

Annex H – CONCEPTUAL MODEL PRODUCT DESCRIPTION

Table H-1: Generic Template for Specification of Product.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	<i><Denotative names and identifiers of Product.></i>
Product Description	
• Product Definition	<i><A definition of the subject Product.></i>
• Product Purpose	<i><Describes the purpose of the Product, both in the development process and as an artefact for later reference.></i>
• Product Content	<i><Describe the content of the product.></i>
• Product Structure/Format	<i><Describe the structure of the product.></i>
Product Initiation	
• Entrance Criteria	<i><This field specifies component values that are necessary and sufficient for the development of subject Product to be effectively initiated.></i>
Product Development Guidance	
• Product Development	<i><In this field, the agent is provided procedural guidance for the development of the subject Product. Note that relationships to Process Activities and needs for tools or information are specified in other form records.></i>
Product Relationships	
• Product – Process Relationships	<i><Instruction regarding the Process steps and sub-steps that produce this Product, and the Process steps and sub-steps that use this Product.></i>
• Inter-Product Relationships	<i><Instruction regarding the relationships between this Product and all other relevant Products. These instructions should indicate which Products are predecessors to this Product, which are successors, and which may be done in concurrence.></i>
Associated Entities	
• Tools	<i><Identify tools such as hardware or software necessary and sufficient, or useful, to complete the Product.></i>
• Actor-Agents	<i><Indicate the actor agents responsible for development of the Product, and their respective roles.></i>

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<ul style="list-style-type: none"> • Information Pools 	<p><i><Data stores of any type containing information used as input or generated as key content of the Product. May contain intermediate information re-used by this or successor Products, or components of the Product compiled as residual documentation.></i></p>
<p>Product Completion</p>	
<ul style="list-style-type: none"> • Exit Criteria 	<p><i><This field specifies component values that are necessary and sufficient for the subject Product to be considered finished.></i></p>

Table H-2: Conceptual Model Product 1.1 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P1.1 – Stakeholder Description.
Product Description	
• Product Definition	Document mapping stakeholders to roles and responsibilities in the Conceptual Model effort.
• Product Purpose	The purpose of this product is to identify the stakeholders of this Conceptual Model development process and their respective roles and responsibilities to enable staffing/tasking of the Conceptual Model development effort, derivation of stakeholder-related requirements and stakeholder-related knowledge needs, and identification of subject-matter expertise for knowledge acquisition.
• Product Content	<p>Conceptual model knowledge acquisition needs shall describe at a minimum:</p> <ul style="list-style-type: none"> • Relevant Conceptual Model development responsibilities identified and grouped into roles; and • Stakeholders identified organizationally, mapped to responsibilities and roles. <p>Desired:</p> <ul style="list-style-type: none"> • Stakeholder identities by name, along with contact information.
• Product Structure/Format	No mandated format.
Product Initiation	
• Entrance Criteria	<p>Entrance criteria consists of the following activities, availability of information and establishment of operational capability:</p> <ul style="list-style-type: none"> • Product development may begin once PA1.1 begins.
Product Development Guidance	
• Product Development	See PA1.1.
Product Relationships	
• Product – Process Relationships	PA1.1 produces this product, which is used by PA2.1 and PA2.4.
• Inter-Product Relationships	This product may be developed concurrently with P1.2, P1.3, and P1.4, but must be completed prior to the completion of products from any later phases.
Associated Entities	
• Tools	None required.

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• Actor-Agents	<ul style="list-style-type: none"> • Producer. • Conceptual Model Developer.
• Information Pools	<p>Information pools relevant to this activity include:</p> <ul style="list-style-type: none"> • Points of contact lists. • Employee roles. • Organizational charts. • Personnel databases, referrals, resumes, biographies. • Any intermediate information generated during execution of PA1.1.
Product Completion	
• Exit Criteria	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> • Product must contain comprehensive list of stakeholders by organization as a minimum, mapped to all related requirements and roles.

