



# Physical Context Definition Viewpoint

| Domain   | Aspect             | Maturity  |
|----------|--------------------|---|
| Physical | Context & Exchange | <br>under construction |

## Example



## Purpose

The Physical Context Definition Viewpoint identifies the different context the system is used in, along with the associated external entities sharing a physical interface with the system. For each context the applicable environmental conditions may be defined. The physical context helps in discovering the Interface Requirements needed to integrate a system into its environment in a specific context. NOTE: For each candidate system architecture, the physical context Viewpoint is elaborated forming the baseline for the later assessment of the different system architecture solutions.

## Applicability

The Physical Context Definition Viewpoint supports the “Architecture Definition Process” activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§ 4.4]. The Viewpoint is used to define context,

boundaries, and external interactions of the SOI in the physical domain. NOTE: Only those external entities are identified that share a physical interface. Other entities connected via a network are subject of the logical system context.

## Stakeholder

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- [Acquirer](#)
- [Customer](#)
- [Hardware Developer](#)
- [IV&V Engineer](#)
- [Safety Expert](#)
- [Software Developer](#)
- [Supplier](#)
- [System Architect](#)

## Concern

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- How does the system or a system element interact with the test environment?
- What are necessary enabling systems?
- What are the external physical entities the system interacts with in the respective context?
- What is the system boundary definition?
- What kind of test equipment is necessary to test the system elements?

## Presentation

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The following artifacts support the modeling activities: The physical context definition diagram (BDD) defines the elements available in a specific context. At least one physical context definition diagram is used per identified context, featuring

- one block representing the Physical System i.e. the system of interest
- one block representing the specific Physical System Context
- several blocks representing Physical Context Elements such as Physical User, Physical External System, and Physical Environment present in the systems context
- composition relationships attaching the Physical Context Elements and the Physical System to the Physical System Context block

## Profile Model Reference

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- Association [UML\_Standard\_Profile]
- Association [UML\_Standard\_Profile]
- Property [UML\_Standard\_Profile]
- Property [UML\_Standard\_Profile]
- [SAF\\_PhysicalContext](#)

- [SAF\\_PhysicalEnvironment](#)
- [SAF\\_PhysicalExternalSystem](#)
- [SAF\\_PhysicalSystem](#)
- [SAF\\_PhysicalUser](#)
- [SAF\\_SPV01a\\_View](#)

## Input from other Viewpoints

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### Required Viewpoints

*none*

### Recommended Viewpoints

*none*