



The Care Information System of the future is VIRTUAL

Prof. dr. B. Sijnave

CIO UZ Gent

Gedelegeerd Bestuurder CoZo Vlaanderen VZW

The Care Information System of the future



Virtual
mult **I**-dimensional
per **R**sonalised
par **T**icipatory
sec **U**re
Available
supporting qua **L**ity of care



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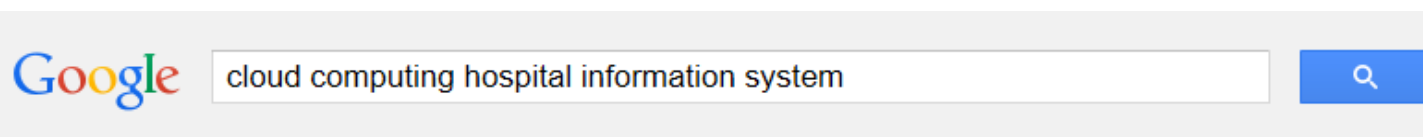


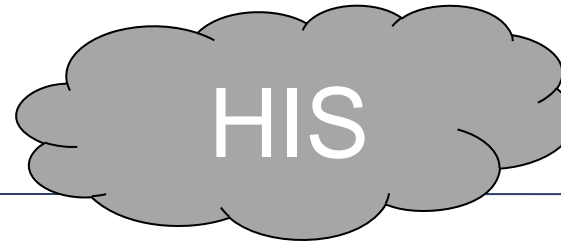
The classical Hospital Information System today



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The HIS of the future is a virtual network

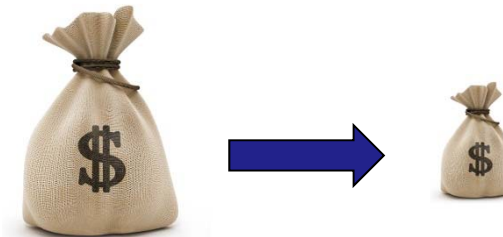




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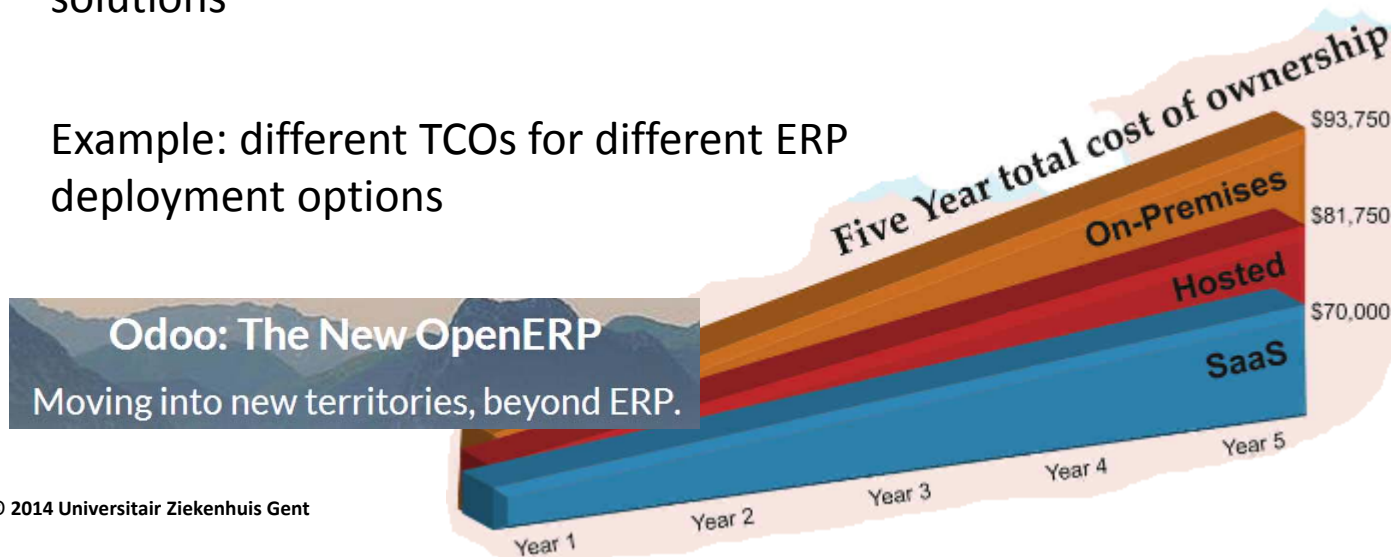
The virtual HIS or the HIS in the cloud – MIS part

Main driver for MIS in the cloud is cost reduction (small set-up cost, small maintenance cost, ...)



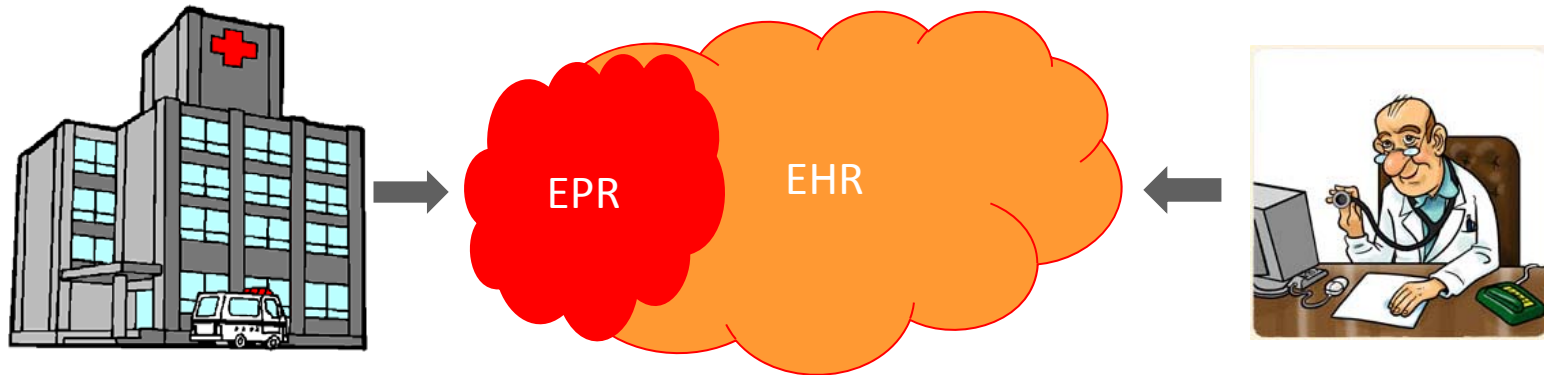
Type of data that is concurrential would only embrace private cloud solutions

