

On Understanding the Value of Domain Modeling

(Extended Abstract)

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This extended abstract is based on our work as reported in [GP21].

In the context of enterprise and information systems engineering (including enterprise architecture, value modeling, business process management, etc), a wide range of models are produced and used. The used models cover, among others, enterprise (architecture) models, business process models, ontology models, enterprise architecture models, information models, etc. We consider each of these kinds of models as being valued members of the larger family of domain models [PG20].

The creation, administration, and use, of such domain models requires an investment in terms of time, money, cognitive effort, etc. We contend that such investments should be met by a return. In other words, the resulting models and/or the processes involved in their creation, administration, and use, should add value that make these investments worth while.

In our observation some, but not much, work has been conducted on balancing the expected return(s) of a modeling effort in relation to the involved resources. Domain modeling in practice is more than ever governed by the laws of economics, which, in our view, fuels the need for a more fundamental reflection on such cost/benefit analysis. Some authors, indeed, identify the need to more explicitly identify the purpose for modeling (see e.g. [Rot89, JGB12]). In some of our own earlier work, we also identified the need to reason about the Return on Modeling Effort (RoME) [Pro09, OPW⁺08].

In our view, a more rigorous underpinning of such cost/benefit trade-offs is called for. In line with this, this presentation will report on our joint effort to gain a better understanding of the factors that underly the value of modeling, i.e., its possible/realized return. The underlying paper [GP21] reported on a first step to gain more insights into the pragmatic aspects of modeling, and more specifically the value of modeling. As such, it builds on our earlier work on e.g. the foundations of modeling [BPS14, GGM20, PG20], quality of

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models and modeling [BHPR09], the return on modeling effort (RoME) [Pro09, OPW⁺08], as well as on a precise definition of the notion of value [SGGM17].

In line with [SGGM17], we take *value* to emerge from the relation between the *goals* of a *value subject* and the properties (qualities, capabilities, dispositions, affordances) that a *value entity* has and which can be enacted to satisfy those goals. So, by proposing this taxonomy here, we take a first step in identifying a relation between properties of models in different capacities and how they relate to these different goals.

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