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Good eHealth project.

*Implementing Good Practice and proposal
for a Good practice label in Europe*

A presentation by
Baudouin Lejeune, Deloitte



European Commission
Information Society and Media

e-Health action plan

e-Health – making healthcare better for European citizens: An action plan for a European e-Health Area': COM(2004) 356 final

Main objective: to accelerate awareness and uptake of beneficial eHealth systems & services

- Approved by European Commission, 30 April 2004

http://europa.eu.int/information_society/activities/health/policy_action_plan/index_en.htm

Issue number 3 Working together and monitoring practices

"e-Health should be supported by the widespread dissemination of best practices. These should include the impact on access to healthcare and on its quality, assessments of cost benefits and productivity gains, as well as examples of addressing liability in telemedicine services, reimbursement schemes, and accreditation of e-Health products and services."

“In a framework of close collaboration between the European Commission and the EU Member States, the target for Ministers is now to address the common challenges of eHealth through shared targets, **dissemination of best practice**, common benchmarking and international collaboration.”

Quotation

European Health Ministers

Tromsö eHealth 2005 – Conference Conclusions



Project goals and objectives

Project goals	Operational objectives
<ul style="list-style-type: none">• Identify good practices and their associated benefits;• Develop and implement proven approaches to wider dissemination and transfer of day-today experiences;• Stimulate and foster accelerated up-take of eHealth by addressing the common challenges of eHealth and lessons learnt.	 <ul style="list-style-type: none">• Developing and defining a common description template;• Defining assessment criteria for evaluation of good practices and for attribution of a “good practice label;• Carrying out an in-depth analysis of good practice examples;• Design and implementation of an intelligent knowledge base and web site allowing easy selection and extraction of relevant cases and supporting ongoing interaction of stakeholders;• Dissemination and promotion of good practices and other outputs of the study based on an implementation and communication plan;• Running of the web site during the duration of the contract.

Outcomes & benefits

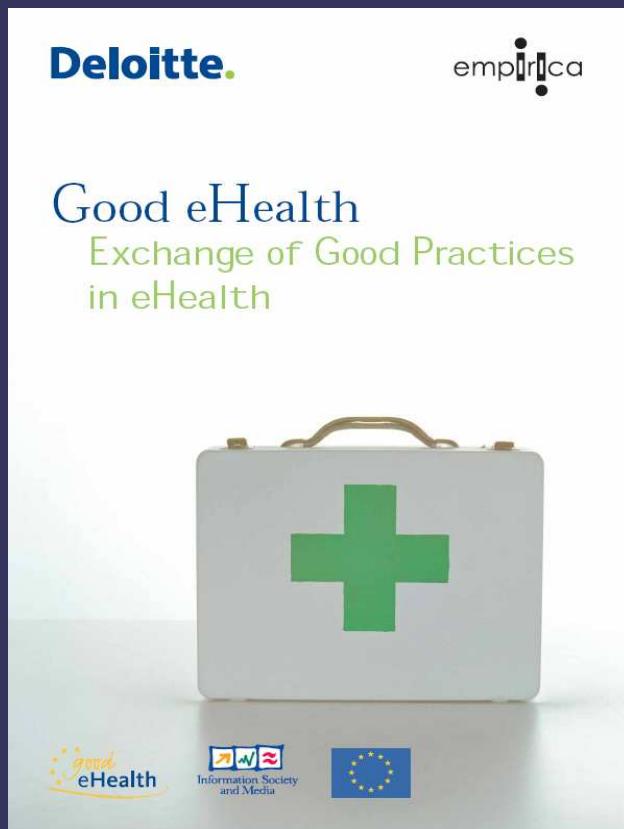
Expected outcomes of the study

- Providing good examples of effective eHealth applications
- Increasing the confidence of decision makers in high-level strategy development, including providing political and financial incentives for mid-term investment
- Improving health professionals' confidence in accepting and using eHealth tools
- Helping to demonstrate the case for the citizen in the areas of knowledge-based and citizen-centred care tools and solutions
- Allowing for longer term expansion of eHealth benefits to achieve health care transformation
- Providing the basis for an overall approach to benchmarking eHealth developments in Europe.



Your contribution!

Report your eHealth achievements by visiting the project website at www.good-ehealth.org



A screenshot of a computer screen displaying the "Good eHealth - Exchange of Good Practices in eHealth" website. The page features a yellow header with the "good eHealth" logo. The main content area has a green background and includes a sidebar with links like "Home", "About", "News & Events", "Documents", and "Good Practice Knowledge Base". A central column contains text about identifying and supporting eHealth Good Practice. On the right, there are sections for "Short cuts", "News", and "Case of the month". The footer indicates the site was created by Deloitte and empirica in 2006.

Self-candidate!

candidate via the description form

The image displays two side-by-side screenshots of a web browser window titled "eHealth home - Mozilla Firefox".

Screenshot 1 (Left): This screenshot shows the initial stages of a candidate submission. It features a "Title and Description" section with fields for "Name of the eHealth application" (containing placeholder text) and "Why your solution?" (also containing placeholder text). Below these are sections for "Detailed description", "Planning", "Routine operation", "Evaluation", "Country", "Healthcare value chain", "Level of implementation", "Technology", "Languages", and "Occupational background", each with dropdown menus. A large text area for the detailed description is present. At the bottom right of this panel is a "Fertig" (Done) button.

Screenshot 2 (Right): This screenshot shows the continuation of the process. It includes a "Search cases" section with dropdowns for "Planning", "Routine operation", "Evaluation", "Country", "Healthcare value chain", "Level of implementation", "Technology", "Languages", and "Occupational background". To the right of this is a "Browse case studies" section showing a study titled "Medcom, Denmark - Danish health data network (DHCN)". The study summary states: "The network allows fast information flow, in form of consistent data. It connects healthcare providers (GPs, hospitals, pharmacies...) as well as relevant stakeholders of the social care system." It also lists the author as S. Weller, views: 16, and submission date: 27/09/2006. Below this is another study titled "Distance treatment of alcohol abusers by the use of eHealth applications.", which describes the eHealth application facilitating access to alcohol abuse therapy for abusers in remote areas via tele-therapy. It lists the author as Wanscher, views: 7, and submission date: 24/10/2006. At the top right of this panel is a "Login" button. The top right corner of the entire interface has a "Regional and international int" link.

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Good practice examples in Europe's hospitals.

A presentation by
Reinhard Hammerschmidt - empirica



Overview

- Three hospitals – Three different experiences:
 - Integrate your IT: Master Patient Index at Hospital Ambroise Paré, Belgium
 - Developing an advanced hospital Electronic Patient Record (EPR): The Homerton University Hospital experience
 - How to optimise your back office and administration: supply chain management at the MedicalOrder®Center Ahlen, Germany

“Do you have various legacy IT systems
that don’t work together properly and
only a small budget?”

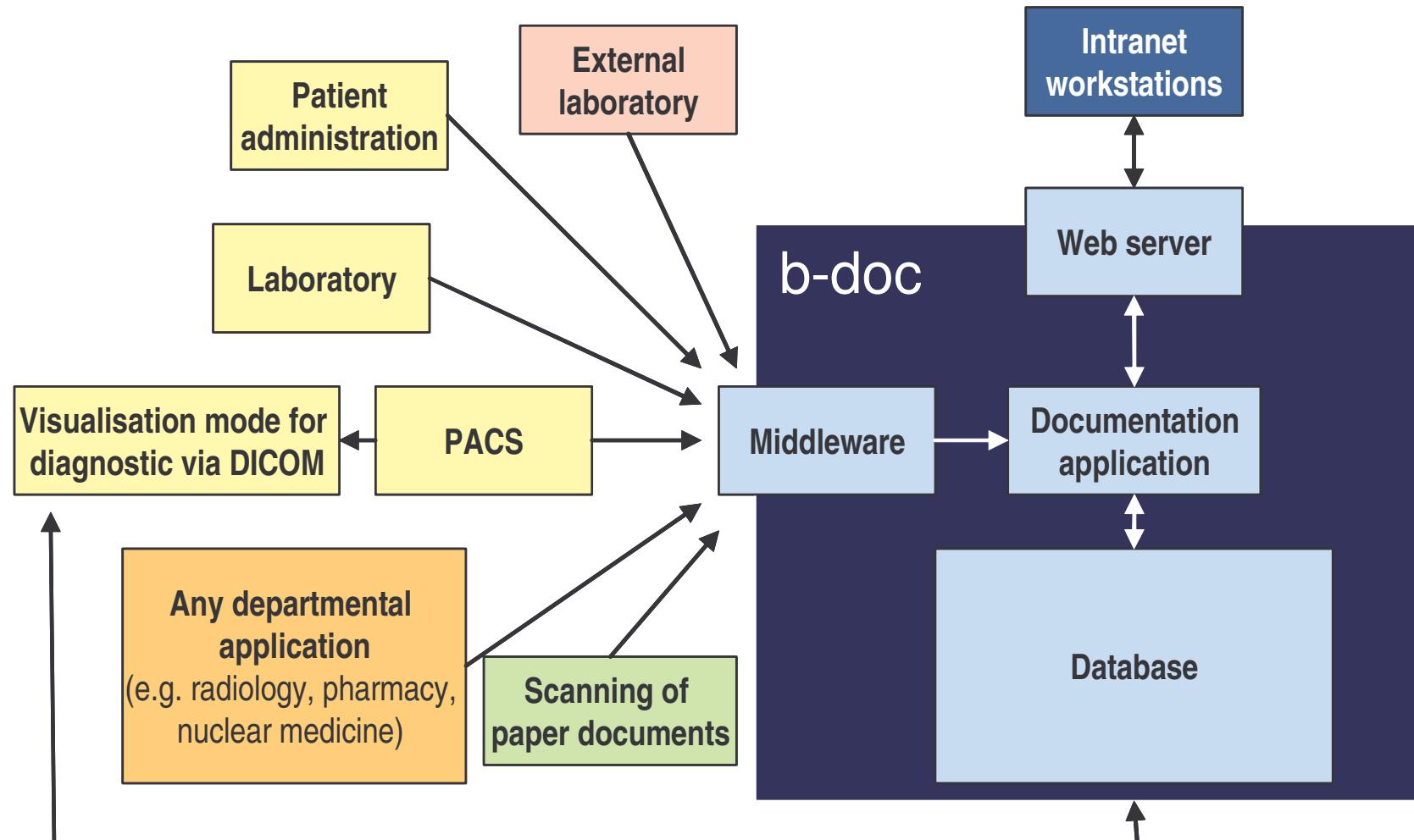


Master Patient Index: Hospital Ambroise Paré, Belgium

- Public university hospital with 500 beds
- pragmatic integration of information resources,
- small investment
- no replacement of well-known and well working specialised information systems.

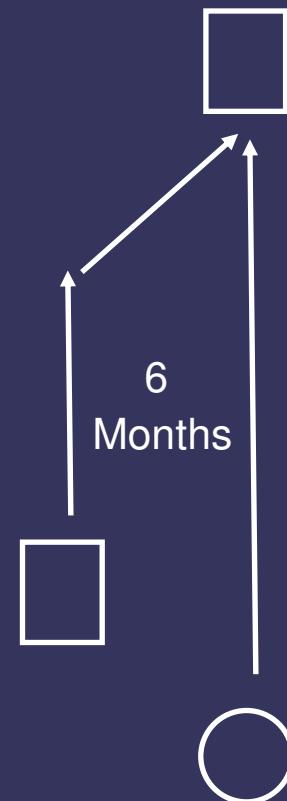


Features



Development process

- Physicians themselves fostered further development
- Nobody was forced to use the system; Only offered as a toolkit.
- Paper and electronic files used in parallel free of choice
- Transition phase: 6 months
- After transition phase: all medical results stored in the system due to good support by physicians.



