



European Network of
Transmission System Operators
for Electricity

IMPACT ASSESSMENT MATRIX PROFILE SPECIFICATION

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28 exist valid reasons in particular circumstances when the particular behaviour is acceptable
29 or even useful, but the full implications should be understood and the case carefully weighed
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32

Revision History

Version	Date	Paragraph	Comments
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115 1 Introduction

116 The impact assessment matrix profile is a profile to exchange impact assessment matrices that
117 are needed within the process.

118 The impact assessment matrix is an output of the impact assessment done on proposed
119 remedial actions.

120 Three impact assessment matrices can be exchanged: list-based impact assessment matrix,
121 calculation-based impact assessment matrix and connecting impact assessment matrix.

122 2 Application profile specification

123 2.1 Version information

124 The content is generated from UML model file CIM17-2_CGMES31v01_PROF-
125 20v02_NC23v65_MS10v01_DES10v01.eap.

126 This edition is based on the IEC 61970 UML version 'IEC61970CIM17v40', dated '2020-08-24'.

- 127 - Title: Impact Assessment Matrix Vocabulary
- 128 - Keyword: IAM
- 129 - Description: This vocabulary is describing the impact assessment matrix profile.
- 130 - Version IRI: <https://ap-voc.cim4.eu/ImpactAssessmentMatrix/2.3>
- 131 - Version info: 2.3.1
- 132 - Prior version: <http://entsoe.eu/ns/CIM/ImpactAssessmentMatrix-EU/2.2>
- 133 - Conforms to: urn:iso:std:iec:61970-600-2:ed-1|urn:iso:std:iec:61970-301:ed-
134 7:amd1|file://iec61970cim17v40_iec61968cim13v13a_iec62325cim03v17a.eap|urn:iso:
135 std:iec:61970-401:draft:ed-1|urn:iso:std:iec:61970-501:draft:ed-
136 2|file://CIM100_CGMES31v01_501-20v02_NC23v62_MM10v01.eap
- 137 - Identifier: urn:uuid:1eb41c0b-3c58-4762-a79b-33220d051d32

138

139 2.2 Constraints naming convention

140 The naming of the rules shall not be used for machine processing. The rule names are just a
141 string. The naming convention of the constraints is as follows.

142 "{rule.Type}:{rule.Standard}:{rule.Profile}:{rule.Property}:{rule.Name}"

143 where

144 rule.Type: C – for constraint; R – for requirement

145 rule.Standard: the number of the standard e.g. 301 for 61970-301, 456 for 61970-456, 13 for
146 61968-13. 61970-600 specific constraints refer to 600 although they are related to one or
147 combination of the 61970-450 series profiles. For NC profiles, NC is used.

148 rule.Profile: the abbreviation of the profile, e.g. TP for Topology profile. If set to "ALL" the
149 constraint is applicable to all IEC 61970-600 profiles.

150 rule.Property: for UML classes, the name of the class, for attributes and associations, the name
151 of the class and attribute or association end, e.g. EnergyConsumer, IdentifiedObject.name, etc.
152 If set to "NA" the property is not applicable to a specific UML element.

153 rule.Name: the name of the rule. It is unique for the same property.

154 Example: C:600:ALL:IdentifiedObject.name:stringLength

155 **2.3 Profile constraints**

156 This clause defines requirements and constraints that shall be fulfilled by applications that
157 conform to this document.

158 This document is the master for rules and constraints tagged "NC". For the sake of self-
159 containment, the list below also includes a copy of the relevant rules from IEC 61970-452,
160 tagged "452".

- 161 • C:452:ALL:NA:datatypes

162 According to 61970-501, datatypes are not exchanged in the instance data. The
163 UnitMultiplier is 1 in cases none value is specified in the profile.

- 164 • R:452:ALL:NA:exchange

165 Optional and required attributes and associations must be imported and exported if they
166 are in the model file prior to import.

