

# **SysML v2 Requirements Review Process**

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# SysML Background

- SysML v1 adopted in 2006
- Continued evolution to address user and vendor needs
  - SysML v1.5: current version
  - SysML v1.6: in process
- Facilitated awareness and adoption of MBSE
- Much learned from applications of MBSE using SysML

Goal: Develop next generation of SysML to support MBSE over next 10+ years

# SysML v2 Requirements Review

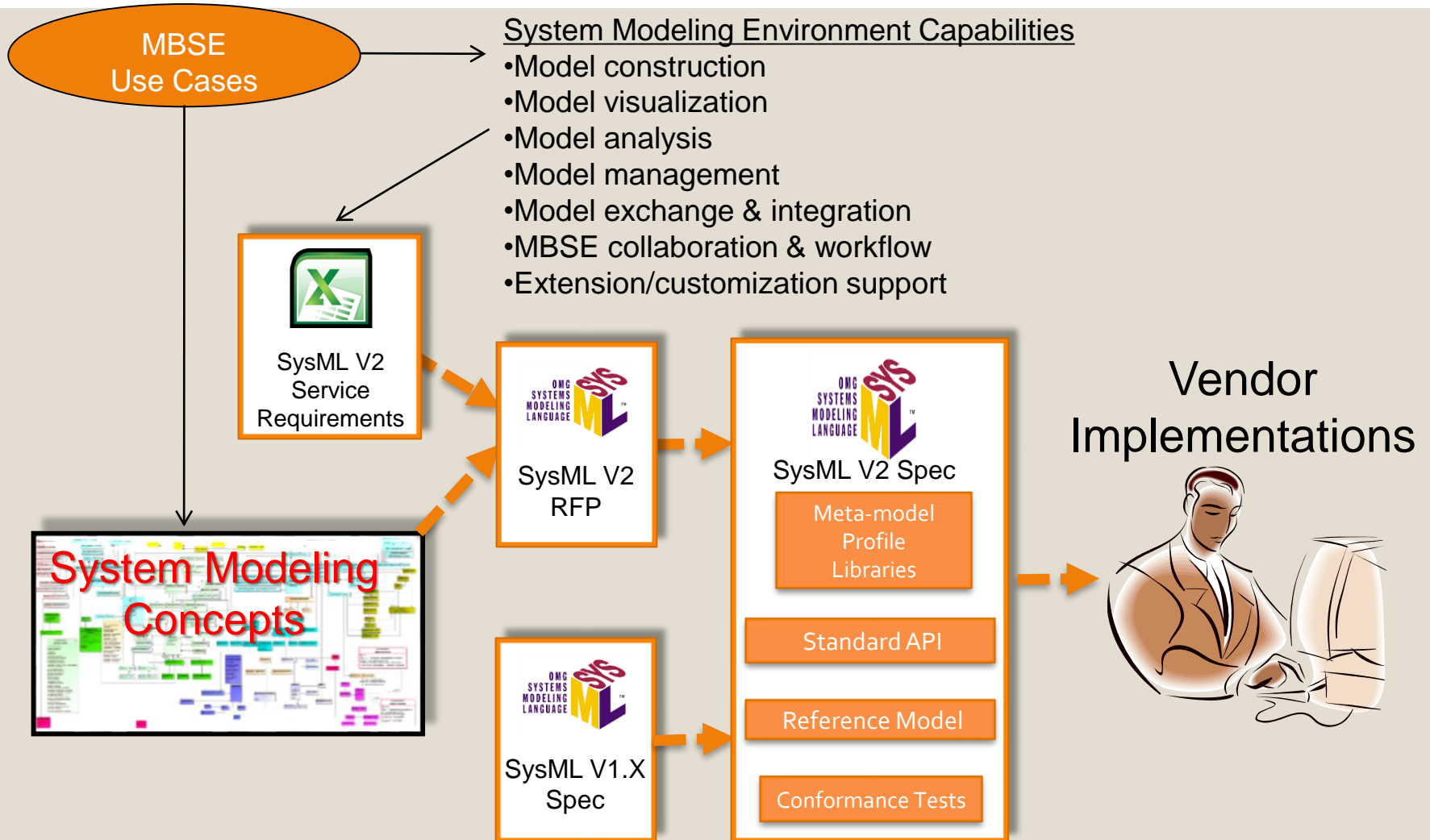
- SysML v2 Requirements Review wiki
  - [http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-roadmap:sysml\\_v2\\_requirements\\_review\\_page](http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-roadmap:sysml_v2_requirements_review_page)
- Source Document
  - SysML v2 Requirements Review Document dated July 3, 2017
- Review Objectives
  - Validate that the requirements reflect the needs of the MBSE community for the next generation systems modeling language, and support the business case for adoption by end users and tool vendor implementations.
- Timeline
  - Comments due: August 4, 2017