Example: different TCOs for different ERP deployment options



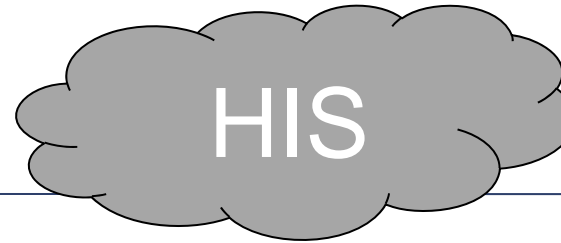
Odoo: The New OpenERP
Moving into new territories, beyond ERP.

The virtual HIS or the HIS in the cloud – EHR part



Main driver for EPR in the cloud would most probably be...
cost reduction (small set-up cost, small maintenance cost, ...)

Type of data that is extremely private would only embrace private cloud
solutions



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The virtual HIS or the HIS in the cloud – EHR part

What is the best option for a hospital EPR? Does anyone know?
Is it really 'small and cheap' versus 'large and expensive'?

SIEMENS

cegeka

polymedis
member of the xperthis group

AGFA *Agfa*

alert[®]

nexuz

xperthis
committed to care

INFOHOS
SERVICES

docbyte
Value your content

Cerner

CSC

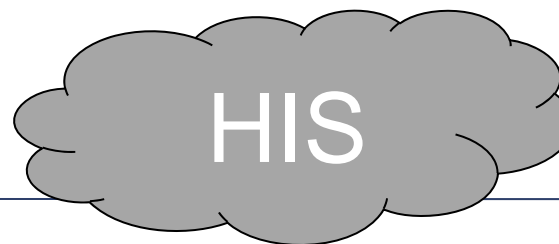
Epic

ChipSoft

MCKESSON
Empowering Healthcare

iMDsoft[®]

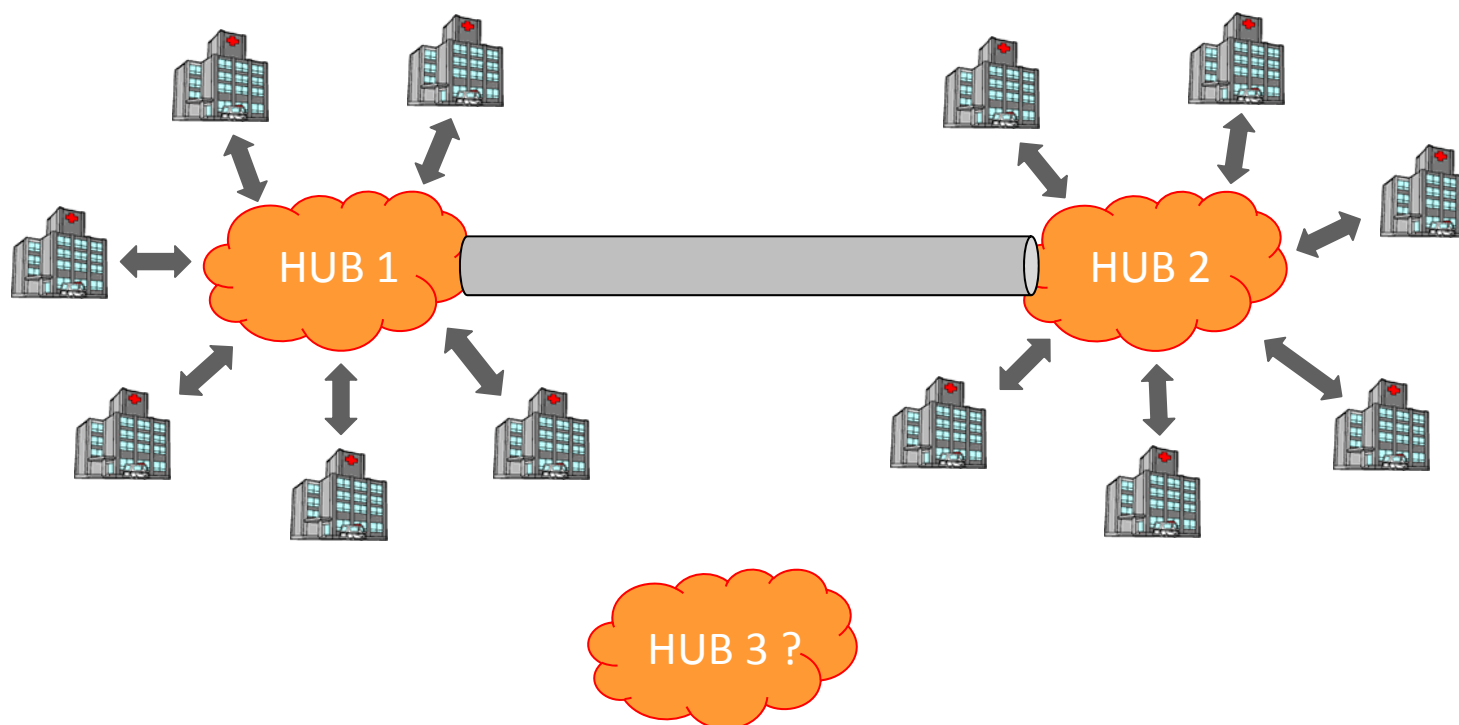
Care 4 Health
we care about your patients



