*Below is some information from work I had done previously on developing a maturity model for end user computing. The first section gives some background information on the purpose of maturity models and advice on their development and the second part gives some examples of levels and dimensions of models (albeit more relevant to end user computing).*

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*16/2/16*

Maturity models

1. Background

The origins of maturity models date back to the late 1980’s and are attributed to the work of the Carnegie Mellon University (Paulk, 2009). There are quite a few maturity models in existence these days, particularly in the area of IT. Over the last few years, over a hundred such models have been developed to support IT management in addressing a broad range of areas (Becker, et al., 2009).

Maturity models are conceptual multi-stage models that describe typical patterns in the development of certain organisational capabilities. They are usually depicted as a sequence of stages that show a path from an initial state to a target state maturity either for an individual capability or a complete set of organisational capabilities (Pöppelbuß & Röglinger, 2011).

The primary purpose of maturity models is to outline the stages of maturation paths. They can be used for as-is assessments, to identify desirable future maturity levels and provide guidance on how to implement improvement measures and can also be used for benchmarking both internally and externally (Röglinger, et al., 2012).

These different purposes can be categorised as descriptive, prescriptive or comparative as described below (Pöppelbuß & Röglinger, 2011):

* **Descriptive:** Model applied for as-is assessments where the current capabilities of the entity under investigation are assessed with respect to given criteria;
* **Prescriptive:** Model indicates how to identify desirable maturity levels and provides guidelines on improvement measures;
* **Comparative:** Model allows for internal or external benchmarking.

Maturity models are not without their critics of both their concept and development (Pöppelbuß & Röglinger, 2011). Few studies have researched the usefulness of maturity models. While almost all maturity models aspire to all three purposes of such models, many are not good at the prescriptive purpose as guidance on the specific steps to take to improve maturity levels can be minimal (Röglinger, et al., 2012).

To address some of the concerns, a procedural model for the development and evaluation of maturity models has been developed based on design science principles (Becker, et al., 2009) - this model is shown in Figure 4.

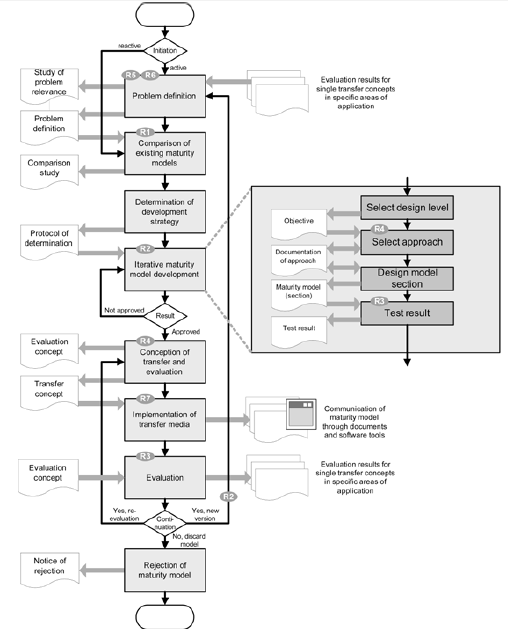


Figure 4: Procedure model for developing maturity models (Becker, et al., 2009)

Following on from the procedural model, a framework of design principles for maturity models was developed to support the development process (Pöppelbuß & Röglinger, 2011) – this framework, which essentially is a check list of issues to be documented or considered, is shown in Figure 5. It is not expected that every design principle is met but that they are used for guidance.

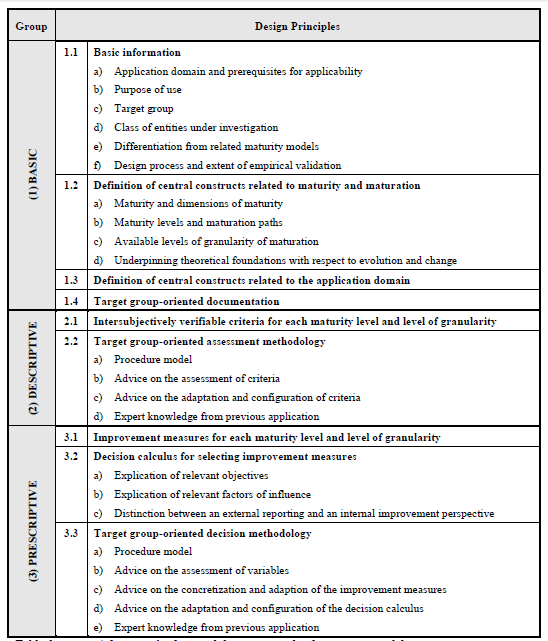


Figure 5: A framework of general design principles for maturity models (Pöppelbuß & Röglinger, 2011)

Maturity models are widely adopted but that it can be a challenge for practitioners to identify an appropriate model given the ever increasing number of models in existence (Poeppelbuss, et al., 2011). Despite the large number of maturity models in the area of IT, there does not appear to be any model in existence on the topic of end-user computing.

2. Architecture

Dimensions of maturity

In considering the dimensions or components of maturity, a wide range of maturity models could be considered. Examples of models and frameworks considered of most relevance to end user computing are shown in Table 19 where the first and second level categories are summarised.



Table 19: Dimensions of maturity in selected maturity models and EUC frameworks

*Maturity levels*

In order to identify appropriate maturity levels, a wide variety of maturity models were reviewed - models of interest are identified and their levels described in Table 21.

Many maturity models are 5 stage models, similar to the well-known Capability Maturity Model (CMM), but there is no requirement to stick with a 5 stage model. It has been found that the design of maturity models may be overly influenced by the CMM whose stages are used as a blueprint, irrespective of appropriateness (Poeppelbuss, et al., 2011).

Table 21: Maturity levels in selected maturity models