- 167 • R:452:ALL:NA:exchange1

168 If an optional attribute does not exist in the imported file, it does not have to be exported
169 in case exactly the same data set is exported, i.e. the tool is not obliged to automatically
170 provide this attribute. If the export is resulting from an action by the user performed after
171 the import, e.g. data processing or model update the export can contain optional
172 attributes.

- 173 • R:452:ALL:NA:exchange2

174 In most of the profiles the selection of optional and required attributes is made so as to
175 ensure a minimum set of required attributes without which the exchange does not fulfil
176 its basic purpose. Business processes governing different exchanges can require
177 mandatory exchange of certain optional attributes or associations. Optional and required
178 attributes and associations shall therefore be supported by applications which claim
179 conformance with certain functionalities of the IEC 61970-452. This provides flexibility
180 for the business processes to adapt to different business requirements and base the
181 exchanges on IEC 61970-452 compliant applications.

- 182 • R:452:ALL:NA:exchange3

183 An exporter may, at his or her discretion, produce a serialization containing additional
184 class data described by the CIM Schema but not required by this document provided
185 these data adhere to the conventions established in Clause 5.

- 186 • R:452:ALL:NA:exchange4

187 From the standpoint of the model import used by a data recipient, the document
188 describes a subset of the CIM that importing software shall be able to interpret in order
189 to import exported models. Data providers are free to exceed the minimum requirements
190 described herein as long as their resulting data files are compliant with the CIM Schema
191 and the conventions established in Clause 5. The document, therefore, describes
192 additional classes and class data that, although not required, exporters will, in all

- 193 likelihood, choose to include in their data files. The additional classes and data are
194 labelled as required (cardinality 1..1) or as optional (cardinality 0..1) to distinguish them
195 from their required counterparts. Please note, however, that data importers could
196 potentially receive data containing instances of any and all classes described by the
197 CIM Schema.
- 198 • R:452:ALL:NA:cardinality
- 199 The cardinality defined in the CIM model shall be followed, unless a more restrictive
200 cardinality is explicitly defined in this document. For instance, the cardinality on the
201 association between VoltageLevel and BaseVoltage indicates that a VoltageLevel shall
202 be associated with one and only one BaseVoltage, but a BaseVoltage can be associated
203 with zero to many VoltageLevels.
- 204 • R:452:ALL:NA:associations
- 205 Associations between classes referenced in this document and classes not referenced
206 here are not required regardless of cardinality.
- 207 • R:452:ALL:IdentifiedObject.name:rule
- 208 The attribute “name” inherited by many classes from the abstract class IdentifiedObject
209 is not required to be unique. It must be a human readable identifier without additional
210 embedded information that would need to be parsed. The attribute is used for purposes
211 such as User Interface and data exchange debugging. The MRID defined in the data
212 exchange format is the only unique and persistent identifier used for this data exchange.
213 The attribute IdentifiedObject.name is, however, always required for CoreEquipment
214 profile and Short Circuit profile.
- 215 • R:452:ALL:IdentifiedObject.description:rule
- 216 The attribute “description” inherited by many classes from the abstract class
217 IdentifiedObject must contain human readable text without additional embedded
218 information that would need to be parsed.
- 219 • R:452:ALL:NA:uniqueIdentifier
- 220 All IdentifiedObject-s shall have a persistent and globally unique identifier (Master
221 Resource Identifier - mRID).
- 222 • R:452:ALL:NA:unitMultiplier
- 223 For exchange of attributes defined using CIM Data Types (ActivePower, Susceptance,
224 etc.) a unit multiplier of 1 is used if the UnitMultiplier specified in this document is “none”.
- 225 • C:452:ALL:IdentifiedObject.name:stringLength
- 226 The string IdentifiedObject.name has a maximum of 128 characters.
- 227 • C:452:ALL:IdentifiedObject.description:stringLength
- 228 The string IdentifiedObject.description is maximum 256 characters.
- 229 • C:452:ALL:NA:float
- 230 An attribute that is defined as float (e.g. has a type Float or a type which is a Datatype
231 with .value attribute of type Float) shall support ISO/IEC 60559:2020 for floating-point
232 arithmetic using single precision floating point. A single precision float supports 7
233 significant digits where the significant digits are described as an integer, or a decimal

234 number with 6 decimal digits. Two float values are equal when the significant with 7
235 digits are identical, e.g. 1234567 is equal 1.234567E6 and so are 1.2345678 and
236 1.234567E0.

