

### Modeling, Use Case and Architecture Process



• ONAP Way of Working

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# **Modeling Process**

	High Level Model Req	Experimental Model	Preliminary Model	Approved Model	Approved Model
WHAT					
3	Model Planning	Input model	Discussion Model	Data Model Freeze Clean Model	
Timeline	High Level Model Requirements	Model Plan Work	Refine Model	Approve Model Model Launch	Model Final Model Freeze
WHEN Tim					MaAr
	Model S/C	Model S/C Use Case Team	Model S/C Architecture	Model S/C	Use Case Team
ОНО	Model S/C Use Case Team	Model S/C Platform Project Teams	Model S/C Architecture	Model S/C Use Case Team	Use Case Team
	Before M0 to M0 Kickoff	From M0 Kickoff to M1 Project Planning	-	M1 Project Planning to M2 Functionality Freeze	M2 Functionality Freeze to M3 API



# Info and Data Modeling Co-Evolution

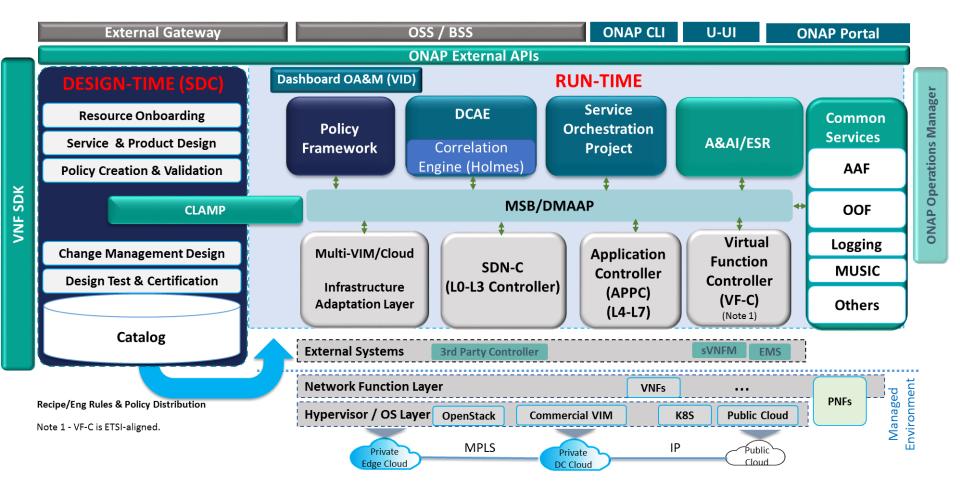




### **Architecture Process**



Arch improvements Troated like a LL/C



# Use Case (U/C) Process

	U/C Proposal	U/C Definitions	U/C Design	U/C Software	Test Integration Plans
WHEN Timeline WHAT	U/C Proposal Approved & base Wiki U/C page	Epics, Stories ("HiLvl Req"), Business Drivers	APIs, S/W design, Platform S/W	U/C S/W deliverables VNFRQTS Requirements Data Model (Defined)	Test/Integration plans
	U/C Proposal	U/C Definition	U/C Design		U/C Test
					Seq interact Shared info
	U/C Team	Model S/C Use Case Team	Model S/C Architecture	Model S/C Use Case Team	Use Case Team
ОНМ	Use Case Team	Model S/C Use Case Team Platform Project Teams	Use Case Team Platform Project Teams	Use Case Team Platform Project Teams	Use Case Team
	Before M0 to M0 Kickoff	From M0 Kickoff to M1 Project Planning	M1 Project Planning to M2 Functionality Freeze	M2 Functionality Freeze to M3 API M4 Code	M3 API M4 Code to RC0 Integration
		MIT TOJECC Hanning	M2 Tunctionality rreeze	WS AFTW4 COUP	Reo Integration



