PARAMETERS IN REVIT

The properties or attributes of elements in Revit models are called PARAMETERS.
Parameters and the customization of their information in BIM models is one of the most important features of Revit.
It is important to understand the process to create them correctly based on the use we want to give them.
PARAMETERS can be classified depending on who created them and in the file they are saved.
It is important to understand the difference between existing PARAMETERS and those that can be created.

Parameter Type	Used in:	Generated by:	Can be Tagged	Can be Schedule	Type / Use	
SYSTEM	Families Project		Yes 	Yes 	Type	Profitable
						Report
					Instance	Profitable
						Report
PROJECT	Project	Modeler	No 	Yes 	Type	Profitable
					Instance	Aligned by group
						Vary in the group
FAMILY	Families	Modeler	No 	No 	Type	Profitable
					Instance	Aligned by group
						Vary in the group
SHARED	Families Projects Interdisciplinary	BIM Manager	Yes 	Yes 	Type	Profitable
					Instance	Profitable
						Report
GLOBAL	Project	Modeler	No 	No 	Type	Profitable
						Associated
					Instance	Profitable
						Associated

Can be incluided in

SYSTEM	These are those that exist by default in the elements when you start modeling, both in a project and in a family. They cannot be created or deleted. They are native to the program Example: Mark, Assembly Code, Keynote, Comment and others *They come in families like: Walls, Stairs, Floors, Ceilings…*

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PROJECT	They contain information that is first defined and then classified into various categories of elements for a project. They are project-specific and cannot be shared with another project. However, they can be transferred to another project. You can use project parameters in single-category or multi-category planning tables.
FAMILY	*They control the variable values of the family, such as: dimensions, dimensions, materials.* They are only available in the created family and not in any similar or same category family. It can be used to control a parameter in a nested family.
SHARED	These are parameter definitions that can be used in multiple families or projects. They can be used to create a planning table that shows multiple family categories. If you need to use the same parameter in different files, whether they are families or projects, you must create a shared parameter. They are saved in an external ".txt" file. They can be used in a team of multiple disciplines. They can allow automatic updates of annotations in a model. They can be included in Family, Global and Project parameters
GLOBAL from Revit 2017	To control or report values. Control the geometric relationship, the value of a dimension, constraint, or other attribute. Associate them with a property of an element type or instance to control their value. Associate them with an instance or a project parameter type. Report the value of a dimension so that this value can be used in the equations for other global parameters.

Properties to define of a PARAMETER

NAME	It should be descriptive enough to understand its function. You must comply with the nomenclature standards established in the BEP It is editable in the Project and Family Parameters It is not editable in Shared Parameters
DISCIPLINE	Depending on the Discipline we can find different types of Parameters
TYPE	There are a number of predefined types It is a very important property that must be carefully selected according to the attribute of the element we want to control. Once chosen it cannot be changed The units depend on the type of Parameter.

Type / Instance / Report

TYPE	*If we define it as Type to change its values it will affect all the examples of that type of family* When you select an object we can find this parameter in properties (Edit type)
INSTANCE	Changing the value of an Item Parameter only affects the selected item. The value of the Specimen Parameters can change between Specimens of the same family type. When you select an object they appear in the Properties window.
REPORT	It is a type of parameter that is being managed from a family dimension It is a value that is extracted from a geometric condition of the family and is used as data in reports, tables or formulas.