

Industry Consultation on Innovative ICT tools and Telemedicine services

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room ASP 5F 385

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Challenges for European Health Systems

- **Pressure on healthcare systems**
 - Citizens' expectations for high-quality care
 - Demographic changes
 - more people will require prolonged care
 - Increased prevalence of chronic diseases
 - substantial part of the overall healthcare costs
 - Medical accidents
 - Staff shortages
 - Reactive model of healthcare delivery
 - after appearance of symptoms
 - Rising healthcare costs
 - faster than the economic growth itself
- **How to offer high-quality & affordable care?**



Needs and Trends

- **Require changes in the way:**
 - Healthcare is delivered
 - Medical knowledge is managed & transferred in clinical practice
- **Emphasis on:**
 - Remote monitoring and care
 - continuity of care - health services outside hospitals
 - Efficient disease management
 - monitor patients over extensive periods of time (at home)
 - Prevention and Prediction of diseases
 - enhanced quality of life
 - avoid costly treatments - reducing healthcare costs
 - Individual citizen with stronger role in healthcare process



	Traditional model of healthcare	New model of health services delivery
Model/Philosophy	<i>Disease centred cure</i>	<i>Citizen centred and wellness focused</i>
Interactions	<i>Episodic, on demand</i>	<i>Continuously, autonomous</i>
Data Characteristics	<i>Fragmented, proprietary</i>	<i>Integrated, distributed, shared, continuous update</i>
Care giver	<i>Healthcare professional</i>	<i>Citizen, informal carers, community, healthcare professional</i>
Care receiver	<i>Patient</i>	<i>All citizens (independent of social, mental, physical capacities)</i>
Entry into healthcare system	<i>Disease triggered</i>	<i>Choice</i>
Consultation delivery process	<i>Linear (cottage industry type)</i>	<i>Ubiquitous, seamless, collaborative</i>
Consultation receiver location	<i>Hospital, GP office</i>	<i>Home, community-based</i>

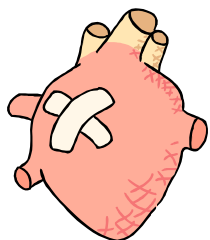
Our WIN³ approach for eHealth

- For improvement of quality of care – *Saving lives*
 - ICT infrastructure for Continuity of care, Personalisation, prevention and improved patient safety
- For increase of productivity- *Saving Money*
 - Cost benefits possible when eHealth combined with appropriate organization and skills
- For economic development- *eHealth Market*
 - To facilitate sustainable growth of transparent and innovation friendly eHealth market. Current market size estimated at 20 Billion



Cardiovascular disease -CVD- in the EU

Facts & Figures



Costs the EU economy €192 billion a year

- 57% health care costs
- 21% productivity losses
- 22% informal care of people with CVD

CVD causes 42% of all deaths in the EU

Coronary heart disease > Stroke

Central and Eastern Europe > Northern, Southern and Western Europe



EU-funded projects

MyHeart, HeartCycle, Heartfaid, EUHeart, ...
European Vascular Genomics Network (EVGN)

...

Source : « European cardiovascular disease statistics 2008 » © European Heart Network



eHealth Market Definition*

- 4 major categories

1. Clinical information systems

- a) Specialised tools for health professionals within care institutions
- b) Tools for primary care and/or for outside the care institutions

2. Telemedicine systems and services, including homecare

3. Integrated regional/national health information networks and distributed electronic health record systems and associated services

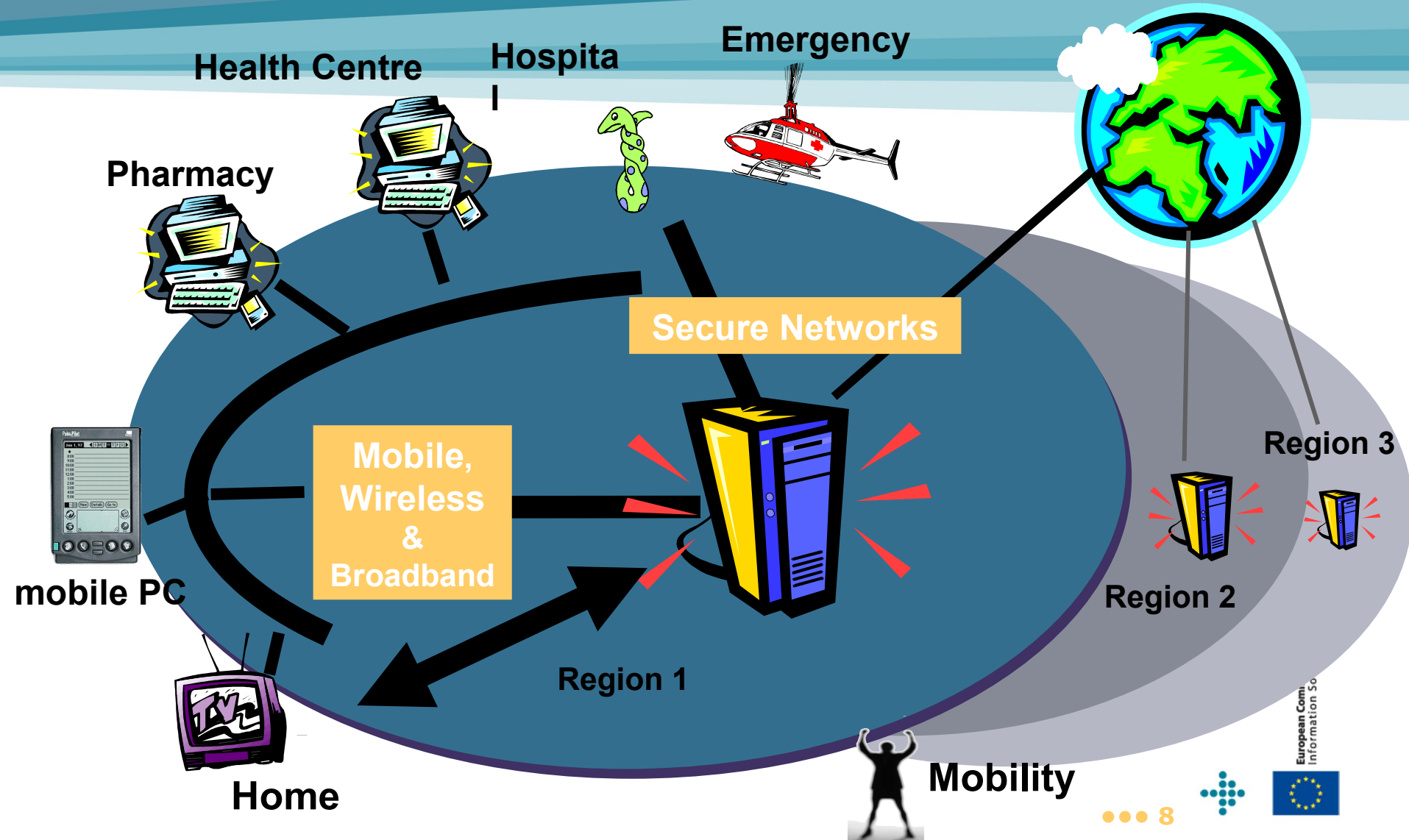
4. Secondary usage non-clinical systems

- a) Systems for health education and health promotion of patients/citizens
- b) Specialised systems for researchers and public health data collection and analysis
- c) Support systems for clinical processes not used directly by patients or healthcare professionals.



