interVASP Messaging Standards

IVMS101
Universal common language for communication of required originator and beneficiary information between virtual asset service providers

interVASP data model standard
Issue 1 FINAL

intervasp.org

CONTENTS

1   Terms and definitions

1.1   List of reserved words and definitions

For the purposes of IVMS101, the following terms are considered to be reserved words and follow the definitions below:

Term	Definition
beneficiary	refers to the natural or legal person or legal arrangement who is identified by the originator as the receiver of the requested VA transfer.
beneficiary VASP	refers to the VASP which receives the transfer of a VA from the originating VASP directly or through an intermediary VASP and makes the funds available to the beneficiary. *Adapted from General Glossary of the FATF Recommendations*
component	refers to a composite datatype that consists of one or more elements that can be reused across data entities.
constraint	refers to a rule, limitation or control enforced on a datatype, element, component or entity that restricts the content being created or amended.
country	refers to a nation with its own government.
country subdivision	refers to an administrative subdivision of a country.
data entity	refers to a single object in a data model that can be distinctly identified.
datatype	refers to an attribute of an element that reflects the possible values that can be represented by the element.
element	refers to a unit of data that has precise meaning, serving to identify the attributes of a data entity.
intermediary VASP	refers to a VASP in a serial chain that receives and retransmits a VA transfer on behalf of the originating VASP and the beneficiary VASP, or another intermediary VASP. *Adapted from General Glossary of the FATF Recommendations*
interVASP Messaging	refers to the transmission of structured data between VASPs and/or other affected entities.
legal person	refers to any entity other than a natural person that can establish a permanent customer relationship with an affected entity or otherwise own property. This can include companies, bodies corporate, foundations, anstalt, partnerships, or associations and other relevantly similar entities.

Term	Definition
	Adapted from General Glossary of the FATF Recommendations
legal entity	refers to a unique party that is legally or financially responsible for the performance of financial transactions or has the legal right in its jurisdiction to enter independently into legal contracts, regardless of whether it is incorporated or constituted in some other way (e.g. trust, partnership, contractual). It includes individuals when acting in a business capacity. *Adapted from ISO 17442*
locality	refers to a particular area of a country subdivision, such as a district, suburb, village, town, or city.
natural person	refers to a uniquely distinguishable individual; one single person.
originating VASP	refers to the VASP which initiates the VA transfer and transfers the VA upon receiving the request for a VA transfer on behalf of the originator. *Adapted from General Glossary of the FATF Recommendations*
originator	refers to the account holder who allows the VA transfer from that account or, where there is no account, the natural or legal person that places the order with the originating VASP to perform the VA transfer. *Adapted from General Glossary of the FATF Recommendations*
other affected entity	refers to a natural or legal person, other than a VASP, that engages in or provides covered VA activities.
Recommendation	refers to a FATF Recommendation.
registration authority	refers to a corporate or business registry, or other national or local authority that maintains the authoritative source of information about legal entities operating in its jurisdiction.
Standard	refers to the IVMS101 standard.
transfer	refers to conducting a transaction on behalf of another natural or legal person that moves a virtual asset from one virtual asset address or account to another. *Source: FATF guidance for a risk-based approach to virtual assets and virtual asset service providers*
virtual asset	refers to a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes. Virtual assets do not include digital representations of

Term	Definition
	fiat currencies, securities and other financial assets that are already covered elsewhere in the FATF Recommendations. *Source: General Glossary of the FATF Recommendations*
virtual asset service provider	refers to any natural or legal person who is not covered elsewhere under the FATF Recommendations, and as a business conducts one or more of the following activities or operations for or on behalf of another natural or legal person: i) exchange between virtual assets and fiat currencies; ii) exchange between one or more forms of virtual assets; iii) transfer of virtual assets; iv) safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets; and v) participation in and provision of financial services related to an issuer's offer and/or sale of a virtual asset. *Source: General Glossary of the FATF Recommendations*

1.2   Abbreviations and Acronyms

The following is a list of abbreviations and acronyms used in this document:

Abbreviation/Acronym	Definition
AML	anti-money laundering
CDD	customer due diligence
CFT	countering the financing of terrorism
FATF	Financial Action Task Force
GLEIF	Global Legal Entity Identifier Foundation
IVMS	interVASP Messaging Standard
ISO	International Organisation for Standardisation
KYC	know your customer
LEI	Legal Entity Identifier
VA	virtual asset
VASP	virtual asset service provider
TSP	technical solution provider

1.3   Formatting Notations

Entities and components will follow an upper camel case convention with no spaces, with the first word capitalised.

Elements will follow a lower camel case convention with no spaces; the first word will not be capitalised. Datatypes will be referred to in upper camel case, unless convention requires otherwise.

For readability purposes, entities may be referred to in their business context in Title Case, which will permit the use of spaces between words.

1.4   Naming Conventions

Any term used within an entity, component or element name does not necessarily dictate the value for such an object. For example, customerNumber, and other elements where the name contains the word '*Number',* do not necessarily have to only consist of numerals. Valid values are determined through the datatype definition and any applicable constraints.

1.5   Case sensitivity

Unless otherwise specified, all values are case insensitive.

2 Background and rationale

2.1 Background

In October 2018, FATF adopted changes to its Recommendations to explicitly clarify that they apply to financial activities involving VA, effectively expanding the scope of the Recommendations to apply to VASPs and other obliged entities that engage in or provide covered VA activities (together, affected entities).

INR. 15, paragraph 7(b), relating to Recommendation 16[1] was officially adopted to form part of the FATF standards in June 2019 stating that countries should ensure that:

> *"…originating VASPs obtain and hold required and accurate originator information and required beneficiary information on virtual asset transfers, submit this information to beneficiary VASP or financial institution (if any) immediately and securely.*
>
> *…beneficiary VASPs obtain and hold required originator information and required and accurate beneficiary information…"*

Originating VASPs must transmit mandated data to the Beneficiary VASP (if applicable) immediately and securely, ensuring that only those parties processing the transfer have access to the information.

While it is already expected that traditional financial institutions share this information between counterparties, numerous technical, operational and cultural challenges brought about by this clarification are unique to the VA space. The variances between the data that are captured by VASPs, and shared over existing blockchain networks by which VA are transferred locally and globally create a technical challenge that does not impact traditional payments gateways.

The diverse AML/CFT regulatory landscape applying to the VA space has also led to notable differences in the client data already possessed by VASPs between jurisdictions. For all practical purposes, VASPs operate in a global ecosystem and as such, local and regional data compliance and privacy laws with which personal data can be shared and persisted apply. Globalisation challenges, including the use of data captured in multiple languages, character sets and local conventions, can affect the sharing of data between VASPs.

2.2 Rationale

Consistency and harmonisation are in the interests of all VASPs. This is particularly the case in the field of domestic and cross-border messaging between VASPs. There exists a need for VASPs to adopt uniform approaches and establish best market practice, especially in relation to meeting obligations resulting from the FATF Recommendations as they apply to VASPs.

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[1] *The FATF Recommendations, Updated June 2019*, pg. 71.

Unambiguous data allows VASPs to exchange messages in an automated fashion, reducing costs and minimising risks. A universal common language enables beneficiary VASPs to understand and process required originator and beneficiary information submitted by originating VASPs.

Following the update to FATF paragraph INR.15 7(b)-R.16, several technical solutions that facilitate the transfer of such data between VASPs have been progressed by TSPs to aid VASPs in meeting their regulatory obligations.

