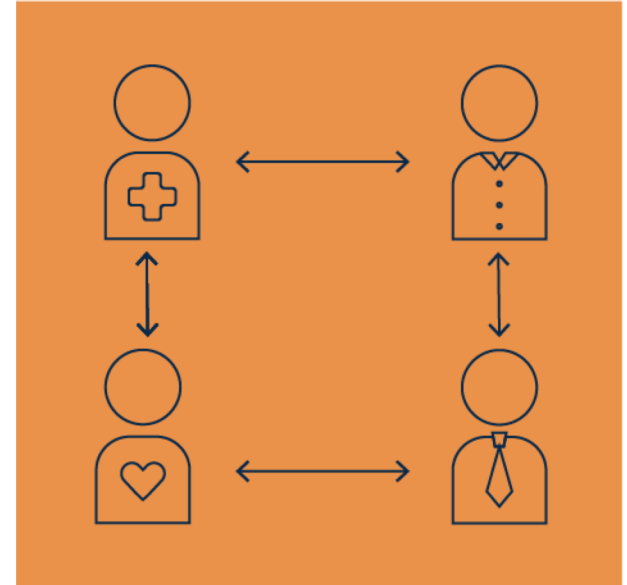


Medical Pass

Mission

The mission of the Medical Pass is to act as a medium between Patients, Doctors, Institutions and Authorities helping store important information, tracking and analyzing medical data, and accessing necessary documents.

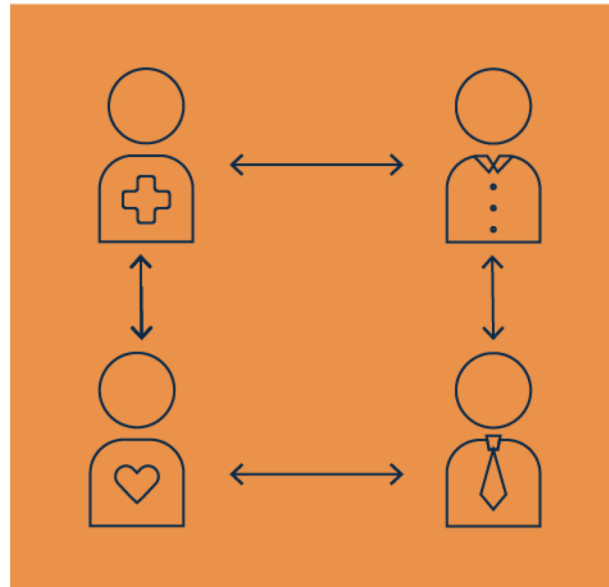
Medical Pass also allows authorized Institutions to have instant secure access to critical medical data, vaccines and Patient's test history.



What makes MP different

Medical Pass is PATIENT CENTRIC.

The vast majority of systems available are Hospital or Government centric, where Patient data stored is provided only on need-to basis. This works well when Patient is using medical services within one system, however in today's global environment Patients do need their data available whenever and wherever needed



Roles in Application



Patient



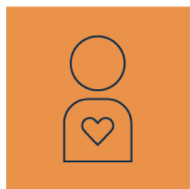
Institution Doctor



Institution Manager



Authorities

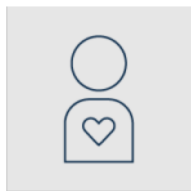


Patient Benefits

PATIENT IS THE KING



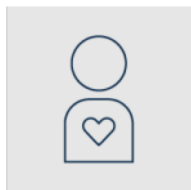
- Patient has FULL control of ALL the DATA in MP with full compliance of GDPR rules – he/she can give or take access, delete data, forward data, make it public, and with forget function
- Patient has full history of all the medical information, regardless of institution, country or language it is created in
- Patient has a full control on who has access to which information in MP and can use it in any desired way
- Patient can use all the TeleMedicine services with guaranteed supplier verification, transaction history and payment upon delivered results and services



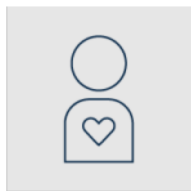
Institution Benefits

- NO need for repetitive data entry – all information is in MP
- NO redundancy of new analysis – blood group, allergies, medications – all information is in MP
- NO high costs of Patient Relationship Management – no printing, no CD with scans, no posting signed letters, etc. since all the information in Blockchain Secured MP app
- NO translation, migration and reformatting of data – all the previous medical history available in local databases or in another language accessible in required format
- NO restrictions on sharing data as Patient OWNS the information and can do with it whatever needed

