



REGIONE DEL VENETO

Venice, 26th February 2007



The INCO-HEALTH “antennas”: experiences and networking

Objectives and Results of the IESS Project and National Service Card
(Carta Nazionale dei Servizi - CNS)

REGIONE del Veneto



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Fabio Perina

Fabio Perina





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OBJECTIVES



- ✓ Creation of solutions that, through the interoperability of existing management systems, help facilitate citizens' access to services, making the principles of "free choice" and "continued care" (personal health file) concrete..
- ✓ Installation of tools to support the operators' corporate and intercorporate network
- ✓ Definition of a standard for the integration of the information systems of the Local Health Units in the Region



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ARCHITECTURE



- ✓ Use of applied cooperation tools (domain port; e-government package) to implement the integration components of the existing applications in order to enhance and extend the applications already adopted by the single organizations
- ✓ Adoption of solutions characterized by their "minimum invasiveness" in the individual domains
- ✓ Definition of messaging standards to activate the interoperability between the systems or rather adopt and implement existing standards



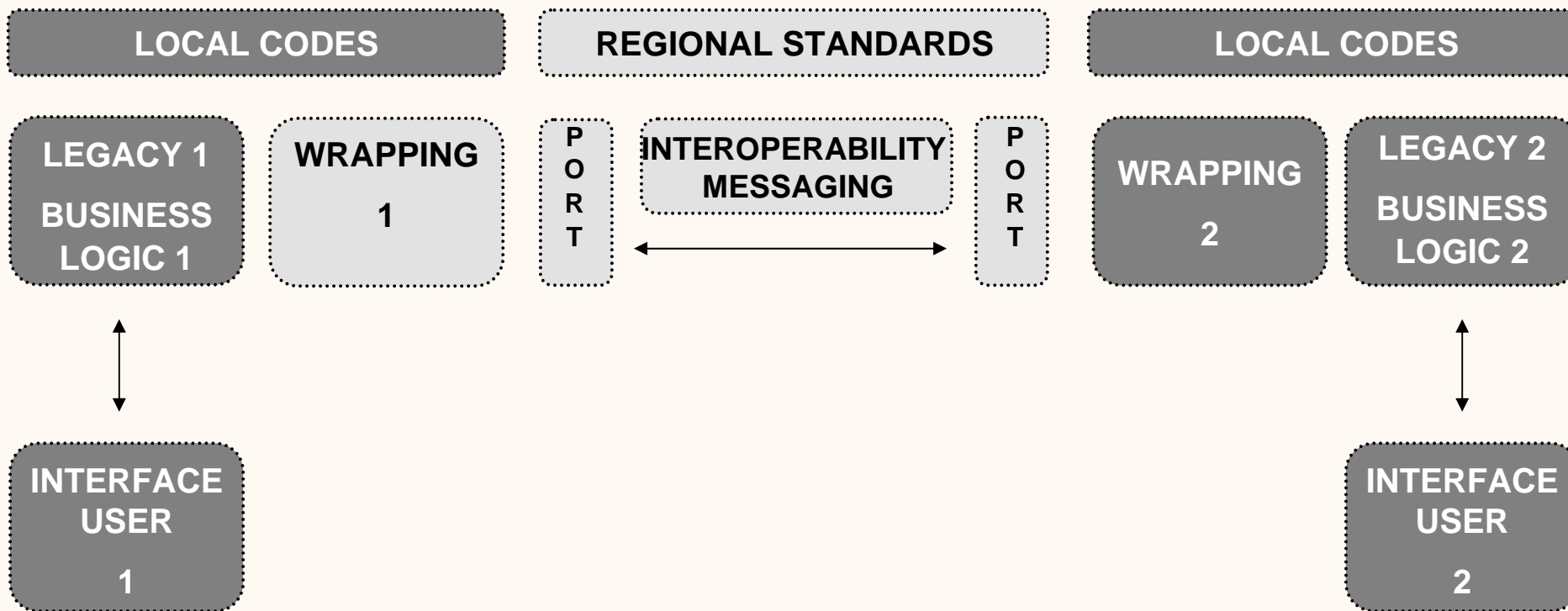
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ARCHITECTURE





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ARCHITECTURE



Introduction of the CNS (as required in the appendixes to the e-government call for tender) as an authentication and signature tool and, therefore, the dual card system (for both the operator and the citizen) in order to make the principle of exclusive ownership by the citizen of his/her own health information effective.



