

Was ist ELGA und wie wird sie umgesetzt?



Schilddrüsendialog Seefeld
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Tirol Kliniken is ...

... a Management Holding owned a 100% by the Federal State of Tirol



Tirol Kliniken manage 4 Hospital Sites in and around Innsbruck



Tirol Kliniken Key Figures

Number of Beds	2.461
Inpatients p.a.	119.000
Outpatient Visits p.a.	1.907.000
Staff	7.120 FTEs
Operating Budget p.a.	595 Mio €





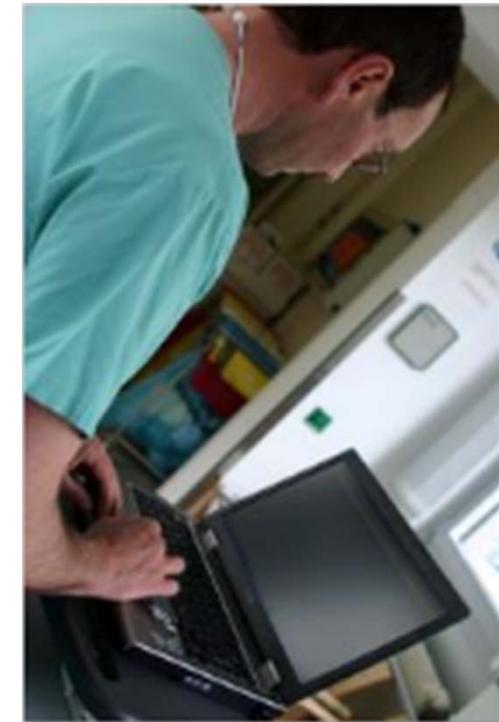
Major IT Systems

- Clinical Information System – Cerner Millennium
- Patientadministration and ERP – SAP
- Intensive Care PDMS – GE Centricity Critical Care
- Multimedia Archive – Siemens syngo.share
- Surgery Documentation System - Carus MyMedis
- Radiology - PACS Agfa Impax and RIS GE Centricity



Strategic IT Goals of Tirol Kliniken

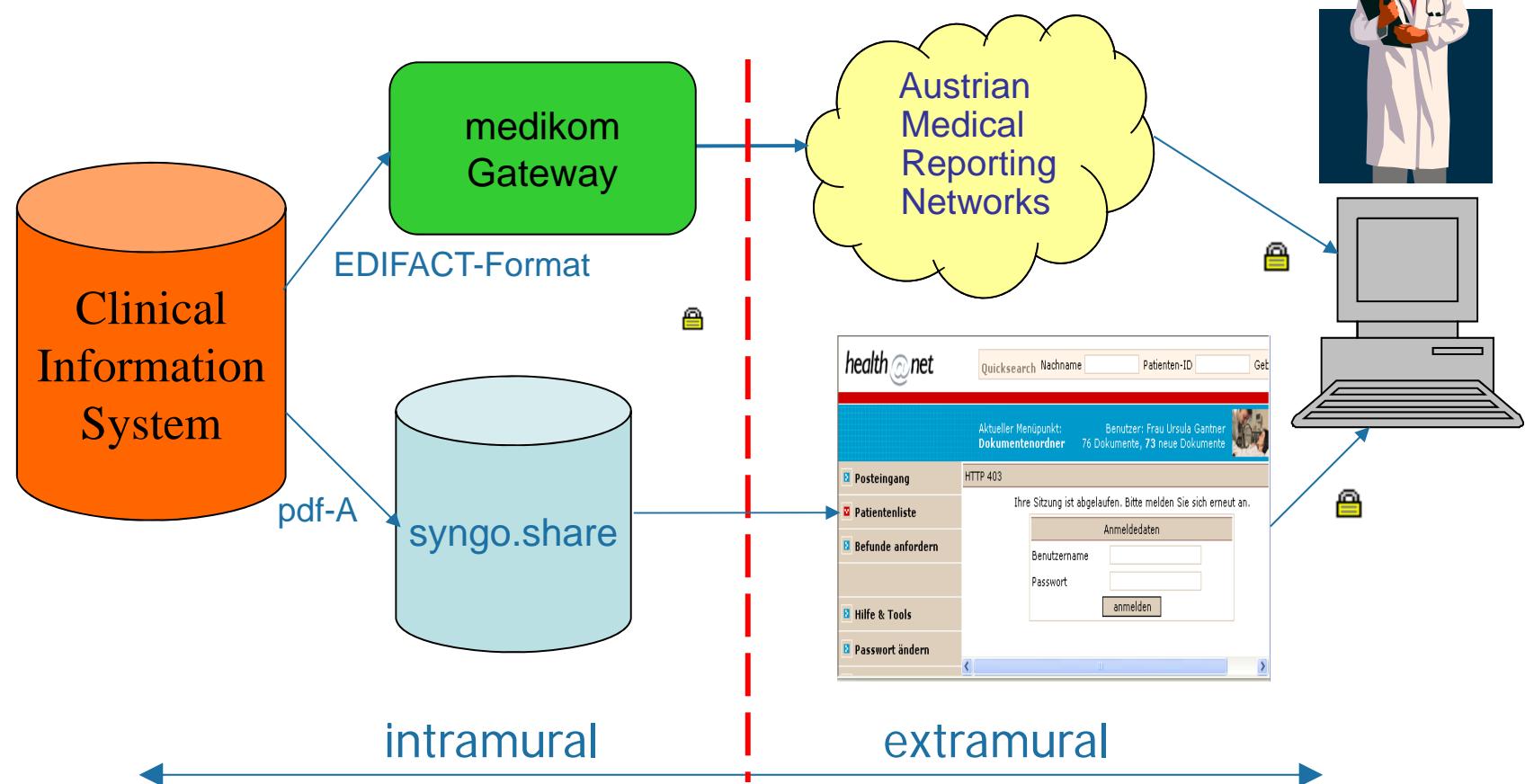
- integrated comprehensive EMR
- consistent IT support for all major processes & process standardization
- IT support for QM and Research
- Cross institutional extramural electronic communication / eHealth