Benefits for Authorities

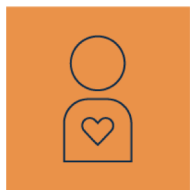


- Authorities have access to verified medical information where through Blockchain it is visible which Institution gave what results at which date and the validity date – example would be Border Control checking the COVID-19 PCR Test
- Authorities have a full history of all the medical information that Patient allows them to see, making the processes such as Health Insurance claims much easier to process without re-entry of existing data
- Authorities can decide on whether to allow or not a Patient to do certain things automatically through the history of limiting factors such as allergies, medical conditions or medicines taken without spending time and money on entry and storage of repetitive information



Benefits for Doctors

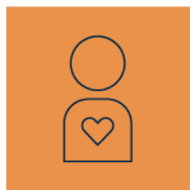
- Doctors have one place where they can see the full information about Patient even if they see them for the first time, regardless of origin or language of the documents
- Doctors can use MP as a complementary system to their existing Hospital or Government IT systems, with an easy import / export functions via API / email / web access
- Doctors have an easy task of searching and preparing documents for Patient visit and analysis of the data, and have an ability to provide Patient with all the necessary documents and information even for visits outside their Institution or country



How it all fits together



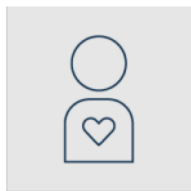
- Medical Pass User (Patient) owns the documents, scans and information, which is stored in Personal Medical Record (PMR)
- Patient has access to PMR through web or mobile app
- Institutions have registered Doctors which send the medical information of a Patient to the PMR and can access it through web and mobile app
- Patient controls who has access to which information from PMR and can share it with Doctors/Institutions or send it externally for analysis and / or processing, or delete it from the records
- Patient also defines which information is accessible through Bracelet Login – a user defined quick access to critical information in case of an emergency



Patient Verification



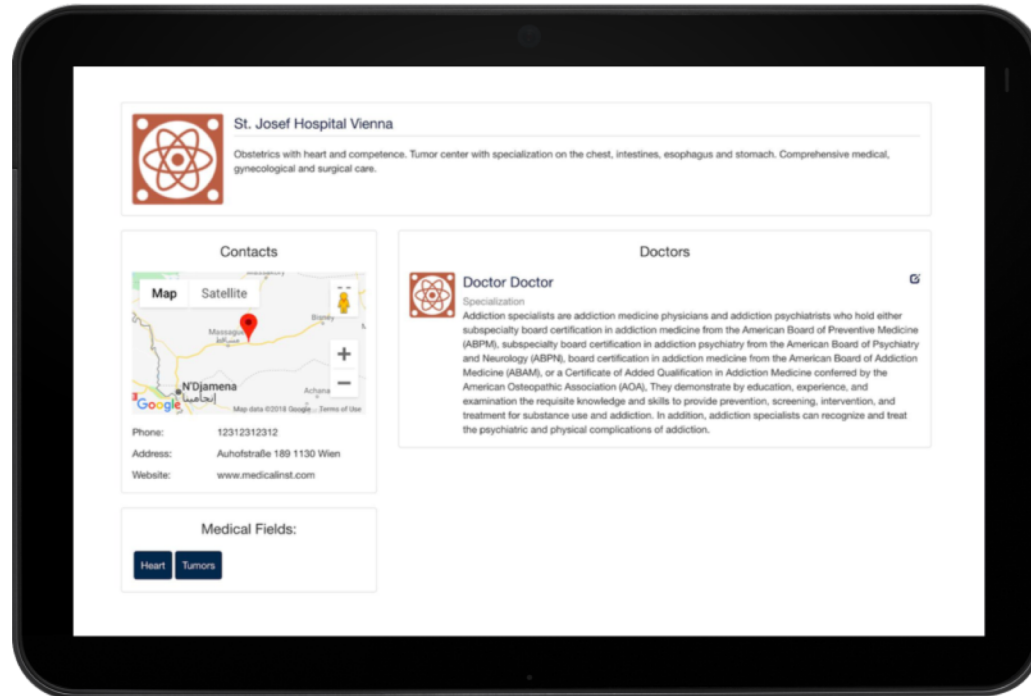
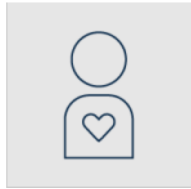
- Patients must verify their profile in any of the registered Institutions
- NON-verified Patient cannot share documents with Doctors and Institutions
- Patient must have all information (address, phone and passport scans) required in order to be approved
- Approval is done by Institution Manager

