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# ARTIST

**ARTIST proposes a software modernization approach based on Model Driven Engineering techniques to automate the reverse and forward engineering of legacy applications to and from platform independent models. It reduces the risk, time and cost of migrating legacy software and lowers the barriers for service companies wanting to take advantage of the latest Cloud Computing and SaaS based technologies and business models.**

## AT A GLANCE

### Project title:

Advanced software-based service provisioning and migration of legacy Software

### Project coordinator

Clara Pezuela, Head of IT sector at Research and Innovation group in ATOS SPAIN SA

### Partners:

ATOS SPAIN SA

FUNDACION TECNALIA RESEARCH & INNOVATION

INRIA - FRENCH NATIONAL INSTITUTE FOR RESEARCH IN COMPUTER SCIENCE AND CONTROL

FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V

TECHNISCHE UNIVERSITAET WIEN

ENGINEERING - INGEGNERIA INFORMATICA SPA

INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS

SPARXSYSTEMS SOFTWARE GMBH

ATHENS TECHNOLOGY CENTER SA

SPIKES NV

### Duration:

36 months (Oct. 2012 – Sep. 2015)

### Total cost:

€9.690.538 (€6.953.705 funded)

### Website:

[www.artist-project.eu](http://www.artist-project.eu)

## Concept

The Cloud-based service delivery model has the potential to create tremendous new business opportunities for software companies. On-going improvements in the Internet's connections, both in speed and reliability as well as reach, have made Internet native solutions an attractive alternative, and the rate of innovation driving software and service evolution is still accelerating.

Innovations in the technological space affect the systems that the software has to support or needs to adapt to. Innovations in the business space not only affect the licensing and usage model, but also the core value proposition to the customer.

To remain viable, legacy software solutions have to be improved with regard to these new circumstances, but without disrupting the business continuity of existing customers. Software service companies need to transition to a new opportunity model, without abandoning their client portfolios.

The complete lifecycle of software, from requirements to delivery and operations, has to be re-adapted to the new technological and business conditions, requirements and challenges. There is a need for tools and methods to support software evolution and adaptation as a key value for next generation service-based software modernization. Following this approach, companies face the following challenges:

- The decision whether to migrate their existing products or to start from scratch;
- The estimation of the impact and effort required to implement the

- modernization of a system is difficult and uncertain;
- Time-to-market is critical. Therefore the software development cycles need to change;
- High requirements for specialized skills due to a low degree of process automation.

A complete approach is needed that helps companies bring their applications and services into the Internet of Services, taking into account the implications of current architectures, and forecasting the implications of future ones.

This requires the development of a new vendor and platform independent methodology and a new automation oriented toolset for reengineering, migration, maintenance and evolution. This is the mission of ARTIST.

## Objective

To prepare, support and increase the competitiveness of the European Software and Services Industry in a global Cloud and Software as a Service (SaaS) business environment, ARTIST develops a set of methods, tools and techniques that facilitate the transformation and modernization of legacy software assets and businesses. The project creates tools to assess, plan, design, implement and validate the automated evolution of legacy software to SaaS and the Cloud Computing delivery model. By focusing on reusability during this transition, the methods and tools are generic enough to cover future shifting efforts, e.g. deployment to future platform delivery paradigms.

## Approach

In order to reach its objective, ARTIST:

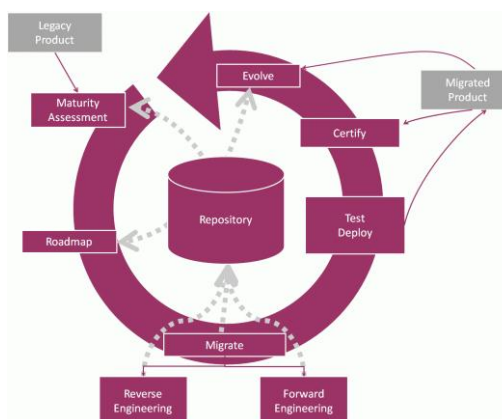
- Develops an innovative and combined technical and business analysis on the maturity and prospect of the legacy application;
- Provides a large scale model-based approach for representing the source and target applications as well as infrastructures/platforms;

- Creates a unified performance modelling framework;
- Identifies dynamic deployment methodologies;
- Fosters reusability of the (modelling) artefacts produced during the migration process through the usage of a repository;
- Implements an innovative and thorough testing and continuous validation process that will span across all layers of the multi-level ecosystem;
- Enhances, enforces and promotes the usage of an integrated certification model for Cloud application providers.

## Impact

*Easier evolution of legacy software over time, thanks to innovative methods and tools managing the complete lifecycle of software from requirements to run-time.*

This major impact is expected to be produced by ARTIST through allowing software vendors and users of open source software to migrate their legacy software to a new software paradigm in an automated, easy and cost effective way. This means that legacy software can be transformed so that it receives the benefits of that new software paradigm such as performance enhancement, cost effectiveness, and better interoperability.



### For further information:

Information Desk

European Commission - Communications Networks, Content and Technology DG

Office: BU25 02/95 B-1049 Brussels

Email: [info-desk@ec.europa.eu](mailto:info-desk@ec.europa.eu)

Tel: +32 2 299 93 99

Fax: +32 2 299 94 99

[http://europa.eu/information\\_society](http://europa.eu/information_society)