

# Card enabled e-health network

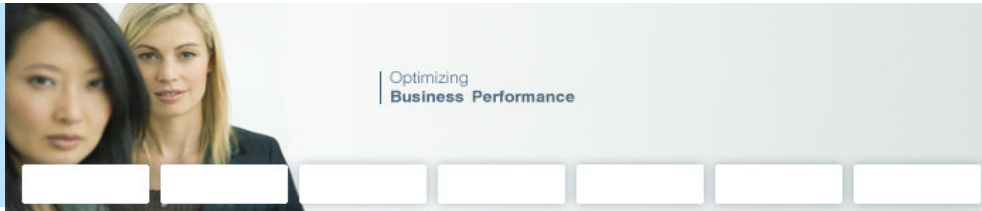
## How to improve healthcare

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Bratislava, 25. Sept. 2008



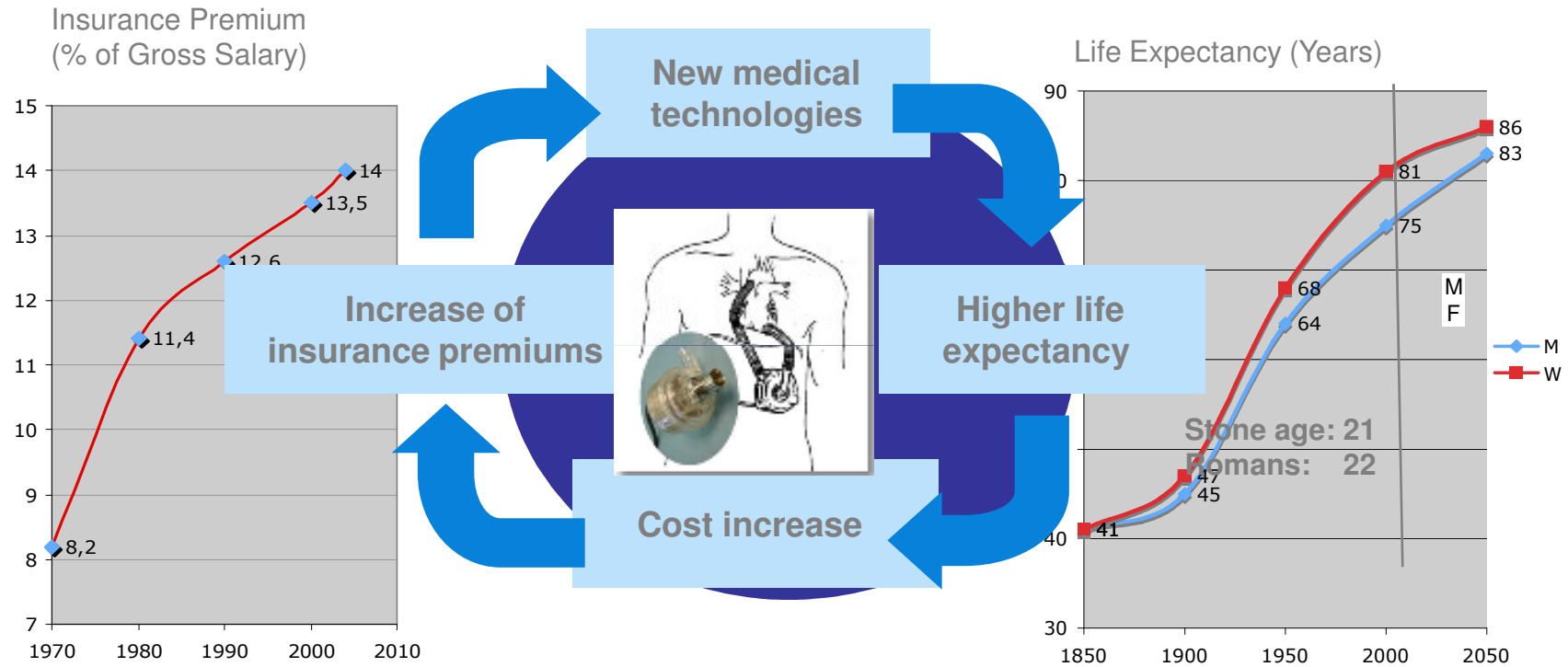


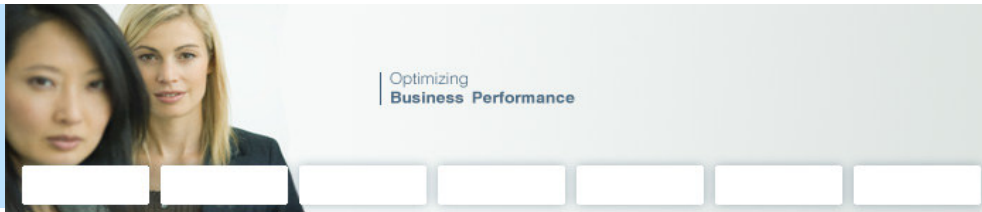
## Agenda

- 1) The Vicious Circle in health care
- 2) Card enabled e-health Network
  - Concept
  - Benefits
  - System Architecture
  - Electronic Health Record - Field Trial in France 2006
  - Rollout Plan Germany
- 3) EMDS Consulting Approach