As such, there arises a greater need for the standardisation of the data domain to which VASPs can share data to avoid the proliferation of numerous data models. While underlying source data may not align to the Standard, standardisation of the data domain to which the required data is shared can ease the adoption of such technical solutions by VASPs. Irrespective of the technical solution, data should be expected to be structured in line with the Standard at time of transmission.

When consumed, the data for entities covered by the Standard can be received in a structure that is meaningful, well-formed and complete. The technical burden towards adoption can be eased, as a VASP has only to develop transformations for such entities once.

Through the introduction of the Standard, TSPs can focus less on having to model the business domain, assigning resources to deliver the technical solution.

Through the alignment of data structures and those constraints governing the content, sharing or consuming data that is compliant with the Standard can be assured of a quality of data that may be lost should there be numerous models to which the platforms would operate. By assuring the reliability of data, it can be expected that data be obtained and maintained to a higher standard than would be the case without the Standard.

2.3   Process Model
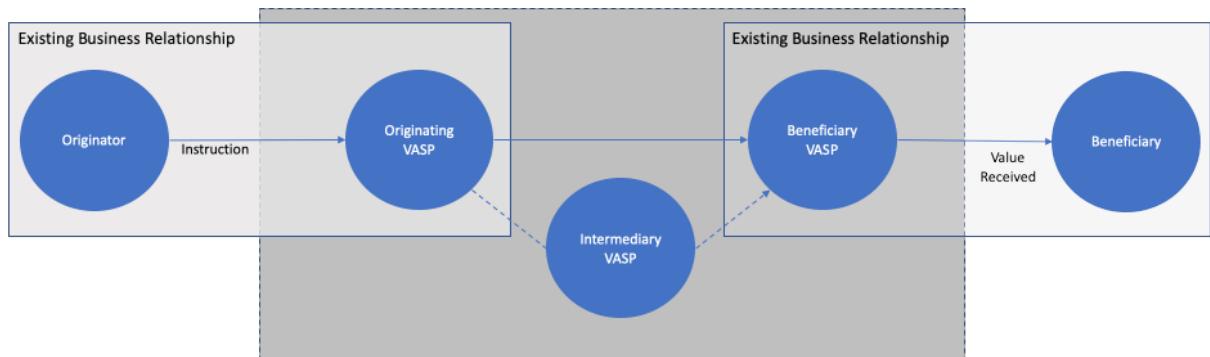
Figure 1 Transfer of data between an originator and beneficiary by way of an originating, intermediary and beneficiary VASP

3 Scope of the Standard

To meet the challenge as described in Section 2.1 (Background), the Standard covers four primary areas in the sharing of data, agreed through consensus with the Joint Working Group on interVASP Messaging Standards.

3.1 Establish a universal lexicon

In a business domain with countless acronyms, definitions and synonyms, identifying a universal lexicon, or common vocabulary, for those terms and concepts that constitute the data universe allows for the reduction of ambiguity and risk of misinterpretation of data that must be shared between parties.

3.2 Describe the data model

The data model consists of an agreed representation of format, definition and structure of those entities that form the business domain. A standardised data model also serves to reduce duplication of effort on take-up of TSPs, improving reliability and reducing effort and costs of meeting regulatory obligations in the sharing of data between VASPs.

3.3 Define constraints over the data

Appropriate restrictions over permissible content may not ensure the correctness of the data but will ensure the completeness and well-formedness of any data that is shared. It is through the adherence to constraints that data retrieval can be in line with expectations and data quality upheld.

3.4 Deliver a model that is fit for global use

Legacy client data will have been captured by VASPs in numerous languages, character sets and structural conventions. Sharing this data across borders, to actors potentially spanning numerous geographies, requires conventions that will ensure that the format, as intended by the originator can be consumed in an expected, meaningful manner by all required VASPs.

3.5 Out of scope

It is beyond the scope of the Standard to describe mechanisms that will cater to:

- Information security;
- Data privacy and global compliance requirements;
- Identification of VASPs or other affected entities;
- Representation of verification status or mechanism of a VASP or other entity (for example, CDD/KYC data or other forms of due diligence data that is implementation, TSP or VASP specific);
- Network protocols, or other component leveraged in the mode of transmission;
- Storage of any data included in the payload by the originating or beneficiary VASP;
- The manner in which payload data is leveraged by the beneficiary VASP for the purposes of Recommendation 16, such as the requirement for a VASP to *identify and report suspicious transactions, monitor the availability of information, take freezing actions, and prohibit transactions with designated persons and entities.*

3.6   Layer model representing scope of IVMS101

The following diagram is intended to serve as a conceptual model characterising the partition of a technology platform to which the scope of IVMS101 applies[2].
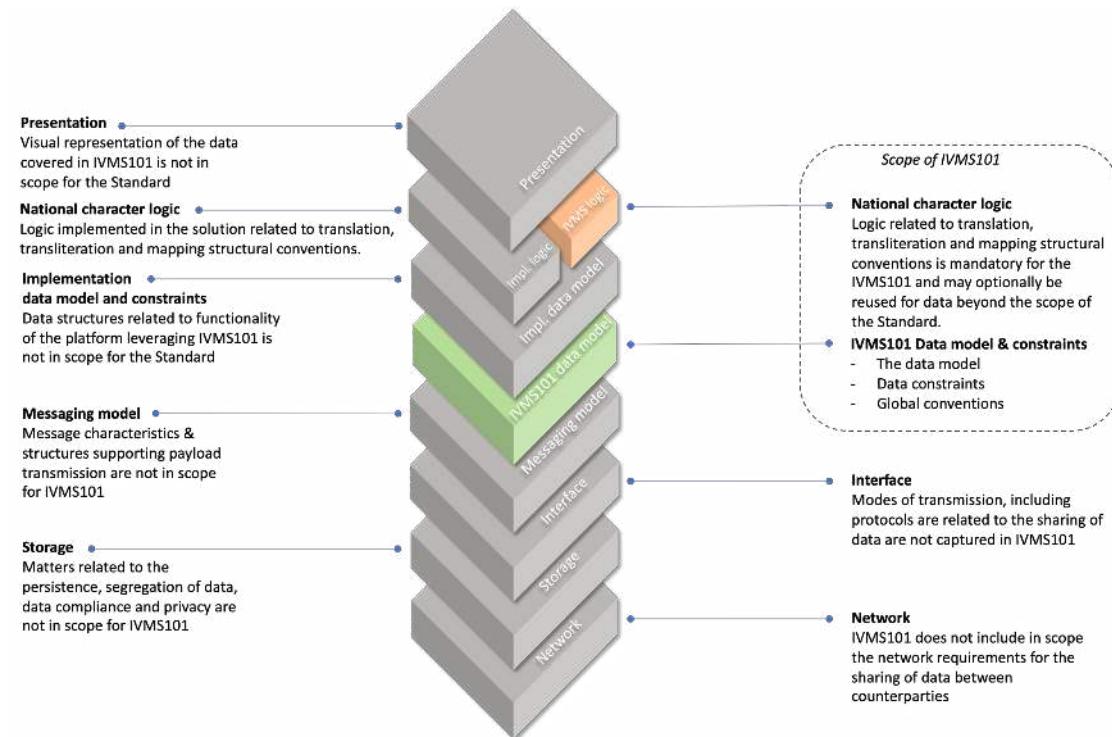
Figure 2: Conceptual model illustrating scope of IVMS101

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[2] The model is used for illustrative purposes and is not intended to define the underlying structure or technologies used for any such platform.

