

Potentially Shippable Product Increment

Ken Schwaber

A number of people have questioned how Scrum and other agile processes support mission critical, FDA approved, or other varieties of software systems. These questions have arisen because the vanilla version of the most popular agile processes describe the construction of software that is single use; that is, it is used within the organization that develops it, with the development mostly done by the internal Information Technology (IT) organization.

Most agile processes require development teams to build an increment of product functionality every iteration, or Sprint. Scrum and Extreme Programming require that this increment be potentially shippable, if the customer desires to implement the functionality. This usually requires that the increment consist of thoroughly tested code that has been built into an executable, and the user operation of the functionality is documented, either in Help files or user documentation.

If the product increment that is created during the iteration has more exacting use, the development organization usually defines the additional product requirements as standards or conventions. For example, the Federal Drug Administration (FDA) must approve a product that will be used in life-critical circumstances by in numerous health care settings if the product is to be used in the United States. As part of the approval process, the FDA checks that specific information regarding the product is provided, such as requirements traceability and specific functionality operation. For each increment to be potentially shippable, these additional facets of the product must also be developed - so that each increment of the product is potentially ready for FDA approval.

Similarly, some products require that performance requirements be modeled and the performance demonstrated mathematically, not just through statistical measurement of the actual system. The model with all required rigor is thus an additional part of each iteration's potentially shippable increment.

The phrase used in agile development for such an iterative, incremental process is "sashimi", a thin slice of a product which contains all aspects of the final product. The word sashimi is related to sushi; one slice of sushi is similar to all other slices.