The virtual HIS or the HIS in the cloud – EHR part

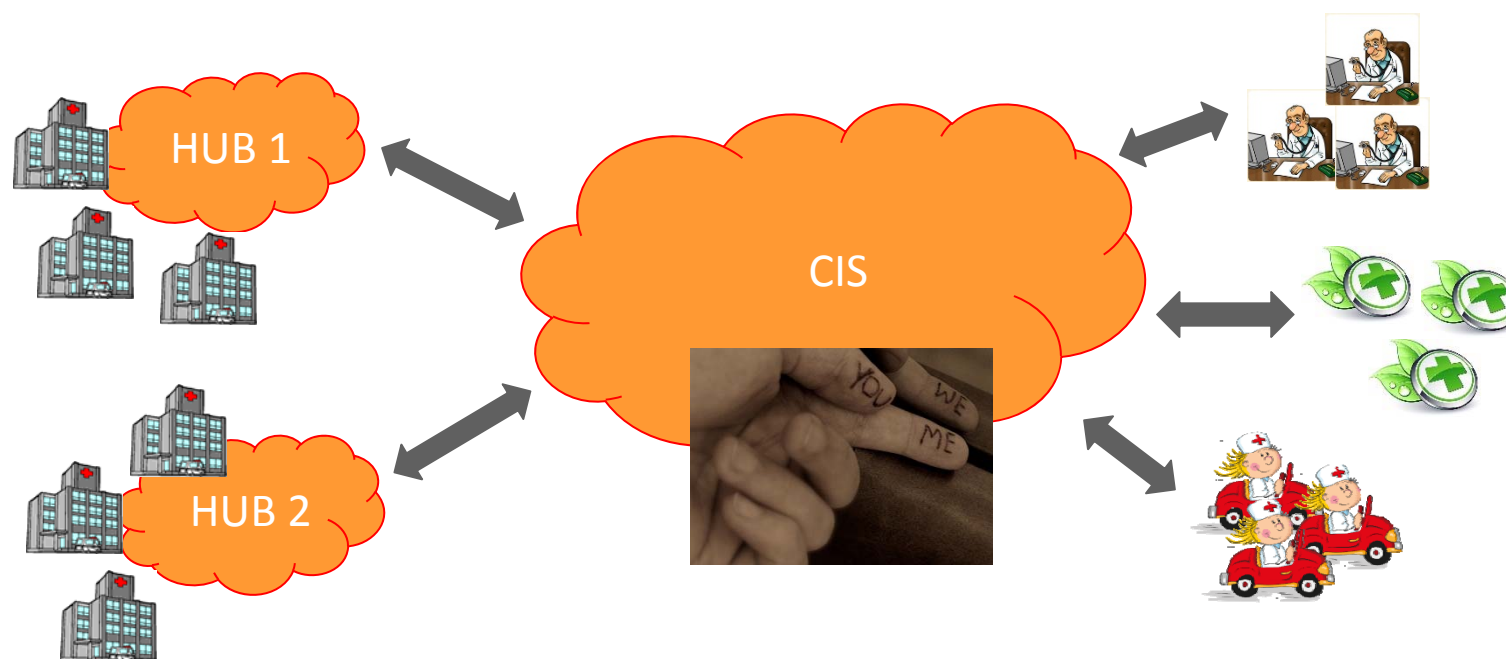
Cooperation is the key, taking into account local criteria and the large CIS picture

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The virtual CIS or the CIS in the cloud