Table H-3: Conceptual Model Product 1.2 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P1.2 – Need Statement.
Product Description	
• Product Definition	Document that defines the intended use of the Conceptual Model derived from the purpose and intended use of the M&S effort.
• Product Purpose	This product serves as the source from which to derive the set of Conceptual Model requirements and knowledge needs which are driven by M&S purpose and intended use.
• Product Content	Description of Conceptual Model intended use driven by M&S purpose and intended use.
• Product Structure/Format	No mandated format.
Product Initiation	
• Entrance Criteria	<p>Entrance criteria consists of the following activities, availability of information and establishment of operational capability:</p> <ul style="list-style-type: none"> • Product development may begin once PA1.2 begins.
Product Development Guidance	
• Product Development	See PA1.2.

Product Relationships	
• Product – Process Relationships	PA1.2 produces this product, which is used by PA2.1, PA2.2, and PA2.4.
• Inter-Product Relationships	This product may be developed concurrently with P1.1, P1.3, and P1.4, but must be completed prior to the completion of products from any later phases.
Associated Entities	
• Tools	Requirements Management tools optional.
• Actor-Agents	<ul style="list-style-type: none"> • Producer. • Conceptual Model Developer.
• Information Pools	Information pools relevant to this activity include: <ul style="list-style-type: none"> • Task orders. • Mission needs statements. • M&S needs statements. • User requirement documents. • Requests for proposal. • Statements of work. • Formal or informal directives. • Test agreements. • Any intermediate information generated during execution of PA1.2.
Product Completion	
• Exit Criteria	Criteria-types for demonstration of satisfactory completion of the subject activity, include the following: <ul style="list-style-type: none"> • Product must contain comprehensive description of Conceptual Model intended use sufficient to drive all Conceptual Model requirements and knowledge needs related to purpose and intended use of M&S.

Table H-4: Conceptual Model Product 1.3 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P1.3 – Constraints and Policies.
Product Description	
• Product Definition	Document that defines the constraints and policies to be applied to the Conceptual Model effort based upon initial direction and enterprise scope.

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• Product Purpose	This product serves as a set of constraints upon the Conceptual Model requirements and knowledge needs and impacts the content of Conceptual Model requirements and knowledge needs which are driven by constraints and policies.
• Product Content	List of constraints and mandates affecting the Conceptual Model development and design.
• Product Structure/Format	No mandated format.
Product Initiation	
• Entrance Criteria	Entrance criteria consists of the following activities, availability of information and establishment of operational capability: <ul style="list-style-type: none"> • Product development may begin once PA1.3 or PA1.4 begins.
Product Development Guidance	
• Product Development	Execute PA1.3 and PA1.4 concurrently or in any order.
Product Relationships	
• Product – Process Relationships	PA1.3 and PA1.4 produce this product, which is used by PA2.1, PA2.2, and PA2.4.
• Inter-Product Relationships	This product may be developed concurrently with P1.1, P1.2, and P1.4, but must be completed prior to the completion of products from any later phases.
Associated Entities	
• Tools	None.
• Actor-Agents	<ul style="list-style-type: none"> • Producer. • Conceptual Model Developer.
• Information Pools	Information pools relevant to this activity include: <ul style="list-style-type: none"> • Enterprise standard operating procedures. • Industry and government standards. • Enterprise executive mandates, law. • Agency regulations. • Agency directives. • Written policy. • Implied enterprise mandates. • Documented resource constraints. • Senior stakeholder preferences and requirements. • Planning/budgeting/management limitations. • Legacy M&S preferences and availability. • Data availability.

<ul style="list-style-type: none"> Information Pools (cont'd) 	<ul style="list-style-type: none"> Enterprise preferences. Any intermediate information generated during execution of PA1.3 and PA1.4.
Product Completion	
<ul style="list-style-type: none"> Exit Criteria 	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> Product must contain comprehensive list of Conceptual Model constraints and policies sufficient to constrain Conceptual Model requirements and knowledge needs in keeping with direction and enterprise mandates.