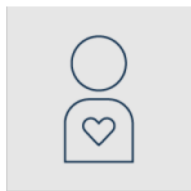


Institution

- Institutions include Managers and Doctors, whose information is publicly available
- Institutions must be verified by Medical Pass in order to be able to use the Medical Pass application
- Verified Institution Managers verify Patients
- Institution Managers control Doctors, Patient visits and information flow

Institutions

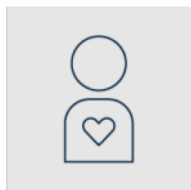




Institution Manager Use Cases



- Manage Institution
- Manage Doctors
- Create Patients
- Search for Patients
- Verify Patients
- Manage what information Doctor can see



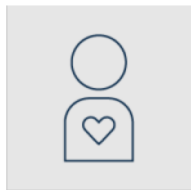
Authorities

Authorities include both government bodies (such as state hospitals, migration services and border control, State Health Insurance Companies) as well as large private organizations (such as Airlines).

Government of each country determines what organizations are able to operate as regulatory bodies.

Authorities

- verify validity period and authenticity of documents/tests in one case
- certify these documents on their own for other regulatory bodies



Doctor Use Cases

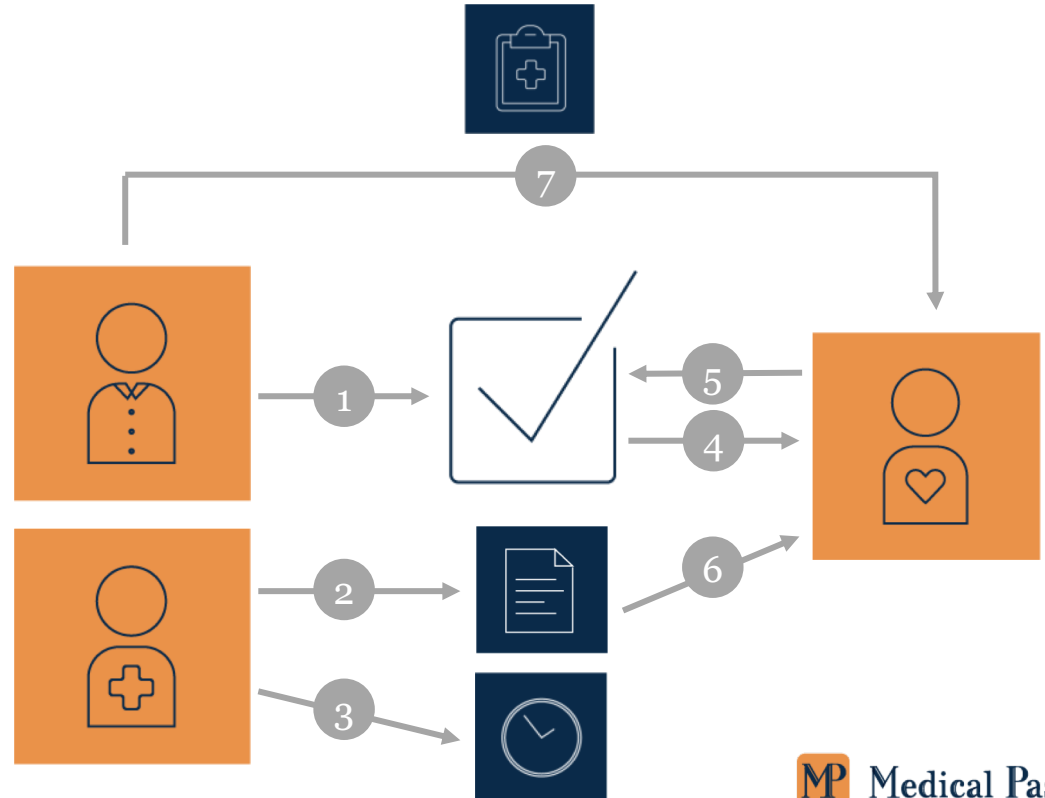


- Create Institution visit
- Search for available Patient documents and information
- Compile various documents for the Institution visit
- Communicate with Patient through internal secure MP messenger
- Assign document ICD10* classification and category if missing

* ICD-10 is the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD)

Process of Institution Visit

- 1 Institution creates Patient visit
- 2 Doctor adds documents
- 3 Doctor sets time and duration of the visit
- 4 Doctor sends Institution visit for approval
- 5 Patient can approve or deny the request
- 6 Patient can add the documents to his/her repository
- 7 Patient will receive a Medical Report at the end of the visit





Medical Report

Medical Report includes:

- Conclusions
- Recommendations
- Referrals
- Prescriptions
- Lab Results



Lab Result Analysis

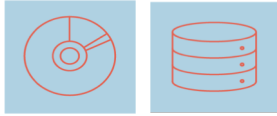
There are 3 types of Lab Results:

1. Electronic Document
2. Lab Results Picture / Scan that is then converted into Electronic Document that Doctor or/and Patient must review and verify the content
3. Certified Lab Results using Blockchain Technology *

* Use of Blockchain Technology is explained in more detail in later slides



Lab Result Analysis Input



CD & Server

API



Mail/Viber/WhatsApp

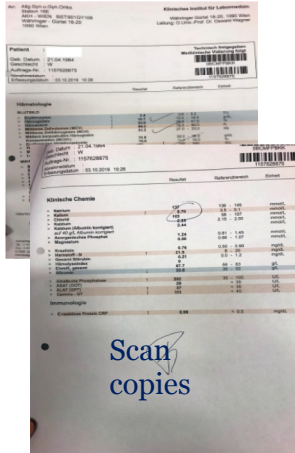
John@medicalpass.com



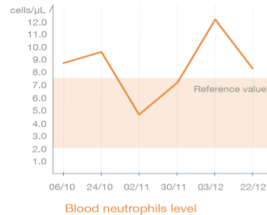
AI



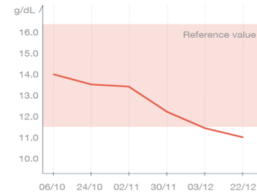
Lab	Reference						
WCC	4-11 x 10 ⁹ /L	11.5	13.9	8.0	9.5	14.4	10.2
Neut	2-7.5 cells/ μ L	8.7	9.6	4.7	7.1	12.1	8.3
Hb	11.5-16.5 g/dL	14.0	13.5	13.4	12.2	11.6	11.0
Plt	140-450x10 ⁹ /L	454	331	308	633	531	469
ESR	1-30	75	70	2	75	95	73
Urea	2.5-7.5 mmol/L	2.9	3.8	3.4	2.5	3.1	3.5
CRP	<5	76	69	<1	94	232	89
ASOT		600	1400		1000		1200
Date:		06/10	24/10	02/11	30/11	03/12	22/12



