Regional IT platform for health related data exchange and improved management

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LOCAL LEVEL

- Maturity level of ICT
  - Most voivodship's specialized hospitals have mature ICT solutions – here, usually regional tenders for all entities conducted by Marshal's Office (2007-2013)
  - Provincial and municipal hospitals are at different levels of ICT maturity - tenders relate to individual institutions – expected development (2014-2020)
  - Ministerial and University hospitals – different levels of ICT
  - Private healthcare facilities – simple and standardized ICT
- Areas of computerization
  - IT infrastructure
  - Basic set of IT systems HIS/RIS/LIS/ERP/BI
  - Additional domain IT systems

Goals

- Empower patients
- Provide location agnostic and high quality treatment
- Grant medical personnel easy access to all required information
- Allow seamless and secure communication between patients and healthcare centers
- Improve business efficiency with state-of-the-art data analytics
- Be future-proof by using international standards

Regional IT Healthcare Platform

Caste Study

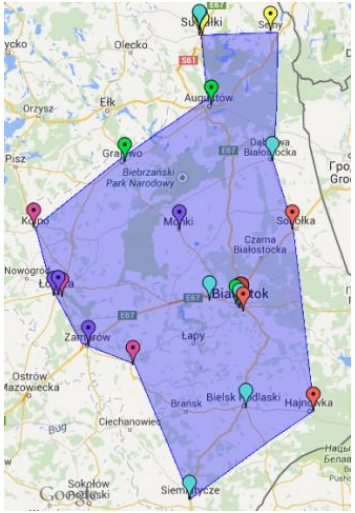
Wrota Podlasia

Regional e-Health Platform - Podlaskie voivodship – case study

36 Healthcare units

- Marshal's Office of Podlaskie
- 25 medical entities
- 10 district offices
- ca. 8700 employees