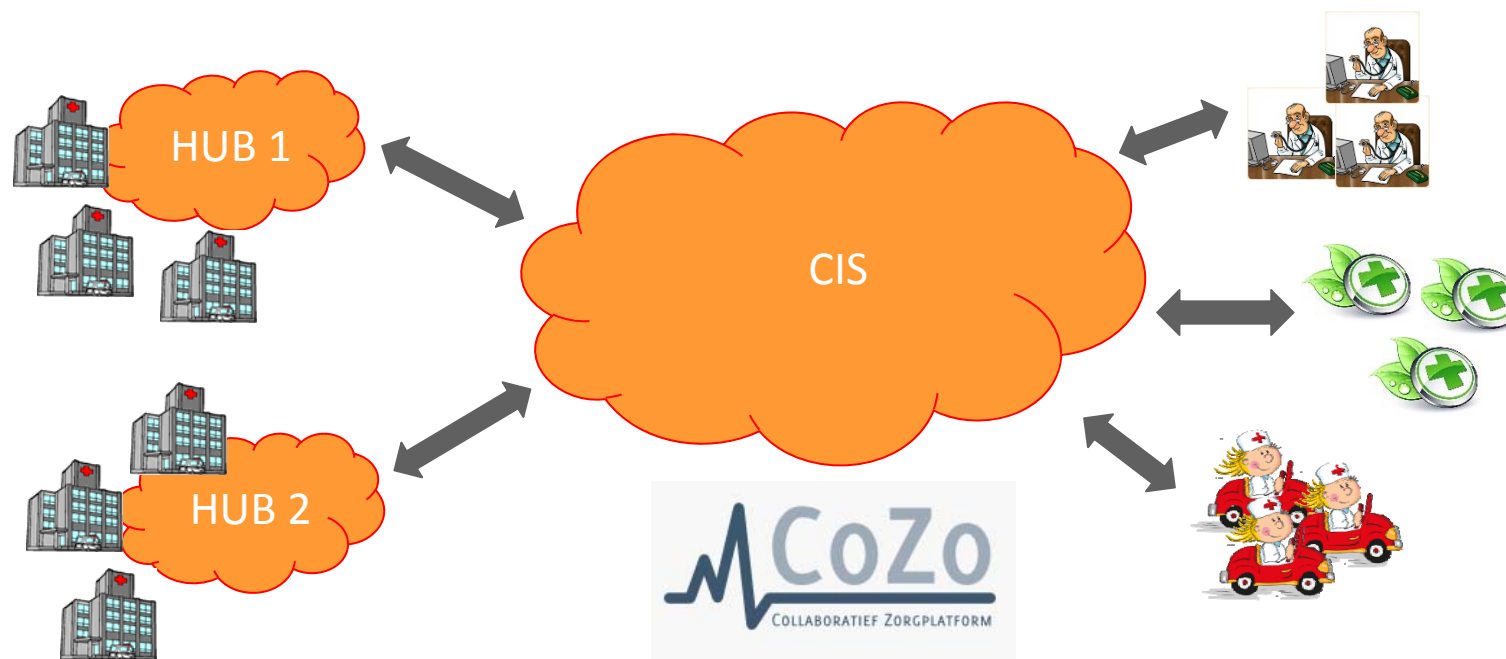
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The CIS of the future should be a virtual network, connecting all care givers, care actors and care consumers (You! Me! We!) together

CoZo: first steps towards the CIS of the future

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CoZo Vlaanderen is a **virtual** network for care information exchange serving 37 hospitals and more than 1.500 GPs. Each month, more than 80.000 contacts are registered on the platform.

The Care Information System of the future

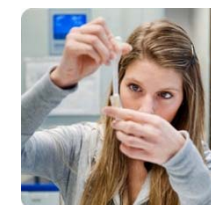


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supporting qua **L**ity of care



The multi-dimensional HIS

Multi-dimensionality and –disciplinarity of the HIS



MIS

EHR

The multi-dimensional CIS: possible approaches

The discussion between



&



doesn't have a single truth, but should have a complementarity, or



instead of



The multi-dimensional CIS: possible approaches



instead of



can only be achieved by



Shared Patient record in practice: Netherlands

vk.nl

de site van de Volkskrant

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Eerste Kamer wil uitstel invoering landelijk EPD

Van onze verslaggever - 07/07/10, 00:00

EPD wisselt al informatie van 8,5 miljoen mensen uit

GIJS HERDERSCHEË - 23/03/11, 00:00

Elektronisch Patiëntendossier gaat definitief niet door

Gijs Herderscheë - 08/11/11, 14:41

Landelijk elektronisch patiëntendossier blijft toch

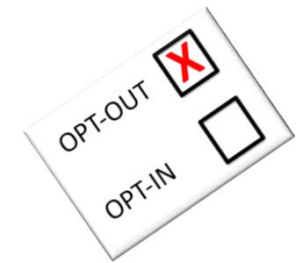
Gijs Herderscheë - 08/12/11, 14:11

'persoonlijk gezondheidsdossier'

Opt Out
Costly
No ther. relation check
No exclusions

Smaller, Opt-IN

Shared Patient record in practice: NHS



The Telegraph

NHS patients to see medical records online

Patients will be able to view their medical records online, email their GP and compare doctors across Britain under plans for an “information revolution” in the NHS.

The Telegraph

Patients' medical records go online without consent

Patients' confidential medical records have been uploaded on a controversial NHS database without their knowledge. The move has drawn the attention of privacy campaigners who have warned.

The Telegraph

Controversial medical records database suspended

A controversial scheme to upload confidential medical records to a national database has been suspended following public outcry.

The Telegraph

NHS patients 'will be able to view medical records online'

Patients will be able to view their medical records online, under proposals backed by the Government.

Oct 2013: NHS pulls the plug on its £11bn IT system (The Independent)

feb 2010

apr 2010

Dec 2011
(est: 2014)¹⁷

The multi-dimensional CIS in Belgium

What it is today...

CoZo
COLLABORATIEF ZORGPLATFORM

Réseau Santé Wallon

...

hubs of hospitals and GPs

vitalink
gegevens delen, van vitaal belang

eHealth

...

governmental initiatives

zorg net
VLAANDEREN

cegeka

UZ
Universitair Ziekenhuis Gent

nexuz health
Medisch samenwerkingsverband

...

groupings of hospitals

The multi-dimensional CIS in Belgium

What it could become tomorrow...



CoZo
COLLABORATIEF ZORGPLATFORM

S Réseau Santé Wallon

...

hubs of hospitals and GPs




vitalink
gegevens delen, van vitaal belang

e Health

...

governmental initiatives



zorg net
VLAANDEREN

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Medisch samenwerkingsverband

...

groupings of hospitals

CoZo: a multi-dimensional open network



CoZo: a multi-dimensional open network

The screenshot shows the CoZo web application interface. At the top, there is a navigation bar with the CoZo logo and menu items: Home, Mijn Patiënten, Mijn Praktijk, Mijn CoZo, Beheer, and Help. The user is logged in as 'Dhr DEV UZG' at 'UZ Gent'. The main content area is titled 'Mijn Patiënten' and shows a patient named 'An'. A black arrow points from the patient's name to the 'Gekend in' section.

