Efficient and secure transborder exchange of patient data


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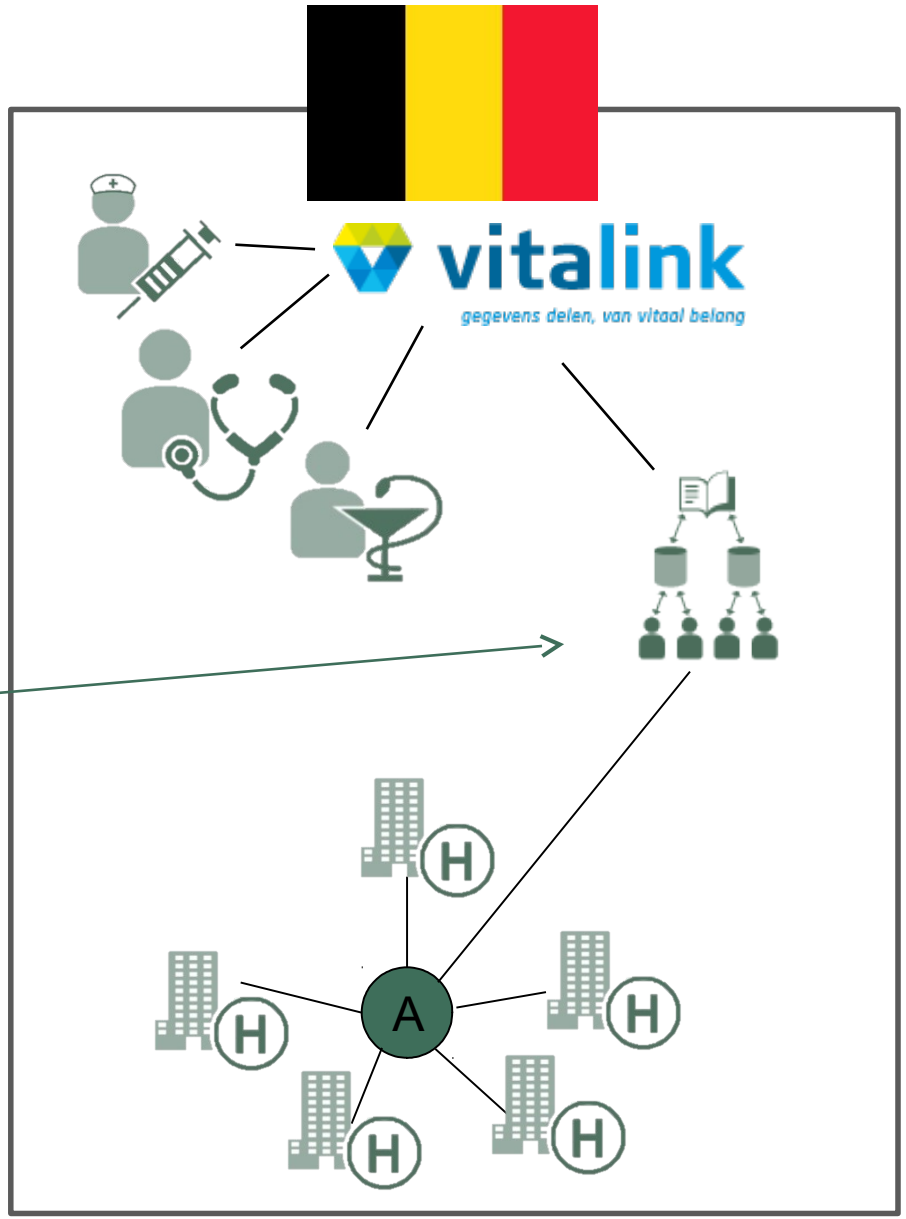
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gegevens delen, van vitaal belang
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Basic requirements

- Correct identification of the patient
- Correct routing of information request
- Privacy and information security management
  - user and access management
  - end-to-end encryption
- Interoperability
  - technical
  - semantic

Mission of the Belgian eHealth platform

- How?
  - through a well-organised, mutual electronic service and information exchange between all actors in health care
  - by providing the necessary guarantees with regard to information security, privacy protection and professional secrecy

- What?
  - optimisation of health care quality and continuity
  - optimisation of patient safety
  - reduction of administrative burden for all actors in health care
  - thorough support of health care policy and research

10 Tasks

- Development of a vision and of a strategy for eHealth
- Organization of the cooperation between all governmental institutions which are charged with the coordination of the electronic service provision
- The motor of the necessary changes for the implementation of the vision and the strategy with regard to eHealth
- Promoting and coordinating programmes and projects

10 Tasks

- Determination of functional and technical norms, standards, specifications and basic architecture with regard to ICT

- Registration of software for the management of electronic patient files

- Managing and coordinating the ICT aspects of data exchange within the framework of the electronic patient files and of the electronic medical prescriptions

