



HAL
open science

System Engineering and Agile Management

Diego Armando Diaz Vargas, Claude Baron, Philippe Esteban

► **To cite this version:**

Diego Armando Diaz Vargas, Claude Baron, Philippe Esteban. System Engineering and Agile Management. 7ème FORUM ACADEMIE - INDUSTRIE de l'AFIS, Dec 2016, Toulouse, France. 1p., 2016. hal-01828819

HAL Id: hal-01828819

<https://laas.hal.science/hal-01828819>

Submitted on 3 Jul 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Diego Armando DIAZ VARGAS (dadiav@laas.fr)

Claude BARON, Philippe ESTEBAN

LAAS-CNRS, Université de Toulouse, INSA, UPS, Toulouse, France

1 Problem

Change is a constant thing in our world and is visible everywhere, finding solutions to provide fast services to the clients is a very strong challenge. We need different methods to bring innovative products and services to market more quickly and inexpensively on complex projects. Agile methods have rapidly spread and all organizations are trying to get attention in that context.

2 Agile Methods

Agile methods are contemporary software engineering approach[1]. Figure 1 shows agile methods approach.

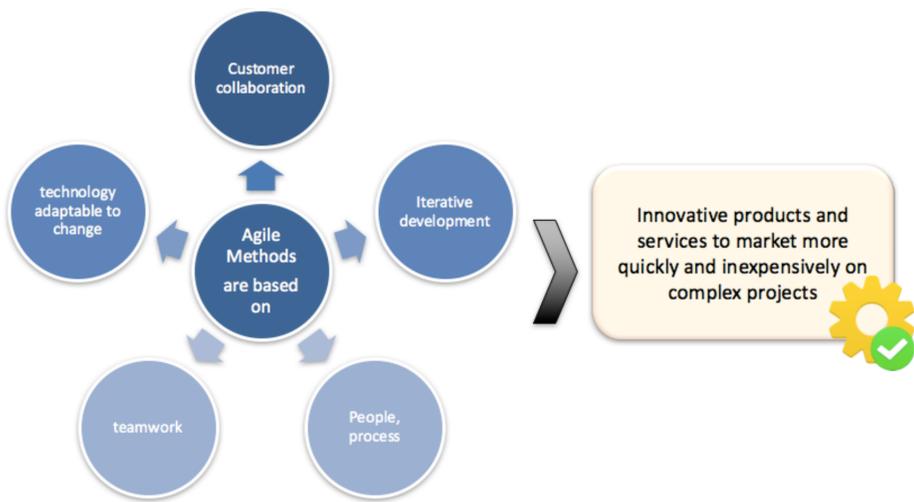


Figure 1. Agile Methods Approach

Agile methods emerged as an answer to traditional plan-driven methods.

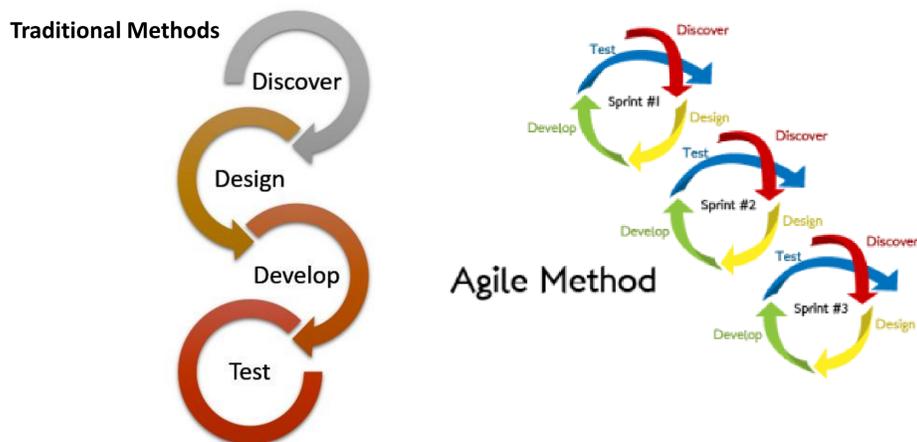


Figure 2. Traditional Method vs Agile Method

3 Research Context

The research objective is to integrate the traditional practices of System Engineering (SE) and Project Management (PM) to coordinate stakeholders based on a collaborative decision-making using agile management (Figure 3).

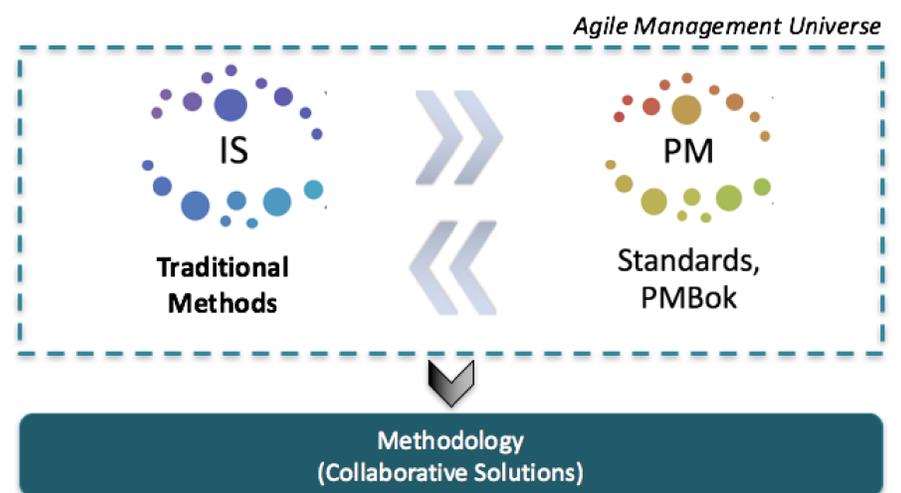


Figure 3. Global Research Context

To achieve that objective we'll try:

- To mapping agile concept
- To define what tool can be used according to each project
- To propose a methodology

4 References

- [1] J.A. Highsmith, Agile Software Development Ecosystems. Boston MA: Addison Wesley, 2002.
- [2] A. Tarhan and S. G. Yilmaz, "Systematic analyses and comparison of development performance and product quality of Incremental Process and Agile Process," Inf. Softw. Technol., vol. 56, no. 5, pp. 477–494, May 2014.
- [3] S. Wood, G. Michaelides, and C. Thomson, "Successful extreme programming: Fidelity to the methodology or good teamworking?," Inf. Softw. Technol., vol. 55, no. 4, pp. 660–672, 2013.