Milestones

- Start of planning: 2001
 - 1.+ 2. Q 2002: Core system components created
 - 3.+ 4. Q 2002: Tests in two wards
 - 2003: All other wards connected + further medical devices integrated
- Start of routine operation: 2003

Outcomes

- Medical secretaries: 16 → 7
- Archive assistants: 8 → 2
- Radiology film: 400,000 → 12,000 Euros a year
- Paper archive costs: 100,000 → 25,000 Euros a year
- Cost savings equal construction and implementation costs within two years
- Construction and implementation costs: 2.5 million Euros
- Installation of about 430 PCs all over the hospital

Success factors

- Integration from the user's point of view
- Staff and patient at the centre of efforts
- Pragmatism in solution specification
- Simple operation

“Are you faced resistance in your organisation when introducing new Information Technology?”



Development of an Electronic Patient Record (EPR) at Homerton University Hospital, England

- Implementation in two NHS hospitals
- exceptional modules:
 - accident and emergency patient pathway
 - maternity services records,
 - patient administration system incorporating booking
 - waiting lists management



Features

- Accident & Emergency patient pathway management system
- Maternity module
- Radiology system with physician order entry
- Clinical observations documented in the EPR
- Discharge summary
- Patient access list
- Booking and waiting list management system

Development process

- Strength of vision and commitment secured a fully integrated EPR
- Engagement of clinicians and staff required for EPR system to match patient pathways
- Collaborative working by multi-disciplinary teams.
- Process mapping between the two hospitals: challenging discussion and review and robust design
- Essential to achieve the support from staff.
- Anglicising the US-based software.

Milestones

- **Start of planning:** 2000
- **2000**
 - selection of a software supplier
 - modification of US based system
- **2004**
 - Replacement of patient administrative system
- **2006**
 - Increased electronic clinical documentation
 - Alignment with the NPfIT
 - Integration with other systems in the hospitals
- **Start of routine operation:** 2004

Outcomes

- Benefits realisation review - May 2006
 - 70% of the staff: EPR benefited the hospital.
 - 2% of the staff: EPR not benefited the hospital
 - Most popular impacts
 - access to results
 - time savings for staff.

Success factors

- Success factors
 - Clinical engagement and commitment
 - Effective partnership working
 - Effective change management

Failure factors

- Teething problems
 - Continued use of traditional appointment process by GPs, consultants and other staff
 - Inappropriate software that doesn't meet the functional specification
 - Security and confidentiality not up to standard
 - Over-reliance on piloting, deferring benefits realisation

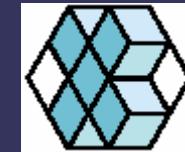
Critical factors

- Recent work with extending the EPR to other NHS hospitals shows:
 - Need to develop effective leadership of IT-enabled change
 - Need to mainstream and integrate IT projects with other strategic developments
 - Need to manage costs and benefits over time and so optimise net benefits
 - Risks must be identified, measured and mitigated
 - EPR functionality and usability drives EPR utilisation.

“Do you want to further increase the efficiency of your hospital’s process and save money but don’t want to cut medical personnel?”



MedicalOrder®Center Ahlen, Germany



- storage and supply system
- barcoding and standardisation
- supplies managed by non-medical staff
- take less time



Features

- **Supply Services:**
 - Pharmacological products from centralised pharmacy,
 - Medical and office products from centralised warehouse,
 - Sterilised goods from a centralised sterilisation unit.
- MOC offers a standardised, ICT-supported storage and supply system.
- 90% of articles barcoded
- standardised storage system .
- Standardisation
- bulk purchasing
- demand based ordering
- Standardisation, process re-engineering and electronic message exchange are intrinsically tied together and only so unfold their full potential.

Milestones

- Start of planning: 1999
- 2001
 - MedicalORDER®center founded
 - St. Franziskus Hospital outsourcing of purchasing department and pharmacy.
- 2004
 - first trials of new stock room concept
- 2005
 - Intensive Care Unit (ICU) new stock room
- Start of routine operation: 2005

Outcomes

- Main benefit: Cost reduction
- decrease in process costs → lower product prices.
- product standardisation + reduction of logistics costs between suppliers and MOC
- initial investment for ICU: €100 000
- economic benefits exceeded total costs one year later.
- Annual net benefit from the application at the ICU: about €40 000 per year.
- The impact on the whole hospital is a multiple of this.
- Most important effects
 - 18% drop in total spending on medical articles.
 - Occurrence of stock shortages dropped by 75%.
 - Fewer products get spoiled, especially expensive medicine
 - Smaller stock room

Success factors

- Restructuring towards unified purchasing and logistics.
- Reorganisation as process over more than 5 years, conducted step by step.
- knowledge from logistics and healthcare.
- Medical and organisational tasks disentangled -> specialisation and increased quality.

Failure factors

- lack of human contact person

“Information technology in the hospital is an enabler that helps you improve your processes. But technology is not everything. You need a strong vision, but adaptable goals, commitment of people and a focus on all processes in the hospital to create impact. ”





e-Health

from Vision to Reality

Dr. Dirk Colaert MD
Advanced Clinical Application Research Manager

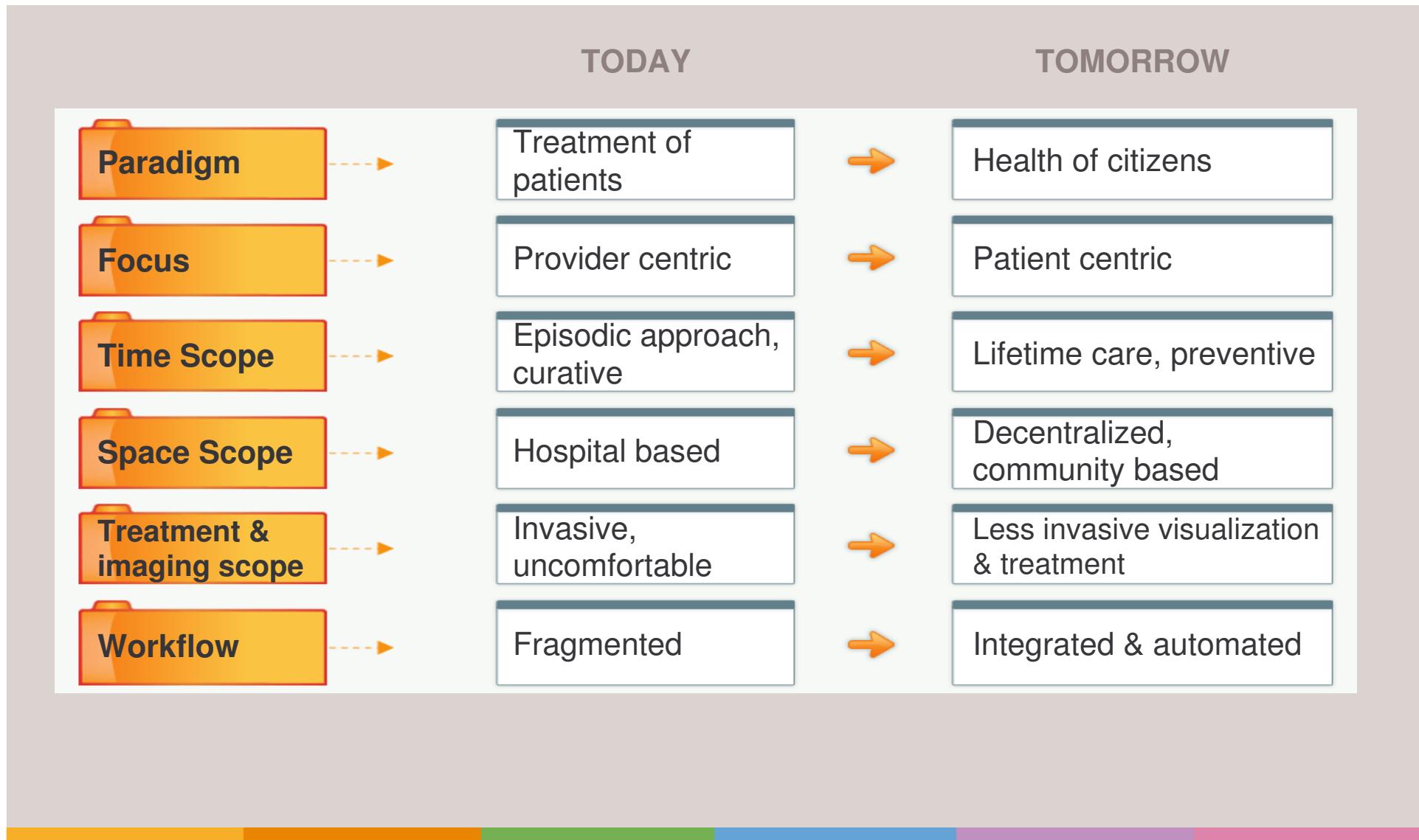




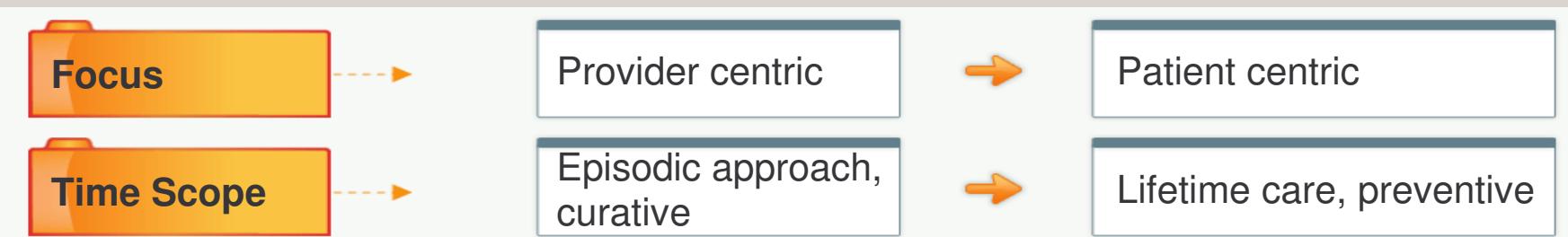
e-Health: from Vision to Reality

The World is Changing
e-Health: we'll take you there
Lessons Learned
Recommendations

The Healthcare paradigm is evolving ...

