The rulebook β_{AE}

Contents

1 IR2 rules

$\beta_{IR2\text{-}M01}$	A trustworthy ecosystem must have at least one rulebook	$\forall(E)$ $(Eco(E)$ $\wedge\ \exists\ \beta \in S_\beta$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}M02}$	Every rulebook must be uniquely identified	$\forall(E)$ $(Eco(E)$ $\wedge\ (\forall\ \beta \in S_\beta\ (f_{id}(\beta) = c \rightarrow \exists! c \in \mathcal{R}))$ $\rightarrow\ TwsEco(E))$

Table 1: IR2 rulebook-related mandatory rules

$\beta_{IR2\text{-}M10}$	A participant is an actor that has a given name (for a natural person) or an organisation name (for an organisation)	$\forall(X)$ $(Actor(X)$ $\wedge$ $(\exists\ A \in S_{attn}\ (\mathcal{A}ttestation_{t_{sub}}(A) = X))$ $\wedge$ $(((\mathcal{A}ttestation_{t_{att}}(A) = givenName)$ $\wedge\ (\mathcal{A}ttestation_{t_{val}}(A) \neq \emptyset))$ $\vee\ ((\mathcal{A}ttestation_{t_{att}}(A) = orgName)$ $\wedge\ (\mathcal{A}ttestation_{t_{val}}(A) \neq \emptyset)))$ $\rightarrow Participant(X))$

Table 2: IR2 participant-related mandatory rule

$\beta_{IR2\text{-}D01A\text{-}AE}$	A trustworthy ecosystem must contain at least one endorser	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{EnDo}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D01B\text{-}AE}$	A trustworthy ecosystem must contain at least one enforcer	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{EnFo}))$ $\rightarrow\ TwsEco(X))$
$\beta_{IR2\text{-}D02\text{-}AE}$	A trustworthy ecosystem must contain at least one authentic source	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{AS}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D03\text{-}AE}$	A trustworthy ecosystem must contain at least one accreditation body	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{AB}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D04\text{-}AE}$	A trustworthy ecosystem must contain at least one conformity assessment body	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{CAB}))$ $\rightarrow\ TwsEco(E))$

Table 3: IR2 enabler plane-related discretionary rules

$\beta_{IR2\text{-}D05\text{-}AE}$	A trustworthy ecosystem must contain at least one evidence service provider	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{EvSP}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D06\text{-}AE}$	A trustworthy ecosystem must contain at least one claim status service provider	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{CsSP}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D07\text{-}AE}$	A trustworthy ecosystem must contain at least one trustworthiness monitor	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{TwsMo}))$ $\rightarrow\ TwsEco(E))$

Table 4: IR2 trustworthiness provision plane-related discretionary rules

$\beta_{IR2\text{-}D08\text{-}AE}$	A trustworthy ecosystem must contain at least one functional service provider	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{FuSP}))$ $\rightarrow\ TwsEco(E))$
$\beta_{IR2\text{-}D09\text{-}AE}$	A trustworthy ecosystem must contain at least one functional service consumer	$\forall(E)$ $(Eco(E)$ $\wedge\ (\exists\ A \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = R_{FuSC}))$ $\rightarrow\ TwsEco(E))$

Table 5: IR2 functional plane-related discretionary rules

2 IR3 rules

$\beta_{IR3\text{-}M01}$	A participant is an actor that is uniquely identified	$\forall(X)$ $(Actor(X)$ $\wedge\ (\forall\ A \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = X$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = c)$ $\rightarrow \exists! c \in \mathcal{P})$ $\rightarrow Participant(X))$ Alternatively $\forall(X)$ $(Actor(X)$ $\wedge\ (\exists\ A_1,\ A_2 \in S_{attn}$ $((A_1 \neq A_2)$ $\wedge\ (\mathcal{A}ttestation_{t_{sub}}(A_1) = X$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier)$ $\wedge\ (\mathcal{A}ttestation_{t_{sub}}(A_2) = X$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = eIdentifier)$ $\rightarrow (\mathcal{A}ttestation_{t_{val}}(A_1) = \mathcal{A}ttestation_{t_{val}}(A_2))$ $\rightarrow Participant(X))$

Table 6: IR3 linked and unique identity mandatory rule

$\beta_{IR3\text{-}D11\text{-}AE}$	A participant's identity must be self-attested	$\forall\ X \in S_{PT}\ \exists\ A \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A) = \mathcal{A}ttestation_{t_{sub}}(A))$