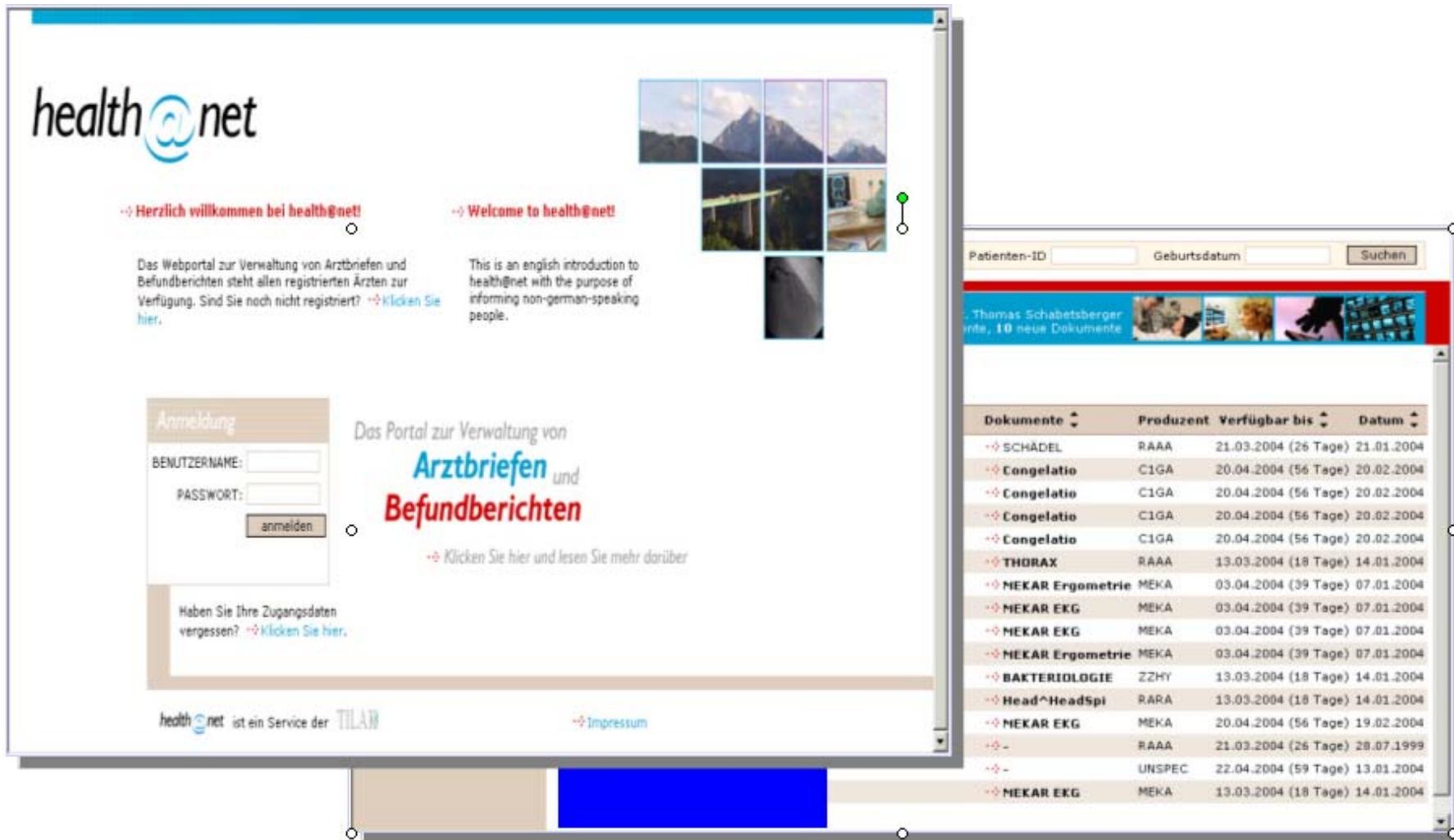


„Classic“ Channels for Extramural Electronic Communication

Since 2003 Tirol Kliniken have been supporting two extramural electronic communication channels