Patient details:

- 159 96
- 11/05/19[redacted] jaar
- Kleine [redacted] 69 [redacted] broek
- toegang tot gedeeld: 22/10/2014 (nog 213 dagen)
- GMD-arts: ja

Gekend in:

- AZ Jan Palfijn
- AZ Maria-Middelares
- AZ Sint Lucas Gent
- Centra GGZ art. 107
- HH Roeselare-Menen
- sumehr
- UZ Gent
- ZNA
- Zorgsaam

Patiënte xxx An xxx is gekend in meerdere ziekenhuizen, zelfs over de landsgrenzen heen (Zorgsaam), bij een centrum voor GGZ en er zijn ook resultaten van huisartsen gedeeld (sumehr).

Buttons:

Navigation icons: Resultaten, Contacten, Patiënttoegang resultaten, Sumehr documenten, GGZ107 documenten, Dossierlogging

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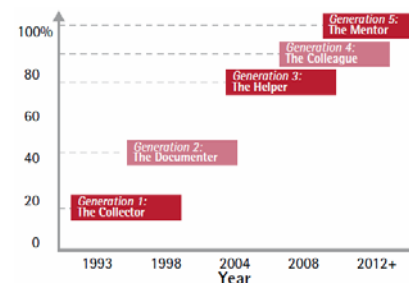




The personalised CIS

A few suggested starting points...

- Turning silo's of non-integrated data into connected 'care warehouses'
- Integrate into open networks/platforms
- Going for real EHR-mentorship



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The participatory CIS

Clear trend towards people taking more control of their own health: participation is no longer an option, it is a fact!

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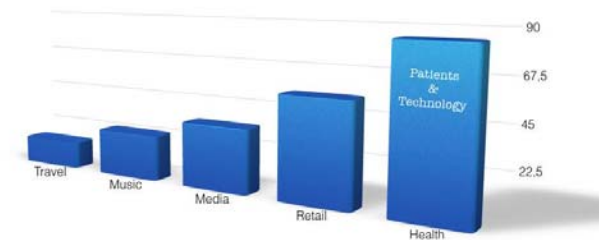


- 4,3 mio members
- > 41% of primary care contacts



Radboudumc

5th democratization



Lucien Engelen fluencer
Director Radboud REshape Center at Radboud University Medical Center

Dr. Apple & Dr. Google Will See You Now



The participatory CIS

But...

'my' data



psychiatric evaluation
social situation
suspected abuse?
shield certain results?

delicate balance

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The participatory CIS

Helping patients to easy accessible health care by building patient-friendly portals for online appointments, live chats, ...

+ Reduction in number of physician visits

+ Reduction in number of no-shows

UZ Universitair Ziekenhuis Gent

Nieuwe verwijzing

Uitloggen > Vragenformulier Terug naar overzicht

Beantwoord de onderstaande vragen

Welke afspraak wenst u?

- Een afspraak op de algemene polikliniek
- Een geprivatiseerde consultatie bij een stafid
- Een afspraak op de prostaatkliniek
- Een afspraak op de continentiekliniek
- Een afspraak op de enuresispol voor kinderen

Bij welk stafid wenst de patiënt een afspraak?

- Prof. Dr. Hoebeke P.
- Prof. Dr. Everaert K.
- Prof. Dr. Verbaeys A.
- Prof. Dr. Oosterlinck W.
- Dr. Groen L.-A.
- Dr. Lumen N.
- Dr. Van Laecke E.

Resultaat

Deze afspraak is een geprivatiseerde afspraak. Hiervoor zal een supplement worden aangerekend

- [Ga verder](#)
- [Bewaar de verwijzing en vervolgdig later](#)

Is de patiënt een kind of een volwassene?

- Kind (-16 jr)
- Volwassene

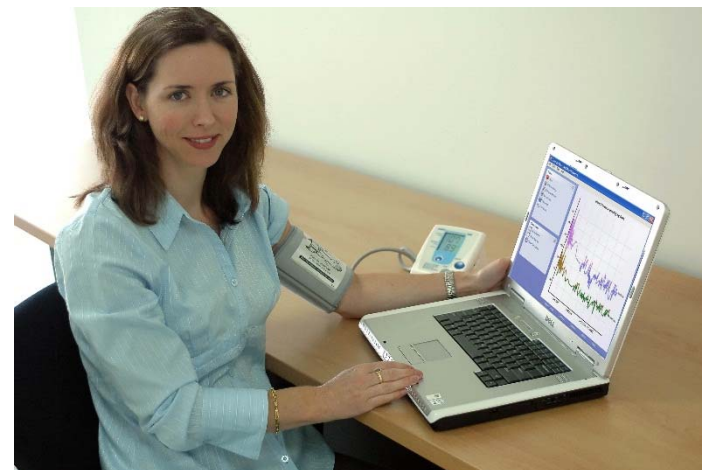
Resultaat / Voorstel

Verwijzing voor PUROL - Cons. Prof. Hoebeke Kind
PUROL - Cons. Prof. Hoebeke Kind

[Ga terug](#) [Ga verder](#)

The participatory CIS

Also a good way of controlling the cost and keeping patients out of the hospital: home monitoring



