

# PROJECT VITALINK

E-HEALTH EVOLUTION IN FLANDERS

7/12/2016

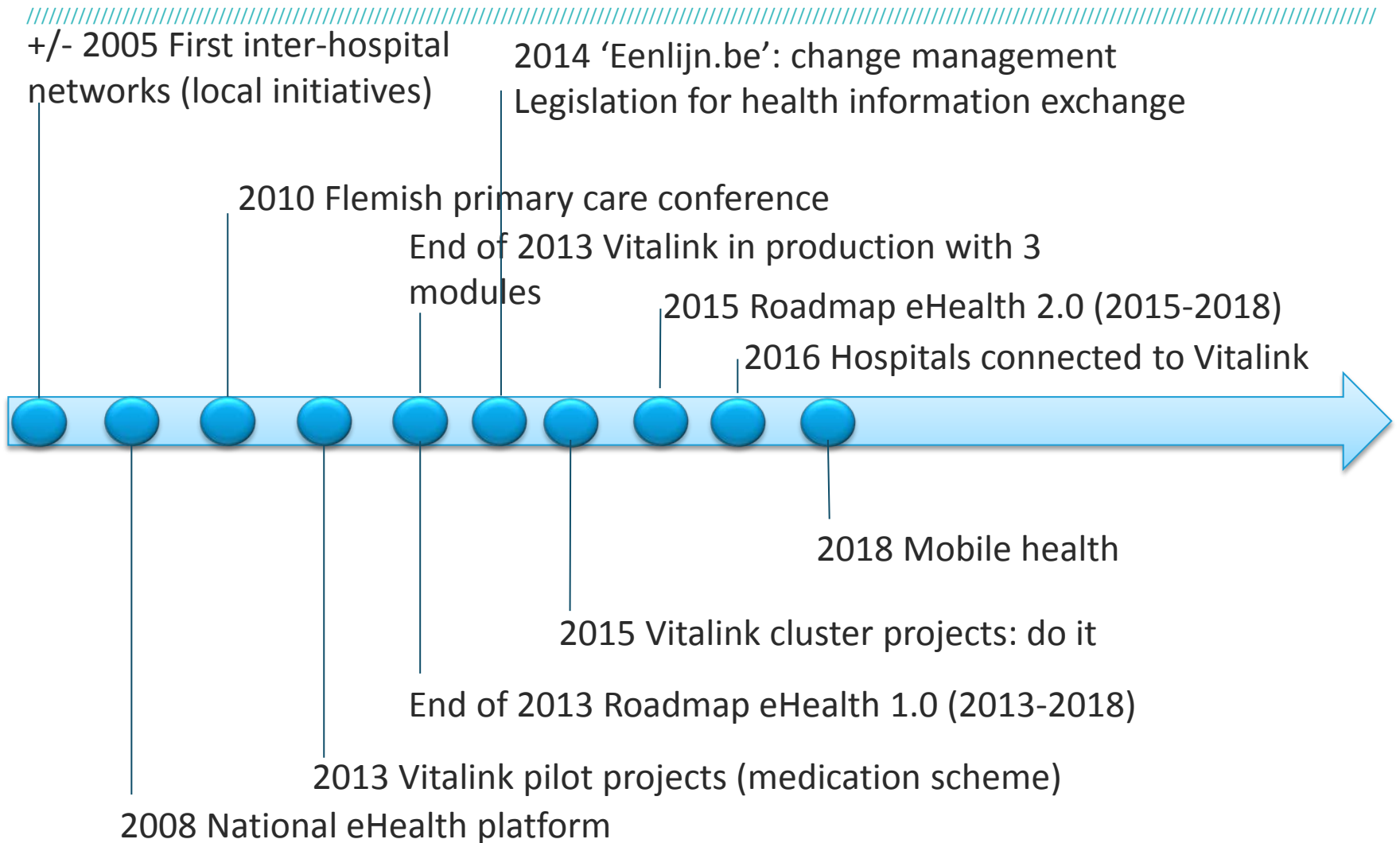
Dominique Dejonckheere

Director ICT



**Vlaanderen**  
is zorg

# TIMELINE



# TIMELINE: AROUND 2005



- > Around 2005: Creation of the first inter-hospital networks
  - Local initiatives
  - No connection between the different networks
  - Every network has own architecture and set of rules
  - Cultural differences between regions about patient-centered primary care
    - Flemish Community: multidisciplinary collaboration of primary care-actors
    - French Community: hospital managed care with important role for general practitioner



# TIMELINE: 2008



## > 2008: Creation of national eHealth platform

- Organise and support of the electronic data exchange between all health actors
- Guarantee the information safety and privacy of the patient and care taker

And thus:

- Optimise the quality and continuity of care
- Improve the patient safety
- Simplify administration for all health care actors
- Support the health policy

Offers services related to encryption and communication via a safe mailbox, electronic certificates, user and access management, time stamping...



# TIMELINE: 2010



- > 2010: Flemish conference on the priorities of primary health care
  - Bottom-up approach
  - Primary health care actors express the need for better cooperation and for a safe system of data sharing
  - Also clear need for interdisciplinary cooperation, also between health and care
  - Patient centric approach
  - This results in the building of Vitalink



# WHY VITALINK?



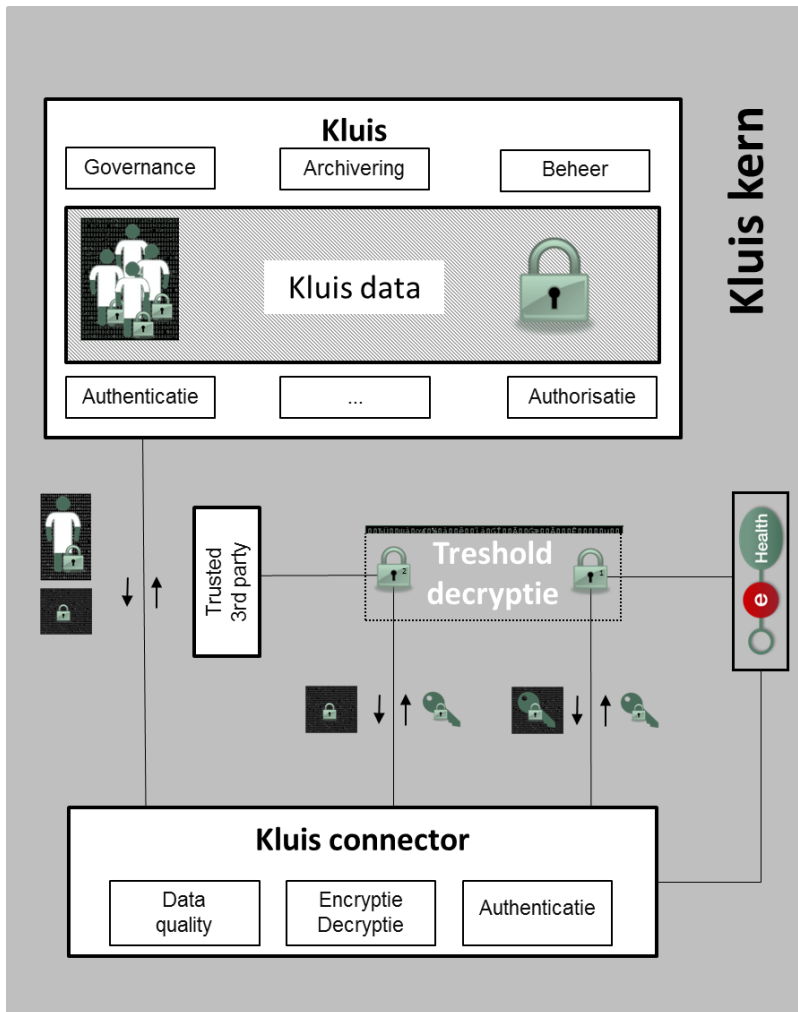
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- > Why? To safely share medical and welfare data that is NOT available 24/7
    - Between caretakers and patients
    - To improve the cooperation between care professionals
    - Focus on the primary care
    - Patient in a central position
  