- Austrian Medical Networks (DaMe, Medicom, ...)
- Push-Portal **health@net**





The screenshot displays the **health@net** portal interface. On the left, there is a login form titled "Anmeldung" with fields for "BENUTZERNAME" and "PASSWORT", and a "anmelden" button. Below the login form is a link for forgotten credentials. The center of the page features a large banner with the text "Das Portal zur Verwaltung von Arztbriefen und Befundberichten" and a "Klicken Sie hier und lesen Sie mehr darüber" button. To the right of the banner is a grid of small images showing various medical scenes. On the far right, a separate window shows a list of documents with columns for "Dokumente", "Produzent", "Verfügbar bis", and "Datum".

Dokumente	Produzent	Verfügbar bis	Datum
SCHÄDEL	RAAA	21.03.2004 (26 Tage)	21.01.2004
Congelatio	C1GA	20.04.2004 (56 Tage)	20.02.2004
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THORAX	RAAA	13.03.2004 (18 Tage)	14.01.2004
MEKAR Ergometrie	MEKA	03.04.2004 (39 Tage)	07.01.2004
MEKAR EKG	MEKA	03.04.2004 (39 Tage)	07.01.2004
MEKAR Ergometrie	MEKA	03.04.2004 (39 Tage)	07.01.2004
BAKTERIOLOGIE	ZZH	13.03.2004 (18 Tage)	14.01.2004
Head^HeadSpl	RARA	13.03.2004 (18 Tage)	14.01.2004
NEKAR EKG	MEKA	20.04.2004 (56 Tage)	19.02.2004
-	RAAA	21.03.2004 (26 Tage)	28.07.1999
-	UNSPEC	22.04.2004 (59 Tage)	13.01.2004
NEKAR EKG	MEKA	13.03.2004 (18 Tage)	14.01.2004

ELGA Basics



was
kann
elga?

ELGA erleichtert Ihnen in Zukunft den Umgang mit Ihren Gesundheitsdaten. Mit ELGA können Sie und Ihre behandelnde Ärztin oder Ihr behandelnder Arzt zeit- und ortsunabhängig auf Ihre Befunde zugreifen – sicher und unkompliziert. Ziel ist die Unterstützung der medizinischen Behandlung und Betreuung durch einen besseren Informationsfluss, vor allem dann, wenn mehrere Gesundheitseinrichtungen zusammenarbeiten.

mehr
infos
zu elga.



Für Fragen steht Ihnen die ELGA-Serviceline unter der Telefonnummer **050 124 4411** werktags von Montag bis Freitag von 07.00 – 19.00 Uhr zur Verfügung.

Meine elektronische
Gesundheitsakte.
Meine Entscheidung!



mehr
wissen
hilft.



Informationen zur elektronischen
Gesundheitsakte ELGA

Meine elektronische
Gesundheitsakte.
Meine Entscheidung!





eHealth is a major topic for EU's Digital Agenda

■ EU eHealth Action Plan of 2004

- ◊ covered everything from electronic prescriptions and health cards to new information systems that reduce waiting times and errors – to facilitate a more harmonious and complementary European approach to eHealth
- ◊ Member States should have developed tailored national and regional eHealth strategies derived from the EU eHealth Strategy

■ eHealth was also a core part of the EU i2010 Strategy

■ „eHealth Action Plan 2012 – 2020“ is a major bulding block of Europe’s *Digital Agenda / Initiative 2020*

■ <https://ec.europa.eu/digital-agenda/en/news/ehealth-action-plan-2012-2020-innovative-healthcare-21st-century>

Core of the Austrian eHealth Strategy

- ELGA = Acronym for „**E**lektronische **G**esundheits**A- ELGA is an information system which enables all eligible users (citizens / patients, physicians, nurses, pharmacists etc.) to gain access to healthcare information.
 - ◊ e-reports
 - ◊ e-medikation
- ELGA links data already available in different provider systems and gives access to the care providers who have a current patient contact.
- ELGA-Portal can be accessed via www.gesundheit.gv.at
- From Dec. 2015 on Hospitals, Nursing Homes, GPs, Pharmacies will successively be able to provide healthcare information for ELGA and access information in ELGA in a step-by-step go-live-process. The first 2 Affinity Domains that will go live are Wiener Krankenanstaltenverbund and KAGES (Steiermark)
- Planned Go-Live Date for Tiroler Landesdomäne ELGA-GNT: Dec.2016
- More information about ELGA: www.elga.gv.at**

ELGA is mandatory!

ELGA GmbH, financed by the Republic of Austria, all 9 Federal States and the Social Insurance Group, was founded in November 2009 to manage the technical and organizational implementation of ELGA.

www.elga.gv.at

BUNDESGESETZBLATT FÜR DIE REPUBLIK ÖSTERREICH

Jahrgang 2012

Ausgegeben am 14. Dezember 2012

Teil I

111. Bundesgesetz: Elektronische Gesundheitsakte-Gesetz – ELGA-G

(NR: GP XXIV RV 1936 AB 1979 S. 179. BR: AB 8818 S. 815.)