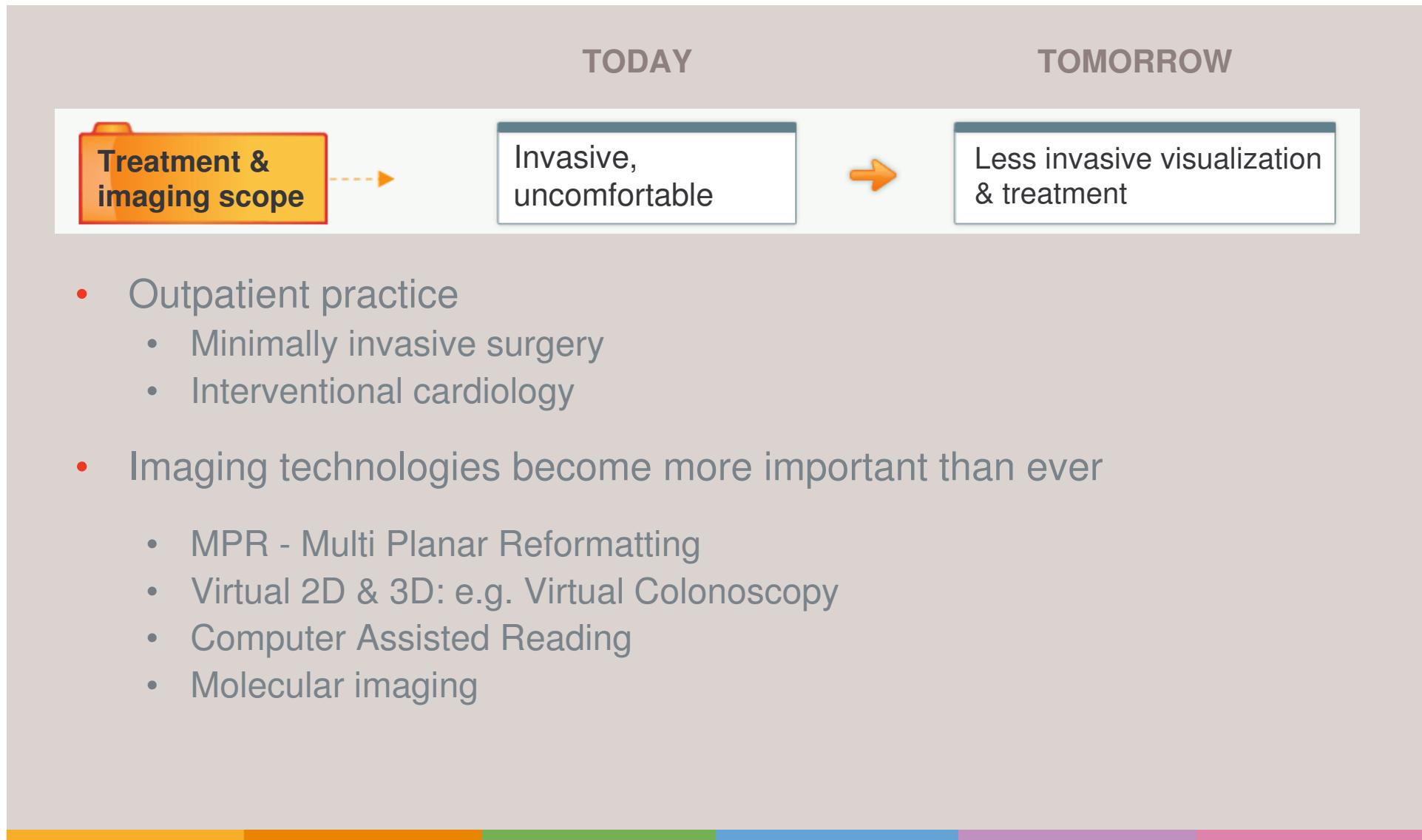


In time scope and focus ...

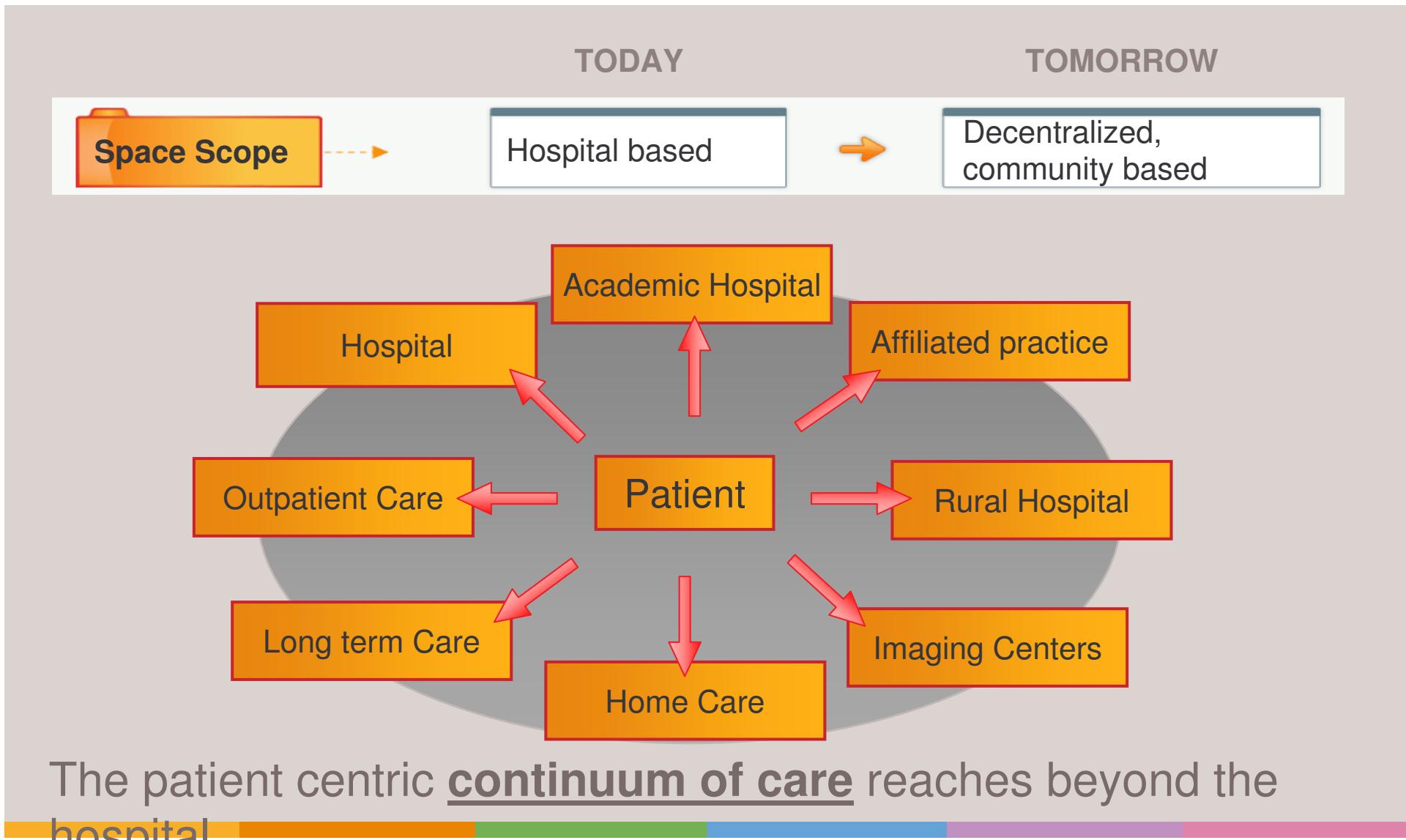


- Cross discipline disease management teams
 - Pathologies combine multiple medical disciplines
 - More data interchange & knowledge sharing
 - More complex → Decision support systems
 - Need for better organization → Clinical pathways

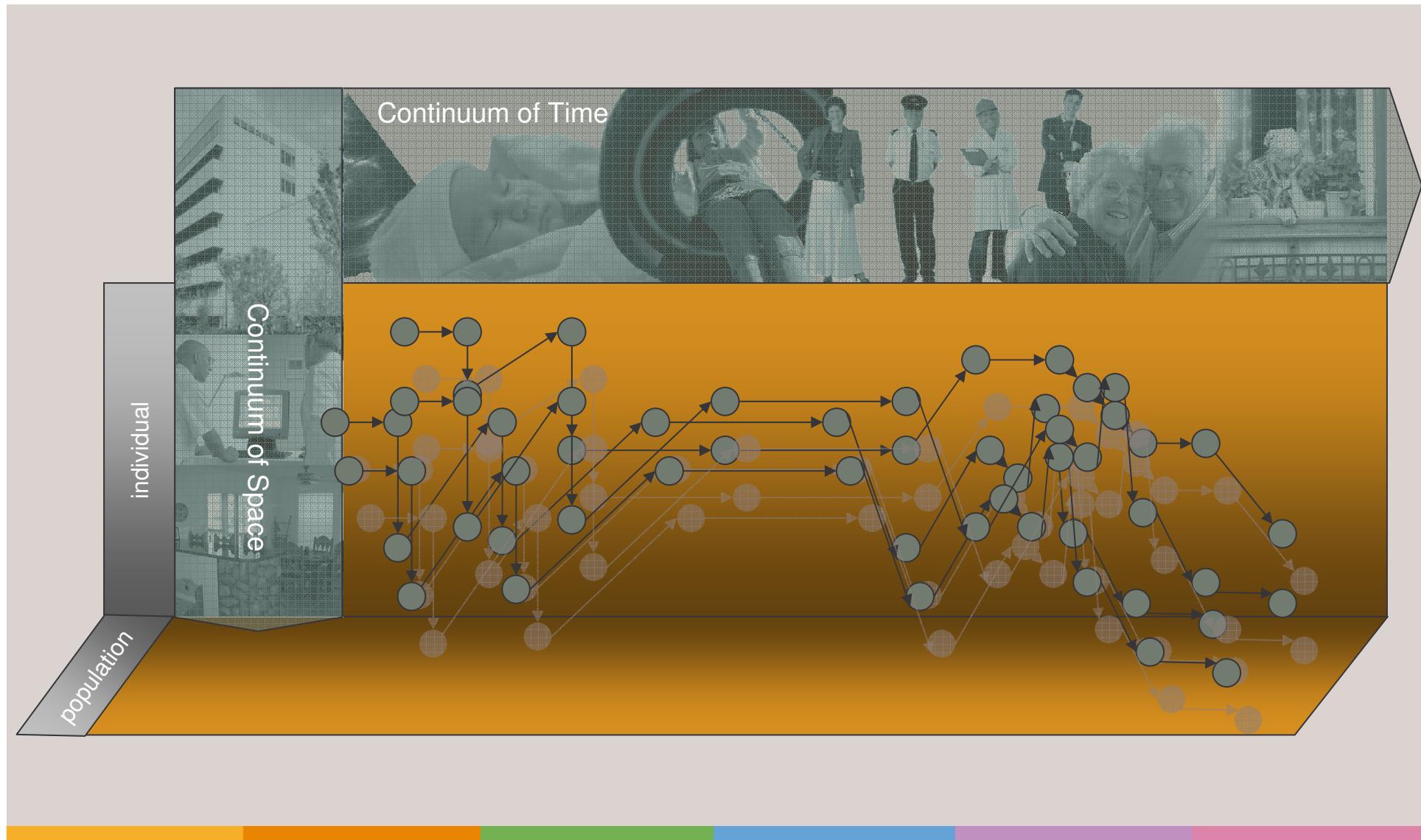
In treatment ...



And in space ...