  - > Actors in primary care have local records on their patients/clients
    - On their personal computers
    - Often not structured
    - Not designed to share with others
    - No culture of sharing and collaboration

# CORE CONCEPTS OF VITALINK



- > Vitalink is a digital platform, not a software package (a Health vault)
- > Goal: better multidisciplinary cooperation and better care (guarantee continuity of care)
- > Data safety and privacy are crucial!
- > Vitalink is accessible through the familiar software of the healthcare provider
- > Patients can access their health data via a downloadable software application

# VITALINK ARCHITECTURE



- Double encryption, 2 keys
- Connector available for integration in software
  - Easier to integrate
  - Guarantees privacy by:
- Validation of therapeutic relation
- Validation of informed consent given by patient
- Enforces end-to-end encryption
- Uses strict authentication and authorisation rules
- Extensive logging



# VITALINK MODULES: MEDICATION SCHEME



Real multidisciplinary cooperation

GP's, pharmacists, midwives, dentists and nurses can view and edit medication schemes. Patients can only view information

Patient  
**Test Dum** **atient**  
 81062205558

Permanente geneesmiddelen					Ontbijt				Middagmaal				Avondmaal				Opmerkingen
Geneesmiddel	Frequentie	Begin	End	Inname/Eenheid	Ochtend	Voor	Tijdens	Na	Voor	Tijdens	Na	Voor	Tijdens	Na	Opmerkingen		
Atenolol TEVA 50mg 90 tabletten	Dagelijks	07/11/13			1										gebruik: bloeddruk		
Crestor 20 mg 98 tabletten	Dagelijks	22/11/13												1	gebruik: cholesterol instructie: @patiënt: steeds +/- op 't zelfde uur innemen! ook: eçaçü		
Ibuprofen EG 30 x 400mg	Dagelijks	22/11/13	27/11/13		! STOP !										opgeschort, reden: Tijdelijk niet innemen vanwege interactie met Y., auteur: arts GP Test, beslissing gemaakt op: 07/11/13		
MOXONIDINE 0,4 MG COMP PEL 1'00 X 0,4 M	Dagelijks	30/11/13					1								gebruik: bloeddrukverlager		
SOTALOL MYLAN 160 MG TABL 66X160MG	Dagelijks	07/11/13				1											
TRANXENE APS 100X10MG	Dagelijks	07/11/13 bij stop												1			
UNITRANXENE CAPS 30X15MG	Dagelijks	07/11/13	Op = stop											1			
Xylometazoline	Dagelijks	07/11/13													1 tussen het ontbijt en het middageten	gebruik: bloeddruk	
AXIDO NAT	Om de 2 dagen - dag 2	07/11/13		zakje(s)					1							instructie: oplossen in een glas water	

Goal: to give a realistic view on the real medication use of a patient

Tijdelijke geneesmiddelen					Ontbijt				Middagmaal				Avondmaal		Opmerkingen
Geneesmiddel	Frequentie	Begin	End	Inname/Eenheid	Ochtend	Voor	Tijdens	Na	Voor	Tijdens	Na	Voor	Tijdens	Na	
IRADIANIN CAPS 50X10MG	Dagelijks	07/11/13	16/11/13						2					2	
LASIX COMP 12 X 40 MG	Wekelijks - ma, wo, vr	07/11/13					1								gebruik: vochtopstapeling
Medrol tab 30x 4mg	dag 1, dag 2, dag 3, dag 4, dag 5, dag 6, dag 7, dag 8	07/11/13						1			1			1	

# VITALINK MODULES: SUMEHR



- 
- > Summarised Health Record of the GP
  - > Every GP must be able to create and consult this document
  - > Is integrated in the software package of the GP

# VITALINK MODULES: VACCINATIONS



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## > Daily update from Vaccinnet to Vitalink

- Vaccinnet is system for ordering vaccines linked to an operational vaccination registration
- Integrated with GP's software
- Accessible for all vaccinators to improve the quality of the vaccination program and raise new possibilities for its evaluation
- In production since 2005
- By 2010: Registration bij GP's, paediatricians, well-baby clinics and school medicine: 90% of all yearly given vaccinations for child vaccinations (0-18 y/o) registered.
- Mandatory registration for child vaccinations since 2015.
- Connected: 5450 GP's, 475 pediatricians, well-baby clinics, school medicine, travel vaccination, elderly care home...

## > Vitalink allows patients and other care professionals to access the vaccination data from Vaccinnet

# END 2013: FIRST NATIONAL EHEALTH ROADMAP



- > Agreement on common architecture and common set of rules for health data exchange in Belgium
- > Connection of primary care safes and hospital networks
- > Agreement on one common informed consent
- > Regions represented in national eHealth platform
- > eHealth manages the coding and data exchange standards
- > Roadmap is updated in 2015