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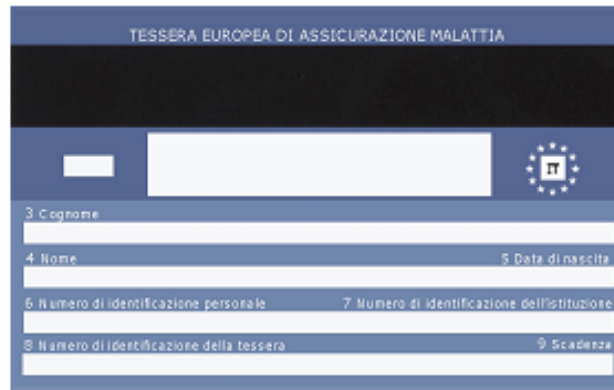
CNS



fronte



retro



Around 120,000 cards have been distributed in Bassano, Dolo-Mirano, Belluno, Pieve di Soligo, Padua, Treviso and Venice.



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APPROACH



- ✓ Implementation of standards available at the international and national level
- ✓ Sharing specifications at inter-regional level
- ✓ Creation of "open source" components that can be freely used by all the parties involved
- ✓ Communication of the results obtained
- ✓ Promoting the "recycling" of solutions developed through their supply to institutions and Companies promoting similar projects



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Sending technical specifications about CUP cooperation to the General Directors

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Delivering software on the domain port to the Health Department



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CNS and TS



With the agreements of the Department of Economy and Finance, the CNS can be used also as TS: the citizens who have the CNS **have not received the TS**.

The CNS lists all the information contained on the TS and can therefore be used for all the purposes set forth by the MEF.



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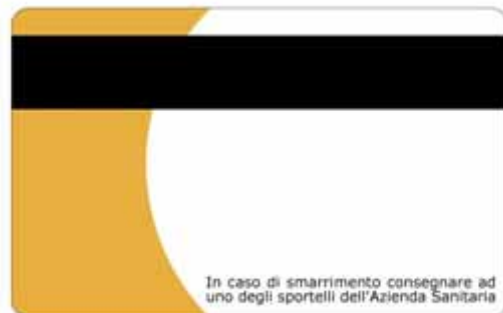
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OPERATOR CARD



The Operator Card (IESS Card) is, for all intents and purposes, the same as the CNS.

The Operator Card has both the signature system for test results, authorizations, etc. and the authentication certificate for access to secure information.

About 200 IESS have been distributed. The cards are used by general practitioners, laboratory doctors, chemists, and operators.



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SERVICES

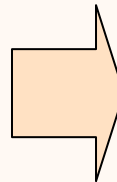


✓ **Booking services, with the ability to view the integrated availability of providers at both Companies:**

✓ Standardized definition of cooperation services for the integration of the existing CUP systems

✓ Real time information on the offer structure (supply) and service access times (availability)

✓ Greater freedom of choice for the citizen: possibility to book all services managed by the computerized agendas of the Health Care Companies involved from any access point, and also to pay the ticket



CUP Interoperability

Bassano ↔ **Dolo/Mirano**

PROVINCIAL CUP

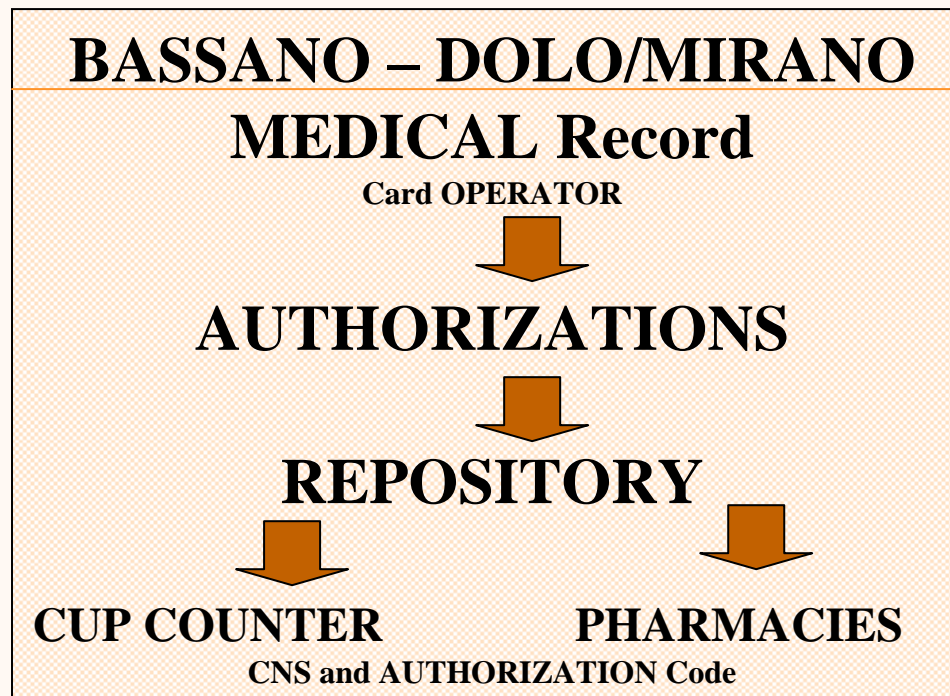
Asolo ↔ **Conegliano**
↙ ↘
Treviso





✓ **Direct transmission**, in electronic format, of **prescriptions** from General Practitioners and Pediatricians to Pharmacies for pharmaceutical prescriptions as well as to **Districts** and **CUP Offices** for service prescriptions