4   Data principles

4.1   Primary Principles

4.1.1   Adaptability

The IVMS101 data model is able to withstand enhancement or correction and will not compromise the integrity of instances where data is structured in accordance with the Standard has already been shared or held.

4.1.2   Expandability

The IVMS101 model is expandable to support additional requirements from the Standard, and also to permit it being used as a baseline from which subsequent data standards can be prepared.

4.1.3   Fundamentality

The IVMS101 model provides the fundamental structures and rules related to the business entities that are deemed required for transmission between VASPs. As a design principle, the model may be wrapped in data structures supporting the implementation, should it be required. However, while the Standard does not preclude features and functionality from a platform that leverages the model, it will not incorporate proprietary or implementation specific objects or rules.

4.1.4   Portability

The IVMS101 model is technology neutral. It can be codified across markup languages, notations and document specifications, and can be supported by disparate systems.

4.1.5   Individual data points over aggregated or determined values

The IVMS101 model includes individual, granular data over aggregate or determined values. Where required, source data that would serve as inputs into determination logic is preferred over the output of such logic.

4.1.6   Unambiguous data

The IVMS101 model holds data that is specific and not subject to interpretation. Through adherence to the Standard, the consumer of transmitted data will receive it as intended by the originating VASP.

4.2   Additional Principles

4.2.1   Stay within the defined scope

In line with the scope set out in Section 3 (Scope of the Standard), the data model adheres to the following:

- The entity, component, attribute or relationship (if deemed necessary) is within the stated scope of IVMS101.

- The entity, component, attribute or relationship is necessary for the purposes of meeting the business challenge as stated in Section 2 (Background and rationale).
- The entity, component, attribute or relationship is specifically required to apply context to the data transmitted to meet the business challenge as stated in Section 2 (i.e. the data would be meaningless or ambiguous without such information).

4.2.2   Group elements into reusable logical components

Elements are grouped into reusable components. Through the grouping of elements into reusable components, it is possible to avoid the duplication of efforts in oversight of each element as it applies to each component.

4.2.3   Data model has been tested with the use of business examples

The data model is tested, both in its initial release and as it evolves, with real business examples to demonstrate the correctness and completeness of the data that may be transmitted.

4.2.4   Leverage existing standards work

IVMS101 leverages relevant and appropriate standards, i.e. standards, by whatever name, issued, adopted and/or published by a standards-setting body.

5   Datatypes

5.1   Context for datatypes

This section describes the components and datatypes leveraged in those entities documented in Section 6 (Data model definition). Definitions to the terms used are available in Section 1.1, (Terms and Definitions).

Figure 3, IVMS data model taxonomy (1) represents *in blue* the objects within the IVMS101 data model taxonomy that are documented in this section.
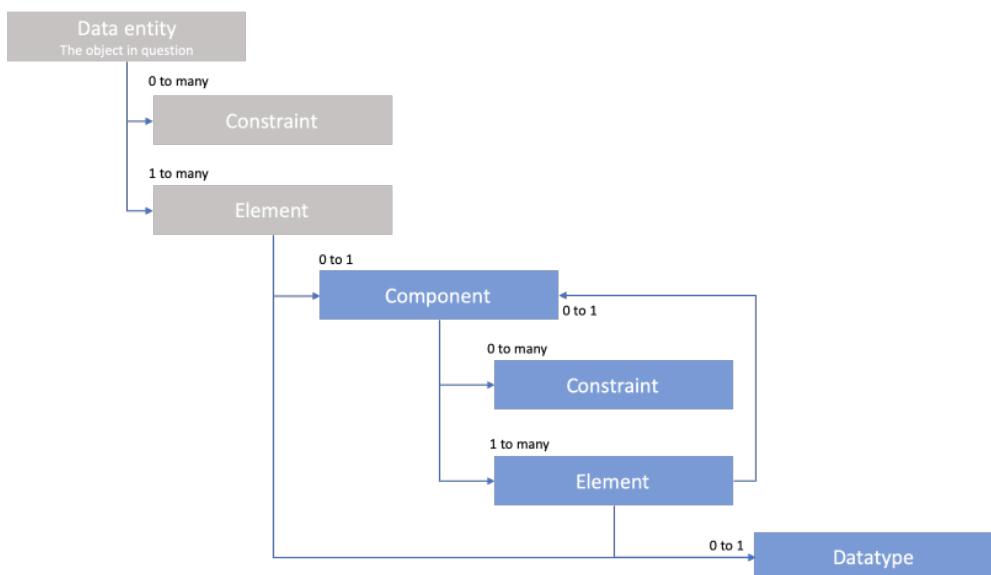
Figure 3 IVMS101 data model taxonomy (1) component through to datatype

5.2   Components

5.2.1   Person

5.2.1.1   *Person structure*

Element	Multiplicity	Type	Constraint	OR
naturalPerson	[0..1]	*NaturalPerson*	C1, C2, C3, C6, C8	{Or
legalPerson	[0..1]	*LegalPerson*	C3, C4, C5, C7, C8, C9, C10, C11	Or}

5.2.1.2   *Person constraints*

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2 DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3 Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4 OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5 LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6 LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7 ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8 ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9 CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element RegistrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element RegistrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10 RegistrationAuthority

The value used for the applicable element must be present on the GLEIF Registration Authorities List.

C11 ValidLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

5.2.1.3   *Person elements*

5.2.1.3.1   naturalPerson

Multiplicity: [0..1]

Definition: refers to a uniquely distinguishable individual; one single person.

Component: NaturalPerson

5.2.1.3.2   legalPerson

Multiplicity: [0..1]

Definition: refers to any entity other than a natural person that can establish a permanent customer relationship with an affected entity or otherwise own property. This can include companies, bodies corporate, foundations, anstalt, partnerships, or associations and other relevantly similar entities.

Component: LegalPerson

5.2.2   NaturalPerson

5.2.2.1   *NaturalPerson structure*

Element	Multiplicity	Type	Constraint	OR
name	[1..n]	*NaturalPersonName*	C6	
geographicAddress	[0..n]	*Address*	C1, C3, C8	
nationalIdentification	[0..1]	NationalIdentification	C1, C3	
customerIdentification	[0..1]	Text	C1	
dateAndPlaceOfBirth	[0..1]	DateAndPlaceOfBirth	C1, C2	
countryOfResidence	[0..1]	CountryCode	C3	

5.2.2.2   *NaturalPerson constraints*

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C6 LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C8 ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

5.2.2.3 *NaturalPerson elements*

5.2.2.3.1 name

Multiplicity: [1..1]

Definition: the distinct words used as identification for an individual.

Component: NaturalPersonName

5.2.2.3.2 geographicAddress

Multiplicity: [0..n]

Definition: the particulars of a location at which a person may be communicated with.

Component: Address

5.2.2.3.3 nationalIdentification

Multiplicity: [0..1]

Definition: a distinct identifier used by governments of countries to uniquely identify a natural or legal person.

Component: NationalIdentification

5.2.2.3.4 customerIdentification

Multiplicity: [0..1]

Definition: a distinct identifier that uniquely identifies the person to the institution in context.

Datatype: "Max50Text"

5.2.2.3.5 dateAndPlaceOfBirth

Multiplicity: [0..1]

Definition: date and place of birth of a person.

