

## SAF User Documentation : Physical Logical Mapping Viewpoint

| Domain   | Aspect                 | Maturity  |
|----------|------------------------|---|
| Physical | Traceability & Mapping | <br>released |

### Example



### Purpose

The Physical Logical Mapping Viewpoint supports the definition of the assignment of conceptual logical system elements to physical SOI elements.

Following the identification of physical SOI elements capable of performing the system functions of logical elements, the Physical Logical Mapping Viewpoint provides feedback to the System Architecture Definition process to consolidate or confirm the allocation, partitioning, and alignment of logical elements to physical elements that comprise the SOI.

### Applicability

The Physical Logical Mapping Viewpoint supports the "Design Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§2.3.5.5] and contributes to the artifact "Traceability Mapping".

Furthermore, the Physical Logical Mapping Viewpoint supports the "Allocation and Partitioning of Logical Entities to Physical Entities" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§4.4.2.7].

## Presentation

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A LBS\_to\_PBS mapping matrix featuring

- Logical Breakdown Structure (LBS)
- Physical Breakdown Structure (FBS)
- Allocation from conceptual logical system elements to physical SOI elements

## Stakeholder

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- [Hardware Developer](#)
- [IV&V Engineer](#)
- [Mechanic Developer](#)
- [Software Developer](#)
- [System Architect](#)

## Concern

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- [Which conceptual logical elements are allocated to the physical SOI physical architecture?](#)

## Profile Model Reference

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The following Stereotypes / Model Elements are used in the Viewpoint:

- Allocate [SysML Profile]
- Attribute "logical\_element" of SAF\_PhysicalItem referencing SAF\_LogicalElement
- SAF\_LogicalInternalRole contained in SAF\_LogicalElement
- SAF\_PhysicalInternalRole contained in SAF\_PhysicalItem
- [SAF\\_LogicalElement](#)
- [SAF\\_PhysicalInternalRole](#)
- [SAF\\_SPV08a\\_View](#)

## Input from other Viewpoints

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### Required Viewpoints

- [Logical Structure Viewpoint](#)
- [Physical Structure Viewpoint](#)
- [Logical Functional Mapping Viewpoint](#)

## Recommended Viewpoints

- [System Functional Breakdown Structure Viewpoint](#)