

Requirement matrices

The matrices enables you to analyze, create, and modify relationships between Requirements and other design elements. It is especially valuable that you can display relationships that cannot be represented in diagrams, such as representations (classes by lifeline), behavior representations in other diagrams, operation representations by Call Behavior Actions, etc. All Requirement matrices allows you to perform [Requirements gap and coverage analysis](#).

You can create four kind of Requirements matrices:

- Derive Requirement Matrix.
- Refine Requirement Matrix.
- Satisfy Requirement Matrix.
- Verify Requirement Matrix.

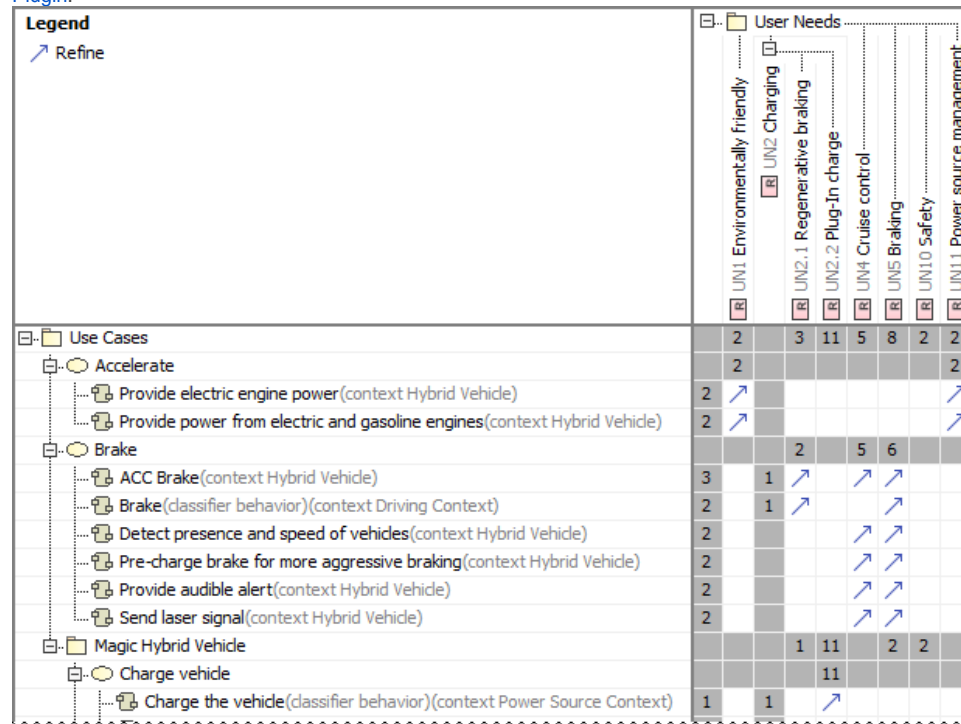
The different purposes for each matrix are illustrated below:

- **Derive Requirement Matrix** allows you to analyze, create, and modify [Derive](#) relationships between Requirements and other design elements. Rows represent the elements that are the clients of Derive relationship. Columns represent the [Requirements](#) that are the suppliers of Derive relationship. The example below is created by using the [extract requirement values.mdzip](#) sample model that comes only with [SysML Plugin](#).

