

# ICT & HEALTH

THE ROLE OF THE DIGITAL SECTOR  
IN MAKING THE HEALTH & CARE  
NEARER TO THE USERS

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**HIM**  
HEALTH INFORMATION MANAGEMENT

## **From telemonitoring to integrated care: the changing role of patients**

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# The context

- Western Europeans constitute an ageing society
  - marked slowdown of the fertility rate
  - extraordinary increase in the life expectancy
- The ageing of the EU population is not expected to stop and even less to go backwards
- Ageing of the EU population means:
  - an increase in chronic diseases and in the frailty among the general population
  - a deterioration of the dependency ratio
  - a shortage of financial resources and personnel in the care sector to cope with the increase in demand



# The context

- The healthcare and welfare systems that we have known in the last decades will not be sustainable any longer in the (near) future
- Small adjustments to traditional care organisation and processes are unlikely to provide a solution



# The opportunity

- Internet has caused an unprecedented increase in the medical literacy of European citizens
  - Chronic patients and especially people affected by rare diseases can end up knowing more about their disease than the average GP
- European citizens in general are better educated and consequently more critical about the services they receive
- There is a general perception that for the healthcare and welfare systems to remain sustainable the citizens/patients need to play a (far) more active role

# The changing role of citizens/patients

- From passive care recipients to proactive stakeholders of their health
- From being part of the problem to becoming part of the solution
- From a culture of cure to a culture of prevention
- From a care financing mechanism based on medical acts to one based on outcomes

# HIM, what is that?



# Skills and responsibilities distribution

Telehealth, telecare

**HIS GmbH - Germany**

Consultancy, EU projects

**HIM S.A. - Belgium**

Teleconsultation, TV-based  
videoconferencing

**HIM.it- Italy**

**HIM GmbH - Germany**

Patient Data Management Systems,  
ICU, AR, OR

**Critical Care Company  
Belgium**

Predictive modelling, ICT interventions  
evaluation, change management in care

**HIM Spain**



# ICT PSP projects won by HIM SA



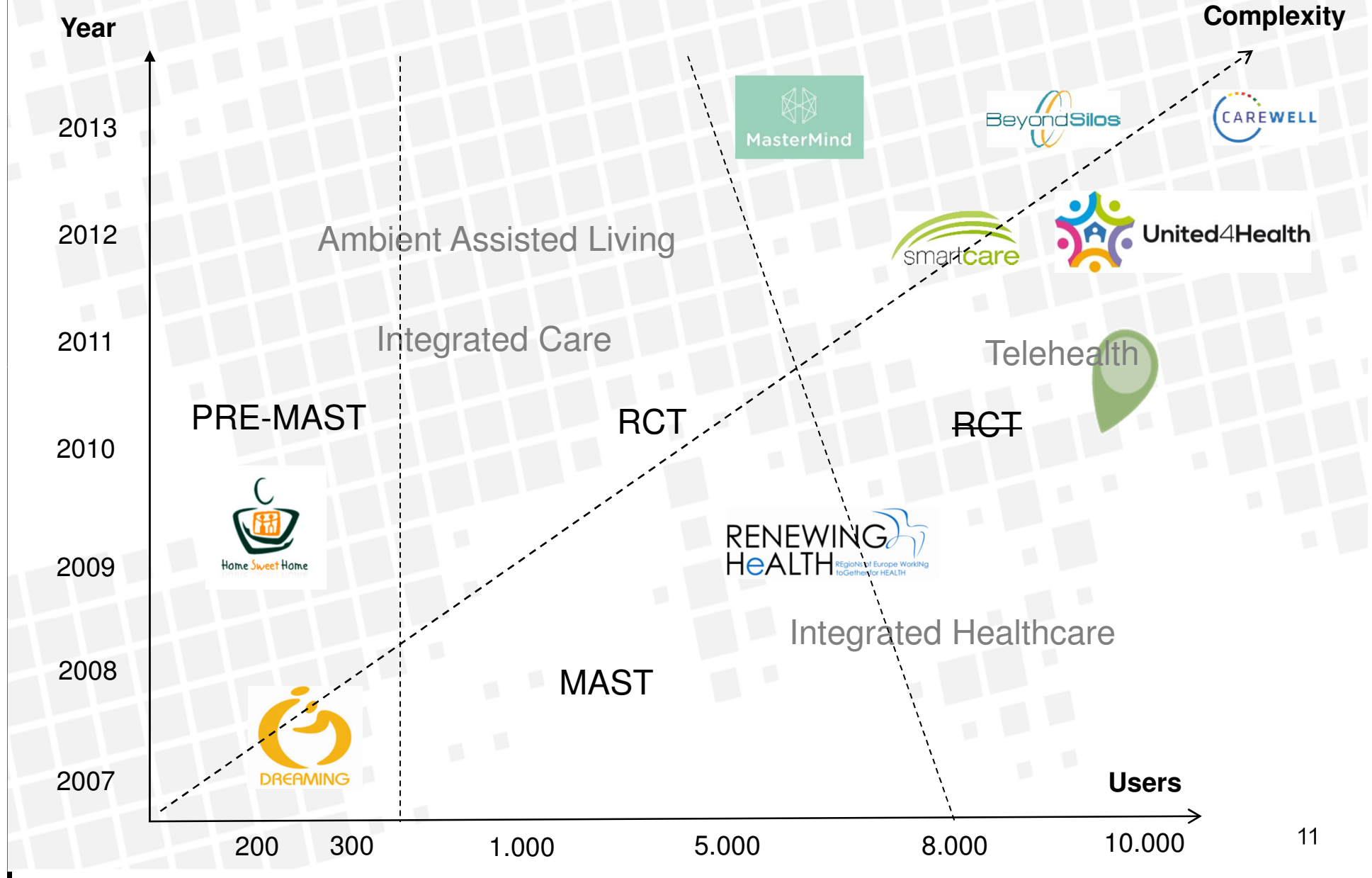
Project	Year	EU funding	Type of pilot	Description
BeyondSilos	2013	2,736,000 €	Pilot B	Integration of social and health services through ICT - AAL
CareWell	2013	2,926,000 €	Pilot B	Integration of health services through ICT
DREAMING	2007	2,770,000 €	Pilot B	AAL
HOME SWEET HOME	2009	2,439,000 €	Pilot B	AAL
MasterMind	2013	7,000,000 €	Pilot A	Mental Health - Treatment of depression through ICT
RENEWING HEALTH	2009	7,000,000 €	Pilot A	Telemedicine B2C
SmartCare	2012	8,000,000 €	Pilot A	Integration of social and health services through ICT - AAL
SUSTAINS	2011	3,500,000 €	Pilot B	On-line access to EHR by citizens
United4Health	2012	5,000,000 €	Pilot A	Telemedicine B2C
<b>Total</b>		<b>41,371,000 €</b>		