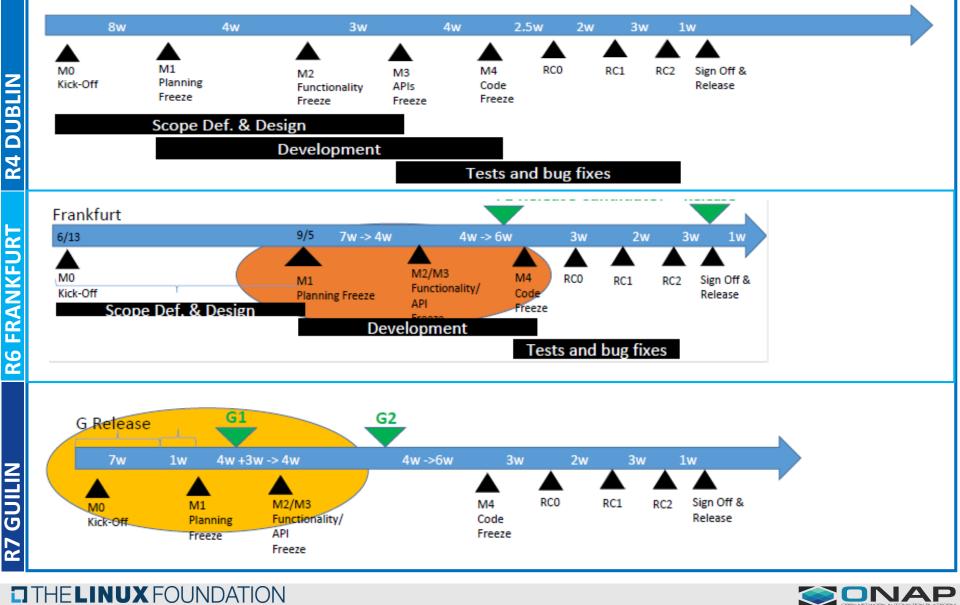
## Architecture Process

	U/C Proposal	U/C Definitions	U/C Design	U/C Software	Test Integration Plans
WHAT	U/C Proposal	Functional Architecture	Functional Architecture Appre	Component Architecture Revi	ews Test/Integration plans
	U/C Proposal		Arch Refined	U/C Develop	
WHEN Timeline			Arch Reviewed		
	U/C Team	Model S/C Use Case Team	Model S/C Architecture	Model S/C Use Case Team	Use Case Team
OHM	Use Case Team	Use Case Team Use Case Team Model	Use Case Team	Architecture	Use Case Team
	Before M0 to M0 Kickoff	From M0 Kickoff to M1 Project Planning	M1 Project Planning to M2 Functionality Freeze	M2 Functionality Freeze to M3 API M4 Code	M3 API M4 Code to RC0 Integration