# END 2013: VITALINK PILOT PATIENT EMPOWERMENT

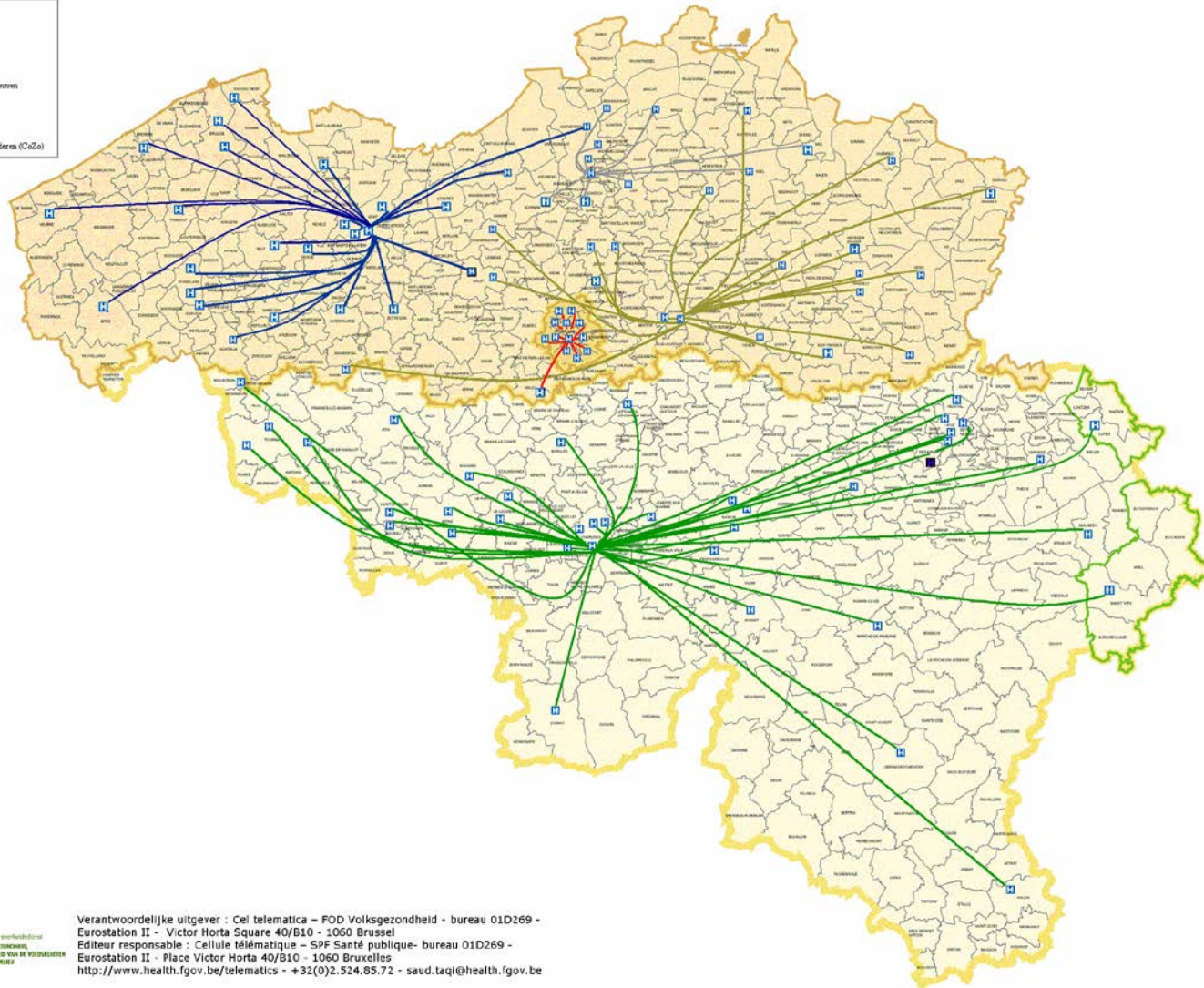


- > Vitalink pilot with 3 modules
- > Patients are able to access their Vitalink data online through the Patient Health Viewer
- > National roll out by eHealth of systems of informed consent and therapeutic link give patients the ability to control their data (September 2016: > 4.000.000 consents in Belgium)
- > National roll out by eHealth of a system of exceptions that gives patients the option to exclude individual health care providers from access to their data (September 2016: <10.000)
- > Log access in Vitalink: Patients can see online which care giver had access to his Vitalink data

# VITALINK WITHIN THE BELGIAN E-HEALTH LANDSCAPE



Hubs	
	AlbraMeT
	Aziërop's regionaal platform
	Vlaams Ziekenhuisnetwerk KU Leuven
	Réseau Santé Wallon
	Collaboratief Zorgplatform Vlaanderen (CoZo)