- 1 193 348 citizens
- about 12 000 km^2
- about 70 km distance
- between cities



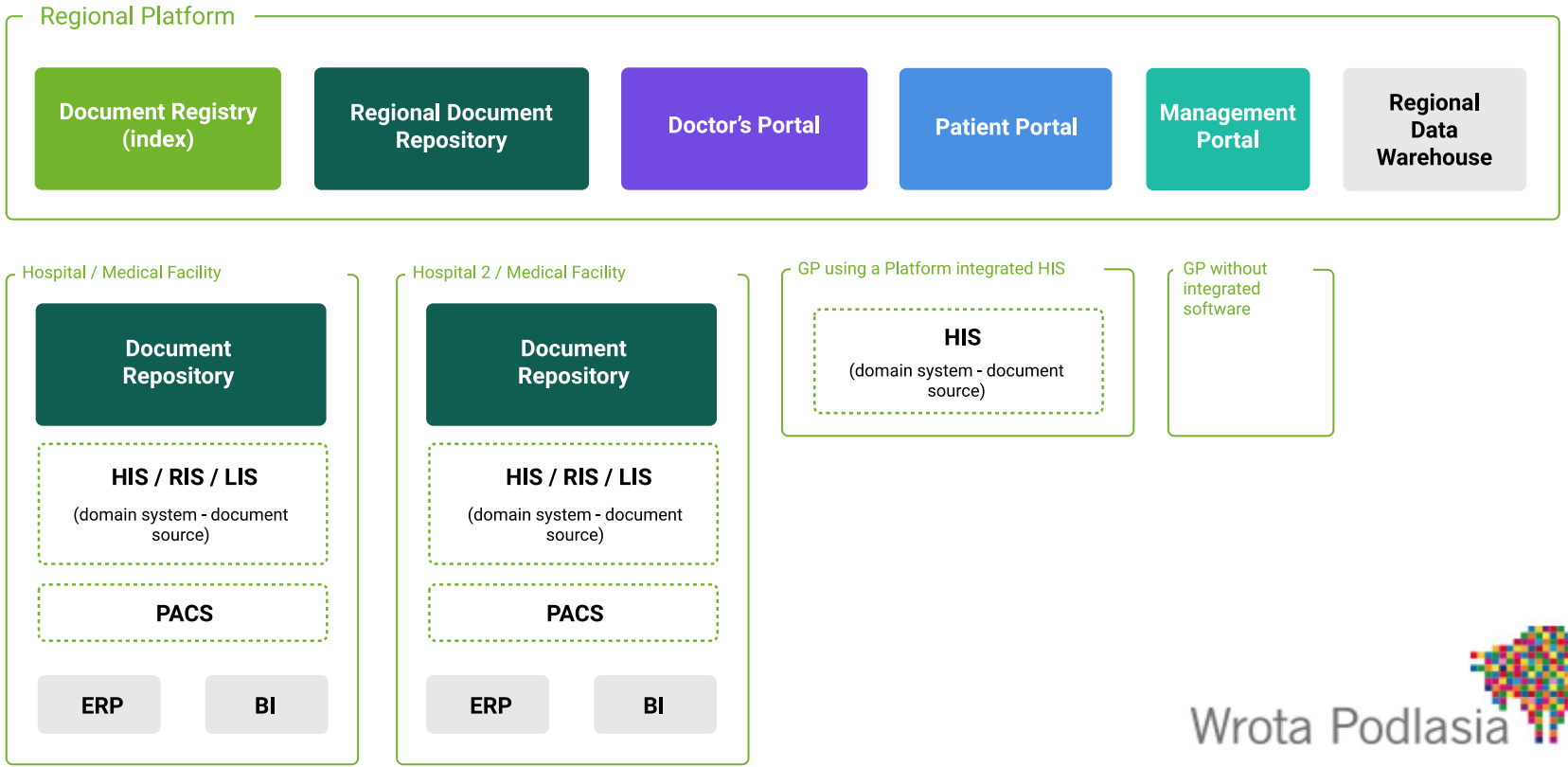
Many forms of business and ownerships

- District and provincial hospitals
- Emergency Ambulance Service
- Marshal's Office of Podlaskie
- Private medical centers

Delivery and implementation of integrated systems

- Regional Platform: Regional Registry System, Regional EHR, Patient Portal, e-Registration, Managerial Portal, BI, Regional Integration Layer
- Local Systems: ERP, HIS, EHR, DMS, BI

Regional IT Platform – Podlaskie voivodship – case study



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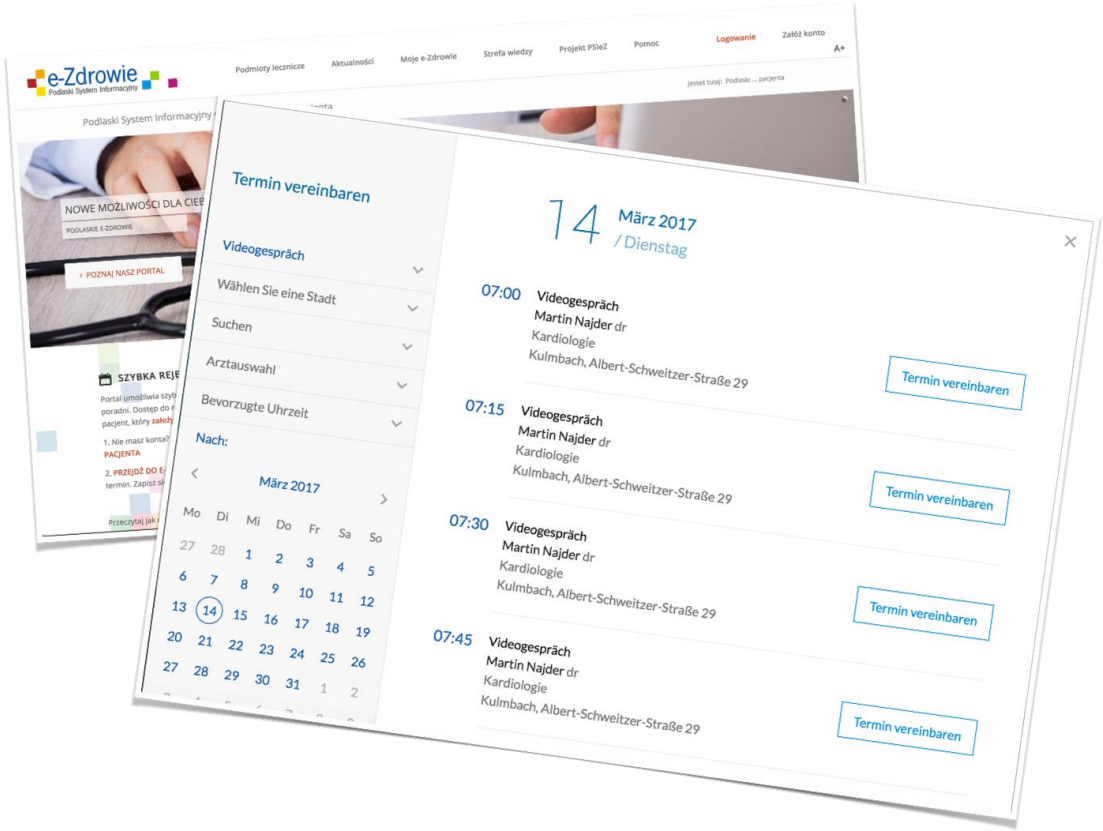
Usage Scenarios