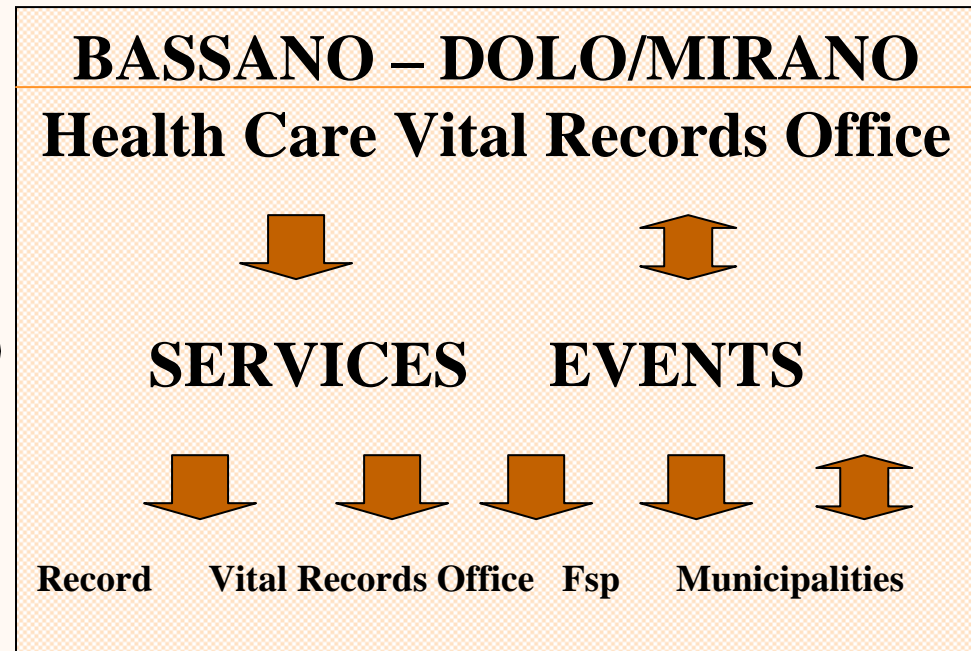
- ✓ Standardized definition of cooperation services for the integration of the General Practitioner medical record services with the management systems used in pharmacies
- ✓ Standardized, structured and digitally signed prescriptions
- ✓ Timely transmission of pharmaceutical prescriptions to pharmacies and medical office prescriptions to booking systems
- ✓ Confidentiality guarantee and protection of health information (dual card system)





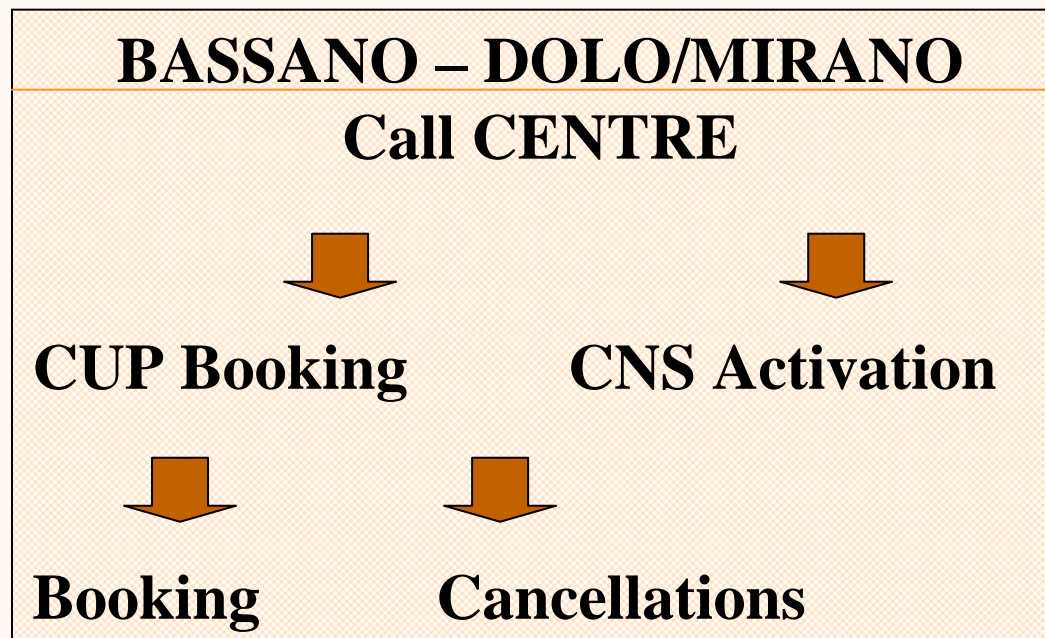
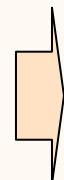
✓ **Shared management of health care vital records** (residency registration, primary physician registration, transfers, cancellations, etc.) by integrating the vital records system at the Health Care Companies and activating cooperation services with the municipal Vital Records Offices and sharing the solutions developed by SIRV INTEROP.

