WCC ID SOLUTIONS

Artificial Intelligence
for solving EES and ETIAS Challenges

11 October 2022

Agenda

01 Multiple & Fraudulent Identity Challenges

02 Knowledge-Base AI

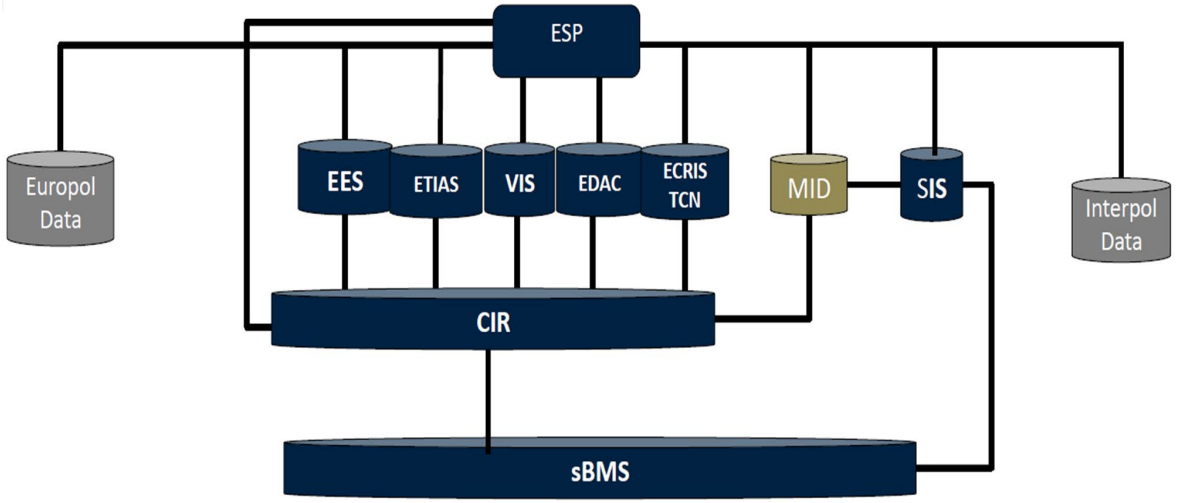
03 Domain-Specific AI

04 Cognitive AI

05 Multiple & Fraudulent Identity Cases

06 Conclusion

ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
MULTIPLE & FRAUDULENT IDENTITY CHALLENGES



EU Central Systems:

Multiple-Identity Detection for new enrollment & ETIAS

Persons of Interest:

Visitor TCNs & few EU Citizens in SIS

Member State:

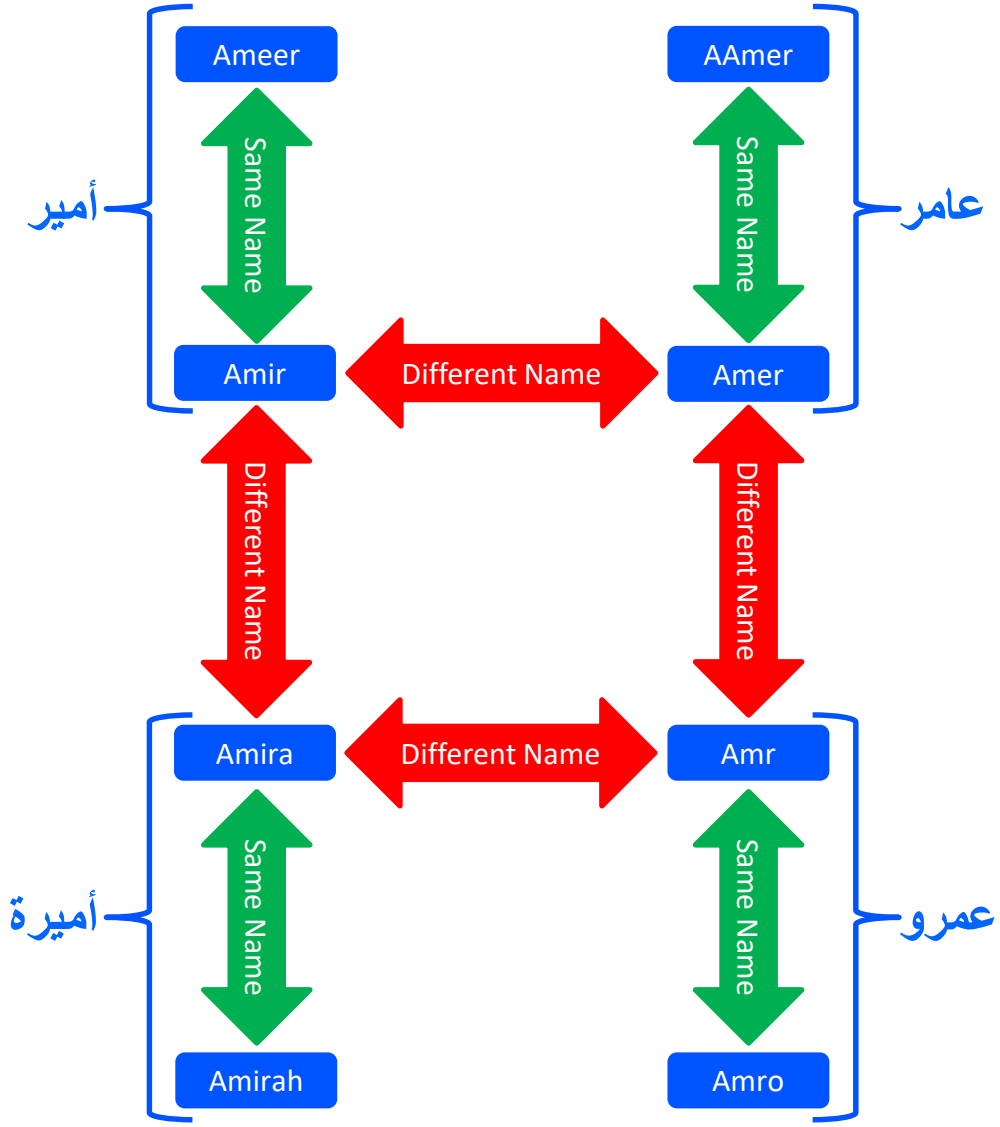
Multiple-Identity Detection for national ETIAS & National DBs

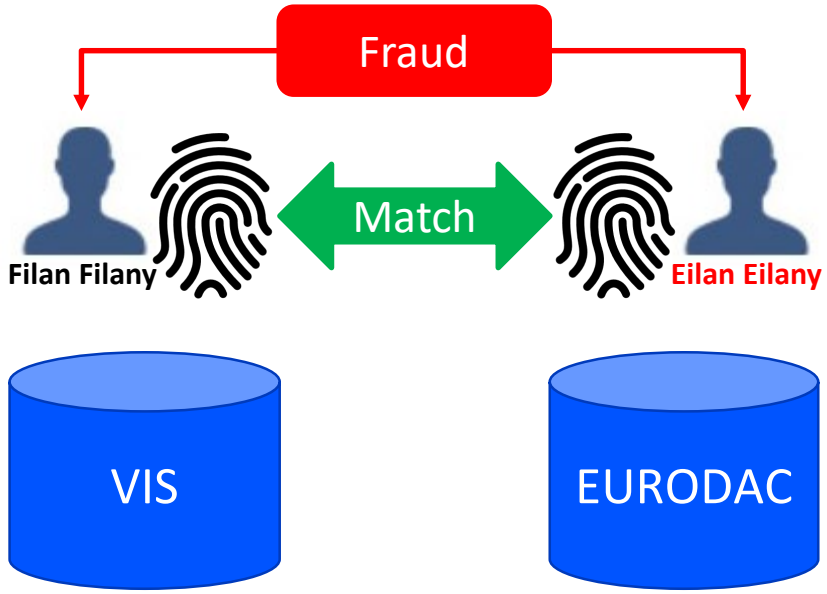
Persons of Interest:

