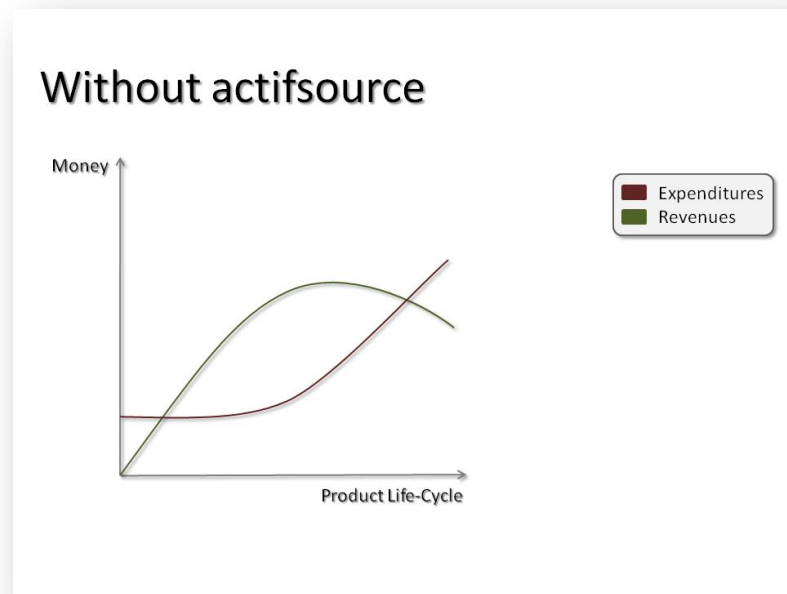# Looking for a Domain-Driven Code Generator?

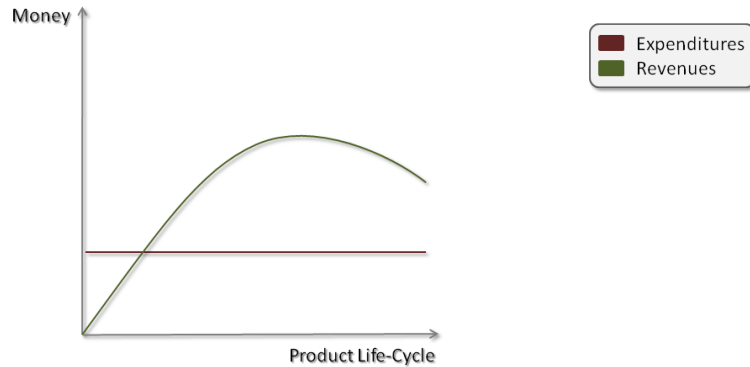## Prevent Software Aging and Reap the Benefits of the actifsource Code Generator Technology

Global competition makes software an indispensable element of success - without software many of today's products and services would be impossible to develop and sell. On the other hand, creating and maintaining software is expensive, especially in the light of ever changing market needs.

Traditionally, software ages and changing it becomes more and more difficult and costly, reaching a point, where expenditures outrun revenues. As a consequence, the software becomes a liability and stops being an asset.

Imagine, you had the means to change your software anytime according to market needs without incurring the havocking effects of software aging. Imagine even, you could do all this at a fixed level of expenditures. Does this sound too good to be true? Then read on, and learn how the actifsource ultra-lightweight code generator technology allows you to do exactly this.
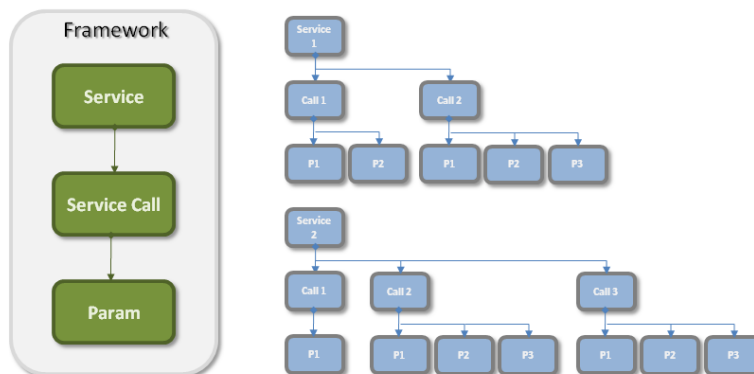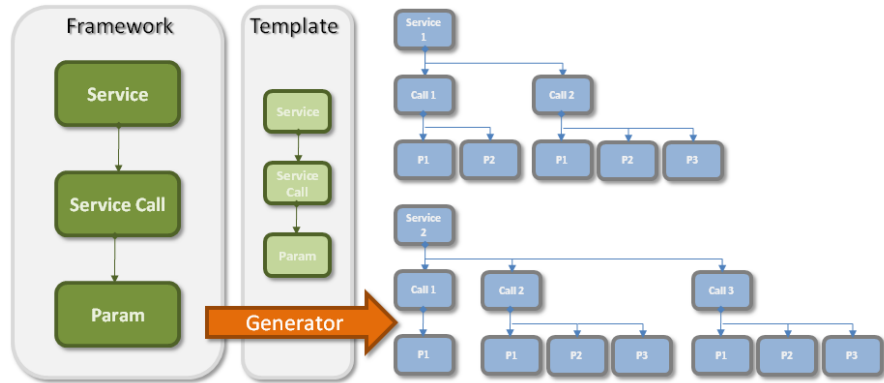
A Holistic Framework Approach: Provide your Developers with an Unprecedented Level of Framework Integration