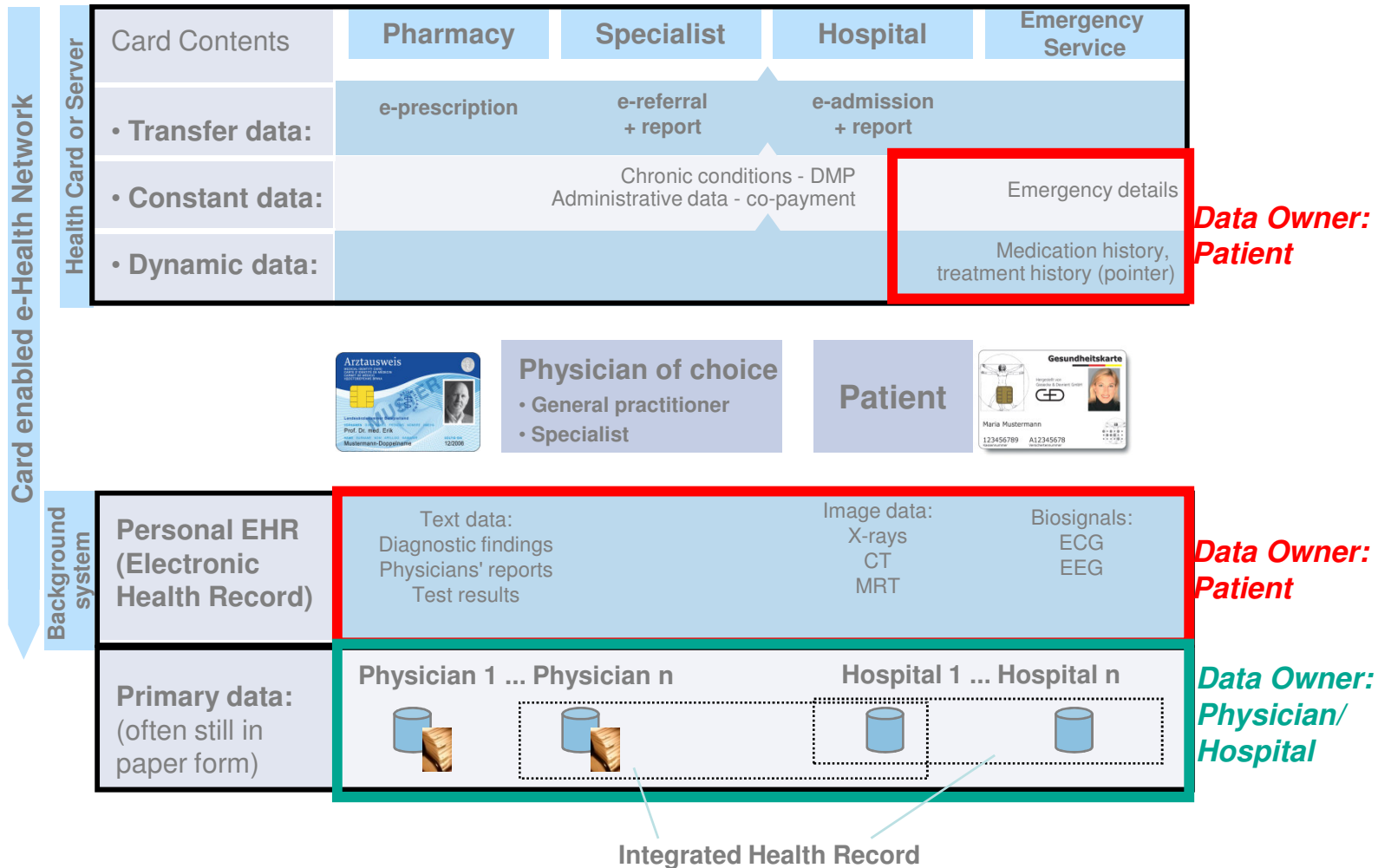


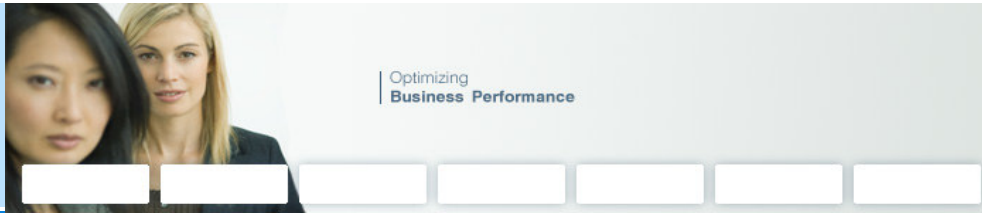
# The health care cost dilemma: a vicious circle