EU Citizens & Resident TCNs

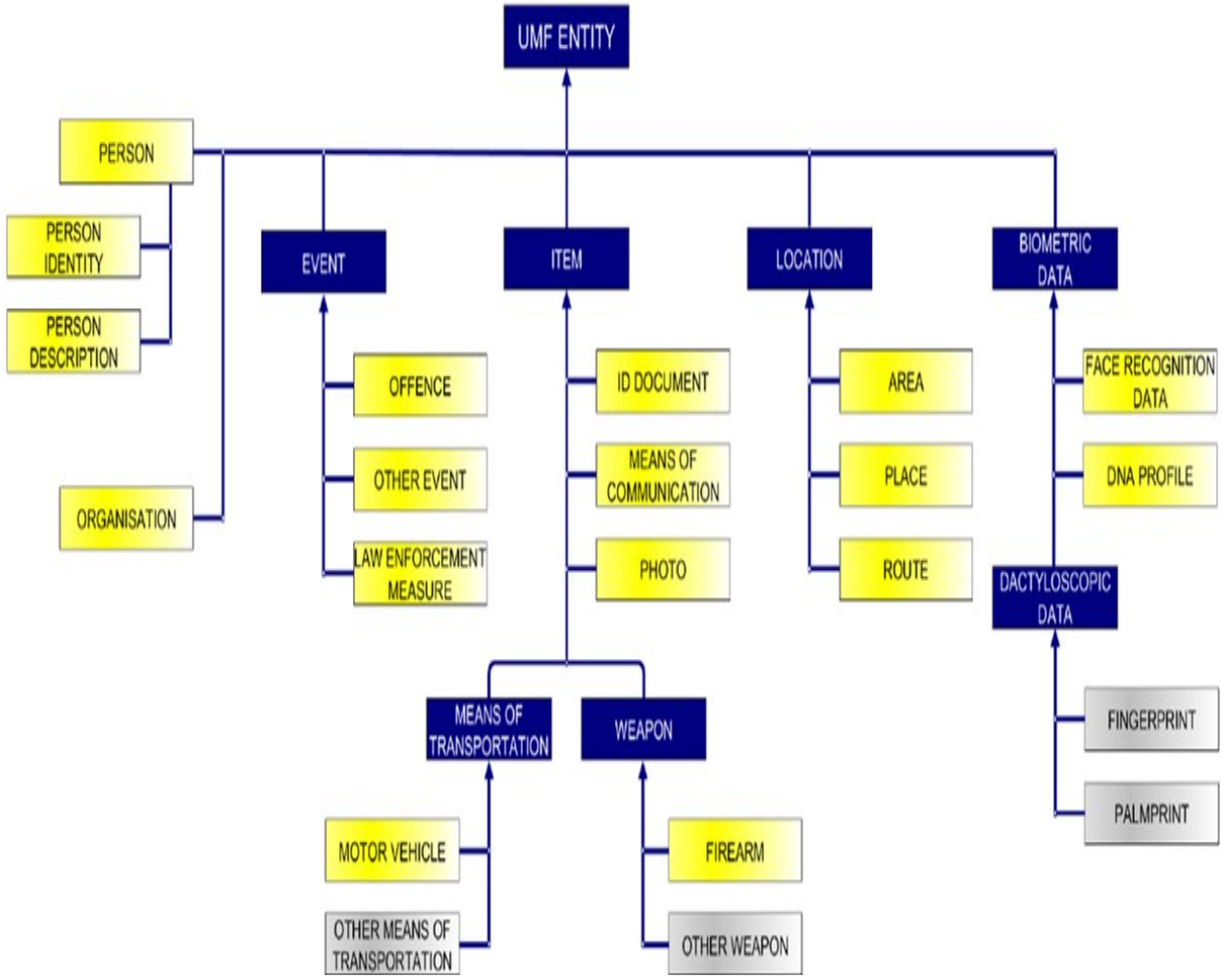
Clause 22 of Interoperability Regulations 2019/817 & 818: Member State Responsibility

ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
KNOWLEDGE-BASE AI – MULTIPLE & FRAUDULENT IDENTITY





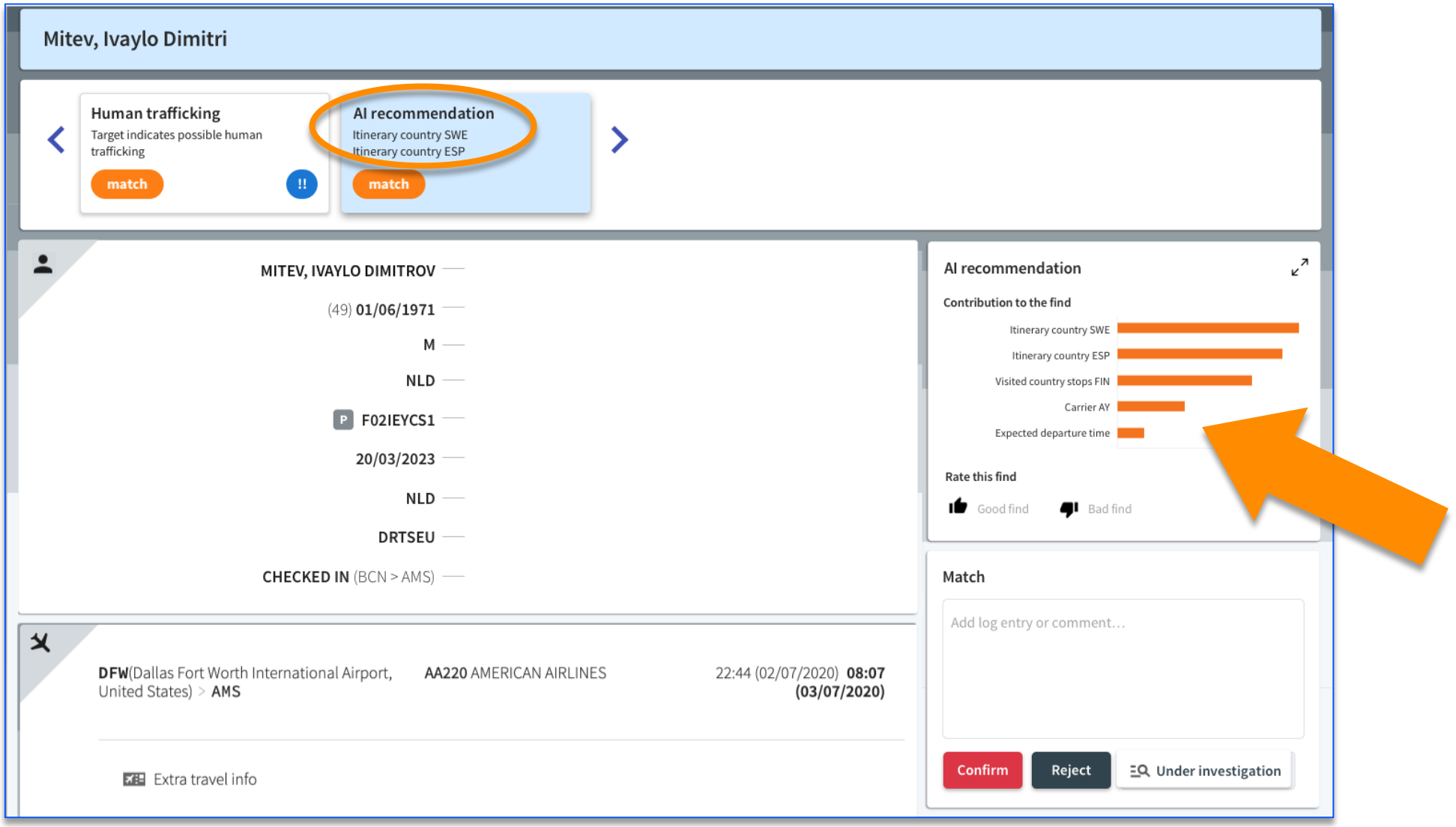
ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
DOMAIN-SPECIFIC AI – UMF DATA MAPPING