111. Bundesgesetz, mit dem ein Gesundheitstelematikgesetz 2012 erlassen und das Allgemeine Sozialversicherungsgesetz, das Gewerbliche Sozialversicherungsgesetz, das Bauern-Sozialversicherungsgesetz, das Beamten-Kranken- und Unfallversicherungsgesetz, das Gentechnikgesetz und das Strafgesetzbuch geändert werden (Elektronische Gesundheitsakte-Gesetz – ELGA-G)

Der Nationalrat hat beschlossen:

Inhaltsverzeichnis

Art. Gegenstand

- 1 Gesundheitstelematikgesetz 2012
- 2 Änderung des Allgemeinen Sozialversicherungsgesetzes
- 3 Änderung des Gewerblichen Sozialversicherungsgesetzes
- 4 Änderung des Bauern-Sozialversicherungsgesetzes
- 5 Änderung des Beamten-Kranken- und Unfallversicherungsgesetzes
- 6 Änderung des Gentechnikgesetzes
- 7 Änderung des Strafgesetzbuches

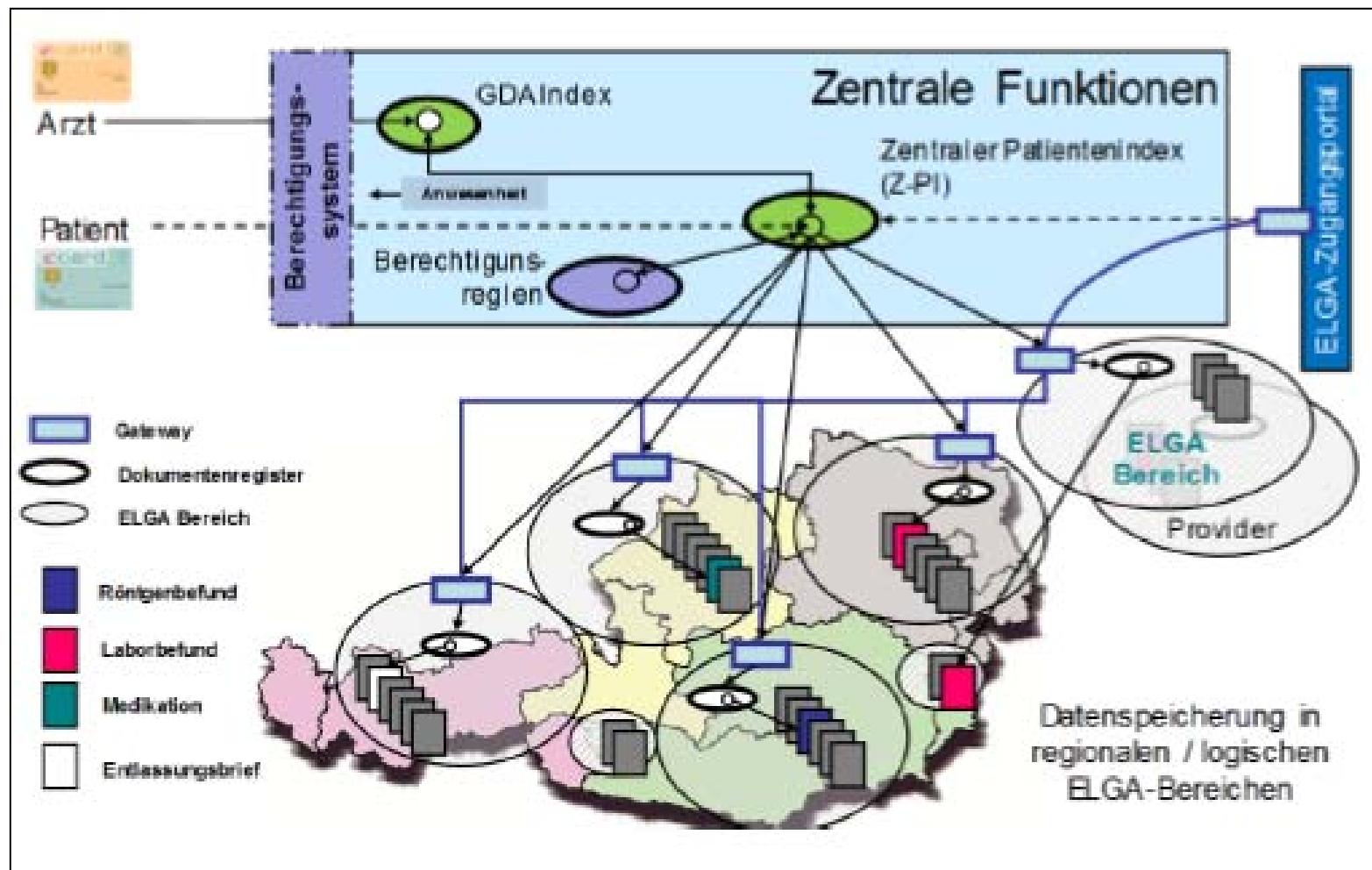
- BGBI. 111/2012: ELGA Law (ELGA-G)
- ELGA Implementation Guideline of the Austrian Ministry of Health (ELGA-VO)
- Health Telematics Guidline 2013
- Data Protection & Privacy Law 2000 (DSG 2000)
- eGovernment Law
- Patient Charta
- Treaty for the Financing and Organisation of the Austrian Healthcare System between States and the Federation according to §15a B-VG
- Hospital und Convalescence Law (KAkUg)
- Physician Law 1998
- Hospital Laws of the Federal States