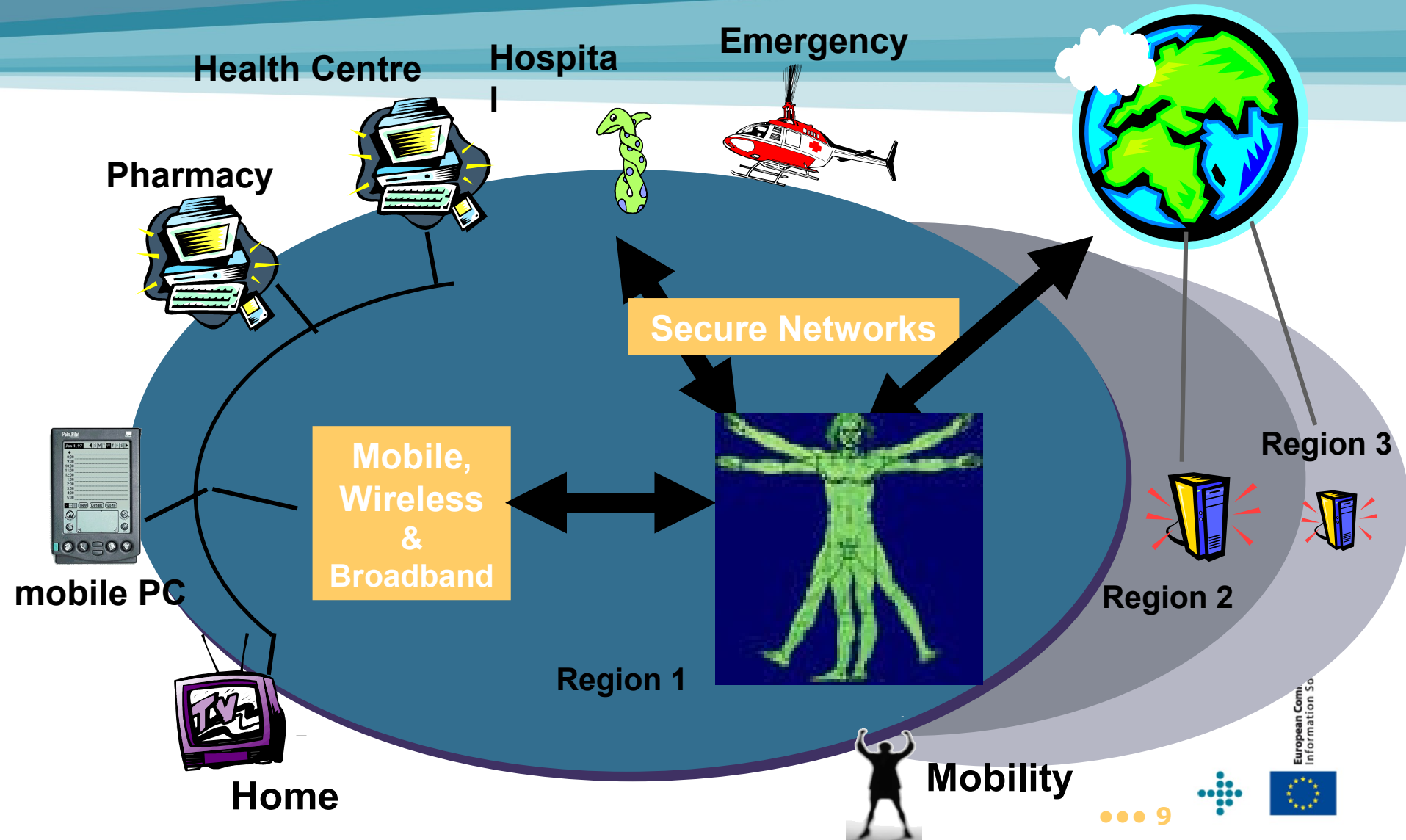
I. Past R&D Focus 1990-1998

Regional health information networks



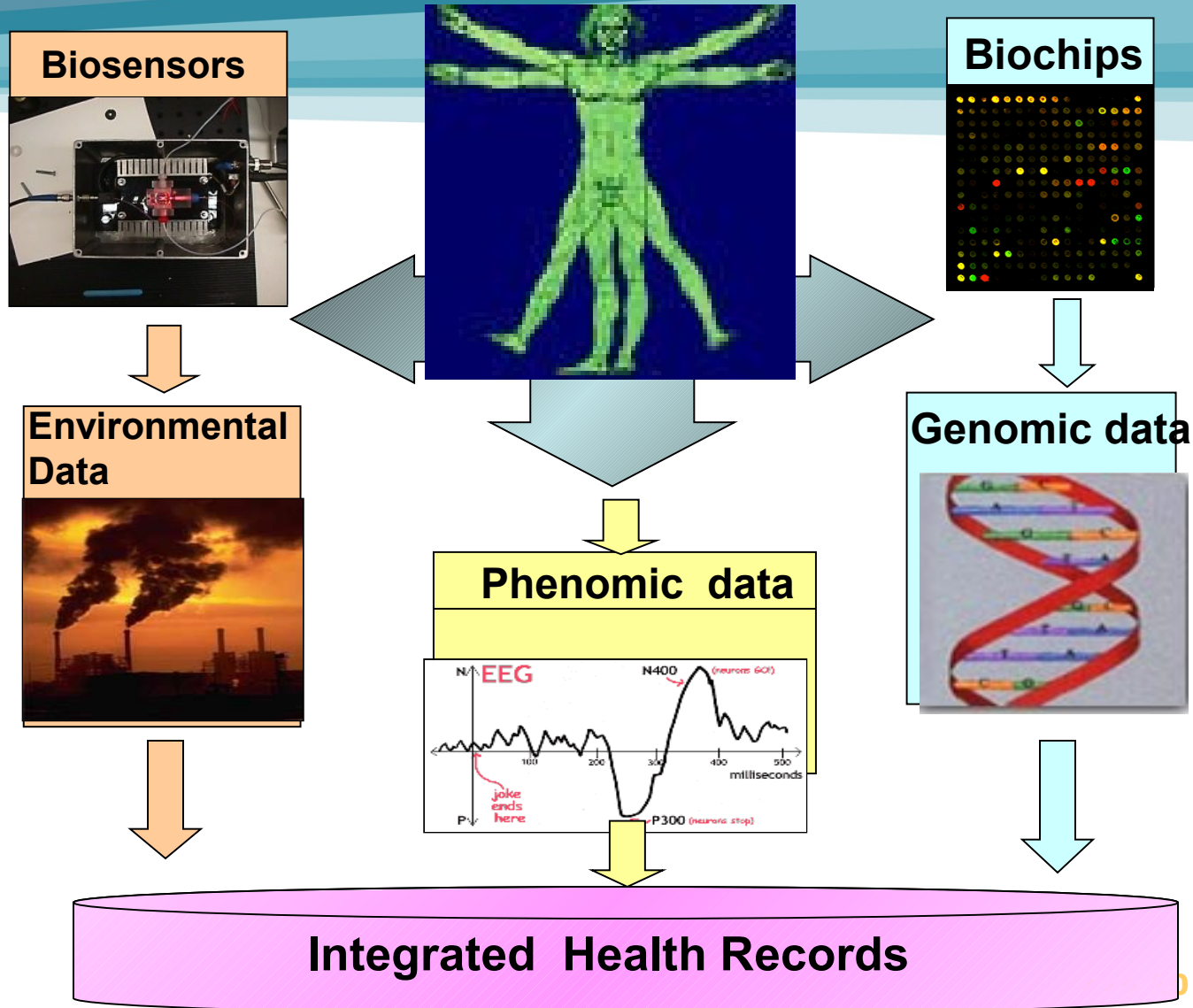
II. Current R&D focus (since 1999 -)