The Continuum of Care





e-Health: from Vision to Reality

The World is Changing

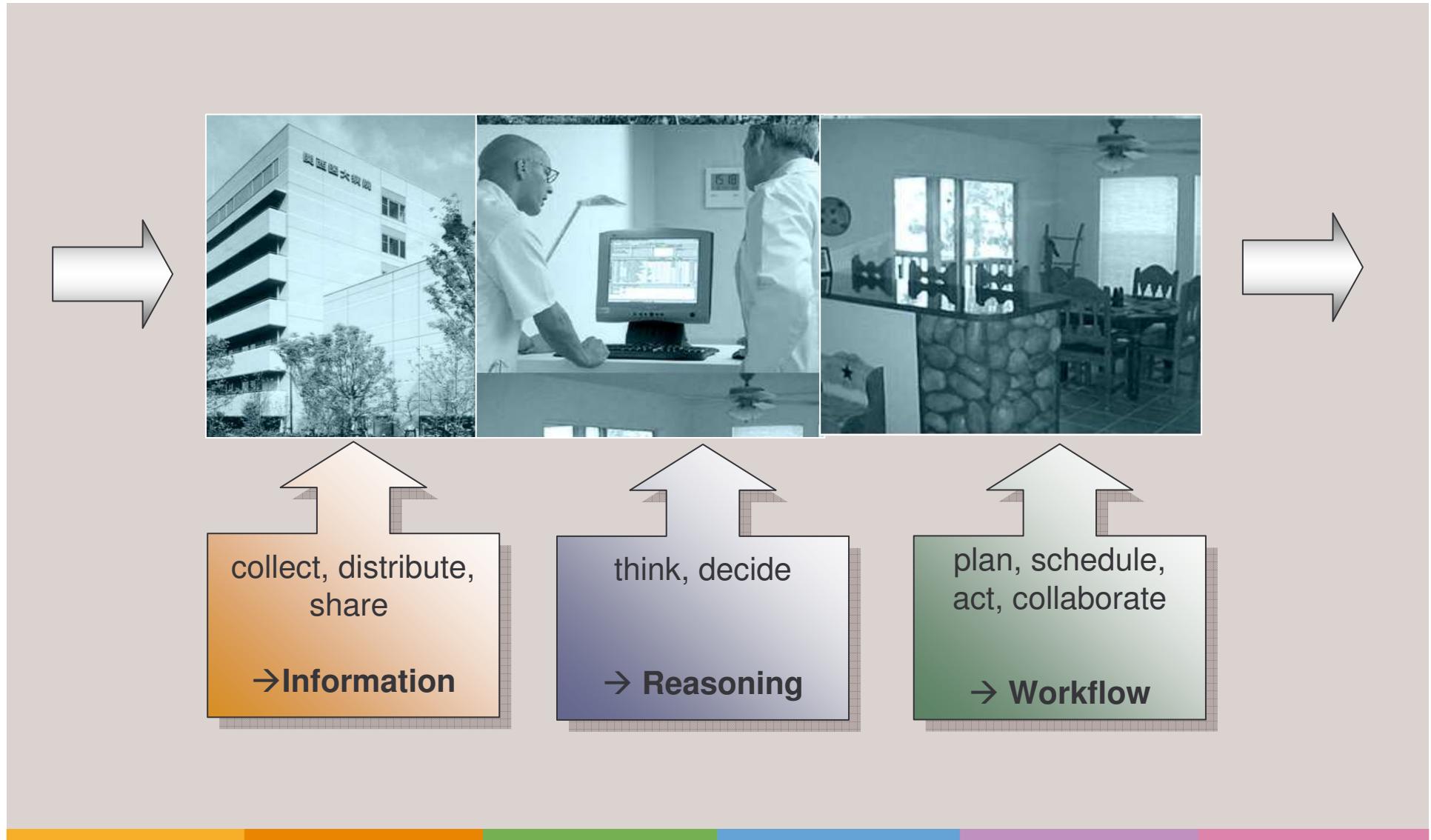
e-Health: we'll take you there

Lessons Learned
Recommendations

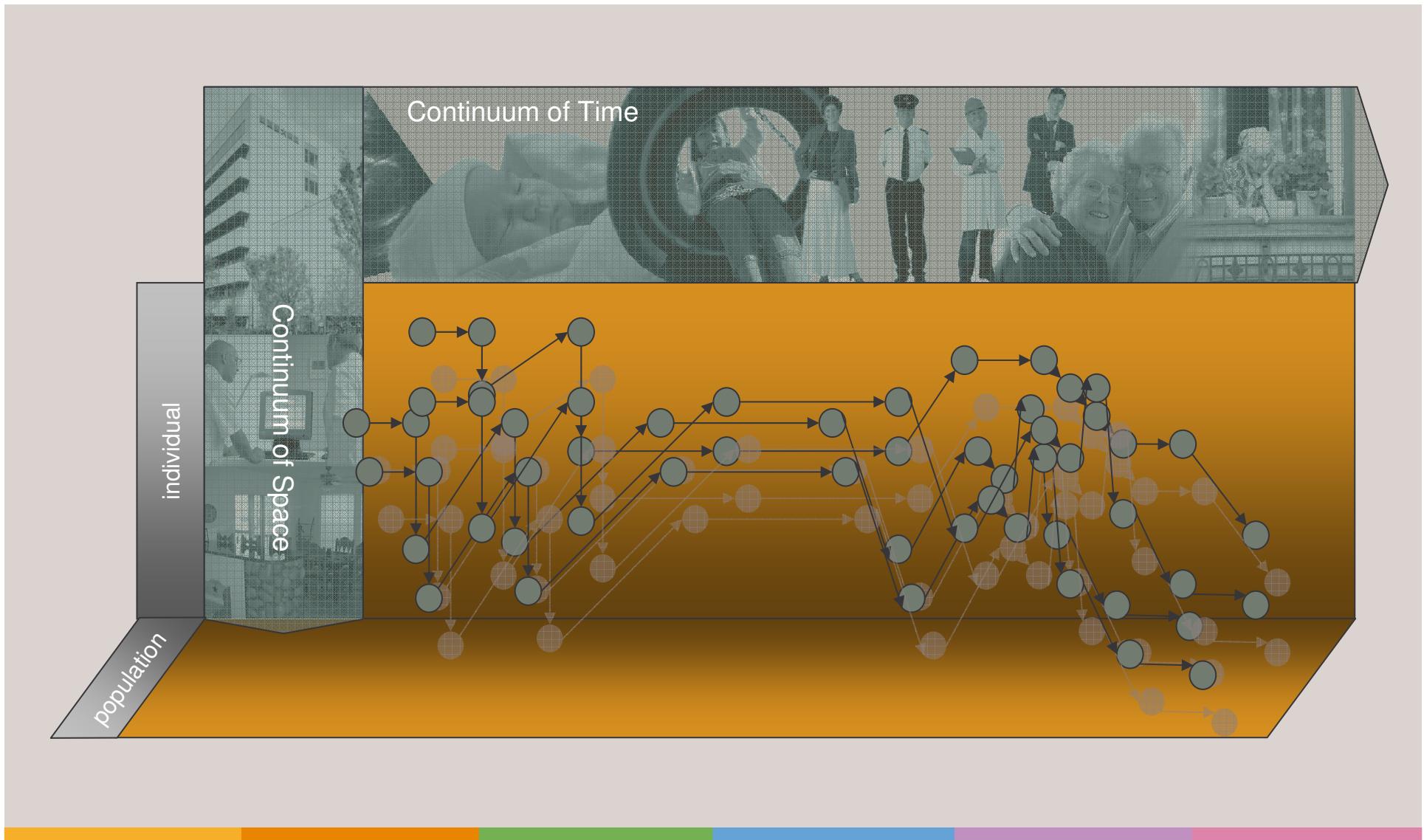
The Promises of e-Health

- Provide ubiquitous access to **life-long clinical care record** of a patient by all relevant stakeholders, including the patient, in a community, region or country - at anytime, anyplace, on any device
- Guarantee the **privacy** of the patient
- Integrate and enrich the clinical, medical and operational knowledge to support **lifelong health guidance of citizens**
- Facilitate **inter-professional collaboration**
- Integrate workflows into shared clinical and operational pathways to enable true disease management and optimally **support the clinical process**

