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## System Engineering and Agile Management

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## 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.

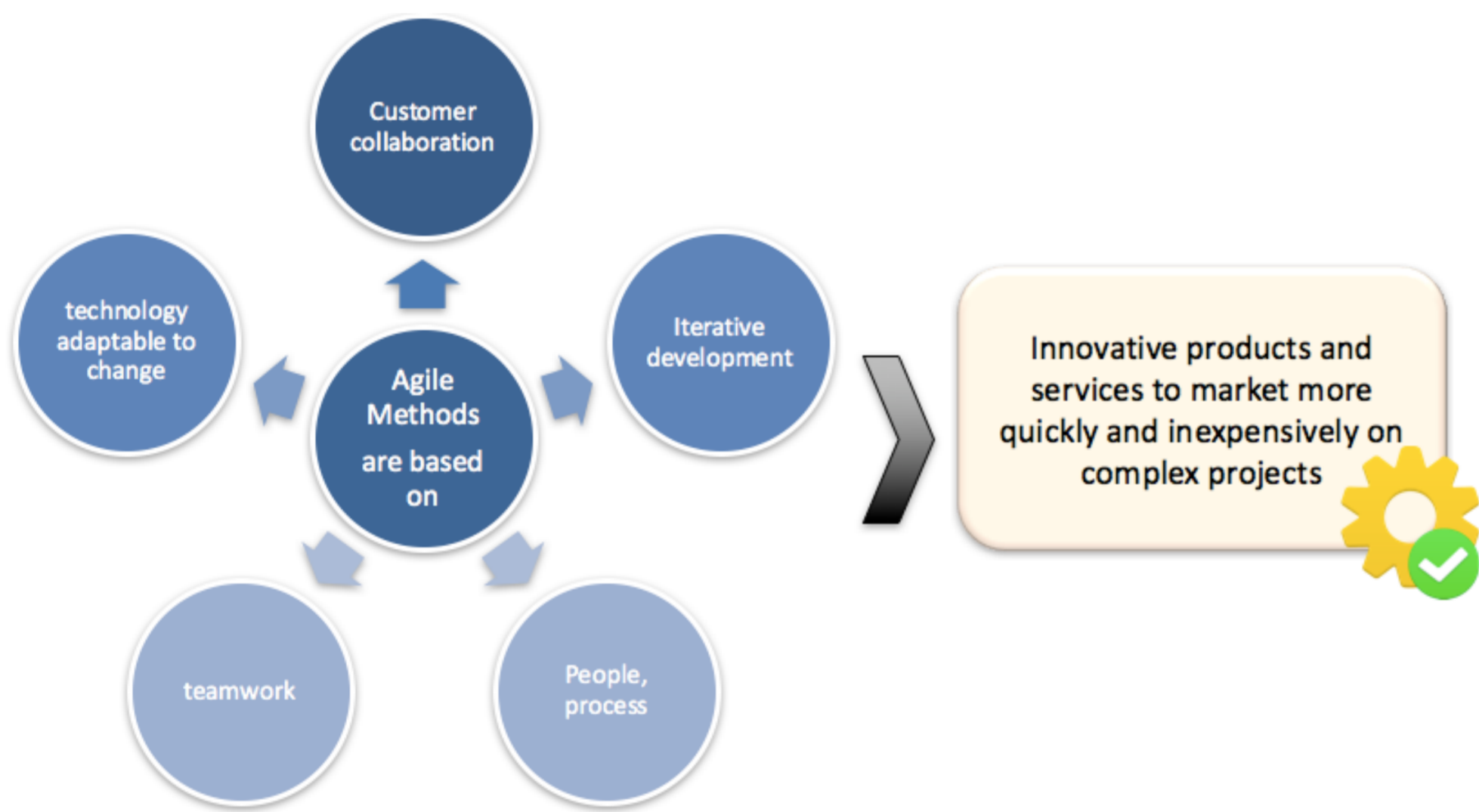


Figure 1. Agile Methods Approach

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

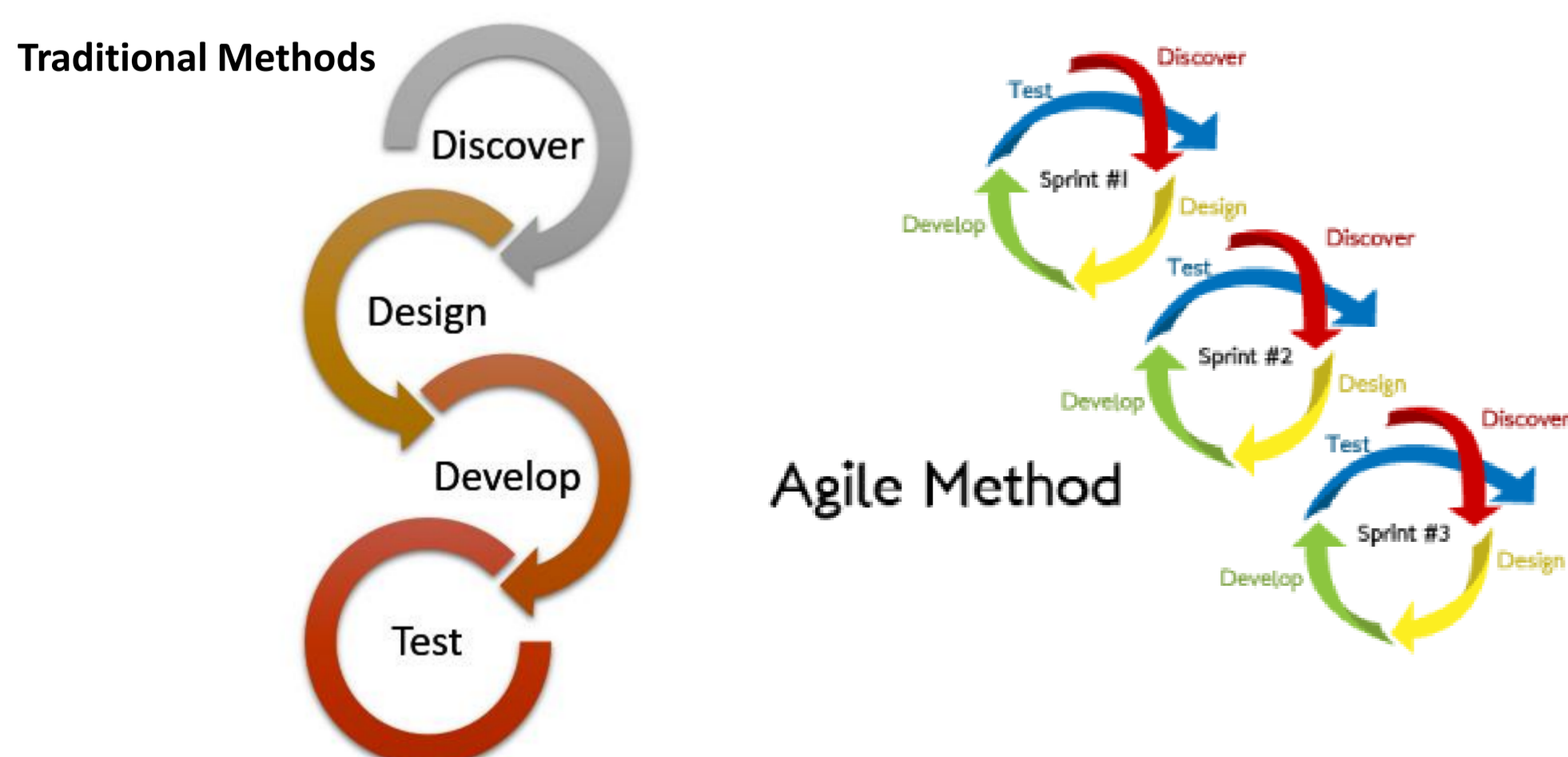


Figure 2. Traditional Method vs Agile Method