- ELGA does not only standardize purely technical aspects but also content!
- One key part of ELGA are **Implementation Guidelines**
- For each document type an officially approved Implementation Guidline + LOINC must exist before it may be registered for ELGA!
 - ◊ Implementation Guidelines describe structure, content and technical implementation of an ELGA Document in CDA
 - ◊ Generation of an Implementation Guidline requires intensive discussions among clinical and technical experts → big effort!
- Currently the following ELGA Implementation Guidelines are available
 - ◊ Allgemeiner CDA-Implementierungsleitfaden (Version 2.06.1)
 - ◊ Implementierungsleitfaden Entlassungsbefund Ärztlich (Version 2.06.1)
 - ◊ Implementierungsleitfaden Entlassungsbefund Pflege (Version 2.06)
 - ◊ Implementierungsleitfaden Laborbefund (Version 2.06.1)
 - ◊ Implementierungsleitfaden Befund bildgebende Diagnostik (Version 2.06.1)
 - ◊ Implementierungsleitfaden e-Medikation (Version 2.06.1)
 - ◊ Implementierungsleitfaden Pflegesituationsbericht (Version 2.06)
 - ◊ Implementierungsleitfaden XDS Metadaten (Version 2.06)
- ... further Implementation Guidelines will follow

Relevant Initiatives and Standards for ELGA

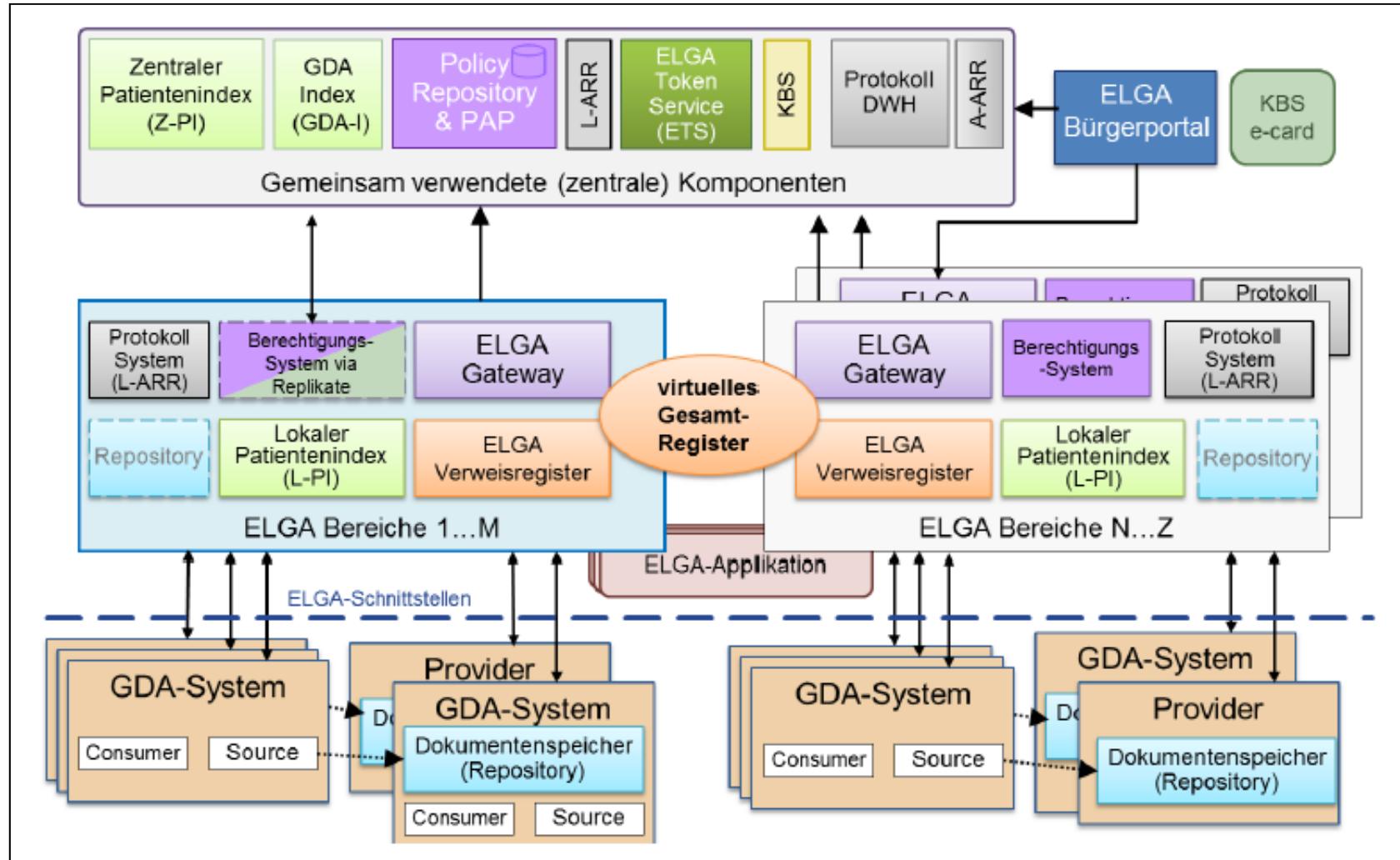
- **Integrating the Healthcare Enterprise (IHE)**
 - Technical Framework
 - IHE-Profiles
 - Syntactical Interoperability
 - ability of systems to exchange data on a technical level by applying approved standards
 - Semantic Interoperability
 - ability of systems to interpret data automatically via metadata (information about data)
 - Process Interoperability
- **HL7**
 - Reference Information Model (RIM)
 - Clinical Document Architecture (CDA)
- **LOINC** (Logical Observation Identifiers Names and Codes)
 - Coding Standard for Lab-Parameters, Documents ...
- **DICOM**
 - Including WADO (Web Access to DICOM persistent Objects)