Table 7: IR3 linked and unique identity discretionary rule/self

$\beta_{IR3\text{-}D21\text{-}AE}$	For all participants there must at least one identity attestation that is not self-attested	$\forall\ X \in S_{PT}\ \exists\ A \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A) = eIdentifier$ $\rightarrow \mathcal{A}ttestation_{a_{id}}(A) \neq \mathcal{A}ttestation_{t_{val}}(A))$
$\beta_{IR3\text{-}D22\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP})$
$\beta_{IR3\text{-}D23\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider whose role has been attested to by a trustworthiness monitor	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3, \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$

Table 8: IR3 linked and unique identity discretionary rules

$\beta_{IR3\text{-}D24\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider • whose role has been attested to by a trustworthiness monitor • who confirms that the identifying attributes exist in corroborative evidence and the binding between an applicant and an identity was checked using one factor prior enrolment (ISO/IEC 29003:2018 Level 2)	$\forall\ X \in S_{PT}\ \exists\ A_1, A_2, A_3, A_4 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_4) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_5) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_5) =$ $ISO\text{-}IEC\text{-}TS\text{-}29003\text{:}2018\text{:}Level2)$
$\beta_{IR3\text{-}D25\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider • whose role has been attested to by a trustworthiness monitor • who confirms that the identifying attributes exist in corroborative evidence and the binding between an applicant and an identity was checked using one factor prior enrolment (ISO/IEC 29003:2018 Level 3)	$\forall\ X \in S_{PT}\ \exists\ A_1, A_2, A_3, A_4 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_4) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_5) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_5) =$ $ISO\text{-}IEC\text{-}TS\text{-}29003\text{:}2018\text{:}Level3)$

Table 9: IR3 linked and unique identity discretionary rules

$\beta_{IR3\text{-}D31\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider who is legally attested in that role	$\forall\ X \in S_{PT}\ \exists\ A_1, A_2, A_3 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = uri)$
$\beta_{IR3\text{-}D32\text{-}AE}$	The identity of every participant • must be attested to by at least one evidence service provider whose role has been attested to by a trustworthiness monitor, and • the evidence service provider and the trustworthiness monitor are legally attested in their respective roles	$\forall\ X \in S_{PT}\ \exists\ A_1, A_2, A_3, A_4, A_5 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_4) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_4) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_4) = uri$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_5) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_5) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_5) = uri)$

Table 10: IR3 linked and unique identity discretionary rules

$\beta_{IR3\text{-}D33\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider • whose role has been attested to by a trustworthiness monitor • who confirms that the identifying attributes exist in corroborative evidence and the binding between an applicant and an identity was checked using one factor prior enrolment (ISO/IEC 29003:2018 Level 2), and there must be legal attestation for the evidence service provider and trustworthiness monitor in their respective roles.	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3,\ A_4,\ A_5,\ A_6 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_4) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_4) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_4) =$ $ISO\text{-}IEC\text{-}TS\text{-}29003\text{:}2018\text{:}Level2$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_5) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_5) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_5) = uri$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_6) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_6) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_6) = uri)$

Table 11: IR3 linked and unique identity discretionary rules

$\beta_{IR3\text{-}D34\text{-}AE}$	The identity of every participant must be attested to by at least one evidence service provider • whose role has been attested to by a trustworthiness monitor • who confirms that the identifying attributes exist in corroborative evidence and the binding between an applicant and an identity was checked using one factor prior enrolment (ISO/IEC 29003:2018 Level 3), and there must be legal attestation for the evidence service provider and trustworthiness monitor in their respective roles.	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3,\ A_4,\ A_5,\ A_6 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = eIdentifier$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_3) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_4) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_4) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_4) =$ $ISO\text{-}IEC\text{-}TS\text{-}29003\text{:}2018\text{:}Level3$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_5) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_5) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_5) = uri$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_6) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_6) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_6) = uri)$

Table 12: IR3 linked and unique identity discretionary rules

3 IR4 rules

$\beta_{IR4-M01}$	A participant's base roles must be self-attested	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{abr}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{a_{id}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = \mathcal{A}ttestation_{t_{val}}(A_1))$

Table 13: IR4 Mandatory rule

$\beta_{IR4\text{-}D021\text{-}AE}$	For each role that participants have attestations for, there must be at least one role attestation that is not self-attested	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = \mathcal{A}ttestation_{t_{val}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) \neq \mathcal{A}ttestation_{a_{id}}(A_1))$

