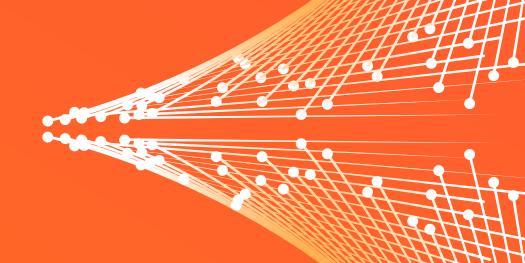
WCC ID SOLUTIONS

Biographic Matching & UMF Standards for High Quality Interoperability







Agenda

- 1 Problem: Real-World Challenge
- 02 Biographic Data
- O3 Solution: SSI & Interoperability
- 04 CIR: Out-Of-The-Box Matching Platform
- 05 UMF: Universal Message Format
- O6 Demo: Biographic Matching & UMF for Interoperability



HIGH QUALITY INTEROPERABILITY PROBLEM: REAL-WORLD CHALLENGE?

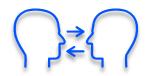


Real-world challenge: Meet WCC Consultant Amr el Rahwan

- In Arabic: عمرو
- Pronunciation in Egypt: "AMR' ['Samr]
- Pronunciation in some countries: "AMRO" ['Sam.re]
- Transliterated from Arabic to MRZ (Doc 9303): "EMRW"
- Issue with boarding pass: "MRAMR"
 - Is it "Mister AMR"?
 - Someone named "MRAMR"?
 - Or "MRA, Mister"?
 - Is it "AMR", or "A. Mister"?