Scheduling an Appointment

1. Patient has centralized access to schedules from all hospitals/GPs through the **Patient Portal** and can find an available slot in no time

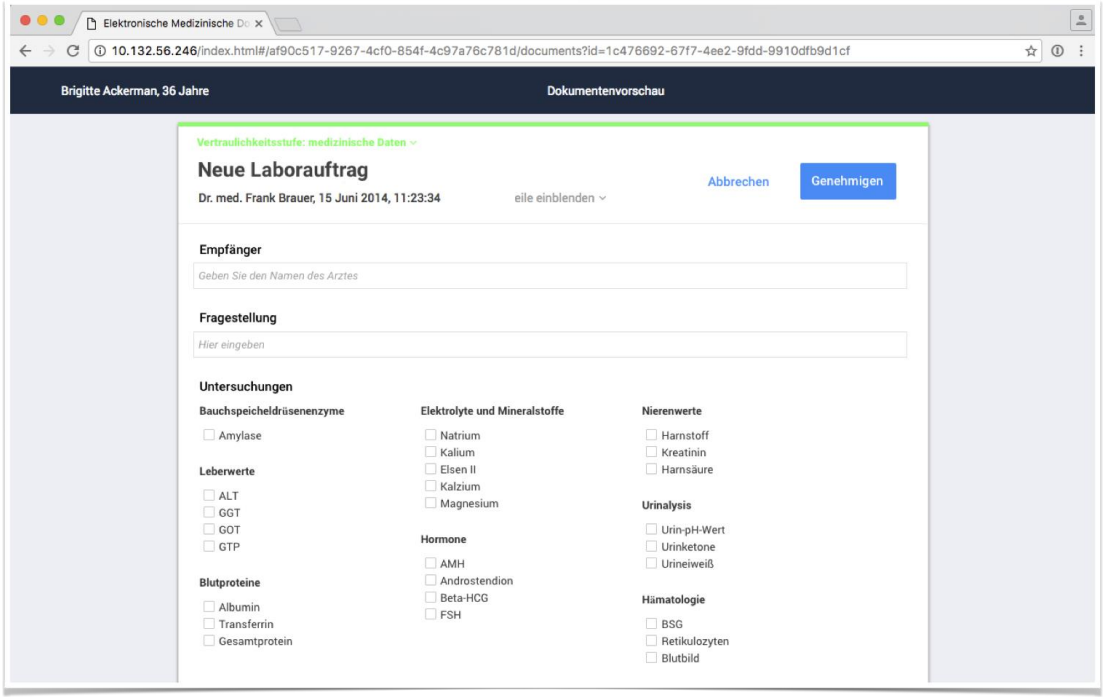
2. Optionaly she can grant access to her medical record