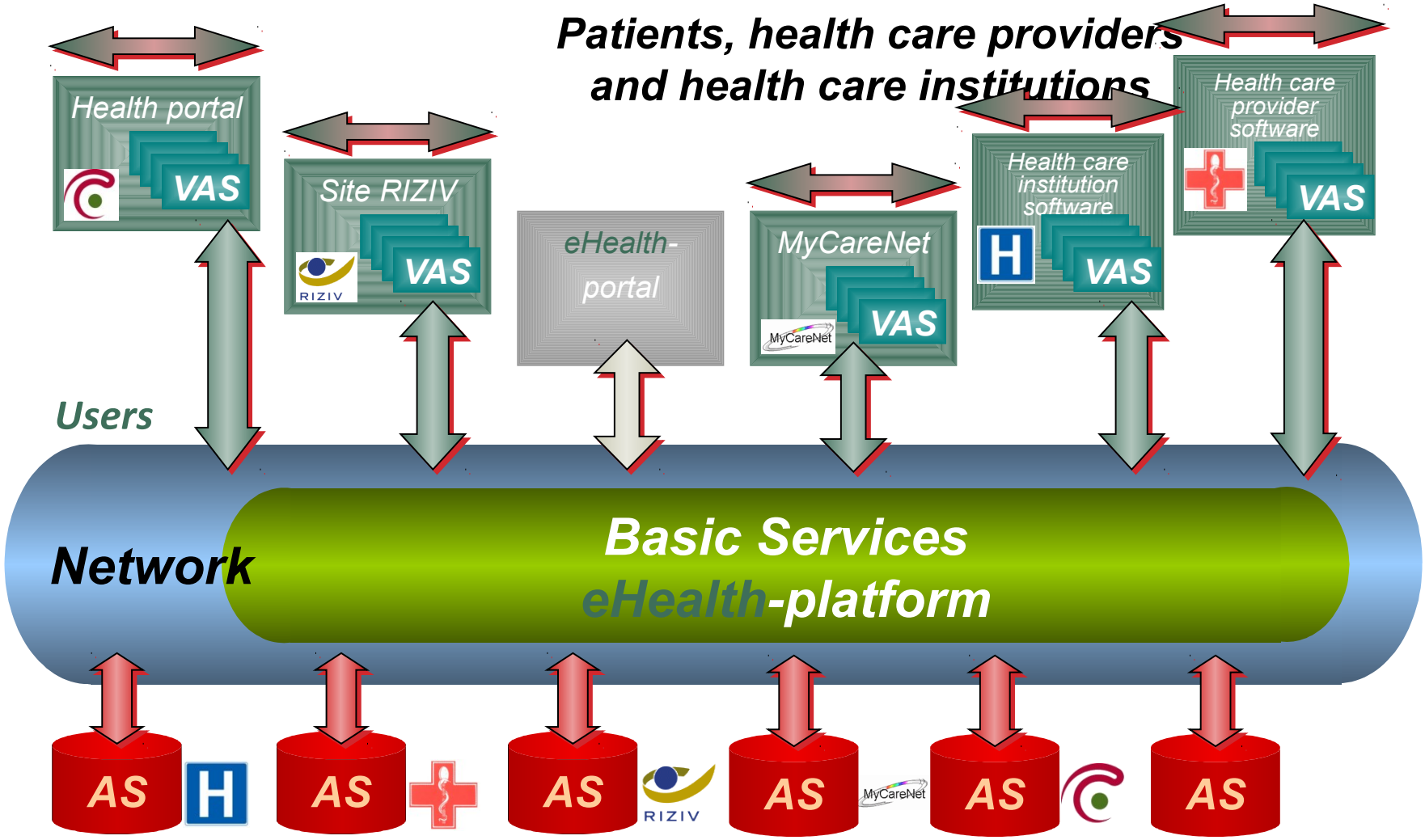
10 Tasks

- Conceptualization, design and management of a cooperation platform for secure electronic data exchange with the relevant basic services

- Reaching an agreement about division of tasks and about the quality standards and checking that the quality standards are being fulfilled

- Acting as an independent trusted third party (TTP) for the encoding and anonymisation of personal information regarding health for certain institutions summarized in the law for the support of scientific research and policymaking

Basic Architecture



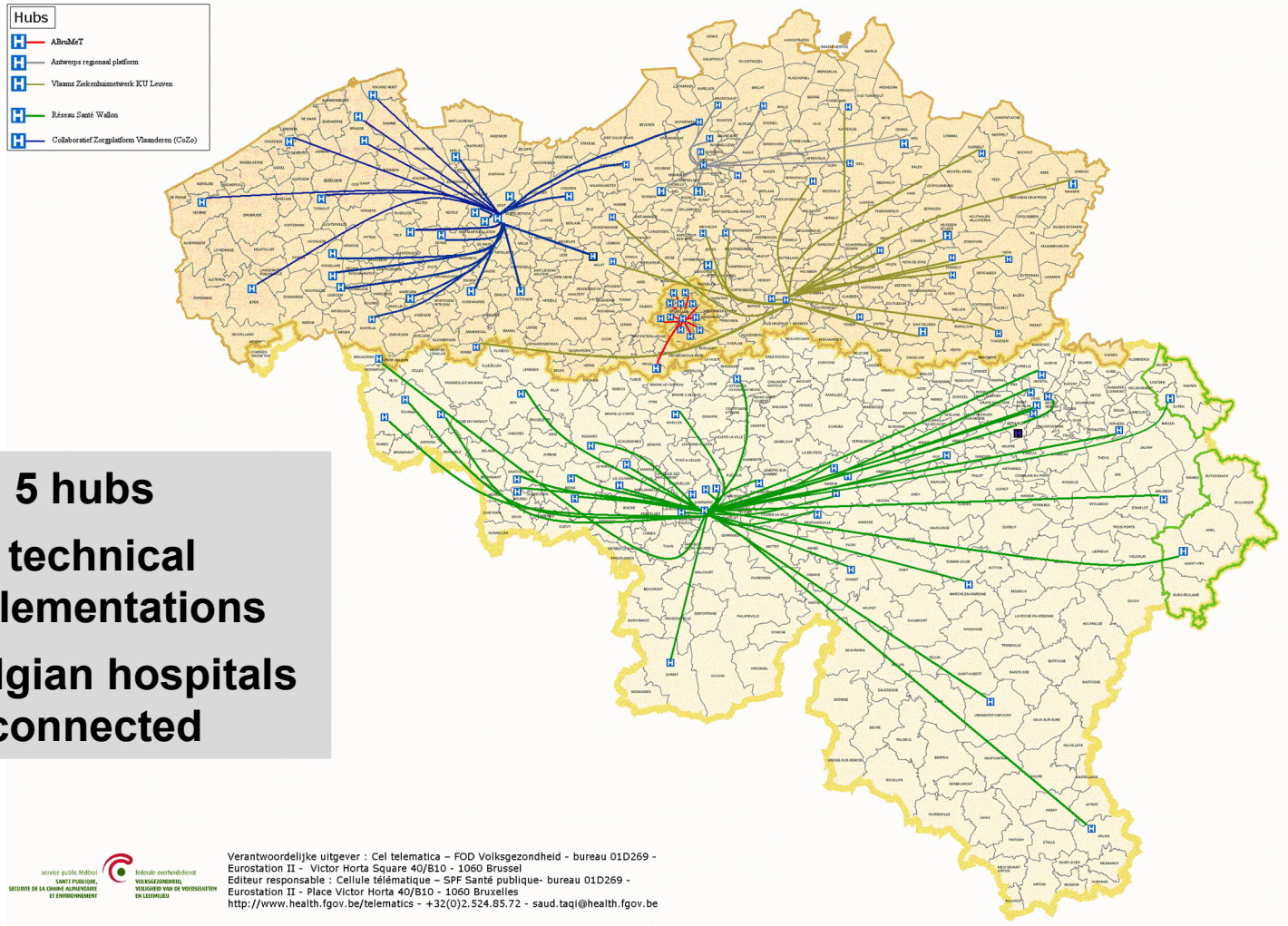
10 Basic services

- Coordination of electronic sub-processes
- Portal
- Integrated user and access management
- Logging management
- System for end-to-end encryption
- eHealthBox
- Timestamping
- Encoding and anonymization
- Consultation of the National Identification Registers
- Reference directory (metahub)

