The Austrian e-card project

An Overview

Walter M. Bugnar – project manager
„Consultation of a Doctor“ …how it was before...

1. Issue of health insurance vouchers
2. Insurance status: Registration & Deregistration process
3. Sending of health insurance vouchers to Social Security Institutions for ....
4. ....Accounting

Computer System(s)  
Social Security Institutions
... then we created a vision: „e-card operates in the fields of e-Social Security, e-Health, e-Government and e-...“
The Austrian e-card project - An Overview

The e-card layout

Front

Back

with European Health Insurance Card

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E - 111

EUROPÄISCHE KRANKENVERSICHERUNGSKARTE

AT

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Jan 19th, 2010
The Austrian e-card project - An Overview

Features of the e-card

- The e-card is a **smart key card** and **signature card** enabling reliable verification of health care entitlements

- The e-card incorporates **2 signature applications** which support
  - Secure Electronic Signatures (for e-gov applications according to SigG and SigV)
  - Social Insurance Signatures

- The e-card stores holder's name, date of birth, sex, social insurance number, card serial number and user group identification

- The e-card is the **European Health Insurance Card**
  - replaces form E-111 for stays abroad
  - valid in the EU, EEA and Switzerland
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Result: The e-card Process „Consultation with a General Practitioner“

1. **Insurance status**: Registration - Deregistration
   - Computer System(s) Social Security Inst.

2. **Accounting via physician’s EDP**
   - Online Eligibility Check (SV-Signature protected)

3. **Online Electronic Data Transmission**
   - e-card data centre

4. **Eligibility Data**
The Austrian e-card project - An Overview

Advantages of the e-card

- Easier access to medical help
- Protection of privacy
- No issue of health care vouchers
- Efficient use of IT
- Minor administration expenses
- Reliable verification of entitlements
- Minor administration expenses

Insured

General Practitioner

Employer

Social Insurance

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Requirements to the Compound System - Government Requirements

- Design of the e-card as a „Key card“
- Access to personal data after approval of the cardholder (§31a (2) ASVG)
- Reload ability of health data on the smart card
- The e-card system shall support the transparency of medical services and costs
- Acceptance of other cards with „Citizen Card Functionality“ (i.e. prepared for e-government).
Requirements to the Compound System - Openness of the System

- Modification of „Conditions for Entitlement“- rules:
  Requires software-updates by the operating company, which is specifically supported by the online-system

- Load ability of new applications:
  Post Issuance Personalization and downloading of data, data structures and cryptographic key-files to the e-card

- Innovation and migration:
  Simultaneous operation of several „generations“ of smart cards with different scope of applications
The Austrian e-card project - An Overview

Medical Practice Unit (MPU) and Single Workstation

Working Area
(Reception Desk)

Chip-card Reader

Workstation of Medical Assistant

(Application „Replacement of Health Insurance Vouchers“)

Patient

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The e-card network
The Austrian e-card project - An Overview

Risk potential

- High degree of innovation – technological risks:
  - deadline constraints
  - multiple applications, open system
  - Online system: max. 5 s response time
  - Digital signature cards: 8 Mio. citizens
  - Implemented in approximate 12,000 Medical Practices
  - Network: consistent Broadband connection (ADSL)
  - Citizen card functions
  - domains: social insurance, e-Health, e-Gov, e-Commerce
  - Interoperability (EU application „eE111“)

- virgin soil:
  - Signature procedure (algorithms, processes, applications)

- Diversity of targets:
  - interest of the political clients changed:
  - „electronic administrative system“ of the social insurance changed to an infrastructure for e-health & e-government projects
The Austrian e-card project - An Overview