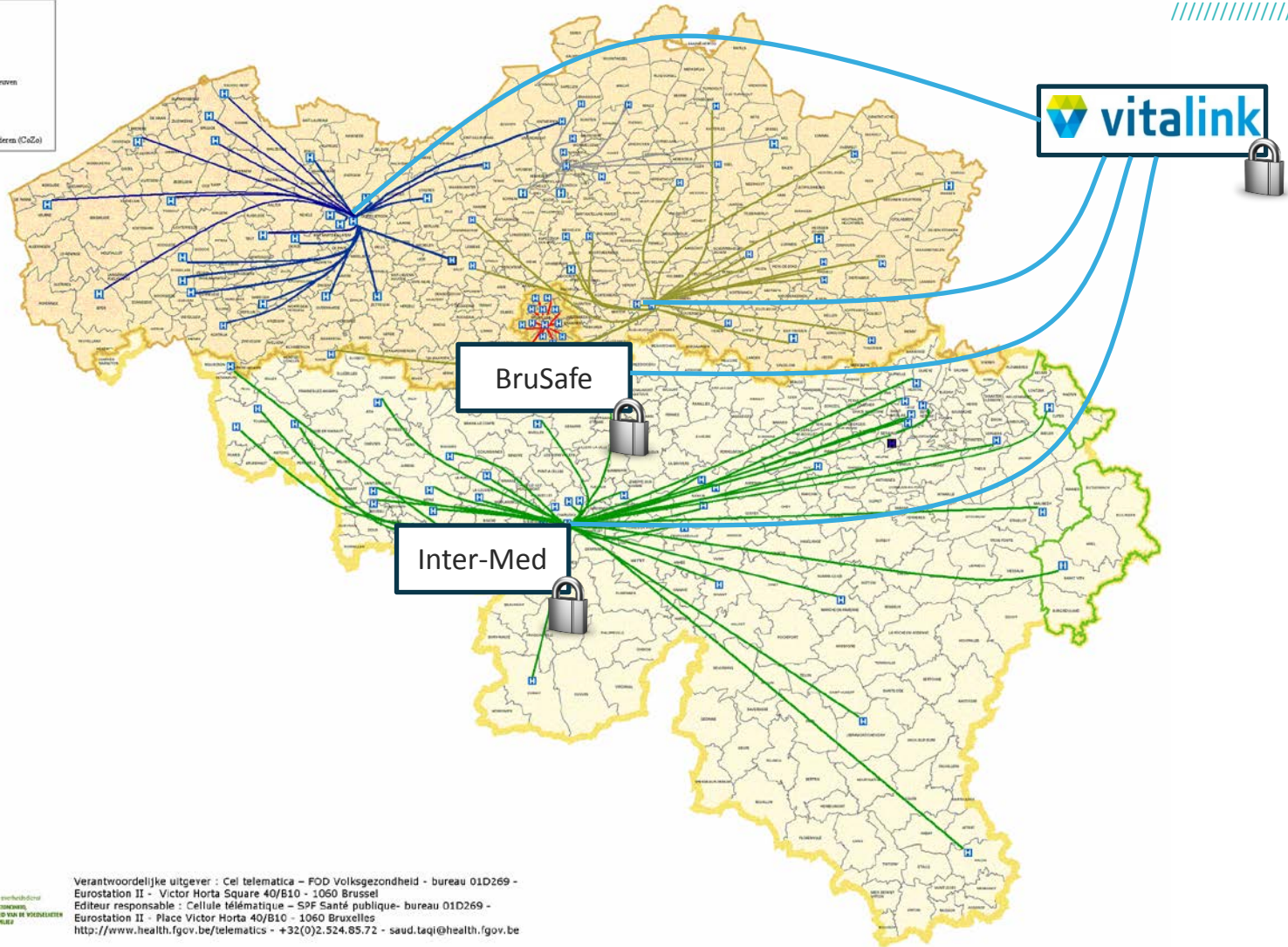
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 Eurostation II - Victor Horta Square 40/B10 - 1050 Brussel  
 Editeur responsable : Cellule télématicque – SPF Santé publique- bureau 01D269 -  
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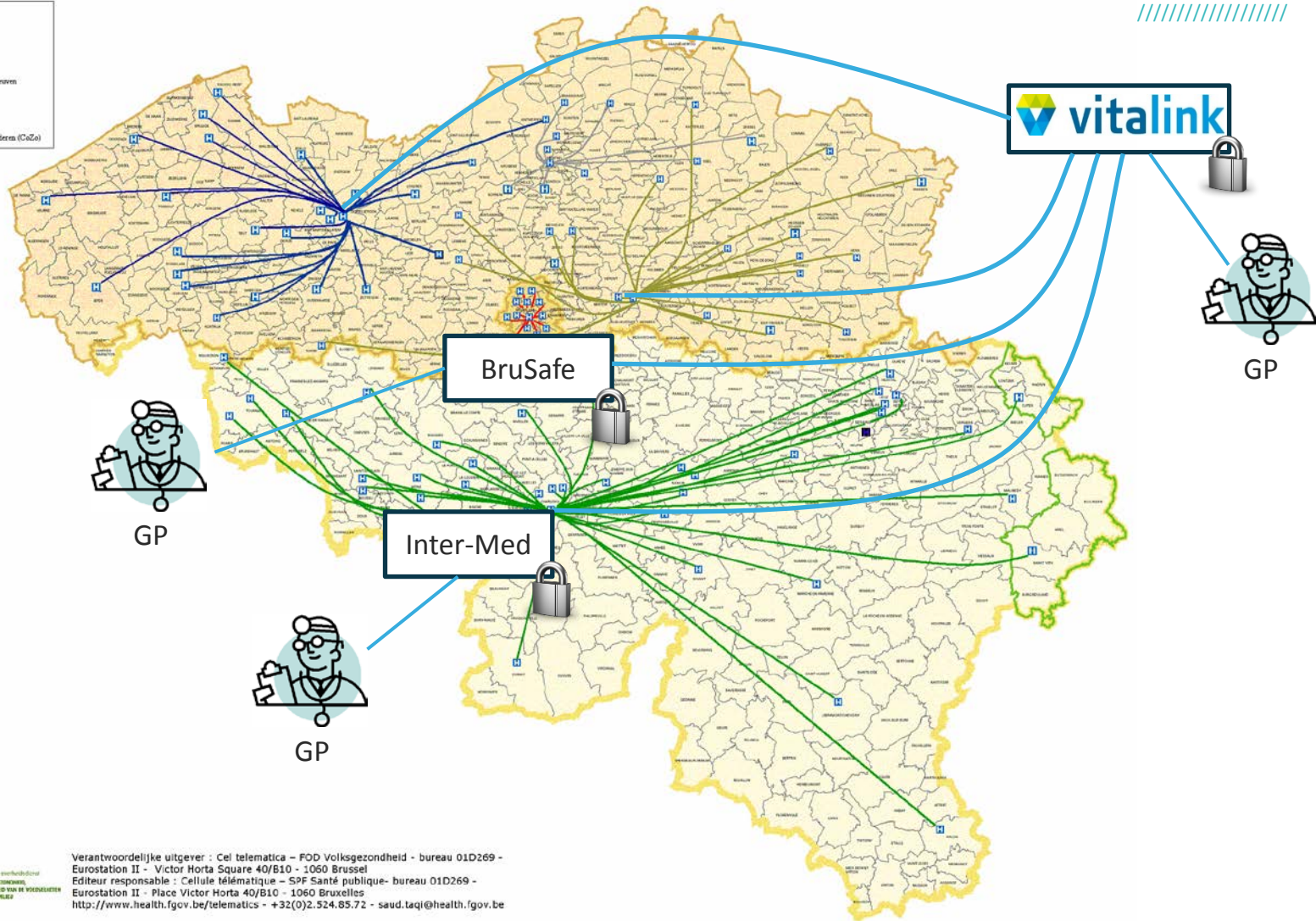
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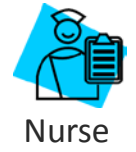
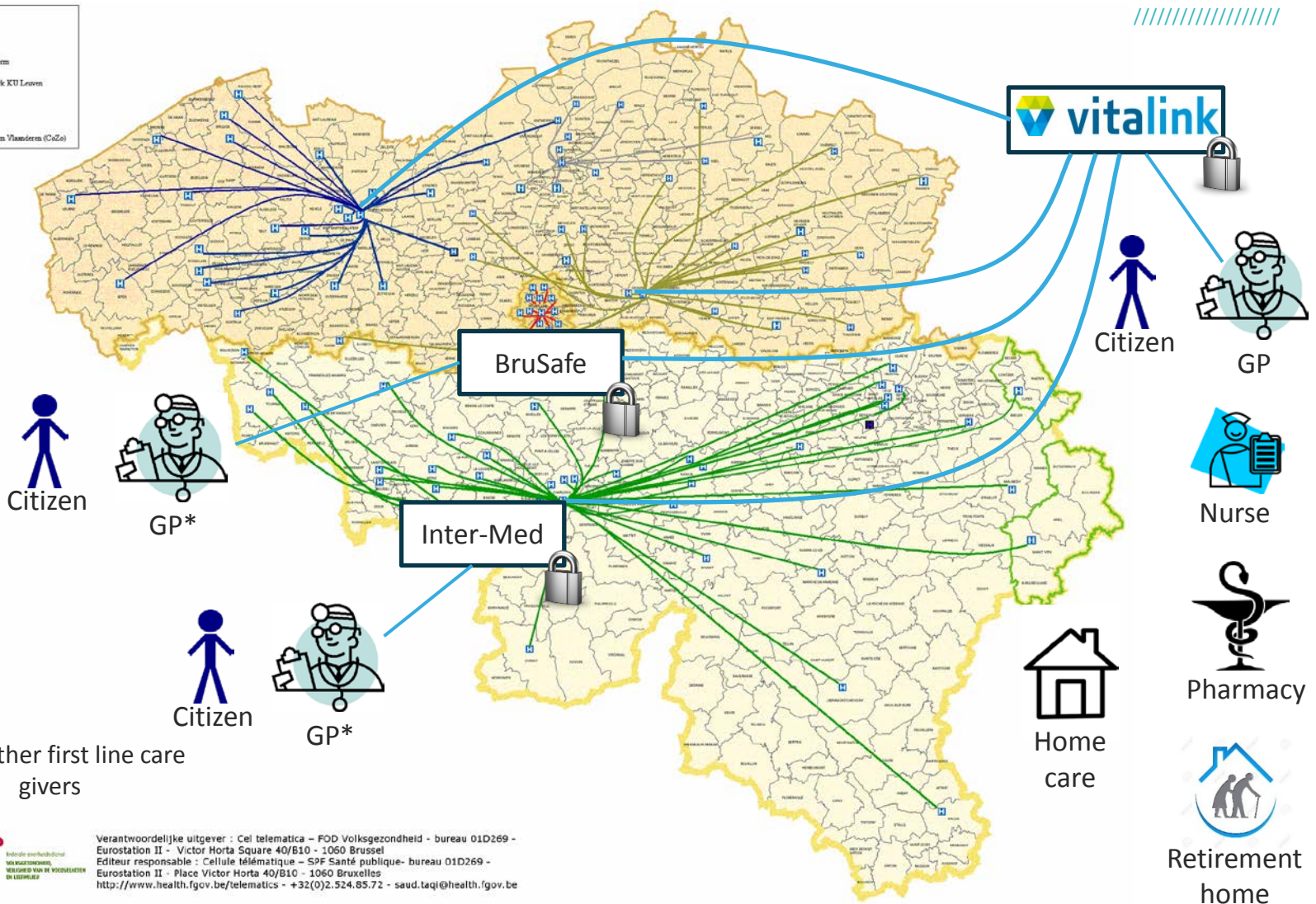




