

Description	Type of change	Anchor
Comparable to the fm-fault, fm-action etc. In the new version the systemelements are typed objects too. Their name is provided by their type.	New element "FM-STRUCTURE-ELEMENT-TYPE" New element "FM-STRUCTURE-ELEMENT-TYPE-REF"	FM-STRUCTURE-ELEMENT
Machines which are visible in a variant are now described in a positiv logic. They are referenced in this element. All other machines are excluded from the variant. The SI attribute is the ID of the Object with the excluded machines. The IDREF attribute is the ID of the machine which is excluded. The old behaviour used the FM-NET-CONNECTIONS to exclude the machines from a variant.	Added element FM-MACHINE-REFS	FM-VARIANT
In this new version userdefined attributes (UDA) may be excluded from variants. The visible UDA are referenced in this element. The behaviour is the same as for machines (see above).	Added element FM-USERDEFINED-ATTRIBUTE-REFS	FM-VARIANT
The attribute "category" of revision states is now also available to the action groups.	Added element FM-CATEGORY-REFS	FM-TASK-SET
The attribute "classification" is added to actiongroups.	Added element FM-CLASSIFICATION	FM-TASK-SET
The attribute "classification" is added to revision states.	Added element FM-CLASSIFICATION	FM-TASK-SETS
Global actions may have history states too (moved deadlines and status changes). This is the element comparable to the history states of "instances" of actions. Background: the FM-ACTION-TYPE of global actions is the "administrator" of the locally used	Added element FM-HISTORY-STATES	FM-ACTION-TYPE

instances of the global action.		
Now product- and processcharacteristic types can be used as a pattern for new instances regarding their specification. This is the element for the specification of the types.	Added element PRMS	FM-CHARACTERISTIC-TYPE
Now failures can be "global" like actions. All instances of the failure are using the same significance which is deposited at the type of the failure.	Added element FM-SIGNIFICANCE	FM-FAULT-TYPE
The attributes of the "Quantified Risk" feature were stored in the SDG container till now. With the new version these values are moved to the new container called FM-FAILURE-RISK-INFOS.	Added element FM-FAILURE-RISK-INFOS	FM-FAULT
These are the parameter for the "functional safety" of functions.	Added element FM-IEC-PARAMETERS	FM-FUNCTION
These are the parameter for the "functional safety" of systemelements.	Added element FM-IEC-PARAMETERS	FM-STRUCTURE-ELEMENT
"Start date" of (global) actions is now defined at the FM-TASK-SCHEDULE and can be used in FM-ACTION and FM-ACTION-TYPE too.	Added element FM-START-DATE	FM-TASK-SCHEDULE
The new documentsetting "Use reaction plan/control method as dedicated objects" is used to hold reaction plan and control method as an independent objects. Alternatively they can be used as a control or preventive action. This new elements are stored in XML as an fm-action with the category "FM-CONTROL-METHOD" or "FM-REACTION-PLAN". This is the possibility to differ between control or preventive actions and control methods and	New element "FM-CONTROL-METHODS" New element "FM-REACTIONS"	FM-TEST-SAMPLE

reaction plans.		

**Note:** this notes of changes are a summary of the Document "msrfmea\_2\_2\_1.ml.dtd\_en.pdf" which is available for the IQ-Software as Download from the APIS Website (<http://www.apis.de/sites/default/files/MSR-2.2.1.zip>). The changes there are marked as red text.