237 • R:NC:ALL:Region:reference

238 The reference to the Region is normally a reference to the capacity calculation region,
239 which is identified by “Y” EIC code of the capacity calculation region.

240 • R:NC:ALL:SystemOperator:reference

241 The reference to the System Operator is normally identified by “X” EIC code of TSO.

242 • C:NC:IAM:ListBasedImpactAssessmentMatrix:outcomeValue

243 For a ListBasedImpactAssessmentMatrix, RemedialActionScheduleOutcomeValue shall
244 not be exchanged.

245 • C:NC:IAM:CalculationBasedImpactAssessmentMatrix:outcomeValue

246 For a CalculationBasedImpactAssessmentMatrix, RemedialActionOutcomeValue shall
247 not be exchanged.

248 • C:NC:IAM:ConnectingImpactAssessmentMatrix:outcomeValue

249 For a ConnectingImpactAssessmentMatrix, shall have either
250 RemedialActionScheduleOutcomeValue or RemedialActionOutcomeValue.

251 • R:NC:ALL:NA:serialization

252 The profiles are defined in the EnterpriseArchitect application and have multiple artifacts
253 that describe them. The main artifacts are:

- 254 1) the EAP file (EnterpriseArchitect project file),
- 255 2) the profiles' specification document and
- 256 3) the application profiles (RDFS and SHACL).

257 Due to the complexity of the profiles, there are various cross profile associations that,
258 from profiling and profile maintenance point of view, it is not practical to include the
259 complete inheritance structure in all profiles. If this is done the documentation provided
260 for all profiles would also include duplicated information on the description of classes
261 defined in other profiles. The following cases are often observed in profiles:

- 262 ○ Case 1: An association end refers to an abstract class
- 263 ○ Case 2: An abstract class (stereotyped with “Description”) has an association
264 (direction to another class)
- 265 ○ Case 3: An abstract class (not stereotyped with “Description”) has an
266 association (direction to another class)
- 267 ○ Case 4: An abstract class has attributes and subclasses are not in the profile

268 In all cases, the datasets shall only include the subtypes of the abstract classes with
269 the related properties (i.e. association or attributes) defined in the profile. The
270 information is taken from either canonical model or the profiles where complete
271 (expected) inheritance structure for the related abstract class is described. SHACL
272 based constraints include constraints only for the concrete classes that are subtypes of
273 the abstract class in the profile, and this can be used to inform which are the concrete
274 classes expected in a dataset that conforms to this profile.

275 It should be taken into account that this approach deviates from MVAL5 (IEC 61970-
276 600-1:2021), which creates multiple inheritance at serialization. For instance, with this

277 more explicit exchange the serialization of the association between abstract class
278 Equipment and abstract class Circuit for a PowerTransformer will be serialized as
279 follows:

280 o for association

281 <cim:PowerTransformer rdf:about="_c328f787-bc17-47ad-a59f-6ba7133340d0">

282 <nc:Equipment.Circuit rdf:resource="#_9ced16ac-d076-4ef9-a241-a998a579e77b"/>

283 </cim:PowerTransformer>

284 o for attribute

285 <cim:ACLineSegment rdf:about="_04f681aa-6999-4fb3-9775-aca5eb7ceff">

286 <cim:Equipment.inService>true</cim:Equipment.inService>

287 </cim:ACLineSegment>

288 The usage of rdf:ID or rdf:about depends on the stereotype of the class. rdf:about is
289 used if the class has the stereotype "Description".