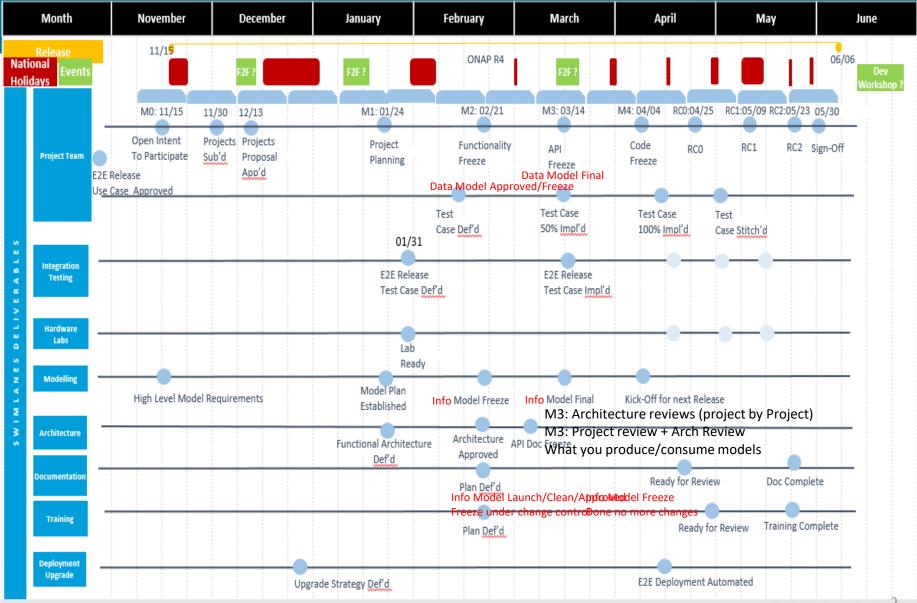


## Release D/(E)/F/G Timelines

#### From Amsterdam to Dublin - ~28 weeks



### **ONAP** Dublin Release Calendar Proposal





### Model & Use Case Development





## Model & Use Case Development

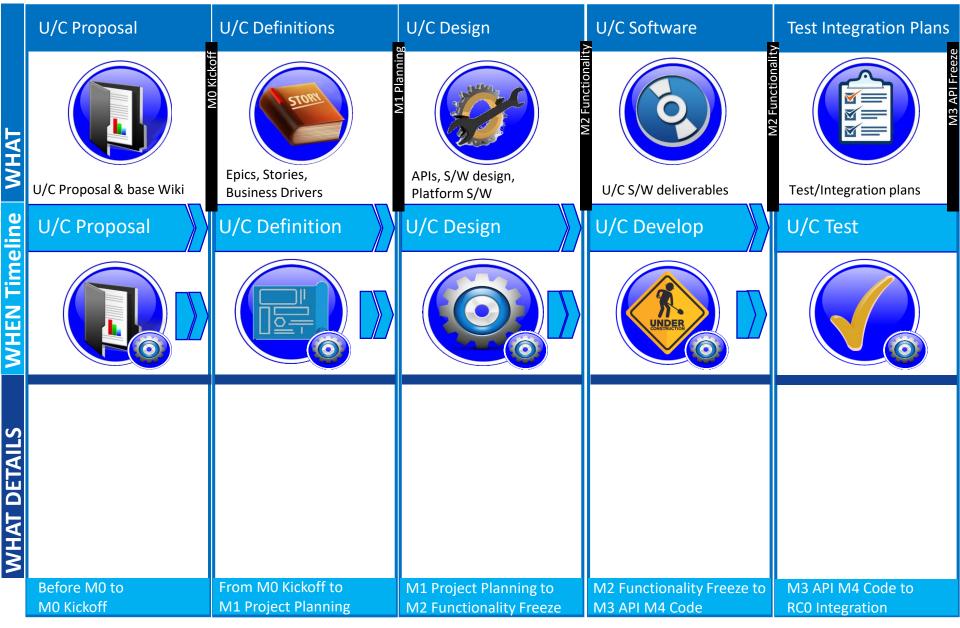




# Modeling Process

Discussion Notes	Input Info Model	Discussion Info Model	Clean Info Model	Approved Model
Info Model Planning Discussion	Info Model Definition	Refine Info Model	Info Model Launch	Refinements Jupdate from Build team Employ Model
<ul> <li>Modeling team adds "High Level Info-model Requirements" (Scope of modeling, continuing, introducing, standards updates). Forward Looking Work (FLW) = Existing,</li> <li>Knowing that are coming.</li> <li>Use Case Team (evaluating U/C proposals) present their</li> <li>modeling needs</li> <li><u>Architecture</u> understanding reference model</li> <li>High level release scope from <u>PTLs</u> (understand from ONAP components what updates)</li> <li>Joint <u>PTL</u> sync meeting</li> </ul>	<ul> <li>U/C - tie it to use case; or tie to FLW.</li> <li>Architecture - sync Architecture; bring to Arch 5/C major model impacts to socialize.</li> <li>PTL - would like the info model signed off on. Open discussion socialize major info model changes.</li> <li>Model Team</li> <li>Add "Info model Plan Established". Template model plan. Phrase high-level requirements for release. Invite U/C teams (HLR) to give more detailed explanation for ideas. Experts in infomodel team ID what fields of existing info model could be enhanced. Overlaps of proposals ided. Reuse of models – working plan on each proposal. https://wiki.onap.org/display/DW/ONAP+R6+Modeling+High +Level+Requirements</li> <li>Note: Info model Updates Begin / Data Model Refinements Begin (M1.5)</li> <li>Development Commitments for InfoModel Requirements"</li> </ul>	<ul> <li>Arch S/C engaged</li> <li>Use Case Project, Platform Teams review Model impacts.</li> <li>Discussion Info Model &amp; Data model development with input from the Model S/C.</li> <li>Reviews of Data Model with Project Teams</li> <li>Info Model changes/ updates can happen</li> <li>(Yang Xu) Monday Call</li> </ul>	<ul> <li>Info Model is Launched.</li> <li>Info Model is reviewed and approved (Clean Info Model)</li> <li>Info Model Frozen (Clean Info Model)</li> <li>Input data model is available.</li> <li>Discussion data model is being developed.</li> <li>Modeling S/C reviews of Data Models.</li> <li>Working w/ Project teams' Data Model to approve</li> <li>Joint Arch S/C + Model S/C API Review</li> </ul>	<ul> <li>Post-M3 Model updates can happen but are very limited. (Jira Tickets)</li> <li>Updates to the Data Model (project/ U/C teams) as needed</li> <li>Feed into API Model Freeze</li> </ul>
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# Use Case (U/C) Process