Connecting individuals with Health Information Networks



III. Current R&D focus (2004 -)

Towards full picture of individual's health status



EU current eHealth Agenda Research & development – FP7

■ Personalisation of Healthcare

- Personal health system

€ 72 Million 2007, € 63 Million 2009

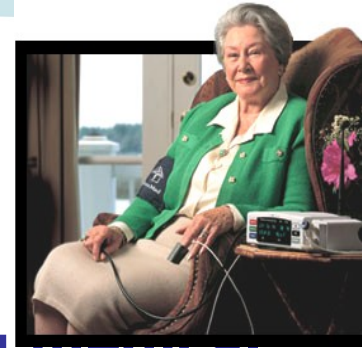
■ Improving Patient safety & avoiding medical errors

€ 30 Million 2007, € 30 Million 2009

■ Predictive Medicine – Virtual Human

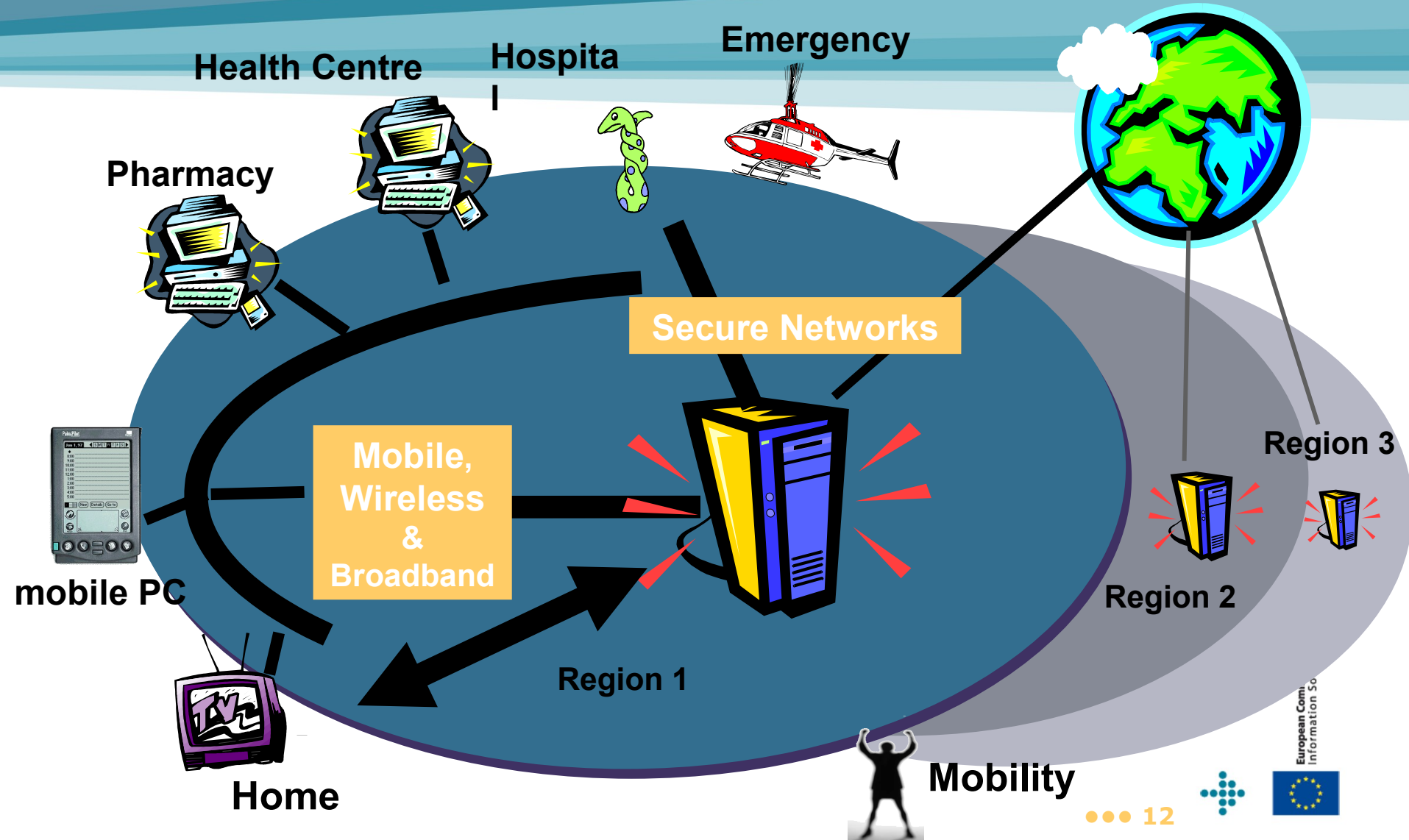
- Modelling/simulation of diseases

€ 72 Million 2007, € 68 Million 2009,



I. Past R&D Focus 1990-1998

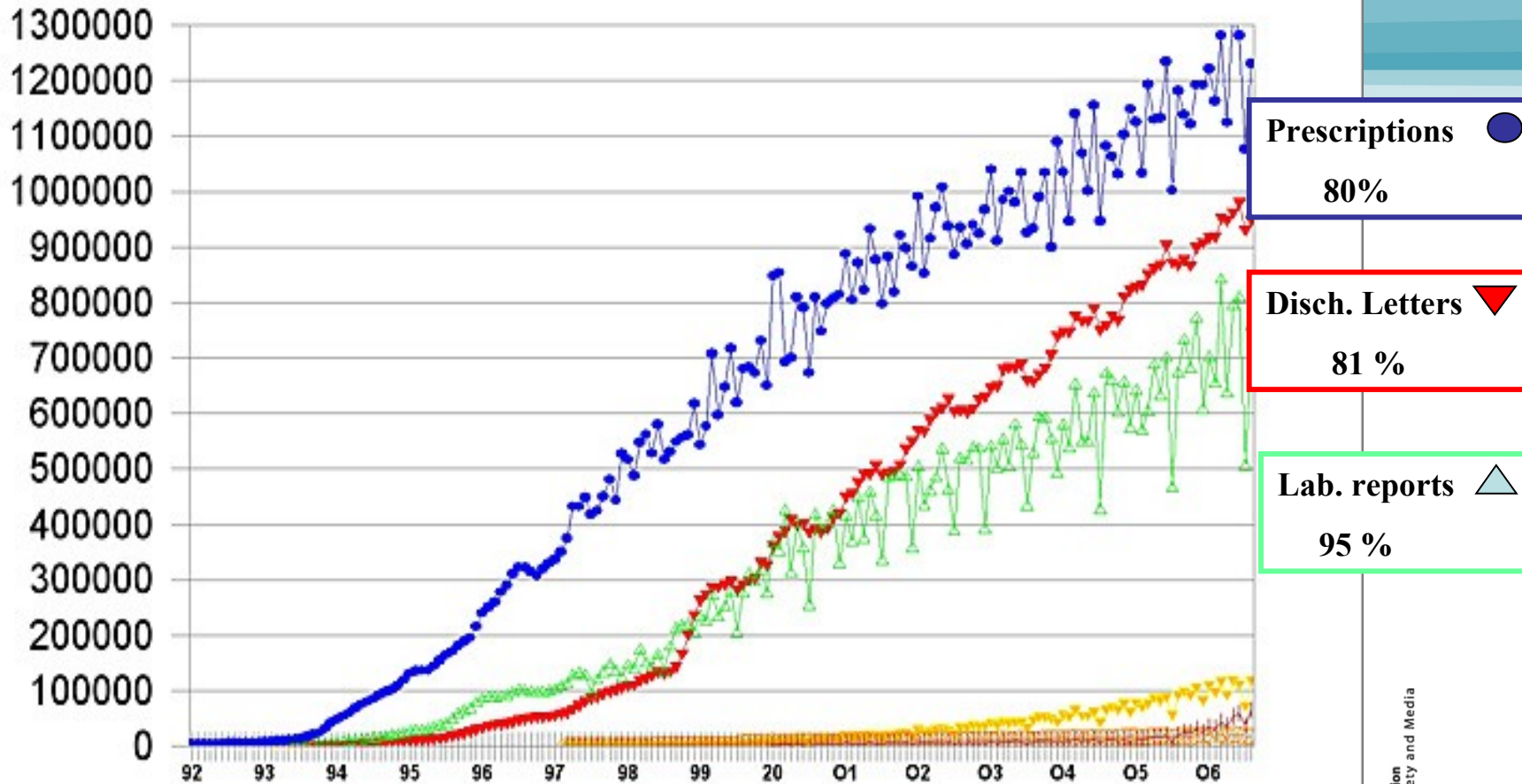
Regional health information networks



MedCom -The Danish Health Data Network

Messages/Month

www.medcom.dk



Estimated cumulative benefit by 2008: ~ € 1.4 bil.

Reimbursement 
13290 = 95 %

Referrals 
40113 = 80%



IT use among primary care physicians in seven countries

	AUS (%)	CAN (%)	GER (%)	NET (%)	NZ (%)	UK (%)	US (%)
Electronic medical record (EMR) system Do you currently use EMRs in your practice?							
