



ITTM

Information Technology
for Translational Medicine

Communication and Data Platforms for Translational & Digital Health: *Making Data Actionable*

Secure and scalable health data as a service platforms for citizens *and patients*
Pharma, Healthcare and Health IT Industry

IMI Impact on SMEs - March 29th 2022

ITTM (IT for Translational Medicine) S.A.

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LU  **EMBOURG**

LET'S MAKE IT HAPPEN

Disclaimer

Dr. Andreas Kremer

Co Founder and Managing Director of ITTM S.A.

Member of the Board of Directors of i2b2 tranSMART

Member of the ELIXIR Industry Advisory Committee

Member of the German Society for Medical Informatics, Biometry and Epidemiology

Expert for ISO TC 276 “Biotechnology”;
 ISO/IEC JTC 1/SC 42 “Artificial Intelligence”;
 ISO TC 215 “Health Informatics”

Reviewer and Expert for the European Commission (incl. ethics), EOSC-Life, and others

Overall, more than 20 years of experience in various positions with increasing responsibilities in Pharma and Clinical Research as well as Diagnostics.

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Data Management/Curation

(Pharma, pre-clin. & clin. studies)

IMI: TransBioLine, BioMap, ImSAVAR, ImmUniverse, T2EVOLVE, OPTIMA
B2B: Pharma, Biotech, Registries, Hospitals, ...



Digital Health Services

H2020: Smart4Health, ICU4COVID
B2B: MVP Com4Care, ParkinsonNet-LU

Data Management /Curation Services

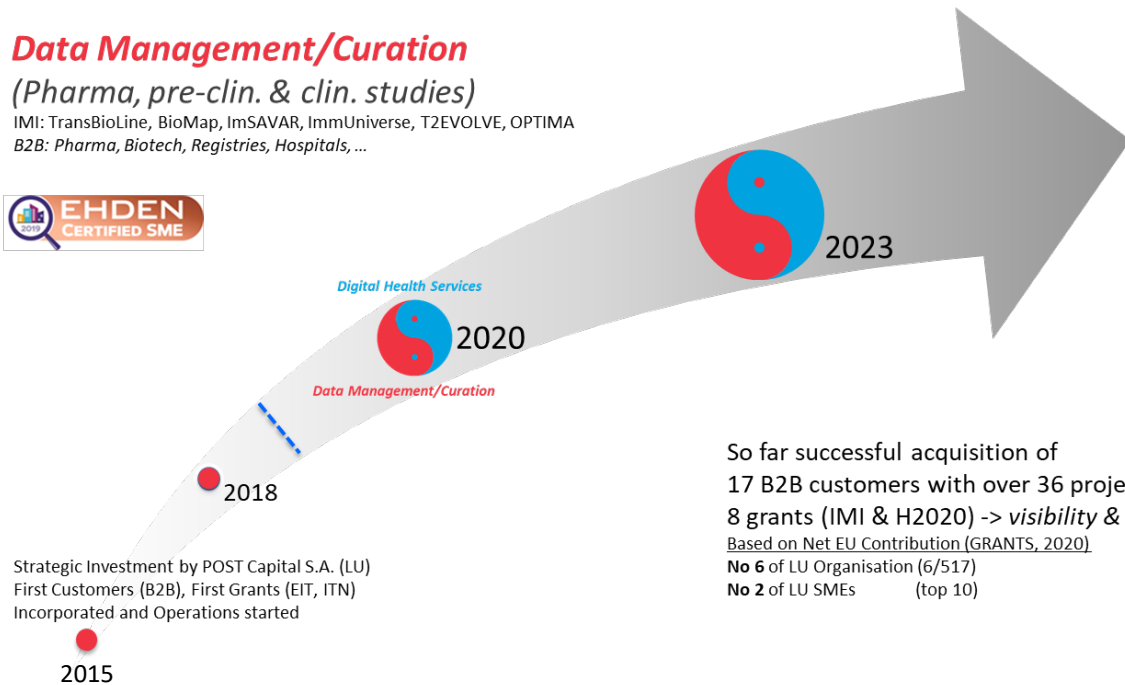
Central & Federated Data Management

- tranSMART
- OHSDI, OMOP-CDM
- Software installation, maintenance, training
- Data mapping, Quality Control, Curation
- ETL design / implementation

Digital Health Services

Central & Federated Data Management

- Real World Data / Real World Evidence
- Federated (secure) analysis of data
- Patient engagement (PROMs, PREMs)



So far successful acquisition of
17 B2B customers with over 36 projects
8 grants (IMI & H2020) -> visibility & reputation
Based on Net EU Contribution (GRANTS, 2020)
No 6 of LU Organisation (6/517)
No 2 of LU SMEs (top 10)

Communication and Data Platforms for Translational & Digital Health

Secure and scalable health data as a service platforms for citizens and patients

IMI Impact on SMEs...