OCR



Blood neutrophils level



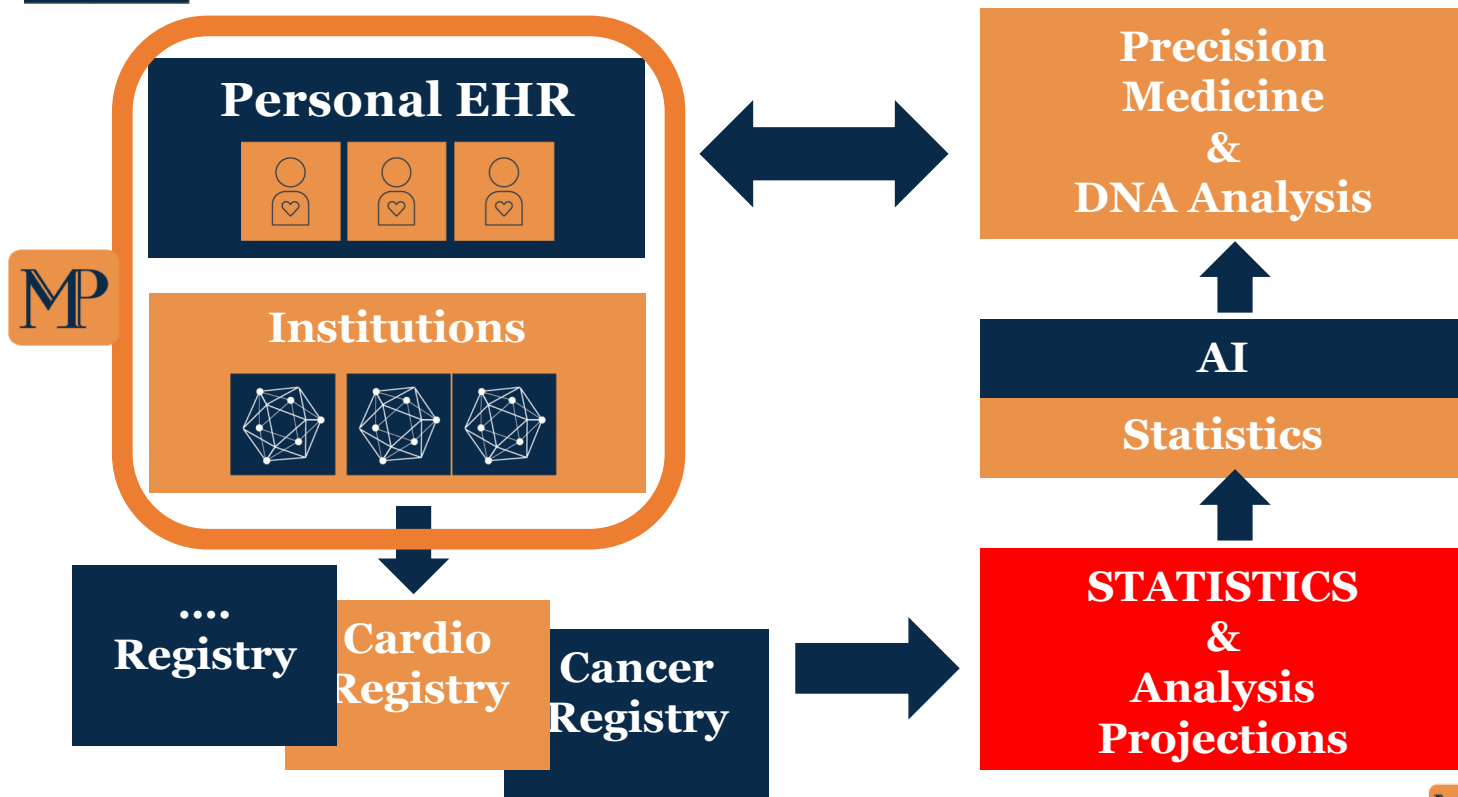
Blood hemoglobin level

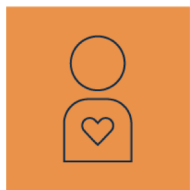
Knowledge base
&
AI analysis





Precision Medicine Use





Patient Medical Pass App



- Manage documents
- Search documents
- Manage issues
- Search Institutions and Doctors
- Give permissions and share other documents with Institutions / Doctors and for external use
- Edit all document parameters including classifications and issues
- Manage all incoming documents via email including validation



Document Overview

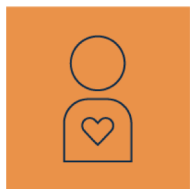
- Preview
- Details
- Doctor/
Institution
- Related
documents
- Issues
- Permissions





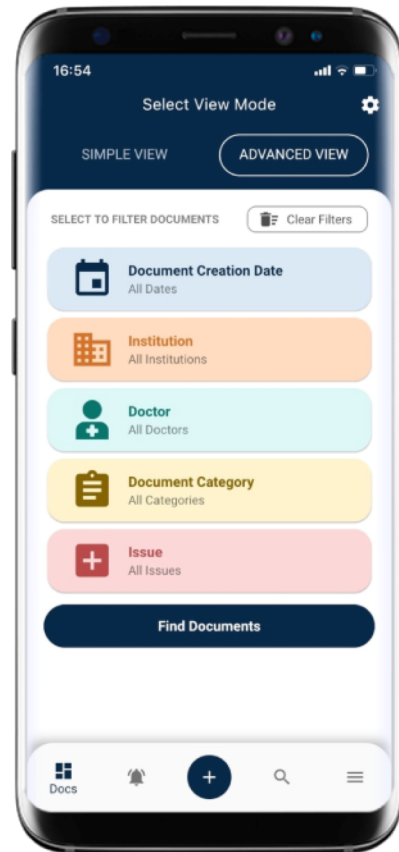
Notifications

- Institution visit request
- Institution visit cancellation
- Institution visit confirmation with required documents attached
- Notifications of access rights granted / revoked for a document / issue / Patient
- Expiry of vaccine / test
- Optional medication alerts



Patient Issues

- Manage issues (i.e. knee pain)
- Add/remove documents from issues
- Share whole issue to the Doctor/Institution/external email
- Search documents





Permissions

Patient can assign read-only permissions to

- Document
- Issue
- Whole Profile

Patient can give read-only permissions to

- Doctor
- Institution Manager
- External User

Patient can give write permissions to Institution / Doctor in order to add documents, manage issues and permissions



Sharing

Doctor sharing

- Doctor can only see the documents that are shared with him/her
- Doctor can see the notification for every new permission given by the Patient
- Doctor can assign ICD10 value to any document if not defined

Institution sharing

- Patient can share information with the whole Institution or just certain Doctors in the Institution