Medical Documentation Flow 1/3

1. Physician issues and digitally signs documents directly in the HIS

2. Documents are stored at a **Local Document Repository** and indexed in the **Regional Document Registry**



Medical Documentation Flow 2/3

1. When the patient goes to another medical facility his medical history might be relevant to the treatment

2. An authorized doctor can find and access his medical record through the Doctor’s Portal

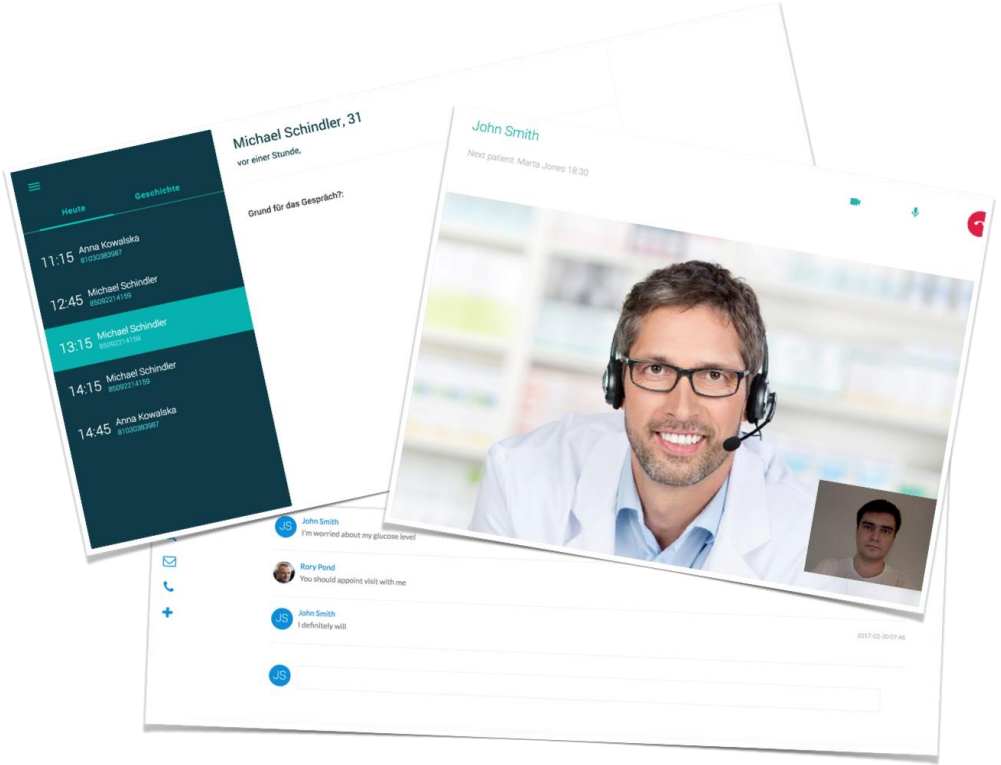
Medical Documentation Flow 3/3

1. Patient can also read his medical documentation on the Patient's Portal after the visit or after being discharged

2. He can also manage the list of authorized doctors!

Remote Care (1/2)

Patients can contact doctors remotely using a secure messaging system or video-calls



Remote Care (2/2)

Doctors providing remote diagnostics have access to complete patient's medical history and current reading from telemonitoring devices

Regional IT Platform – Podlaskie voivodship – case study

- Secure, ECM-based Medical Documentation Archive optimized for huge volumes of data
- Instant access to complete information about patient
  - efficient search engine indexing all documents
  - semantic analysis subsystem providing holistic view on patient's health
- Standards (HL7CDA R2 Level3, IHE XDS.b, DICOM, IHE PIX)
- Efficient document exchange between all kinds of medical facilities

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Beneficiaries

Regional Platform – for Patient

Information

Personal Health Record

Education

Health Education and Alerts

Solutions

Wellness Plan for individual patients

Innovation

24 hour remote medical care, teleconsultations

Regional Platform – for Medical Staff

Information

Real-time access to the patient's health record

Education

Health Education and notifications about alerts

Solutions

IT Medical Solutions for Data Delivery and Image Information

Innovation

24 hour remote medical center & care

Regional Platform – for Local Government and Regional Administration

Information

Real-time access to reports and benchmarks

Medical data

Discover trends and prevent potential outbreaks

Financial data

Optimize costs and improve efficency

Aggregation

Managerial level summary

Thank you!

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