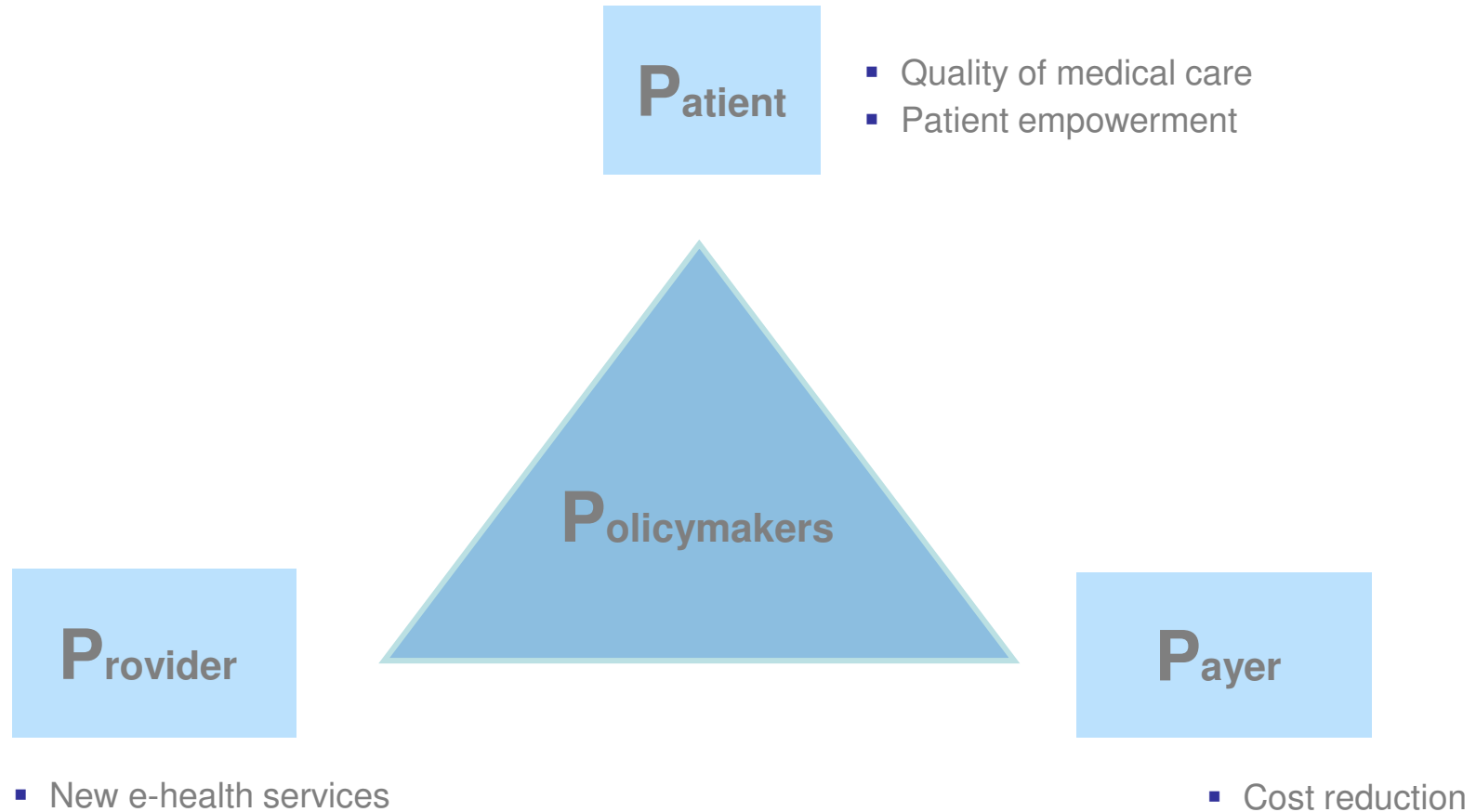


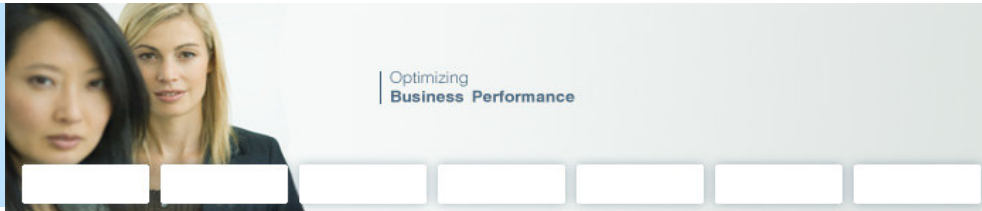
▶ Concept card enabled e-health network





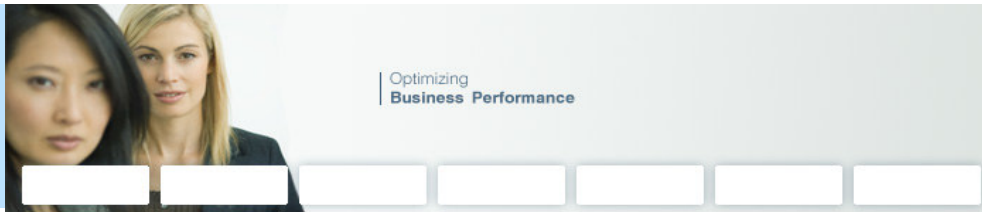
# Benefits of a Card enabled e-health Network



