

# Evidence on economic impact of eHealth and telemedicine applications

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**Med-e-Tel International trade and conference on Health, telemedicine and health ICT, Healthware workshop**

**Luxembourg, 06.04.2006**

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## eHealth Impact – study on economic impact of eHealth: Outcomes

- Review of **state-of-the-art** in eHealth economic assessment
- Generic **methodology** for economic evaluation of eHealth applications
- Detailed **evaluation of 10 proven eHealth case studies**
- **Synthesis, vision, and policy recommendations** to encourage appropriate eHealth investments
- Website, including an Electronic **database of "Good Practice"** cases of eHealth

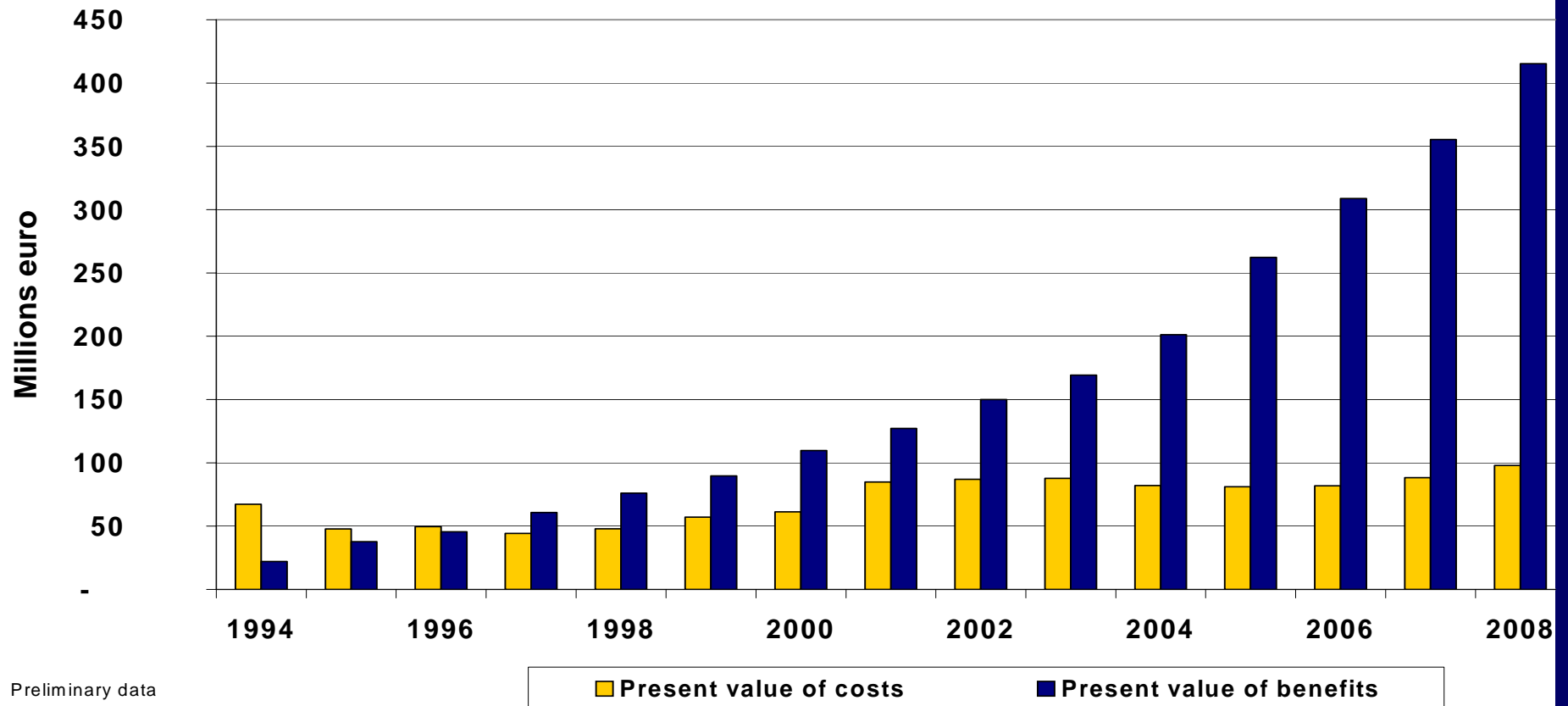
## eHealth Impact: evaluation methodology

