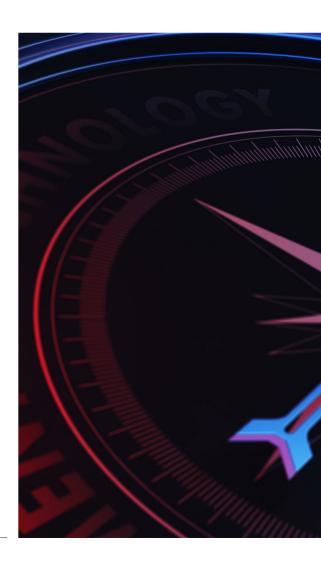# State of the Art

A compass for your project

Through its projects ITEA is pushing clear innovations that are defined in comparison to the State of the Art (SotA). To help the ITEA Community to position its innovation ideas, ITEA has gathered the latest, interesting SotAs from ITEA projects on various technologies. Writing the State of the Art (SotA) should not be considered as a formal exercise that is mandatory for your Project Outline (PO) and Full Project Proposal (FPP). It will help your project to sharpen its focus and to start on a good basis. First, we present some reasons for investing in a SotA analysis and then propose some advice on how to prepare it.

Why define a SotA?

First of all, the SotA will give the status of the technologies that are important for your project. The knowledge of what has been achieved so far in the field is mandatory to know from where you start and to have a reference to define the progress you want to make. Taking into account recent research results, commercially available products and/or services and key players is crucial to position the activities of the project and to see what your project will bring as additional elements to make it a success. It can also help to select relevant KPIs that will guide the execution of the project.

Furthermore, the SotA can help you to identify interesting work that could be reused in your project. Nowadays, complexity we must deal with is very high and so any element that is already developed is welcome to enable to focus the effort on new developments: we do not want to reinvent the wheel.

Next to that, at the PO phase, the SotA can serve to identify relevant additional partners. If you find a very strong actor in the field belonging to a Eureka country, you can invite them to join your project.

Fourth, the SotA is a way for you to convince the reviewers and the Public Authorities that you master the domain of your project. A PO or FPP that clearly documents that you are aware of the current SotA has a strong impact on the positive assessment of the quality of your PO or FPP.

To continue with a last reason (of course this list is not exhaustive), the SotA of your project is used to provide the Living Roadmap for ITEA 3. Thanks to this effort we have a continuous technology intelligence that helps our Community to follow innovations arising every day.

How to prepare a good SotA?
It is important in the SotA to describe the current technological situation in the project's domains in terms of both industry and academia. So, it is essential to look at the research activity of the field. This leads to a search of the latest developments in conferences or journals of the domains. This activity can also help to identify key research players of which a further investigation of their works can be interesting. Another source of information is current or past research projects. The main

project funding instruments provide lists of projects (ITEA website, Cordis database, national programmes…) that are relevant to find information on the recent research results. It is important to comment potential collaboration with these other projects in the same field. The analysis of the state of the industry is also very important to position your project. To find knowledge about the current products/services some browsing of the public information is most of the time interesting. You can also look at analysts' sources that often position the different players of the domain and provide their view on the current trends.

To perform an analysis of the standards of your domains is also very valuable. It can give indications on elements that you can build on or, conversely, information on what you must disrupt.

For these different elements of the SotA, it is important to describe them with the right level of detail and the right focus. The enumeration of too many different works or presenting only one element will not be very effective. The selection of the research papers, the existing projects and the industrial solutions must be made according to their connection with the technologies central for your project. Presenting the information in a precise and concise way with a reference to the source of information is of course of great value for the readers of the SotA. The quality of the SotA will definitely depend more on its connection with the objectives of the project than on its exhaustivity.

Finally, it is useful to update your SotA during the project. It is important to check that no actor has moved quicker than the project and to keep an eye open to detect potentially disruptive new results.

Conclusion
In summary, the SotA is a central element, a guiding compass, to start a successful project. In addition, the SotA delivered by the projects is also at the heart of the Living Roadmap of ITEA and so has a very special role in the life of our Cluster. All good reasons to write your next SotA carefully!