HIGH QUALITY INTEROPERABILITY BIOGRAPHIC DATA: THE COMPLEXITIES OF BIOGRAPHIC MATCHING



Name Challenges

Typing errors
John → Jhon

Transcription variantsMohammad, Muhamet

Name variations
William → Bill

Name changes After marriage, adoption



Date of Birth Challenges

Typing errors 11-08-19<u>75</u> vs 11-08-19<u>57</u>

DD-MM vs MM-DD 11-08-1975 vs 08-11-1975



City Name Challenges

Typing errors

Multilingual names

The Hague, Den Haag, 's-Gravenhage, La Haye



Country Name Challenges

Typing errors

Multilingual names

The Netherlands, les Pays Bas, Holland, Nederland

Geographical changes former USSR, Russia, Ukraine, Belarus

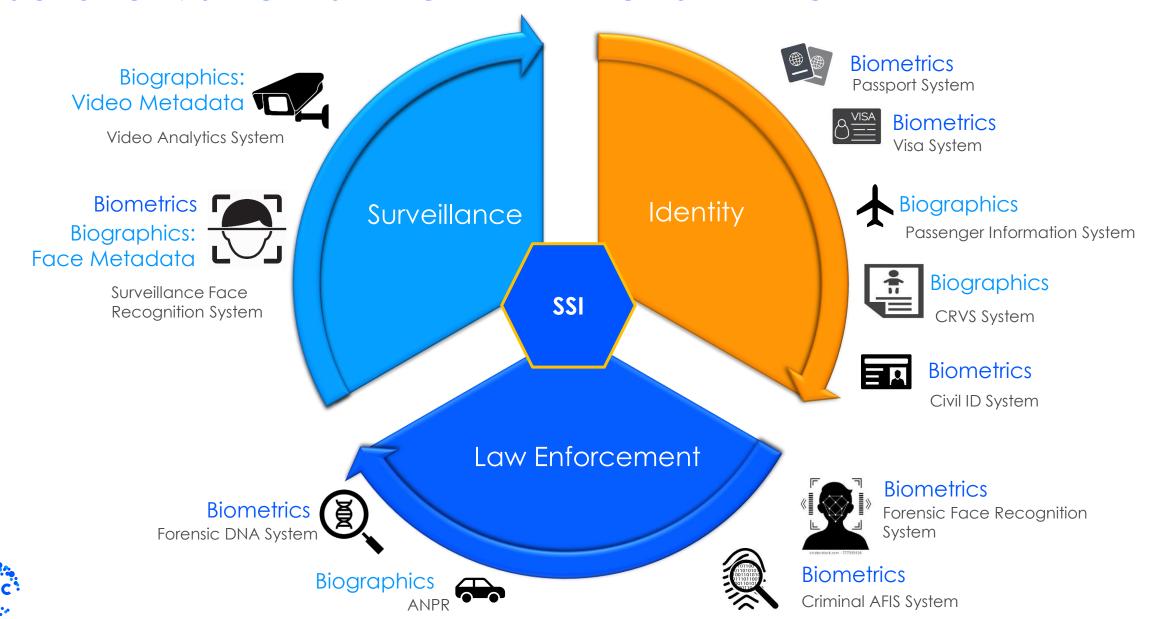


HIGH QUALITY INTEROPERABILITY BIOGRAPHIC DATA: MULTI-CULTURAL NAME MATCHING

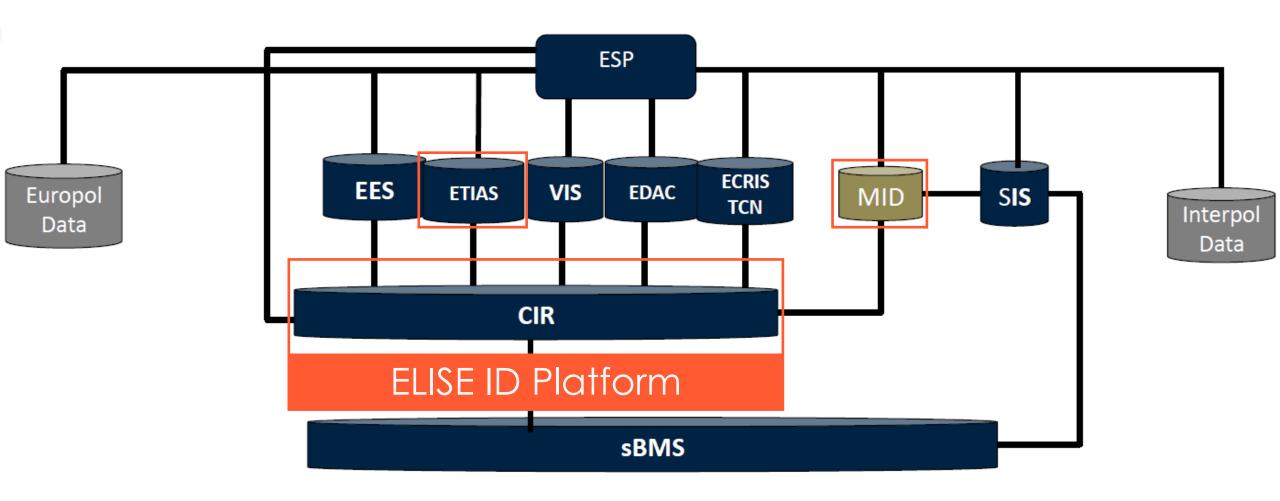
Name in original script	Name in Latin	Variant 1	Variant 2	Variant 3
محمد	Mohamed	Magomed	Mamadou	Mahometus
أحمد	Ahmad	Akhmad	Amadou	Ehmet
علي	Ali	Alikhan	Alisher	Aliy
حسين	Hussein	Huseyin	Khasan	Hussain
يوسف	Yousef	Jousef	Joost	Seosamh
	Robert	Rob	Bob	Bobby
Александр	Alexander	Alex	Sander	Sasha



HIGH QUALITY INTEROPERABILITY SOLUTION: SINGLE SEARCH INTERFACE & INTEROPERABILITY



HIGH QUALITY INTEROPERABILITY CIR: OUT-OF-THE-BOX MATCHING PLATFORM





HIGH QUALITY INTEROPERABILITY REQUIREMENTS FOR EU REGULATIONS FOR INTEROPERABILITY

CIR Key Requirements, based on Regulations (EU) 2019/817 & 2019/818 for interoperability:

- clause 51 considering UMF for VIS, SIS and in any other existing or new information systems
- Art 17 CIR (Common Identity Repository): the CIR will create an individual file for each person in the EES, VIS, ETIAS, Eurodac or ECRIS-TCN
- Art 18 CIR Data: the CIR stores all identity data as alphanumerics (biographics)
- Art 25 MID (Multiple-Identity Detector): Identity data needs to be deduplicated by the MID
- Art 38 establishment of the UMF Standard
- Art 61 (16) Risk Assessment for ETIAS