Identification of the patient

- Obligatory use of social security identification number (SSIN) in health sector
- Procedures are available in order to guarantee unicity of SSIN
- SSIN is available on electronic identity card or ISI+-card
- Link register is available in order to link the Belgian SSIN with identification numbers in other countries

Routing: hubs & metahub system



5 hubs

3 technical implementations

All Belgian hospitals connected

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federale overheidsdienst VOLKSGEZONDHEID, VEILIGHEID VAN DE VOEDSELKETEN EN LEEFMILIEU

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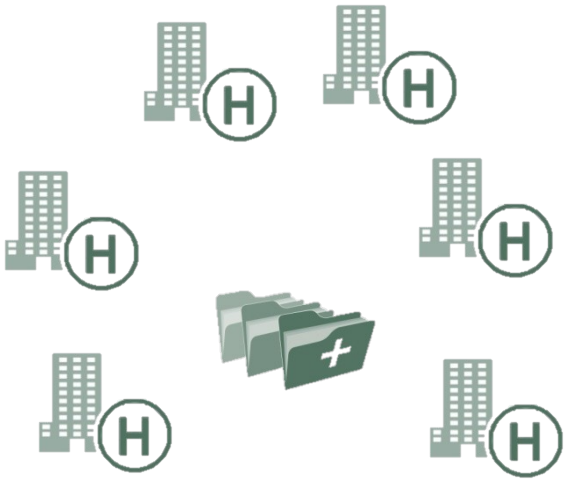
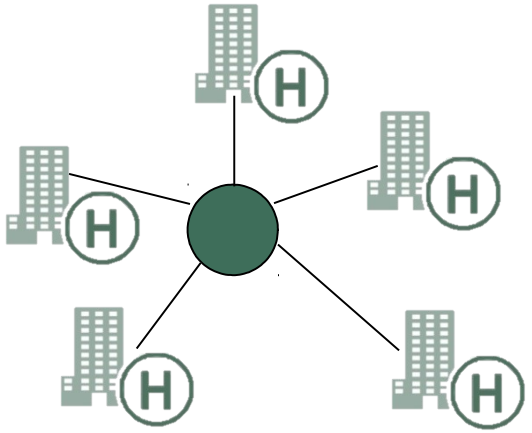
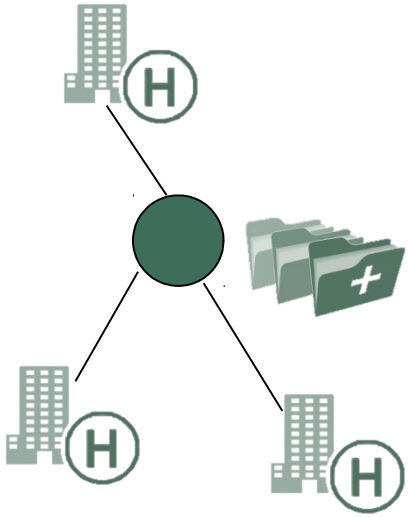
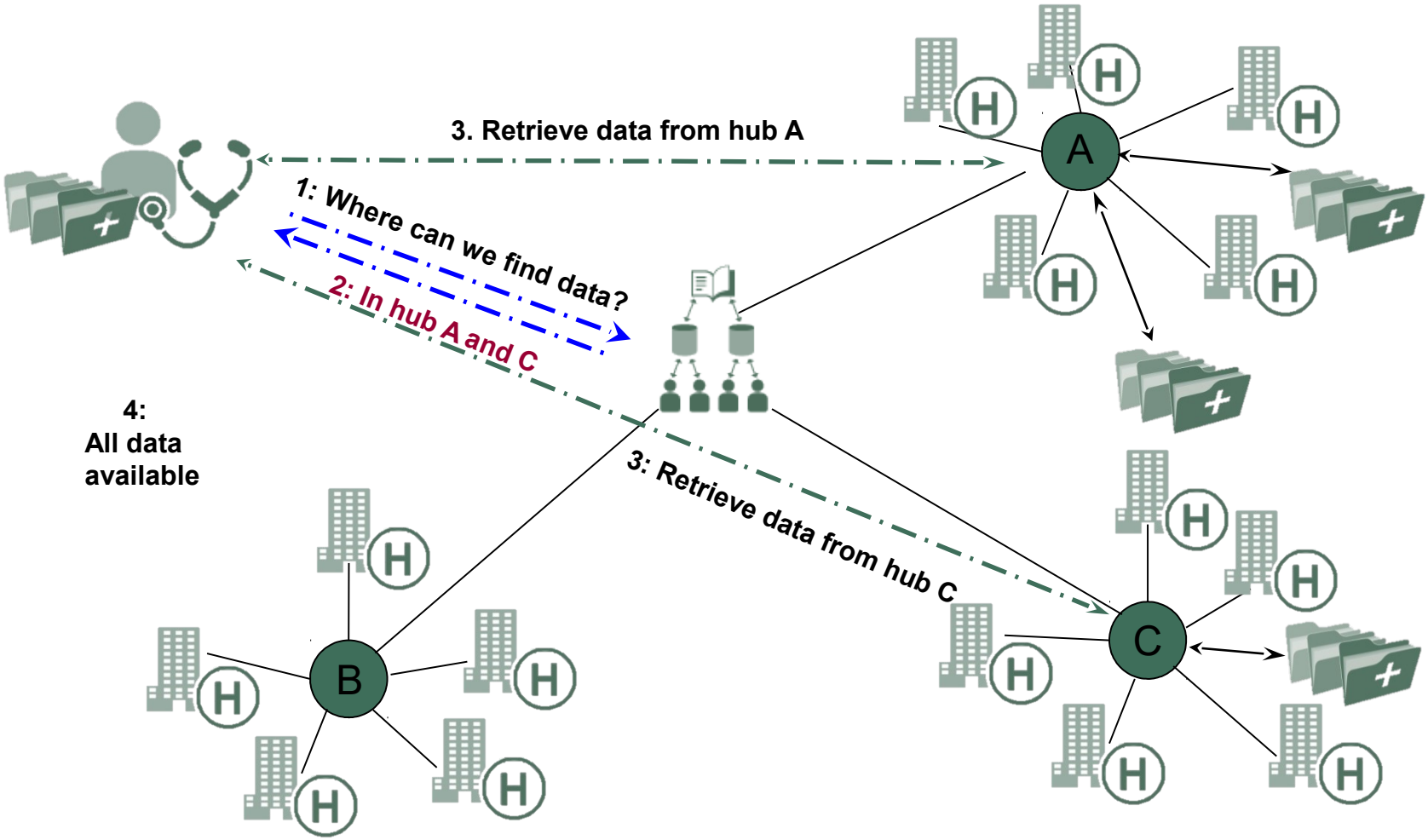
Hubs & metahub system before