is a virtual EHR linking Data stored in decentralized Repositories



Architecture

ELGA is realized around the XDS-Profile via SOAP based Web Services. Source: ELGA GmbH



Central Components of ELGA Architecture

- L-PI (Local Patient Index)
 - Local PIX of an ELGA Domain
- Z-PI (Austrian Central Patient Index)
 - Austria wide identification of patients & linking of Local Patient Indices
- PAP (Policy Administration Point & Policy Repository)
 - Administration and storage of general and individual policies
- ETS (ELGA Token Service)
 - Issues Authorization-Assertions (SAML Tickets) for ELGA Users
- GDA Index (GesundheitsDiensteAnbieter ... Healthcare Provider Index)
 - Directory servicing the identification of Healthcare Providers (Hospitals, Physicians etc.)
- KBS (Kontaktbestätigungsservice ... Contact Confirmation Service)
 - Saves Contact Confirmations (Kontaktbestätigungen)
- A-ARR (Aggregated Audit Record Repository) & Protocol Data Warehouse
 - Summarizes protocol messages from decentralized ARR's for the patient
- e-Medication
 - Central Component handling e-Medication in ELGA
- ELGA Portal
 - Provides access to ELGA for a patient / citizen

ELGA Access System (ELGA Berechtigungssystem)

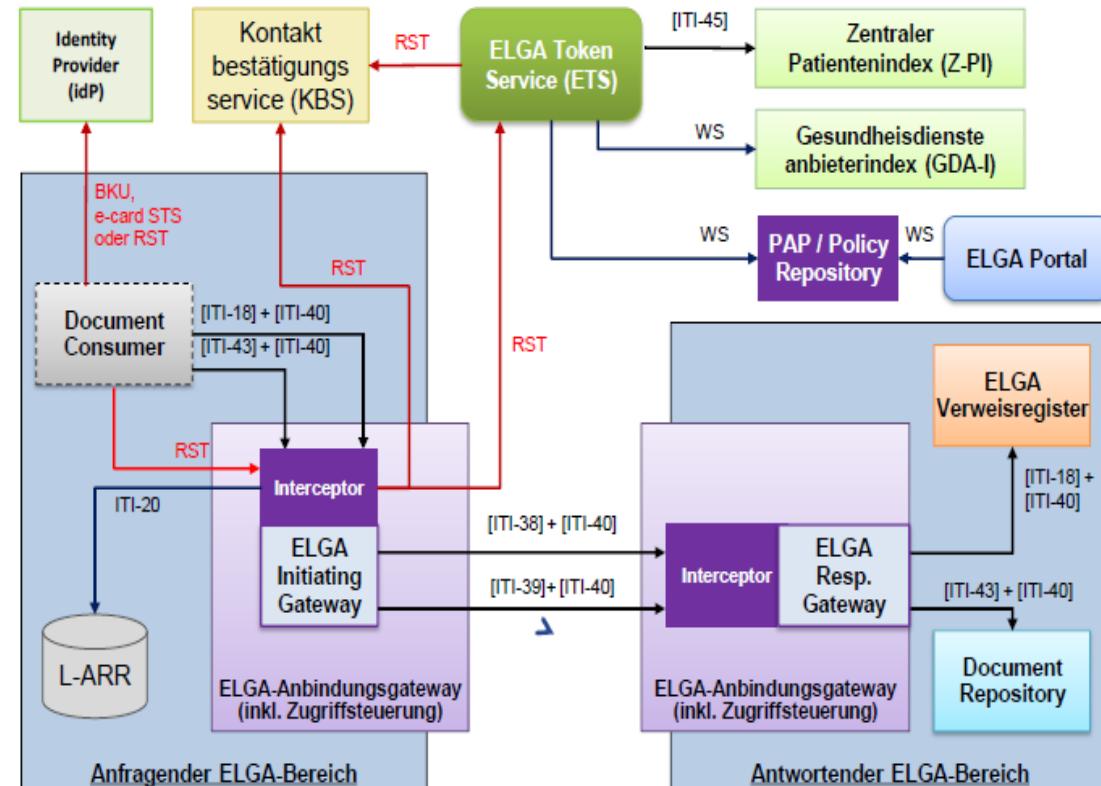
ELGA Access System (ELGA Berechtigungs-system) consists of

