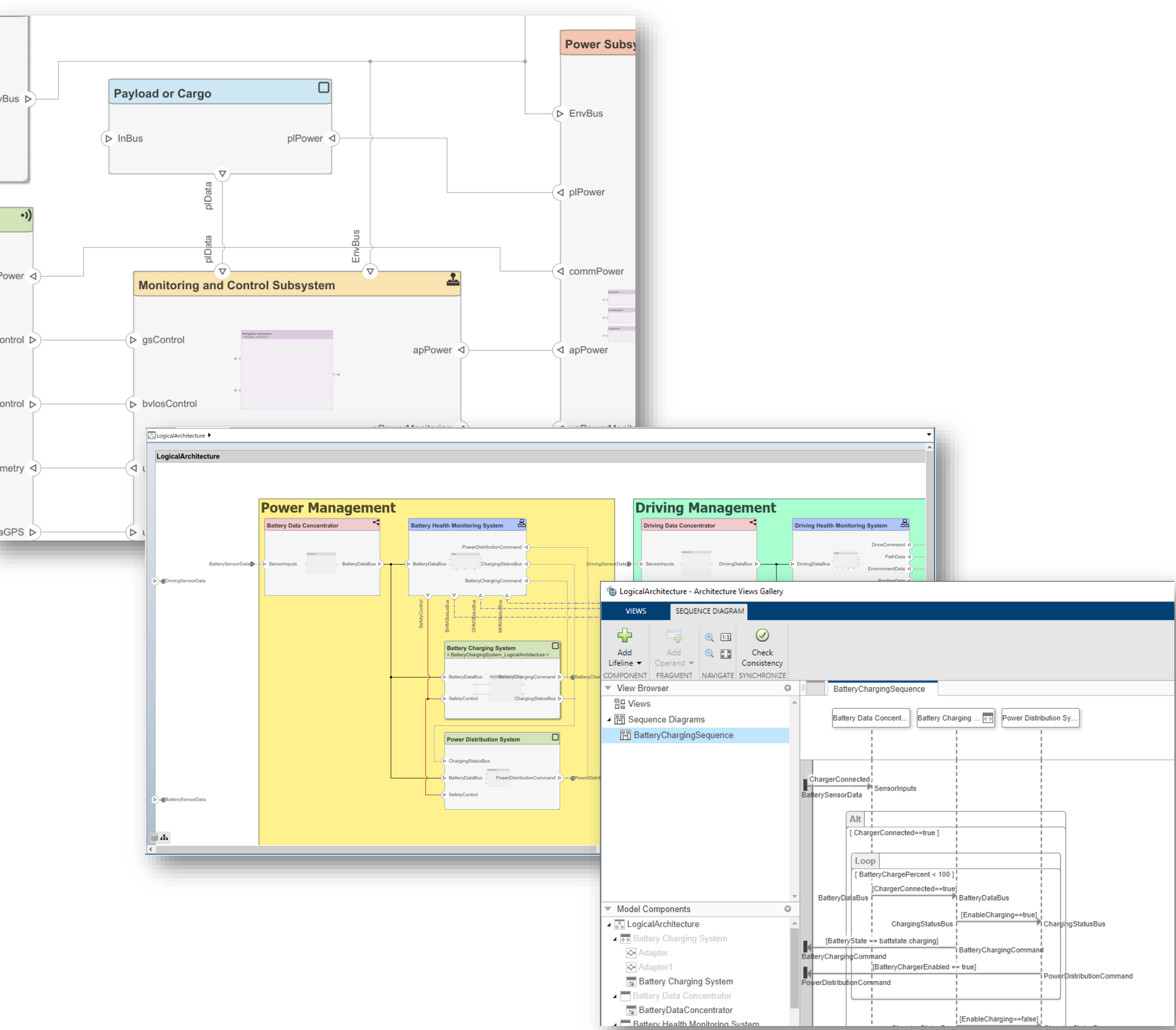
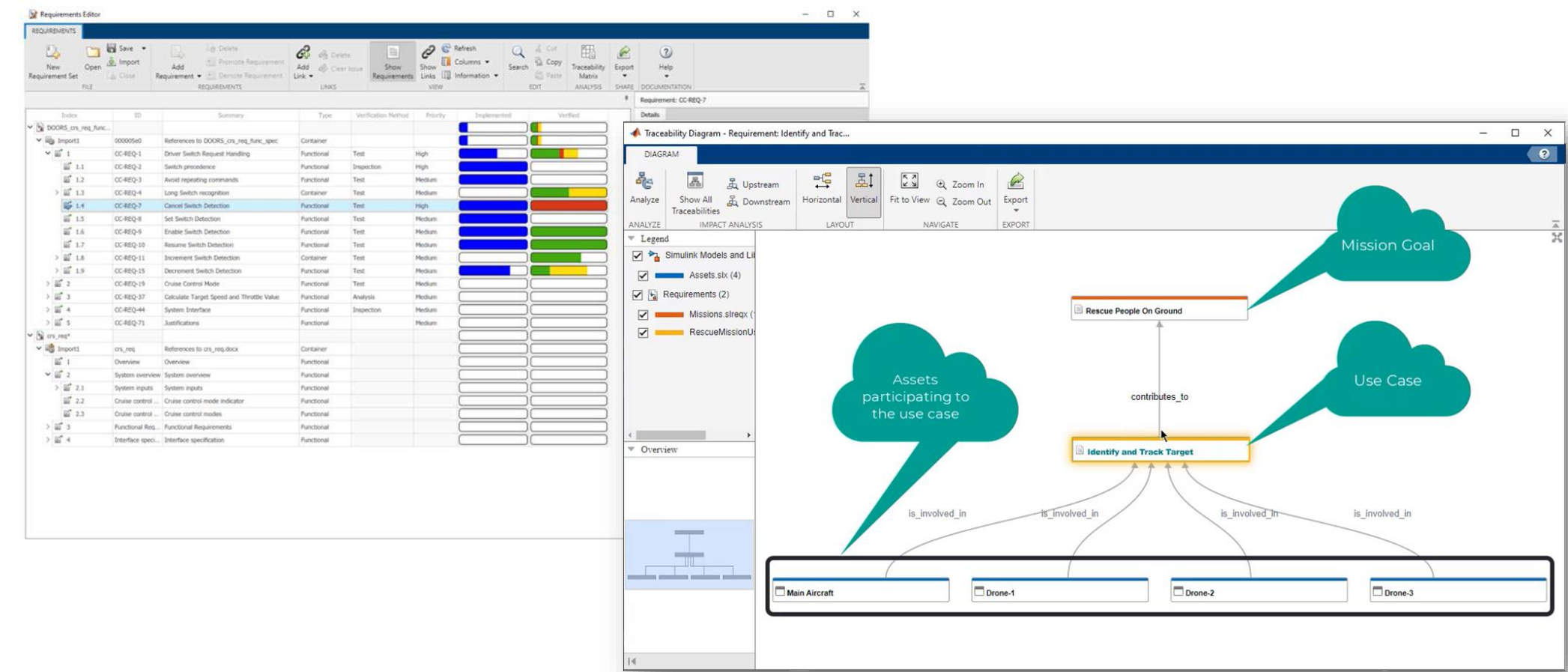