A framework offers base classes and interfaces that let you implement new features effectively and efficiently. Trouble is: developers are forced to implement the same interfaces over and over again in order to provide the necessary glue-code that binds their implementations to the framework's abstractions.

With actifsource Writing Glue Code Means: Template-based Code Generation

Stop writing an implementation for each feature that uses the framework, say good-bye to this repetitive and error-prone work, and take a step into the future today: write a generic implementation conforming to the framework and generate all the implementations accordingly.
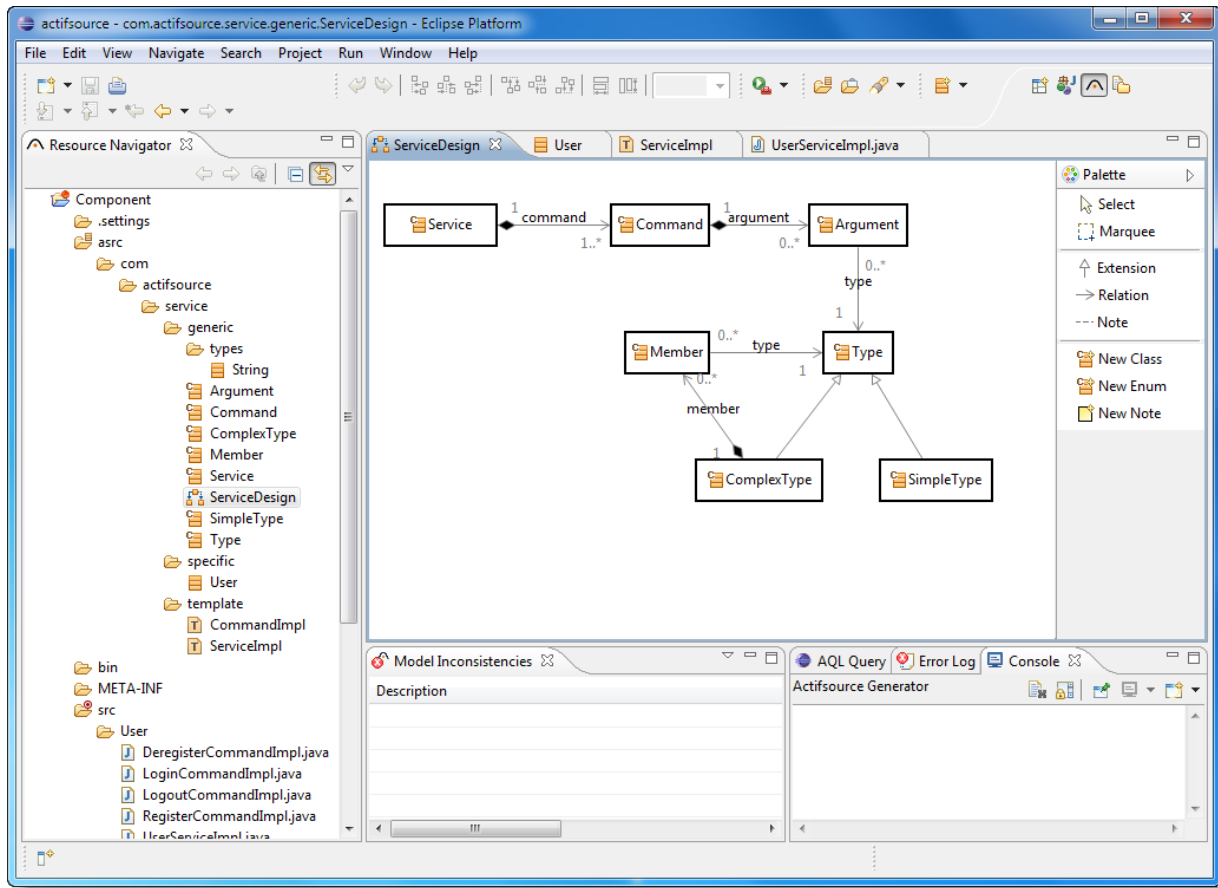
Evolve your framework in synch with your architecture and re-generate all implementations that use the framework with the click of a button.