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Hubs	
	AltoMed
	Aziëtop regioaal platform
	Vlaamse Ziekenhuisnetwerk KU Leuven
	Réseau Santé Wallon
	Collaboratief Zorgplatform Vlaanderen (CoZo)



\* And other first line care givers



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# 2014-2015: CHANGE MANAGEMENT



## > 2014: creation of 'Eenlijn.be'

- Training and support for health care professionals
- Support on:
  - Collaboration
  - Data exchange
  - Structured data imputation in EHR
  - Use of existing e-health services

## > Legislation for health information exchange in Flanders

## > Start-up for a Flemish agency for collaboration and health information exchange

# 2014-2015: CHANGE MANAGEMENT



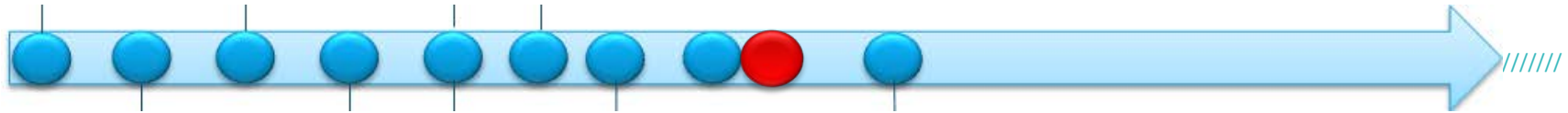
## > Cluster projects

- 100 clusters of minimum 1 GP and 1 pharmacy or nurse pledge to use the Vitalink medication scheme on common patients
- Clusters get support from 'Eenlijn.be'
- Goal: real use of Vitalink in the field

## > **New Vitalink modules** built in 2015 available in 2016:

- Well-baby clinic summary available for school medicine care professionals and parents
- Cancer screening results are available for patients

# 2016: HOSPITALS CONNECTED TO VITALINK



## > Via the hubs

- All the hospital hubs are now connected to Vitalink
- Most of the Belgian hospitals should be able to consult data in Vitalink

## > Direct integration of Vitalink in hospital software:

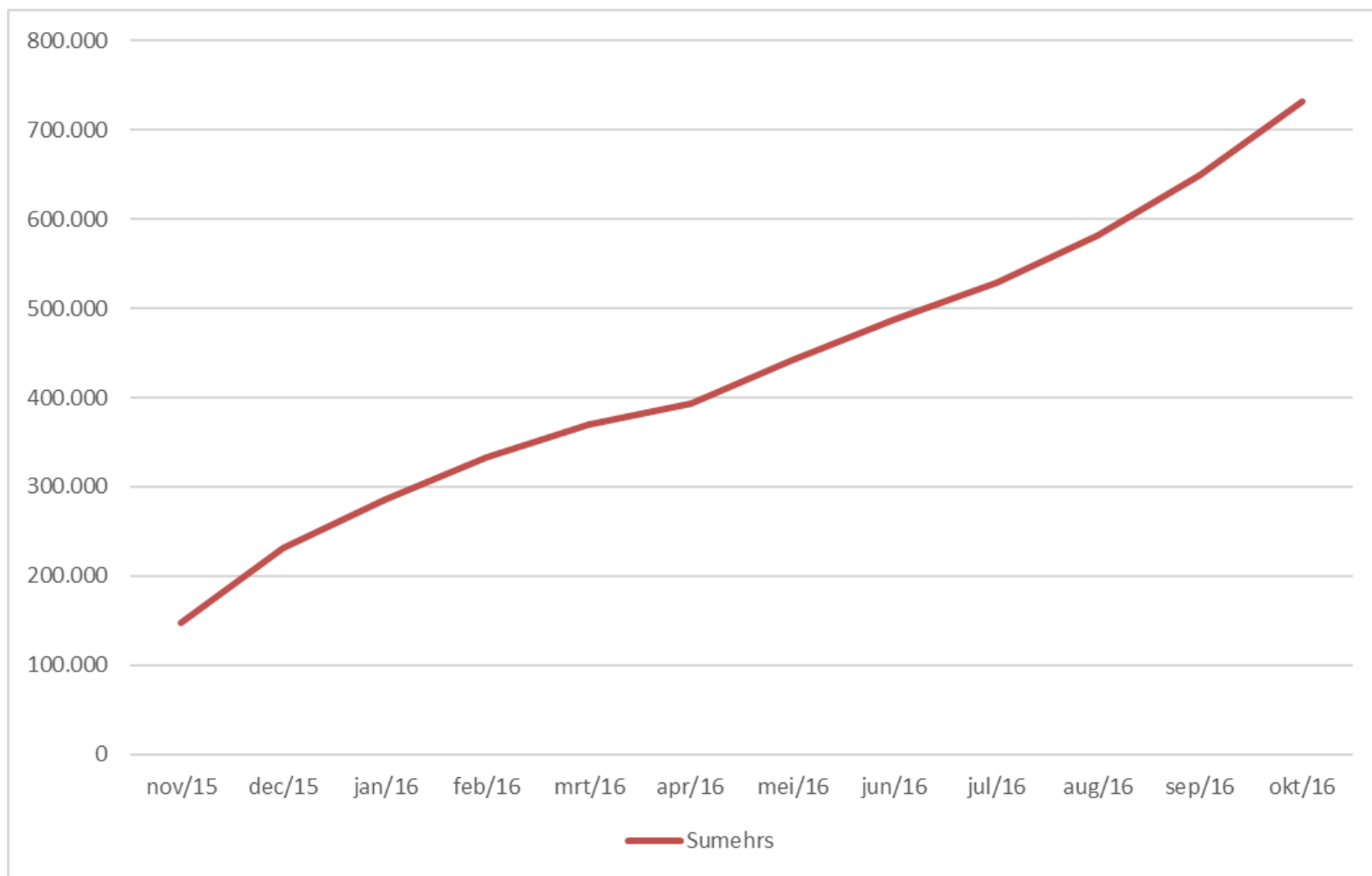
- 25 hospitals today
- In near future will those hospitals be able to update information in Vitalink