- Cost Benefit Analysis from an economic perspective
- eHealth Utilisation
- Productivity measures – unit costs
- Three eHI investment periods:  
development/implementation/operation
- Willingness to pay – inferred from behaviour
- Discounted cash flow
- Sensitivity analysis
- Estimates, optimism bias and contingencies

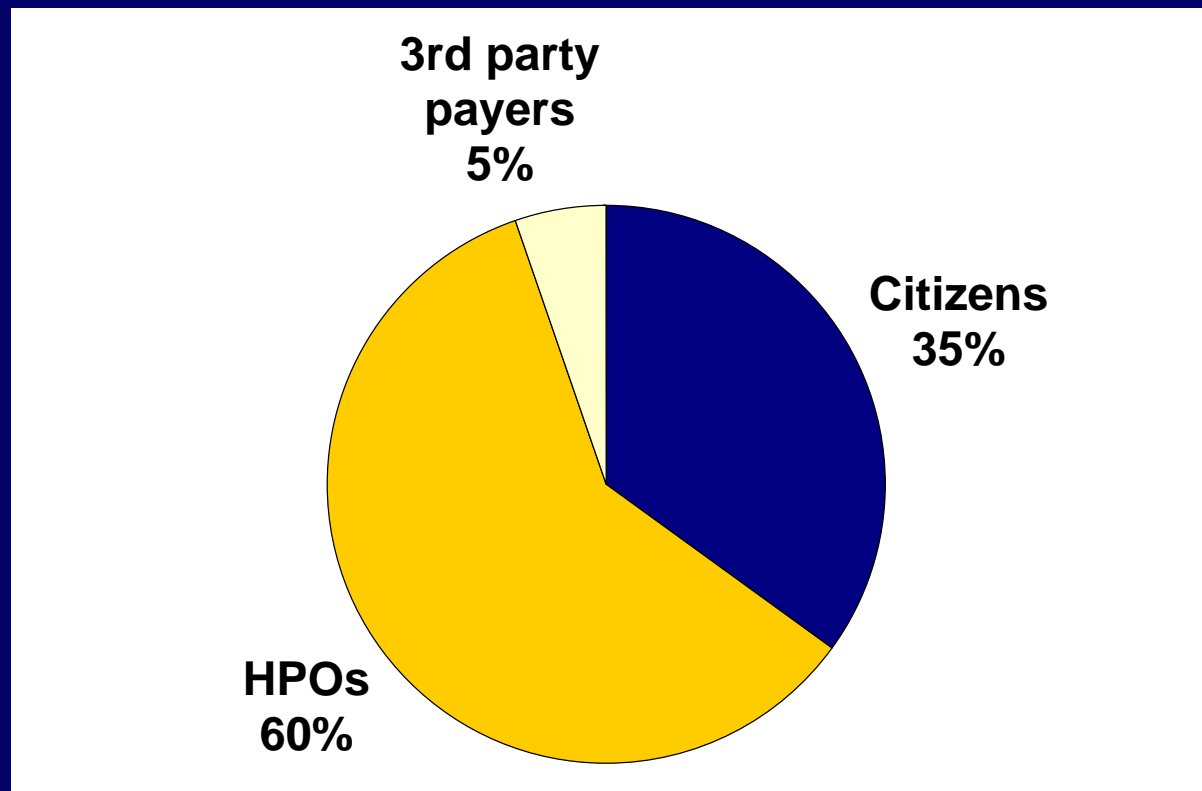
## Why is eHealth worth it?

- **eHealth can help:**
  - The eHealth IMPACT study indicates: "Healthcare providers can use eHealth to improve quality and expand their capacity to meet increasing demand, within a stable resource base."
- This is:
  - **More, better, and safer healthcare, within the available resources**

## Estimated costs and benefits p.a. in a virtual health economy with 10 proven eHealth applications



## Average distribution of direct benefits from eHealth



Note: Virtual health economy with 10 proven eHealth applications

## eHealth distribution range

Depends on the nature of the eHealth investment

	Max	Min	Mean
Citizens	96%	1%	35%
HPOs	99%	4%	60%



## eHealth needs a **medium-term** perspective

- First year in which benefits from eHealth exceed costs – **year 4** (average)
- Time until cumulative benefits from eHealth exceed cumulative costs – **6 years** (average)
- Productivity improvement: Average decrease in unit costs – **49%**