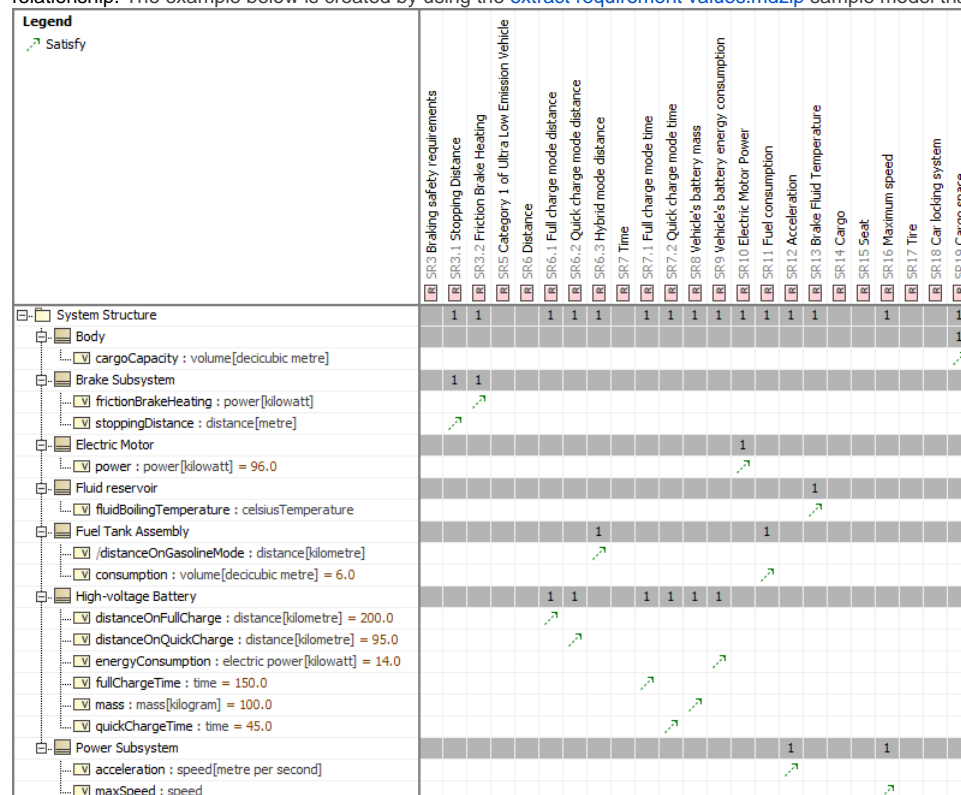
Legend		User Needs				
DeriveReq		UN1 Environmentally friendly	UN2 Charging	UN2.1 Regenerative braking	UN4 Cruise control	UN5 Braking
System Requirements		1	2	2	3	4
SR1 Adaptive Cruise Control	1			DeriveReq		
SR2 Regenerative Braking	1	1	DeriveReq			
SR3 Braking safety requirements	2	1	DeriveReq		DeriveReq	
SR3.1 Stopping Distance	1				DeriveReq	
SR3.2 Friction Brake Heating	1				DeriveReq	
SR4 ACC Brake	1			DeriveReq		
SR5 Category 1 of Ultra Low Emission Vehicle	1	DeriveReq				
SR6 Distance	1					DeriveReq
SR6.1 Full charge mode distance	1					DeriveReq
SR6.2 Quick charge mode distance	1					DeriveReq
SR6.3 Hybrid mode distance	1					DeriveReq

- **Refine Requirement Matrix** allows you to analyze, create, and modify [Refine](#) relationships between Requirements and other design elements. Rows represent the elements that are the clients of Refine relationship. Columns represent the [Requirements](#) that are the suppliers

of the Refine relationship. The example below is created by using the [extract requirement values.mdzip](#) sample model that comes only with [SysML Plugin](#).



- **Satisfy Requirement Matrix** allows you to analyze, create, and modify [Satisfy](#) relationships between Requirements and other design elements. Rows represent the elements that are the clients of Satisfy relationship. Columns represent the [Requirements](#) that are the suppliers of the Satisfy relationship. The example below is created by using the [extract requirement values.mdzip](#) sample model that comes only with [SysML Plugin](#).



- **Verify Requirement Matrix** allows you to analyze, create, and modify [Verify](#) relationships between Requirements and other design elements. Rows represent the elements that are the clients of Verify relationship. Columns represent the [Requirements](#) that are the suppliers of the Verify relationship. The example below is created by using the [Categorization requirements.mdzip](#) sample model that comes only with [Cam eo Requirements Modeler Plugin](#).