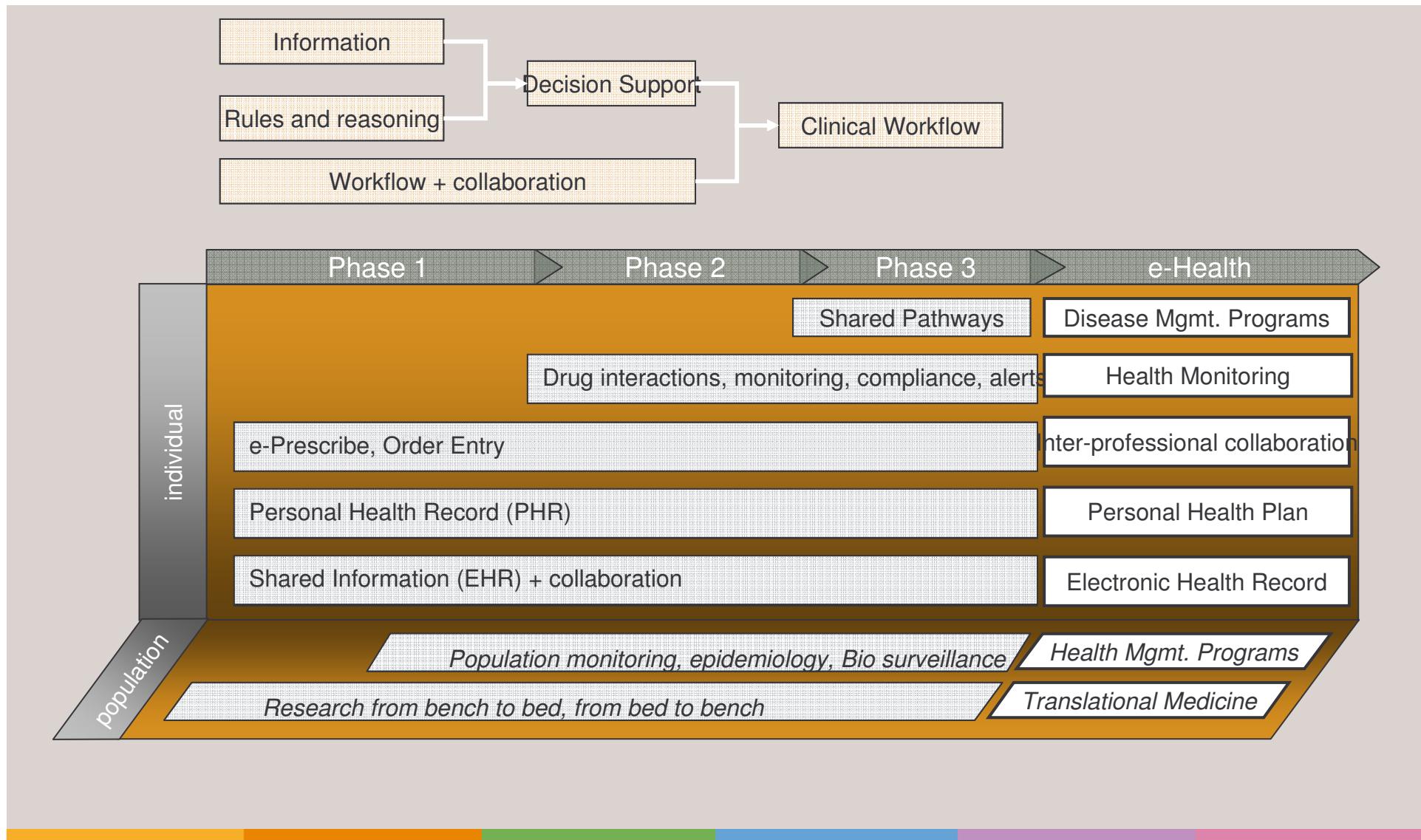
The Clinical Process



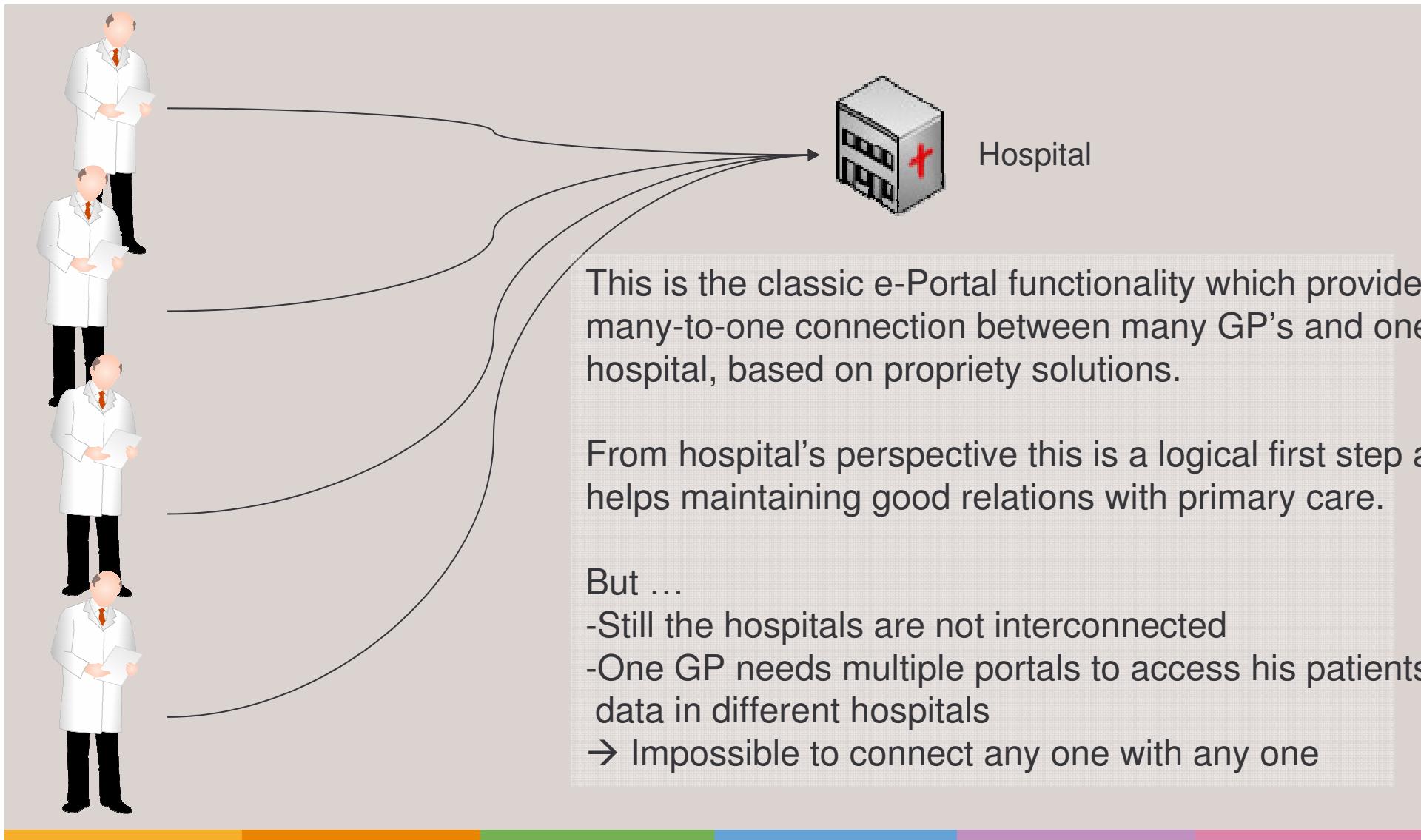
e-Health: The Continuum of Care



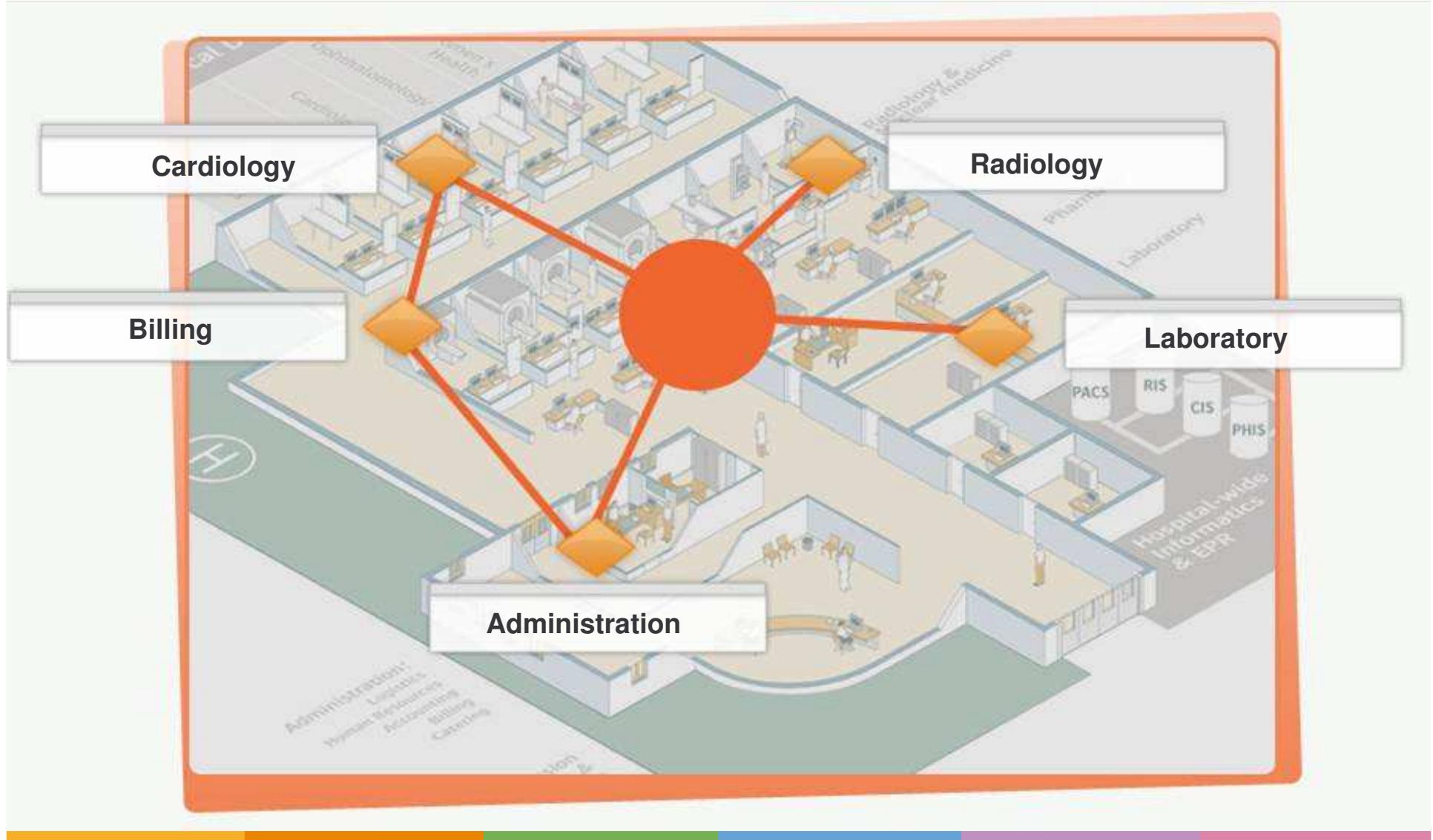
Scaling out the Clinical Process into e-Health



What Community Healthcare is NOT

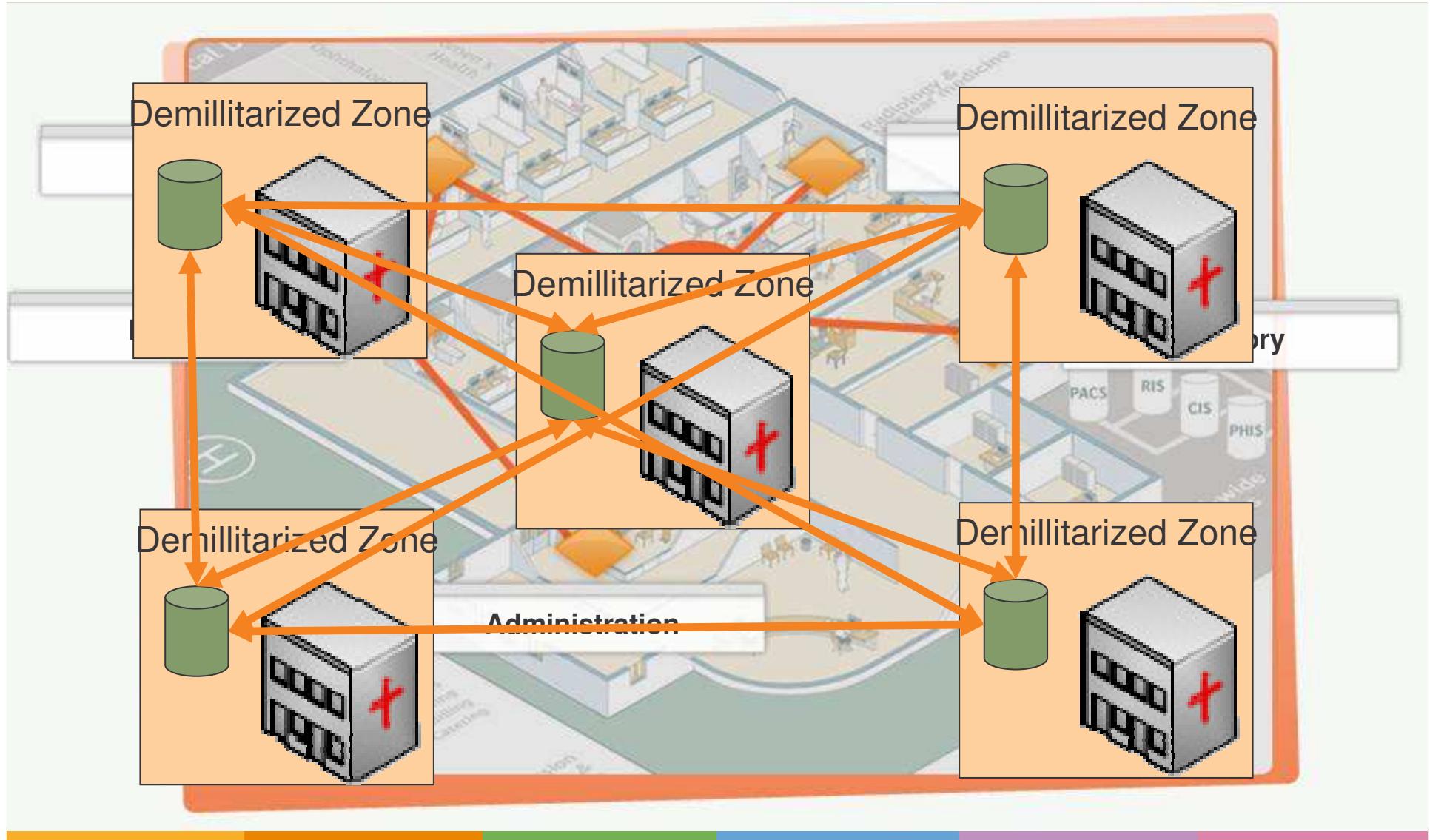


Within the hospital: the value of connected systems higher than sum of individual parts