## Telecardiology in Italy

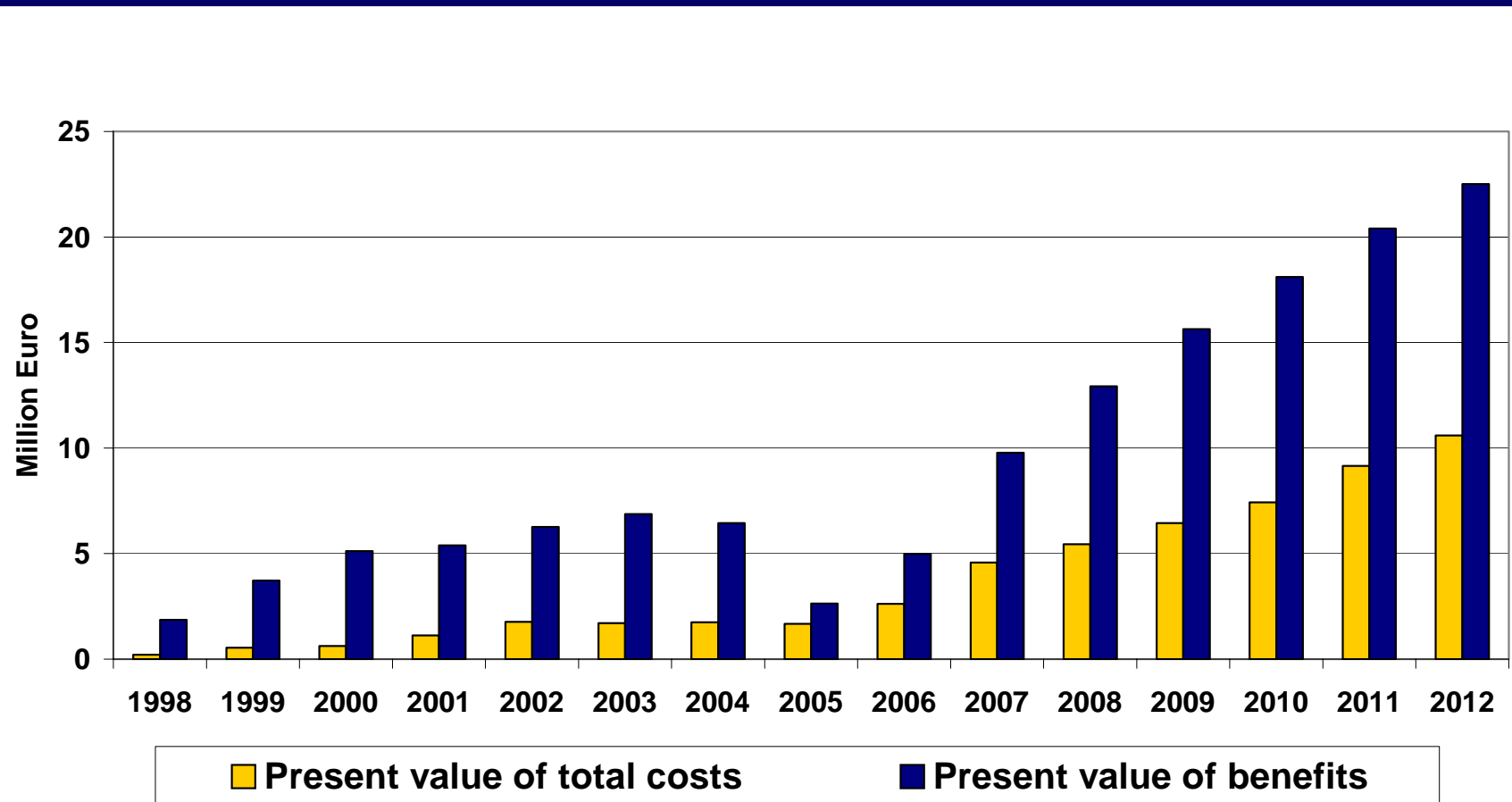
- Health Telematic Network and Salvatore Maugeri Foundation
- Region of Lombardy
- Converting evidence from clinical research into practice