Created by Andy Mayer, last modified by Kevin Scaggs on Mar 24, 2018 Go to start of metadata **Proposed ONAP Process Improvements No Modeling Presence** Add Modeling Swim Lane Add Modeling Artifacts for appropriate milestones to Modeling Swim Lane MO Only Item in M0 timeframe is "Open Intent To Participate" Add "High Level Info model Requirements" M1 Project Planning / Functional Architecture Defined / Architecture Approved Add "Infomodel Plan Established" Note: Infomodel Updates Begin / Data Model Refinements Begin (M1.5) Note: Development Commitments for Infomodel Requirements? M2 **Functionality Freeze** Add "Infomodel Freeze" (Approval) Add "Data Model Freeze" (Approval) Note: Feed to Data Dictionary?? M3 **API Freeze** Add "Infomodel Final" Add "Component Data Model Final" (Approval – Design Level Compliance) M4 Code Freeze Kickoff Information Model Requirements for Next Release RCx **Runtime Compliance Observations** Establishes and Evolves a Common Model Project (Component) Team Involvement in Modeling Solution Governance of Common Model and Corresponding Component Models Update possible in M3 and M4 (bug fixes) per exception process

Information Model Artifact Contains Classes **Relationships with Multiplicity** Important Attributes with Multiplicity Definitions Data Types Feed to Data Dictionary **Tooling - Papyrus with GitHub** Component Data Model Artifacts (Implementation Specific) **Component Data Model** Contains objects, attributes, & relationship Mapping to Information Model Feed to Data Dictionary? **API Artifacts** API Model Mapping to Information Model New Roles – Model Governance Information Model **Internal Committers Internal Approvers** Impacted Project (Component) Approvers Impacted API Approvers **Architecture Group Approvers Component Data Models Internal Committers Modeling Team Approvers Architecture Approvers** Impacted API Approvers **API Definitions Modeling Team Approvers** Impacted Project (Component) Approvers **Architecture Approvers** Benefits Establishment and Evolution of a Common Model (Model C Continue Move Toward a Model Driven Design Improve Data Quality

Example (Failed) in R4 Dublin

**<u>PNF S/W Model Version</u>** – PNF Resource Model

- M0, M1, M2, M3, M4 (R3) – Defined

- M3 Well-Defined

- M4 – never got approved (not included), Use Case Usage

The PNF model was approved WITHOUT the **PNF S/W Model Version** 

R4 start of R4 the PNF S/W Upgrade was one scope; and end of R4 change scope

Example A&AI PNF-Name & PNF-ID

- M0, M1, M2, M3, M4 (R3) Defined
- M3 Well-Defined
- A&AI Schema impact

Example (Worked) PnP

AT&T would like to put License Model wo/ a Use Case.

### Case 1 U/C starts before Modeling

Case 2 U/C co-evolves

Case 3 modeling starting U/C after (5G modeling, multi-release)

Thinh, Michela's view is that there should be no APPROVED model before a Use Case proposal is approved

1 U/C – Arch S/C - Model S/C present SOCIALIZE 2 Details -3 Wiki -