Table 14: IR4 Discretionary rules/others

$\beta_{IR4\text{-}D022\text{-}AE}$	Should one want to rely on the services of an accreditation body that has an ISO/IEC 17011 [2] attestation then there must be such an accreditation body and its attestation must be provided by a member of the International Attestation Forum (IAF)	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{AB}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = ISO\text{-}IEC\text{-}17011\text{:}2017$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) \in \{IAF\text{-}Memberlist\})$

Table 15: IR4 Discretionary rules/AB

$\beta_{IR4\text{-}D023\text{-}AE}$	Should one want to rely on a conformity assessment body that has an ISO/IEC 17065 [1] attestation for the assessment of evidence or claim status service providers then there must be a conformity assessment body that has such attestation issued by a member of the EA	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{CAB}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = ISO\text{-}IEC\text{-}17065\text{:}2012$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) \in \{EA\text{-}Memberlist\})$
$\beta_{IR4\text{-}D024\text{-}AE}$	Should one want to rely on a conformity assessment body that has an ETSI EN 319 403 [4] attestation for the assessment of evidence or claim status service providers then there must be a conformity assessment body that has such attestation issued by a member of the EA	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{CAB}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = EN319403$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) \in \{EA\text{-}Memberlist\})$

Table 16: IR4 Discretionary rules/others/CAB

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$\beta_{IR4\text{-}D025\text{-}AE}$	Should one want to rely on the services of an evidence service provider that has an ISO/IEC 27001 [3] attestation then there must be such an evidence service provider and its attestation must be provided by a member of the EA	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = ISO\text{-}IEC\text{-}27001\text{:}2013$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) \in \{EA\text{-}Memberlist\})$
$\beta_{IR4-D026-AE}$	Should one want to rely on the services of an evidence service provider then there must be such an evidence service provider and it must be whose role has been attested to by a trustworthiness monitor	$\exists\ X \in S_{PT}\ \exists\ A_1 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = R_{EvSP}$ $\rightarrow \exists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{a_{id}}(A_1) = \mathcal{A}ttestation_{t_{sub}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{TwsMo}))$

Table 17: IR4 Discretionary rules/others/CAB

$\beta_{IR4\text{-}D027A\text{-}AE}$	Should one want to rely on the services of an evidence service provider that has an eIDAS TSP attestation then there must be such an evidence service provider and it must be listed in a European Trusted List by a trustworthiness monitor	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = isRegisteredIn$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = eIDASTrustList$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_3) = R_{TwsMo})$
$\beta_{IR4\text{-}D027B\text{-}AE}$	Should one want to rely on the services of an evidence service provider that has an eIDAS TSP attestation then there must be such an evidence service provider and it must demonstrate conformance to ETSI EN 319 403 [5]	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = ETSI\text{-}EN\text{-}319\text{-}403$

Table 18: IR4 Discretionary rules/others/EvSP

$\beta_{IR4\text{-}D028\text{-}AE}$	Should one want to rely on the services of a claim status service provider that has an ISO/IEC 27001 [3] attestation then there must be such a claim status service provider and its attestation must be provided by a member of the EA	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{CsSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesConformTo$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = ISO\text{-}IEC\text{-}27001\text{:}2013$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2)\ in\ \{EA\text{-}Memberlist\})$
$\beta_{IR4\text{-}D029\text{-}AE}$	Should one want to rely on the services of a claim status service provider then there must be such a claim status service provider and it must be whose role has been attested to by a trustworthiness monitor	$\exists\ X \in S_{PT}\ \exists\ A_1 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = R_{CsSP}$ $\rightarrow \exists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{a_{id}}(A_1) = \mathcal{A}ttestation_{t_{sub}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{TwsMo}))$
$\beta_{IR4\text{-}D030\text{-}AE}$	Should one want to rely on the services of an claim status service provider that has an eIDAS TSP attestation then there must be such an claim status service provider and it must be listed in a European Trusted List by a trustworthiness monitor	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{CsSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_1)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = isRegisteredIn$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = eIDASTrustList$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_3) = \mathcal{A}ttestation_{a_{id}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_3) = R_{TwsMo})$

Table 19: IR4 Discretionary rules/others/CsSP

$\beta_{IR4\text{-}D301A\text{-}AE}$	Participants in the role of endorser must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EnDo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(PT)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$
$\beta_{IR4\text{-}D301B\text{-}AE}$	Participants in the role of enforcer must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EnFo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$
$\beta_{IR4\text{-}D302\text{-}AE}$	Participants in the role of authentic source must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{AS}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$
$\beta_{IR4\text{-}D303\text{-}AE}$	Participants in the role of accreditation body must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{AB}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$