- ✓ Standardized definition of cooperation services for the integration of the existing health care vital records systems
- ✓ Real time notification and cross validation of events causing a vital records change
- ✓ Availability of consistent information about vital records situations on a regional level
- ✓ Providing event management services at a regional level





- ✓ **Call centre** for booking services
 - ✓ Automated system to cancel appointments
 - ✓ Routing system for operators

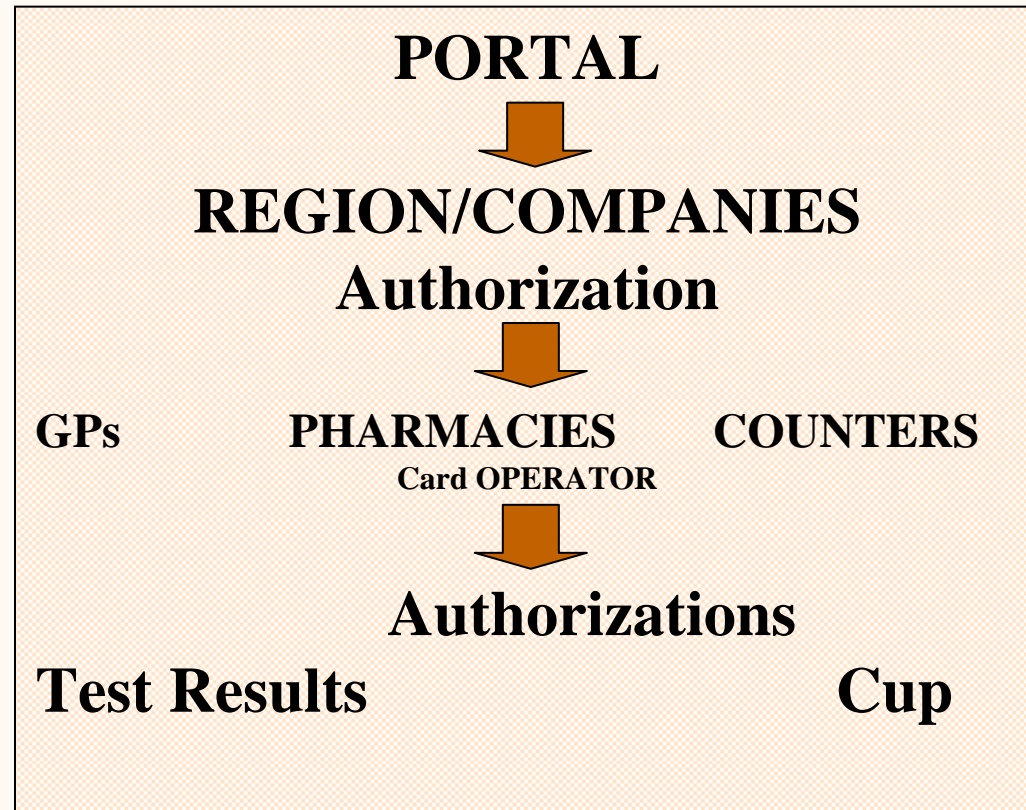




SERVICES



- ✓ **Test results repository** for internal wards
 - ✓ Availability of services to consult standardized, medical information filed in the repository and obtained by departmental systems.
- ✓ **Portal services** for CUP operators, General Practitioners and Pharmacies:
 - ✓ Integrated access to booking systems and the test results repository;
 - ✓ Health care doctor authorization system;
 - ✓ Protected access through the operator card.