Yes	79 ^{b,c,d,e,f,g}	23 ^{c,d,e,f,g}	42 ^{d,e,f,g}	98 ^{e,f,g}	92 ^g	89 ^g	28
Does your EMR system allow you to (base: all doctors; percent yes)							
Share records electronically with clinicians outside your practice	10 ^{b,d,e,f}	6 ^{c,d,e,f,g}	9 ^{d,e,f,g}	45 ^{e,f,g}	17 ^g	15	12
Are the following tasks routinely performed in your practice?							
Doctor receives alert or prompt about a potential problem with drug dose or interaction							
Yes, using computerized system	80 ^{b,c,d,e,f,g}	10 ^{c,d,e,f,g}	40 ^{d,e,f,g}	93 ^{e,g}	87 ^g	91 ^g	23
Yes, using manual system	10 ^{b,c,d,e,f,g}	31 ^{c,d,e,f}	33 ^{d,e,f,g}	2 ^{e,f,g}	6 ^g	6 ^g	28
No	11 ^{b,c,d,f,g}	56 ^{c,d,e,f,g}	27 ^{d,e,f,g}	4 ^g	7 ^{f,g}	3 ^g	47

SOURCE: Commonwealth Fund International Health Policy Survey of Primary Care Physicians, 2006.

NOTES: Reading from left to right starting with Australia (AUS), the letter indicates significant differences with the country or countries to the right, as indicated ($p < .05$).

^b Different from Canada.

^c Different from Germany.

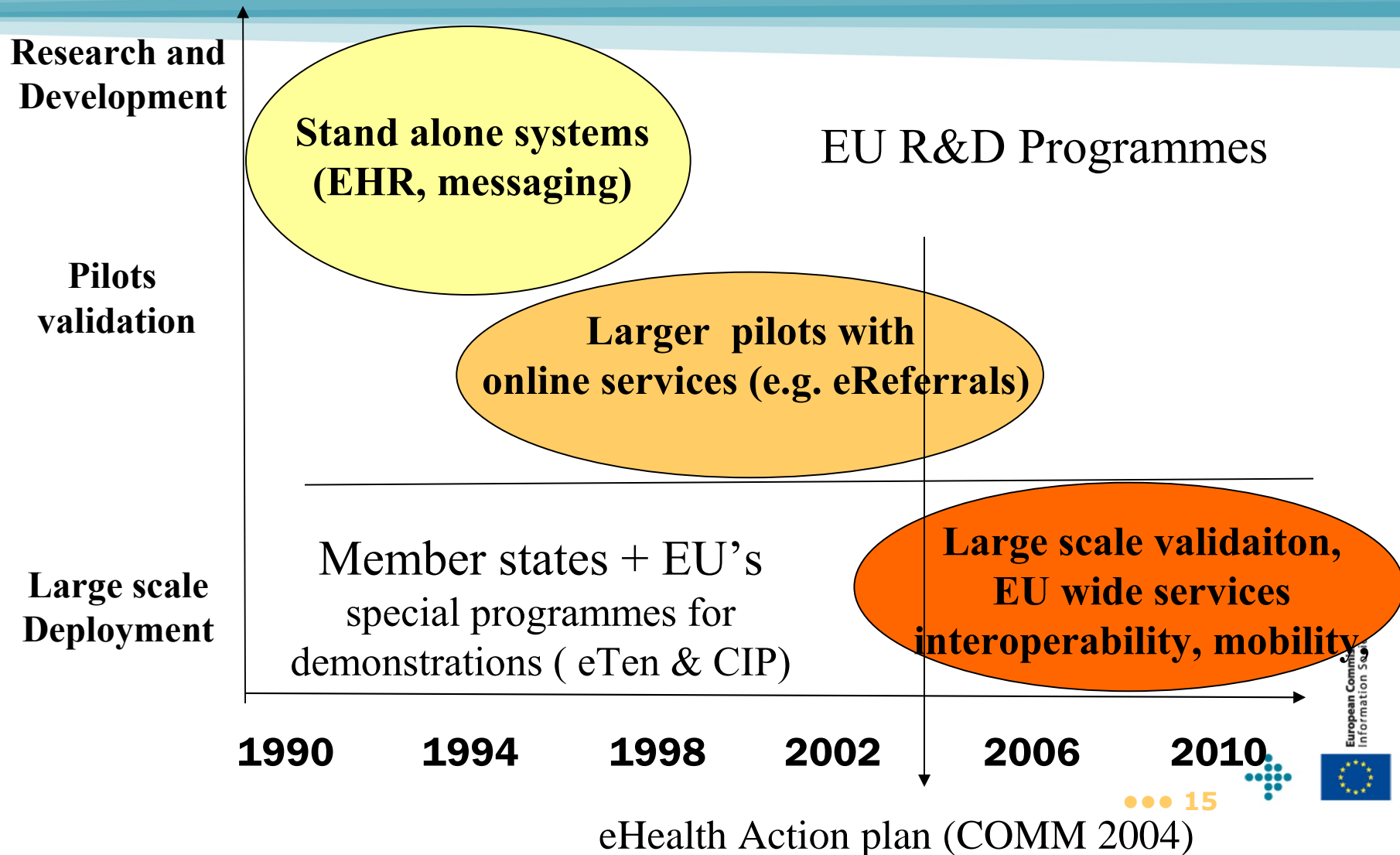
^d Different from the Netherlands.