Evaluation was conducted in cooperation with ACCA, using the eHI methodology

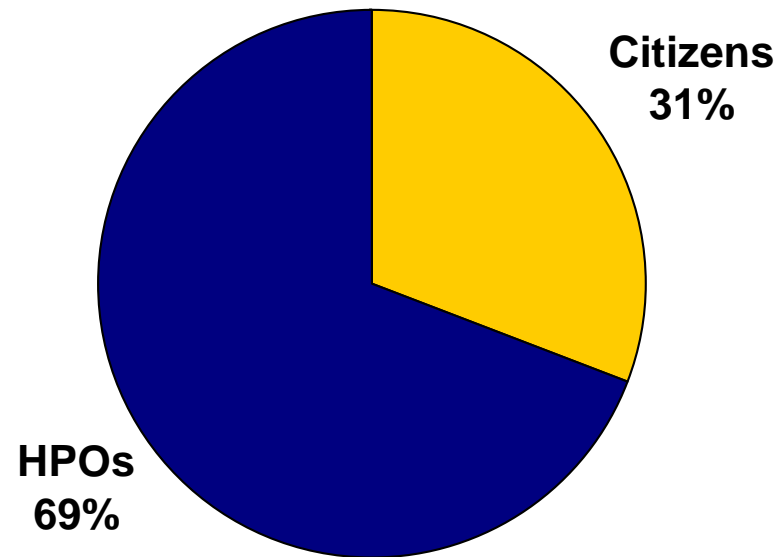
## Telecardiology in Italy

- Second opinion for GPs
- Home telenursing for chronic patients
- Call centre services for hospitals

# Telecardiology - estimated annual costs and benefits



## Telecardiology – distribution of benefits



# Telecardiology – summary of economic performance

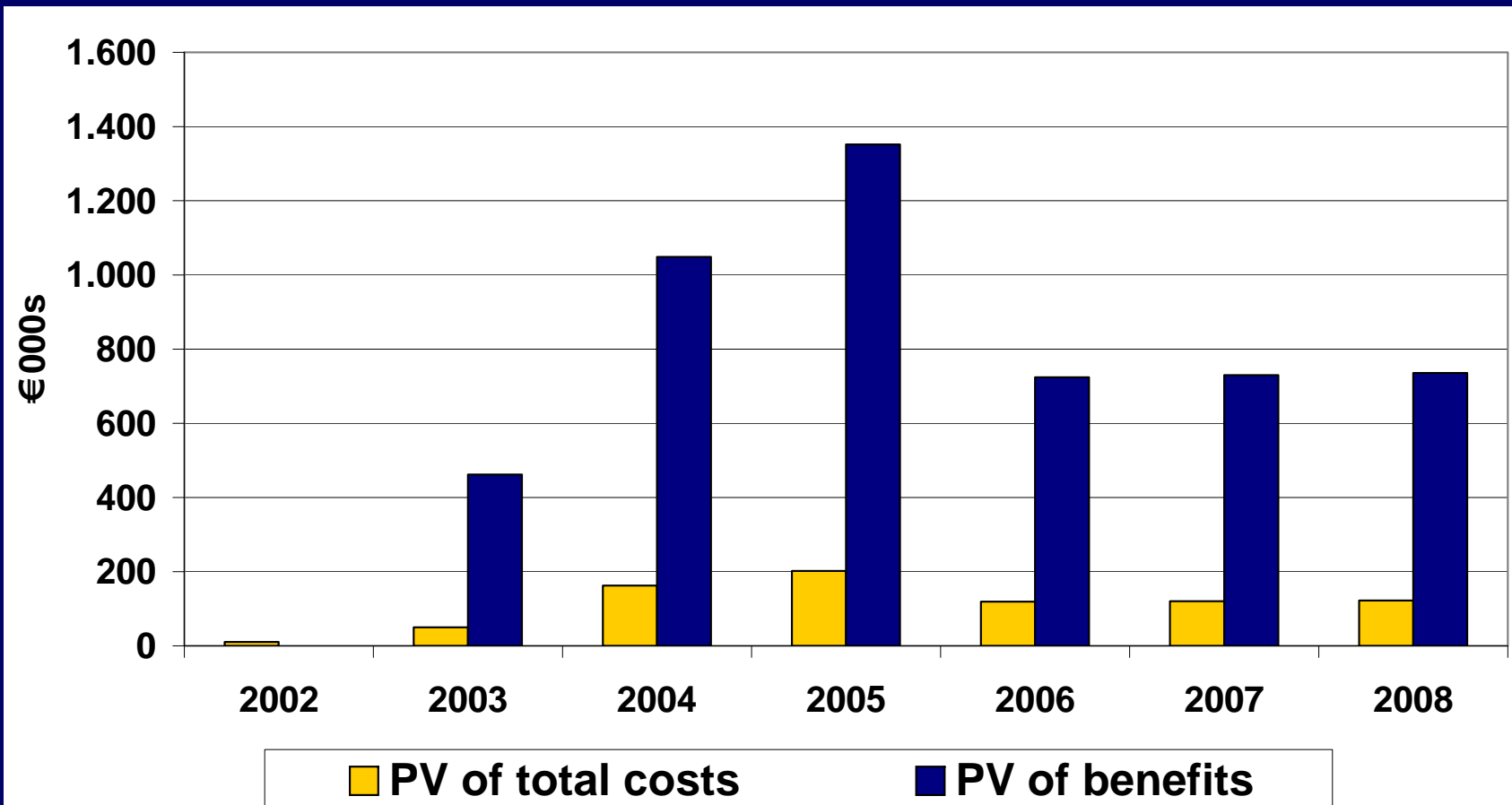
Estimates based on conservative assumptions