Table H-5: Conceptual Model Product 1.4 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
<ul style="list-style-type: none"> Product Name and Aliases 	P1.4 – Conceptual Model Meta Data.
Product Description	
<ul style="list-style-type: none"> Product Definition 	The conceptual model Meta data will address the conceptual model, acting as its identifier. Conceptual models are stored together with their Meta data specifying how they have been produced, i.e., when, where, by whom, from what, using what tool, and so on.
<ul style="list-style-type: none"> Product Purpose 	This Meta data is necessary to ensure traceability and reusability of the conceptual model.
<ul style="list-style-type: none"> Product Content 	The Meta data template can accommodate a number of meta features of the conceptual model, for example: Name, Type, Version, Modification Date, Security Classification, Release Restriction, Purpose, Application Domain, Description, Use Limitation, Use History, V&V Data Elements, Keyword, Implementation Dependencies, Point Of Contact (POC), Reference and Glyph.
<ul style="list-style-type: none"> Product Structure/Format 	A table with an entry for each data element in the Meta data.
Product Initiation	
<ul style="list-style-type: none"> Entrance Criteria 	<p>Entrance criteria consists of the following activities, availability of information and establishment of operational capability:</p> <ul style="list-style-type: none"> Product development may begin once PA1.1 begins.
Product Development Guidance	
<ul style="list-style-type: none"> Product Development 	The entire list of activities given in text of “Product 1.4 Guidance” should be completed.

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Product Relationships	
• Product – Process Relationships	Almost all the Process Activities in all the five Process Phases will continuously fill the conceptual model Meta data table to finally produce this product.
• Inter-Product Relationships	This product will be developed concurrently with all other products, and will be updated and completed till final conceptual model is built.
Associated Entities	
• Tools	No specific tools or software to complete this product has been identified.
• Actor-Agents	No specific actor or agent has been identified to be alone responsible for the development of this product, however all actors and agents involved in the development of the conceptual model are responsible for filling the conceptual model Meta data with the relevant data from their activities.
• Information Pools	<p>Information pools relevant to this activity include:</p> <ul style="list-style-type: none"> • POC: Holds information about an organization or a person having a particular role with respect to the conceptual model. • Model Identification: Can accommodate information related to the identification of a conceptual model such as: Name, Type, Version, Modification Date, Security Classification, Release Restriction, Purpose, Application Domain, Description, and Use Limitation. • Use History: Provides a description of where this conceptual model has been used. • Reference: Specifies a pointer to additional sources of information such as locations in XML documents and references to ontologies (both domain and middle level) which are used by the conceptual model. • Implementation Dependencies: Maintains a log of all dependencies determined during the development of this conceptual model, such as domain ontologies or any other new concept introduced by the process during the implementation of this conceptual model. • Key Word: Holds information about the key words of this conceptual model for future use. It helps users in searching for this conceptual model. • Glyph: Is responsible for holding the image of conceptual model, which can be used to visually represent a conceptual model in a tool palette or a web repository.

<ul style="list-style-type: none"> Information Pools (cont'd) 	<ul style="list-style-type: none"> V&V Data Elements: The V&V process can produce an enormous amount of data. These data are collected under a label called V&V Data Elements and placed in the product “conceptual model Meta data”. In the table below a list of data items is presented together with the Process Activities where that data is produced.
Product Completion	
<ul style="list-style-type: none"> Exit Criteria 	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> Product development may end once the Meta data table is completed.

Table H-6: Conceptual Model Product 2.1 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
<ul style="list-style-type: none"> Product Name and Aliases 	P2.1 – Conceptual Model Requirement Specification.
Product Description	
<ul style="list-style-type: none"> Product Definition 	The conceptual model requirement specification documents a collection of verifiable properties, attributes and characteristics of the Conceptual Model necessary for it to satisfy its intended purpose.
<ul style="list-style-type: none"> Product Purpose 	The conceptual model requirement specification shall communicate to Conceptual Model designers and builders all intended uses of the conceptual model, the aspects of the mission space to be represented by it and the simulator features to be supported.
<ul style="list-style-type: none"> Product Content 	Requirement statements documenting the content of the Conceptual Model and what criteria the Conceptual Model must satisfy.
<ul style="list-style-type: none"> Product Structure/Format 	Each requirement must be given a unique identifier. It may be useful to categorizing the requirements as belonging to one of the three “spaces” (Conceptual Model, mission, simulation).
Product Initiation	
<ul style="list-style-type: none"> Entrance Criteria 	<p>Entrance criteria consists of the following activities, availability of information and establishment of operational capability:</p> <ul style="list-style-type: none"> At least some of the content or the intended uses of the simulation must have been documented.

