



Press Release

September 2015

ARTIST: The realization...the vision is now a reality

Do you remember ARTIST?

ARTIST is an EU-funded project that started three years ago and is being operated by leading European industries and academic institutions. ARTIST managed to produce a [tool-supported method](#) that facilitates the transformation and modernization of non-cloud software assets and businesses to the cloud. ARTIST assets can be used by any company that owns obsolete applications and old-fashion business models and wants to transform them to innovative applications, thus exploiting the opportunities provided by cutting-edge technologies of nowadays, naming cloud computing and model-driven engineering. ARTIST provides an open source end-to-end solution that best fits in modernizing several similar applications towards the cloud, as it also emphasizes on how to reuse the work from one project to the next offering in this way greater cost reductions and shorter development cycles. Validated by four real-life industrial cases, ARTIST project has demonstrated that its [open-source package](#) can

- support companies (software providers) in the hard and costly challenge of modernizing their applications,
- foster the uptake of cloud technologies and business models (especially by SMEs),
- reduce the migration costs in relation to manual migration,
- allow an easier evolution of software with optimal performance and cost.

The vision which became a reality

Three years ago, ARTIST envisioned the creation of a tool-supported methodology to cloudify software applications. Now, three years later we can say that we have realized our vision. ARTIST has released an open source tool suite that guides software application vendors selling their applications following the license-based business model and with traditional n-tier architectures, in the process to make their applications cloud - compliant, multi-tenant, scalable, elastic and secure. The competitive advantage of the ARTIST tool suite strives in:

- an end-to-end process, from when the migration is just a thought up to the deployment of the cloudified application
- a customized methodology for each application and business model, not “one size fits all”
- user-driven toolset
- model-driven approach, allowing application owners understand the logic of their own applications before the migration takes place
- application of novel cloudification and optimization patterns, that change the architecture of the application to make it compliant with current cloud reference architecture standards
- benchmarking of cloud providers
- auditing of actual performance of cloud providers measured against their SLAs.

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Lessons learnt

In this process of realization, we have learned a lot about the application of model-driven techniques to cloud migration. First insight coming up is about the complexity of the research required to reach the ambitious goal of the project.

Despite the complete process is depicted and supported by tools, the fully automated migration is not possible at the moment. Intervention of the developer is needed and desirable, since humans are taking the decisions in the end. Additionally, the provided tools are not generic enough to be used without any adaptation to any kind of migration project, which represents a business opportunity around ARTIST for the future.

The usage of MDE techniques required skilled people in the modernization and optimization process, especially in certain phases of the methodology targeted for developers and dedicated to the inspection of source code.

Finally, it has been quite difficult to retrieve useful metrics from the validation examples in the project to assess the benefits of MDE in the migration challenge. However, very interesting recommendation were raised by them:

- Reduction of time by using ARTIST is a reality, mainly for product line projects and for those ones with a standardized development process. For other type of projects, the quality of the produced code is a more relevant benefit.
- ARTIST is very useful for getting knowledge from third-party code
- It is more suitable for big and complex projects than for small and light ones.
- The major benefit is obtained after the first migration, when produced migration artefacts are reused in successive migrations of similar projects.

The end The start - ARTIST Club

A tremendous amount of work has been produced in the ARTIST project, and the tools and software are starting to be used in the offerings of the organisations involved. There is a common need to ensure that the results remain available and up-to-date. The partners are committed to this, and the most economic and structured way to do this is to continue working on the common open-source tools - this is, in its very essence, the *raison d'être* of open source. As each organisation increases the use of the tools, further adaptations and improvements are made, and can be shared back with the original participants. Furthermore partnerships based on common business goals are likely to form between the partners. To structure both this forum of business partnerships and the stewarding of the open source results, not to mention the pooling of marketing and dissemination efforts, the consortium has formed an organisation termed the ARTIST Club. The Club is based on a common agreement signed by the parties, which reestablishes much of the structure and safeguards present in the current contract. The ARTIST Club will provide the stability necessary to incubate the innovation opportunities flowing from the final research results.

The last minute achievement!!!!!!

We are proud to announce that ARTIST project has been unanimous accepted in the [OW2](#) open-source software community at the incubation level by the OW2 Technology Council. Considering OW2 mission, to promote the development of open-cloud computing platforms and foster a vibrant community and business ecosystem, long-term sustainability of ARTIST assets has been ensured. Furthermore, we intensified our collaboration work with other EU-funded projects ([two joint papers](#)) and we published an article in [IEEE Computer](#).

Project web site: www.artist-project.eu

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