External sharing

- Patient can share information to an external email
- Patient can protect the document with a password when sharing
- External users can view the document(s) via web access



Email Documents

- Patient has a personal Medical Pass Application email where files can be sent directly into the system for review
- Patient can preview the emailed content
- Patient can approve or deny the emailed content
- Approved content documents are added to the repository



Bracelet Medical Record (BMR)

- BMR can be accessed only using an access number (card number, QR code, bar code) and a PIN
- BMR is used for sharing critical information with Authorities, Institutions and in case of emergency
- Patient can create several Bracelets and several BMR
- Patient defines what information is in each BMR from several categories of the Patient Medical Record



Patient Data



Allergies



Medications



Diseases

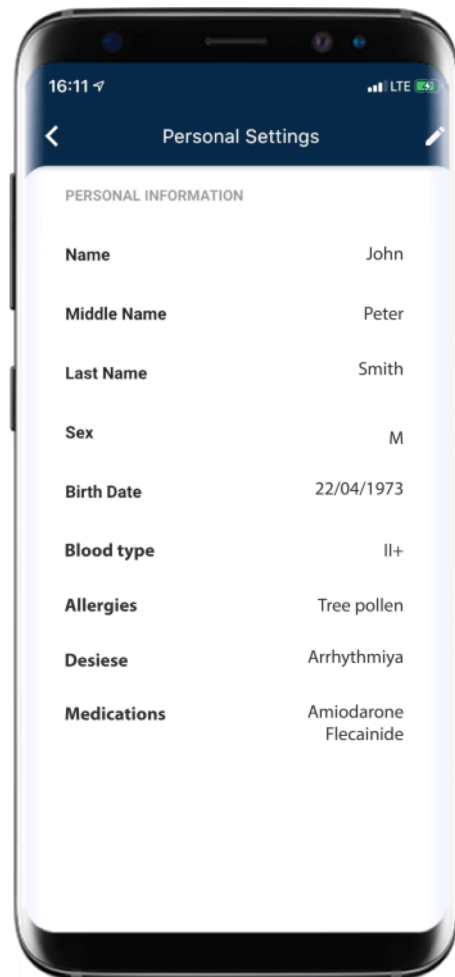


Lab Results



Medical Pass

Bracelet





Blockchain

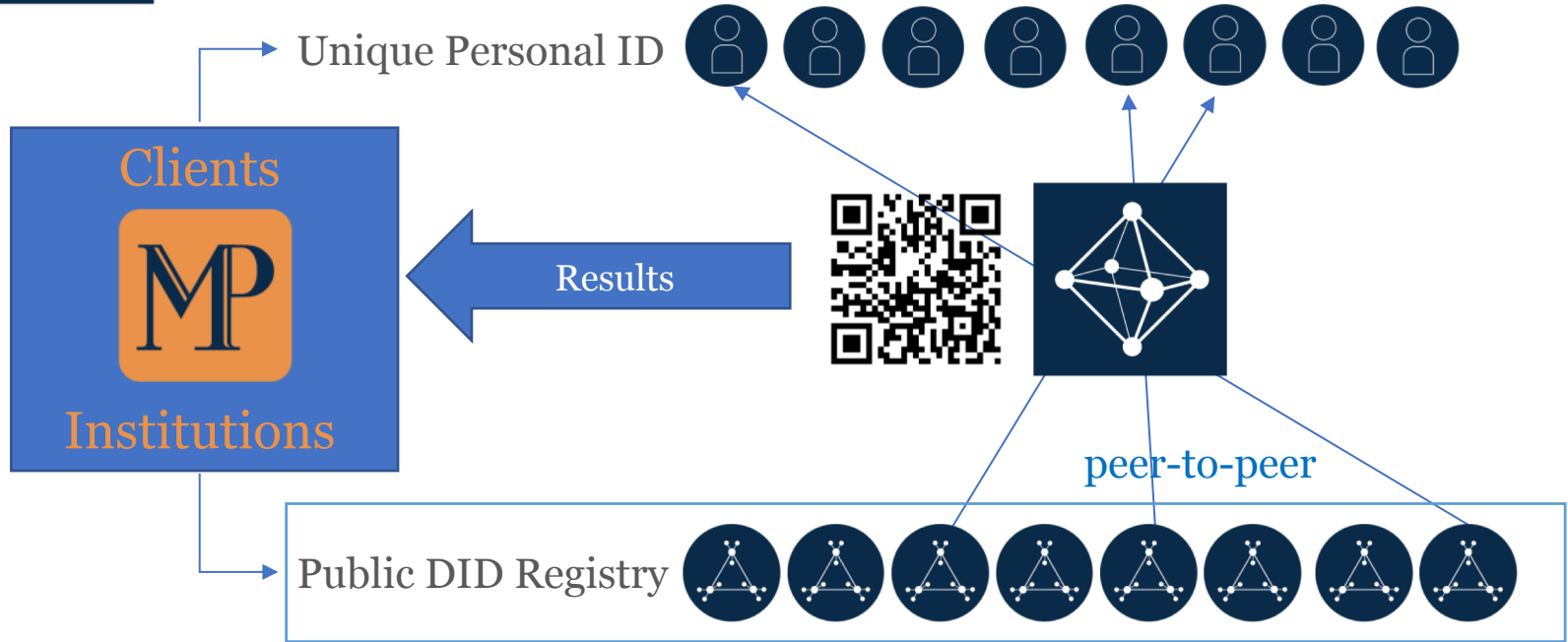
Certain medical documents contain important information that is used for legal purposes. These include Lab Results for certain viruses (HIV, hepatitis, COVID-19), confirmation for vaccines (Malaria, Ebola) and reports on diseases (heart diseases, diabetes, etc.).