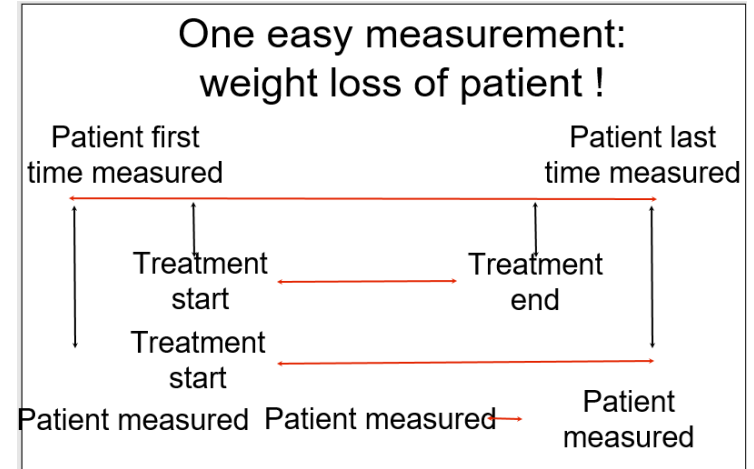
IMI eTRIKS (2012-2018)

Data Curation Challenges – still actual

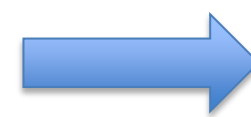
Measurement	Lab 1	unit	Lab 2	unit	Lab 3	unit	STATUS	comment
Adiponectin	⊕		⊕	µg/mL	⊕	mg/L	?	
ALAT (alaninaminotferase)	⊕		⊕		⊕	ukat/L	OK	
Albumin	⊕		⊕	%	⊕	g/L	OK	is it really %?
Apolipoprotein A1	⊕		⊕	mg/dL	⊕	g/L	OK	
Apolipoprotein B	⊕		⊕	mg/dL	⊕	g/L	OK	
Apolipoprotein B/ApoA1 ratio	⊕		⊕	-	⊕	-	OK	was calculated for S and L
ASAT (aspartateaminotferase)	⊕		⊕		⊕	ukat/L	OK	
Cholesterol total	⊕		⊕	mg/dL	⊕	mmol/L	OK	
C-Peptide	⊕		⊕	pmol/L?	⊕	nmol/L	OK	or pmol/mL?
C-Reactive Protein hs-CRP	⊕		⊕	mg/dL	⊕	mg/L	OK	
Creatinine	⊕		⊕	mg/dL	⊕	umol/L	OK	
Cystatin C	⊕		⊕	mg/L	⊕	mg/L	OK	
Estradiole E2	⊕		⊕	pg/mL	⊕	pmol/L	OK	
Follicle Stimulating Hormone FSH	⊕		⊕	mIU/mL	⊕	U/L	OK	
FT3 (free trijodtyronin)	⊕		⊕	pmol/L	⊕	pmol/L	OK	
FT4 (free tyroxin)	⊕		⊕	ng/dL	⊕	ng/dL	OK	
GFR (Glomerular filtration rate)	⊕		⊕	l/m/1.73	⊕	?	?	
Glucose	⊕		⊕	mg/dL	⊕	mmol/L	OK	
Glutamyltransferase GGT	⊕		⊕	U/L	⊕	ukat/L	OK	
GOT glutamic oxaloacetate transaminase	⊕		⊕	U/L	⊕	?	?	
GPT glutamic pyrovate transaminase	⊕		⊕	U/L	⊕	?	?	
HbA1c	⊕		⊕	%	⊕	?	?	exclude? recalc
HDL-cholesterol	⊕		⊕	mg/dL	⊕	mmol/L	OK	
Hemolysis	⊕		⊕	-	⊕	-	?	
Ikterus (bilirubin)	⊕		⊕	-	⊕	-	?	
Insulin	⊕		⊕	µU/mL	⊕	pmol/L	?	
Interleukin 1-beta IL-1b	⊕		⊕		⊕		?	
Interleukin 6 IL-6	⊕		⊕	?	⊕		?	exclude?
LDL-cholesterol	⊕		⊕	mg/dL	⊕	mmol/L	?	
Leptin LEPT	⊕		⊕	ng/mL	⊕	ng/mL	OK	
LH Lutropin	⊕		⊕	mIU/mL	⊕	U/L	OK	
Lipoprotein A LPA	⊕		⊕	mg/dL	⊕	g/L	OK	
Proinsulin	⊕		⊕	pmol/L	⊕	pmol/L	OK	
Prolactin PROL	⊕		⊕	µU/mL	⊕	mU/L	OK	Lab 1 high wrong units?
SHBG (steroid hormone binding globulin)	⊕		⊕	nmol/L	⊕	nmol/L	OK	
Testosterone	⊕		⊕	ng/mL	⊕	nmol/L	OK	recalc
TNF-alpha (tumour necrosis factor)	⊕		⊕	?	⊕	?	?	
Triglyceride	⊕		⊕	mg/dL	⊕	mmol/L	OK	recalc
TSH (thyroid stimulating hormone)	⊕		⊕	mIU/L	⊕	mU/L	OK	
UREA (Harnstoff HST)	⊕		⊕	mg/dL	⊕	mmol/L	OK	recalc
Uric acid (Urat Harnsaure HRS)	⊕		⊕	umol/L	⊕	umol/L	OK	recalc
UU - Pt-GFR(CystC-beräkn) (see also GFR)	⊕		⊕	mL/m/	⊕			
UU - GLP-1 (glucagon like peptide -1 in P800 tubes)	⊕		⊕	?	⊕			when?
UU -FFA Free fatty acids	⊕		⊕	mg/dL	⊕			
UU -steroid hormone pattern (12 different)	⊕		⊕	pg-ng/mL	⊕			

⊕ = values reported
⊕ = values NOT reported
? = values reported but without unit

STATUS = OK (good correlation between the reporting laboratories, at least 2/3) K (probably fine but something unclear), ? (not ready),



in Kg, Gramm, pounds, percentage ??