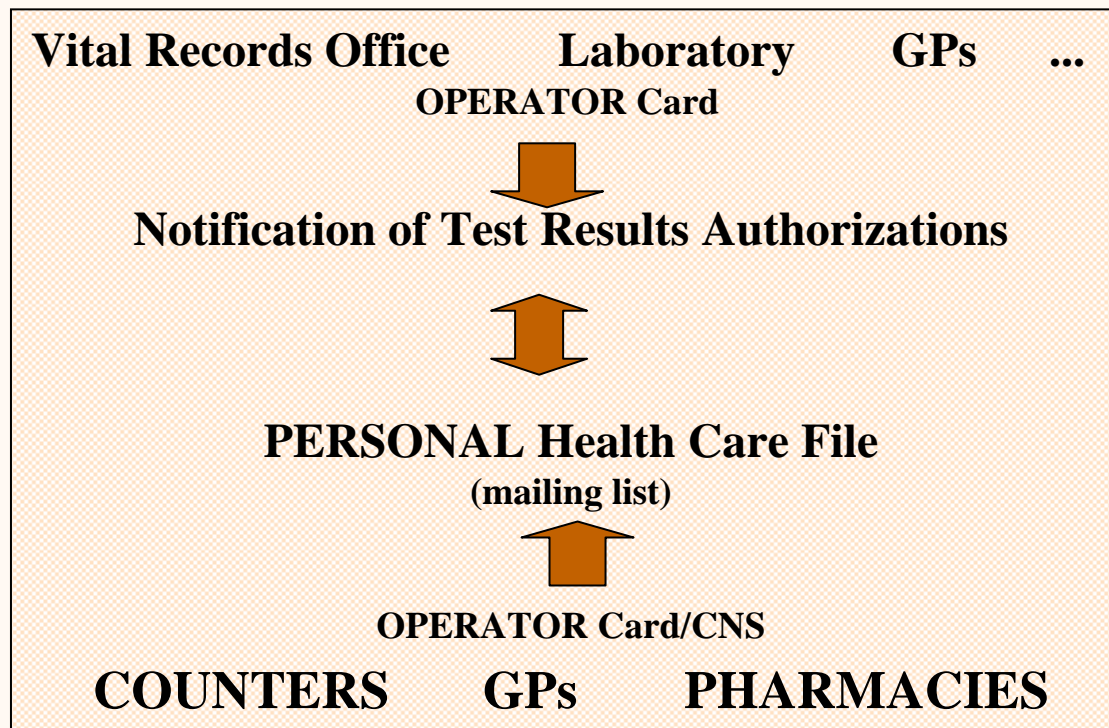
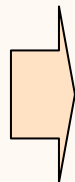