Component: DateAndPlaceOfBirth

5.2.2.3.6 countryOfResidence

Multiplicity: [0..1]

Definition: country in which a person resides (the place of a person's home).

Datatype: "CountryCode"

5.2.3 NaturalPersonName

5.2.3.1 *NaturalPersonName structure*

Element	Multiplicity	Type	Constraint	OR
nameIdentifier	[1..n]	NaturalPersonNameID	C6	
localNameIdentifier	[0..n]	LocalNaturalPersonNameID		
phoneticNameIdentifier	[0..n]	LocalNaturalPersonNameID		

5.2.3.2 *NaturalPersonName constraints*

C6 LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

5.2.3.3 *NaturalPersonName elements*

5.2.3.3.1 nameIdentifier

Multiplicity: [1..n]

Definition: full name separated into primary and secondary identifier.

Component: NaturalPersonNameID

5.2.3.3.2 localNameIdentifier

Multiplicity: [0..n]

Definition: full name separated into primary and secondary identifier using local characters.

Component: LocalNaturalPersonNameID

5.2.3.3.3 phoneticNameIdentifier

Multiplicity: [0..n]

Definition: Alternate representation of a name that corresponds to the manner the name is pronounced.

Component: LocalNaturalPersonNameID

5.2.4 NaturalPersonNameID

5.2.4.1 *NaturalPersonNameID structure[3]*

Element	Multiplicity	Type	Constraint	OR
primaryIdentifier	[1..1]	Text		
secondaryIdentifier	[0..1]	Text		
nameIdentifierType	[1..1]	SingleValueFromList	C6	

5.2.4.2 *NaturalPersonNameID constraints*

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

5.2.4.3 *NaturalPersonNameID elements*

5.2.4.3.1 primaryIdentifier

Multiplicity: [1..1]

Definition: This may be the family name, the maiden name or the married name, the main name, the surname, and in some cases, the entire name where the natural person's name cannot be divided into two parts, or where the sender is unable to divide the natural person's name into two parts.

Datatype: "Max100Text"

5.2.4.3.2 secondaryIdentifier

Multiplicity: [0..1]

Definition: These may be the forenames, familiar names, given names, initials, prefixes, suffixes or Roman numerals (where considered to be legally part of the name) or any other secondary names.

Datatype: "Max100Text"

5.2.4.3.3 nameIdentifierType

Multiplicity: [1..1]

Definition: The nature of the name specified.

Datatype: "NaturalPersonNameTypeCode"

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[3] Adapted from International Civil Aviation Organization (ICAO) Doc 9303, *Machine Readable Travel Documents, Seventh Edition, 2015 Part 3: Specifications Common to all MRTDs,* Section *3.4 Convention for Writing the Name of the Holder.*

5.2.5   LocalNaturalPersonNameID

5.2.5.1   *LocalNaturalPersonNameID structure[4]*

Element	Multiplicity	Type	Constraint	OR
primaryIdentifier	[1..1]	Text		
secondaryIdentifier	[0..1]	Text		
nameIdentifierType	[1..1]	SingleValueFromList		

5.2.5.2   *LocalNaturalPersonNameID constraints*

There are no constraints that apply to the LocalNaturalPersonNameID component.

5.2.5.3   *LocalNaturalPersonNameID elements*

5.2.5.3.1   primaryIdentifier

Multiplicity: [1..1]

Definition: This may be the family name, the maiden name or the married name, the main name, the surname, and in some cases, the entire name where the natural person's name cannot be divided into two parts, or where the sender is unable to divide the natural person's name into two parts.

Datatype: "LocalMax100Text"

5.2.5.3.2   secondaryIdentifier

Multiplicity: [0..1]

Definition: These may be the forenames, familiar names, given names, initials, prefixes, suffixes or Roman numerals (where considered to be legally part of the name) or any other secondary names.

Datatype: "LocalMax100Text"

5.2.5.3.3   nameIdentifierType

Multiplicity: [1..1]

Definition: The nature of the name specified.

Datatype: "NaturalPersonNameTypeCode"

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[4] Adapted from International Civil Aviation Organization (ICAO) Doc 9303, *Machine Readable Travel Documents, Seventh Edition, 2015 Part 3: Specifications Common to all MRTDs,* Section *3.4 Convention for Writing the Name of the Holder.*

5.2.6   Address

5.2.6.1   *Address structure[5]*

Element	Multiplicity	Type	Constraint	OR
addressType	[1..1]	SingleValueFromList		
department	[0..1]	Text		
subDepartment	[0..1]	Text		
streetName	[0..1]	Text	C8	
buildingNumber	[0..1]	Text	C8	
buildingName	[0..1]	Text	C8	
floor	[0..1]	Text		
postBox	[0..1]	Text		
room	[0..1]	Text		
postcode	[0..1]	Text		
townName	[1..1]	Text		
townLocationName	[0..1]	Text		
districtName	[0..1]	Text		
countrySubDivision	[0..1]	Text		
addressLine	[0..7]	Text	C8	
country	[1..1]	CountryCode	C3	

5.2.6.2   *Address constraints*

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

5.2.6.3   *Address elements*

5.2.6.3.1   addressType

Multiplicity: [1..1]

Definition: Identifies the nature of the address.

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[5] Adapted from ISO20022 registered message component *PostalAddress6.*

Datatype: "AddressTypeCode"

5.2.6.3.2   department

Multiplicity: [0..1]

Definition: Identification of a division of a large organisation or building.

Datatype: "Max50Text"

5.2.6.3.3   subDepartment

Multiplicity: [0..1]

Definition: Identification of a sub-division of a large organisation or building.

Datatype: "Max70Text"

5.2.6.3.4   streetName

Multiplicity: [0..1]

Definition: Name of a street or thoroughfare.

Datatype: "Max70Text"

5.2.6.3.5   buildingNumber

Multiplicity: [0..1]

Definition: Number that identifies the position of a building on a street.

Datatype: "Max16Text"

5.2.6.3.6   buildingName

Multiplicity: [0..1]

Definition: Name of the building or house.

Datatype: "Max35Text"

5.2.6.3.7   floor

Multiplicity: [0..1]

Definition: Floor or storey within a building.

Datatype: "Max70Text"

5.2.6.3.8   postBox

Multiplicity: [0..1]

Definition: Numbered box in a post office, assigned to a person or organisation, where letters are kept until called for.

Datatype: "Max16Text"

5.2.6.3.9   room

Multiplicity: [0..1]

Definition: Building room number.

Datatype: "Max70Text"

5.2.6.3.10   postCode

Multiplicity: [0..1]

Definition: Identifier consisting of a group of letters and/or numbers that is added to a postal address to assist the sorting of mail.

Datatype: "Max16Text"

5.2.6.3.11   townName

Multiplicity: [0..1]

Definition: Name of a built-up area, with defined boundaries, and a local government.

Datatype: "Max35Text"

5.2.6.3.12   townLocationName

Multiplicity: [0..1]

Definition: Specific location name within the town.

Datatype: "Max35Text"

5.2.6.3.13   districtName

Multiplicity: [0..1]

Definition: Identifies a subdivision within a country subdivision.

Datatype: "Max35Text"

5.2.6.3.14   countrySubDivision

Multiplicity: [0..1]

Definition: Identifies a subdivision of a country for example, state, region, province, département or county.