- Average value of projects won : 4.596.778 €
- Success rate >80% (9 proposals funded out of 11 submitted)
- > 28% of the global ICT PSP budget for eHealth, eInclusion and AAL won
- HIM SA has direct access to the largest base of evidence of eHealth, eInclusion and AAL impact currently available

# Our pedigree



# The chronological sequence



# Two different but complementary axes

## Chronicity management

- Renewing Health
- United4Health
- CareWell

± 30.000 chronic (mostly older) patients

## Support to independence

- DREAMING
- HOME SWEET HOME
- SmartCare
- BeyondSilos



± 20.000 older people

# The user population

## Mental Health

- MasterMind

± 5.200 patients suffering  
from depression



The largest base of evidence for telemedicine  
impact currently available in Europe

# An extraordinary observatory

- Through the Europeans projects that we have managed in the past or we are currently managing and our participation in specialised networks we are in contact with:
  - Over 100 care organisations established in 22 EU countries and 3 non-EU countries (Norway, Turkey and Israel)
  - We have visibility on what is happening in the various countries depending on the model of care they have adopted
  - We can play the role of clearance house transferring experiences from one region to the other

## The telemonitoring era

- **DREAMING (2007)**
- **RENEWING HEALTH (2009)**
- United4Health (2012)





**EIDeRly-friEndly Alarm  
handling and MonitorING**

**DREAMING**



# Key Components

HIS Central Unit



Mambo 2



HIS Portal



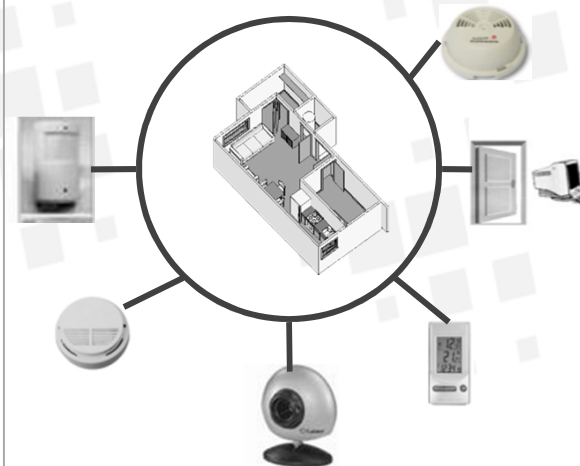
Video Conference



Vital Monitors



Environmental and Bi-directional Monitors



# RENEWING HeALTH



REgioNs of Europe Working  
toGether for HEALTH

# Consortium

## The Regions

Regione Veneto (I)



Norrbotten County (S)



North Norway (N)



South Karelia (F)



Catalonia (E)



# Consortium

## The Regions

Carinthia (A)



Central Greece (GR)



Berlin (D)



# Consortium

## The Competence Centres



# The RH Organisation

7148 patients

9 regions

21 pilots

84 centres

10 clusters

3 diseases

9 RCTs

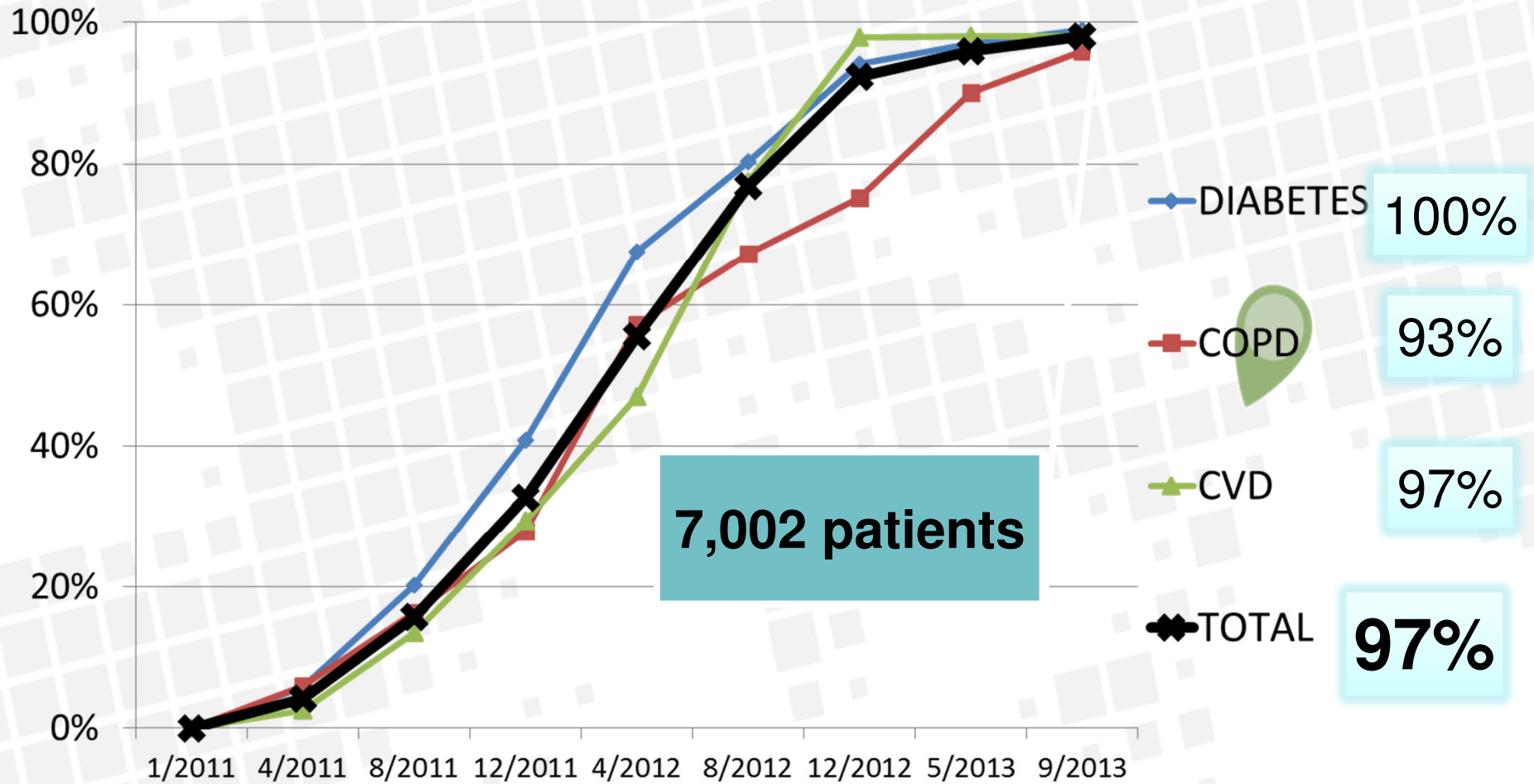
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DM