# VITALINK IN 2016 (OCTOBER)

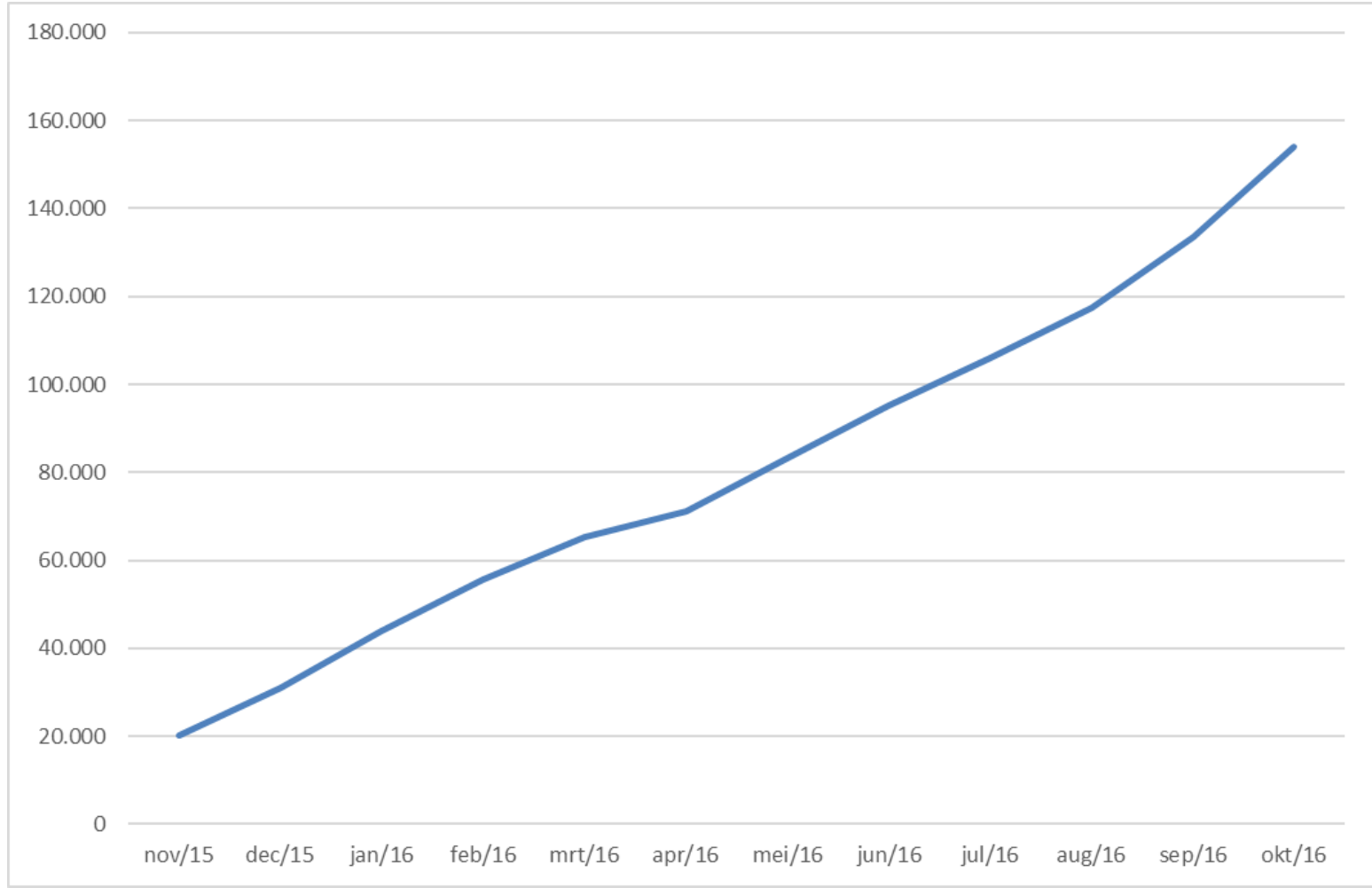


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- > Constant surge of the numbers of citizens with health data in Vitalink: 5,5 million citizens by today!
  - > GP's: every month more GP's are working with Vitalink, entering more data for more patients using more and better software packages
  - > More than 1.500.000 record Vitalink consultations & 1.000.000 updates per month .
  - > All Belgian hospital networks are now connected with Vitalink = connection between primary care & second line: 300.000 consultations
  - > Evolution: Design of a new technical architecture for Vitalink that will make mobile acces & health apps possible in the future