For the first time ever: Instead of just releasing classes and interfaces, deliver complete frameworks, freeing your developers from disgruntling rote and repetitive work, so they can focus on what is really important: delivering new features fast and reliably and with uncompromising quality.

Evolve your Architecture in Lock-Step With the Ever Changing Market-Needs: Use Typed Domain-Models to Build Evolving Software.

Requirements change – anytime. That is a given. And as long as your software's architecture supports those changes, you're fine. But imagine your architecture needs to evolve as well in order to support the necessary changes: Can you pull this off? And if so, how do you go about to make all the existing code follow the architectural changes? Do you really find the time to refactor and redesign your existing code-base just to keep it in synch with your software's architecture? And if you don't: Are you willing to let your architecture degrade into a meaningless set of concepts that have no correspondence in the code?

Why not save yourself a great deal of hassle, headaches and time? Start using typed domain-models today, and unleash the power of code generation: generate your system's entire structure according to its architecture, anytime and fully automated. Adapt and evolve your software as need be and turn it into a true asset.

Easy Setup, Fast Results

Did you hear about the successes of model-driven approaches recently? Would you like to reap the benefits of generating code from higher-level models, but are afraid of the steep learning-curve and up-front investment in time and resources? Then actifsource is for you:

actifsource is an ultra-lightweight state-of-the-art code generator that tightly integrates into the popular Eclipse IDE. Setup and configuration is easy, so you will be up and running within minutes.