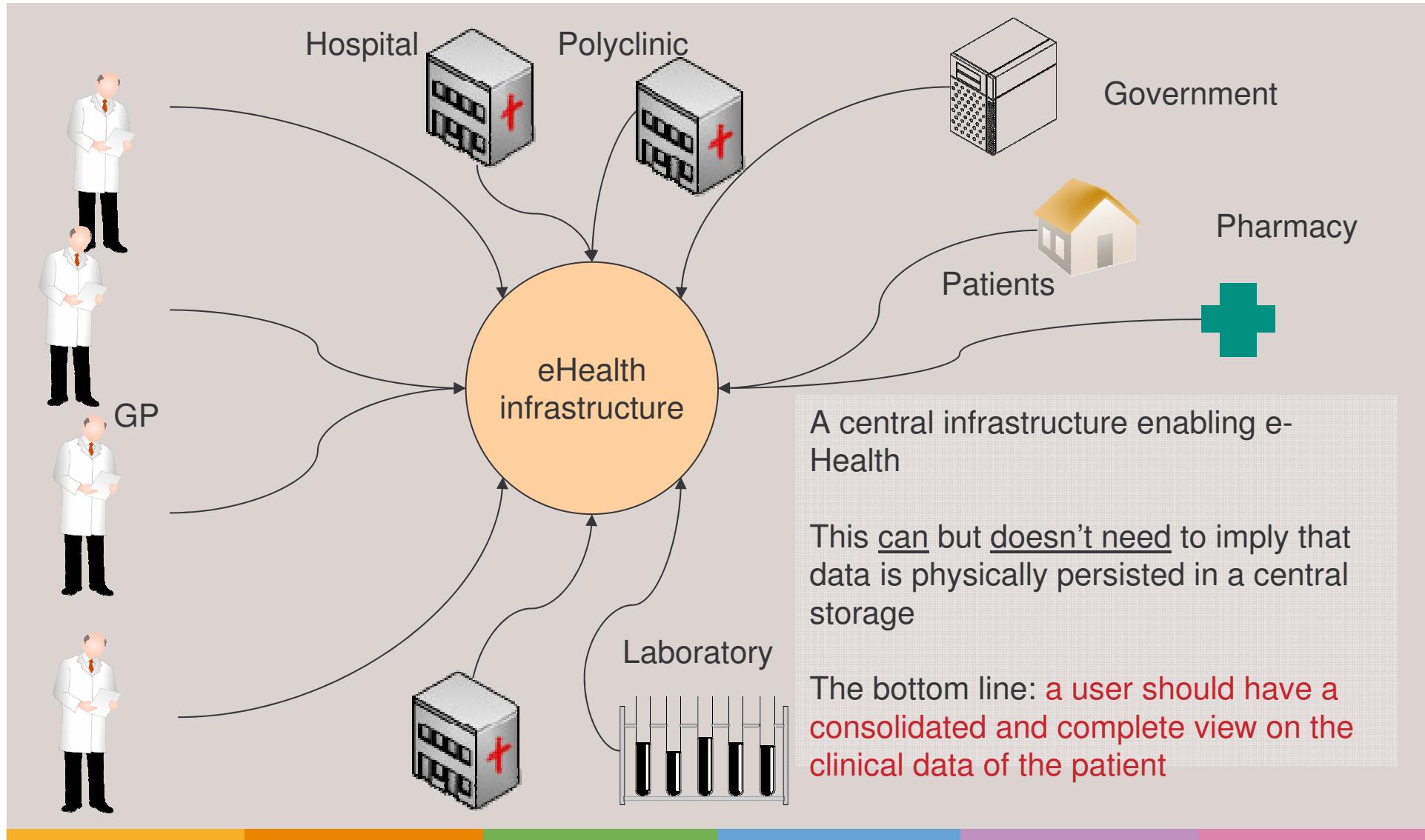


Between organizations:

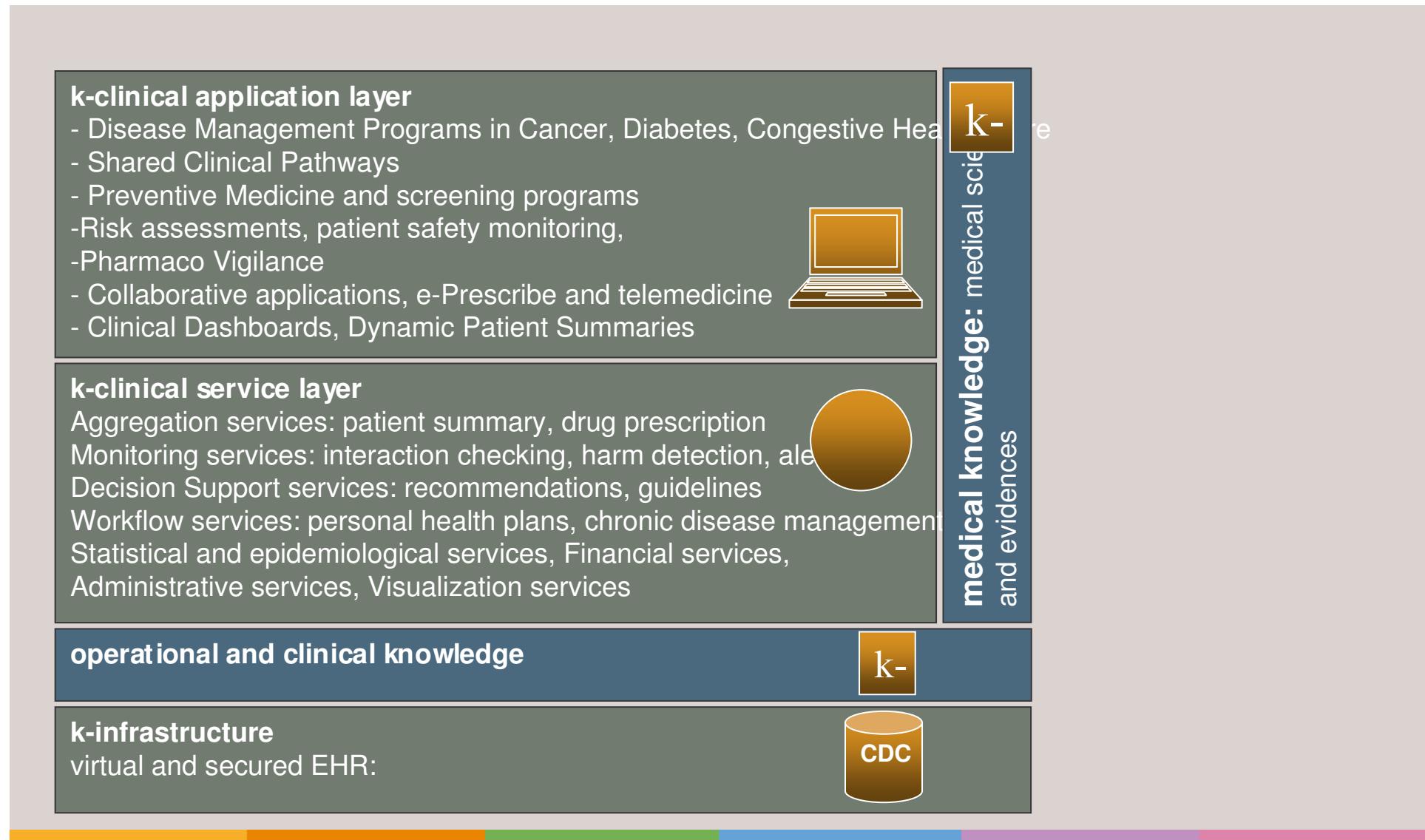
The value of connected systems higher than sum of individual parts