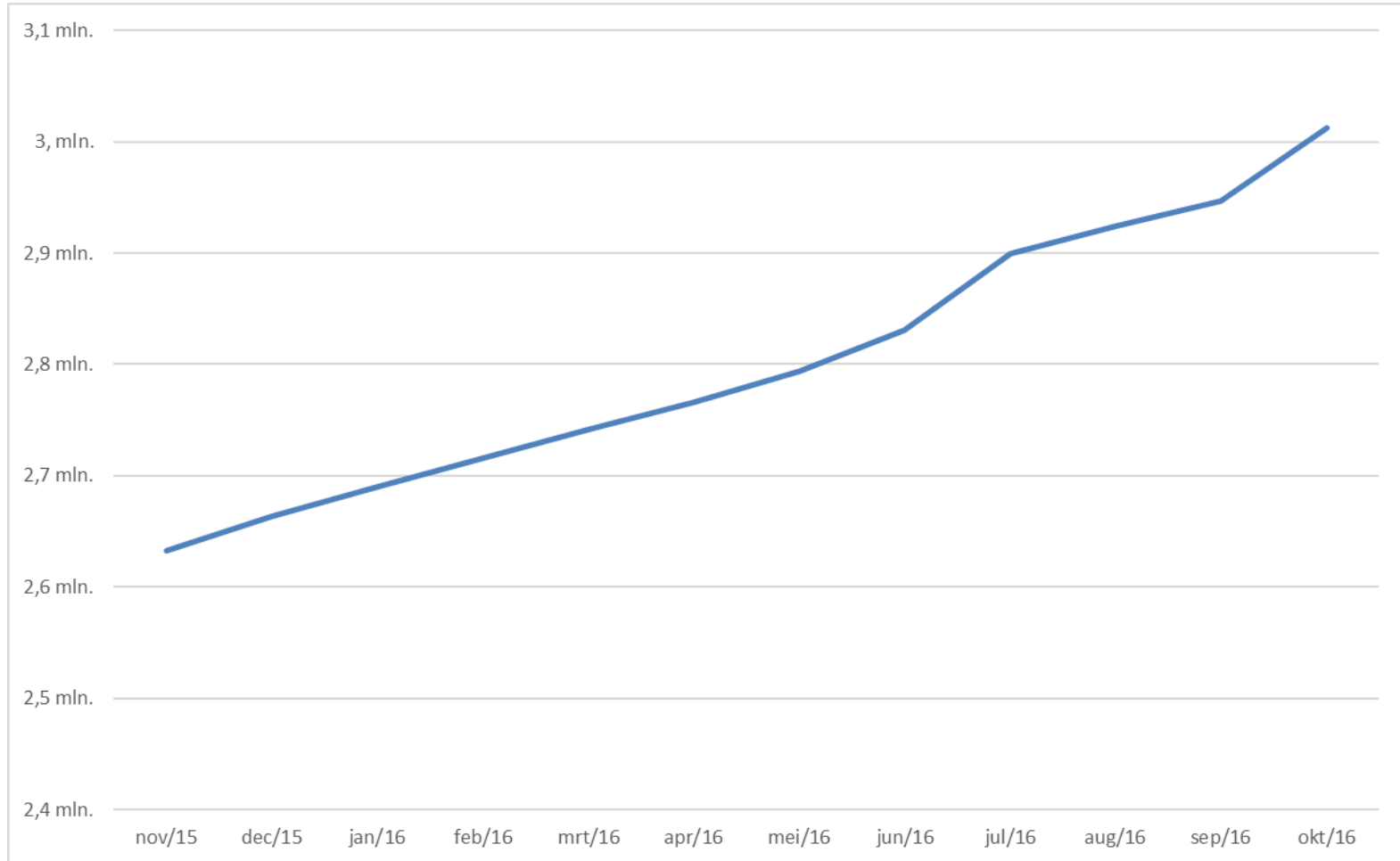
# VITALINK: NUMBER OF PATIENTS WITH A SUMMARIZED ELECTRONIC HEALTH RECORD



# NUMBER OF PERSONS WITH A MEDICATION SCHEME IN VITALINK

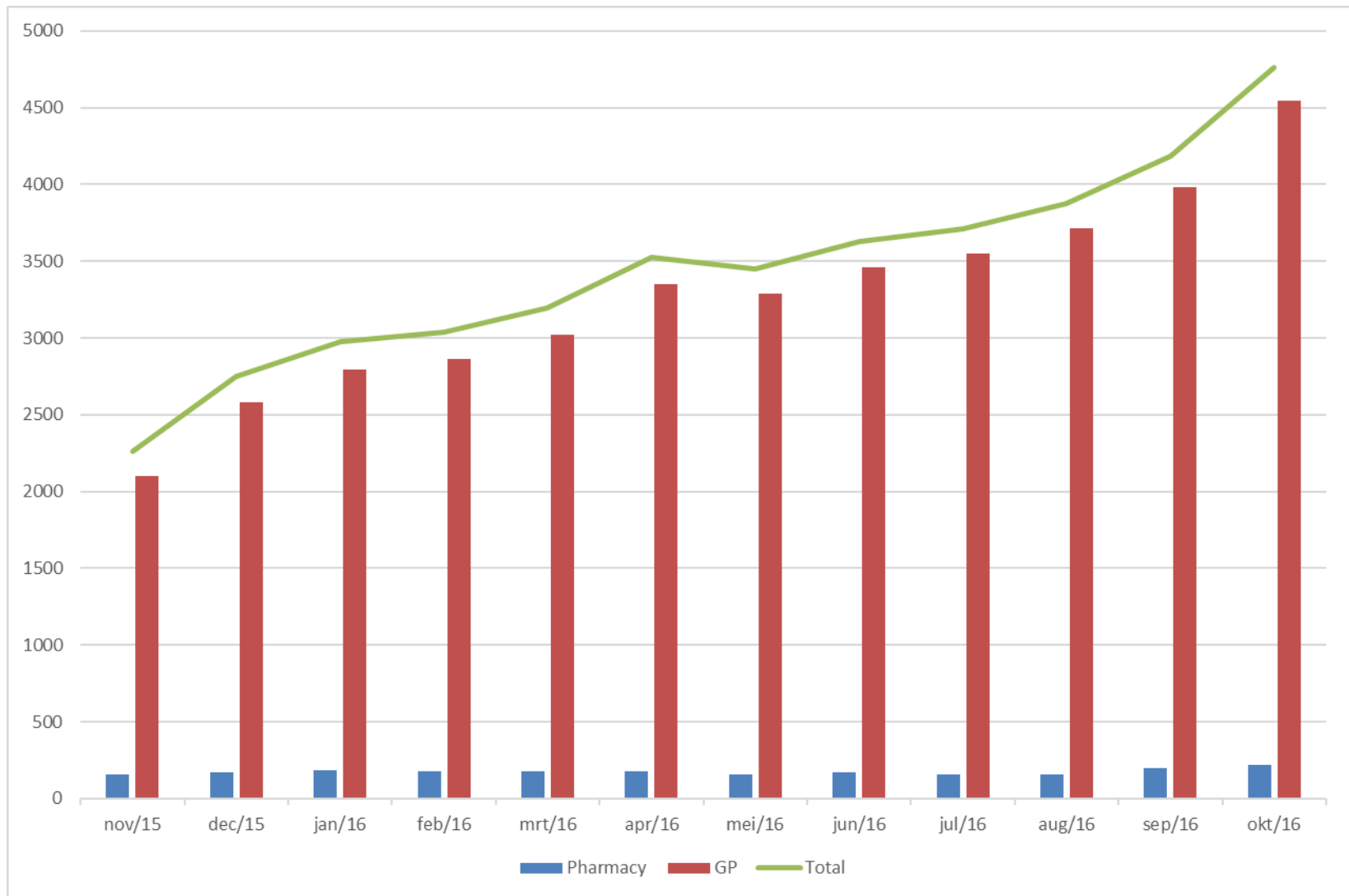


# NUMBER OF PERSONS WITH VACCINATION DATA IN VITALINK

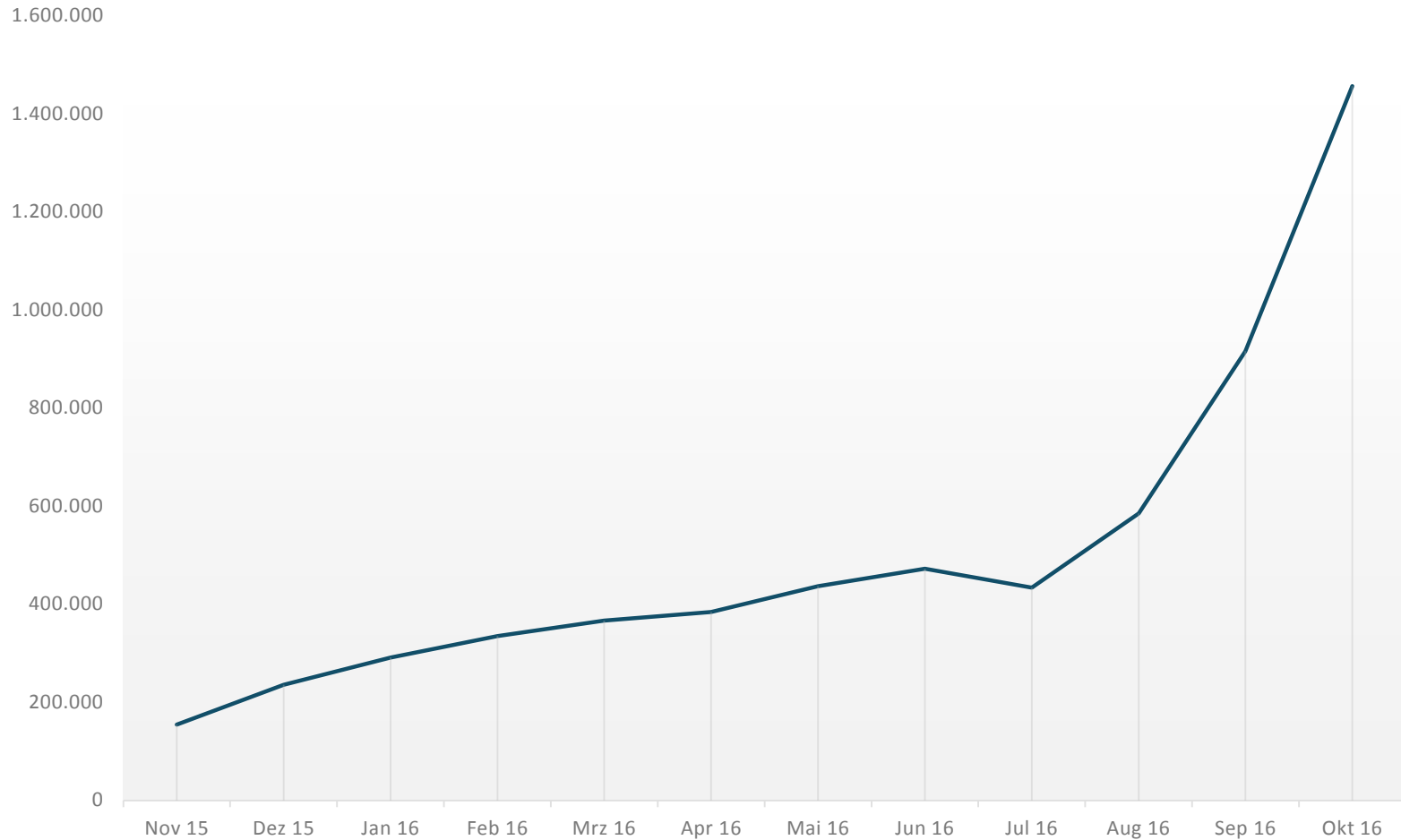




# NUMBER OF GP'S AND PHARMACIES USING VITALINK



# NUMBER OF CONSULTATIONS OF VITALINK/MONTH



# 2015-2018: EHEALTH NATIONAL ROADMAP 2.0: THE PRIORITIES FOR FLANDERS ARE



- > EHR's from GP's and nurses will be shared (not only a summary)
- > Medication scheme available in all regions, via every regional data vault, not only in Flanders via Vitalink
- > All hospitals have an EHR and it will be connected with Vitalink
  - 2016: consultation from within ALL hospitals in Flanders (via hubs)
  - 2018: also updating of information (like medication)
