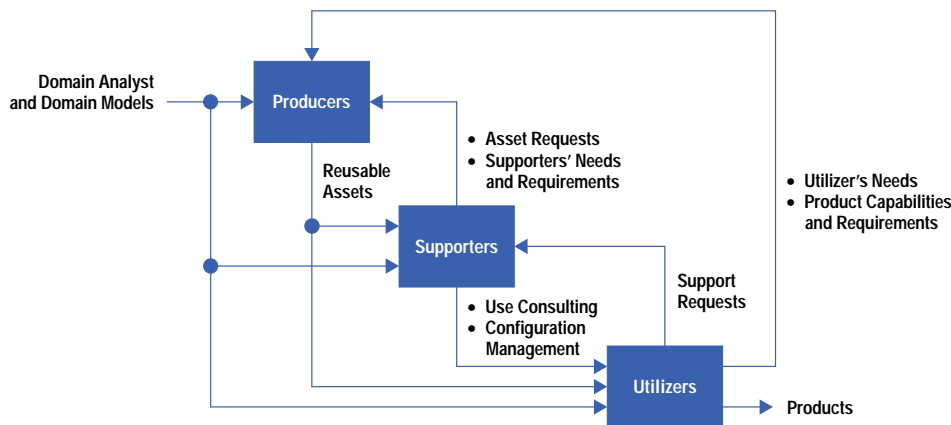


Reuse Roles: Producers, Supporters, and Utilizers

In the early stages of moving to reuse-oriented product development, software engineers take on the roles of being responsible for developing their software to be reusable (producers), learning how to use software developed by others (utilizers), and supporting their software for use by others (supporters). As reuse becomes more systematic, it is common for organizations to evolve so that individuals take on the specific roles of producer, supporter, or utilizer for the duration of a product development cycle.

Fig. 1 shows the primary relationships among software engineering roles in a reuse-oriented organization, and the following sections describe the responsibilities for each of the roles.

Fig. 1. Relationships among the software engineering roles in a reuse-oriented organization.



Domain Analyst

- Analyze the common feature set and the range of feature variation across the projected uses of the assets.
- Characterize capabilities the domain must provide to support the users of products built with domain assets by the product developers. Capture the characterization in models that can be used to design and develop domain assets and guide the use of those assets.
- Produce conceptual models that are readily understandable by managers, new project managers, and engineers who will produce, utilize, or support the domain assets.
- Extract domain information from diverse sources such as past designs, interviews with experts, product data sheets, and trade press articles.
- Use consistent, unambiguous terminology captured in the domain lexicon to communicate about the domain.
- Develop and maintain a working partnership with producers, supporters, utilizers, managers, and key technical contributors.

Producers

- Include utilizers' requirements and needs as part of the design. Consider the utilizers' assessment of product requirements and what it takes for them to be able to tailor and integrate the assets easily to build products.
- Include supporters' requirements and needs as part of the design. Consider the supporters' ability to maintain the assets, to manage the asset base's evolution, and to provide assistance to utilizers.
- Develop an architecture for the product portfolio that clearly defines the common elements and the range of variation across the uses of those elements. Design the architecture's evolution to meet delivery requirements.
- Design the assets to support critical abilities like portability, supportability, extensibility, scalability, and tailorability and to meet functionality and performance requirements.
- Develop and maintain a working partnership with the domain analysts, supporters, and utilizers, including managers and key technical contributors.

Supporters

- Develop and maintain a configuration management process and environment that support the producers and the various teams of utilizers, as well as making it easy to configure and distribute releases.
- Provide asset use consulting to utilizers.

- Join with producers throughout the producers' development effort to ensure that the assets will be easy to understand, maintain, and port.
- Contribute to the prioritization of asset development and support plans and consider the overall business priorities and needs.
- Develop and maintain a working partnership with domain analysts, producers, utilizers, managers, and key technical contributors.

Utilizer

- Use the architecture and available software assets to guide every phase of the product development life cycle. This includes everything from determining product requirements to quality assurance.
- Design the product to take advantage of new combinations of features that could provide a market advantage.
- Join with producers throughout the producer's development effort to influence their design and implementation of assets so that they will meet the utilizer's product needs.
- Join with the domain analyst to influence the scope of the domain and the domain utilizer's model.
- Contribute to the prioritization of asset development and support plans, considering overall business priorities and needs.
- Develop and maintain working partnerships with domain analysts, producers, supporters, managers, and key technical contributors.

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