- First year of annual net benefit: year 1
- First year of cumulative net benefit: year 1
- Estimated economic return: 250%

## Cross-border Teleradiology

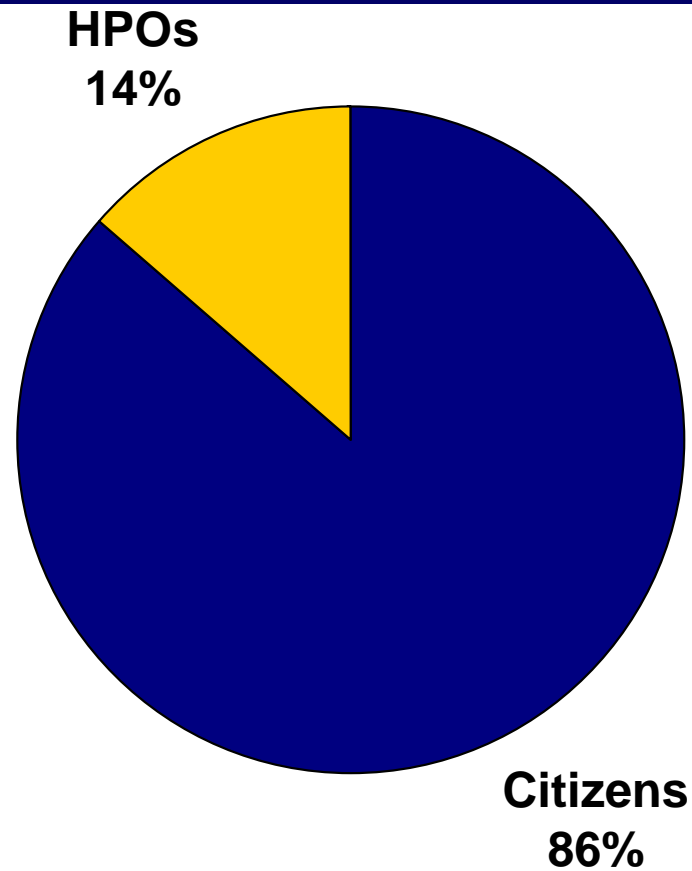
- Sollefteå Hospital
  - MRIs
  - extending capacity in remote area hospital
- Borås Hospital
  - MRIs and CTs
  - improving flexibility
- Telemedicine Clinic (TMC) in Barcelona
  - Service centre reading MRIs and CTs for Sweden