- > Elderly care organisations connected with Vitalink
- > VIDIS: National project, GP's prescribe medication scheme i.s.o. medication e-recipe
- > National incentives for the use of e-health services by GP's
- > Long-term evolution to a Patient Health Record with patient data from different sources through a new platform
- > Patient will have possibility to appoint a mandated person



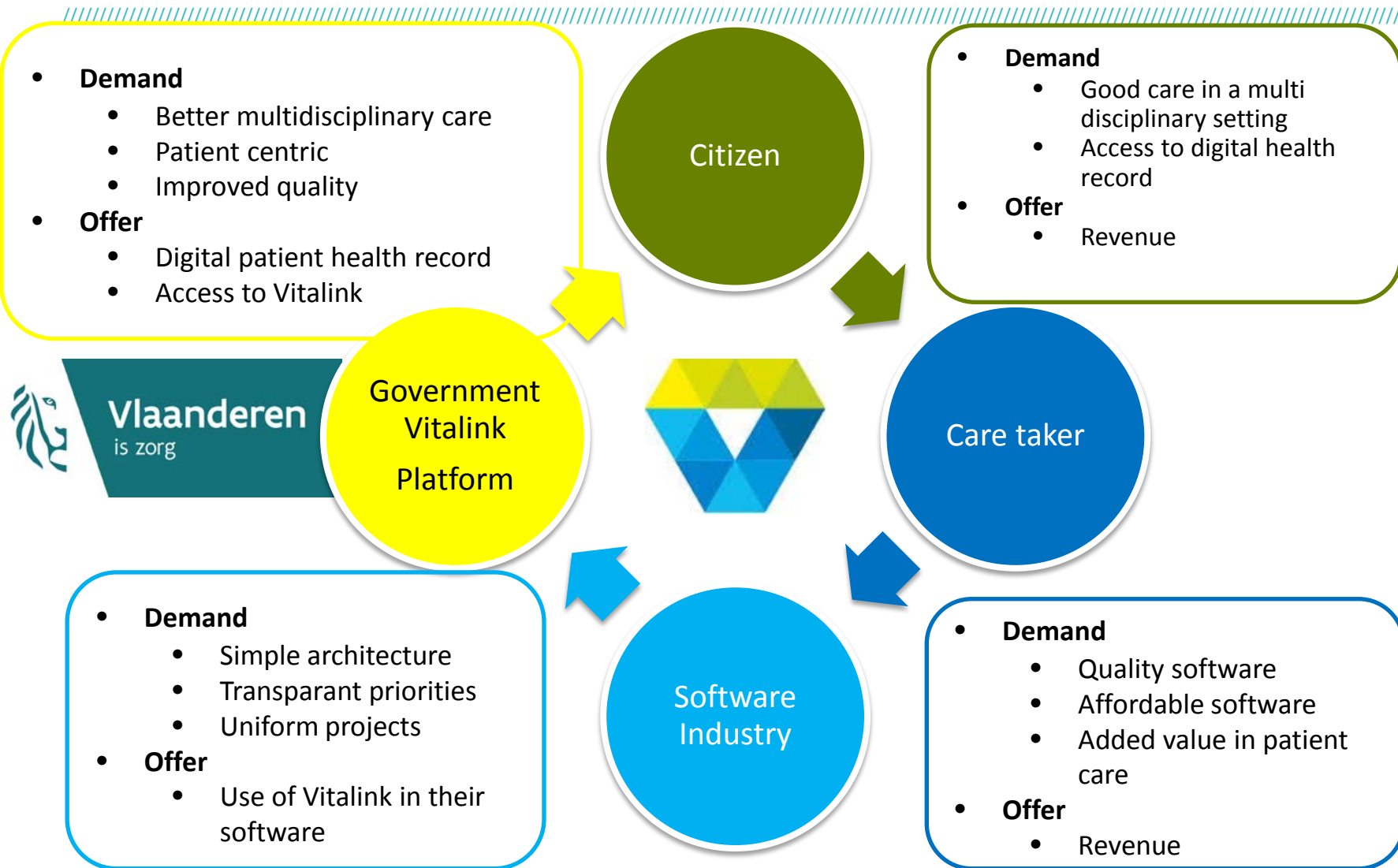
# 2015-2018: MOBILE HEALTH



- > Health care providers and patients will be able to make use of trusted and officially registered mobile health apps
- > The registered apps will have to fulfill to the highest standards regarding privacy and interoperability and will need an EU-label for medical devices and evidence based medicine (EBM)
- > Mobile authentication
- > Vitalink must have a mobile-ready architecture



# VITALINK MARKET CREATION: DON'T GO THE FAST AND EASY WAY!



THANK YOU!