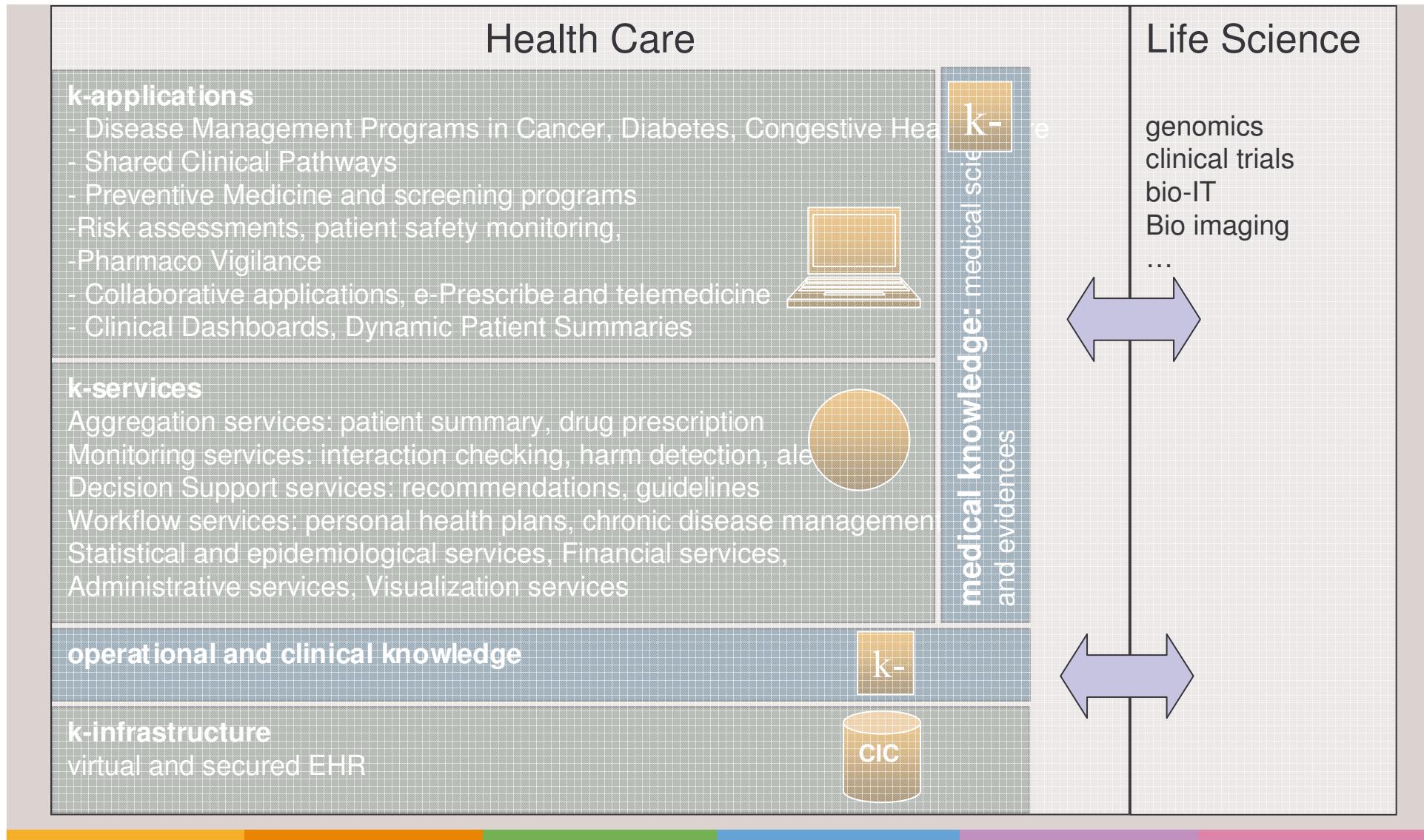
The e-Health Infrastructure



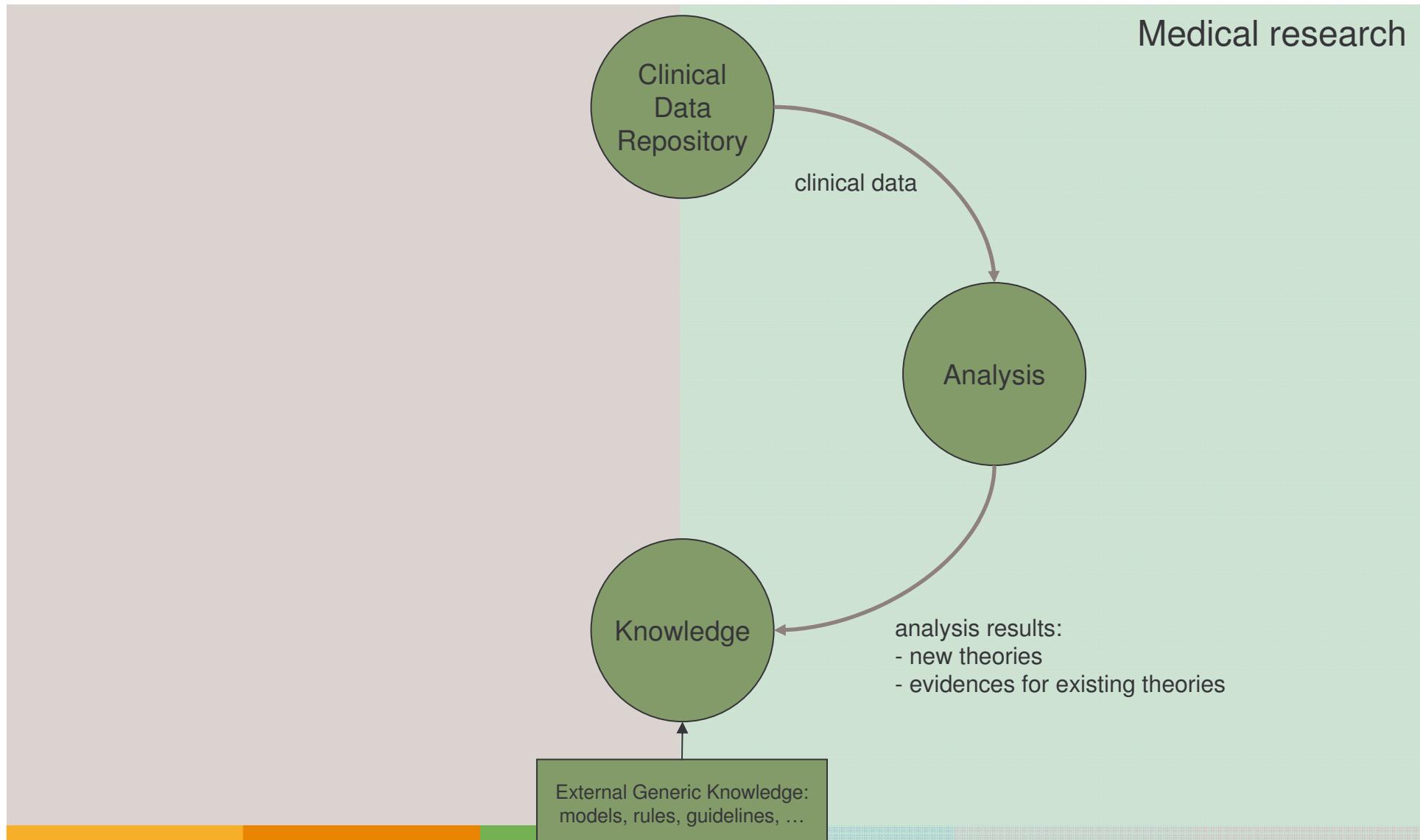
The e-health Stack



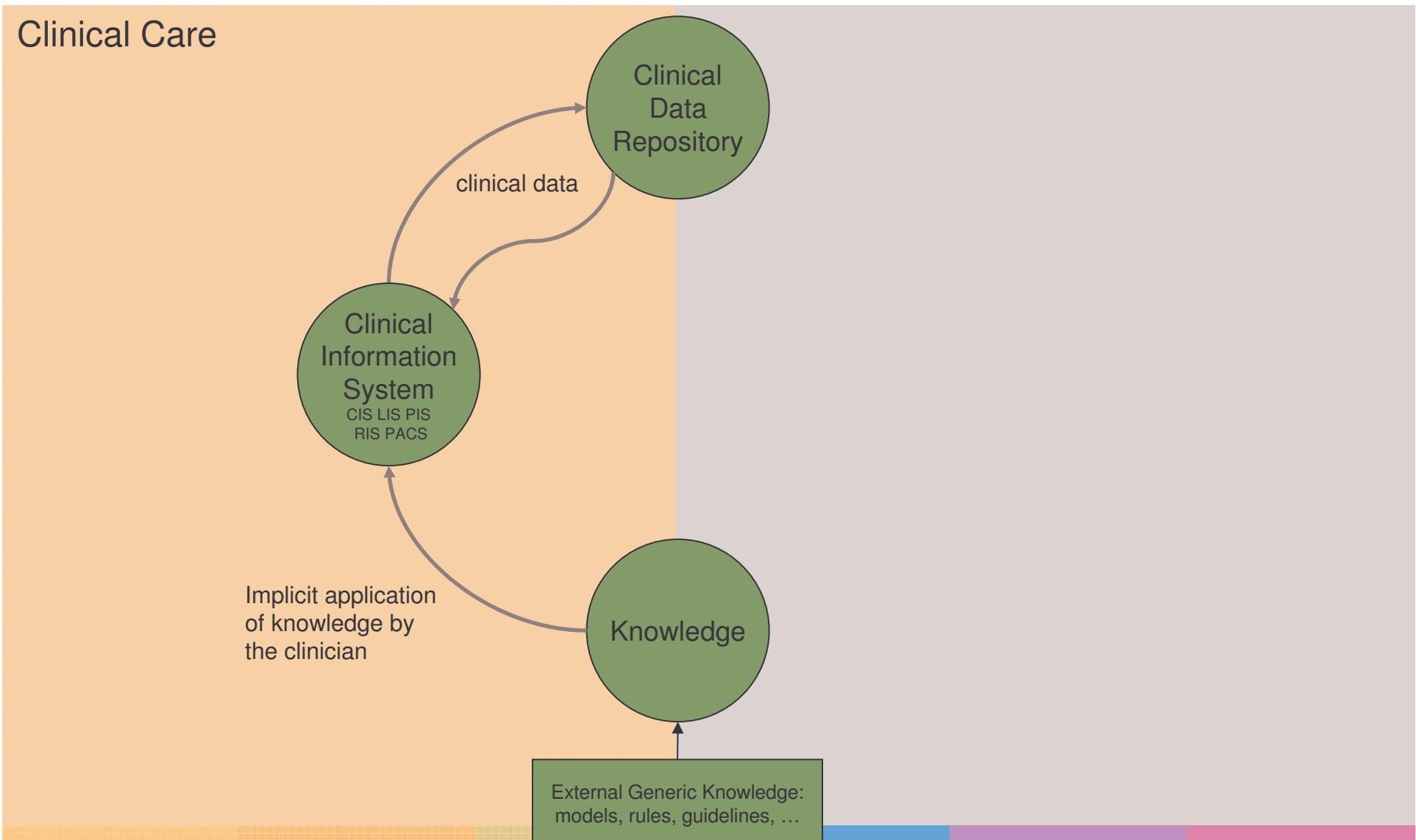
Connecting to Life Sciences



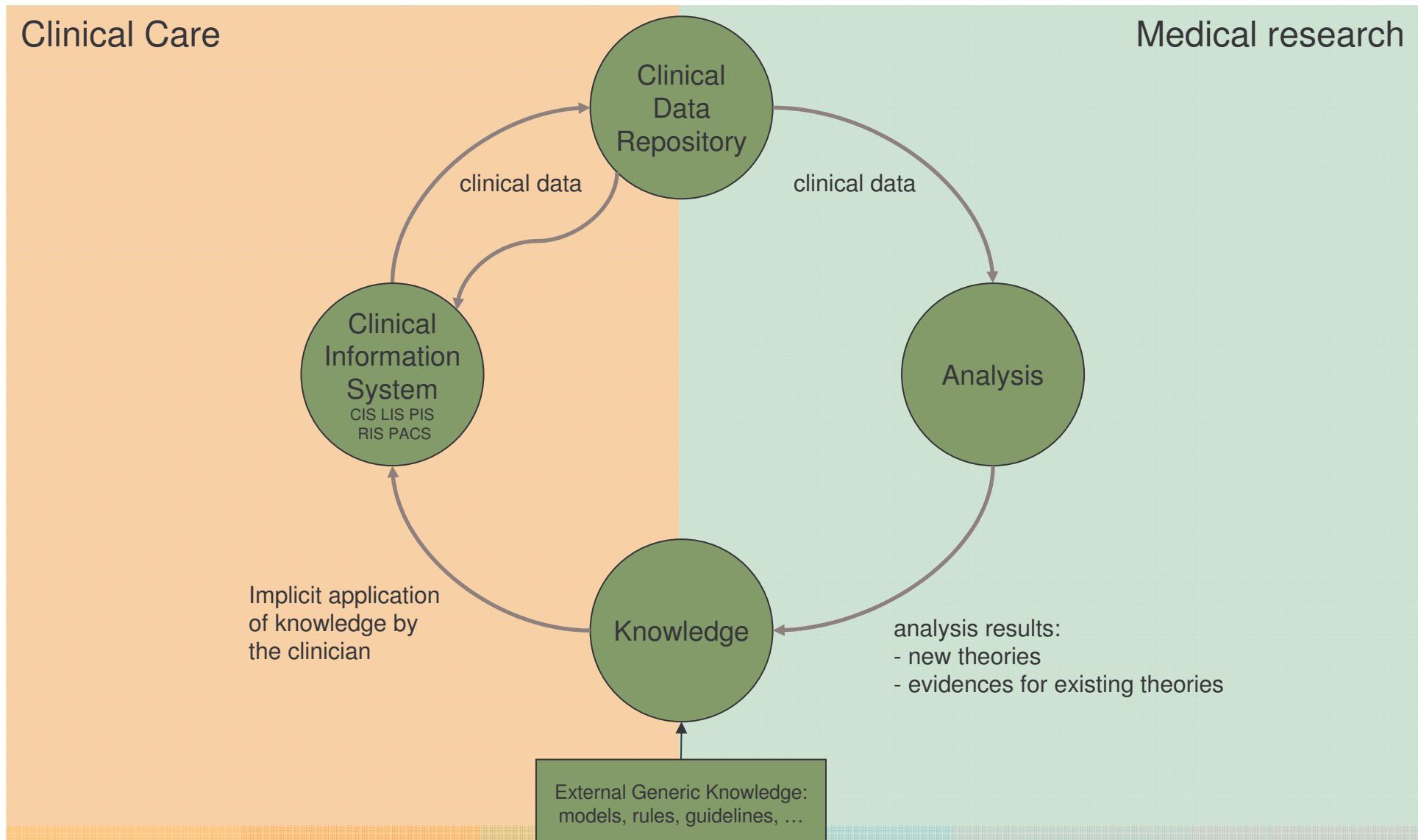
Medical Research



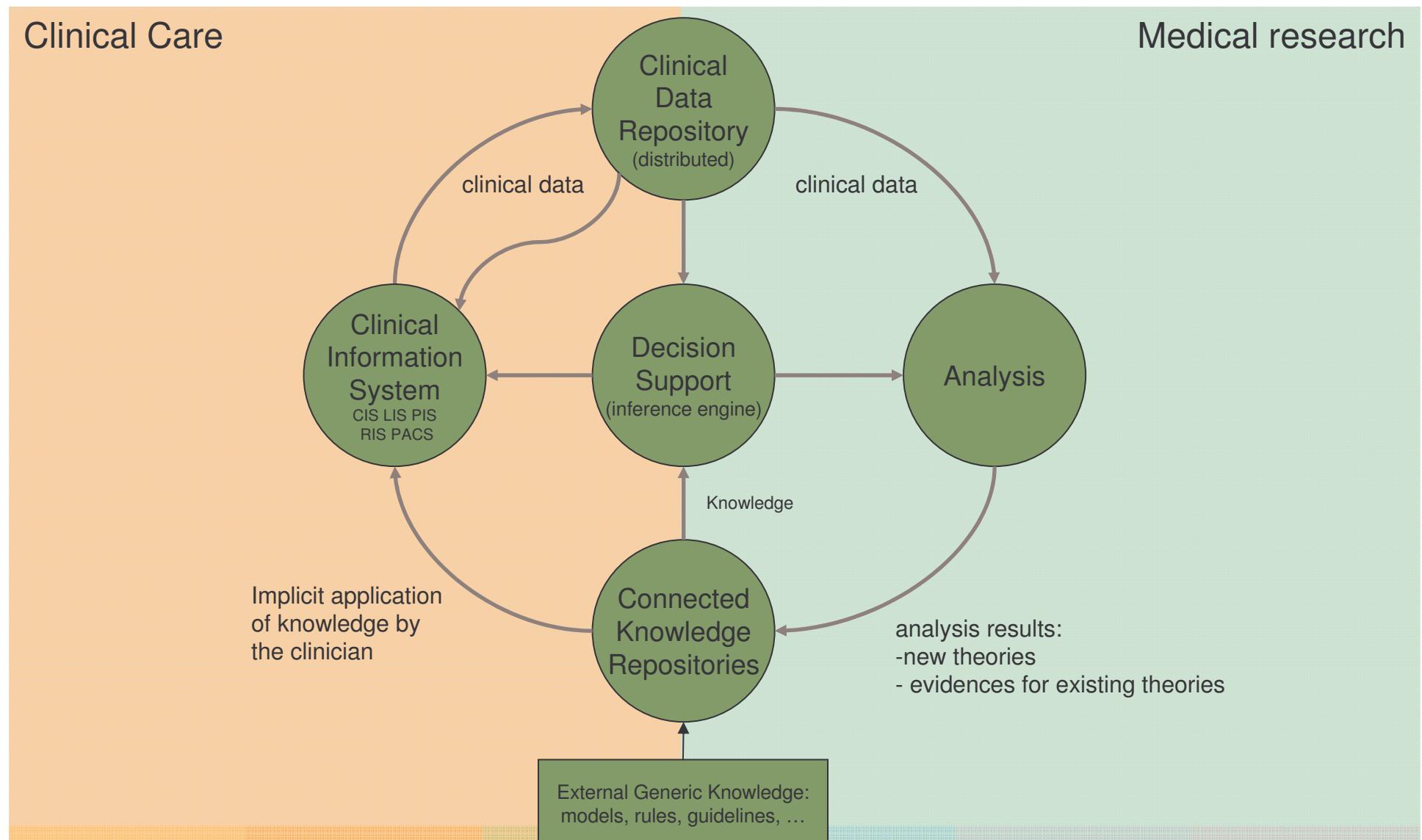
Clinical Care

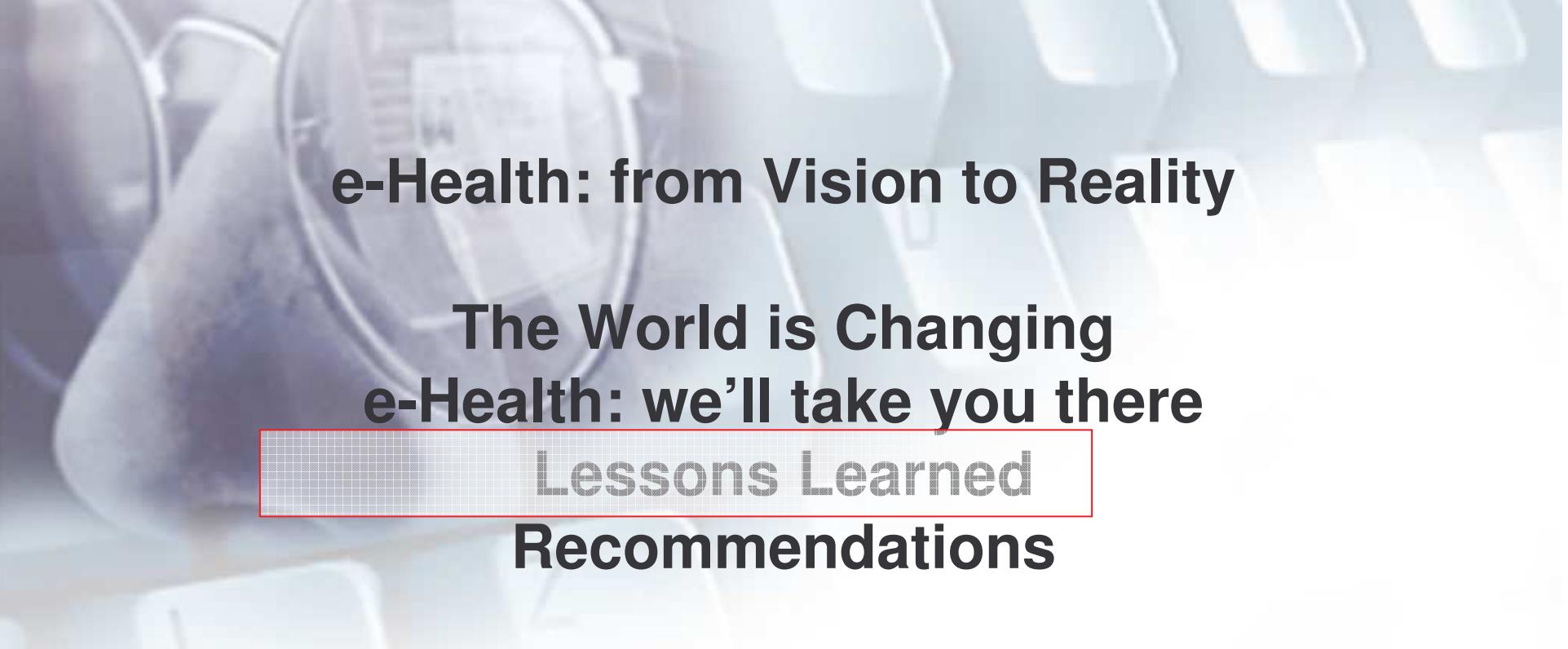


Medical Research + Clinical Care



The future: smart systems





e-Health: from Vision to Reality

The World is Changing
e-Health: we'll take you there

Lessons Learned

Recommendations



Lessons Learned

- It is a slow process
- Technology is not the biggest challenge
 - For the first phases, technology is there
 - Standards are emerging but still US-EU collaboration is needed
 - Still work to do on distributed structured EHR, decision support and workflow
 - → Lack of political/strategic vision of eHealth. Implementation strategy when they exist are too technology focused and fails to see technology as an enabler of transformational change.
- Psychology, organization, change management is more important
 - eHealth experiments often fail to convince based on outcomes and engage with the social and health professional's side resulting in frustration and massive resistance to change
 - Organisation fragmentation
 - Protective behaviour
 - Insufficient outcomes thinking
 - Adoption of IT in the first place is still not there
- Many scattered and sometimes funded initiatives create “fatigue”
- European (and world) scale will become important
- Financial models: big question ?
 - Today, the ones who pay are not necessarily the ones who get the benefits, resulting in slow take-up of eHealth solutions, longer learning curves and insufficient large-scale deployment.
 - Current business models are outmoded, and reimbursement mechanisms do not currently reward the use of eHealth.
 - Quantifying cost is easy, but how can we quantify quality and reward it?



e-Health: from Vision to Reality

The World is Changing
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Recommendations

- We need political “will” and we need an active and sustained IT adoption strategy within the institutions