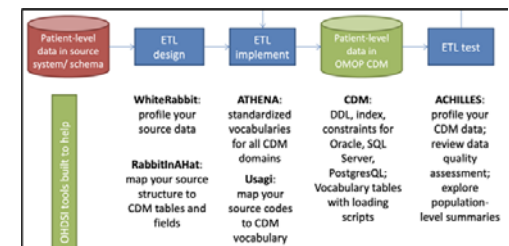
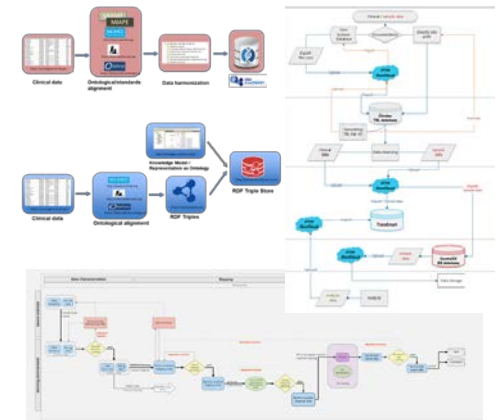
Translation Medicine Market

System Integration & Process Optimization of Clin. and Pre-clin. Data

ITTM

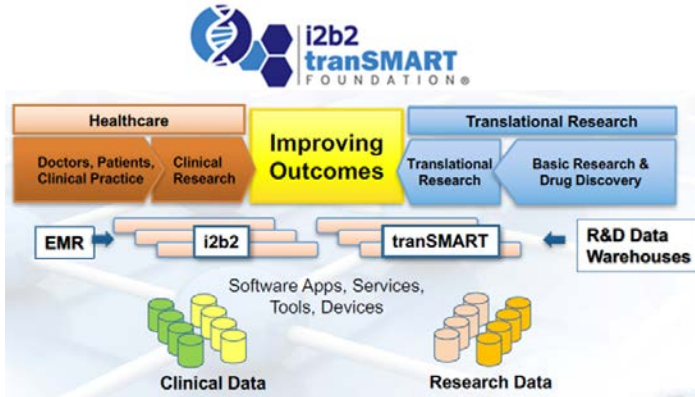
Information Technology
for Translational Medicine

- Pharma and Biotech projects (B2B)
- H2020 & IMI2 grants
- ITTM Services:
 - **Central and Federated Data Management** (i2b2tranSMART, OHDSI software stacks / clin. and pre clin. data, RWD, PROMs etc.)
 - **Data Sharing Support and Process Optimization**
 - **Cleansing of pre-clinical and clinical data**, validation, harmonization and standardization to ensure **quality data (QC of data/format/etc)**
 - **Quality Control**
 - **Data Mapping (like OMOP-CDM)**
 - **ETL design and implementation**
 - **Software installation, maintenance, secure hosting of technical infrastructure**
 - **Training**

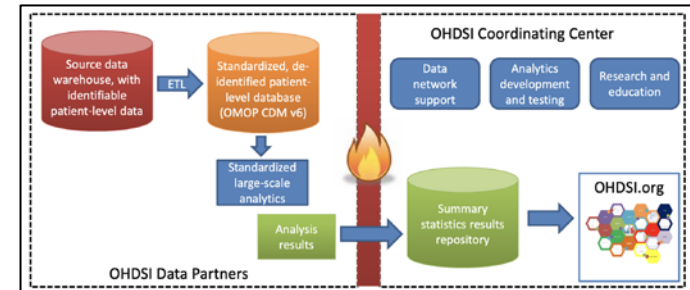


Data Management and Curation Services

Central & Federated Data Management selected projects



OHDSI OMOP-CDM
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS



OHDSI: Observational Health Data Sciences and Informatics / OMOP (CDM): Observational Medical Outcomes Partnership Common Data Model



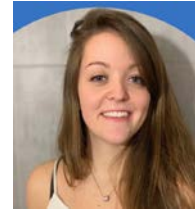
- Gaining visibility and **reputation**

- Multi-year contracts support financial situation
 - Fee-for-Service
 - Very limited margins
 - Proper financial controlling is needed !

- Facilitator for B2B contracts

- Interesting and stimulating collaborations !

We are passionate about your data !



ITTM is a successful and innovative company with an excellent international customer network, a highly motivated and qualified team of managers and technical experts that creates profitable and scalable communication and data platforms and support its customers in **Making Data Actionable** for the rapidly expanding digital healthcare market.