OTHER FUNCTIONS

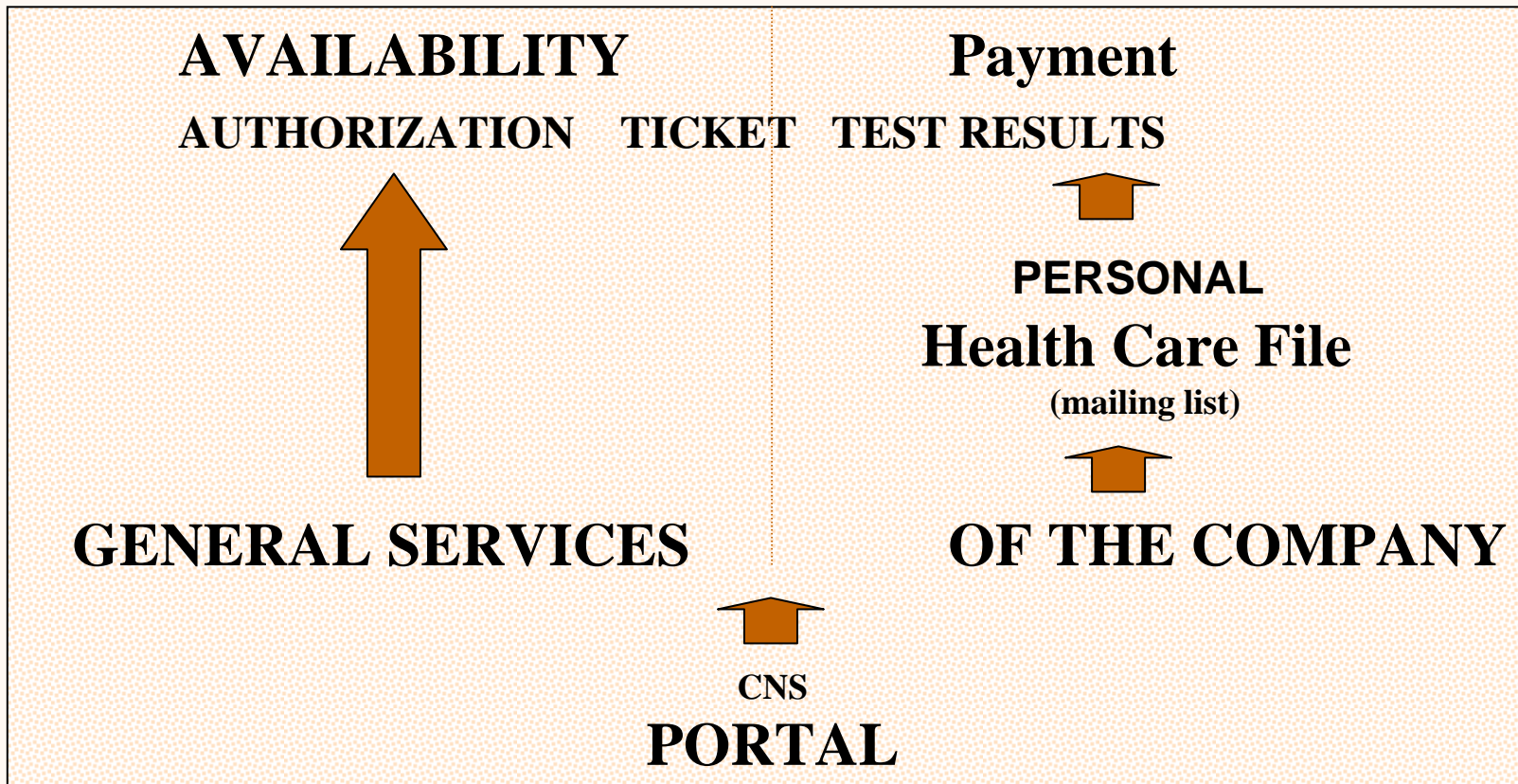


✓ Setting up search and select functions for the citizen's data in the **Electronic Health Record** with access to the distributed databases by using patient-indexes.





SERVICES FOR CITIZENS





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RECYCLING



The Social Health Care Resource Directorate has presented the following solutions from the IESS and TELEMED ESCAPE projects for **the recycling catalogue**:

- *Personal Health Care File*
- *Interoperability of Health Care Vital Records*
- *Interoperability between Health Care Company Information Systems and Medical Record tools for General Practitioners*
- *CUP Interoperability*
- *Health Documentation Repository*
- *Distribution of electronic test results*



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IESS CLINICAL FILE



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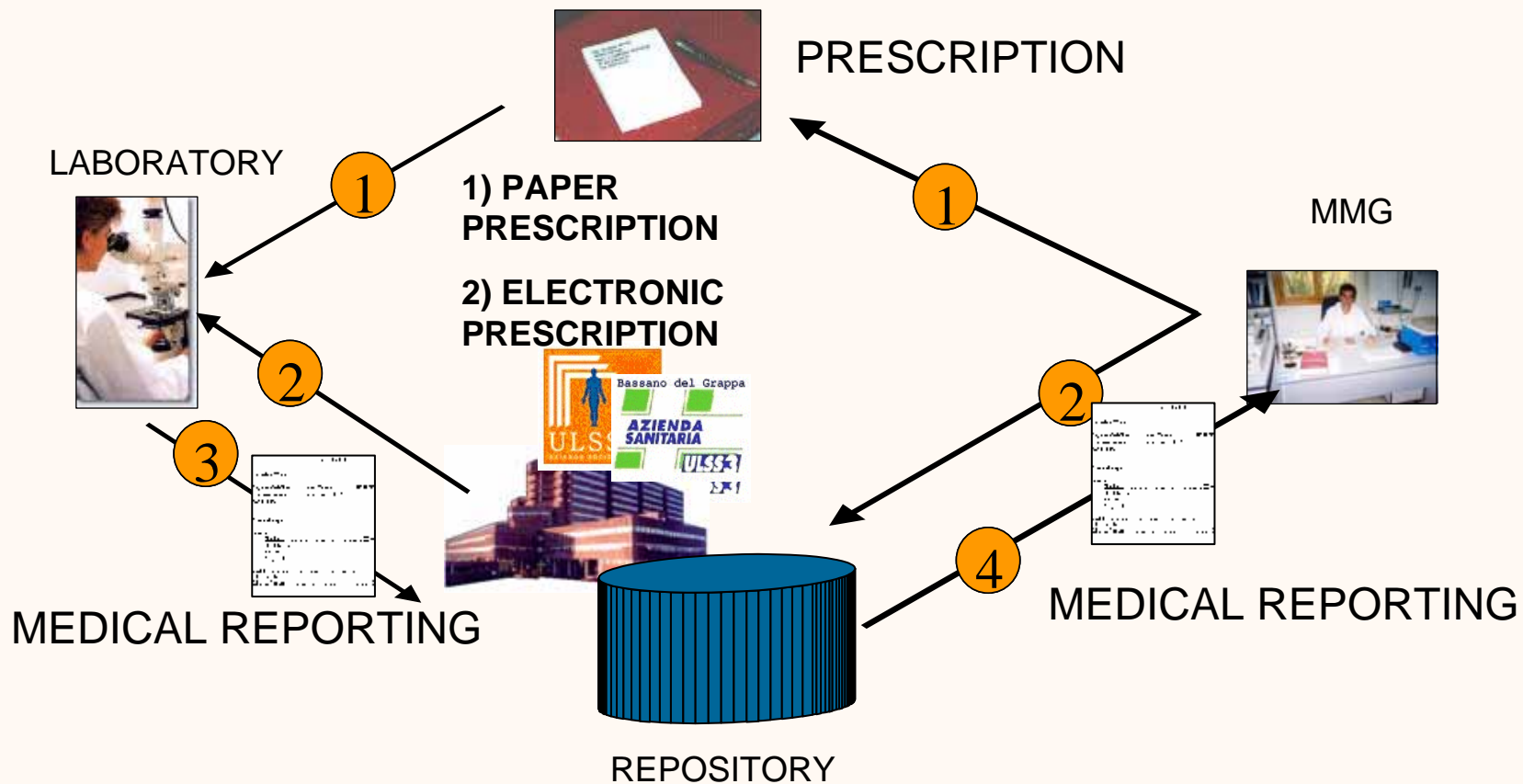