Datatype: "Max35Text"

5.2.6.3.15   addressLine

Multiplicity: [0..7]

Definition: Information that locates and identifies a specific address, as defined by postal services, presented in free format text.

Datatype: "Max70Text"

5.2.6.3.16   country

Multiplicity: [1..1]

Definition: Nation with its own government.

Datatype: "CountryCode"

5.2.7   DateAndPlaceOfBirth

5.2.7.1   *DateAndPlaceOfBirth structure[6]*

Element	Multiplicity	Type	Constraint	Or
dateOfBirth	[1..1]	Date	C2	
placeOfBirth	[1..1]	Text		

5.2.7.2   *DateAndPlaceOfBirth constraints*

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date)

5.2.7.3   *DateAndPlaceOfBirth elements*

5.2.7.3.1   dateOfBirth

Multiplicity: [1..1]

Definition: Date on which a person is born.

Datatype: Date

5.2.7.3.2   placeOfBirth

Multiplicity: [1..1]

Definition: The town and/or the city and/or the suburb and/or the country subdivision and/or the country where the person was born.

Datatype: "Max70Text"

---

[6] Adapted from International Civil Aviation Organization (ICAO) Doc 9303, *Machine Readable Travel Documents, Seventh Edition, 2015 Part 3: Specifications Common to all MRTDs,* Section *3.7 Representation of Place of Birth.*

5.2.8 NationalIdentification

5.2.8.1 *NationalIdentification structure*

Element	Multiplicity	Type	Constraint	Or
nationalIdentifier	[1..1]	Text	C11	
nationalIdentifierType	[1..1]	SingleValueFromList	C7, C9, C11	
countryOfIssue	[0..1]	CountryCode	C3	
registrationAuthority	[0..1]	RegistrationAuthority	C9, C10	

5.2.8.2 *NationalIdentification constraints*

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element RegistrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element RegistrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   RegistrationAuthority

The value used for the applicable element must be present on the GLEIF Registration Authorities List.

C11   ValidLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

5.2.8.3 *NationalIdentification elements*

5.2.8.3.1 nationalIdentifier

Multiplicity: [1..1]

Definition: An identifier issued by an appropriate issuing authority.

Datatype: "Max35Text"

5.2.8.3.2 nationalIdentifierType

Multiplicity: [1..1]

Definition: Specifies the type of identifier specified.

Datatype: "NationalIdentifierTypeCode"

5.2.8.3.3   countryOfIssue

Multiplicity: [0..1]

Definition: Country of the issuing authority.

Datatype: "CountryCode"

5.2.8.3.4   registrationAuthority

Multiplicity: [0..1]

Definition: A code specifying the registration authority.

Datatype: "RegistrationAuthority"

5.2.9   LegalPerson

5.2.9.1   *LegalPerson structure*

Element	Multiplicity	Type	Constraint	OR
name	[1..1]	LegalPersonName	C5	
geographicAddress	[0..n]	Address	C3, C4, C8	
customerIdentification	[0..1]	Text	C4	
nationalIdentification	[0..1]	NationalIdentification	C3, C4, C7, C9, C10, C11	
countryOfRegistration	[0..1]	CountryCode	C3	

5.2.9.2   *LegalPerson constraints*

C3   Country

The value used for the field country must be present on the ISO-3166 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or nationalIdentification and/or customerNumber is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element RegistrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element RegistrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   RegistrationAuthority

The value used for the element must be present on the GLEIF Registration Authorities List.

C11   ValidLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

5.2.9.3   *LegalPerson elements*

5.2.9.3.1   name

Multiplicity: [1..1]

Definition: The name of the legal person.

Component: LegalPersonName

5.2.9.3.2   geographicAddress

Multiplicity: [0..1]

Definition: The address of the legal person.

Component: Address

5.2.9.3.3   customerNumber

Multiplicity: [0..1]

Definition: The unique identification number applied by the VASP to customer.

Datatype: "Max50Text"

5.2.9.3.4   nationalIdentification

Multiplicity: [0..1]

Definition: A distinct identifier used by governments of countries to uniquely identify a natural or legal person.

Component: NationalIdentification

5.2.9.3.5 countryOfRegistration

Multiplicity: [0..1]

Definition: The country in which the legal person is registered.

Datatype: "CountryCode"

5.2.10 LegalPersonName

5.2.10.1 *LegalPersonName structure*

Element	Multiplicity	Type	Constraint	OR
nameIdentifier	[1..n]	LegalPersonNameID	C5	
localNameIdentifier	[0..n]	LocalLegalPersonNameID		
phoneticNameIdentifier	[0..n]	LocalLegalPersonNameID		

5.2.10.2 *LegalPersonName constraints*

C5   LegalNamePresent

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

5.2.10.3 *LegalPersonName elements*

5.2.10.3.1 nameIdentifier

Multiplicity: [1..n]

Definition: The name and type of name by which the legal person is known.

Component: LegalPersonNameID

5.2.10.3.2 localNameIdentifier

Multiplicity: [0..n]

Definition: The name and type of name by which the legal person is known using local characters.

Component: LocalLegalPersonNameID

5.2.10.3.3 phoneticNameIdentifier

Multiplicity: [0..n]

Definition: The name and type of name by which the legal person is known using local characters.

Component: LocalLegalPersonNameID

5.2.11 LegalPersonNameID

5.2.11.1.1 LegalPersonNameID structure

Element	Multiplicity	Type	Constraint	OR
legalPersonName	[1..1]	Text		
legalPersonNameIdentifierType	[1..1]	SingleValueFromList	C5	

5.2.11.2 *LegalPersonNameID constraints*

C5   **LegalNamePresent**

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

5.2.11.3 *LegalPersonNameID elements*

5.2.11.3.1 legalPersonName

Multiplicity: [1..1]

Definition: Name by which the legal person is known.

Datatype: "Max100Text"

5.2.11.3.2 legalPersonNameIdentifierType

Multiplicity: [1..1]

Definition: The nature of the name specified.

Datatype: "LegalPersonNameTypeCode"

5.2.12 LocalLegalPersonNameID

5.2.12.1 *LocalLegalPersonNameID structure*

Element	Multiplicity	Type	Constraint	OR
legalPersonName	[1..1]	Text		
legalPersonNameIdentifierType	[1..1]	SingleValueFromList		

5.2.12.2 *LocalLegalPersonNameID constraints*

There are no constraints that apply to the LocalLegalPersonNameID component.

5.2.12.3 *LocalLegalPersonNameID elements*

5.2.12.3.1 legalPersonName

Multiplicity: [1..n]

Definition: Name by which the legal person is known.

Datatype: "LocalMax100Text"

5.2.12.3.2 legalPersonNameIdentifierType

Multiplicity: [1..1]

Definition: The nature of the name specified.

Datatype: "LegalPersonNameTypeCode"

5.2.13 IntermediaryVASP

5.2.13.1 *IntermediaryVASP structure*

Element	Multiplicity	Type	Constraint	OR
intermediaryVASP	[1..1]	Person	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	
sequence	[1..1]	Number	C12	

5.2.13.2 *IntermediaryVASP constraints*

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   registrationAuthority

The value used for the applicable element must be present on the GLEIF Registration Authorities List.

C11   validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

C12   sequentialIntegrity

Occurrences of this component must have a corresponding sequence value starting from 0 and remain uninterrupted through to the final instance.