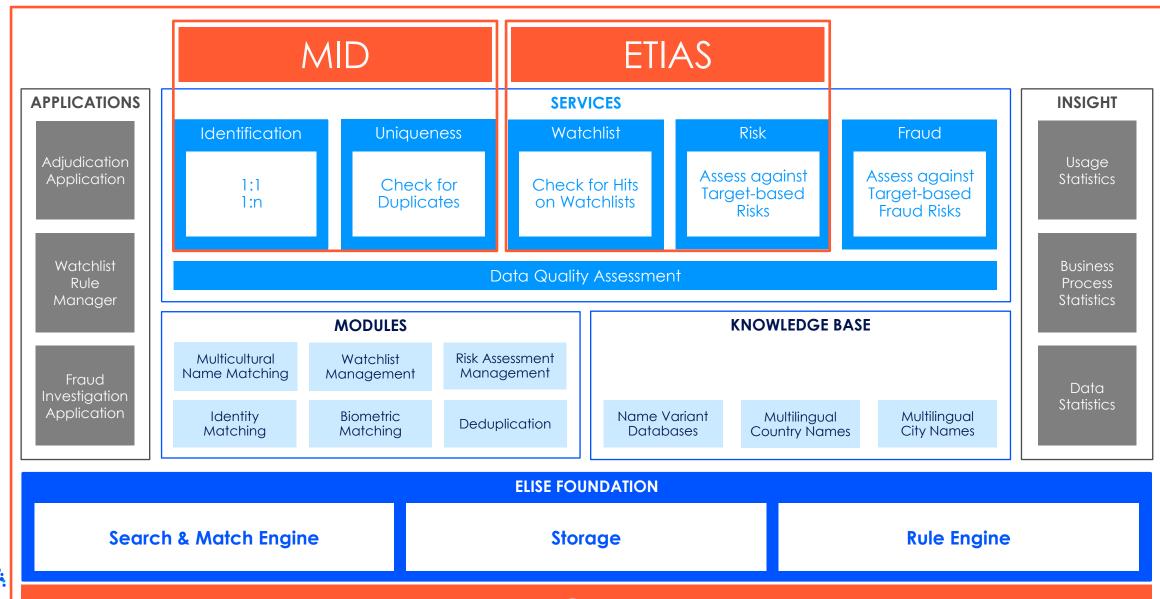


HIGH QUALITY INTEROPERABILITY COMPLIANCE WITH EU REGULATIONS FOR INTEROPERABILITY

Requirement	ELISE Compliancy		
clause 51 – considering UMF for VIS	ELISE is used by VIS, supports UMF, and can be re-used for the CIR		
Art 17 - CIR	ELISE is an out-of-the-box Identity Management system with Person Centric View capabilities that can link identities to VIS, Eurodac, ETIAS, EES, ECRIS-TCN.		
Art 18 – CIR Data	ELISE is a leading Identity matching system specialized in matching alphanumeric (biographic) data, including advanced multicultural name matching.		
Art 25 – MID	Using ELISE's matching capabilities, the MID can act as a periodic process to detect duplicate identities in the CIR. ELISE has a long track record of successfully deduplicating identity databases.		
Art 38 – establishment of UMF	The ELISE data model supports the UMF data format out-of-the-box		
Art 61 (16) – Risk Assessment for ETIAS	ELISE Rule-based Target can be used for risk assessment for ETIAS		