This legally important medical information should be uploaded to the system by medical Institutions with the Blockchain verification for Authorities to know the source of information and be sure the results were not tampered with.

Blockchain verified data will be displayed in a special section of the MP app or Mobile Wallet apps, with an option of quick view for checking out by Authorities through a QR code.



Blockchain

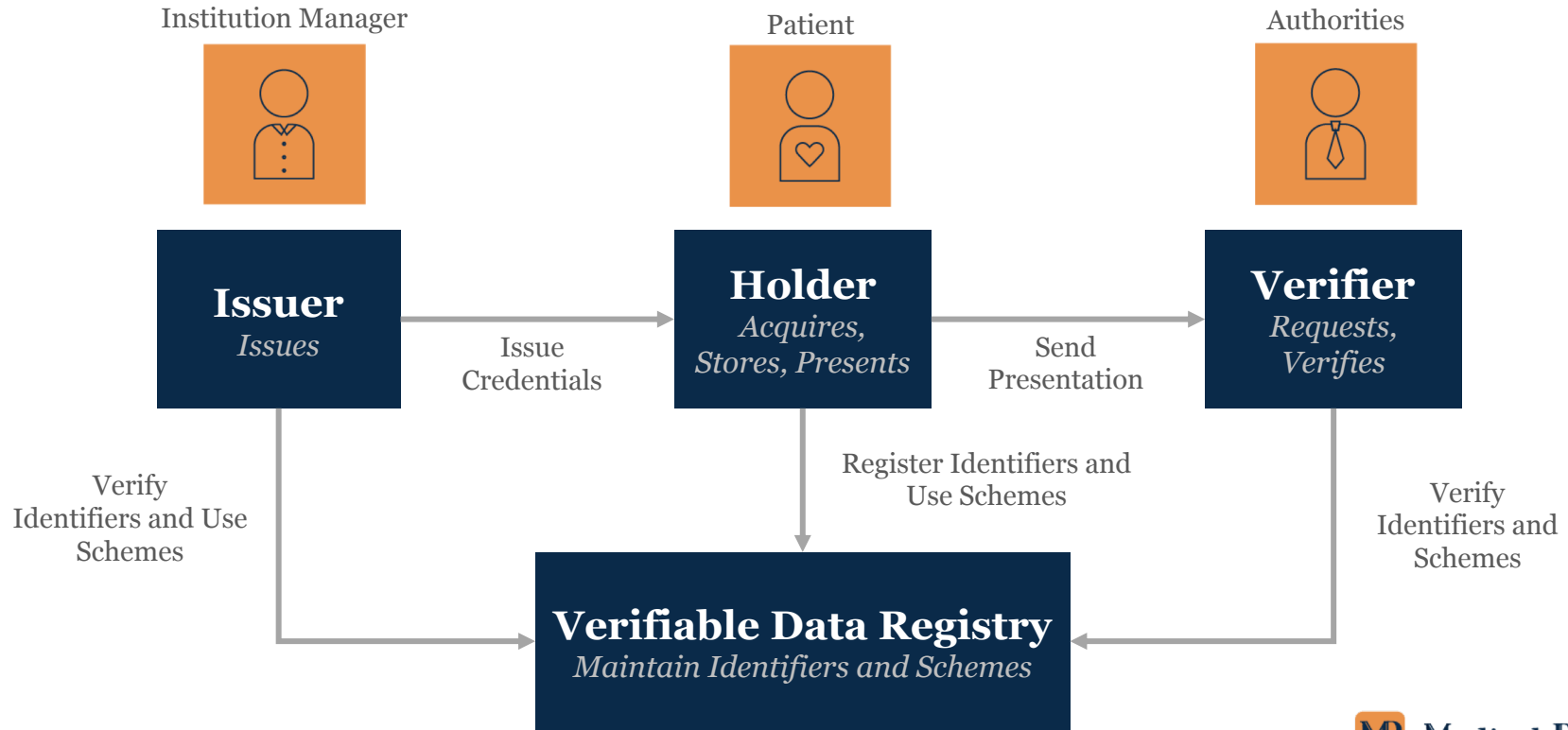


Blockchain Credential Roles

Given the roles and responsibilities outlined in the Blockchain Credentials specification, MP User story can be described using the following concept:

Role	Description	Examples
<i>Holder</i>	An entity that is in control of one or more verifiable credentials	Holder can be a person, or a connected device. MP User is a Holder
<i>Issuer</i>	An entity that creates a verifiable credential, associates it with a particular subject, and transmits it to a Holder	Issuers include governments, medical Institutions, Doctors. Private Insurance, AKH, WGKK and Vienna Airport Health Centre are Issuers
<i>Inspector-Verifier</i>	An entity that receives one or more verifiable credentials (specified by a proof request) for processing	Verifiers include Border Control, Airlines and Hospitals. Austrian Airlines, Austrian Passport Control and AKH are Inspector Verifiers
<i>Identifier Registry</i>	Mediates the creation and verification of subject identifiers	Identifier registries include Government and Private Health Insurers, and distributed ledgers, which can consists of many registers and nodes

Blockchain Credential Roles



Architecture

The Medical Pass Test and Vaccines Book

Issuer Workflow

Stakeholder
Registry

**Medical Pass
Registered User SSI
App
Holder**

MP Agent



**MedicalPass app that
issues the Verifiable
Medical Pass User ID**

Issuer

MP Agent



**Testing Laboratory
(Vienna Airport
Health Center)**

Issuer/Verifier

MP Agent



**Large Hospital
(AKH)**

Issuer/Verifier

MP Agent



**Airline Company
(needs a test/vaccine
to create a boarding
pass)**

Issuer/Verifier

MP Agent



