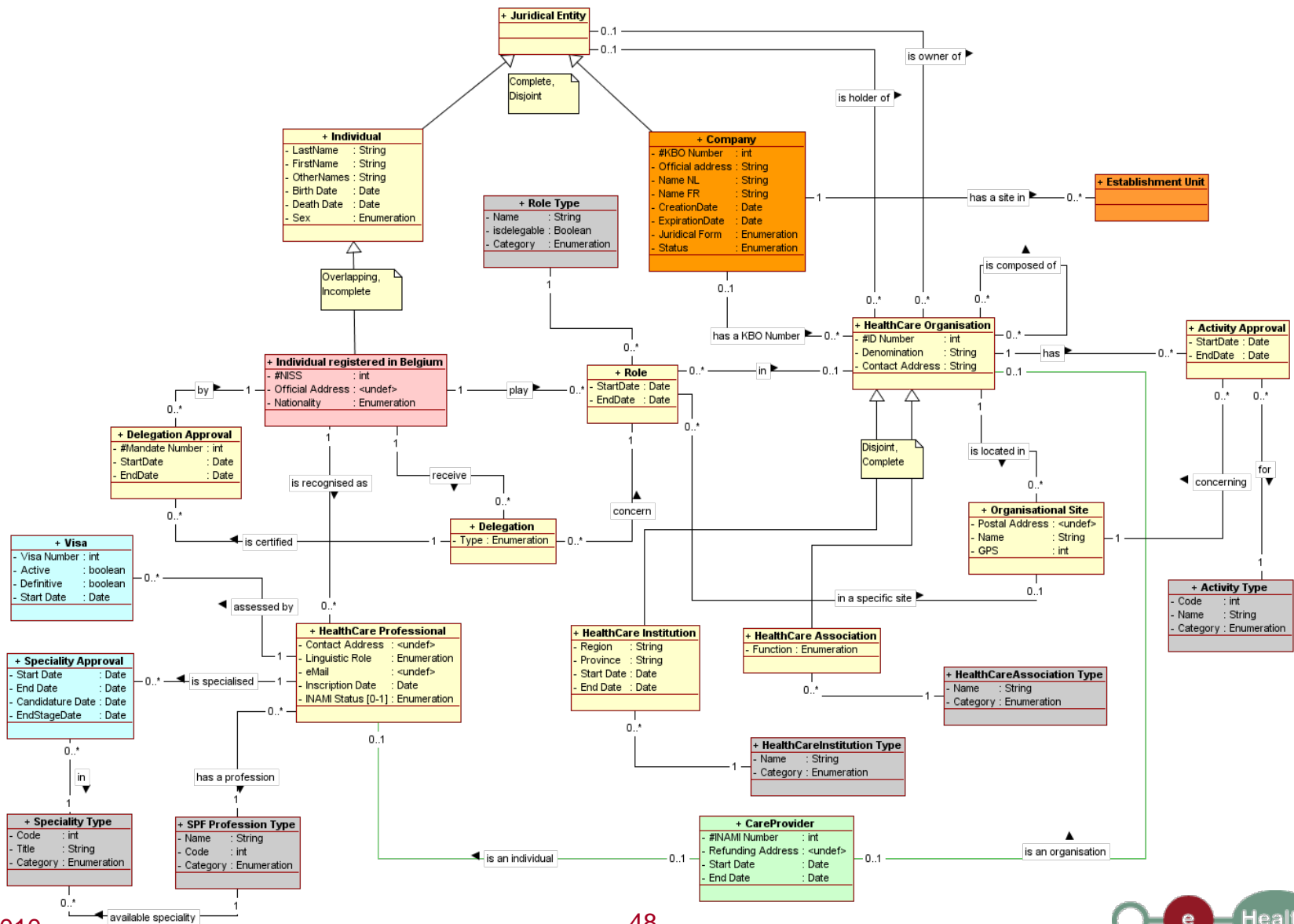
6. Value-added services

- under study
 - priority areas for computerisation of hospitals
 - electronic transfer of incapacity for work certificates to employers and schools
 - electronic transfer of certificates and bills to insurance companies who provide hospitalisation insurance
 - electronic transfer of medical certificates for the issue of driver's licences
 - electronic exchange of data on occupational diseases
 - electronic collection of data on treatments for drug use in order to implement the European protocol for the Treatment Demand Indicator (TDI)
 - electronic access to data for the patient
 - ...

7. Accessible authentic data sources

- national registry and CBSS registries for actors authorised for access
 - managers: Federal Public Service of Home Affairs and Crossroads Bank for Social Security
 - contain basic identification information about physical persons
- registry of healthcare providers
 - manager: Federal Public Service of Public Health, Food Chain Security and the Environment
 - contains information on a healthcare provider's diploma and specialism identified by using their identification number for social security (INSZ)
- database of RIZIV-INAMI authorisations
 - manager: RIZIV-INAMI
 - contains information on a healthcare provider's RIZIV-INAMI authorisation identified using their INSZ

15/10/2010



7. Authentic data sources under development

- database of pharmaceutical products
 - managers: FAGG, RIZIV-INAMI and BCFI
 - will contain the following in phase 1
 - authorisations
 - composition
 - scientific information leaflets
 - reimbursement conditions
 - will contain the following in phase 2
 - interactions between the active substances of pharmaceutical products
 - interactions between the active substances of pharmaceutical products and patient characteristics

7. Authentic data sources under development

- database with patient rights under health insurance
 - manager: sickness funds
 - will contain information about the health insurance status and other rights of patients under health insurance
- database of best practices on the treatment of patients for certain diagnoses
 - manager: Center for Evidence Based Medicine under the RIZIV-INAMI
 - will contain best practices on the treatment of patients for around 1500 diagnoses

8. Advantages

- for the patient
 - added value in terms of healthcare quality and patient safety
 - in certain cases, quicker service
 - more transparency

- for the healthcare provider
 - less administrative formalities, enabling to spend the maximum available time on healthcare
 - improved support in the practice of one's profession
 - one connection to electronic platform suffices for the use of several applications
 - greater legal certainty for electronic data exchange
 - easier referrals between healthcare providers / institutions
 - support of cooperation, locally and regionally as well

9. Read more

- eHealth platform portal (<https://www.ehealth.fgov.be>) contains detailed functional and technical documentation on
 - the basic architecture
 - the 9 multifunctional basic services provided by the eHealth platform
 - the value-added services that use these basic services
 - those authentic sources already available
 - the norms, standards and specifications
 - all KMEHR messages
- own website (<http://www.law.kuleuven.be/icri/frobben>) contains all slides used in presentations

Th@nk you !

Questions?