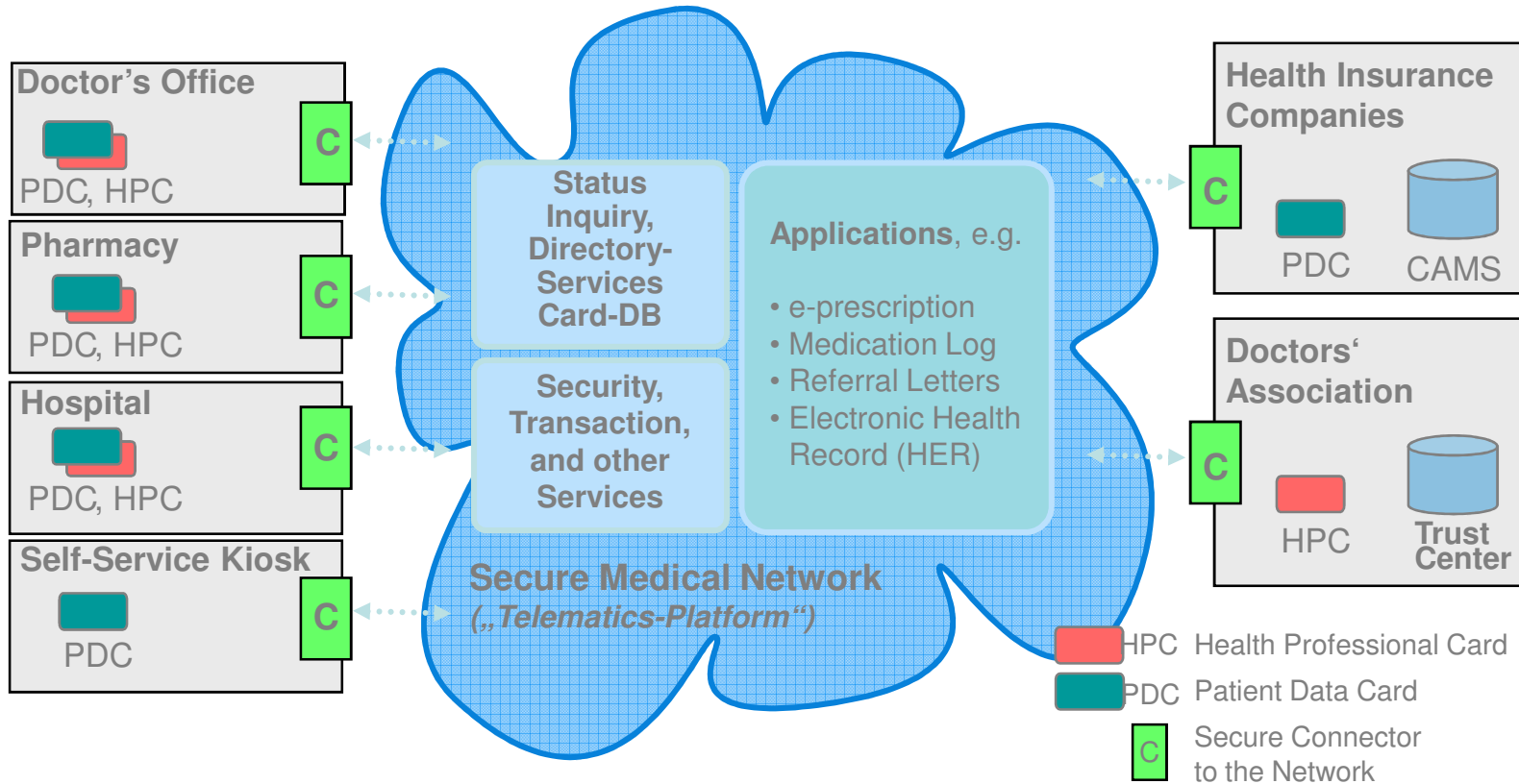
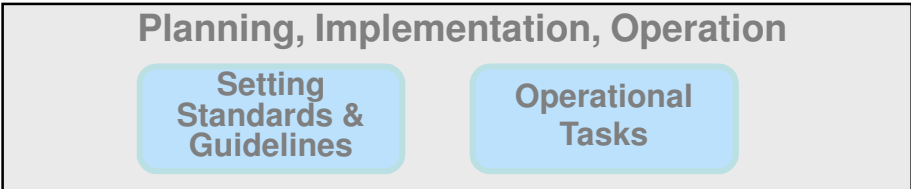


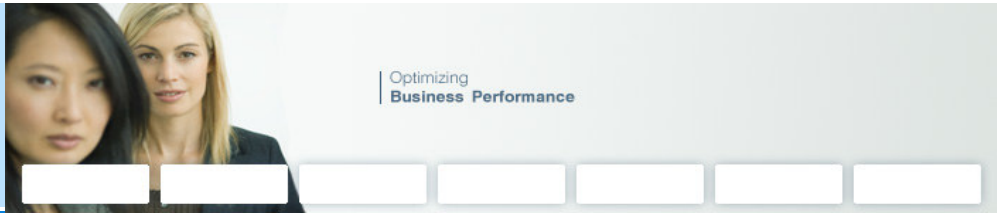
▶ Benefits in Germany

Topic	Problems in Germany	e-health network	Benefits (EUR p.a.)
e-prescription	Media breaks and cost for scanning	No media breaks, Cost reduction from 0,34€ to 0,07€ per prescription	200 Mio.
Co-Payment Information	Missing Co-Payment information	Co-payment information on Health Card	250 Mio.
Fraud	Identification issue	Identification via Health Card	800 to 2.000 Mio.
Drug interaction	No drug history	Drug history	500 Mio.
Patient medical history	Multiple medical files	Electronic Health Record	5 to 10 % of health budget

