

INCOSE IW 2012 MBSE Workshop

System Architecture and Requirements Modeling Breakout Session

Setting the SE Modeling Context



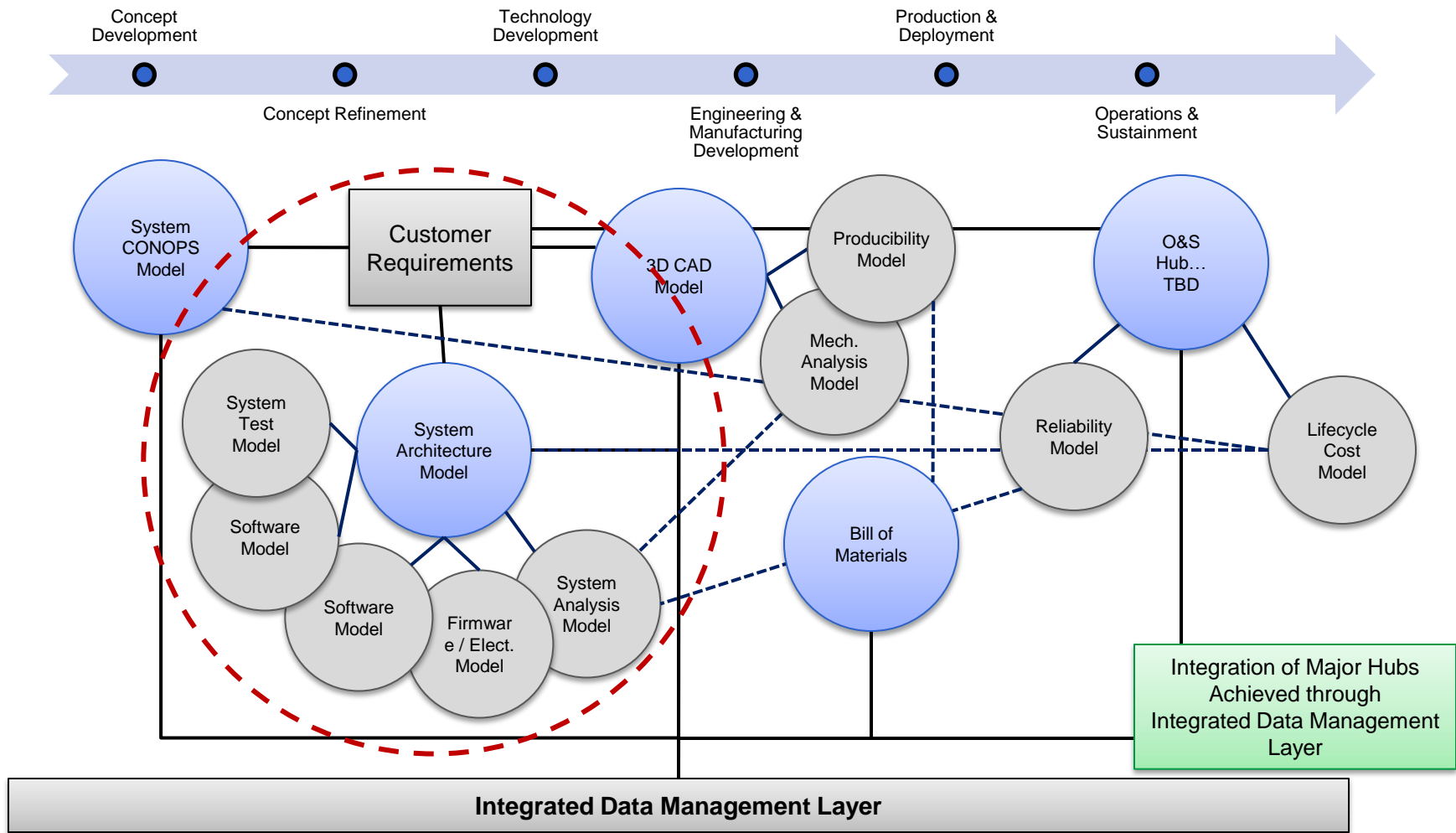
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INCOSE - Integrated Systems Engineering Vision