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Product Development Guidance	
<ul style="list-style-type: none"> • Product Development 	<ul style="list-style-type: none"> • Use the need statement and constraints and policies inputs to identify requirements for the Conceptual Model. • Analyze the requirements with respect to completeness, consistency and correctness. • Document the requirements in an appropriate format. • Subject the requirement specification to review by competent subject-matter experts and approval by the client.
Product Relationships	
<ul style="list-style-type: none"> • Product – Process Relationships 	<p>The conceptual model requirement specification is produced by the process step P2.1 Identify, analyse and record User, Mission and Simulation Space Requirements.</p> <p>It serves as an input to the derivation of knowledge needs and guides the development of the Conceptual Model design.</p>
<ul style="list-style-type: none"> • Inter-Product Relationships 	<p>The conceptual model requirement specification translates P1.2 – Need Statement and P1.3 – Constraints and Policies into verifiable requirements. It spells out in greater detail and more precisely what is implied by these inputs. It influences the P4.1 – Conceptual Model Design and indirectly the P5.1 – Conceptual Model itself.</p>
Associated Entities	
<ul style="list-style-type: none"> • Tools 	<p>A requirement management tool may prove useful to maintain traceability from needs to requirements and Conceptual Model content.</p>
<ul style="list-style-type: none"> • Actor-Agents 	<p>The conceptual model requirement specification is produced in collaboration between mission space and Modeling SMEs and subject to comment and approval by the client.</p>
<ul style="list-style-type: none"> • Information Pools 	<p>Information pools relevant to this activity include:</p> <ul style="list-style-type: none"> • Scenarios. • Use cases. • Repository of previously developed requirement specifications.
Product Completion	
<ul style="list-style-type: none"> • Exit Criteria 	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> • The requirements for the Conceptual Model are sufficiently detailed to allow unambiguous derivation of knowledge needs and Conceptual Model design.

Table H-7: Conceptual Model Product 2.2 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P2.2 – Conceptual Model Knowledge Acquisition Needs.
Product Description	
• Product Definition	Conceptual model knowledge acquisition needs describe the scope and level of detail of knowledge needed by the Conceptual Model developer to produce a Conceptual Model satisfying the client’s need statement.
• Product Purpose	Conceptual model knowledge acquisition needs shall guide the Conceptual Model developer in collecting the necessary knowledge and limit knowledge acquisition to the minimum sufficient knowledge set.
• Product Content	Conceptual model knowledge acquisition needs shall describe: <ul style="list-style-type: none"> • The entities and activities in the mission space the modeler must understand in order to represent them correctly and with appropriate detail. • The simulation technique, tools and legacy assets the modeler must understand in order to represent implementation requirements and constraints correctly.
• Product Structure/Format	Textual description.
Product Initiation	
• Entrance Criteria	Entrance criteria consists of the following activities, availability of information and establishment of operational capability: <ul style="list-style-type: none"> • At least some of the requirements for the Conceptual Model must have been documented.
Product Development Guidance	
• Product Development	The developer must review the Conceptual Model requirement specification in order to identify knowledge needed for developing a Conceptual Model with sufficient fidelity to satisfy its purpose. Such knowledge will typically include: <ul style="list-style-type: none"> • Technologies applied in mission space entities and their capabilities and limitations. • Physical theories underpinning these technologies. • Military tactics, techniques and procedures. • Candidate simulation technologies. • Legacy simulation models and their capabilities and limitations.

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PRODUCT CHARACTERISTIC	
Product Relationships	
• Product – Process Relationships	Conceptual model knowledge acquisition needs are developed in Process Activity PA2.4 – Derive Mission Space and Simulation Space Knowledge Needs. Knowledge acquisition needs form the input to Process Phase 3 – Acquire Conceptual Model Knowledge.
• Inter-Product Relationships	P2.2 – Conceptual Model Knowledge Acquisition Needs are developed based on P2.1 – Conceptual Model Requirement Specification. It is used in order to develop P3.1 – Validated Knowledge.
Associated Entities	
• Tools	Not applicable.
• Actor-Agents	The main agents participating in the development of Conceptual Model knowledge needs are subject-matter experts from the military mission domain, the military technology domain and modeling and simulation domain.
• Information Pools	Information pools relevant to this activity include: <ul style="list-style-type: none"> • Previously developed knowledge needs descriptions.
Product Completion	
• Exit Criteria	Criteria-types for demonstration of satisfactory completion of the subject activity, include the following: <ul style="list-style-type: none"> • A description of the knowledge needed for Conceptual Model development has been developed that is sufficiently comprehensive and specific to serve as guidance for the knowledge acquisition phase.