5.2.13.3   *IntermediaryVASP elements*

5.2.13.3.1   intermediaryVASP

Multiplicity: [1..1]

Definition: the VASP in a serial chain that receives and retransmits a VA transfer on behalf of the originating VASP and the beneficiary VASP, or another intermediary VASP.

Component: Person

5.2.13.3.2   sequence

Multiplicity: [1..1]

Definition: the sequence in a serial chain at which the corresponding intermediary VASP participates in the transfer.

Datatype: "Number"

5.3   Datatypes

5.3.1   "Max100Text"

Definition: A character string that is restricted to a maximum length of 100 characters, limited to Latin characters and numbers.

Type: Text

Format:

 Minimum Length: 1

 Maximum Length: 100

Regex:

```
^[a-zA-Z0-9' ]{1,100}$
```

5.3.2   "LocalMax100Text"

Definition: A character string that is restricted to a maximum length of 100 characters.

Type: Text

Format:

 Minimum Length: 1

 Maximum Length: 100

Regex:

```
^.{1,100}$
```

5.3.3   "Max50Text"

Definition: A character string that is restricted to a maximum length of 50 characters, limited to Latin characters and numbers.

Type: Text

Format:

 Minimum Length: 1

 Maximum Length: 50

Regex:

```
^[a-zA-Z0-9' ]{1,50}$
```

5.3.4   "Max70Text"

Definition: A character string that is restricted to a maximum length of 70 characters, limited to Latin characters and numbers.

Type: Text

Format:

Minimum Length: 1

Maximum Length: 70

Regex:

```
^[a-zA-Z0-9' ]{1,70}$
```

5.3.5 "Max35Text"

Definition: A character string that is restricted to a maximum length of 35 characters, limited to Latin characters and numbers.

Type: Text

Format:

Minimum Length: 1

Maximum Length: 35

Regex:

```
^[a-zA-Z0-9' ]{1,35}$
```

5.3.6 "Max16Text"

Definition: A character string that is restricted to a maximum length of 16 characters, limited to Latin characters and numbers.

Type: Text

Format:

Minimum Length: 1

Maximum Length: 16

Regex:

```
^[a-zA-Z0-9' ]{1,16}$
```

5.3.7 "LEIText"

Definition: a 20-character, alpha-numeric code.

Type: Text

Format:

Minimum Length: 20

Maximum Length: 20

Regex:

```
^[0−9A−Z]{18}[0−9]{2}$
```

5.3.8 "NaturalPersonNameTypeCode"

Definition: A single value corresponding to the nature of name being adopted.

Code	Name	Description
ALIA	Alias name	A name other than the legal name by which a natural person is also known.
BIRT	Name at birth	The name given to a natural person at birth.
MAID	Maiden name	The original name of a natural person who has changed their name after marriage.
LEGL	Legal name	The name that identifies a natural person for legal, official or administrative purposes.
MISC	Unspecified	A name by which a natural person may be known but which cannot otherwise be categorized or the category of which the sender is unable to determine.

5.3.9 "LegalPersonNameTypeCode"

Definition: A single value corresponding to the nature of name being specified for the legal person.

Code	Name	Description
LEGL	Legal name	Official name under which an organisation is registered.
SHRT	Short name	Specifies the short name of the organisation.
TRAD	Trading name	Name used by a business for commercial purposes, although its registered legal name, used for contracts and other formal situations, may be another.

5.3.10 "Date"

Definition: A point in time, represented as a day within the calendar year. Compliant with ISO 8601.

Type: Text

Format:

YYYY-MM-DD

Regex:

```
^([0-9]{4})-([0-9]{2})-([0-9]{2})$
```

5.3.11 "AddressTypeCode"

Definition: Identifies the nature of the address.

Code	Name	Description
HOME	Residential	Address is the home address.
BIZZ	Business	Address is the business address.
GEOG[7]	Geographic	Address is the unspecified physical (geographical) address suitable for identification of the natural or legal person.

5.3.12 "CountryCode"

Definition: two alphabetic characters representing an ISO-3166 Alpha-2 country, including the code 'XX' to represent 'an indicator for unknown States, other entities or organisations'[8].

Type: Text

Format:

AA

Regex:

```
^[A-Z]{2}$
```

5.3.13 "RegistrationAuthority"[9]

Definition: 8-character code representing a legal entity registration authority.

Type: Text

Format:

RA000099

Regex:

```
^RA([0-9]{6})$
```

---

[7] Additional 'Address Type' value for the purposes of IVMS101; covers any physical / geographic address type held by the VASP on their client.

[8] World International Property Organisation *Standard ST.3 Recommended standard on two-letter codes for the representation of states, other entities and intergovernmental organizations,* Paragraph 6.

[9] Registration Authority Code, as published by the Global Legal Entity Identifier Foundation (GLEIF), *Registration Authorities List.*

5.3.14 "NationalIdentifierTypeCode"[10]

Definition: Identifies the national identification type.

Code	Name	Description
ARNU	Alien registration number	Number assigned by a government agency to identify foreign nationals.
CCPT	Passport number	Number assigned by a passport authority.
RAID	Registration authority identifier	Identifier of a legal entity as maintained by a registration authority.
DRLC	Driver license number	Number assigned to a driver's license.
FIIN	Foreign investment identity number	Number assigned to a foreign investor (other than the alien number).
TXID	Tax identification number	Number assigned by a tax authority to an entity.
SOCS	Social security number	Number assigned by a social security agency.
IDCD	Identity card number	Number assigned by a national authority to an identity card.
LEIX	Legal Entity Identifier	Legal Entity Identifier (LEI) assigned in accordance with ISO 17442[11].
MISC	Unspecified	A national identifier which may be known but which cannot otherwise be categorized or the category of which the sender is unable to determine.

5.3.15 "Number"

Definition: Number represented as an integer.

Format:

      totalDigits: 18

      fractionDigits: 0

---

[10] NationalIdentifierTypeCode applies a restriction over the codes present in ISO20022 datatype 'TypeOfIdentification4Code'.
[11] The LEI is a 20-character, alpha-numeric code that enables clear and unique identification of legal entities participating in financial transactions.

5.3.16 "TransliterationMethodCode"[12]

Definition: Identifies the national script from which transliteration to Latin script is applied.

Code	Script	Standard
arab	Arabic (Arabic language)	ISO 233-2:1993
aran	Arabic (Persian language)	ISO 233-3:1999
armn	Armenian	ISO 9985:1996
cyrl	Cyrillic	ISO 9:1995
deva	Devanagari & related Indic	ISO 15919:2001
geor	Georgian	ISO 9984:1996
grek	Greek	ISO 843:1997
hani	Han (Hanzi, Kanji, Hanja)	ISO 7098:2015
hebr	Hebrew	ISO 259-2:1994
kana	Kana	ISO 3602:1989
kore	Korean	Revised Romanization of Korean
thai	Thai	ISO 11940-2:2007
othr	Script other than those listed above	Unspecified

---

[12] Datatype list 'TransliterationMethodCode' uses the four-letter script code as presented in ISO 15924, *Codes for the representation of names of scripts*.

6 Data model definition

6.1 Context for the data model

This section describes the entities identified as being in scope as set out in Section 2 (Background & Rationale). It includes the structures and constraints applicable to the following entities:

- Originator
- Beneficiary
- Originating VASP
- Beneficiary VASP
- Transfer path
- Payload metadata.