Table 20: IR4 Discretionary rules/legal qualifications

$\beta_{IR4\text{-}D304A\text{-}AE}$	Participants in the role of trustworthiness monitor must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$
$\beta_{IR4\text{-}D304B\text{-}AE}$	Participants in the role of evidence service provider must have a legally qualified attestation	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EvSP}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$
$\beta_{IR4\text{-}D305\text{-}AE}$	Participants in the role of an eIDAS trustworthiness monitor (Supervisory Body) must be registered in a European trusted list	$\forall\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{TwsMo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = eIDAS\_Supervisory\_Body$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_2) = uri)$

Table 21: IR4 Discretionary rules/legal qualifications

4 IR5 rules

$\beta_{IR5\text{-}D01\text{-}AE}$	There exists an endorser who discloses information of who takes on responsibility, accountability, and authority for implementing information security governance in a self-attested attestation	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EnDo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_1) = \mathcal{A}ttestation_{t_{sub}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{a_{id}}(A_2) = \mathcal{A}ttestation_{t_{sub}}(A_2))$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesDisclose$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = uri)$
$\beta_{IR5\text{-}D02\text{-}AE}$	There exists a legally qualified endorser who discloses information of who takes on responsibility, accountability, and authority for implementing information security governance	$\exists\ X \in S_{PT}\ \exists\ A_1,\ A_2,\ A_3 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}\ (A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_1) = R_{EnDo}$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}(A_1) = \mathcal{A}ttestation_{t_{sub}}(A_2)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = doesDisclose$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = uri$ $\wedge\ \mathcal{A}ttestation_{t_{sub}}\ (A_3) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_3) = legalQual$ $\wedge\ \mathcal{A}ttestation_{t_{val}}\ (A_3) = uri)$

Table 22: IR5 governance disclosure discretionary rules

$\beta_{IR5\text{-}D11\text{-}AE}$	An endorser cannot be an enforcer	$\forall\ A_1 \in S_{attn}\ \forall\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = R_{EnDo}$ $\rightarrow \nexists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EnFo}))$
$\beta_{IR5\text{-}D12\text{-}AE}$	An enforcer cannot be an endorser	$\forall\ A_1 \in S_{attn}\ \forall\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = R_{EnFo}$ $\rightarrow \nexists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{EnDo}))$

Table 23: IR5 discretionary rules regarding mutual exclusion of endorser and enforcer

$\beta_{IR5\text{-}D21\text{-}AE}$	Helper rule that defines the separation of duties in the enabler plane	$S_{SOD_1} = \{R_{EnDo}, R_{EnFo}, R_{AB}, R_{CAB}\}$
$\beta_{IR5\text{-}D22\text{-}AE}$	If participant is in S_{SOD_1} then only one role is allowed	$\forall\ A_1 \in S_{attn}\ \exists\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) \in S_{SOD_1}$ $\rightarrow \neg\ \exists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_2) \in S_{SOD_1}\ ))$

Table 24: IR5 discretionary rules regarding separation of duty for the enabler plane

$\beta_{IR5-D23-AE}$	Separation of duties for the trustworthiness monitor role	$\forall\ A_1 \in S_{attn}\ \forall\ X \in S_{PT}$ $(\mathcal{A}ttestation_{t_{sub}}(A_1) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_1) = roleTypeBase$ $\wedge\ \mathcal{A}ttestation_{t_{val}}(A_1) = R_{TwsMo}$ $\rightarrow \nexists\ A_2 \in S_{attn}$ $(\mathcal{A}ttestation_{t_{sub}}(A_2) = f_{id}(X)$ $\wedge\ \mathcal{A}ttestation_{t_{att}}(A_2) = roleTypeBase$ $\wedge\ (\mathcal{A}ttestation_{t_{val}}(A_2) = R_{EvSP}$ $\vee\ \mathcal{A}ttestation_{t_{val}}(A_2) = R_{CsSP})))$

Table 25: IR5 discretionary rule regarding separation of duty for the trustworthiness monitor role

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[1] ISO. ISO/IEC 17065:2012(e) Conformity assessment - Requirements for bodies certifying products, processes and services. Technical report, International Organization for Standardization, Geneva, CH, 2012.

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[3] ISO/IEC 27001:2013(E) Information technology – Security techniques – Information security management systems – Requirements. Technical report.

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