

2. FOUNDATIONS

Doubt grows with knowledge.

*(Johann Wolfgang von
Goethe)*

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In this chapter, terminology and practices from metrics, software components and variation management are covered. Moreover, concepts like metamodeling and paper prototyping are introduced. The content is not intended to be comprehensive. Hence, for introductory readings it is referred to [CN02], [PBvdL05], [LL10] and [Sny03].

2.1. Preliminaries to Metrics

Metrics form an integral part of the management and technical activities that are implemented in every *software organization*¹. Metrics provide organizations with objective and reliable information, which helps to make sustainable decisions that will have positively repercussions throughout their business. The metrics and the information derived from them are treated by software organizations as a valuable asset. This information facilitates in all the organizational levels, from project stage up to management, the decision making.

2.1.1. Metrics in the Organization

Metric should not be confused with measure. A *metric* is a quantitative property of products or processes whose values are somehow a representation of certain type (like numbers) [Mey00]. A measure is the value of a metric for a certain product or process.

¹As a remark, the terms of software organization and organization are used indistinctly overall the presentation of this work and they both refer to software organization.