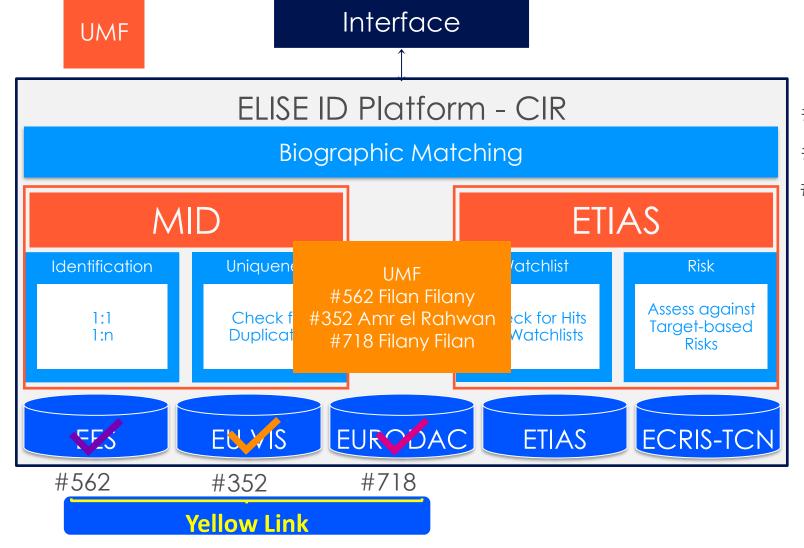


HIGH QUALITY INTEROPERABILITY CIR: OUT-OF-THE-BOX MATCHING PLATFORM





HIGH QUALITY INTEROPERABILITY CIR: OUT-OF-THE-BOX MATCHING PLATFORM



#562 Filan Filany #352 Amr el Rahwan #718 Filany Filan



EU Compliance

Clause 51

Article 17

Article 18

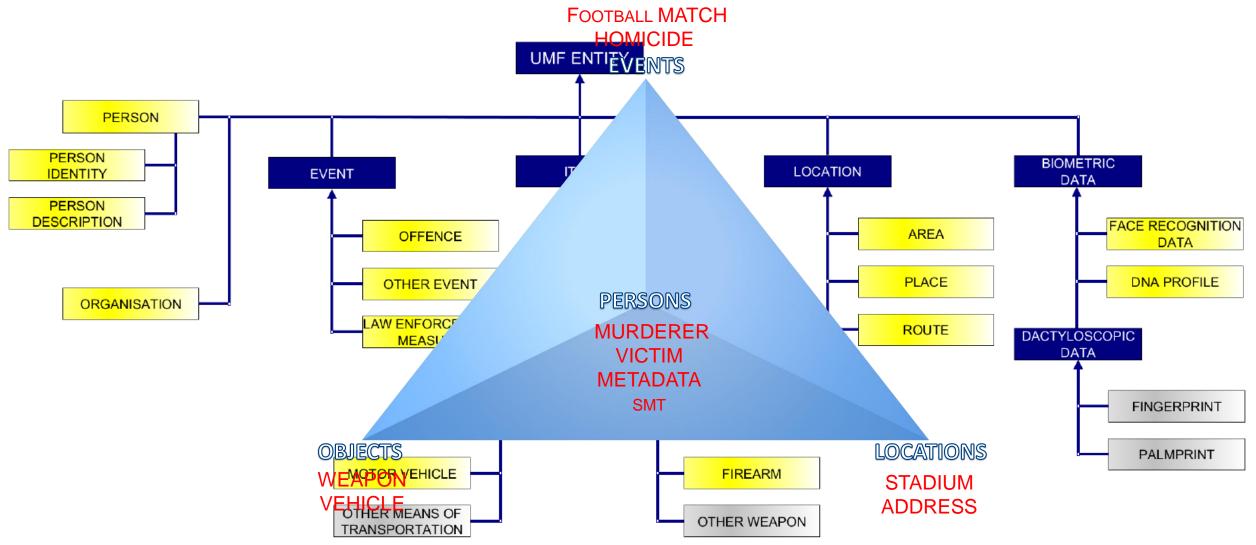
Article 25

Article 38

Article 61

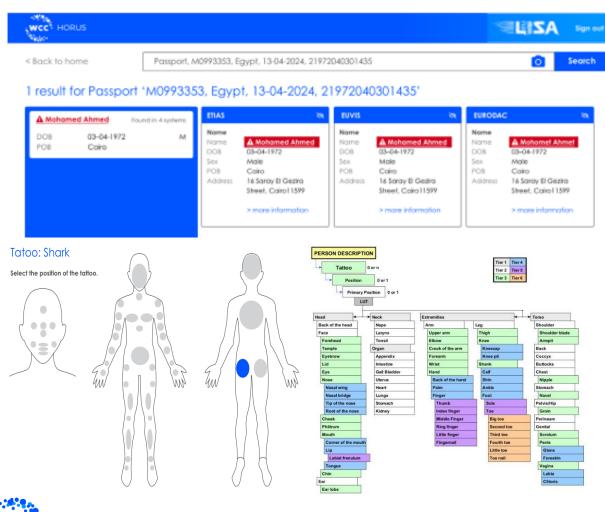
HIGH QUALITY INTEROPERABILITY

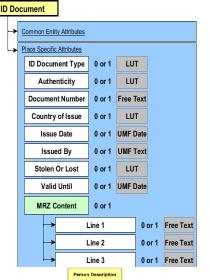
UMF: UNIVERSAL MESSAGE FORMAT

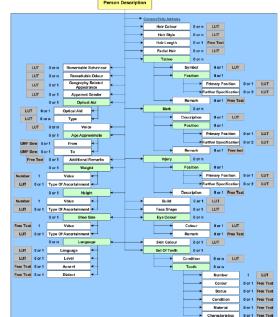


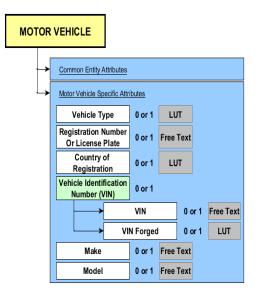


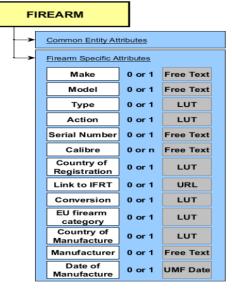
HIGH QUALITY INTEROPERABILITY DEMO: BIOGRAPHIC MATCHING & UMF FOR INTEROPERABILITY















HIGH QUALITY INTEROPERABILITY CONCLUSION: REUSING ELISE-VIS FOR CIR



ELISE-VIS has a proven high performance and complies with the EU Regulations for Interoperability



ELISE is Person-Centric & already supports the UMF standard & the CIR Functionality



solution will reduce the huge risk & costs of developing from scratch





Thank you for your time. Any questions?



Amr el RahwanSr. Solution Architect

Office +31 307 503 224

Mobil +31630 476 718

Mail arahwan@wcc-group.com

Web wcc-group.com