^e Different from New Zealand.

^f Different from the United Kingdom.

^g Different from the United States.

Regional Health Information Networks 15 years of EC activities ("Innovation cascade")



Communication: COM(2004) 356 final 'An Action Plan for a European e-Health Area'

e-Health Action Plan: main areas of activity

- National/regional roadmaps
- Common approaches for patient identifier
- Interoperability standards for EHR
- Boosting investments in eHealth
- Certification and labeling (Q-REC project)
- Legal framework, certification of qualifications
- Yearly Ministerial conferences & exhibitions
- World of Health IT yearly conference



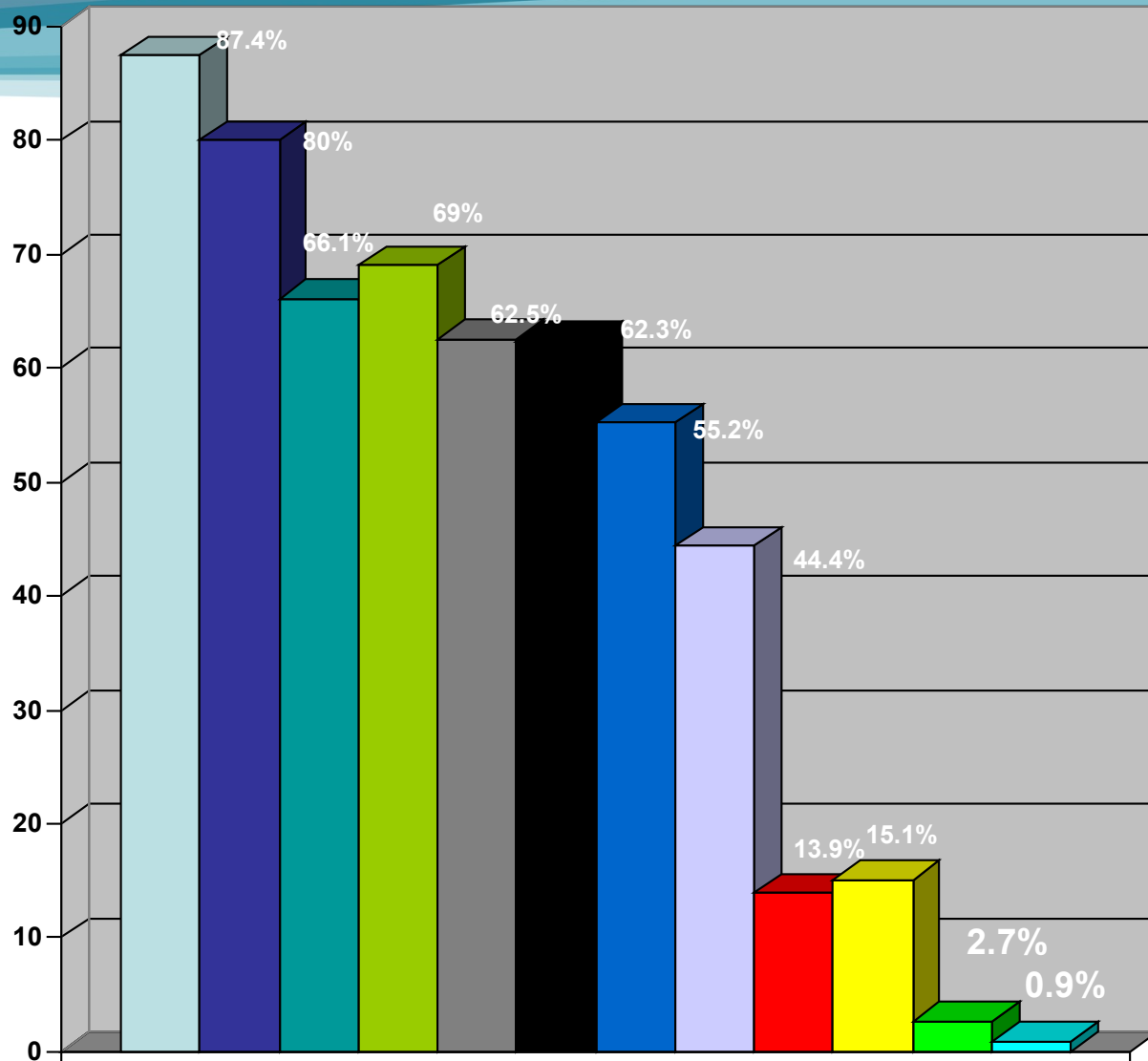
eHealth Action Plan - progress report

- Publishing eHealth Roadmaps of 27 Member States (3/07)
- Launching Large Scale Pilots on interoperability of emergency and medication data – CIP (2/08)
- **Lead Market Initiative (Dec 2007)**
- **EC Recommendation on eHealth Interoperability (April 2008)**
- Mobilising the Actors
 - eHealth 2008 Conference Slovenia May 7-8
 - 3rd World of Health IT (WHIT 08), Copenhagen, November
- Creating the conditions: Working with all the stakeholders and other EC services on the legal framework, cross border health services, Innovation, boosting of eHealth financing



eHealth in EU – Some Good News

Euro leads eHealth deployment in primary care (EC Study 2007)