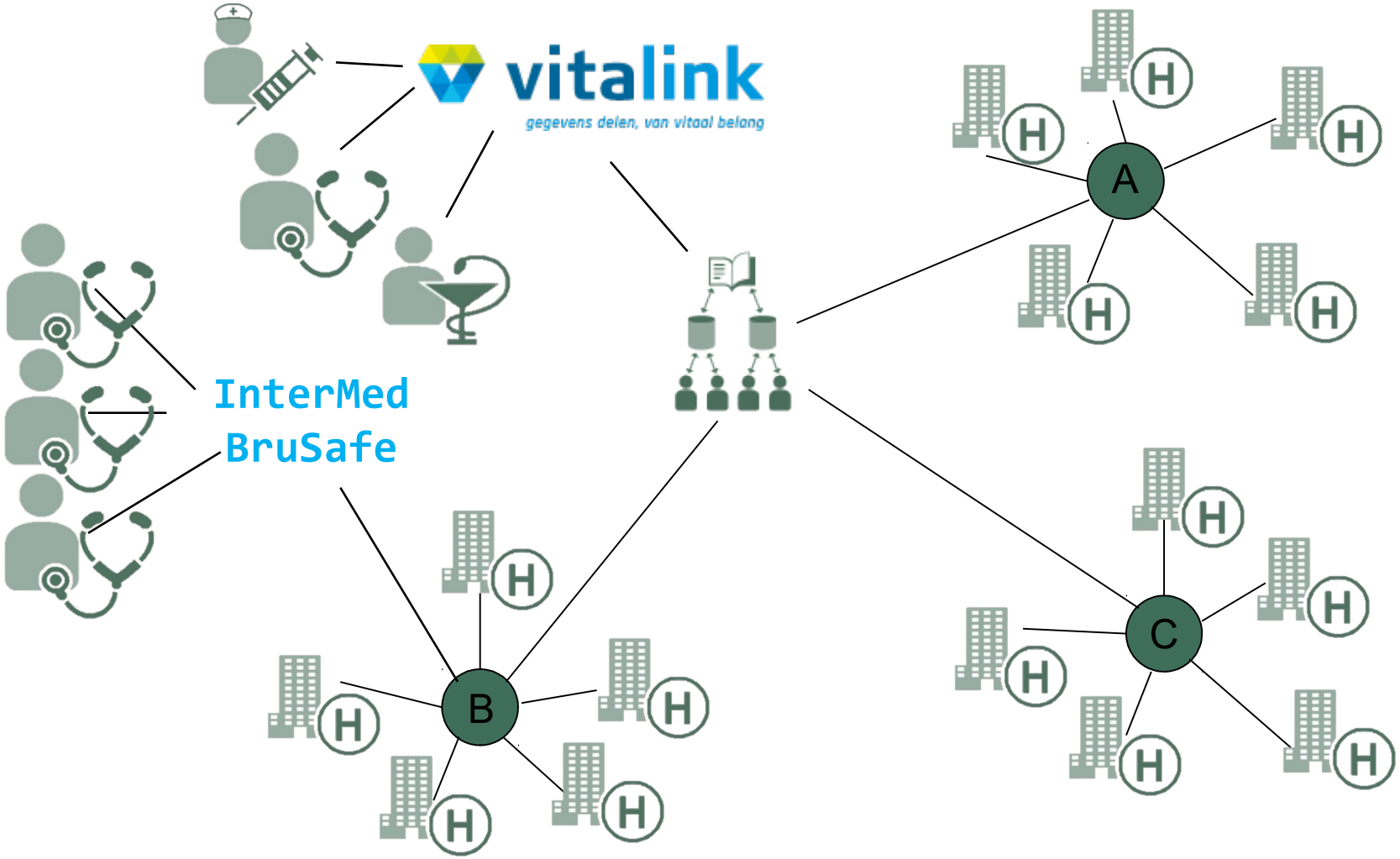




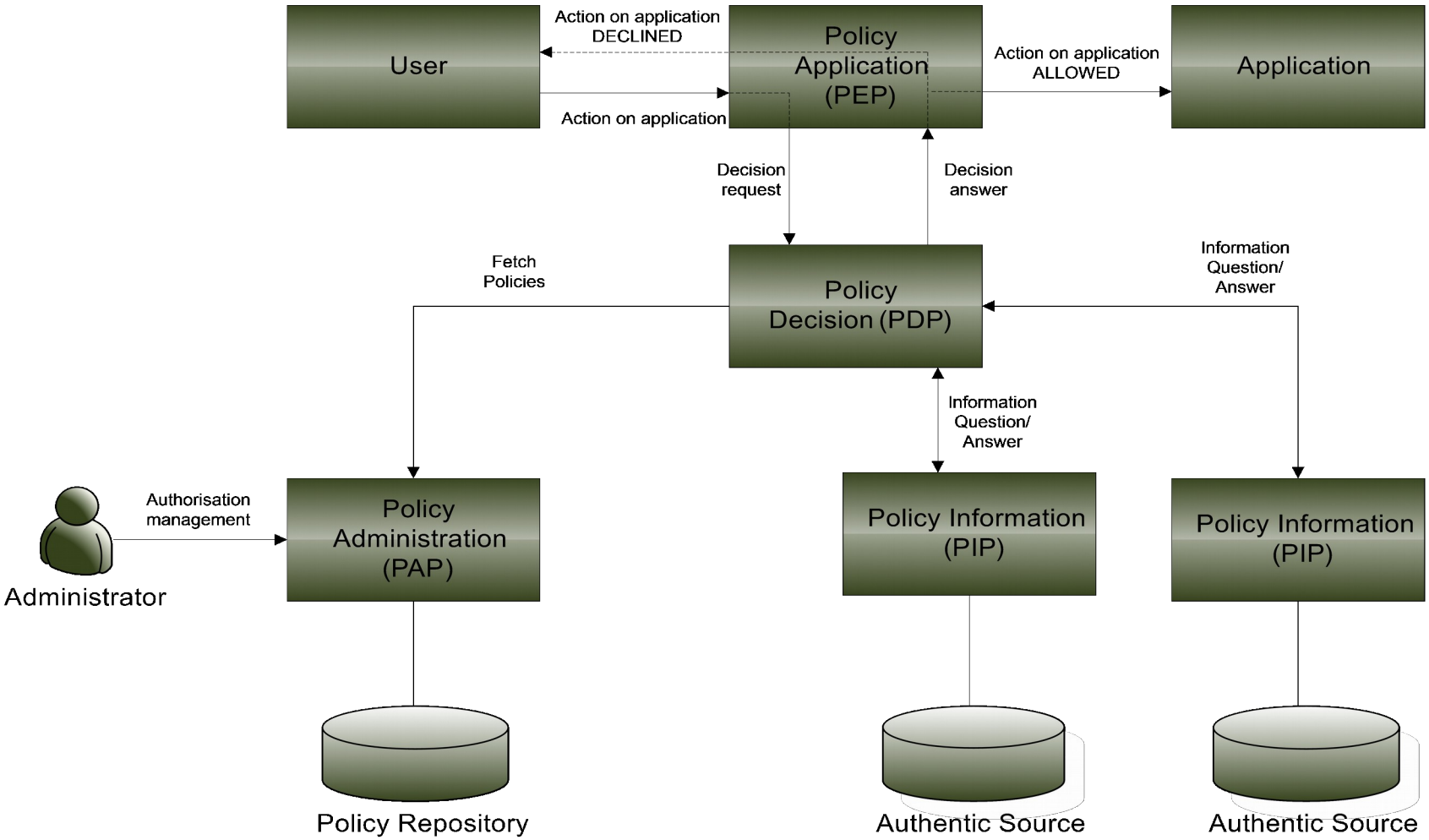
Hubs & metahub system today



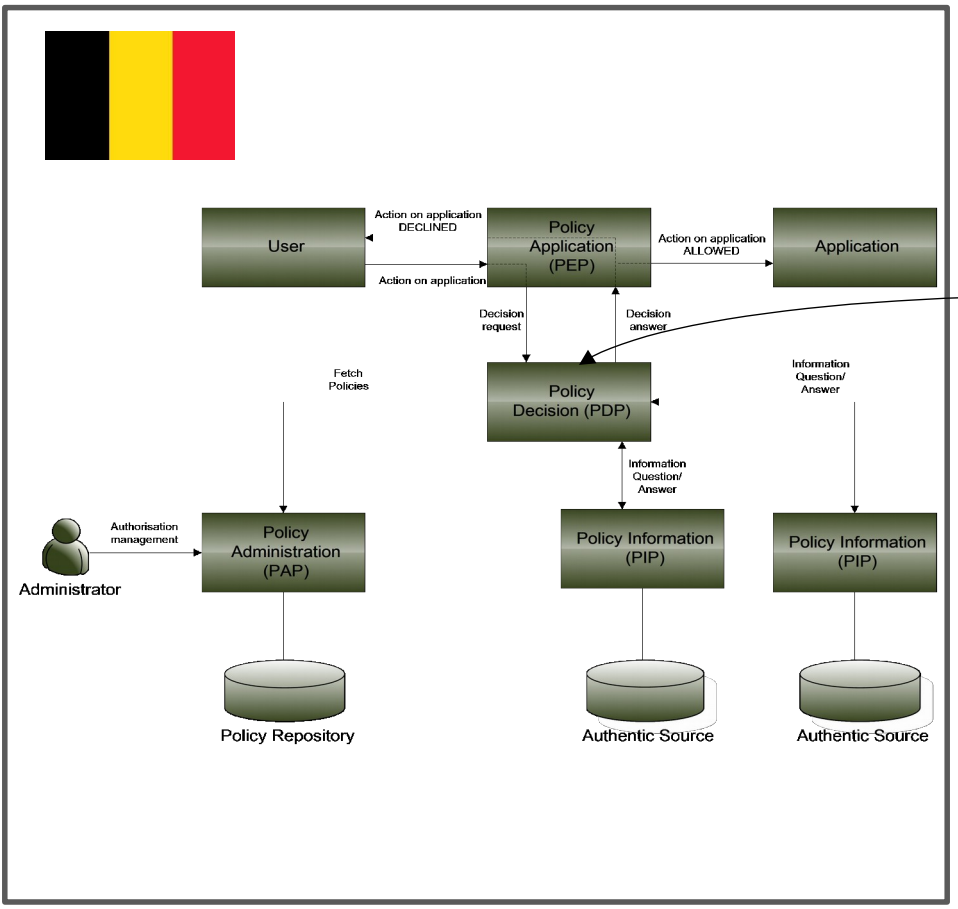
Extramural data