Explore and Learn as you go

Instead of reading through tons of documentation and training material, we believe any developer comfortable with Eclipse should be able to start profiting from code generation using actifsource quickly and easily. Therefore, actifsource fosters learning through exploration, allowing you to gradually learn the many ways actifsource can help you and your team in building evolving software systems.
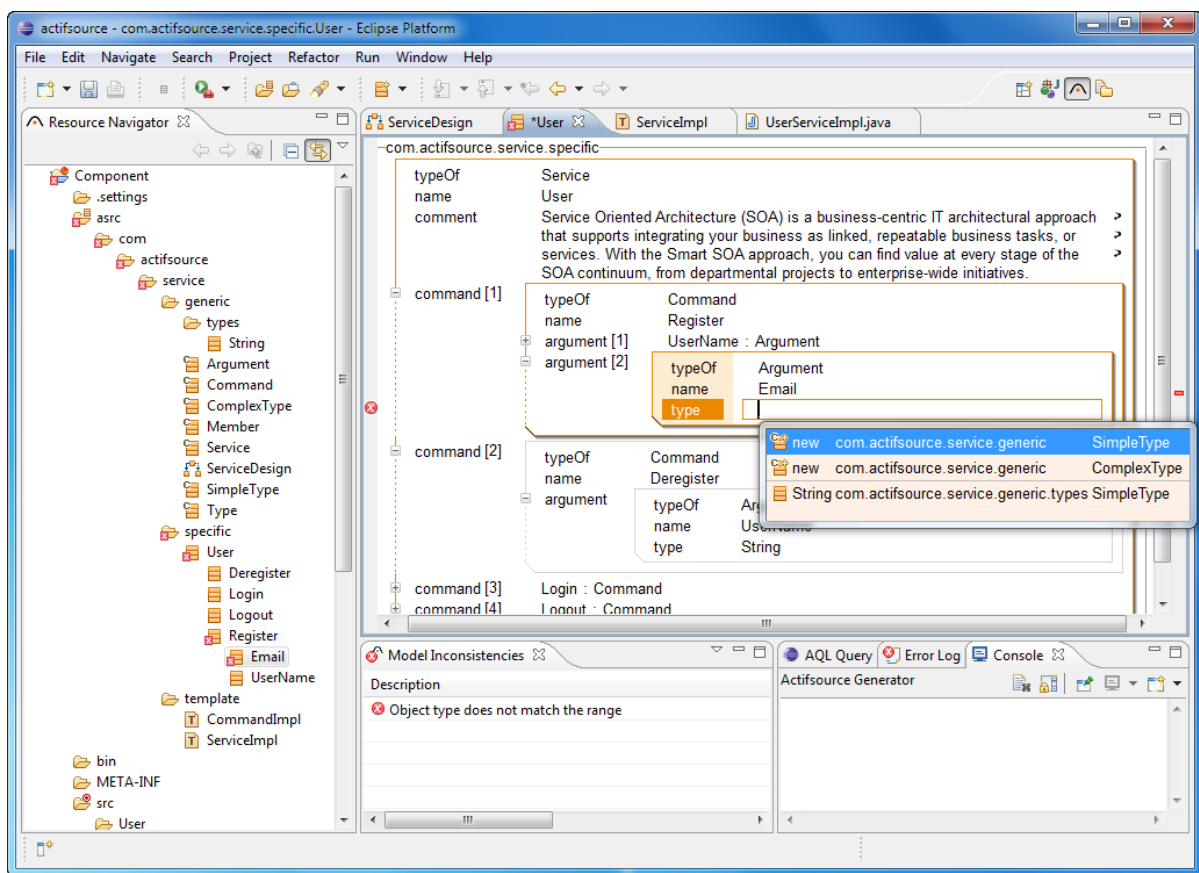
Start Small and Evolve

Don't aim for the big shot at the beginning. Better start small and evolve, one tiny step after another. Start with any part of your system that can benefit from code generation. Don't worry if at the beginning most of your existing code that was developed the traditional way is not backed by a explicit machine-readable model. Expand your knowledge over time, extract domain knowledge bit

by bit from your existing code and build expressive models as you go. Then refactor your code into generic templates and use the existing code base as a reference implementation. Transform any legacy code into an asset again by turning the underlying concepts into expressive reusable models.

