System Model

@wikipedia

Description of a System behavior in response to the parameters to which the system is sensitive to (see **Fig. 1**).

Modern Models are usually implemented in the form of a computer software which provides interface to:

Supply the Model Inputs		Initiate a Model Run		Retrieve the Model Outputs

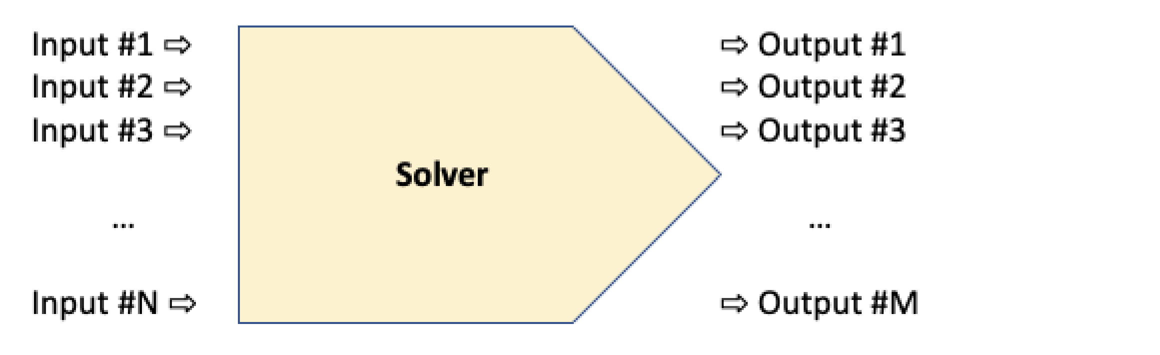

Fig. 1. Schematic of Model's components, including Model Inputs, Model Outputs and Model Solver

It normally follows the Model Description Protocol:

Motivation	Explains the reasons why a Model may come in need
Inputs	A list of System properties which Model takes as input
Outputs	A list of System properties which Model simulates based on the Model Inputs
Model Proposition	A list of assumptions/constraints which have been put into the Model
Model Mathematics	Definition of the Model using mathematical concepts and mathematical language
Model Solver	Description of the solution algorithm to the Mathematical Model
Approximations	Simplified solver(s) for rough estimations and fast track analysis of a System's behavior
Model Matching	Description of algorithm of matching the Model to the training data
Applications	A list of popular Model applications and limitations
Examples (Cases)	A list of practical cases showing Model functionality and usefulness and limitations

A System may have many Models depending on which System properties are taken as Model Inputs and Model Outputs.

The Model may have some governing properties which can be trained to make Model output fit the experimental data.

The results of the training should be qualified by means of Model Validation.

See also

Human / Science / Formal Science / System Science

[Model Solver][Model Run][Model Validation][Model Matching]

[Mathematics][Analytical Model][Numerical Model]