Table H-8: Conceptual Model Product 3.1 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P3.1 – Validated Knowledge.
Product Description	
• Product Definition	The product Validated Knowledge is produced in the NATO conceptual modeling Process Phase 3, called Acquire Conceptual Model Knowledge. It is a validated piece of knowledge, developed in response to an identified need and/or requirement in the previous phase (2). It will be acquired from authoritative knowledge sources, and then will be structured, documented, and validated with respect to that authoritative knowledge source.

PRODUCT CHARACTERISTIC	
• Product Purpose	This will be the sole and very important product produced during Phase 3. The next phase Design the Conceptual Model will use this product to design a conceptual model. It is to say that this product will serve as the foundation for designing and building the final conceptual model.
• Product Content	A structured and documented piece of knowledge which has been validated with respect to the authoritative knowledge sources.
• Product Structure/Format	No mandated format.
Product Initiation	
• Entrance Criteria	Entrance criteria consists of the following activities, availability of information and establishment of operational capability: <ul style="list-style-type: none"> • The knowledge needs and the requirements list from the previous phase (2) are required. • Access to an existing conceptual model repository with reusable knowledge is beneficial and preferred. • A list of the authoritative knowledge sources for the required knowledge is also advantageous.
Product Development Guidance	
• Product Development	After identifying the needs and the requirements for the knowledge which were done in the previous phase (2), the authoritative knowledge sources for the particular knowledge which is requested are identified. Next activity in the process will start looking for the corresponding reusable knowledge which may already exist in an existing conceptual model repository, knowledge that can totally or partly be usable for this new need. If not, the lack of knowledge and the gaps which must be filled is identified. After that the knowledge will be gathered, structured and documented. Next, there should be enough information to either generate domain ontology for this particular mission space or extend existing domain ontology. Finally the validity of the acquired knowledge, with respect to the authoritative knowledge sources, will be reviewed and this product will be produced.
Product Relationships	
• Product – Process Relationships	This is the final product of Phase 3 in the NATO conceptual model Process, and to produce it one should go through the Process Activities PA3.1 to PA3.6.
• Inter-Product Relationships	Products P2.1 – Conceptual Model Requirement Specification and P2.2 – Conceptual Model Knowledge Acquisition Needs are the predecessors and P4.1 – Conceptual Model Design is the successor to this product.

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PRODUCT CHARACTERISTIC	
Associated Entities	
<ul style="list-style-type: none"> • Tools 	<p>This product is a result of a knowledge development process and thus support of appropriate tools, methods, and techniques from the knowledge development area is very much appreciated, such as:</p> <ul style="list-style-type: none"> • Methodologies for acquisition of data, information, and knowledge. • Methodologies for documentation, representation, and formatting the acquired knowledge. • Tools for knowledge acquisition, representation, formalization, etc. • Tools for managing and maintaining ontologies.
<ul style="list-style-type: none"> • Actor-Agents 	<ul style="list-style-type: none"> • Knowledge engineer; to provide experience in acquiring, gathering and compiling information. • SME; to provide the domain and task knowledge. • Analysis and formatting expert; experienced in the appropriate formatting analysis method and technique. • Ontology expert; experienced in mapping and interpreting information held in the ontology, as well as being skilled in how to further develop and extend ontologies. • VV&A-agent; for validating the result.
<ul style="list-style-type: none"> • Information Pools 	<p>Information pools relevant to this activity include:</p> <ul style="list-style-type: none"> • An existing conceptual model repository with reusable knowledge. • Domain ontologies in a knowledge base are very much appreciated but not mandatory.
Product Completion	
<ul style="list-style-type: none"> • Exit Criteria 	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> • The Process Activity 3.6 – Review Validity of Acquired Knowledge with Respect to the Authoritative Knowledge Sources will guarantee that the product lives up to the expectations.

Table H-9: Conceptual Model Product 4.1 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
<ul style="list-style-type: none"> • Product Name and Aliases 	P4.1 – Conceptual Model Design.

