

# Run-time Feature Realization based on Domain-Specific Platforms

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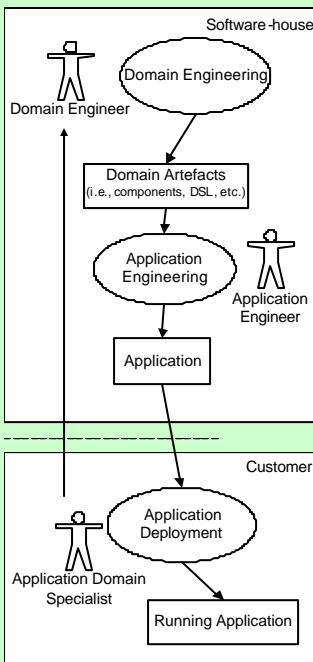
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## Abstract:

The reuse approach to software engineering is gaining considerable adoption in the software industry. In order to implement such an approach, variability mechanisms are needed. These allow the implementation of the variants in a product line and can be applied at several stages in the software development process. If these mechanisms are used at later stages of the development process, the resulting applications will exhibit a higher degree of variability. This is the case of I2S; a Portuguese software house specialized in software solutions for the insurance industry. Resulting from the need to handle specific requirements from almost all of its customers, and because of the nature of the insurance domain, the company has developed and adopted an approach based on domain-specific languages and domain-specific execution environments. These tools provide support for run-time functional feature variability realization based on an application business product approach.

## Traditional Development Process



## Motivation

- Extending/modifying an application at run-time;
- Product lines that require run-time feature binding;
- Typical domains with these requirements are domains with intangible products like insurance, finance and education.

## Objectives

- Provide methods and tools to support run-time feature variability in the context of a specific domain;
- The product line resulting application must provide a framework from which the customer can implement business products.

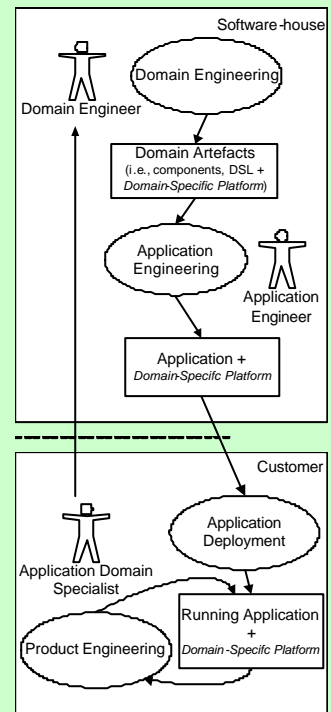
## Approach

- A domain-specific platform to support the business product life-cycle at application run-time.

## Validation

- The approach it's being used by I2S and some of it's insurance customers.

## Domain-Specific Platform Approach Development Process



## Future Work

- Domain engineering method support;
- Business product engineering support, like non-functional concerns.