290 An example of not allowed serialization, as the Equipment is an abstract class

291 <cim:Equipment rdf:about="_c328f787-bc17-47ad-a59f-6ba7133340d0">

292 <nc:Equipment.Circuit rdf:resource="#_9ced16ac-d076-4ef9-a241-a998a579e77b"/>

293 </cim:Equipment>

294

295 2.4 Metadata

296 ENTSO-E agreed to extend the header and metadata definitions by IEC 61970-552 Ed2. This
297 new header definitions rely on W3C recommendations which are used worldwide and are
298 positively recognised by the European Commission. The new definitions of the header mainly
299 use Provenance ontology (PROV-O), Time Ontology and Data Catalog Vocabulary (DCAT). The
300 global new header applicable for this profile is included in the metadata and document header
301 specification document.

302 The header vocabulary contains all attributes defined in IEC 61970-552. This is done only for
303 the purpose of having one vocabulary for header and to ensure transition for data exchanges
304 that are using IEC 61970-552:2016 header. This profile does not use IEC 61970-552:2016
305 header attributes and relies only on the extended attributes.

306 2.4.1 Constraints

307 The identification of the constraints related to the metadata follows the same convention for
308 naming of the constraints as for profile constraints.

- 309 • R:NC:ALL:wasAttributedTo:usage

310 The prov:wasAttributedTo should normally be the "X" EIC code of the actor or their URI
311 (prov:Agent).

312

313 2.4.2 Reference metadata

314 The header defined for this profile requires availability of a set of reference metadata. For
315 instance, the attribute prov:wasGeneratedBy requires a reference to an activity which produced

333 scaled by the intensity of the remedial action) and matching them against a threshold in a
334 determined way described by the methodologies.

335 Table 1 shows all attributes of CalculationBasedImpactAssessmentMatrix.

336 **Table 1 – Attributes of**
337 **ImpactAssessmentMatrixProfile::CalculationBasedImpactAssessmentMatrix**

name	mult	type	description
description	0..1	String	inherited from: IdentifiedObject
mRID	1..1	String	inherited from: IdentifiedObject
name	0..1	String	inherited from: IdentifiedObject

338

339 3.3 (NC) ConnectingImpactAssessmentMatrix

340 Inheritance path = [ImpactAssessmentMatrix](#) : [IdentifiedObject](#)

341 Connecting system operator matrix is the impact matrix indicating which system operators are
342 connecting for that specific remedial action. The concept of connecting system operator for a
343 remedial action is defined by CSAm Article 2.1(14).

344 Table 2 shows all attributes of ConnectingImpactAssessmentMatrix.

345 **Table 2 – Attributes of**
346 **ImpactAssessmentMatrixProfile::ConnectingImpactAssessmentMatrix**

name	mult	type	description
description	0..1	String	inherited from: IdentifiedObject
mRID	1..1	String	inherited from: IdentifiedObject
name	0..1	String	inherited from: IdentifiedObject

347

348 3.4 (abstract) IdentifiedObject root class

349 This is a root class to provide common identification for all classes needing identification and
350 naming attributes.

351 Table 3 shows all attributes of IdentifiedObject.

352 **Table 3 – Attributes of ImpactAssessmentMatrixProfile::IdentifiedObject**

name	mult	type	description
description	0..1	String	The description is a free human readable text describing or naming the object. It may be non unique and may not correlate to a naming hierarchy.
mRID	1..1	String	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.
name	0..1	String	The name is any free human readable and possibly non unique text naming the object.

353

354 3.5 (abstract,NC) ImpactAssessmentMatrix

355 Inheritance path = [IdentifiedObject](#)

356 The result of an impact assessment analysis for each remedial action or remedial action
357 schedule onto the grid and operation of each system operator.
358 Table 4 shows all attributes of ImpactAssessmentMatrix.