Strong Typing and Content-Assist

While most of today's existing generator tools force you to use strings to link models and generator templates, when working with actifsource, you always get full support for strong typing and complete symbolic integration across models and generator-templates. actifsource offers you smart content-assist that lets you browse and navigate all models, their types and instances. Make CTRL-SPACE your friend and be amazed about the power and ease of use with seamless symbolic integration.
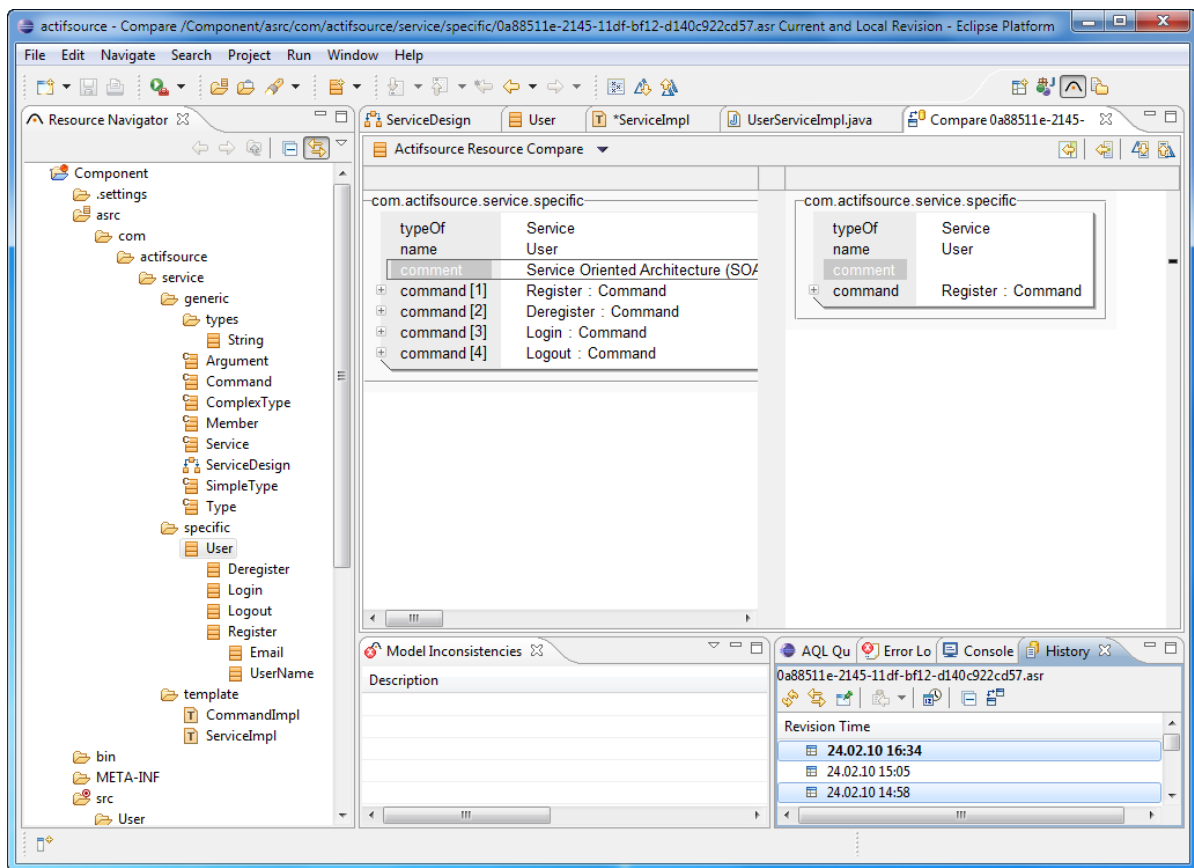

Manage Your Models in a Single Workspace

Thanks to the ground-breaking actifsource core technology, you can keep your meta-models and all their model instances in the same workspace. No need to switch workspaces or spawn extra Eclipse instances. This not only saves you time but it also lets you change your meta-models and keep alle depending models in synch. For the first time ever, you will be able to change meta-models safely without risking inconsistencies that break all existing model usages.

Use Your Favorite Version-Control System to Manage Models and Generator-Templates
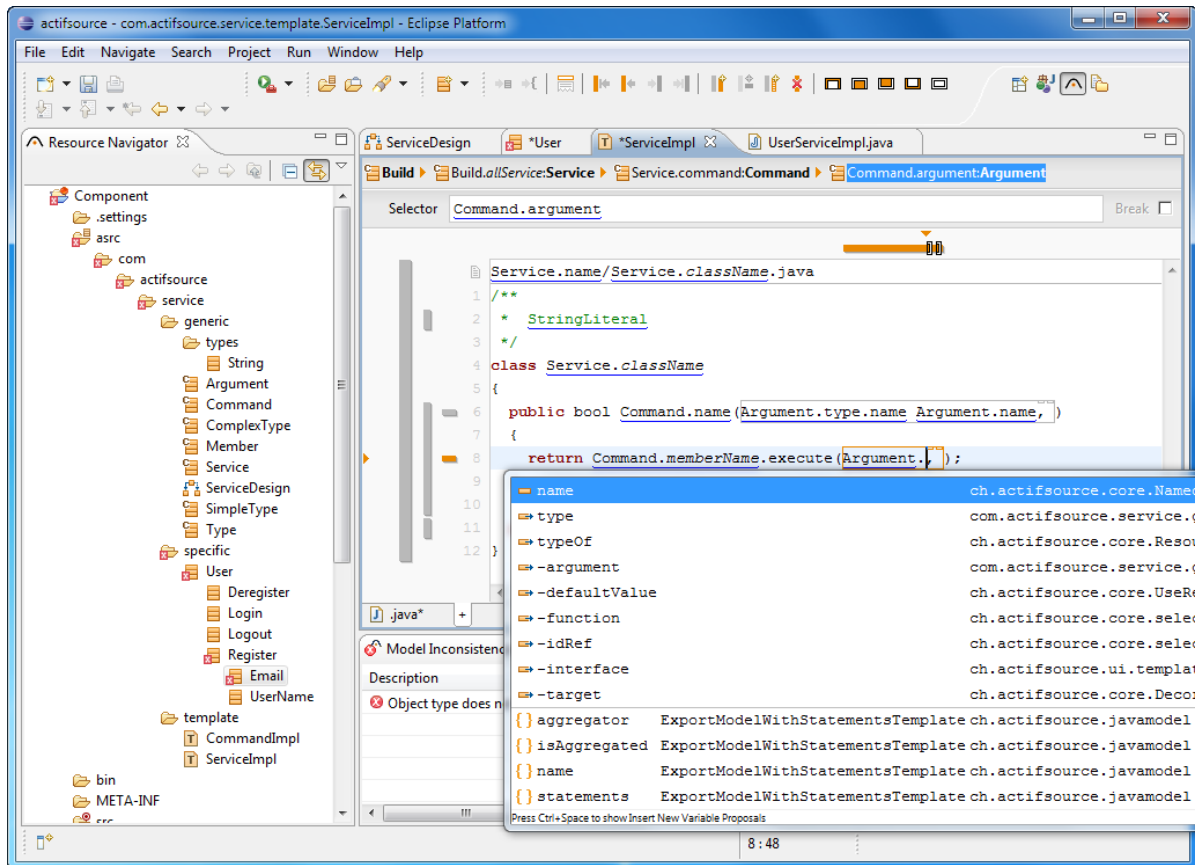
actifsource uses a simple and straight-forward file-based approach to maintain your models and generator templates. While other systems burry your models and templates in proprietary databases, actifsource uses plain text files to store all its information. This allows you to use existing VCS to manage all the necessary artifacts, supporting fast update and commit cycles with complete diff/merge support you have come to appreciate in modern IDE-based development.