Vision of e-card System and Basic Application

Project Figures, Features, System Overview

e-card Project: Multi-Organisation Enterprise

Time Schedule and Rollout Figures

The e-card Project meets Goals

Extended e-card Usage
The Austrian e-card project - An Overview
<table>
<thead>
<tr>
<th>Nr.</th>
<th>Partial Project</th>
<th>Contractor / Organization</th>
<th>Contract Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consultation System: Operational Server Centre and Terminal Software</td>
<td>Siemens Business Services GmbH&amp;Co (IBM-Austria GmbH, Telekom Austria AG, Scientific Games Intern. GmbH.)</td>
<td>03.01.2004</td>
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<td>2</td>
<td>Card System: Health Insurance Smart Card System and Trust Center Functions</td>
<td>Giesecke &amp; Devrient (Deutsche Post Com, Bell ID B.V., BRZ Austria GmbH)</td>
<td>09.04.2004</td>
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<td>3</td>
<td>Communications Services: Data Networks incl. Rollout of e-card IT-Components</td>
<td>Telekom-Provider</td>
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<td>4</td>
<td>Call Center</td>
<td>Competence Call Center</td>
<td>18.08.2004</td>
</tr>
<tr>
<td>5</td>
<td>Training for Personnel dealing with User Interfaces in Medical Practices</td>
<td>Performed by Contractor of TP1</td>
<td>CRQ 07/2004</td>
</tr>
<tr>
<td>6</td>
<td>Administrative Client of the Social Security Institutions</td>
<td>Main Association of Austrian Social Security Institutions</td>
<td>---</td>
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<tr>
<td>7</td>
<td>Coordination of Medical Practice Software Providers</td>
<td>Project Management of SVC</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>EPC: External Project Controlling, Risk and Requirements Management</td>
<td>ESG Elektroniksystem- und Logistik-GmbH</td>
<td>30.03.2004</td>
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At least 15 organizations with substantial contributions.
The Austrian e-card project - An Overview

- Vision of e-card System and Basic Application
- Project Figures, Features, System Overview
- e-card Project: Multi-Organization Enterprise
- Time Schedule and Rollout Figures
- The e-card Project meets Goals
- Extended e-card Usage
### The Austrian e-card project - An Overview

#### Scheduled and reached milestones in the project e-card

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<td>Nationwide Rollout (11.700 Med. Practices)</td>
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- **Start Pilot Medical Practice:** Dec 15th, 2004
- **Start Test Operation:** Feb 28th, 2005
- **Start Rollout:** May 30th, 2005
- **End Rollout:** Nov 30th, 2005

Dec 31st, 2005
Rollout to 97% takes place

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## Rollout Figures

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<th>Rollout Figure</th>
<th>Current Value</th>
<th>Percentage</th>
<th>Planned Value</th>
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<tr>
<td>e-cards shipped</td>
<td>9.024.000</td>
<td>&gt;100,0%</td>
<td>~ 8.200.000</td>
</tr>
<tr>
<td>Spare Cards</td>
<td>824.000</td>
<td>11,5%</td>
<td>5% p.a.</td>
</tr>
<tr>
<td>e-card Systems installed</td>
<td>11.700</td>
<td>99,4%</td>
<td>~ 11.770</td>
</tr>
<tr>
<td>End User Trainings (for Participants)</td>
<td>656 (26.025)</td>
<td>&gt;100,0%</td>
<td>~ 650</td>
</tr>
<tr>
<td>MPUs produced</td>
<td>12.500</td>
<td>100%</td>
<td>~ 12.500</td>
</tr>
<tr>
<td>LAN Card Readers produced</td>
<td>18.000</td>
<td>100%</td>
<td>~ 18.000</td>
</tr>
<tr>
<td>Transactions (Average per day)</td>
<td><em>320.000 – 590.000</em></td>
<td>214% – 280%</td>
<td><em>210.000 per day</em></td>
</tr>
<tr>
<td>Hotline Calls (Average per year)</td>
<td>605.000</td>
<td></td>
<td>600.000 p.a.</td>
</tr>
<tr>
<td>GPs (Average per Day)</td>
<td>400 – 1.100</td>
<td></td>
<td></td>
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<tr>
<td>Patients (Average per Day)</td>
<td>800 – 1.500</td>
<td></td>
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Lessons learned

- **Modelling of established processes through IT**
  - 1:1 - Modelling deteriorates processes
  - IT functions modifies the processes
  - Reconstruction of current processes is expected
  - Legal framework must be adapted
  - IT-based processes changes the organization

- **Feedback from practice**
  - GUI-adaptation for the eligibility check (very first application)
  - Process optimization by IT potentials
  - Adaptation of the social insurance regulations
  - Performance in the online operation
  - Availability of the system
  - Training concept
  - Escalation strategy
  - Call Centre Processes
  - Telecommunication Provider
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e-card Project: Multi-Organisation Enterprise

Time Schedule and Rollout Figures

The e-card Project meets Goals

Extended e-card Usage
The e-card Project meets its goals

(1) Technical Goals
(Functions)

Δ₁ = + 3,2%

Scale: Lines of Specification

Δ₂ = + 5,3%

Δ₃ = + 7,1%

(2) Financial Goal
(EUR 116 Mio)

(3) Time Goal (21 months until end of RO)
The Austrian e-card project - An Overview

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The e-card Project meets Goals

Extended e-card Usage
Extended e-card Usage

- e-Social Security
  Replacement of all paper based health care certificates

- e-Health
  Key card for secure handling of medical transactions
  (basic token for eHealth Telematics)
  - Austrian electronic health record (ELGA)
  - e-medication

- e-government
  Signature and Encryption Card for all fields of application
  with corresponding requirements
We deliver what we promise.