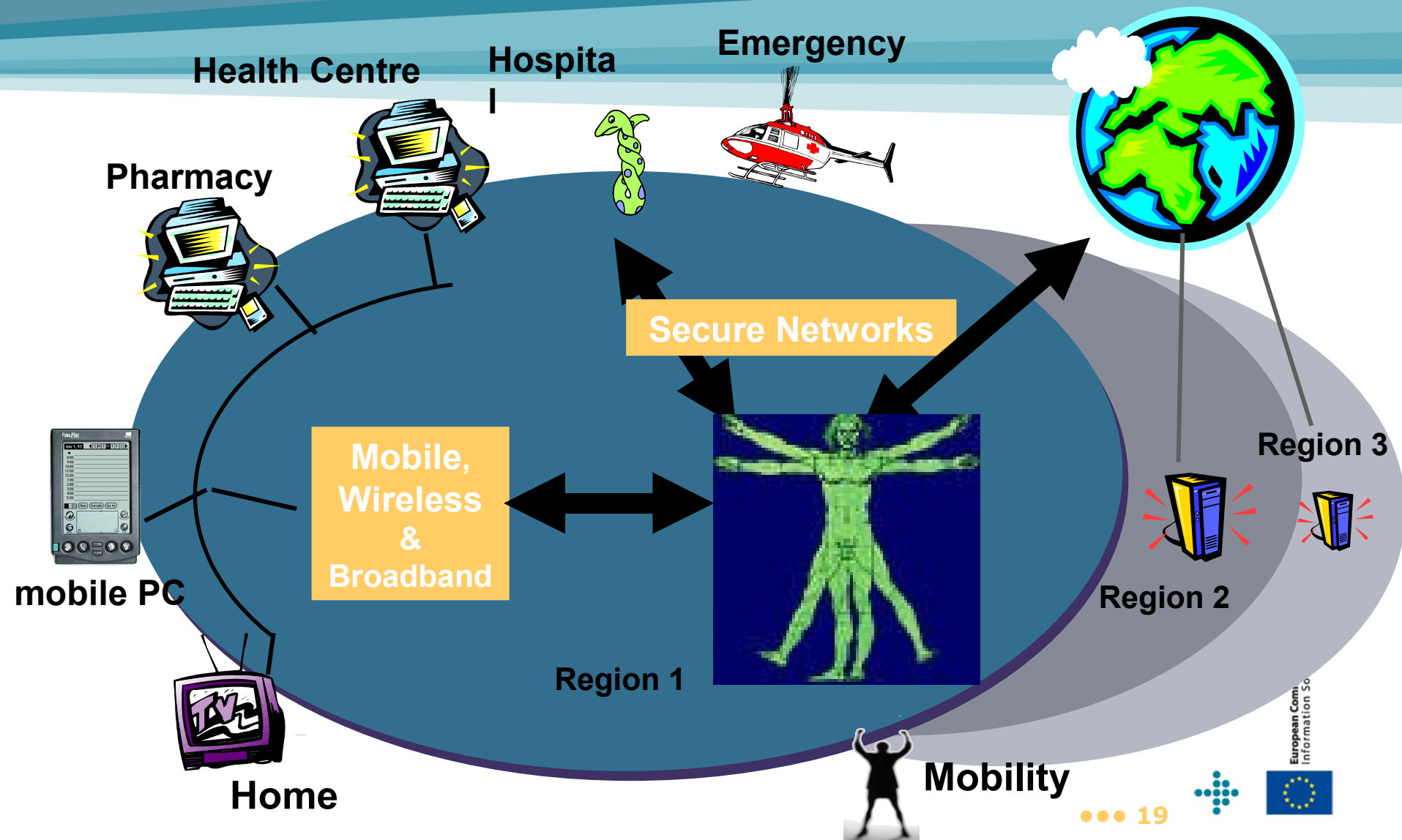


- Using PC
- Using electronic patient data storage
- Routinely using PC in consultation
- Internet access
- Connecting with broadband
- Using decision support software for prescribing or diagnosis
- Accessing other health institutions networks
- Occasionally using PC to illustrate to patient
- Regularly using PC to illustrate to patient
- Exchanging administrative data with reimbursing organisations
- Occasionally using Internet and electronic health networks to provide telemonitoring to home-patients
- Routinely using Internet and electronic health networks to provide telemonitoring to home-patients

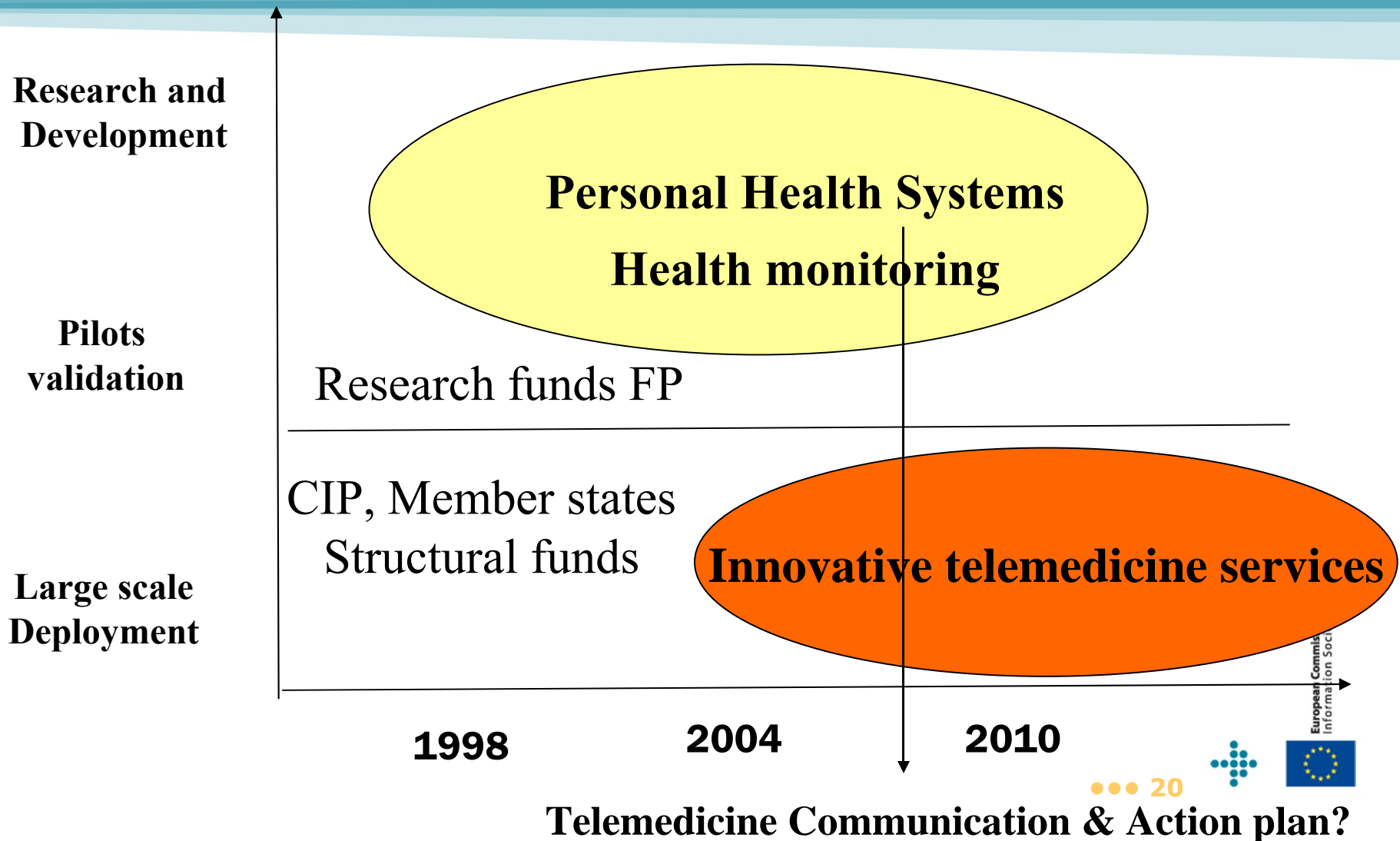


Current focus (since 1999 -)