# Systems Engineering with MATLAB & Simulink

## Integral Process



### Requirements Capture and Validation

DIGITAL THREAD: Traceability Between Requirements, Architecture, and Design

Requirements Authoring and Formalization	Req to Model Traceability Report	Test Procedures Authoring Validation	Model in the Loop (MIL) Functional Testing	Requirement-Based Testing Track Status
External Requirements Import and Synchronization		Coverage and Assumptions Assessment	Software in the Loop (SIL) Testing	Pass/Fail Status Determination Report

Obj.2.2 to 2.4 and Obj.4.1 and 4.4

### Model Architecture, Allocation, Assessment and Decomposition

Multi-Domain Modeling	Allocation	Sequence Diagram Design	Trade-Off Analysis
Event/State Machine	Component Diagram	Sequence Diagram Execution	Data Analysis
Hierarchy Diagram	Views / Perspectives	Optimizations	
Design Error Detection	Design Checks & Metrics Evaluation		

Obj.2.5 to 2.7 / Obj.4.2 and 4.3

### Configuration Management

File Organization and Distribution System    GIT/SVN Integration

**DASHBOARDS**  
Model Quality Statistics  
Requirement-Based Indicators

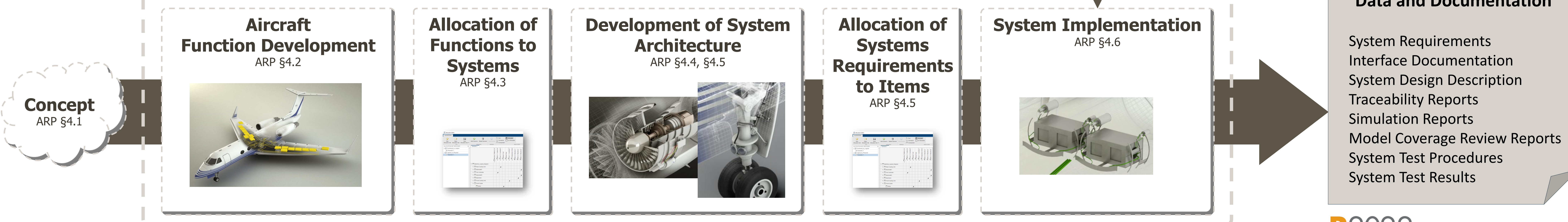
### Implementation Verification

Test Procedures Authoring    Hardware in the Loop (HIL) Testing    Pass/Fail Status Test Determination Report

Obj.5.1 to 5.3

Deliverable Artifact  
Feature

## Development Process



**R2022a**  
At least needed, unless mentioned otherwise

Also Available