## 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).

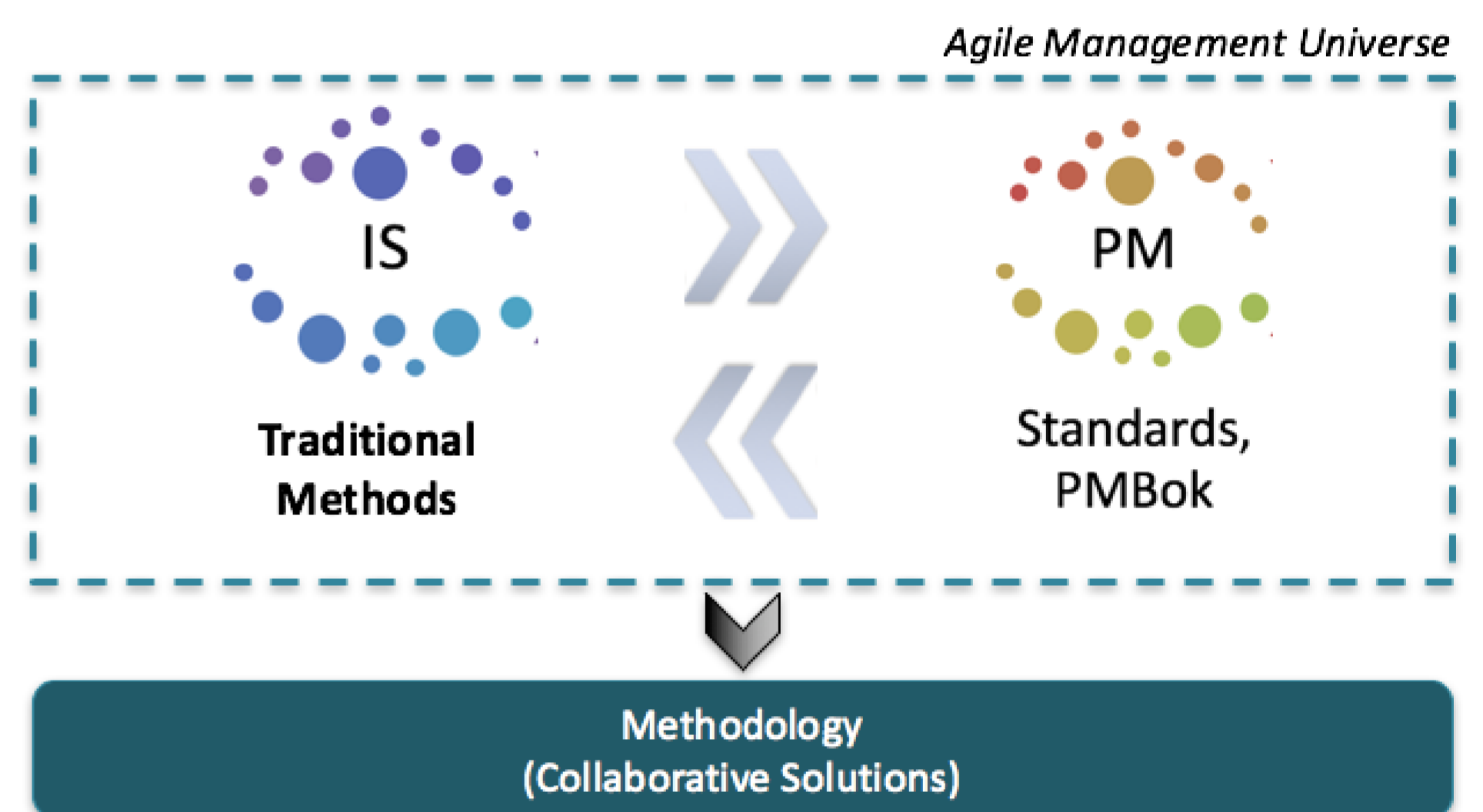


Figure 3. Global Research Context

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.