359 **Table 4 – Attributes of ImpactAssessmentMatrixProfile::ImpactAssessmentMatrix**

name	mult	type	description
description	0..1	String	inherited from: IdentifiedObject
mRID	1..1	String	inherited from: IdentifiedObject
name	0..1	String	inherited from: IdentifiedObject

360

361 3.6 (NC) ListBasedImpactAssessmentMatrix

362 Inheritance path = [ImpactAssessmentMatrix](#) : [IdentifiedObject](#)

363 List-Based is the impact matrix determined by agreement of the system operators involved.
364 System operators jointly decide which Remedial Action (eventually scaled by the intensity of
365 the remedial action) is impacting.

366 Table 5 shows all attributes of ListBasedImpactAssessmentMatrix.

367

368

**Table 5 – Attributes of
ImpactAssessmentMatrixProfile::ListBasedImpactAssessmentMatrix**

name	mult	type	description
description	0..1	String	inherited from: IdentifiedObject
mRID	1..1	String	inherited from: IdentifiedObject
name	0..1	String	inherited from: IdentifiedObject

369

370 3.7 (abstract,NC) OutcomeValue root class

371 Outcome of an impact assessment matrix.

372 Table 6 shows all attributes of OutcomeValue.

373

Table 6 – Attributes of ImpactAssessmentMatrixProfile::OutcomeValue

name	mult	type	description
outcome	1..1	OutcomeImpactAssessmentKind	(NC) Outcome value.
mRID	1..1	String	(NC) Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.

374

375 Table 7 shows all association ends of OutcomeValue with other classes.

Table 7 – Association ends of ImpactAssessmentMatrixProfile::OutcomeValue with other classes

376

377

mult from	name	mult to	type	description
1..*	ImpactAssessmentMatrix	1..1	ImpactAssessmentMatrix	(NC) the impact assessment matrix which has this value.

mult from	name	mult to	type	description
0..*	ImpactedSystemOperator	1..1	SystemOperator	(NC) The impacted system operator that has an outcome value.

378

379 3.8 (NC) OwnerRemedialActionAssessment root class

380 Owner remedial action assessment of the impact of their remedial action on neighboring system
381 operators.

382 Table 8 shows all attributes of OwnerRemedialActionAssessment.

383

384

**Table 8 – Attributes of
ImpactAssessmentMatrixProfile::OwnerRemedialActionAssessment**

name	mult	type	description
mRID	1..1	String	(NC) Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.

385

386 Table 9 shows all association ends of OwnerRemedialActionAssessment with other classes.

387

388

**Table 9 – Association ends of
ImpactAssessmentMatrixProfile::OwnerRemedialActionAssessment with other classes**

mult from	name	mult to	type	description
0..*	RemedialActionImpact	1..1	RemedialActionImpact	(NC) Remedial action impact which is evaluated by the owner of the remedial action.
0..*	ImpactedSystemOperator	1..1	SystemOperator	(NC) System operator that is evaluated to be impacted by the remedial action done by the remedial action owner.

389

390 3.9 (NC) QualitativeRemedialActionImpact

391 Inheritance path = [RemedialActionImpact](#)

392 Defines the qualitative impact for a remedial action. Relevant remedial action is assumed to
393 have impact when the impact quantity is applied.

394 Table 10 shows all attributes of QualitativeRemedialActionImpact.

395

396

**Table 10 – Attributes of
ImpactAssessmentMatrixProfile::QualitativeRemedialActionImpact**

name	mult	type	description
impactQuantity	0..1	Float	(NC) inherited from: RemedialActionImpact
kind	1..1	ImpactAgreementKind	(NC) inherited from: RemedialActionImpact
mRID	1..1	String	(NC) inherited from: RemedialActionImpact

397

398 Table 11 shows all association ends of QualitativeRemedialActionImpact with other classes.

399 **Table 11 – Association ends of**
400 **ImpactAssessmentMatrixProfile::QualitativeRemedialActionImpact with other classes**

mult from	name	mult to	type	description
0..*	RemedialAction	1..1	RemedialAction	(NC) inherited from: RemedialActionImpact
0..*	AssessingSystemOperat or	1..1	SystemOperator	(NC) inherited from: RemedialActionImpact