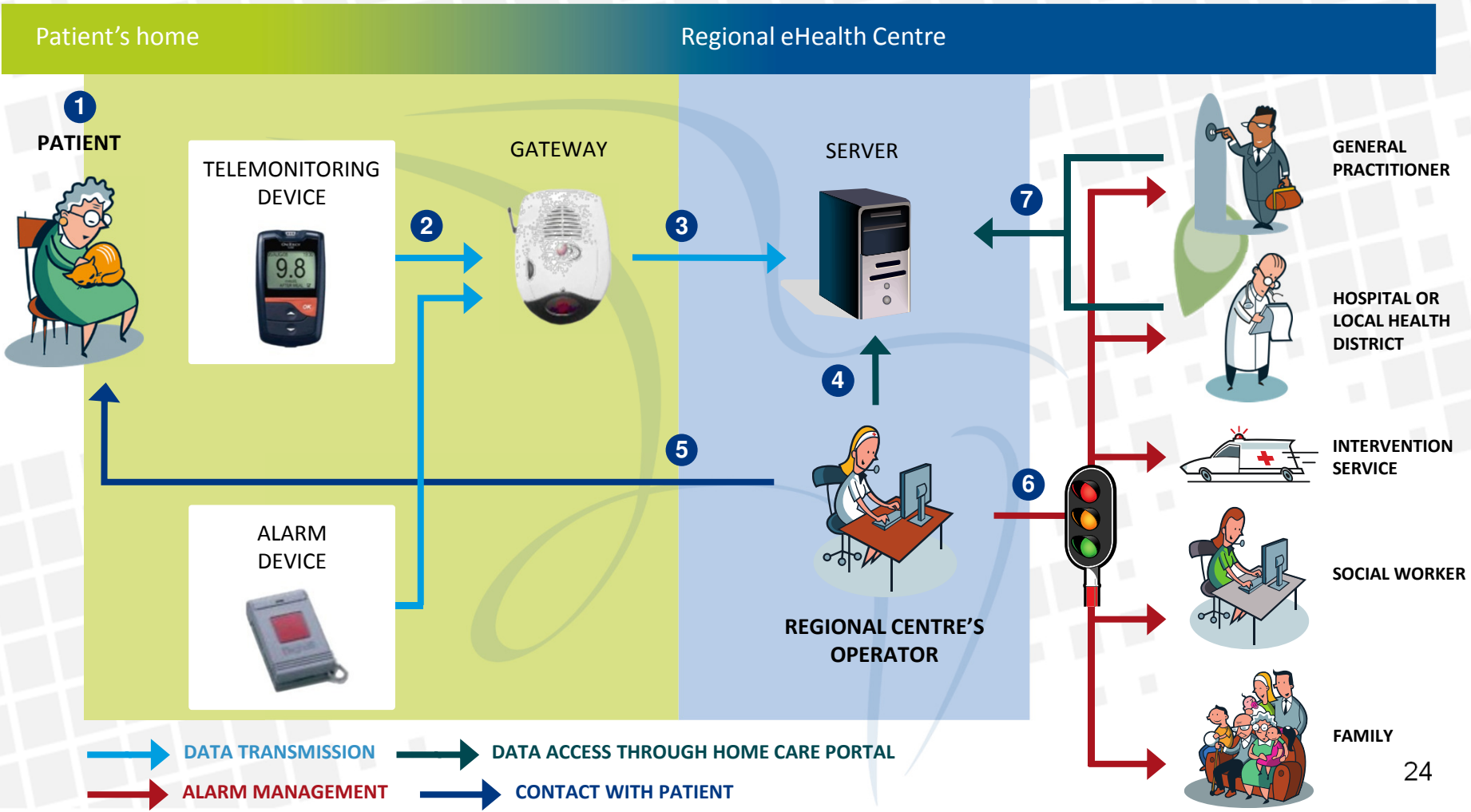
COPD

CVD

# The recruitment

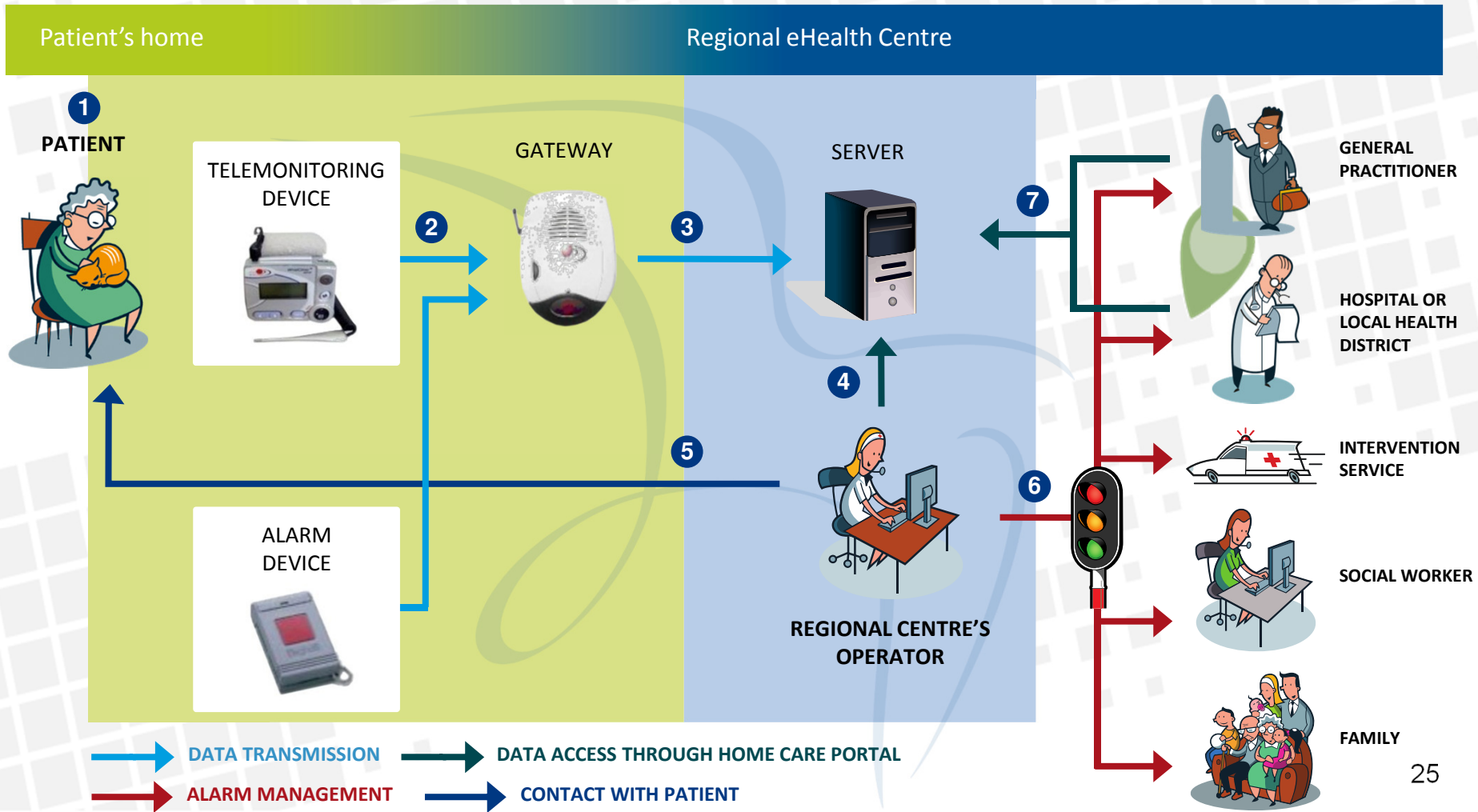


## Cluster 2: Diabetes Veneto Region (IT) ©

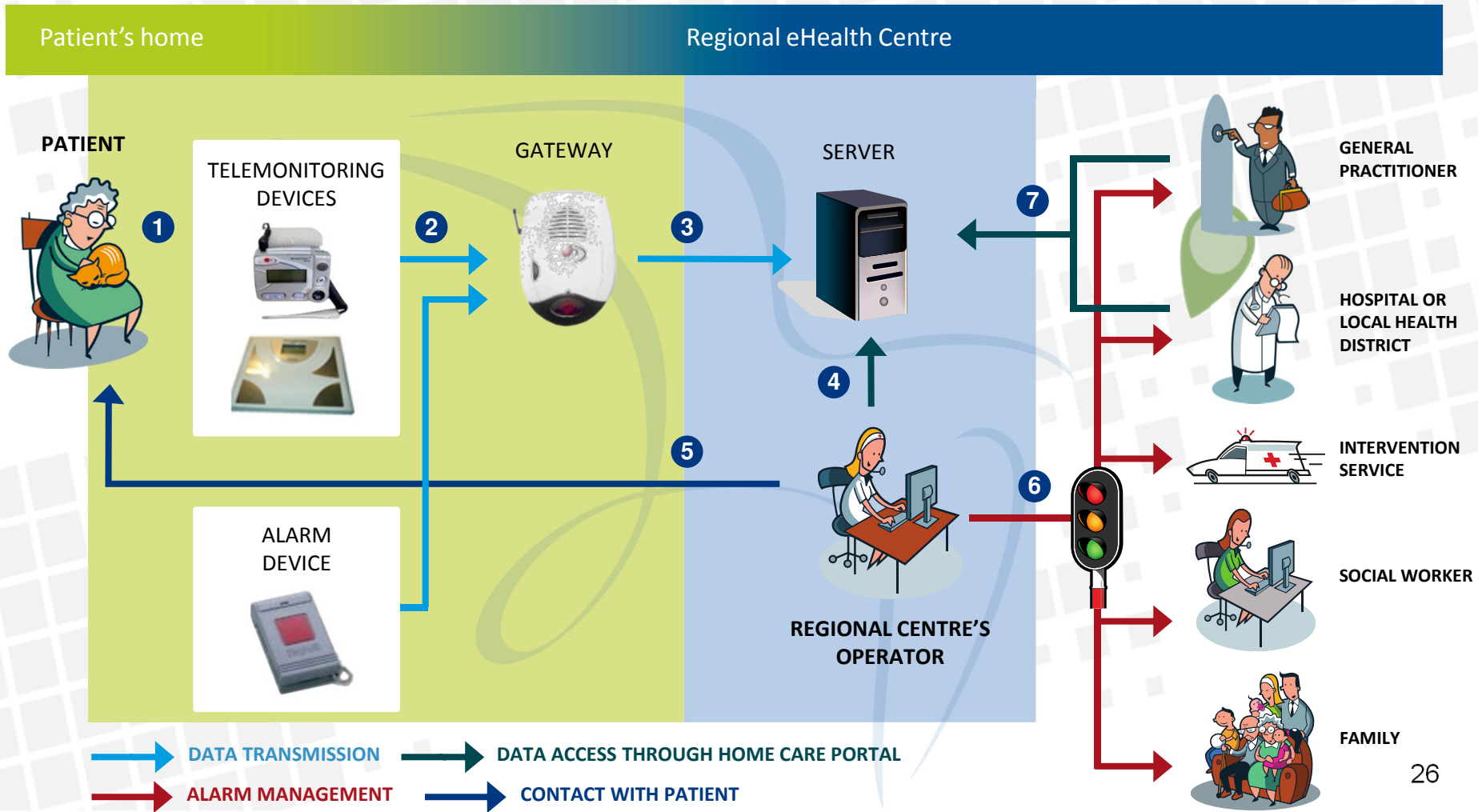




## Cluster 5: COPD Veneto Region (IT) ©



## Cluster 7: CVD Veneto Region (IT) ©



## The integrated care/patient empowerment era

- **HOME SWEET HOME (2009)**
- **SmartCare (2012)**
- BeyondSilos (2013)
- CareWell (2013)
- MasterMind (2013)





Home Sweet Home  
4016 3M66L 4016





Home Sweet Home

# Key Components

# HIM

HEALTH INFORMATION MANAGEMENT

HIS Mambo 2.5



In-Touch Base Unit

HOME SWEET HOME Portal



ello!  
Video Communication



Vital Monitors