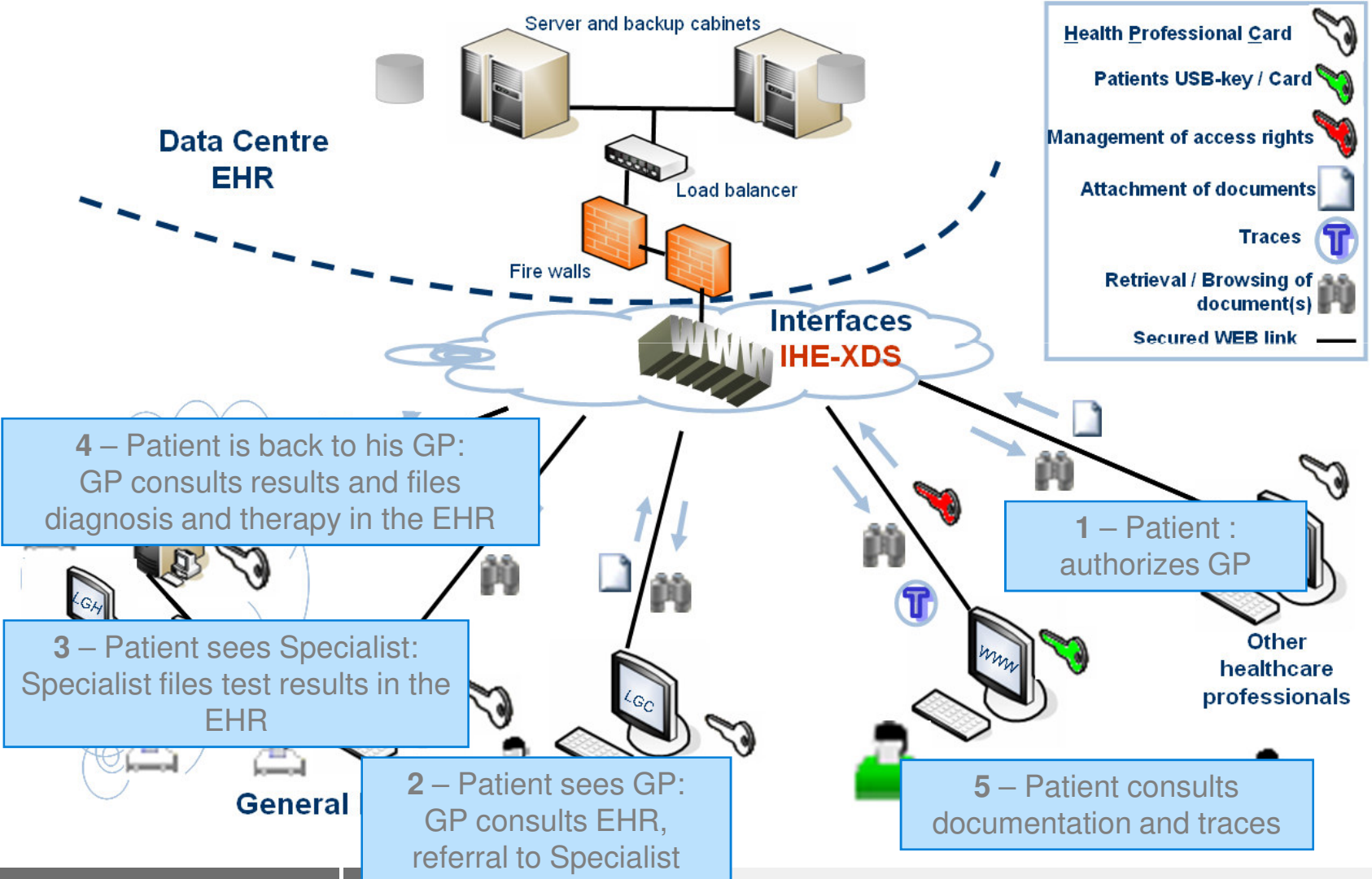


# Overview of System Architecture

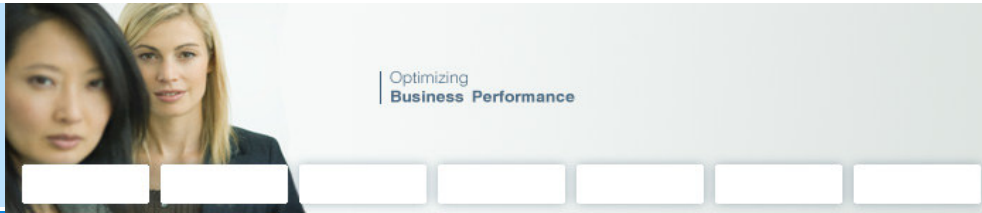




Electronic Health Record (EHR) - Field Trial France 2006







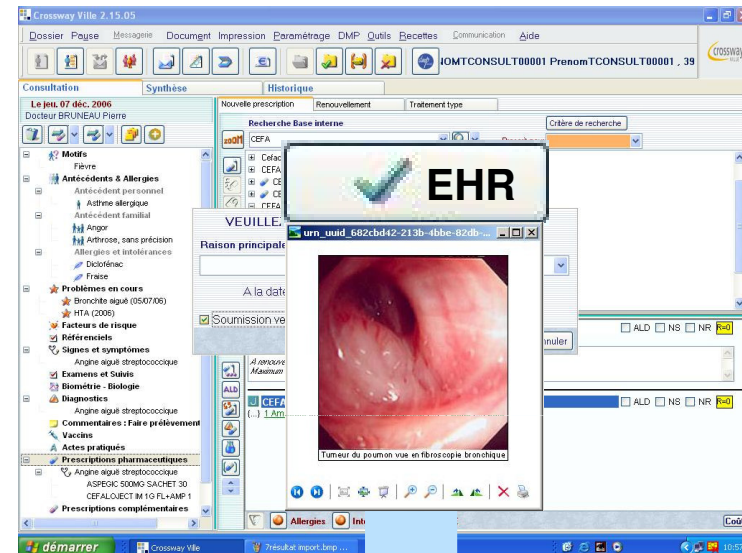
## e-health Applications as seen by the doctor

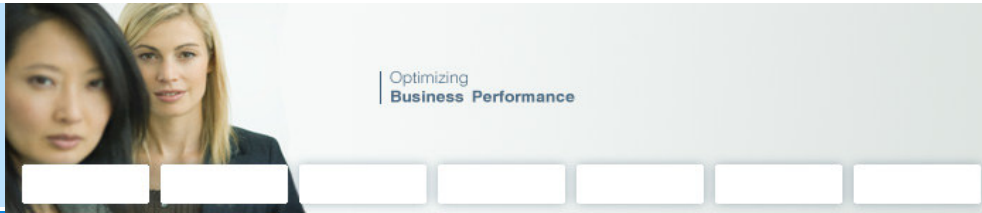
### Medical Application (practical example)