CLINICAL FILE MMG/PLS

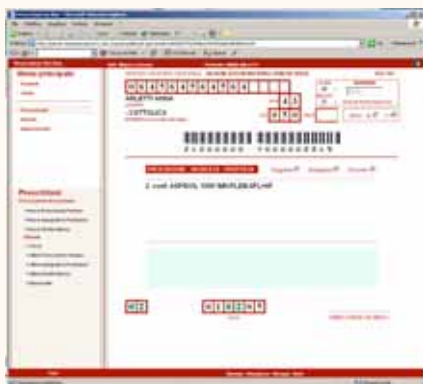
- INPUTING SIGNED PRESCRIPTION
 - QUALIFIED SIGNATURE OF THE MMG/PLS WITH OPERATOR SMART CARD
- MEDICAL REPORT EXTRACTION
- PEOPLE HEALTH REGISTAR
 - PATIENT IDENTIFICATION







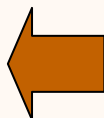
PRESCRIPTION



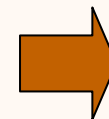
CLINICAL FILE



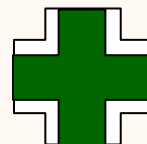
PRESCRIPTION REPOSITORY



UNIFIED BOOKING CENTER



LABORATORIES



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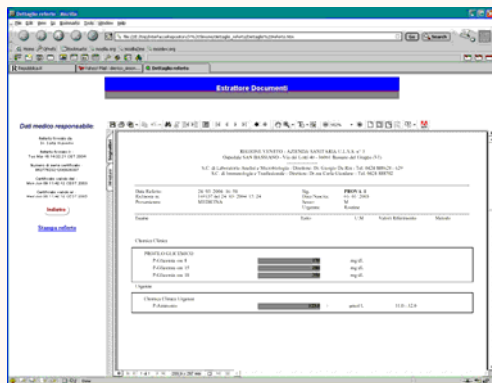
PRESCRIPTIONS

- Client interface for Clinical File to send patient's prescriptions
- Security aspects:
 - Physicians Signature
- From the repository, the reports are available to:
 - Laboratories
 - Chemists
 - Unified booking center





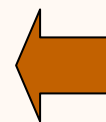
Patient Reports



CLINICAL FILE



REPOSITORY



LABORATORIES





- Client interface for the MMG/PLS medical files for the extraction and visualisation of the patient reports.
- Security managed by:
 - Physician and patient digital signature
 - Physician signature and patient signed authorisation
- Semantic standard XML CDA 2.
- Standard coding based on clinical table LOINC.





MilleWin - IESS

INTERROGAZIONI SU ASSISTITO CORRENTE

Assistito Codice Fiscale : LLLMMM60S23F456X
 Cognome : Rossi
 Nome : Mario

Medico prescrittore Codice Fiscale : ABCDEF43H23A124R

Identificazione
 Identifi

Recupero documenti
 Imposta data ricerca (gg/mm/aaaa)
 Referti Prescrizioni

Documenti recuperati
 d

Per estrarre un documento, fai doppio click sull'id

INTERROGAZIONI SU INTERO ARCHIVIO ASSISTITI

Notifiche Recupera automaticamente le notifiche all'avvio di Millewin

Referti Recupera automaticamente i referti all'avvio di Millewin

Anagrafiche...