Domotic Monitors/Smart Home Components

Security/  
Movement



Door locking  
/unlocking



Climate/Energy  
Management



Lightning  
control





# HOME SWEET HOME



=



+

- Domotics
- DailyScheduler
- Navigator
- Behaviour analysis
- Exercises for maintaining and measuring mental faculties

Joining up ICT and service processes  
for quality integrated care in Europe



# SmartCare Regions

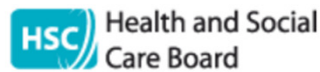
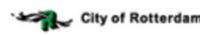
The 23 Regions participating in SmartCare are members of one of two different groups:

- 9 regions will deploy integrated health and social eCare services
- 14 committed regions participate to learn from experience of the deployment regions and go through a programme of service planning and scenario-based piloting





# The Consortium



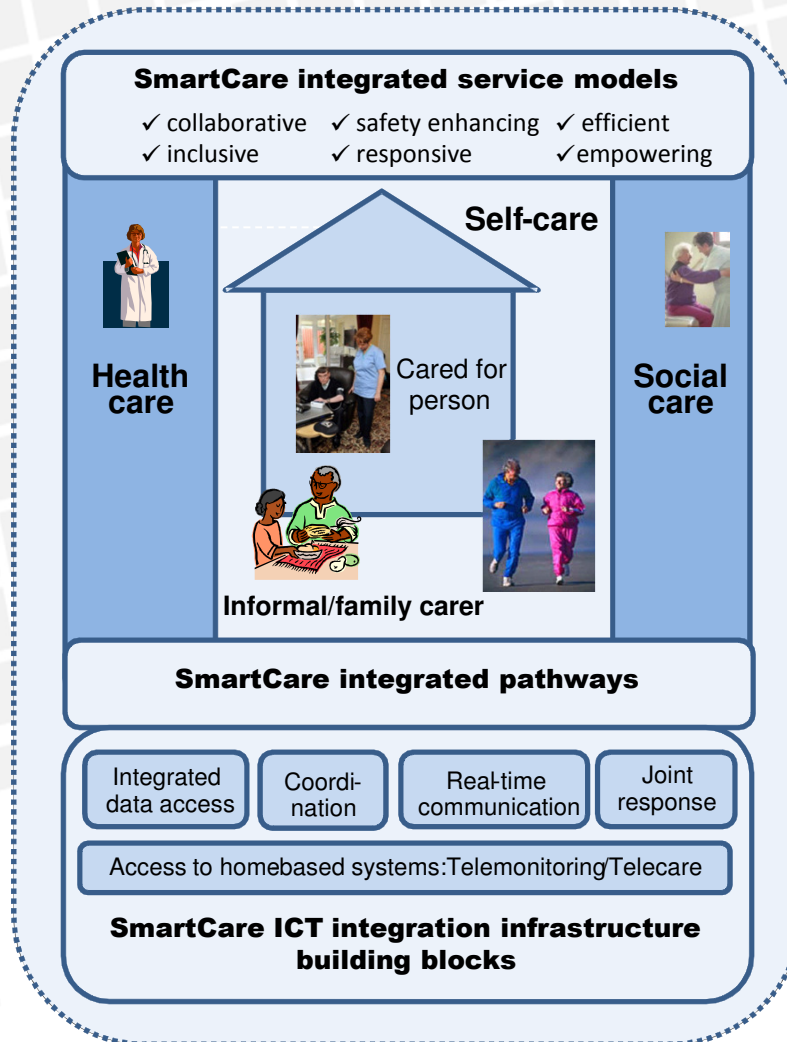
# SmartCare is a breakthrough

The largest deployment of ICT-supported integrated care ever launched in Europe

Region	Older people	Health professionals	Social care professionals	Informal carers
Number of users	(care recipients)			
Friuli-Venezia-Giulia	200	80	20	100
South Denmark	400	50	75	400
Scotland	6,000	1,000	1,000	2,000
Aragon	300	50	100	0
Tallin	100	3	3	0
South Karelia	100	15	2	10
Attica	800	35	10	1,100
North Brabant	500	30	0	500
Kraljevo	110	20	5	100
<b>Total</b>	<b>8,510</b>	<b>1,283</b>	<b>1,215</b>	<b>4,210</b>