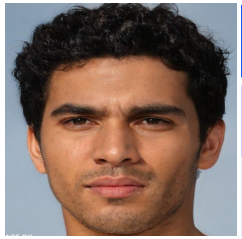
Data Group	Data Element	UMF Mapping
Passenger Name Details	Passenger Name	Person Identity → Person Core Name
	Family Name	Person Identity → Person Core Name
	Given Name/Initial	Person Identity → Person Core Name
	Title	
	Other Names	Person Identity → Other Name
Address Details	Emergency Contact	Person Identity → Person Core Name Primary ID = No
	Contact Address	Location → Place → Address
	Billing Address	Location → Place → Address
	Mailing Address	Location → Place → Address
	Home Address	Location → Place → Address
	Intended Address	Location → Place → Address
	Email Address	Item → MoC → MoC Type Item → MoC → MoC Identifier
Contact Telephone Number	Telephone Details	Item → MoC → MoC Type Item → MoC → MoC Identifier
Travel Document Data	Name on Passport	Item → ID Document → MRZ Content
	Date of Birth	Item → ID Document → MRZ Content
	Sex	Item → ID Document → MRZ Content
	Nationality	Item → ID Document → MRZ Content
	Passport Number	Item → ID Document → Document Number
Vehicles Registration	License Plate Number	MoT → Motor Vehicle → VIN
	Car Brand	MoT → Motor Vehicle → Make
	Car Model	MoT → Motor Vehicle → Model
	Body Style	MoT → Motor Vehicle → Vehicle Type
	Color	MoT → Motor Vehicle → Colour
Biometric Data	Fingerprint	Biometric → Dactyloscopic → Fingerprint

Mapping API & PNR Data with EES, ETIAS, SIS, & VIS

ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
COGNITIVE AI – RECOMMENDATION ENGINE



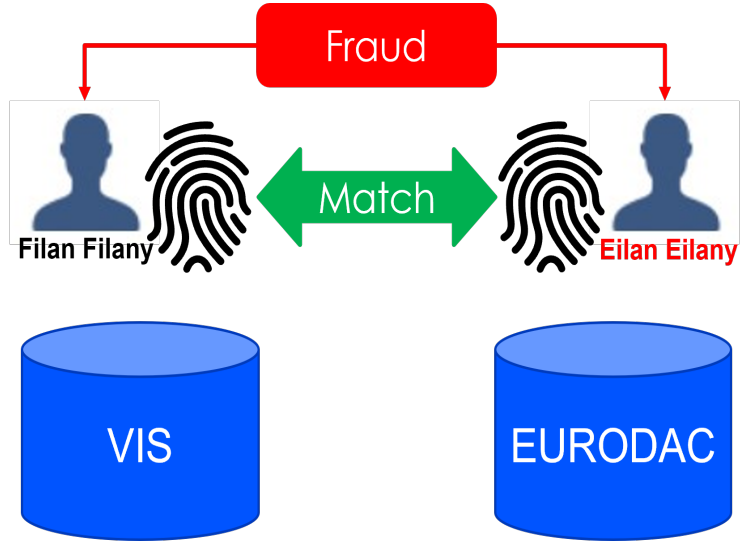
ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
AI FOR SOLVING MULTIPLE AND FRAUDULENT IDENTITY CASES



VIS Data
Name: Amir Amr
Gender: Male
DOB: 01/01/1980
Place of Birth: Cairo
Nationality: Egyptian

Inferred by AI

API/PNR Data
Name: Amira Amer
Gender: Female
DOB: 01/01/1980
Place of Birth: Cairo
Nationality: Egyptian



AI Algorithms for Multiple Identity
NER “Named Entity Recognition”
NLP “Natural Language Processing”
Facial Recognition (If available)

AI Algorithms for Frauds
NLP “Natural Language Processing”
Fingerprint Recognition
Facial Recognition (OSINT)

ARTIFICIAL INTELLIGENCE FOR SOLVING EES & ETIAS CHALLENGES
CONCLUSION

EU Systems

MID supported by Artificial Intelligence can solve the multiple identity & fraud Challenges of EES & ETIAS

Member States

National-MID supported by Artificial Intelligence will solve the Member States challenges of citizens and resident TCNs

AI Algorithms

Knowledge-Base, Domain-Specific, and Cognitive AI can reduce the false positives, save resources, and facilitate seamless travel

Thank you for your time.

Any questions?

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