

3.4.5 Project Support

The project support model specifies domain engineering support for product manufacturing projects, including identifying the capabilities projects need to build products, project-focused evaluations of the degree to which the domain supports efficient and effective use of those capabilities, and the support projects are provided to foster such use. Project support model content is developed in close collaboration with actual and exploratory manufacturing projects.

Project Needs

The project needs element specifies the perspective of product manufacturing projects as to the capabilities that the domain needs to provide. A domain is a necessary balancing of a broad program-market perspective with more narrowly focused project-customer perspectives. The result is a program-level coordination and collaboration between the overall market-focused domain engineering effort and product manufacturing projects. This element is organized around the identification and resolution of common and differing needs of projects and their customers, technical issues and tradeoffs in products, and future needs for domain evolution based on future market needs as a generalization of the current and future needs of existing and prospective customers.

Domain Evaluation

The domain evaluation element specifies the verification and validation of domain capabilities from the perspective of manufacturing projects. Evaluations follow project-informed scenarios to build representative sample products for assessing the behavioral and developmental quality achievable in using the domain. Verification focuses on confirming that the domain produces products whose behavior and quality is a proper realization of their associated product specifications. Validation focuses on determining the degree to which the domain manufacturing process enables projects to achieve expected productivity and product quality.

Domain Delivery

The domain delivery element specifies the means by which the domain engineering effort supports its customers—the program’s product manufacturing projects—in the efficient and effective use of domain capabilities. This element encompasses:

- How projects are oriented to the use of domain-provided manufacturing capabilities, specifically how the process and practices by which manufacturing is to be performed should be understood from a project management perspective;
- How the domain is configured, packaged, and deployed as a product for use by a project;
- How projects are instructed and guided in the proper use of domain capabilities, including information provided in documents (hardcopy or electronic), in domain-integrated guidance and explanation, and in training materials;
- How domain acceptance by a project, including validation, training, and transition into operational use, is supported;
- How a project is assisted in maintaining effective and efficient use of domain capabilities;
- How deficiencies and unmet project or customer needs are captured to inform domain engineering efforts, particularly to aid domain evolution in anticipating changing market needs that foreshadow future needs of current and prospective customers.