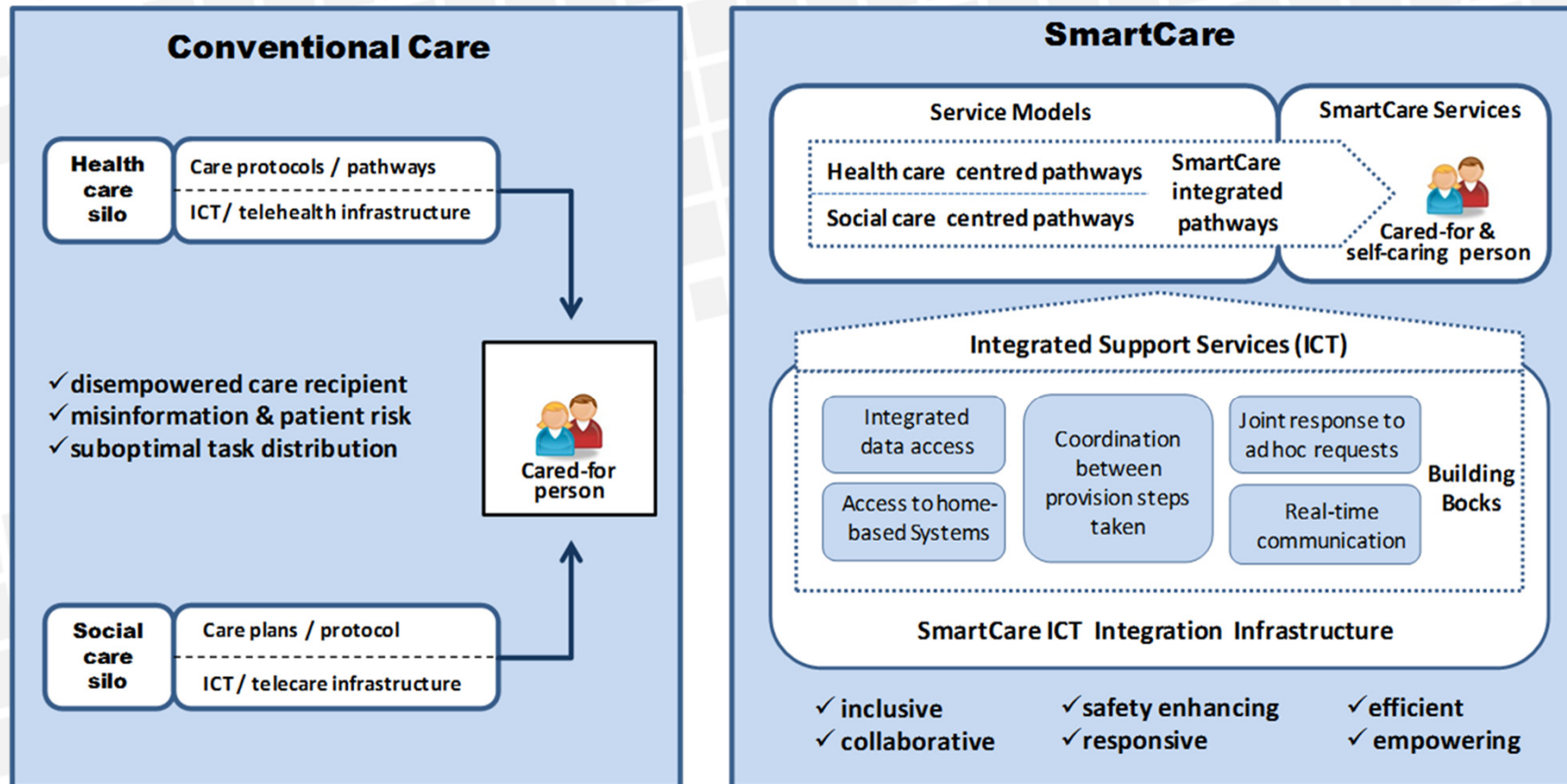
# SmartCare is ambitious

It mobilises all the players involved in elderly care



# SmartCare is ambitious

It fosters the move from conventional care to SmartCare



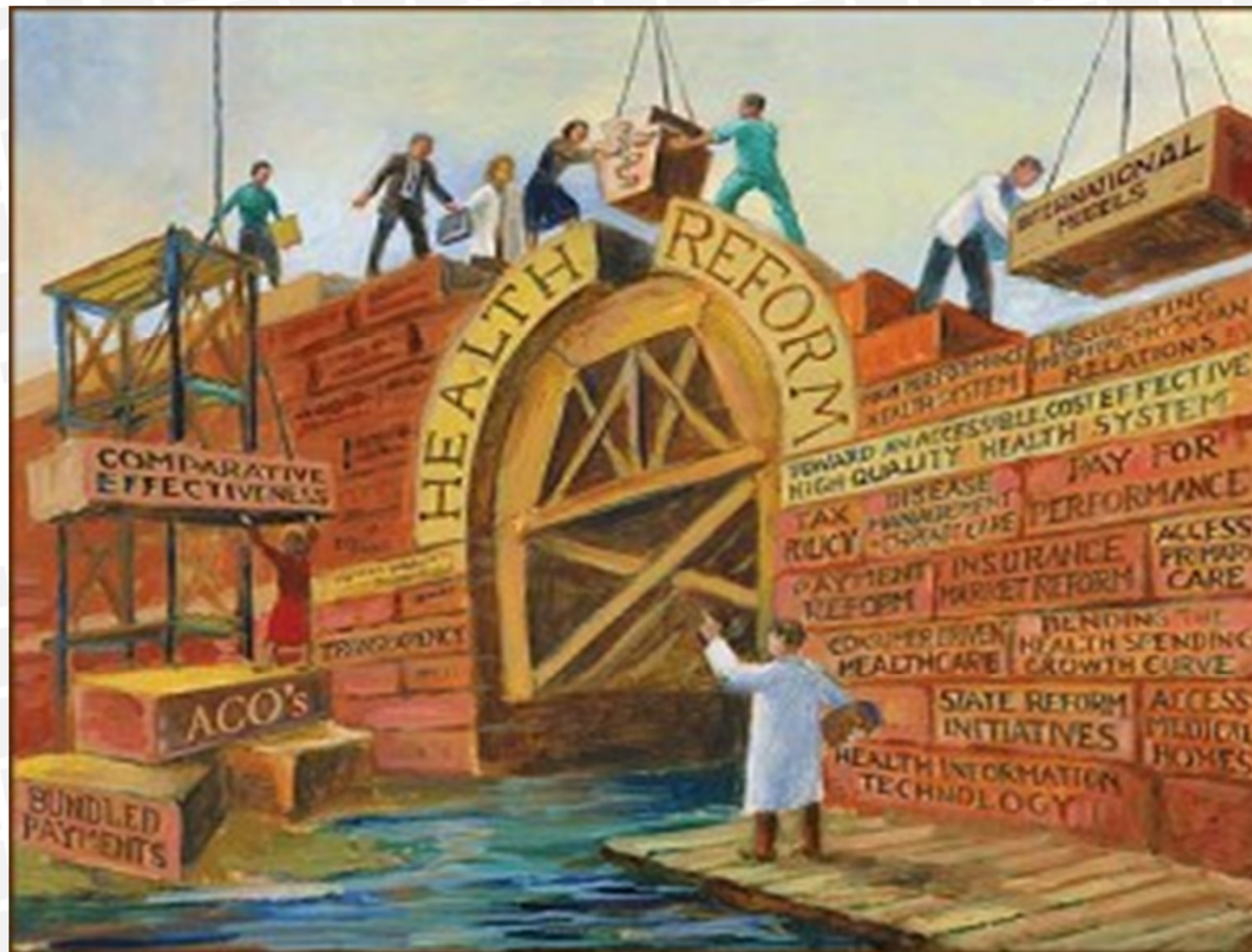
## SmartCare is ambitious

- It aims at validating ICT-based integrated care models in various organisational set-ups covering both the:
  - Beveridge model
  - Bismarckian modelin all their possible variations