401
402 **3.10 (NC) QuantitativeRemedialActionImpact**
403 Inheritance path = [RemedialActionImpact](#)
404 Defines the quantitative impact for a remedial action. The value if the impact quantity is derived
405 through offline calculation that has caused an impact of an element that is monitored by the
406 assessed system operator higher than the relevant threshold for the conducting equipment.
407 Table 12 shows all attributes of QuantitativeRemedialActionImpact.

408 **Table 12 – Attributes of**
409 **ImpactAssessmentMatrixProfile::QuantitativeRemedialActionImpact**

name	mult	type	description
impactQuantity	0..1	Float	(NC) inherited from: RemedialActionImpact
kind	1..1	ImpactAgreementKind	(NC) inherited from: RemedialActionImpact
mRID	1..1	String	(NC) inherited from: RemedialActionImpact

410
411 Table 13 shows all association ends of QuantitativeRemedialActionImpact with other classes.

412 **Table 13 – Association ends of**
413 **ImpactAssessmentMatrixProfile::QuantitativeRemedialActionImpact with other classes**

mult from	name	mult to	type	description
0..*	SensitivityArea	1..1	SensitivityArea	(NC) Sensitivity area which should be monitored to evaluate the threshold given by the remedial action impact on relevant equipment.
0..*	RemedialAction	1..1	RemedialAction	(NC) inherited from: RemedialActionImpact
0..*	AssessingSystemOperat or	1..1	SystemOperator	(NC) inherited from: RemedialActionImpact

414
415 **3.11 (abstract,NC) RemedialAction root class**
416 Remedial action describes one or more actions that can be performed on a given power system
417 model situation to eliminate one or more identified breaches of constraints. The remedial action
418 can be costly, and have a cost characteristic, or non costly.
419 **3.12 (abstract,NC) RemedialActionImpact root class**
420 Remedial action impact assessment based on a given agreement with a specific system
421 operator.
422 Table 14 shows all attributes of RemedialActionImpact.

423 **Table 14 – Attributes of ImpactAssessmentMatrixProfile::RemedialActionImpact**

name	mult	type	description
impactQuantity	0..1	Float	(NC) Delta, positive or negative, quantity that when it is applied to the remedial action, it will cause impact on a conducting equipment monitored by the assessed system operator. Example of relevant remedial action changes are redispatching, countertrading, change of set point on HVDC systems or change of taps on phase-shifting transformers.
kind	1..1	ImpactAgreementKind	(NC) The impact agreement kind.
mRID	1..1	String	(NC) Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.

424

425 Table 15 shows all association ends of RemedialActionImpact with other classes.

426 **Table 15 – Association ends of ImpactAssessmentMatrixProfile::RemedialActionImpact**
427 **with other classes**

mult from	name	mult to	type	description
0..*	RemedialAction	1..1	RemedialAction	(NC) The remedial action that has an impact.
0..*	AssessingSystemOperat or	1..1	SystemOperator	(NC) The impacted System Operator that assigns a remedial action impact.

428

429 **3.13 (NC) RemedialActionOutcomeValue**430 Inheritance path = [OutcomeValue](#)

431 Outcome of an impact assessment matrix for a remedial action.

432 Table 16 shows all attributes of RemedialActionOutcomeValue.

433 **Table 16 – Attributes of ImpactAssessmentMatrixProfile::RemedialActionOutcomeValue**

name	mult	type	description
impactQuantity	0..1	Float	(NC) Delta, positive or negative, quantity that when it is applied to the remedial action, it will cause impact on a conducting equipment monitored by the assessed system operator. Example of relevant remedial action changes are redispatching, countertrading, change of set point on HVDC systems or change of taps on phase-shifting transformers.
outcome	1..1	OutcomeImpactAssessm entKind	(NC) inherited from: OutcomeValue
mRID	1..1	String	(NC) inherited from: OutcomeValue

