

## Building Software Ecosystems from a Reuse Perspective

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**Abstract.** Software Ecosystems (SECOs) involve various stakeholders interacting with a shared market for software and services, exchanging information, resources and artifacts within a common technological platform. In this context, well-known software reuse approaches such as Component-Based Development (CBD) and Software Product Lines (SPL) can lead companies to SECOs. This transition depends on decisions related to making their platforms available outside the organizational boundary, in order to explore competition and collaboration in the software industry. Since 1997, we have been building an environment for supporting software engineering activities such as modeling, construction, reuse and group interaction (contemplating software distributed development), providing an integrated set of tools and a repository of reusable components. By using the Odyssey Environment, components and architectures can be developed, according to a domain engineering process, which are made available in the Brechó repository and reused in all phases of an application development, through an application engineering process. An SPL can either be based on components or services, and Brechó provides mechanisms to support both of them. In this context, we have been trying to understand the components market movements, particularly distribution channels, through a Value-Based Software Engineering (VBSE) perspective that focuses on the historical data collection and exploration aiming to extract useful information and present it according to the various stakeholders' profiles. By evaluating its importance, considering all facets of value for component (i.e., costs, benefits, risks, time, opportunities, needs, flexibilities, and requirements) and how they change and evolve amongst the perspectives, activities and actions of stakeholders regarding value in a value chain, we realize that we have been building ecosystems based on specific architectures/components/services. Thus in this talk, we exploit a software reuse perspective on SECOs based on our group's experience.

**Keywords:** CBD, SPL, component, service, repository, VBSE, SECO.