# SysML v2 RFP

## Development Milestones

|             |   |
|-------------|---|
| Aug 2015    | Driving Requirements (INCOSE MBSE Themed Insight Article) |
| June 2016   | RFP Objectives, Scope, and Outline (Draft)                |
| Dec 2016    | SME Concept (INCOSE INSIGHT Article)                      |
| Jan 2017    | Presentation at INCOSE IW                                 |
| Mar 2017    | Initial Draft Requirements (SECM, API, Formalism)         |
| June 2017   | Draft SysML v2 Requirements Review Document               |
| July 3 2017 | Updated Draft Distributed for Broad Review                |
| Aug 4 2017  | Comments due  |
| Sept 2017   | Draft System SysML v2 RFP and Presentation to ADTF        |
| Dec 2017    | OMG Review Complete                                       |
| Dec 2017    | Issue SysML v2 RFP  |
| Dec 2017    | Form SysML v2 Submission Teams                            |

# SysML v2 Specification Development



# Review Instructions

- *Reviewers of the SysML v2 requirements in this document are encouraged to read Sections 1, 2, and 3 and refer to the Glossary of Terms in Section 4 to understand the context for these requirements.*
- Please provide review inputs as comments and/or redlines to the review document as follows:
  - Comments that describe the issue and rationale
  - Redlines to the text that propose how to address the issue
  - Editorial redlines without comments
- Send comments by August 4, 2017 to [safriedenthal@gmail.com](mailto:safriedenthal@gmail.com)

# SysML v2 Requirements Review Document

- 1 Introduction
- 2 System Modeling Environment Overview
- 3 **Mandatory Requirements**
- 4 References & Glossary Specific to this Document
- 5 General Reference and Glossary

# SysML v2 Requirements Review Document

## Mandatory Requirements

3.1 Language Architecture

3.2 Data Model

3.2.1 Common Core

3.2.2 Properties, Values, and Expressions

3.2.3 Structure

3.2.4 Interfaces

3.2.5 Behavior

3.2.6 Requirements

3.2.7 Verification

3.2.8 Analysis

3.3 API

3.4 Services

3.4.1 Model Construction Services

3.4.2 Model Visualization Services

3.4.3 Model Analysis Services

3.4.4 Model Management Services

3.4.5 Workflow and Collaboration Services

3.4.6 Interoperability Services

3.5 Other

3.5.1 Interoperability

3.5.2 Usability Introduction

3.5.3 Reference Model & Model Libraries

3.6 Conformance



# OMG SysML v2 Requirements References

- Friedenthal, S, Burkhart, R. Evolving SysML and the System Modeling Environment to Support MBSE, INCOSE INSIGHT, Model-Based Systems Engineering, August 2015 (*August 15 Volume 18 Issue 2, Pg 39-42*)
  - Capabilities, effectiveness measures, and driving requirements for a **system modeling environment (SME)** to support MBSE
- Friedenthal, S. Evolving SysML and the System Modeling Environment to Support MBSE-Part 2, INCOSE INSIGHT, (*December 16 Volume 19 Issue 4, Pg 76-80*)
  - Concept for a **system modeling environment (SME)** to support MBSE
- OMG SysML v2 RFP Working Group Wiki
  - [http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-roadmap:sysml\\_assessment\\_and\\_roadmap\\_working\\_group](http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-roadmap:sysml_assessment_and_roadmap_working_group)