Figure 4, IVMS data model taxonomy (2) represents the objects within the IVMS data model taxonomy that are documented in this section.
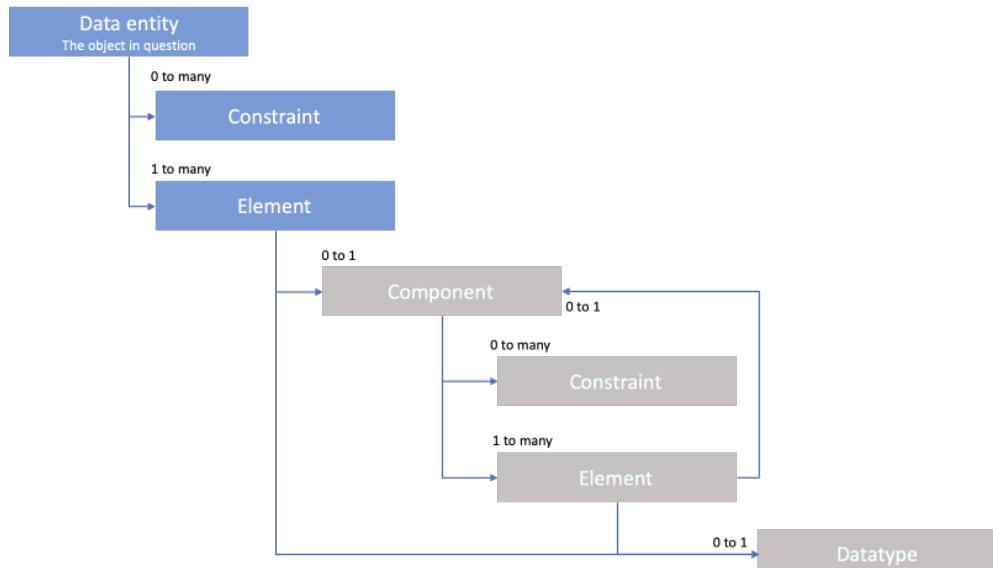

Figure 4 IVMS data model taxonomy (2) data entity through to element

6.2 Originator

The originator is defined in Section 1.1 as the account holder who allows the VA transfer from that account or, where there is no account, the natural or legal person that places the order with the originating VASP to perform the VA transfer.

6.2.1 Originator structure

Element	Multiplicity	Type	Constraint	OR
originatorPersons	[1..n]	Person	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	
accountNumber	[0..n]	Text		

6.2.2 Originator constraints

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   registrationAuthority

The value used for the element must be present on the GLEIF Registration Authorities List.

C11   validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

6.2.3   Originator elements

6.2.3.1   *originatorPersons*

Multiplicity: [1..n]

Definition: the account holder who allows the VA transfer from that account or, where there is no account, the natural or legal person that places the order with the originating VASP to perform the VA transfer.

Component: Person

6.2.3.2   *accountNumber*

Multiplicity: [0..1]

Definition: Identifier of an account that is used to process the transaction. The value for this element is case-sensitive.

Datatype: "Max100Text"

6.3   Beneficiary

The beneficiary is defined in Section 1.1 as the natural or legal person or legal arrangement who is identified by the originator as the receiver of the requested VA transfer.

6.3.1   Beneficiary structure

Element	Multiplicity	Type	Constraint	OR
beneficiaryPerson	[1..n]	Person	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	
accountNumber	[0..n]	Text		

6.3.2   Beneficiary constraints

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   registrationAuthority

The value used for the element must be present on the GLEIF Registration Authorities List.

C11   validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

6.3.3   Beneficiary elements

6.3.3.1   *beneficiaryPerson*

Multiplicity: [1..n]

Definition: the natural or legal person or legal arrangement who is identified by the originator as the receiver of the requested VA transfer.

Component: Person

6.3.3.2   *accountNumber*

Multiplicity: [0..1]

Definition: Identifier of an account that is used to process the transaction. The value for this element is case-sensitive.

Datatype: "Max100Text"

6.4   OriginatingVASP

The originating VASP is defined in Section 1.1 as the VASP which initiates the VA transfer, and transfers the VA upon receiving the request for a VA transfer on behalf of the originator.

6.4.1   OriginatingVASP structure

Element	Multiplicity	Type	Constraint	OR
originatingVASP	[0..1]	Person	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	

6.4.2   OriginatingVASP constraints

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3 Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4 OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5 LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6 LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7 ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8 ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9 CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10 registrationAuthority

The value used for the element must be present on the GLEIF Registration Authorities List.

C11 validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

6.4.3 OriginatingVASP elements

6.4.3.1 *originatingVASP*

Multiplicity: [0..1]

Definition: refers to the VASP which initiates the VA transfer, and transfers the VA upon receiving the request for a VA transfer on behalf of the originator.

Component: Person

6.5   BeneficiaryVASP

The beneficiary is defined in Section 1.1 as the VASP which receives the transfer of a virtual asset from the originating VASP directly or through an intermediary VASP and makes the funds available to the beneficiary.

6.5.1   BeneficiaryVASP structure

Element	Multiplicity	Type	Constraint	OR
beneficiaryVASP	[0..1]	Person	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	

6.5.2   BeneficiaryVASP constraints

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   registrationAuthority

The value used for the applicable element must be present on the GLEIF Registration Authorities List.

C11   validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

6.5.3   BeneficiaryVASP elements

6.5.3.1   *beneficiaryVASP*

Multiplicity: [0..1]

Definition: the VASP which receives the transfer of a virtual asset from the originating VASP directly or through an intermediary VASP and makes the funds available to the beneficiary.

Component: Person

6.6   TransferPath

The transfer path refers to the intermediary VASP(s) participating in a serial chain that receive(s) and retransmit(s) a VA transfer on behalf of the originating VASP and the beneficiary VASP, or another intermediary VASP, together with their corresponding sequence number.

6.6.1   TransferPath structure

Element	Multiplicity	Type	Constraint	OR
transferPath	[0..n]	IntermediaryVASP	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12	

6.6.2 TransferPath constraints

C1   OriginatorInformationNaturalPerson

If the originator is a NaturalPerson either (geographicAddress with an addressType value of 'GEOG' or 'HOME' or 'BIZZ') and/or customerNumber and/or nationalIdentification and/or dateAndPlaceOfBirth is required.

C2   DateInPast

If dateOfBirth is specified, the date specified must be a historic date (i.e. a date prior to the current date).

C3   Country

The value used for the field country must be present on the ISO-3166-1 alpha-2 codes or the value XX.

C4   OriginatorInformationLegalPerson

If the originator is a LegalPerson either (geographicAddress with an addressType value of 'GEOG') and/or customerNumber and/or nationalIdentification is required.

C5   LegalNamePresentLegalPerson

At least one occurrence of legalPersonNameIdentifier must have the value 'LEGL' specified in the element *legalPersonNameIdentifierType*.

C6   LegalNamePresentNaturalPerson

At least one occurrence of naturalPersonNameID must have the value 'LEGL' specified in the element *naturalPersonNameIdentifierType*.

C7   ValidNationalIdentifierLegalPerson

A legal person must have a value for nationalIdentifierType of either 'RAID' or 'MISC' or 'LEIX' or 'TXID'.

C8   ValidAddress

There must be at least one occurrence of the element addressLine or (streetName and buildingName and/or buildingNumber).

C9   CompleteNationalIdentifierLegalPerson

A LegalPerson must not have a value for countryOfIssue and (must have a value for the element registrationAuthority if the value for nationalIdentifierType is not 'LEIX' and must not have a value for the element registrationAuthority if the value for nationalIdentifierType is 'LEIX').

