



31st Annual **INCOSE**
international symposium
virtual event

July 17 - 22, 2021

Idea Development Method, Applying Systems Design Thinking in a Very Small Entity

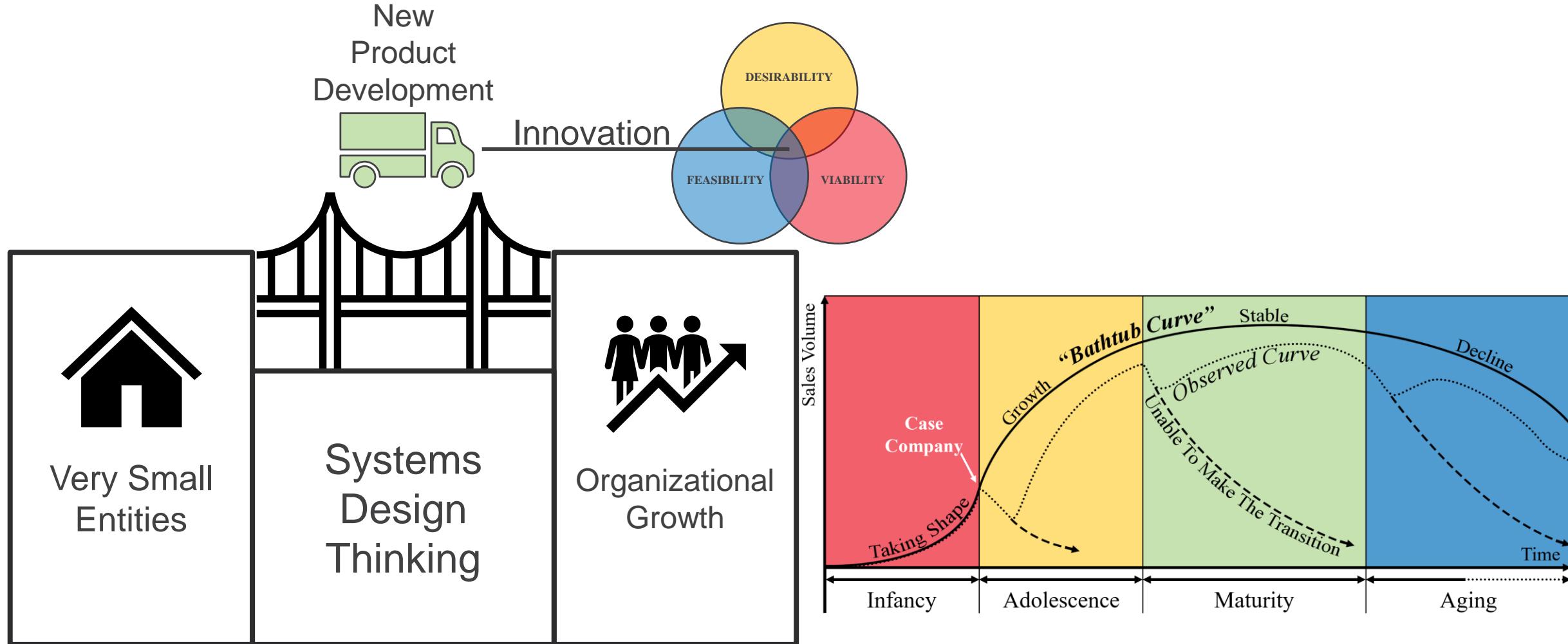


Agenda

- Problem Statement
- Systems Design Thinking
- Research Overview
- Case Company
- Idea Development Method
- Findings
- Results
- Summary