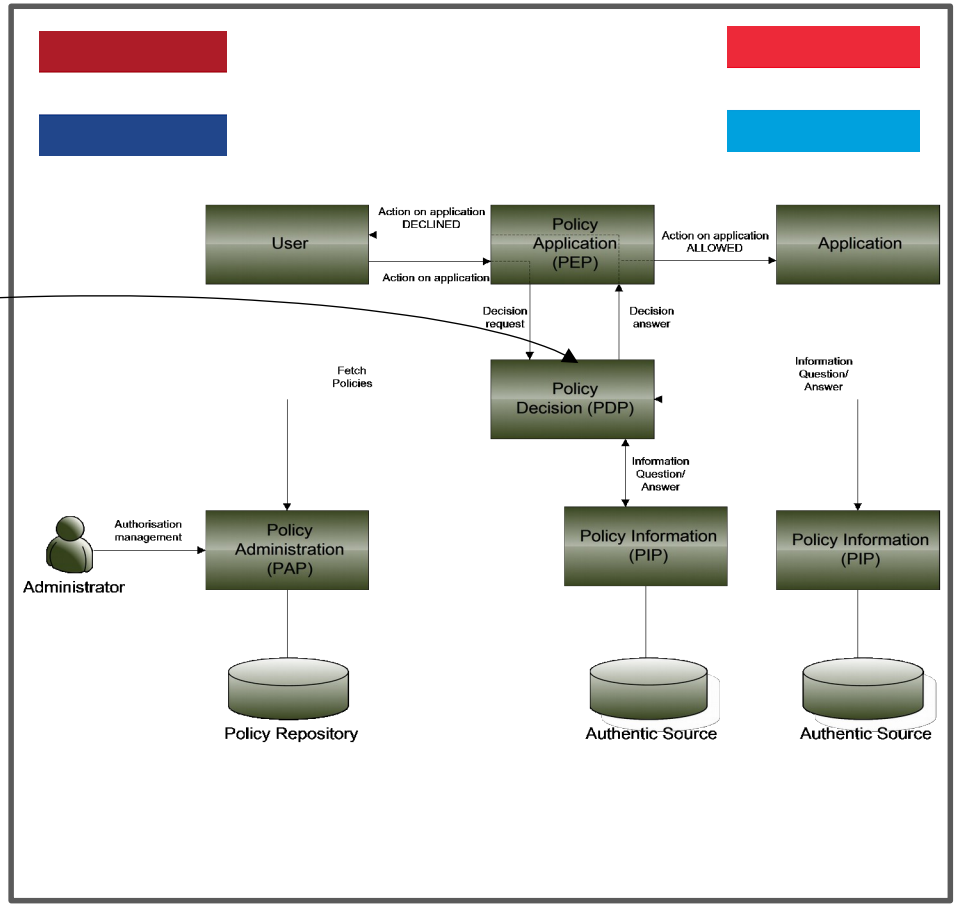


User and access management



User and access management

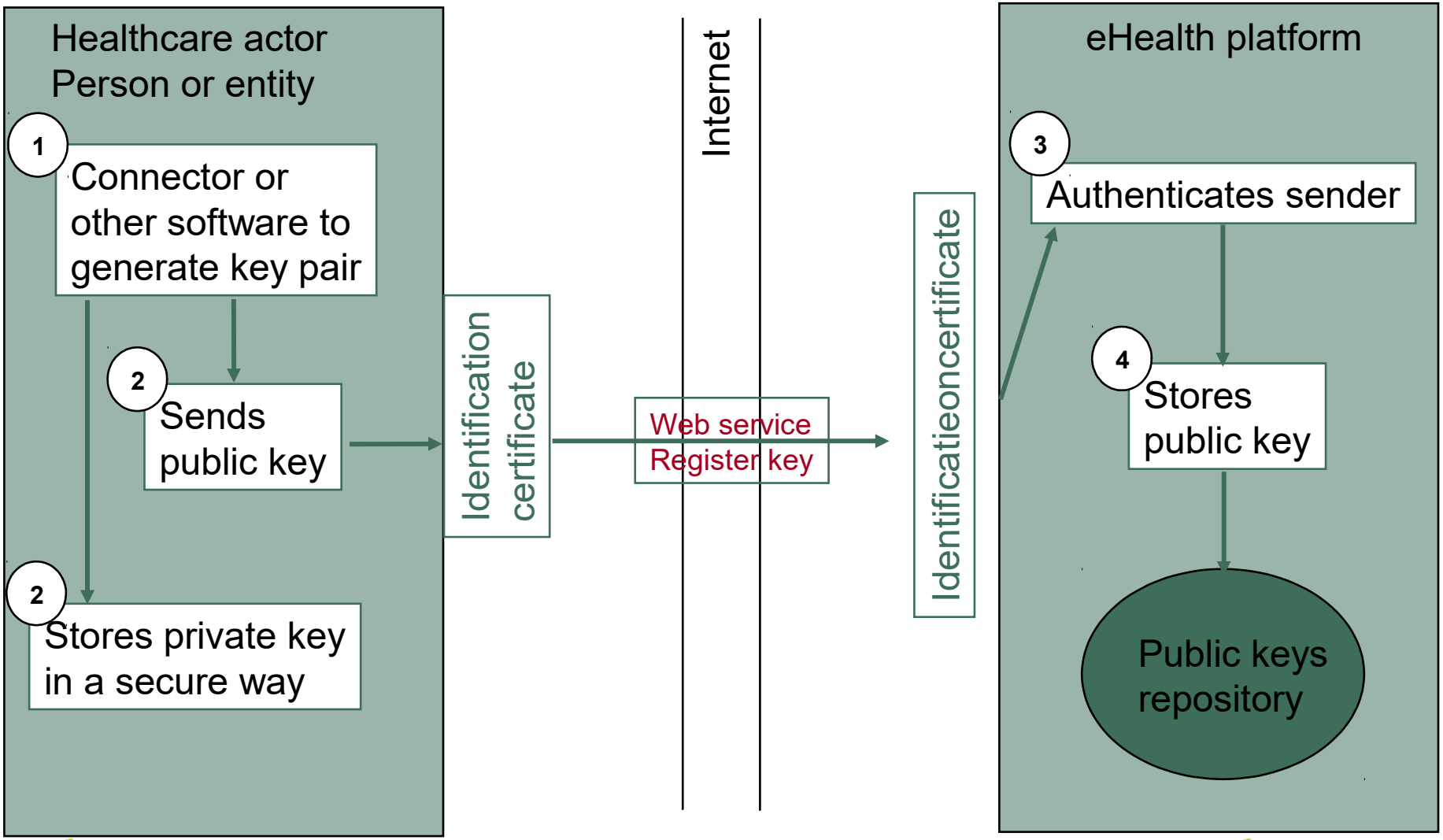




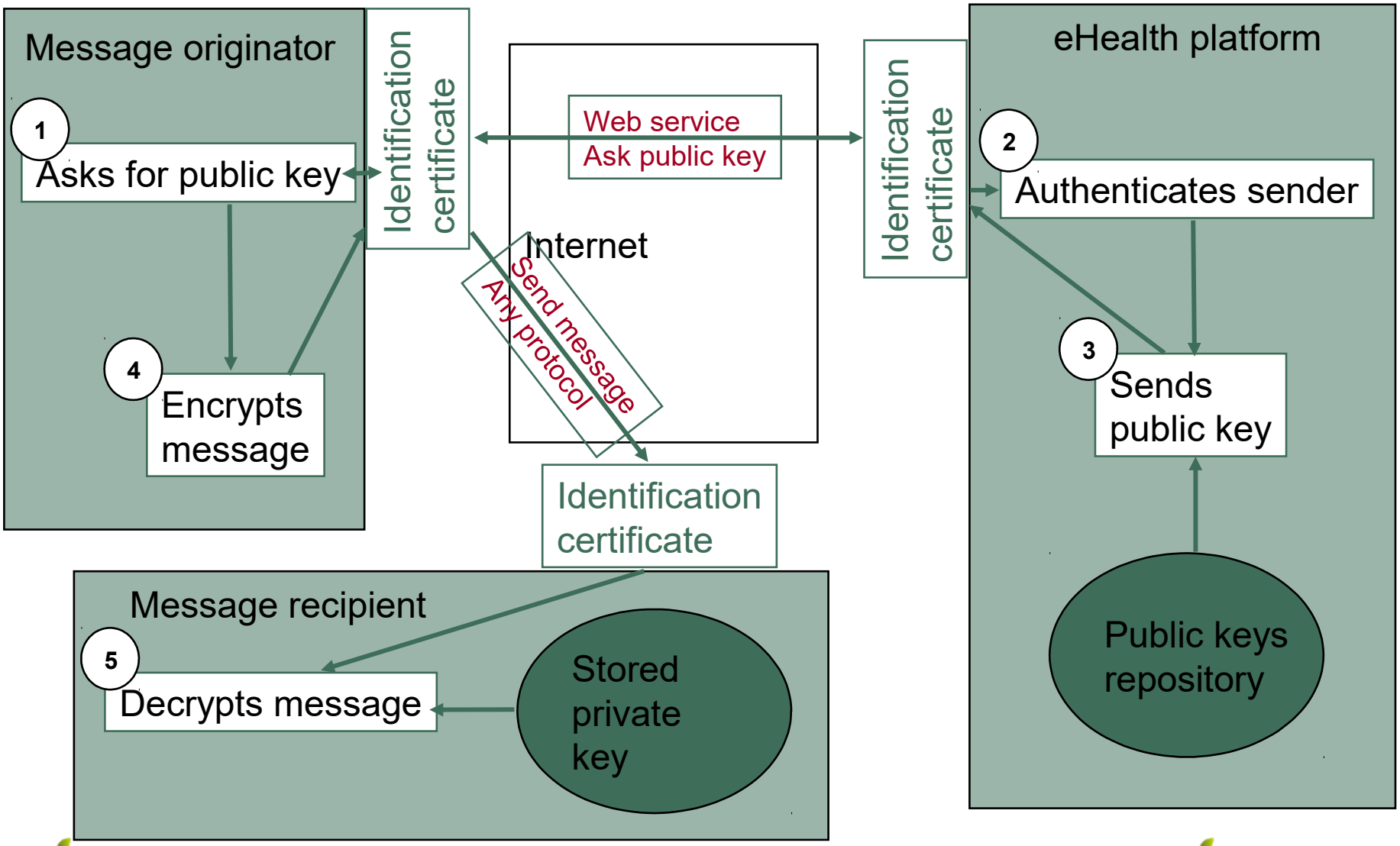
End-to-end encryption

- 2 methods:
  - In the case of a known recipient: use of an asymmetric encryption system (2 keys)
  - In the case of an unknown recipient: use of symmetric encryption (the information is encrypted and stored outside the eHealth platform; the decryption key can only be obtained through the eHealth platform)

