

# Data Mapping

Data mapping mostly has to do with migrating elements and their relationships to UPDM. As mentioned in section 3 above, there are a lot of conceptual changes between DoDAF and UPDM projects. Table 2 below describes entity mapping and Table 3 relationships mapping.

DoDAF 1.5	UPDM 1.x	Properties	Comments
Asset [Class]	ConceptRole [Property]	<i>actualImplementation</i> to <i>type representationType</i> . Data is stored in element's ToDo property.	Concept role is placed under the High Level Operational Concept element.
Capability [UseCase]	Capability [Class]	<i>mission</i> : Data is stored in element's ToDo property.  <i>operationalThread</i> to <i>ownedBehavior</i> .	
CommunicationsNetwork [Class]	System [Class]	<i>securityClassification</i> : Data is stored in element's ToDo property.	
CommunicationsPath [Class]	System [Class]	<i>communicationLinks</i> : Data is stored in element's ToDo property.	
CommunicationsSystem [Class]	System [Class]		
Hardware /SoftwareItem [Class]	System [Class]	<i>vendors/source</i> : Data is stored in element's ToDo property.	
InformationElement [Class]	InformationElement [Class]		<i>ImplementsOperational</i> relationship is created between <i>Information Element</i> and its implementer if any.
InformationExchange [InformationFlow]	InformationExchange [InformationFlow]	<i>consumedBy</i> : Data is stored in element's ToDo property.  <i>producedBy</i> : Data is stored in element's ToDo property.  <i>mission</i> : Data is stored in element's ToDo property.	
LAN [Class]	System [Class]		
MAN [Class]	System [Class]		
Milestone [State]	ConfigurationDeployed [InstanceSpecification]	<i>version</i> : Data is stored in element's ToDo property.  <i>timePeriod</i> to date.	
Objective [UseCase]	EnterpriseGoal [Class]		
OperationalActivity [Activity]	OperationalActivity [Activity]	<i>capability</i> : Data is stored in element's ToDo propertyconsumes does not map.  <i>levelIdentifier</i> : Data is stored in element's ToDo propertyperformedAt does not map.  <i>produces</i> : Data is stored in element's ToDo property.	ImplementsOperational relationship is created between OperationalActivity and its implementer if any.
OperationalActivityAction [CallBehaviorAction]	OperationalActivityAction [CallBehaviorAction]		
OperationalNode [Class]	OperationalNode [Class]	<i>levelIdentifier</i> : Data is stored in element's ToDo propertyoperationalRole does not map.  <i>performers</i> : Data is stored in element's ToDo property.	If <i>isExternal</i> is true <i>ExternalNode</i> should be created instead of <i>OperationalNode</i> .
OperationalNodeUsage [Property]	NodeRole [Property]	<i>operationalRole</i> : Data is stored in element's ToDo property.	
OperationalRule [Constraint]	OperationalRule [Constraint]	<i>type</i> to <i>kind</i> .	

Organization [Class]	ActualOrganization [InstanceSpecification]	<i>responsibility</i> : Data is stored in element's ToDo property.	
OrganizationalResourceUsage [Property]	SubOrganization [Property]		
OrganizationType [Class]	Organization [Class]		
PerformanceMeasurement [Slot]	ActualMeasurement [Slot]		
PerformanceMeasurementSet [InstanceSpecification]	ActualMeasurementSet [InstanceSpecification]	<i>measuredSystem</i> to <i>measuredElement</i> .	
PerformanceParameterSet [Class]	MeasurementSet [Class]	<i>measuredSystems</i> to <i>measuredElement</i> .	
PerformanceParameterType [Property]	PerformanceParameter [Property]	<i>objectiveValue</i> to <i>propertyValue</i> <i>thresholdValue</i> to <i>maxValue</i> .  <i>unitOfMeasure</i> : Data is stored in element's ToDo property.	
Performer [Class]		<i>performs</i> : Performs relationship are created between performer and performed Elements.	
Person [Class]	ActualPerson [InstanceSpecification]	<i>responsibilities</i> : Data is stored in element's ToDo property.  <i>roles</i> : Data is stored in element's ToDo property.	
ReferenceModel [Package]	UML Package	<i>source</i> : Data is stored in element's ToDo property.	
Responsibility [Class]	Competence [Class]	<i>persons</i> : Data is stored in element's ToDo property.  <i>roles</i> : Data is stored in element's ToDo property.	
Role [Class]	PostRole [Property]	<i>persons</i> : Data is stored in element's ToDo property.  <i>responsibilities</i> : <i>RequiresCompetence</i> relationships are created between <i>PostRole</i> and <i>Competences</i> .	
Service [Package]	Resource [Class]	<i>status</i> : Data is stored in element's ToDo property.	
ServiceArea [Package]	UML Package	<i>version/date</i> : Data is stored in element's ToDo property.	
ServiceSpecification [Class]	ServiceInterface [Interface]	<i>serviceDescription</i> : Comment is added.	
SoaService [Port]	ServicePoint [Port]		
Standard [Class]	Standard [Class]		
Standards/PerformanceSubject [Element]	UPDMElement [Element]	<i>measurements</i> to <i>actualMeasurements</i> .  <i>performanceParameterSet</i> to <i>measurementTypes</i> .	
StandardsForecastProfile [Package]	View (SysML) with conforms to TV-2	<i>basedOn</i> : Data is stored in element's ToDo property.	
StandardsProfile [Package]	View (SysML) with conforms to TV-1	<i>applicableDate</i> : Data is stored in element's ToDo property.  <i>basedOn</i> : Data is stored in element's ToDo property.	