- We need a European set of clinical, economical and societal indicators to test the results/outcomes of e-health, follow up its progress and increase confidence in eHealth.
- Europe, the member states, IT industry, insurances, ... should actively investigate innovative business and economic models
- We need to engage and build trusts among all stakeholders, particularly the care professionals’ side, about eHealth technology
- More large scale European incentives for the member states to work on cross border and cross-stakeholder interoperability
 - Not so much because of the cross border interoperability, but it forces to use standards (e.g. CIP program)
- Incentives for initiatives who are complying with the standards
 - New and existing initiatives should be converted to standards. For example: Patient Summary initiatives should use XDS
- First things first: **step by step incremental approach**

We need an active IT adoption strategy within the institutions

- Indicators should drive the changes and priorities
- CIO must be a member of organization's executive committee
- IS steering committee required, and must meet a minimum threshold for effectiveness
- The IT strategic plan must be integrated with the strategic clinical, business and capital plans
- Hospital must measure IT-enabled business initiatives
- Hospital must have executive sponsors who champion IT projects
- Clinicians must act as project champions in leading and educating other clinical staff
- CIO must contribute to the overall business strategy of the organization

First things first

- Start with information sharing
- Start with documents: lab results, discharge and referral letters, patient summary
- Standards: XDS, CDA
- Try to find quick wins: even without decision support and workflow, disease management programs (e.g. diabetes) can already be useful, just by sharing information
- Later: distributed structured data → aggregations → decision support → shared workflow



If you have further question on the study, please do not hesitate to visit
the project web site at www.good-ehealth.org

or pick up our project brochure
or contact the project team at info@good-ehealth.org
or contact us at

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