Connecting individuals with Health Information Networks



EU in support of Telemedicine - Innovation "cascade"



EU current eHealth Agenda Support to Deployment

- Lead Market Initiative (Dec 2007)
- Recommendation on eHealth Interoperability (April 2008)
- Communication on Telemedicine and Innovative ICT Tools for chronic disease management (Q4 2008)



Definition

- Delivery of healthcare services for patients,
 - using information and communication technologies,
 - in situations where the clinician(s) and/or the patient are not in the same location.
- Includes transmission of medical images, audio, video, text or other data to support diagnosis, monitoring, treatment and rehabilitation.



Two main groups

- Healthcare professional to health care professional (e.g. teleradiology, telecardiology)
- Healthcare professional to patient (e.g. telemonitoring of chronic diseases, continuity of care)
- (for Telehealth) Social care/Patient to patient

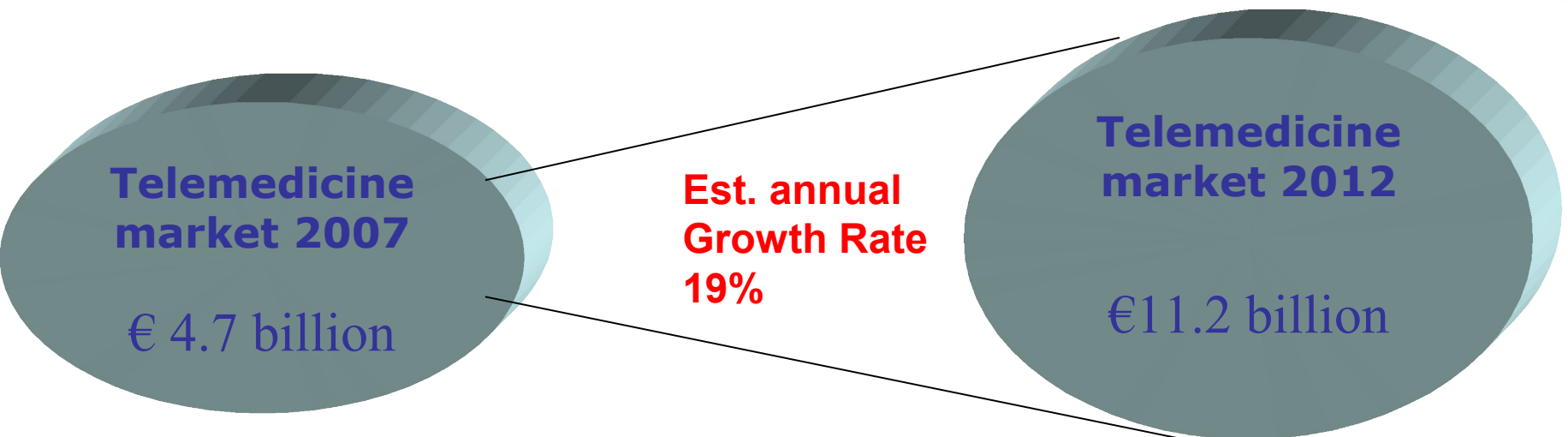


Telemedicine (TM) and market perspectives

- Part of e-Health market, identified as one of the most promising sectors for growth (Lead Market Initiative)
- Market not developing as rapidly as could be anticipated
- Market is fragmented, lack of interoperability, legal and financing uncertainties
- Few proven, sustainable business models



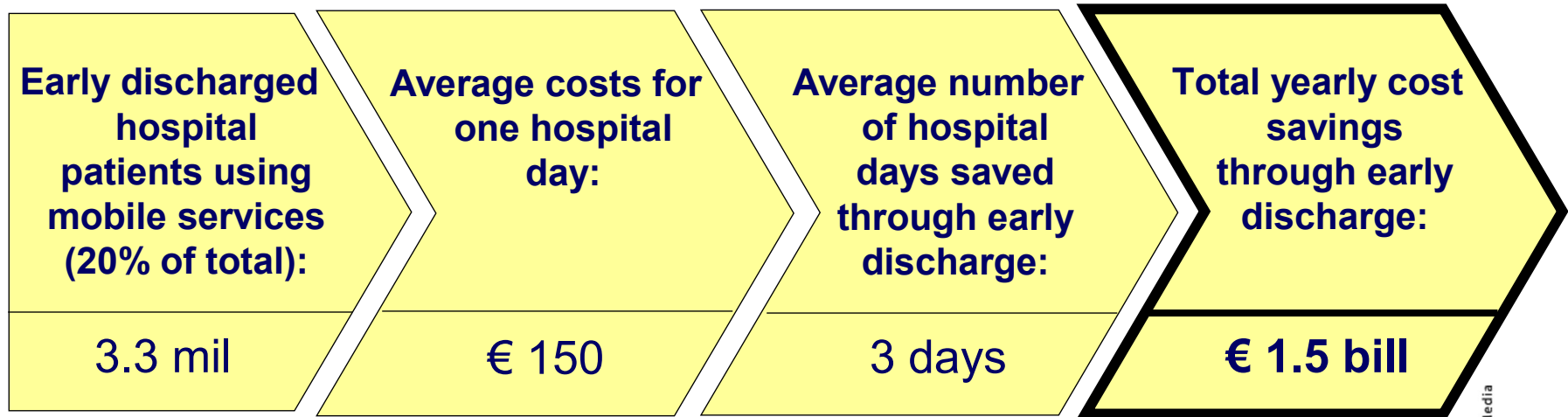
Telemedicine growth estimation 2007-2012



The global market for telemedicine is estimated to be worth €4.7 billion in 2008, increasing to over €11.2 billion by 2012, an average annual growth rate of 19%.