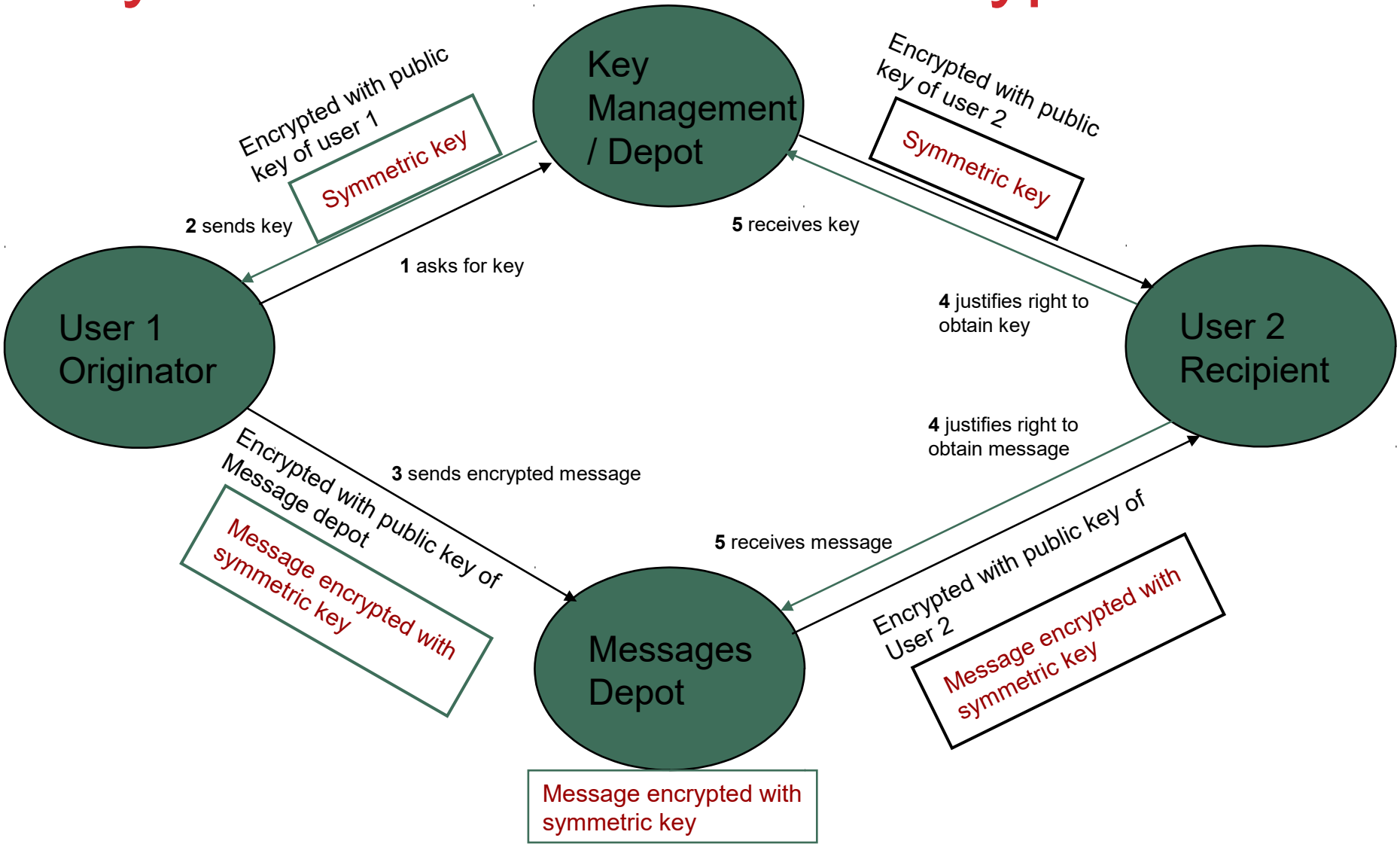
Asymmetric end-to-end encryption

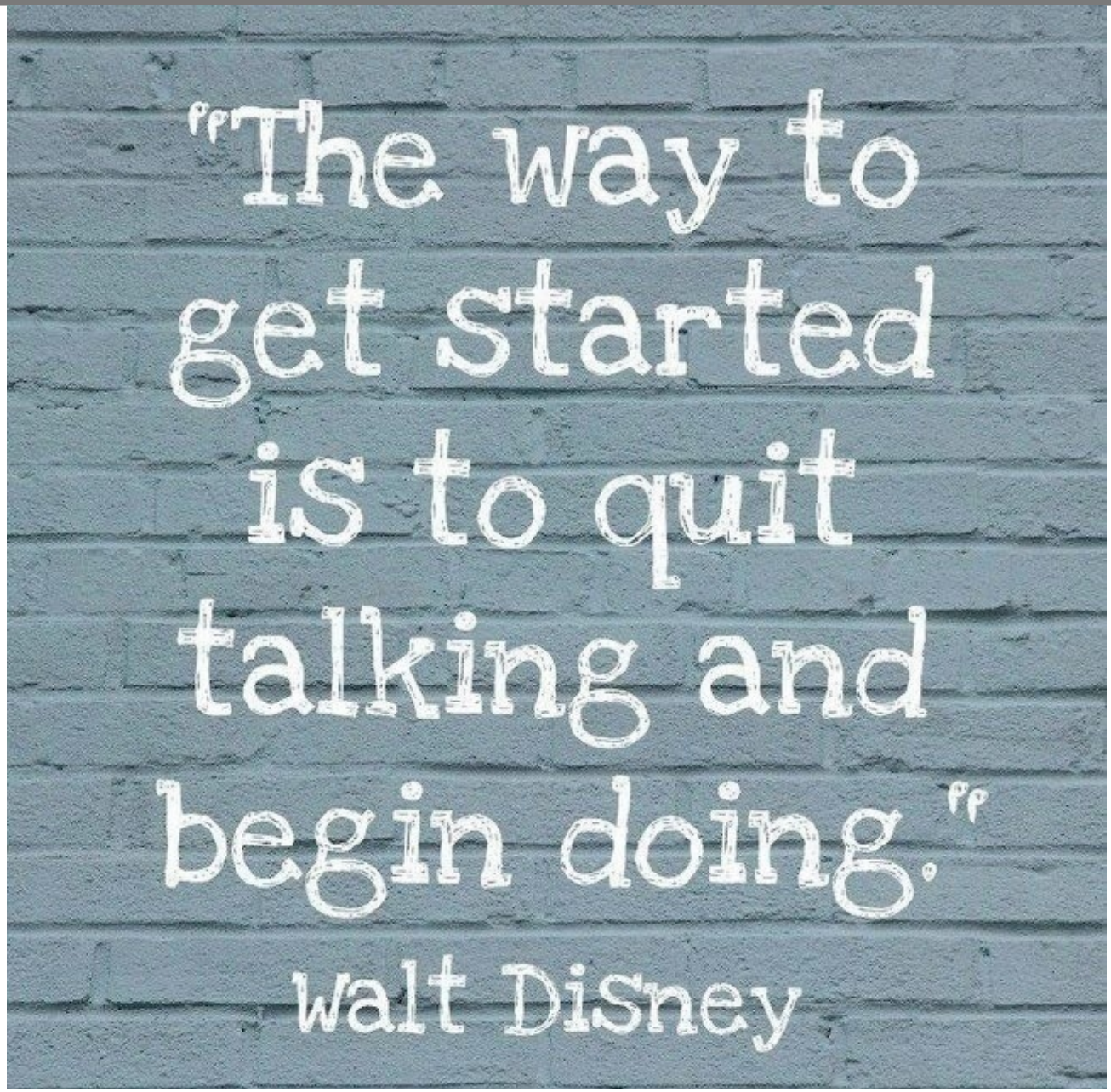


Asymmetric end-to-end encryption



Symmetric end-to-end encryption




"The way to get started is to quit talking and begin doing."
Walt Disney

Thank you !
Any questions ?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