- 60 Patient insurance verifications
  - 120 Prescriptions
  - 40 Reports / Test results
  - 40 Referrals / Admissions
- 200 digital signatures per day

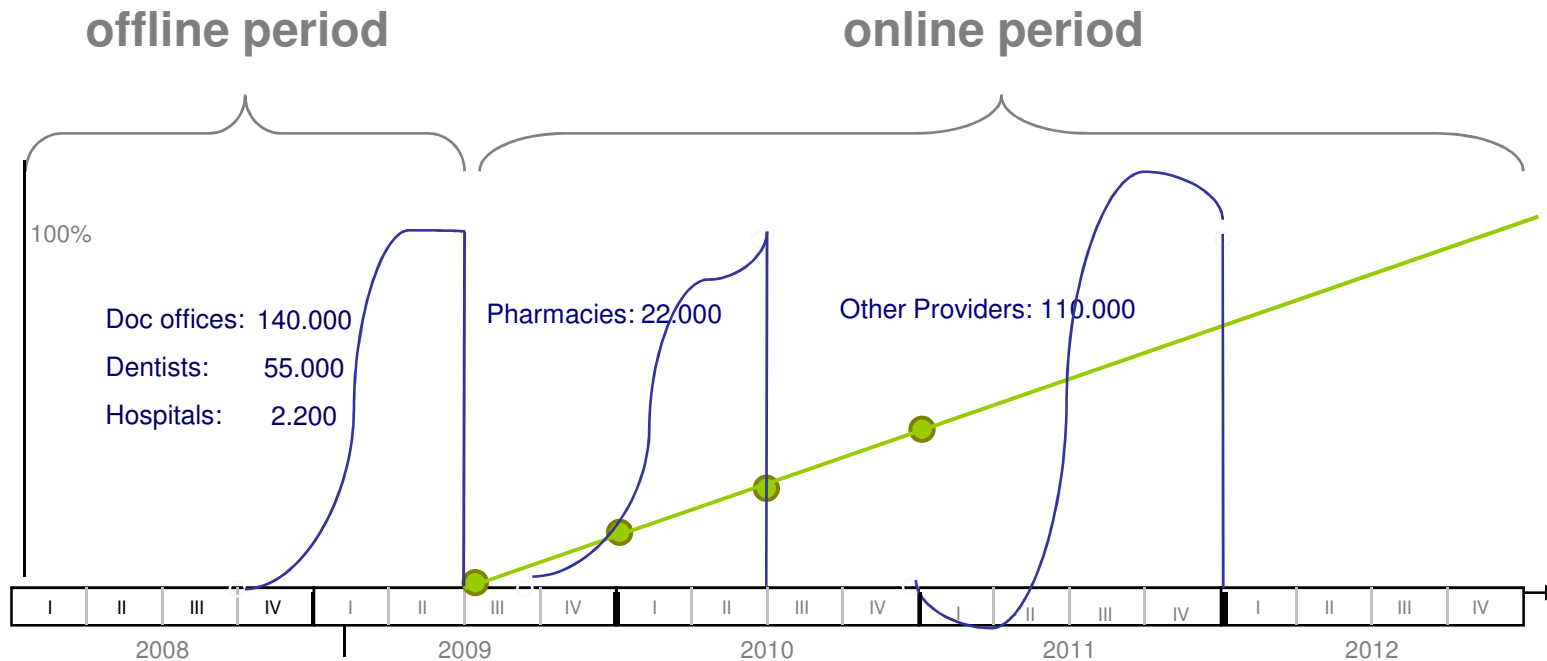
### Crucial for the medical cabinet:

- Easy to use digital signature
  - Biometrics
  - RFID instead of 6-digit PIN
- IHE conformity of doc's office system
- IHE conformity of EHR





# Telematic infrastructure Germany – Rollout plan

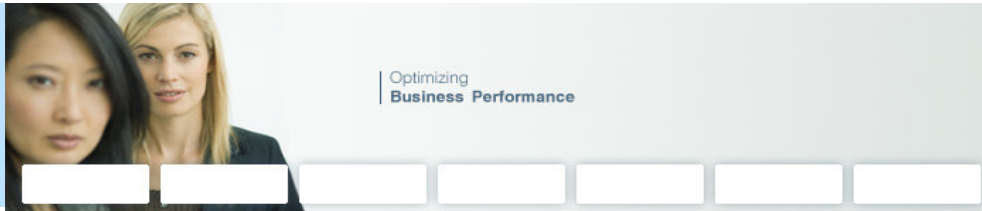


Patient Data Card: 82 Mio  
Insurance Comp.: 300

- e-prescription (rest)
- EHR: emergency data drug history
- e-prescription (drugs)
- patient insurance verification

**Drivers for online:**

- Insurance comp.
- Health associations
- Ministry of Health
- e-health industry



## EMDS Consulting Offering

### Thorough understanding of

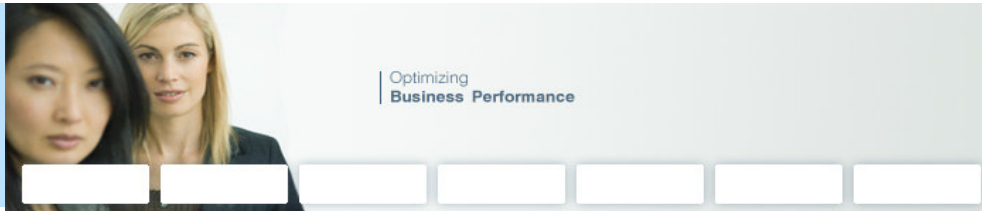
- the **market**: “the 4 Ps” - **P**atients, **P**ayers, **P**roviders, **P**olicymakers”
- the underlying **infrastructure**
- **the objectives** for introducing a card enabled e-health network