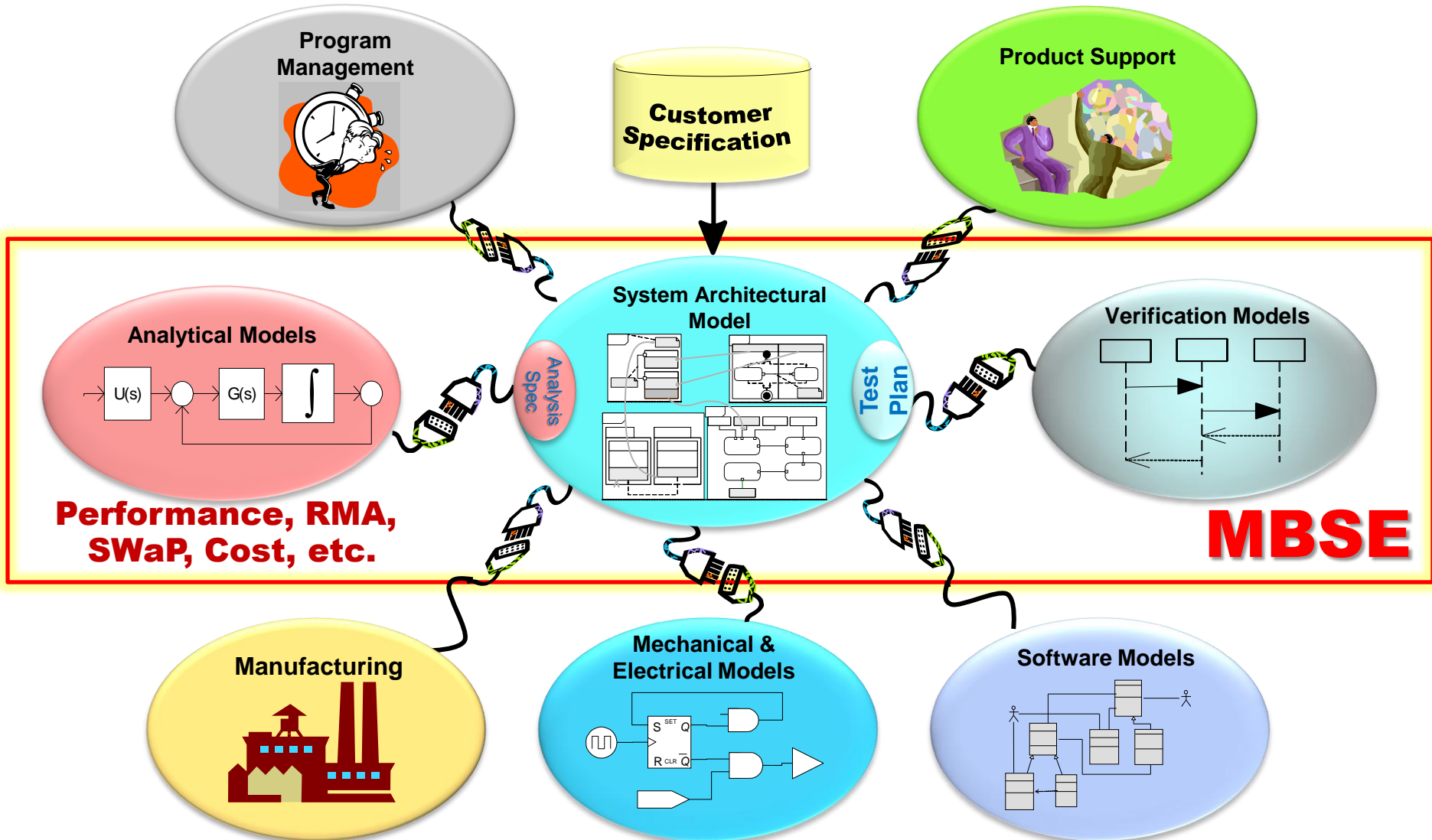


Minimum Turn Radius: 24 ft.
 Dry Pavement Braking Distance at 60 MPH : ~~110~~ ft. 90 ft

Model Integration Through the Lifecycle



The MBSE Integration

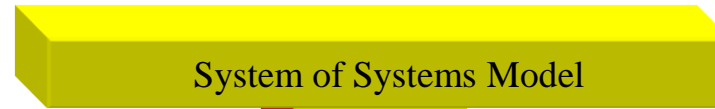


Program Model Tree Integration



SoS Level

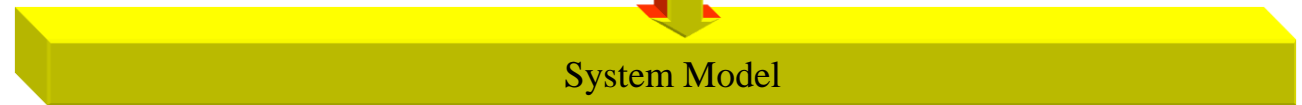
- System Specification



Spec S1

System Level

- Subsystem Specification



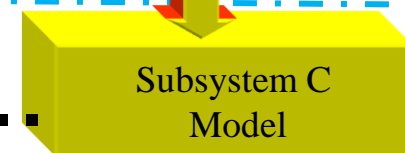
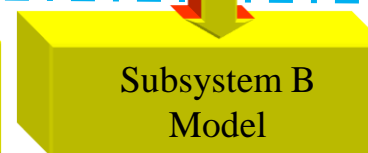
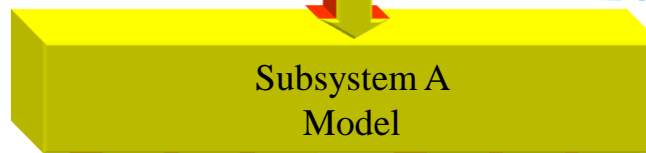
Spec 1

Spec 2

Spec n

Subsystem Level

- Component Specification



Spec 1

Spec 2

Spec 3

Spec 4

Spec 5

Spec 6

Spec 1

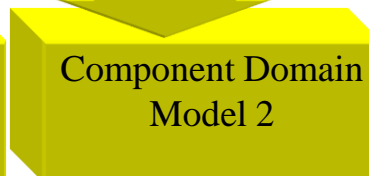
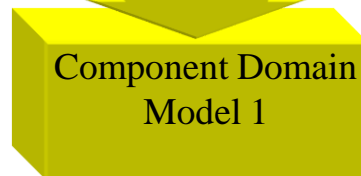
Spec n

Spec 1

Spec n

Component Level

- Design



- Implementation





Integration Benefits

- **Improve communications across all domains and product lifecycle**
 - engineering, manufacturing, management and support
- **Uniform and Consistent Repository of the “Truth” integrated across all product lifecycle domains**
- **Improve ability to Measure Change Impact**
 - A more thorough and complete assessment
 - Reduced time to access the change
- **Enables better design space exploration and design optimization**
- **Reduces the number of defects and detects them earlier**
- **Environment for Automation**
 - Electronic based
 - Linked Data
 - Programmatically Evaluated