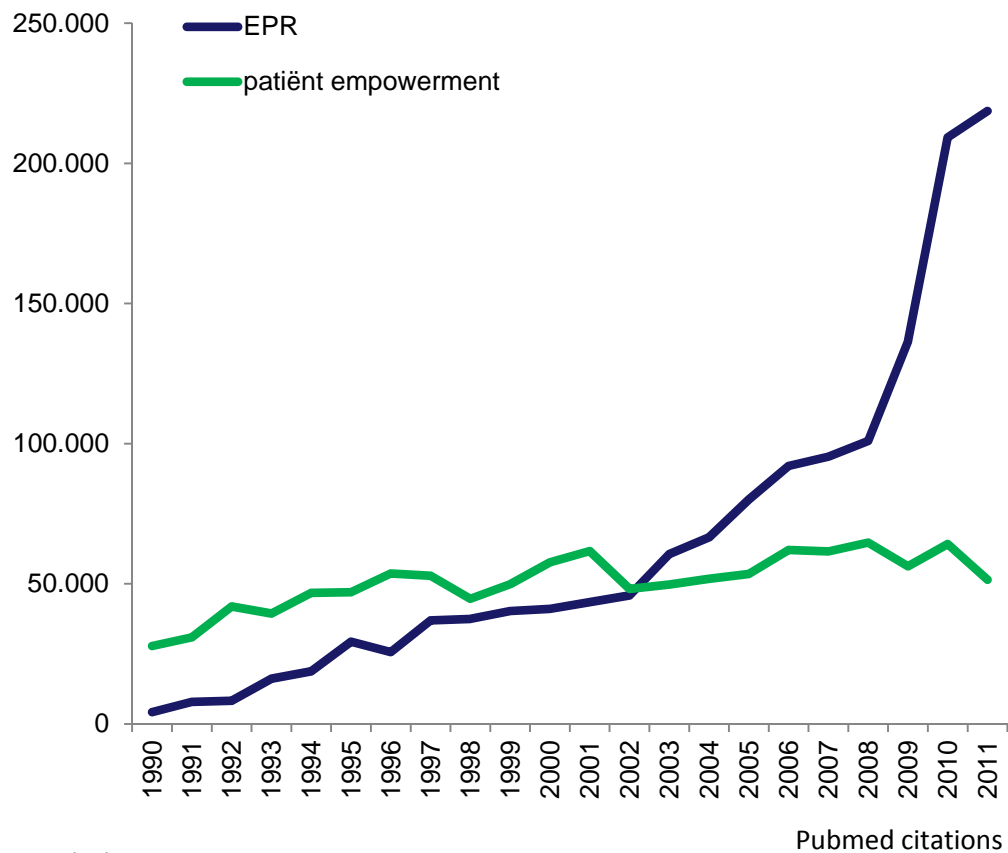
- + Improvement of care experience
- + Improvement of health of population while reducing care cost per capita

The participatory CIS

Last but not least: participation is key for prevention and
*Prevention is so much better than healing because it saves the
labour of being sick. (Thomas Adams, 17th century)*

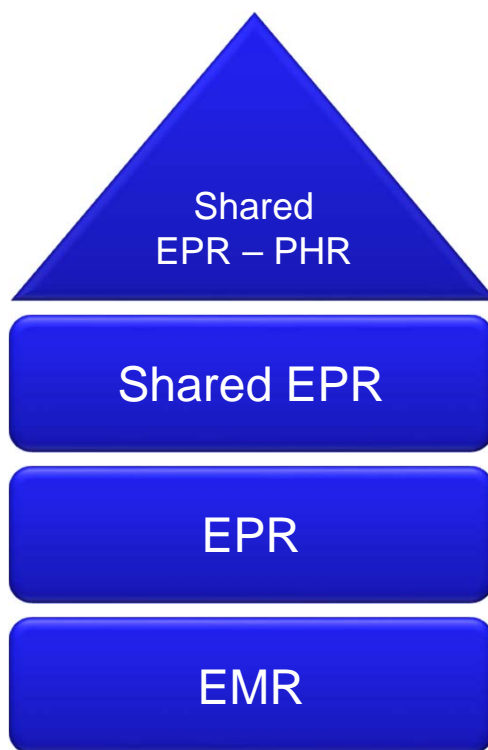


The participatory CIS



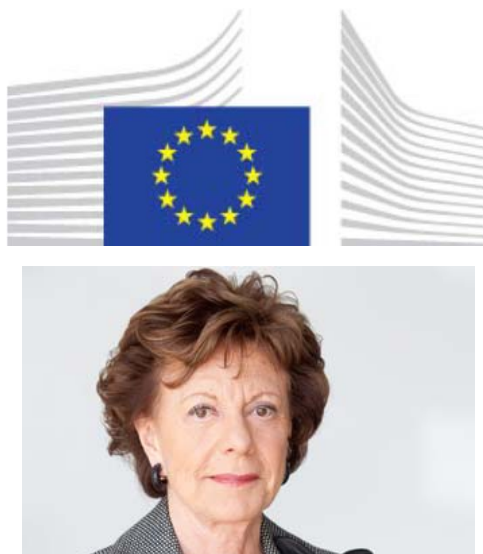
Patient empowerment: finally accessible?

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The participatory CIS

Although everyone agrees, reality of sharing is still poor...



Neelie Kroes (maart 2014):

*“Only 9 % of the hospitals in Europe gives patients online access to their own medical file!
This is unacceptable.”*

Patient empowerment in CoZo: 'Mijn CoZo'

CoZo Home Mijn CoZo Help

Mijn CoZo

CoZo patiënt gegevens

11/05/1975 (38 jaar)
2940 Stabroek

GMD-arts
laatste update 10/11/2013 14:11:05 Aanpassen

Informed consent

Kunnen mijn resultaten opgevraagd worden op het CoZo platform?

✓ Informed consent is geregistreerd.