- ELGA-Token-Service (ETS)
 - Central Patient Index (Z-PI)
 - Healthcare Provider Index (GDA-I)
 - Policy Administration Point (PAP)
- Kontaktbestätigungsservice (KBS)
- ELGA-Access Gateways (AGW ... Anbindungsgateways)

ELGA Token Service utilizes the services of Z-PI, Policy Administration Point (PAP), Healthcare Provider Index (GDA-I) and Contact Confirmation Service (KBS) to issue an ELGA Authorization Assertion (SAML-Token).

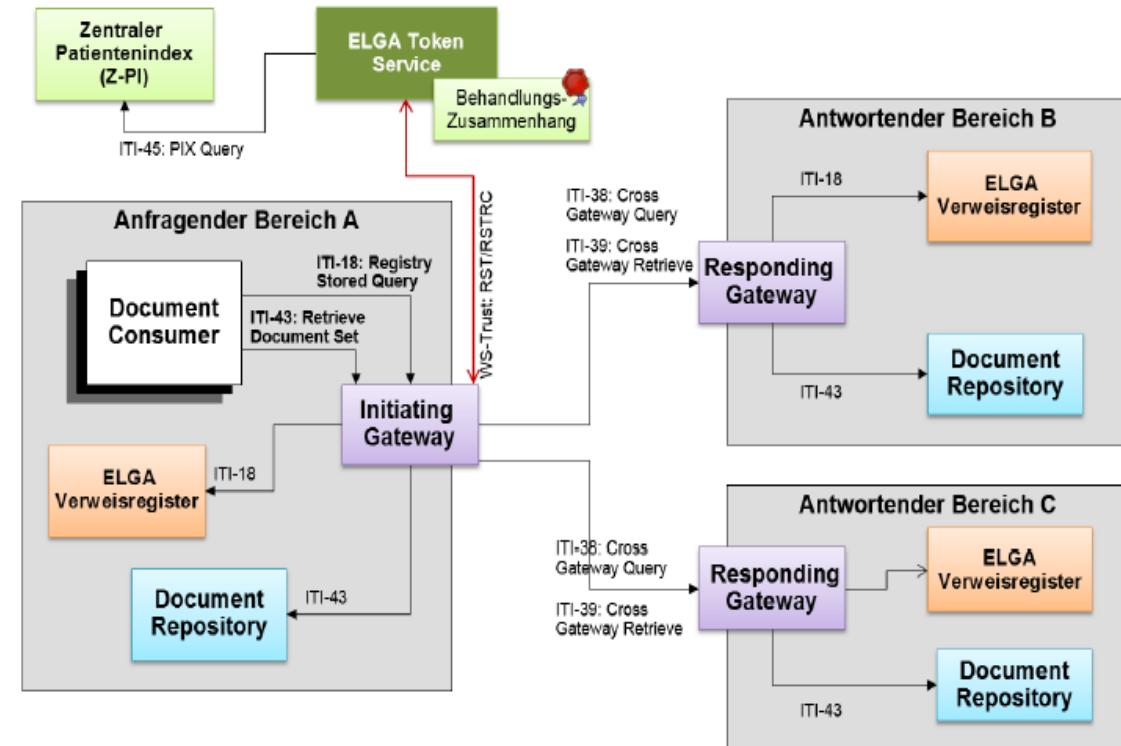
Each ELGA Domain needs one ELGA-Access Gateway („ELGA Anbindungs-gateway“) to communicate with the ELGA Central Components and to enable XCA Access to other ELGA Domains.

An ELGA-Access Gateway (ELGA An-bindungsgateway) will be provided as downloadable VMware by Bundes-rechenzentrum (BRZ).



Document Query in ELGA

- Document Consumer initiates search for a patient's ELGA Documents
- ELGA Token Service (ETS) checks if the Document Consumer may access the patient's ELGA due to a confirmed patient contact.
- Via Cross-Gateway-Queries the Initiating Gateway provides a list of encounters + links to ELGA Documents for the Document Consumer.
- If the clinician on the Document Consumer side wants to fetch a document from another GDA (**GesundheitsDienstAnbieter**, such as a hospital from another organization) he has to click on the document link on the ELGA encounter list.
- The requested document will be fetched from the Document Source Repository using a Retrieve Document Transaction.