C10   registrationAuthority

The value used for the applicable element must be present on the GLEIF Registration Authorities List.

C11   validLEI

A LegalPerson with a nationalIdentifierType of 'LEIX' must have a value for the element nationalIdentifier that adheres to the convention as stated in datatype 'LEIText'.

C12   sequentialIntegrity

Occurrences of this component must have a corresponding sequence value starting from 0 and remain uninterrupted through to the final instance.

6.6.3   TransferPath elements

6.6.3.1   *transferPath*

Multiplicity: [0..n]

Definition: the intermediary VASP(s) participating in a serial chain that receive and retransmit a VA transfer on behalf of the originating VASP and the beneficiary VASP, or another intermediary VASP, together with their corresponding sequence number.

Component: IntermediaryVASP

6.7   PayloadMetadata

Data describing the contents of the payload.

6.7.1   PayloadMetadata structure

Element	Multiplicity	Type	Constraint	OR
transliterationMethod	[0..n]	SingleValueFromList		

6.7.2   PayloadMetadata constraints

There are no constraints that apply to the PayloadMetadata entity.

6.7.3   PayloadMetadata elements

6.7.3.1   *transliterationMethod*

Multiplicity: [0..n]

Definition: the method used to map from a national system of writing to Latin script.

Datatype: "TransliterationMethodCode"

7 Handling of multiple character sets

7.1 Character set and character encoding

Data shall be submitted using UTF-8 character encoding. Unless otherwise specified, data shall be represented in Latin script (i.e. A to Z, a to z) and Arabic numerals (i.e. 1234567890).

7.2 Transformation of national language

Where data is in a national language that does not use Latin script, it must be either:

- Transliterated into Latin characters; or
- Translated into a language to which it may be more commonly known to the international community[13].

Data may also be transmitted using national language where a suitable element exists (i.e. those elements prefixed 'local').

7.3 Transliteration standards

The following scripts shall be transliterated into Latin characters using the corresponding standards set out below:

Script	Standard
Arabic (Arabic language)	ISO 233-2:1993
Arabic (Persian language)	ISO 233-3:1999
Armenian	ISO 9985:1996
Cyrillic	ISO 9:1995
Devanagari & related Indic	ISO 15919:2001
Han (Hanzi, Kanji, Hanja)	ISO 7098:2015
Hebrew	ISO 259-2:1994
Georgian	ISO 9984:1996
Greek	ISO 843:1997
Kana	ISO 3602:1989

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[13] Adapted from International Civil Aviation Organization (ICAO) Doc 9303, *Machine Readable Travel Documents, Seventh Edition, 2015 Part 3: Specifications Common to all MRTDs,* Section *3.1 Languages and Characters.*

Script	Standard
Korean	Revised Romanization of Korean[14]
Thai	ISO 11940-2:2007

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[14] National Institute of Korean Language, *Romanization of Korean*
https://www.korean.go.kr/front_eng/roman/roman_01.do

8 Business examples

8.1 Example 1

VASP A, on behalf of originator Alice Smith, transfers 1BTC to Bob Barnes, who holds a custodial wallet with VASP B.

Originator

Dr Alice Smith is an American national residing at 1 Weathering Views, 24 Potential Street, 91765, Walnut, California USA. She was born on the 25th of February 1990.

Beneficiary

Mr. Bob Barnes is a Canadian national residing at 42 St Johns Close, Pershing Wells, PW3 9NZ London, UK. He was born on the 14th of January 1963 in London, Ontario.

Originating VASP

VASP A is a financial institution providing covered VA activities. For the purposes of sharing identification information per Recommendation 16, VASP A uses the geographic address of the customer. The VASP has also been assigned an LEI, which is 3M5E1GQKGL17HI8CPN20.

Business Data

The IVMS101 payload between VASP A and VASP B:

Element	Content
Originator	
originatorPersons	
naturalPerson	
name*	
nameIdentifier*	
primaryIdentifier	Smith
secondaryIdentifier	Dr Alice
nameIdentifierType	LEGL
geographicAddress[15]	
addressType	GEOG
streetName	Potential Street
buildingNumber	24
buildingName	Weathering Views

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[15] In Example 1, the method selected by the VASP to identify the originator is the Geographic Address.

postcode	91765
townName	Walnut
countrySubDivision	California
country	US
customerIdentification	1002390
accountNumber	10023909
Beneficiary	
beneficiaryPersons	
naturalPerson	
name*	
nameIdentifier*	
primaryIdentifier	Barnes
secondaryIdentifier	Robert
nameIdentifierType	LEGL
accountNumber	1BvBMSEYstWetqTFn5Au4m4GFg7xJaNVN2
OriginatingVASP	
originatingVASP	
name*	
nameIdentifier*	
legalPersonName	VASP A
legalPersonNameIdentifierType	LEGL
nationalIdentification	
nationalIdentifier	3M5E1GQKGL17HI8CPN20
nationalIdentifierType	LEIX

8.2 Example 2

VASP C, on behalf of originator 吴信利 (Xinli Wu), transfers 1 ETH to ABC Limited (trading as CBA Trading), which holds a custodial wallet with VASP D. VASP C routes ETH transfers through the intermediary VASP E.

Originator

吴信利 (Xinli Wu) is a Chinese national residing in Dar es Salaam, Tanzania. He operates as a sole trader, contracting for a multi-national construction firm in providing civil engineering expertise. Xinli Wu is registered as such under his own name by the Business Registrations and

Licensing Agency (BRELA), registration number 446005. Xinli Wu uses VASP C for safekeeping, exchanging and remittances of virtual assets used in a business capacity.

<u>Beneficiary</u>

ABC Limited also goes by the registered trading name of CBA Trading in Santiago, Chile. The beneficiary holds a managed wallet with VASP D.

<u>Originating VASP</u>

VASP C serves as an exchange for virtual assets, custodial wallet provider and provides a means to send and receive virtual assets. Each managed wallet is assigned a unique identifier. For the purposes of sharing identification information per Recommendation 16, VASP C uses the national identifier of the customer.

<u>Transfer Path</u>

VASP C routes ETH transfers through the intermediary VASP E.

Business Data

The IVMS101 payload between VASP C and VASP D:

Element	Content
Originator	
originatorPersons	
naturalPerson	
name*	
nameIdentifier*	
primaryIdentifier	Wu
secondaryIdentifier	Xinli
nameIdentifierType	LEGL
localNameIdentifier	
primaryIdentifier	吴
secondaryIdentifier	信利
nameIdentifierType	LEGL
nationalIdentification[16]	
nationalIdentifier	446005
nationalIdentifierType	RAID
registrationAuthority	RA000553

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[16] In Example 2, the method selected by the VASP to identify the originator is the National Identifier.

countryOfResidence	TZ
Beneficiary	
beneficiaryPersons	
legalPerson	
name*	
nameIdentifier*	
legalPersonName	ABC Limited
legalPersonNameIdentifierType	LEGL
nameIdentifier	
legalPersonName	CBA Trading
legalPersonNameIdentifierType	TRAD
accountNumber	00010190CBATRAD
PayloadMetadata	
transliterationMethod	hani
TransferPath	
transferPath	
intermediaryVASP	
legalPerson	
name*	
nameIdentifier*	
legalPersonName	VASP E
legalPersonNameIdentifierType	LEGL
sequence	0