Voor meer informatie over de informed consent zie <http://www.cozo.be/files/verwijsregister-ehealth-cozo---flyer-v1-7> Intrekken

Ziekenhuizen

Bij welke ziekenhuizen ben ik gekend op het CoZo platform?

naam

- AZ Jan Palfijn
- AZ Maria-Middelares
- AZ Sint Lucas Gent
- HH Roeselare-Menen
- UZ Gent
- ZNA
- Zorgsaam

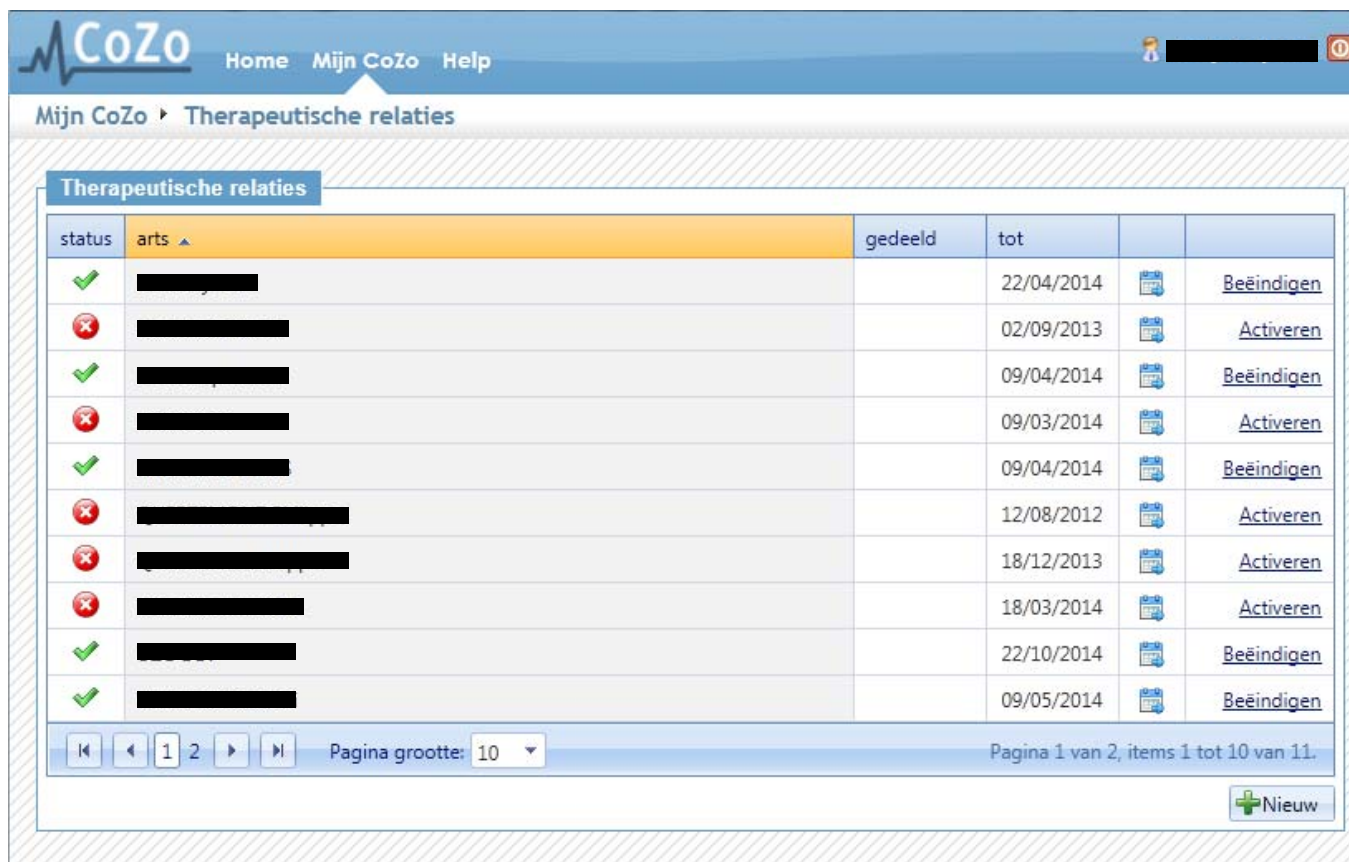
Therapeutische relaties

Wie kan mijn resultaten opvragen op het CoZo platform?

arts	tot
[redacted]	22/04/2014
[redacted]	09/04/2014
[redacted]	09/04/2014
[redacted]	22/10/2014
[redacted]	09/05/2014