Which content must be provided for ELGA?

- Content which has to be registered by Healthcare Providers when ELGA starts:
 - From Inpatient Stays
 - **Physician Discharge Document**
 - **Nursing Discharge Document (if available)**
 - From Outpatient Stays
 - **Lab Report**
 - **Radiology Report**
- Other content, such as Outpatient Reports, Pathology Reports, Images (Dicom) etc. may only be registered after the ELGA Implementation Guideline has been released on this!
- Further ELGA content will be
 - Outpatient Reports
 - Pathology Reports
 - Images
 - Mother-Child Pass
 - ...

Important Facts about ELGA I

- ELGA is based on latest international security standards
 - Connections between all ELGA Components (Affinity Domains, Central Components) via closed and secure Networks
 - Digital Certificates
- No centralized Repository
 - Decentralized Registries and Decentralized Repositories
- ELGA will start empty – no preload
- ELGA will make only documents available < than 10 years old
 - After 10 years content will be set to status “deprecated”
- ELGA is an Opt Out System
 - Opt Out only for eMedikation
 - Opt-Out only for eReports → only e-Medication will be available in ELGA
 - General Opt Out → no ELGA participation at all

Important: if a Patient opts out and opts in again after a while, he will restart with an empty ELGA!
 - Situative Opt Out (SOO)
 - Patient wants to keep all information regarding a specific encounter out of ELGA

Important Facts about ELGA II

■ Additional control mechanisms available for a patient

- Patient can grant long term access to his ELGA for a physician or an institution he trusts
- Declare proxy status for other trusted persons (e.g. children, parents)
- Hiding specific information (documents etc.)

■ Access Logging

- Every access into a patient's ELGA will be logged
 - Who accessed ELGA when and from which institution?
- Patient can see the access protocols

■ ELGA Access for GPs , Hospitals or Pharmacies only in case of a patient contact

- GPs: ELGA can only be accessed for 28 days after the contact to the patient has been confirmed (plugging of the eCard in the GPs office)
- Hospitals: ELGA can only be accessed after the patient admission has been communicated to the „Contact Confirmation Service“. Access is possible until 28 days after discharge.
- Pharmacies: ELGA can be accessed by the pharmacist for 2 hours after a patient's eCard was plugged in the pharmacy

Situative Opt Out (SOO)

- SOO aims for the „medical case“, which is not exactly identifiable in IT systems. So the regulations allow the following variants to realize SOO:
 - Visit / encounter related: SOO is valid for only a specific visit
 - SOO with limited duration: for all encounters in a hospital, which are within a specified time frame (standard: 28 days)
 - Administratively defined timeframe: case related, e.g. for a sequence of encounters belonging to the same treatment
- Each GDA (GDA ... GesundheitsDiensteAnbieter - each hospital of a Holding like Tirol Kliniken is a separate GDA, each GP office is a GDA) can select the most appropriate form of SOO for implementation.
- An SOO always refers to a specific GDA, but not for all hospitals of a legal entity
- SOO Implementation
 - Each organization has to make a desicion for one of the three possible SOO variants
 - SOO administration has to be implemented into patient administration system and CIS
 - Training of administrative personnel, nurses, physicians in handling an SOO

Delegation of Patient Contact

- Delegation is the mechanism for enabling ELGA Access for other institutions (e.g. an external pathology, other external laboratories etc.) which are involved in patient treatment and where only specimen, tissue etc. of the patient shows up, but not the patient himself.
- Delegation means, that the patient contact from the primary treatment institution can be expanded to another secondary institution, that will be involved but which has no direct contact to the patient himself.
- After the delegation the secondary institution can access the ELGA of a patient.
- If the patient declared an SOO at the primary institution this SOO must be transferred with the delegation to the secondary institution. In this case the secondary institution may only read in ELGA but not write into ELGA.
- All delegations will be visible for the patient in ELGA.
- Electronic Delegation Mechanism is still under discussion and construction ...

ELGA Benefit Expectations

- Optimized support of cross-institutional patient-centered treatment processes
- Saving costs and time
 - Eliminating the isolation between information silos
 - Seamless information exchange between intramural and extramural institutions
 - Avoiding double exams
 - Avoiding double prescriptions and Adverse Drug Events
- Sustainable investment by relying on international standards and initiatives
- Highest level of security → encrypted mechanisms for authentication, data transfer and logging
- Patient himself will be empowered to govern over his ELGA

- ELGA start was in Dec. 2015
- Successive go live of further domains from 2016 on
- e-Medication
- Additional value for clinicians can be provided when content will be available as CDA Level 2 or 3 documents
 - with CDA Level 3 content a „Patient Summary“ can be generated.
- Advanced Search Mechanisms
- Availability of further Implementation Guidelines will expand ELGA content to all kind of clinical documents and images
- Mother Child Pass etc. in ELGA
- Support for shared care of oncology and chronically ill patients (tumor boards etc.)
- ...





**Thank you for your
attention!**