

## AgiSpacES: Agile and Iterative Development Methods for Space Industry

**Technology Research Center at the University of Turku investigates how the strictly standardized and regulated area of space technology can benefit from the flexibility and efficiency of agile and iterative product development methods.**

The recently started AgiSpacES project develops agile and iterative product development methods to be utilized in the development of embedded systems in space industry. The project is carried out in close collaboration with Finnish space technology companies and it is mainly funded by Tekes – the Finnish Funding Agency for Innovation.

AgiSpacES (Agile Development Methods for Embedded Systems in Space Industry) extends the Technology Research Center's know-how on the development of embedded systems to the systems in space industry. Software, hardware and mechanics are strictly related to each other in embedded systems.

In space technology, strict standards and regulations characterize the development work. AgiSpacES aims to provide collection of suitable development practices beneficial in the development of space technology. From this collection, companies can select the suitable practices to be exploited in their development processes. During the project, these practices are adjusted to fit into predominant circumstances in the domain of space technology development.

### Product Development in Short Cycles

Agile and iterative product development methods have gained popularity among software developers during the 21st century. Recently, the interest has stirred also in the embedded systems industry.

Agile product development proceeds in short cycles. At the end of each cycle, the product is one step closer to its final form. Uncertainty in the beginning of a project is accepted and the plans are refined as the details emerge. Agile development makes it possible to improve the prioritization of product features and thus enables leaving unnecessary features out at the end of the project.

Several standards and regulations steer the product development processes on development of space technology and may set even strict limitations for the practical development work. AgiSpacES develops practices to exploit the benefits of agile and iterative methods in the space industry.

The companies taking part in the project are Patria, AL Safety Design Ltd, Aboa Space Research Oy, Harp Technologies Ltd and Kovilta Oy with support from the other partners, Turku Science Park Ltd and Turku Agile Group ry.

#### More information:

Senior Research Fellow, D.Sc. (Tech.) Ville Rantala, University of Turku, Technology Research Center  
+358 50 363 8990, ville.rantala(at)utu.fi, <http://embedded.utu.fi>