Therapeutische relaties Dossierlogging Resultaten

Patient empowerment in CoZo: Mijn CoZo



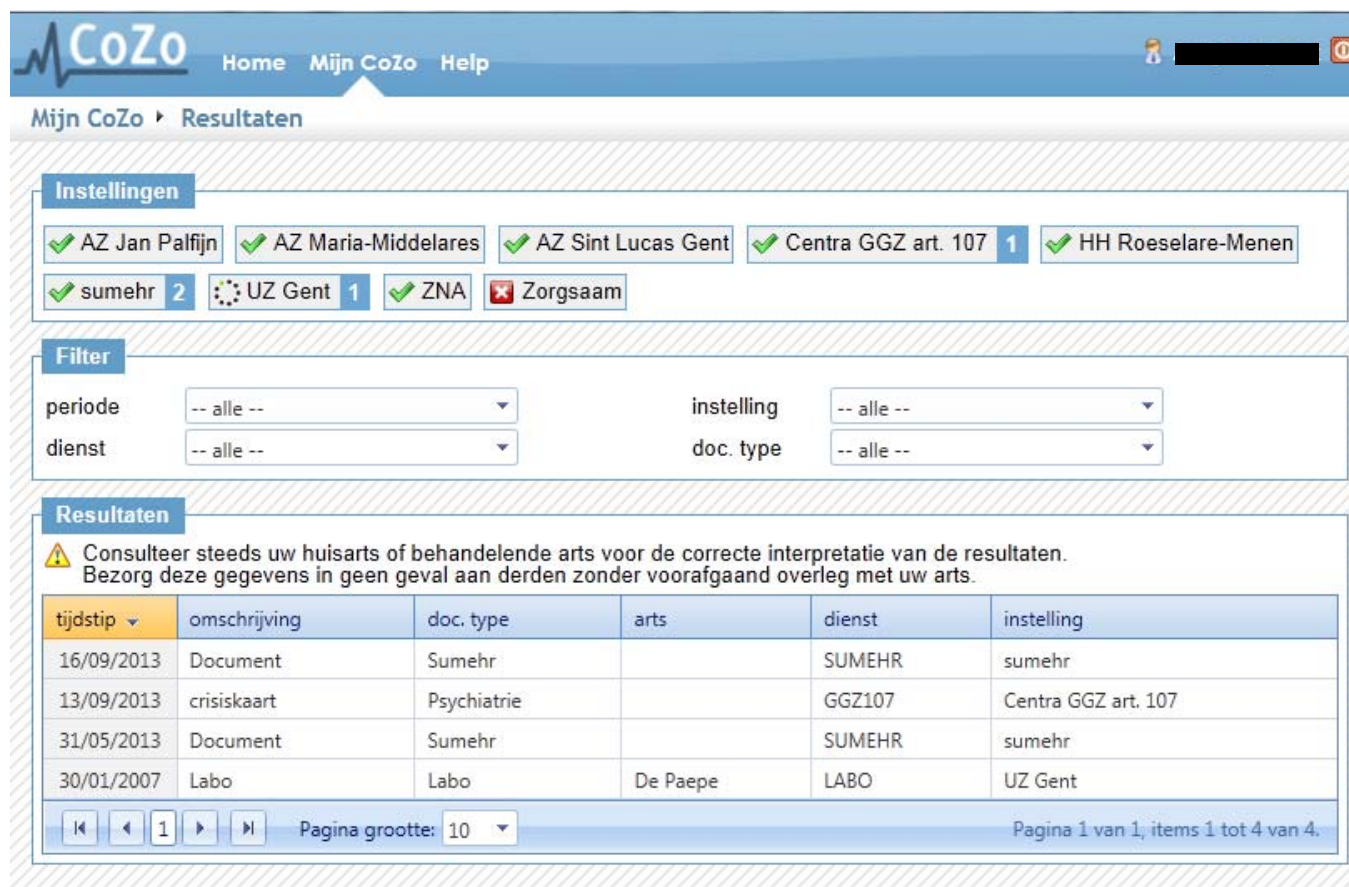
The screenshot shows the 'Mijn CoZo' interface with the 'Therapeutische relaties' section. The table lists various therapeutic relationships with their status, dates, and actions.

status	arts	gedeeld	tot		
✓	[redacted]		22/04/2014		Beëindigen
✗	[redacted]		02/09/2013		Activeren
✓	[redacted]		09/04/2014		Beëindigen
✗	[redacted]		09/03/2014		Activeren
✓	[redacted]		09/04/2014		Beëindigen
✗	[redacted]		12/08/2012		Activeren
✗	[redacted]		18/12/2013		Activeren
✗	[redacted]		18/03/2014		Activeren
✓	[redacted]		22/10/2014		Beëindigen
✓	[redacted]		09/05/2014		Beëindigen

Pagina grootte: 10 Pagina 1 van 2, items 1 tot 10 van 11.

[+ Nieuw](#)

Patient empowerment in CoZo: Mijn CoZo



CoZo Home Mijn CoZo Help

Mijn CoZo ▾ Resultaten

Instellingen

AZ Jan Palfijn
 AZ Maria-Middelares
 AZ Sint Lucas Gent
 Centra GGZ art. 107 1
 HH Roeselare-Menen

sumehr 2
 UZ Gent 1
 ZNA
 Zorgsaam

Filter

periode: -- alle --
 dienst: -- alle --
 instelling: -- alle --
 doc. type: -- alle --

Resultaten

⚠️ Consulteer steeds uw huisarts of behandelende arts voor de correcte interpretatie van de resultaten.
 Bezorg deze gegevens in geen geval aan derden zonder voorafgaand overleg met uw arts.

tijdstip	omschrijving	doc. type	arts	dienst	instelling
16/09/2013	Document	Sumehr		SUMEHR	sumehr
13/09/2013	crisiskaart	Psychiatrie		GGZ107	Centra GGZ art. 107
31/05/2013	Document	Sumehr		SUMEHR	sumehr
30/01/2007	Labo	Labo	De Paepe	LABO	UZ Gent

Pagina grootte: 10 Pagina 1 van 1, items 1 tot 4 van 4.

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Available
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The secure CIS

- Compiled medical data is very attractive...
insurance companies
pharmaceutical industry
employer related (sickness)
....
- Data safety concerns (outside hacking)



The Care Information System of the future



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sec **U**re
Aailable
supporting qua **L**ity of care



99.999 %

99.99 %

99 % 99.9 %

99.9999 %

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The available and performing CIS

The more simultaneous users, the more the availability and the performance of the systems gets challenged





The accessible CIS

Availability is more than about the 'always on'-philosophy

It is also about being available on any platform



The Care Information System of the future



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The quality CIS: data quality = care quality = life quality



- ⇒ longitudinal health record in a mobile world
- ⇒ increased complexity, treatment options and regulations
- ⇒ increasing number of participating health actors
- ⇒ transmural care, data sharing, cooperation
- ⇒ prevention and home monitoring
- ⇒ cost reduction (if implemented right)
- ⇒

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First steps to get there...



Next steps to get there ?





Thank you for your attention!