➔ **A quick assessment and a “solution vision” can be created in about 2 weeks**

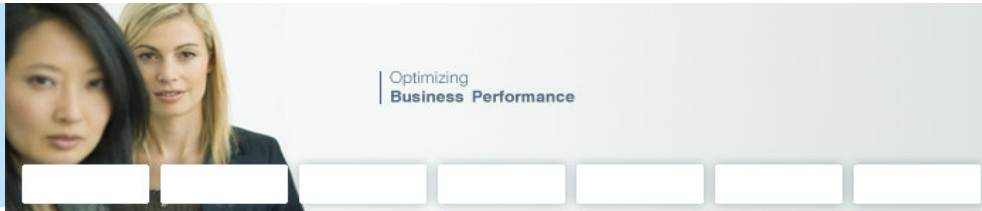
➔ **a “feasibility study” in about 2 months**

### Result

- A draft of the most important underlying issues in cost and efficiency of healthcare
- A preliminary recommendation if and which type of a card enabled e-health network should be used
- A rough schedule and next steps



# Back-up



## Challenges in health care

### DRUG INTERACTION

"Statistically, if you take six different drugs, you have an 80 percent chance of at least one drug-drug interaction," according to Wayne K. Anderson, Dean, State University of New York School of Pharmacy.

(Source: <http://Seniorjournal.com>)

### COST DISTRIBUTION

The distribution of health care costs is strongly age dependent, a phenomenon that takes on increasing relevance as the baby boom generation ages. After the first year of life, health care costs are lowest for children, rise slowly throughout adult life, and increase exponentially after age 50 (Meerding et al. 1998).

Bradford and Max (1996) determined that annual costs for the elderly are approximately four to five times those of people in their early teens. Personal health expenditure also rises sharply with age within the Medicare population. The oldest group (85+) consumes three times as much health care per person as those 65-74, and twice as much as those 75-84 (Fuchs 1998).

Nursing home and short-stay hospital use also increases with age, especially for older adults (Liang et al. 1996).

(Source: <http://findarticles.com>)

### COST INCREASE

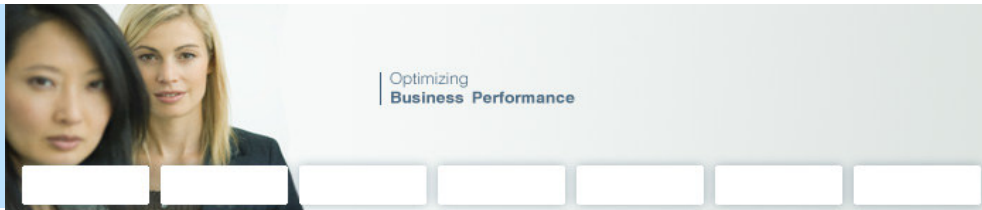
Health care costs will increase by an average of 11 percent in the next 12 months, Aon Consulting estimates.

(Source: <http://www.cfo.com>)

### FRAUD

"... With estimates indicating that at least €30 billion is lost across Europe each year, this is not an issue that can wait until next year or the year after. Organisations must do something about it now and those that have taken action are already spending more money on healthcare provision as a result. The EHFCN represents a real opportunity to protect Europe's healthcare systems from fraud and corruption so that they can properly protect the health of the people of Europe."

(Source: <https://www.ehfcn.org>)



## Germany's layout of patient data card

### Identification

Name, date of birth	OLD
Address	OLD
Gender	NEW
Signature	OLD
Photo	NEW

### Administration

Unique standardized insurance number	NEW
Insurance carrier	OLD
Relevant physicians' association	NEW
Group insurance status	OLD
Medical copayment status	NEW
Beginning date of insurance coverage	NEW
End date of insurance coverage	OLD
Documentation field for revocable consent of insured	NEW
Deletion of selected medical data on request limitation of access, where applicable	NEW
Surrender of card upon switching insurance cos	NEW
Data on contracted medical services and preliminary costs	NEW
Wide-ranging Information Requirements Reg. Functionality and Data on Card	NEW
Treatment in other European states (E-111)	NEW

### E-Prescription

Electronic prescription	NEW
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### Medical Information

Medical emergency data	NEW
Electronic physician's report	NEW
Pointer to electronic patient data file	NEW
Medication history	NEW
Additional data from or for insured patient	NEW

### Security

Encryption	NEW
PIN	NEW
Digital signature	NEW
Access via signature card (HPC or SMC) only	NEW
Access to data limited to certain users	NEW
Except in emergencies, access (via PIN) granted by the insured only	NEW
Last 50 instances of access logged for privacy protection purposes	NEW
Insured may access data they have added themselves or which has been added for them	NEW

- **Administrative data** must be added to the card by the insurance carrier
- **Medical data is optional** and can be added to the card by the physician or the insured
- **The infrastructure for all data must be harmonized** with the card!