- 1 Issue a Medical Pass ID
- 2 Check a Medical Pass ID and send a verified Corona Test
- 3 Check if there is a 72 hours valid test and provide Malaria vaccine for travel to Africa
- 4 Airline checks if there is a valid Corona test and valid Malaria vaccine before issuing a boarding pass

ORACLE CLOUD / EXODATA Network

Identifier Registry



Product Road Map

Product Development Steps	Status
1. Central Server Application	Done
2. Basic Mobile User Application	Done
3. OCR Server Application	Testing
4. Mobile Image Capturing Application	In Progress
5. Patient Data Analysis Tools	In Progress
6. Blockchain for Medical e-Services including verified results	In Progress
7. Doctor Mobile User Application	Start 10/20
8. Machine Learning Text Analysis	Start 11/20
9. Voluntary Anonymous Data Dump for Commercial Analysis	Start 12/20
10. Big Data Analysis Tools	Start 01/21

START OF SALES



Powered by



- ORACLE CLOUD allows Patients and Institutions to access necessary data worldwide
- EXADATA CC allows medical data to be stored locally in countries as to comply with statutory requirements
- ORACLE CLOUD offers the benefit of Big Data analysis and Blockchain for TeleMedicine and verifications



Developed by  **VDEL**

- VDEL is a Services Distribution Company based out of Vienna, Austria that is operating in 30 countries of Central, Eastern Europe and Russia (CER) since 1993
- VDEL has 7 regional offices and 3 development centers
- VDEL has been a Strategic Independent Software Vendor Partner (ISV) with ORACLE since 2008 and has provided complex solutions to global companies and Government Institutions in the CER territory
- VDEL has been chosen by ORACLE as one of the strategic ISV's for ORACLE Cloud

A stethoscope is placed on a medical chart. The chart has a table with columns for 'Date/Time' and 'Vital Signs'. The 'Date/Time' column contains the following entries: 13:30, 13:45, 14:00, and 14:15. The 'Vital Signs' column is empty. The chart also has a section for 'AZIVANJE TERMINA' and 'II SMJERNA'. The text 'Thank you! Questions?' is overlaid on the chart.

Thank you!
Questions?