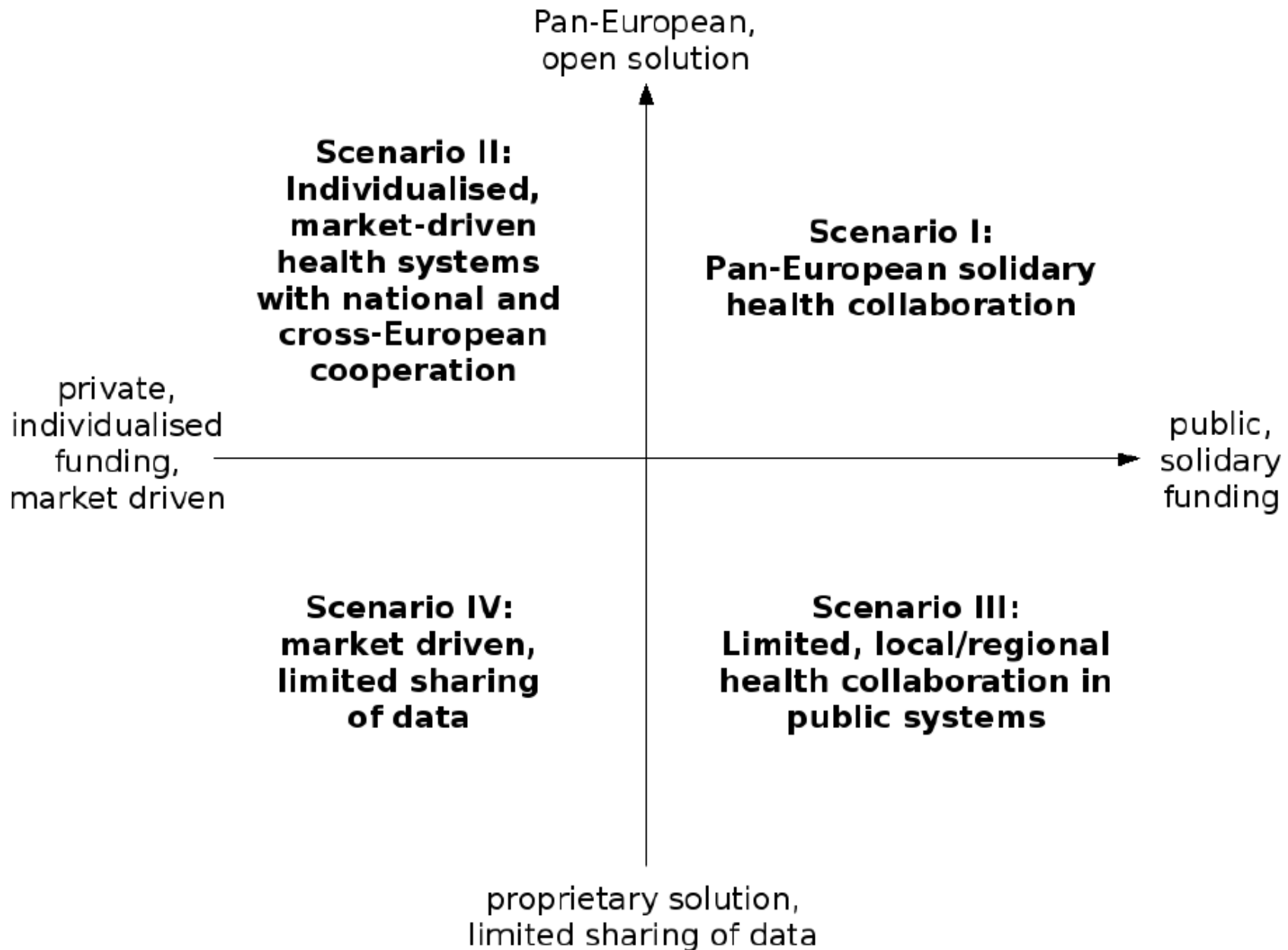
A need for evidence and tech. assessment e.g. Cost savings in patient care

- **Hospitals in Germany can save up to € 1.5 bill per year through early discharge of patients made possible by mobile monitoring services**



Source: GesundheitScout 24 GmbH and Bayerisches Rotes Kreuz

The EU Mosaic of health delivery systems no solution fits all



Telemedicine (TM) and barriers for wider deployment

- Technical
 - infrastructure, interoperability, quality of transmission and encryption, identification and authentication
- Organisational
 - lack of awareness, training, acceptance by professionals and patients; lack of hard evidence of cost/benefits. quality standards; business models for procurement and reimbursement
- Regulatory issues
 - accreditation and autorisation of TM activities, liability, crossborder aspects, safeguarding security and privacy, reimbursement



Why does the Commission need to act?

- In the absence of Community action, possibly:
 - Lost opportunity for health systems and patients to take advantage of TM solutions to address specific challenges
 - Absence of common standards and solutions jeopardising future interoperability of systems
 - Lower market uptake and deployment of useful and technologically mature TM solutions



Does the Commission have the right to act?

- Legal basis (EC treaty)
 - Internal market art. 95
 - Competitiveness of industry, art. 157
 - Public Health art. 152
- Necessity test
 - Community involvement legitimate in:
 - Identification of common barriers to deployment of TM
 - Cross border aspects of healthcare provision
 - Coordination on common standards
 - Support of internal market on TM applications
- Proportionality
 - Policy initiative to support MS and Commission to address common challenges
 - Genuine need for coordination at EU level



Policy options (1)

No policy change

- TM services fall under the existing Directives 98/48/EC (transparency dir.) and Directive 2000/31/EC (Electronic Commerce dir.), but implications need to be clarified
- Proposal for a Directive on cross-border healthcare addresses some issues related to cross-border e-Health aspects (but not expected soon)
- Risks of insufficient coordination between Member States on issues related to common approaches and standards include
 - Hampering, delaying the benefits to patients for regional & national health systems
 - Unnecessary market fragmentation, Slower market development perspectives



Policy options (2)

Non-legislative approach

- Would allow to build a structured and coherent framework to the Commission activities in the Telemedicine area
- Rationale: some issues best addressed at Community level
- Aim of the approach:
 - analysing the main problems, obstacles and barriers for deployment of TM
 - Suggesting possible actions to address the issues (actions for Member States and for the Commission)
- Non binding measures
- Possible instruments : Communication or Recommendation



Policy options (3)

Legislative approach

- Would have to be based on internal market / free movement of services principles
- Currently,
 - lack of sufficient understanding of these information services
 - Little specific national regulation activity in place
- Appears premature to call for harmonisation of regulation in that area
- On the public health side, no legal basis foreseen for binding regulation in this area



Other Consultations

- TeleHealth 2007
 - Conference report available at http://ec.europa.eu/information_society/events/telehealth_2007/docs/2007th-c
- i2010 Sub group questionnaire, discussions in November 2007 and January 2008
- Expert Group Meeting, February 4, Brussels
- Commission Inter Service Group
- Med-e-Tel – Luxembourg, April 16-18 2008
- eHealth 2008, Portoroz, Slovenia, May 6-7 2008
- Consultation with patient organisations, date tbd



What is expected from this workshop

- Exchange of ongoing activities in the domain
- Capture the industry's vision, commitment, concerns
 - An industrial analysis of the market (market data)
 - A better understanding of the industrial strategy
 - What does Industry expects from the Commission (regulation, financial support)
- Input for EC Communication and commitment on feedback from Industry





For further information

- **DG ENTR LMI microsite:**
<http://ec.europa.eu/enterprise/leadmarket/leadmarket.htm>
- **eHealth Task Force report:**
http://ec.europa.eu/information_society/activities/health/docs/lmi-report-final-2
- **INFSO H1 Policy site:**
http://ec.europa.eu/information_society/activities/health/index_en.htm
- **e-Newsletter:**
http://ec.europa.eu/information_society/activities/health/newsletter/index_en.h
- **Research site:**
<http://cordis.europa.eu/ist/health/index.html>
- **Interactive Portal:**
<http://www.epractice.eu>