PRODUCT CHARACTERISTIC	
Product Description	
• Product Definition	Document recording the conceptual model design decisions with a justification of the elective choice.
• Product Purpose	This product serves as a blue print to build the conceptual model.
• Product Content	Conceptual model design shall describe: <ul style="list-style-type: none"> • A record of conceptual model composites: conceptual primitives, model kinds, views, formalisms and notations. • A justification of each design decision with traceability to the driving requirement.
• Product Structure/Format	No mandated format.
Product Initiation	
• Entrance Criteria	Product development may begin as soon as PP4 begins.
Product Development Guidance	
• Product Development	Iteratively: <ul style="list-style-type: none"> • Make elective choices of conceptual model composites. • Reconcile choices into a coherent conceptual model composite combination. • Evaluate the conceptual model design for adequacy/ relevance with the conceptual model requirements.
Product Relationships	
• Product – Process Relationships	The product exists in a preliminary form over PA4.1 to PA4.5 iterations. PA4.6 produces the final P4.1 product, which is used by PA5.1. P4.6 also uses this product to evaluate the design and update P1.4 – Conceptual Model Meta Data accordingly.
• Inter-Product Relationships	This product completely relies on P2.1 – Conceptual Model Requirement Specification and may be used to produce P5.1 – Conceptual Model as soon as it has valuable input. It may evolve iteratively with P5.1.
Associated Entities	
• Tools	No specific tool is required to document the selection of conceptual model composites. A requirement management tool could be useful to document traceability.
• Actor-Agents	Producers.
• Information Pools	Information pools relevant to this activity include: <ul style="list-style-type: none"> • P2.1 – Conceptual Model Requirement Specification, preliminary conceptual model design and literature surveys.

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PRODUCT CHARACTERISTIC	
Product Completion	
• Exit Criteria	<p>Criteria-types for demonstration of satisfactory completion of the subject activity, include the following:</p> <ul style="list-style-type: none"> • Product must pass PA4.6 evaluation against P2.1 – Conceptual Model Requirement Specification.

Table H-10: Conceptual Model Product 5.1 Description.

PRODUCT CHARACTERISTIC	
Product Identity	
• Product Name and Aliases	P5.1 – Conceptual Model.
Product Description	
• Product Definition	The authorized conceptual model work-product resulting from the conceptual modeling activity and including collateral materiel generated during the conceptual modeling effort as are necessary and sufficient to qualify the conceptual model product artefact per se and to support its evolution an use in context of the simulation enterprise environment for which it was produced.
• Product Purpose	The purpose of this work-product is to document in systematic, persistent, authoritative and detailed form information constituting the subject conceptual model in order to support simulation development operations and maintenance as well as model and simulation re-use throughout the duration of the M&S enterprise.
• Product Content	Product contains full and detailed articulation of the mission space and simulation space ontology (entities, attributes, behaviours, and relationships) that is necessary and sufficient to support simulation development and life-cycle evolution.
• Product Structure/Format	Product structure is elective in accordance with decisions made during the conceptual modeling process; including particularly election of conceptual model primitives, model kinds, formalism, views, design features, mission- and simulation-space information to be made manifest in the preliminary (and final) conceptual model. Documentary conventions and media are likewise left to the developer insofar as they are decided explicitly, consistently, and in conformance with protocols and strategic guidance associated with the M&S enterprise.
Product Initiation	
• Entrance Criteria	Product development proper (i.e., in addition to the compilation of ancillary information products generated during the conceptual modeling process), begins at completion of Activity PP4.

PRODUCT CHARACTERISTIC	
Product Development Guidance	
• Product Development	Activity PP5 and its sub-sections PA5.1 through PA5.5 specify in detail product development activity.
Product Relationships	
• Product – Process Relationships	See PA5.1 – PA5.5.
• Inter-Product Relationships	Products directly input to the generation of Product P5.1 are P3.1 – Validated Knowledge and P4.1 – Conceptual Model Design.
Associated Entities	
• Tools	CASE tools implied by the conceptual model design and implementation process elements are relevant to the generation of the subject product.
• Actor-Agents	Conceptual product development team.
• Information Pools	Information contained in P3.1 and P4.1 are required as input to the subject work-product.
Product Completion	
• Exit Criteria	Approval of FINAL DRAFT conceptual model by authoritative stakeholder(s).