System [Class]	System [Class]	<p><i>participant</i>: Data is stored in element's ToDo property.</p> <p><i>performedFunctions</i> : Performs relationship is created between function and System.</p>	
SystemDataElement [Class]	DataElement [Class]		
SystemDataExchange [InformationFlow]	ResourceInteraction [InformationFlow]	<p><i>consumedBy</i>: Data is stored in element's ToDo property.</p> <p><i>producedBy</i>: Data is stored in element's ToDo property.</p>	
SystemDataRepository [DataStoreNode]	Does not map		
SystemFunction [Activity]	SystemFunction [Activity]	<p><i>allocatedAt</i>: Allocation relationship to Systems Node should be created.</p> <p><i>consumes</i>: Data is stored in element's ToDo property.</p> <p><i>parent</i>: Aggregation relationship is created between System Function and parent System Function.</p> <p><i>performedBy</i>: Performs relationship is created between System Function and System.</p> <p><i>produces</i>: Data is stored in element's ToDo property.</p> <p><i>subfunction</i>: Aggregation relationship is created between System Function and child System Function.</p>	
SystemFunctionAction [CallBehaviorAction]	SystemFunctionAction [CallBehaviorAction]		
SystemRule [Constraint]	ResourceConstraint [Constraint]	<i>type to kind</i>	
SystemsNode [Class]	SystemsNode [Class]	<i>allocatedFunctions</i> : Allocation relationship from System Function should be created.	<i>ImplementsOperational</i> relationship is created between Systems Node and its implemented elements if any.
SystemsNodeUsage [Property]	UsedConfiguration [Property]		
SystemUsage [Property]	Subsystem [Property]	<i>participant</i> : Data is stored in element's ToDo property.	
TargetArea [Class]	Location [DataType]		
Technology [Class]	Artifact [Class]		
TechnologyForecastProfile [Package]	UML Package	<p><i>basedOn</i>: Data is stored in element's ToDo property.</p> <p><i>timePeriod</i>: Data is stored in element's ToDo property.</p>	
TimePeriod [TimeConstraint]	ISO8601Date Time [LiteralString]		
TimePeriodList [Class]	Timeline [Package]	<i>timePeriods</i> to <i>ownedElements</i> .	
WAN [Class]	System [Class]		
Backup [Usage]	ResourceInteraction [InformationFlow]		Name is set to "Backup"

Communication sLink [Association, Connector]	SystemConnector [Association, Connector]	<i>communicationsPath</i> : Data is stored in element's ToDo property.	
Contributing [Usage]	ResourceInteracti on [InformationFlow]		Name is set to "Contributing"
Coordination [Usage]	ResourceInteracti on [InformationFlow]		Name is set to "Coordination"
Direct [Usage]	Commands [InformationFlow]		
Indirect [Usage]	ResourceInteracti on [InformationFlow]		Name is set to "Indirect"
InformationFlow [ControlFlow, ObjectFlow]	OperationalActivit yEdge [ActivityEdge]		
Interface [Assoc iation, Connector]	SystemConnector [Association, Connector]		ImplementsOperational relationship is created between System Connector and its implemented elements if any.
Line [Association]	ArbitraryRelations hipConnector [Connector]	<i>representationType</i> : Data is stored in element's ToDo property	
Needline [Association, Connector]	Needline [Association, Connector]		ImplementsOperational relationship is created between Information Elemented and its implementations if any.
OrganizationalR elationship [Usage]	ResourceInteracti on [InformationFlow]		Name is set to "OrganizationalRelationship".
SituationDepen dent [Usage]	ResourceInteracti on [InformationFlow]		Name is set to "SituationDependent".
TimedStandard sForecast [Usage]	Forecast [Dependency]	<i>discussion</i> : Data is stored in element's ToDo property.  <i>requires</i> : Data is stored in element's ToDo property.  <i>standardStatus</i> : Data is stored in element's ToDo property.  <i>timePeriod</i> to <i>startDate</i> .	
TimedTechnolo gyForecast [Us age]	Forecast [Dependency]	<i>discussion</i> : Data is stored in element's ToDo property.  <i>requiredBy</i> : Data is stored in element's ToDo property.  <i>retiredStandard</i> : Data is stored in element's ToDo property.  <i>timePeriod</i> to <i>startDate</i> .	

Entity and relationship mapping raises further issues that requires specific solutions, all of which are described in sub-section 3.3.