Distributed teams as well as off- and near-shore projects profit alike from the sophisticated VCS-support offered by actifsource through its advanced conflict resolution mechanisms for models and generator templates.

Models at Your Fingertips: Write Type-Safe Generator-Templates Quickly and Easily

actifsource offers a whole new approach to template-based code-generation that allows you to write code-templates without the need for a special template language. In fact, you can write clean, crystal-clear templates that do not contain a single generator keyword. This not only makes writing templates easy and straightforward, it also drastically improves on the readability of your templates.

With actifsource code generation is a breeze: Feel the power of complete and unprecedented symbolic integration across all the models in your workspace: browse, filter, and select types and instances as you see fit. Actifsource constantly validates your templates against the backing models and makes sure that all relationships among objects conform to each and every model definition. Errors are automatically detected and flagged on the fly, making it easy to work iteratively and correct mistakes as you go.

Let actifsource automatically generate code every time you save your template or use dedicated generator tasks to build your artifacts as needed.

Feel free to change your models or generator templates anytime you want, let actifsource help you change existing code and other artifacts safely and automatically, so all parts of your software conform to the actual concepts laid out in its architecture. Stop your code from slowly degenerating into an untangled mess and big ball of mud – evolve your software anytime!

Explore, Validate, and Change Models and Generator Templates: Real-time Validation

While working on your models and generator templates, you can rely on real-time validation: actifsource constantly monitors all data input checks it against the type-system of your (meta-) models. This is just another benefit offered by symbolic integration that goes way beyond traditional approaches that often use string-based symbolic references. Explore your models and code; browse your implementations and see what concepts from your initial models they are based on.

Redesign and Refactor to Evolve Your Software Iteratively and Incrementally

"You must be willing to get it wrong the first time, in order to get it right the last time." This simple truth lies at the heart of Adaptive Software Development. actifsource expands on this idea and allows you to change even the most fundamental concept in your software. Redesign and refactor your models and generator templates to accommodate change and let actifsource help you alter all dependent models and implementations accordingly.

In order to successfully use model-driven approaches, you need to be able to cope with change efficiently and effectively. Don't settle for less!

Act now!

- Go to www.actifsource.com and apply for a license key.
- Download actifsource using the Eclipse Download Manager.
- Start with the "SimpleService" tutorial to learn the basics in less than 30 minutes.
- Use actifsource for your own projects by starting with any part of your system that can benefit from code generation.
- Get help from an experienced actifsource consultant and learn how to develop your generic domain quickly and easily.