# SmartCare is ambitious

It aims at changing the way elderly care is organised

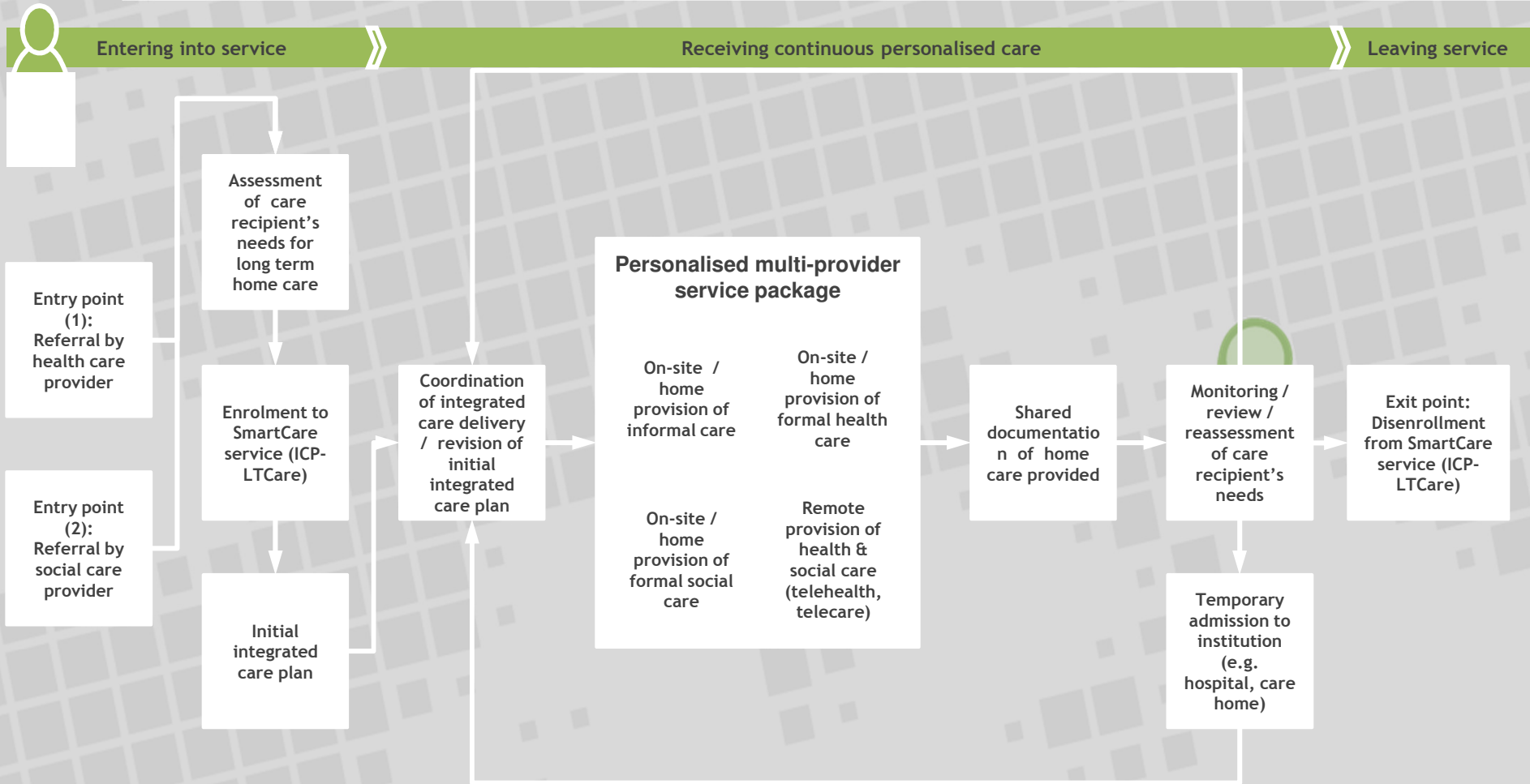


# SmartCare is ambitious

It aims at changing the way elderly care is perceived

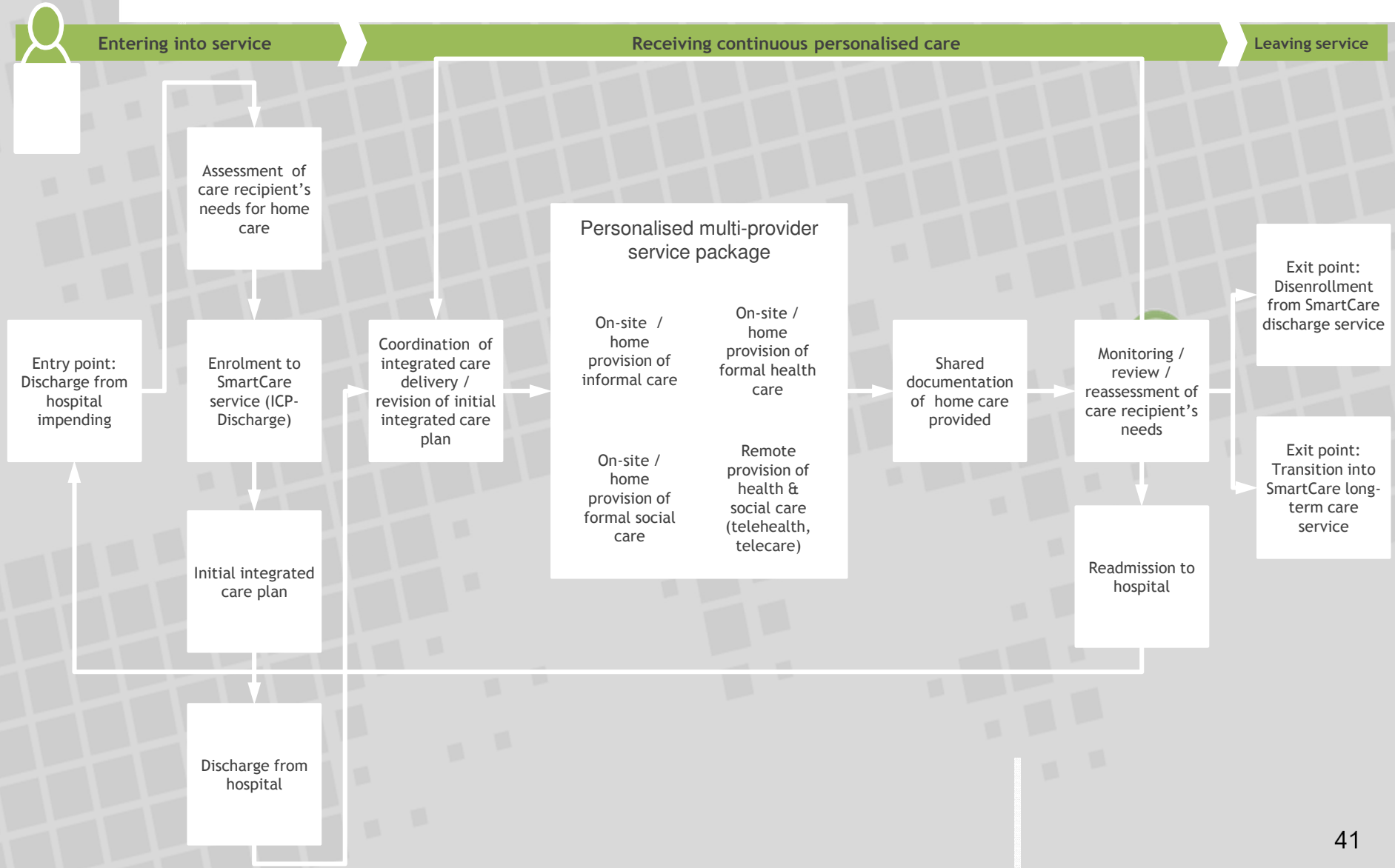


# Integrated Long-Term Home Care Support





# Integrated Home Support after Hospital Discharge



# The ICT Integration Infrastructure

- Integrated data access for care providers in different agencies and informal carers
- Design and execution of pre-planned care pathways enabling temporal coordination among provision steps taken by care providers in different agencies and informal carers
- Access to home-based monitoring (Telehealth andr Telecare) by care providers in different agencies and informal carers
- Real-time communication among care providers in different agencies and informal carers, e.g. support to case conferences
- Joint response to ad hoc requests by care providers in different agencies and informal carers
- Self management, including links into all above cooperation mechanisms

## Where are we today?

- All the deployment sites are operational with the exception of the Netherlands
- A wealth of lessons have been learned already. We are currently elaborating them for later publishing
- A close collaboration has been established with the flagship EU initiative in the field of integrated care: the EIP-AHA B3 Action Group on Integrated Care