## Teleradiology - estimated annual costs and benefits

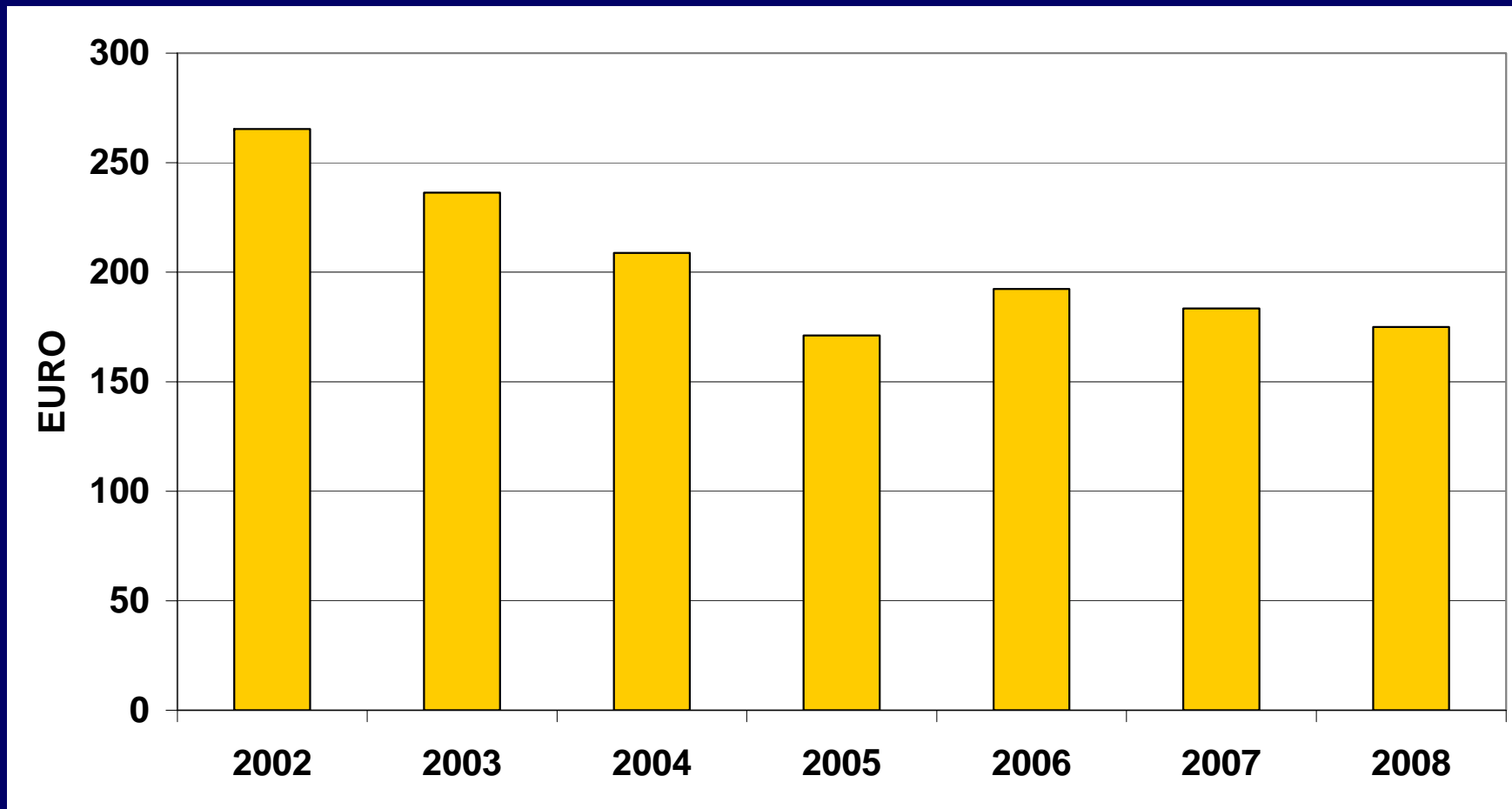




## Teleradiology – distribution of benefits



## Teleradiology – reduction in cost per scan



## Teleradiology – summary of economic performance

Estimates based on conservative assumptions

- First year of annual net benefit: year 2
- First year of cumulative net benefit: year 2
- Decrease in cost per scan: 34%

## Key findings from 10 detailed evaluations of eHealth applications

- All sites show a **positive economic impact** of eHealth services
- Effective eHealth applications deliver **benefits to citizens**: either directly, or indirectly by supporting healthcare professionals and their organisations

## Other key findings from 10 detailed evaluations of eHealth applications

- All sites show **benefits to quality** of healthcare by enhancing:
  - **Coordination** – improving clinical effectiveness
  - **Collaboration** within multi-disciplinary teams
  - **Timeliness** of care provision
  - **Information quality** – completeness and accuracy

## eHealth success factors

- Stable, collaborating teams with ICT, healthcare and organisational knowledge drive the process of change
- eHealth and new clinical and working practices go hand in hand
- eHealth projects are a series of investments with an underlying eHealth dynamic
- Each eHealth application provides benefits to citizens and healthcare professionals
- Effective management of spending
- Setting the right priorities

# Thank you for your attention

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