Chiudi

MilleWin

INSERIMENTO PIN

Inserire SmartCard e digitare PIN

Medico PIN : 12345

Ok Cancel





MilleWin - IESS

INTERROGAZIONI SU ASSISTITO CORRENTE

Assistito	Codice Fiscale : LLLMMM60S23F456X	Medico prescrittore	Codice Fiscale : ABCDEF43H23A124R
	Cognome : Rossi		
	Nome : Mario		

Identificazione e Referti recuperati

Identifica

Recupero documenti

Imposta data ricerca (gg/mm/aaaa)

Referti

to, fai doppio click sull'id

INTERROGAZIONI SU INTERO ARCHIVIO ASSISTITI

Notifiche Recupera automaticamente le notifiche all'avvio di Millewin

Referti Recupera automaticamente i referti all'avvio di Millewin

Anagrafiche...

Chiudi

MilleWin

INSERIMENTO PIN

Inserire SmartCard e digitare PIN

Assistito

PIN : 54321

Ok Cancel





MilleWin - IESS

INTERROGAZIONI SU ASSISTITO CORRENTE

Assistito

Codice Fiscale : LLLMMM60S23F456X

Cognome : Rossi

Nome : Mario

Medico prescrittore

Codice Fiscale : ABCDEF43H23A124R

Identificazione assistito

Identifica

Elenco documenti recuperati

Data	Assistito	Tipologia	Id
12/10/2004	Rossi	PKCS7_HL7CDA1	115543
12/10/2004	Rossi	PKCS7_HL7CDA1	115780
03/12/2004	Rossi	PKCS7_HL7CDA1	115822
21/01/2005	Rossi	PKCS7_HL7CDA1	116044
24/01/2005	Rossi	PKCS7_HL7CDA1	116086

Per estrarre un documento, fai doppio click sull'id

Recupero documenti assistito

Imposta data ricerca (gg/mm/aaaa)

Referti
Prescrizioni

INTERROGAZIONI SU INTERO ARCHIVIO ASSISTITI

Notifiche

Recupera automaticamente le notifiche all'avvio di Millewin

Referti

Recupera automaticamente i referti all'avvio di Millewin

Anagrafiche...

Chiudi





Acquisizione referti

Paziente		Ritorno			Stato
nome nascita	data ricezione	richiesta eseguita il	risultato	referto	
ACCORSI IDA 01/05/41		B-Emocoltura -->			inserimento COLTURA SANGUE <EMOCOLTURA>
ACCORSI IDA 01/05/41		P-Ammonio -->			inserimento AMMONIEMIA
ACCORSI IDA 01/05/41		P-Fibrinogeno -->			inserimento FIBRINOGENO

Individua Acquisisci tutti i risultati individuati Acquisisci risultato Elimina Chiudi





PEOPLE HEALTH REGISTRAR



CLINICAL FILES



PEOPLE HEALTH REGISTRAR





- Client interface for the MMG/PLS medical files for the access to people health registrar.
- Security managed by :
 - Authentication with smart card
- Patient data registrar
- Patient variation





Millewin - IESS

RECUPERO ANAGRAFICA

Medico prescrittore

Codice Fiscale: MLRNNA54R58H294T

MEDICO TITOLARE: ANNA MOLARI
(codice regionale: 15000 - codice fiscale: MLRNNA54R58H294T)

ANAGRAFICA RECUPERATA DA IESS

DATI ANAGRAFICI ASSISTITO	
Cognome:	ACCORSI
Nome:	IDA
Sesso:	F
Data di nascita:	1941-05-01
Comune di nascita:	MERCATINO CONCA
Telefono:	
Codice fiscale:	CCRDIA47H64F257N
Codice sanitario:	9924778
Privacy - data consenso:	20040101
Privacy - data revoca:	

RESIDENZA	DOMICILIO
Indirizzo:	Indirizzo: VIA DEL GATTO 15
Cap: 47036	Cap: 47036
Comune: RICCIONE	Comune: RICCIONE
Provincia: RN	Provincia: RN

ASL DI APPARTENENZA	ASL DI ASSISTENZA
Codice asl: 113	Codice asl: 113
Provincia:	Provincia:

Assistito

Codice Fiscale:

Cognome:

Nome:

Data nascita:

(aaaaammgg)

Acquisizione anagrafica