# SUSTAINS, a project apart

## **SUSTAINS belongs to a different league**

- It is about citizens and not patients (... even if citizens are also sometimes patients)
- It has had a totally different genesis compared to almost all the projects that we have managed
- It cannot be evaluated with the same evaluation methodology as the other projects we have seen
- It is not about care but about knowledge, information and empowerment (possibly about lifestyle management too)



# **SUSTAINS represents a major success story for Uppsala**



- Promoter of the concept from the very beginning (2007)
- Inclusion (2010) of the online access by citizens to their EHR in the Digital Agenda for Europe (Key Action 13)
- Successful submission of the SUSTAINS proposal (2011)
  - 12 pilot sites in 9 different European countries



# SUSTAINS represents a major success story for Uppsala



- 60.000 individual users reached as of today (17,8% of the total population!)
- The reasons of a success
  - an enthusiastic team never losing faith in the final outcome
  - a reach set of data made available to citizens (single EHR system in use by most of the care providers in the County)
  - high visibility among the general public (not always planned in advance!)

A 3D question mark is positioned on the left side of the image. The background is a light green color with a large, faint, dark green question mark shadow that appears to be cast behind the 3D object. The text "Any questions?" is centered in the image in a bright yellow color.

**Any questions?**



**Thank you for your attention**