434

435 Table 17 shows all association ends of RemedialActionOutcomeValue with other classes.

436
437**Table 17 – Association ends of
ImpactAssessmentMatrixProfile::RemedialActionOutcomeValue with other classes**

mult from	name	mult to	type	description
0..*	RemedialAction	1..1	RemedialAction	(NC) The remedial action that has a remedial action outcome value.
1..*	ImpactAssessmentMatrix	1..1	ImpactAssessmentMatrix	(NC) inherited from: OutcomeValue
0..*	ImpactedSystemOperator	1..1	SystemOperator	(NC) inherited from: OutcomeValue

438

3.14 (abstract,NC) RemedialActionSchedule root class

439 A schedule for a determined remedial action.

3.15 (NC) RemedialActionScheduleOutcomeValue442 Inheritance path = [OutcomeValue](#)

443 Outcome of an impact assessment matrix for a remedial action schedule.

444 Table 18 shows all attributes of RemedialActionScheduleOutcomeValue.

445

**Table 18 – Attributes of
ImpactAssessmentMatrixProfile::RemedialActionScheduleOutcomeValue**

name	mult	type	description
outcome	1..1	OutcomeImpactAssessmentKind	(NC) inherited from: OutcomeValue
mRID	1..1	String	(NC) inherited from: OutcomeValue

447

448 Table 19 shows all association ends of RemedialActionScheduleOutcomeValue with other
449 classes.

450

**Table 19 – Association ends of
ImpactAssessmentMatrixProfile::RemedialActionScheduleOutcomeValue with other
451 classes
452**

mult from	name	mult to	type	description
0..*	RemedialActionSchedule	1..1	RemedialActionSchedule	(NC) The remedial action schedule that has a remedial action schedule outcome value.
1..*	ImpactAssessmentMatrix	1..1	ImpactAssessmentMatrix	(NC) inherited from: OutcomeValue
0..*	ImpactedSystemOperator	1..1	SystemOperator	(NC) inherited from: OutcomeValue

453

3.16 (abstract,NC) SensitivityArea root class

455 A monitoring area that defines the required observability area given by the sensitivity factors.

3.17 (abstract,NC) SystemOperator root class

457 System operator.

3.18 (NC) ImpactAgreementKind enumeration

459 The impact agreement for the remedial action.

460 Table 20 shows all literals of ImpactAgreementKind.

461 **Table 20 – Literals of ImpactAssessmentMatrixProfile::ImpactAgreementKind**

literal	value	description
noAgreement		No agreement is reached on the qualitative impact of a remedial action.
never		An agreement is reached that a remedial action is never impacting.
always		An agreement is reached that the remedial action is always impacting whichever the intensity.

462

463 **3.19 (NC) OutcomeImpactAssessmentKind enumeration**

464 Outcome impact assessments kinds.

465 Table 21 shows all literals of OutcomeImpactAssessmentKind.

466 **Table 21 – Literals of ImpactAssessmentMatrixProfile::OutcomeImpactAssessmentKind**

literal	value	description
true		True.
false		False.
undecided		Undecided. Used only for list-based impact assessment matrix.

467

468 **3.20 Float primitive**

469 A floating point number. The range is unspecified and not limited.

470 **3.21 String primitive**

471 A string consisting of a sequence of characters. The character encoding is UTF-8. The string length is unspecified and unlimited.

473

474

475

Annex A (informative): Sample data

476 A.1 General

477 This Annex is designed to illustrate the profile by using fragments of sample data. It is not meant
478 to be a complete set of examples covering all possibilities of using the profile. Defining a
479 complete set of test data is considered a separate activity to be performed for the purpose of
480 setting up interoperability testing and conformity related to this profile.

481 A.2 Sample instance data

482 Test data files are available in the CIM EG SharePoint.