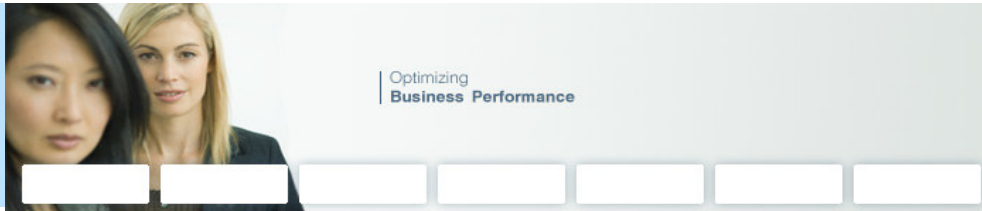
**OLD**

*Already on old card*

**NEW**

*Completely new functionality*

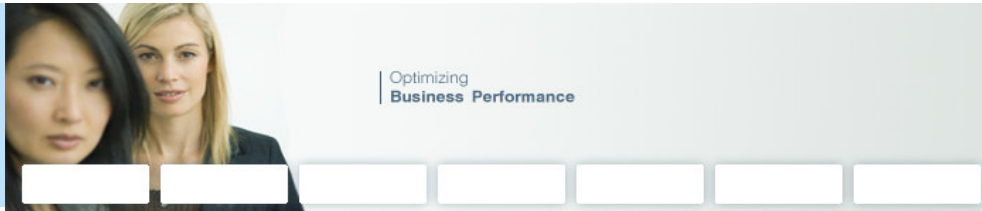
Source: GMG



Benefits

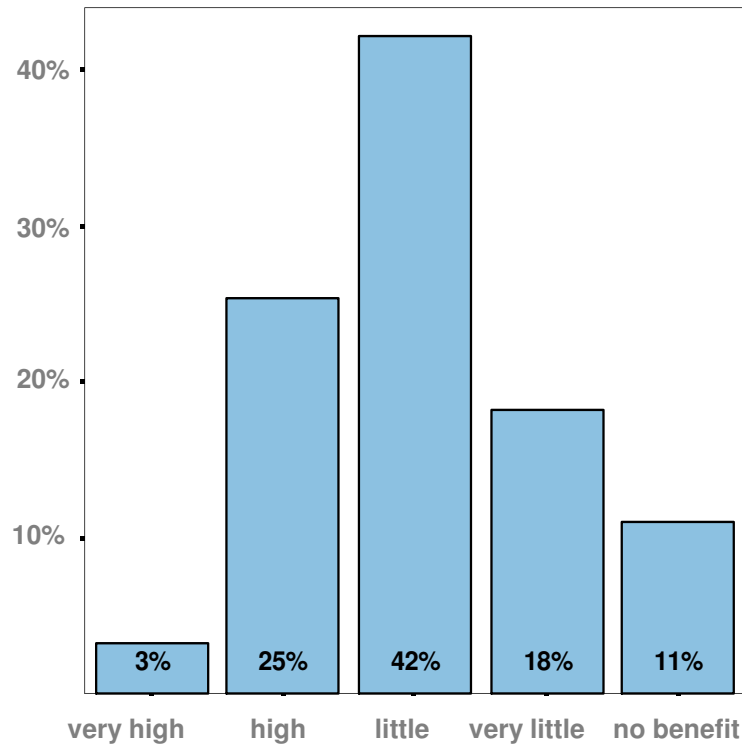


Interaction	Focus of Change
Provider to Provider	Cooperation
Patient to Provider	Patient Empowerment
Patient to Payer	New Contract Models
Payer to Provider	HMO Agreements

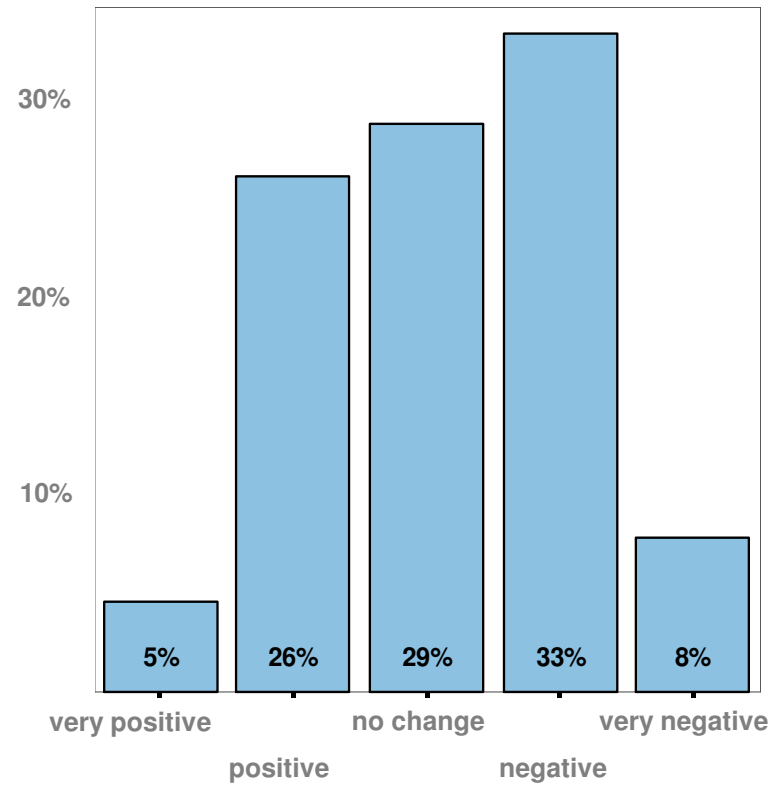


Acceptance of e-health from doctors in private practice

General Benefit for Patients



General consequence for German health care



Questioning 7/2005