Problem Statement

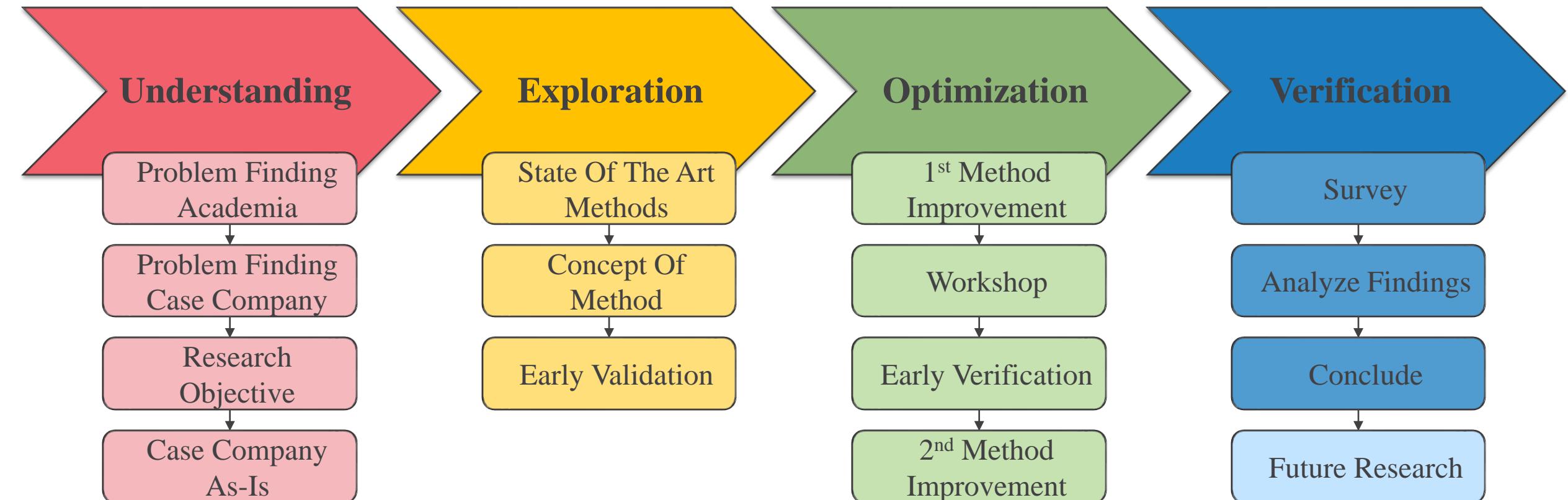


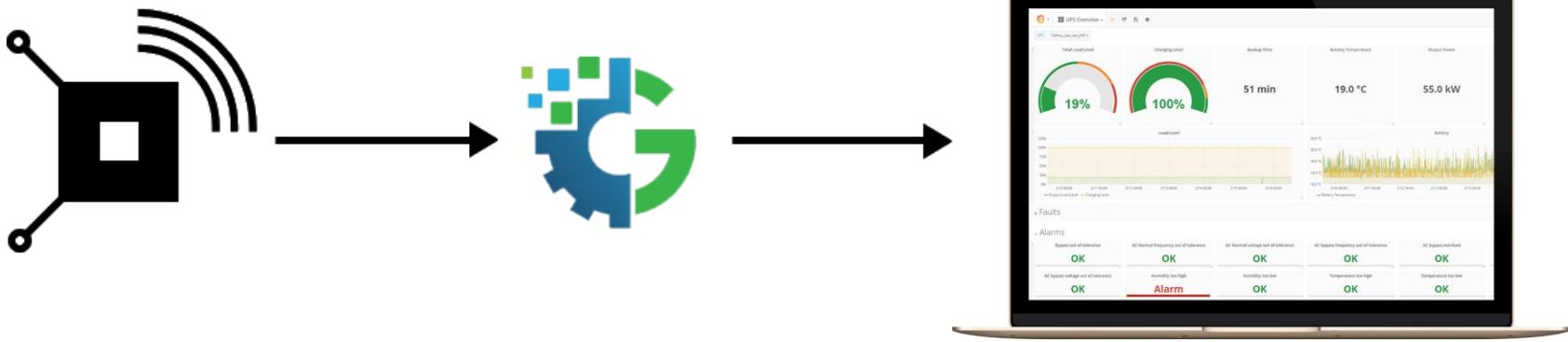


Systems Design Thinking

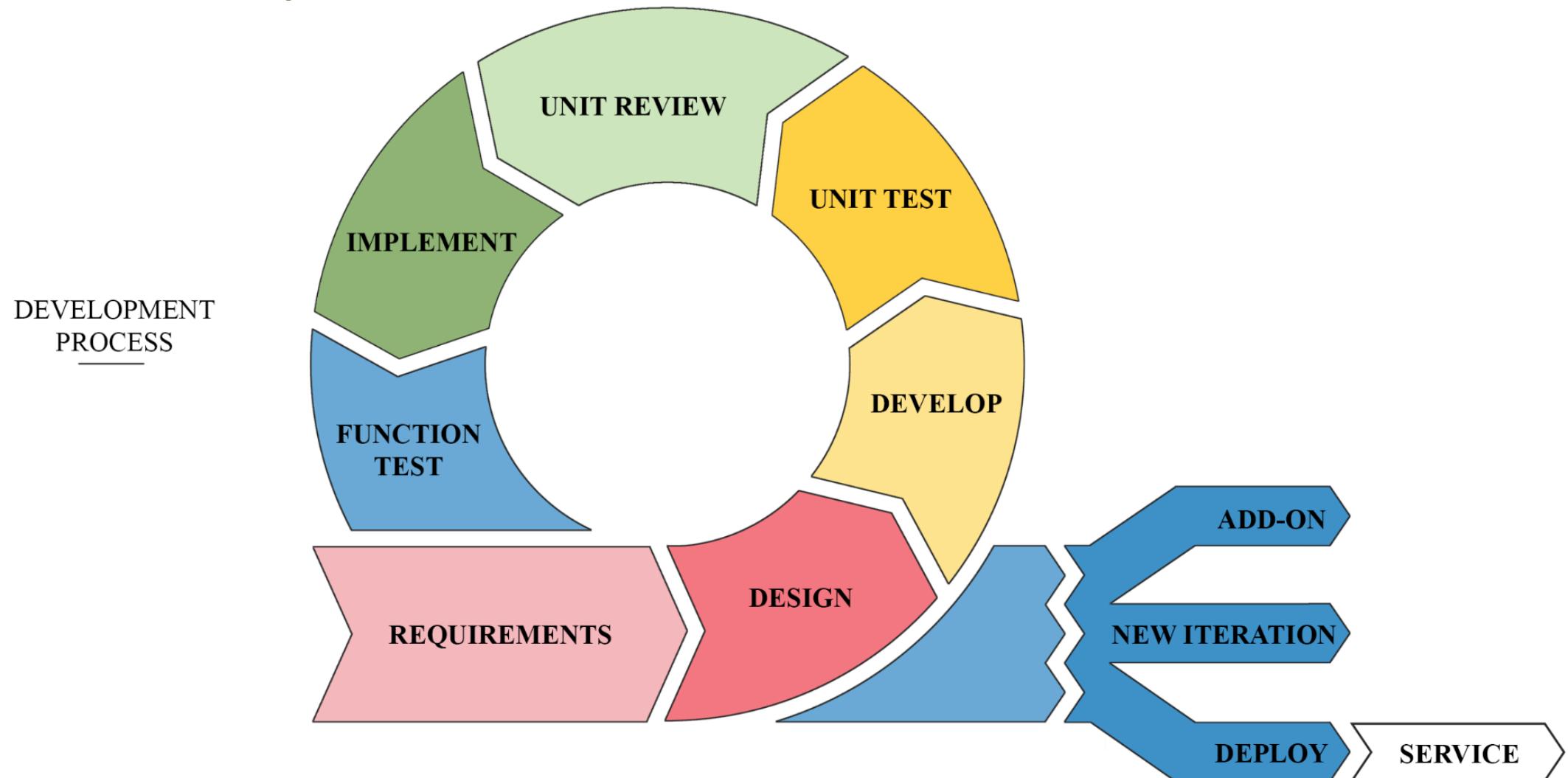
Systems Engineering	<ul style="list-style-type: none">• Analytical• Solution• Interacting of components• Requirement management• Verification & Validation	<ul style="list-style-type: none">• Big-picture View & Individual Systems	Systems Thinking
Similarities	<ul style="list-style-type: none">• Understanding of the problem• Knowledge of uncertainties• Visualizing methods• Interdisciplinary teams	<ul style="list-style-type: none">• Technical & Social Interactions• Integration & Alignment	
Design Thinking	<ul style="list-style-type: none">• Intuitive• Problem and empathy• User interaction and usability• Radical products, services, and business models	<ul style="list-style-type: none">• Tolerate Uncertainty & Flexibility	

Research Overview



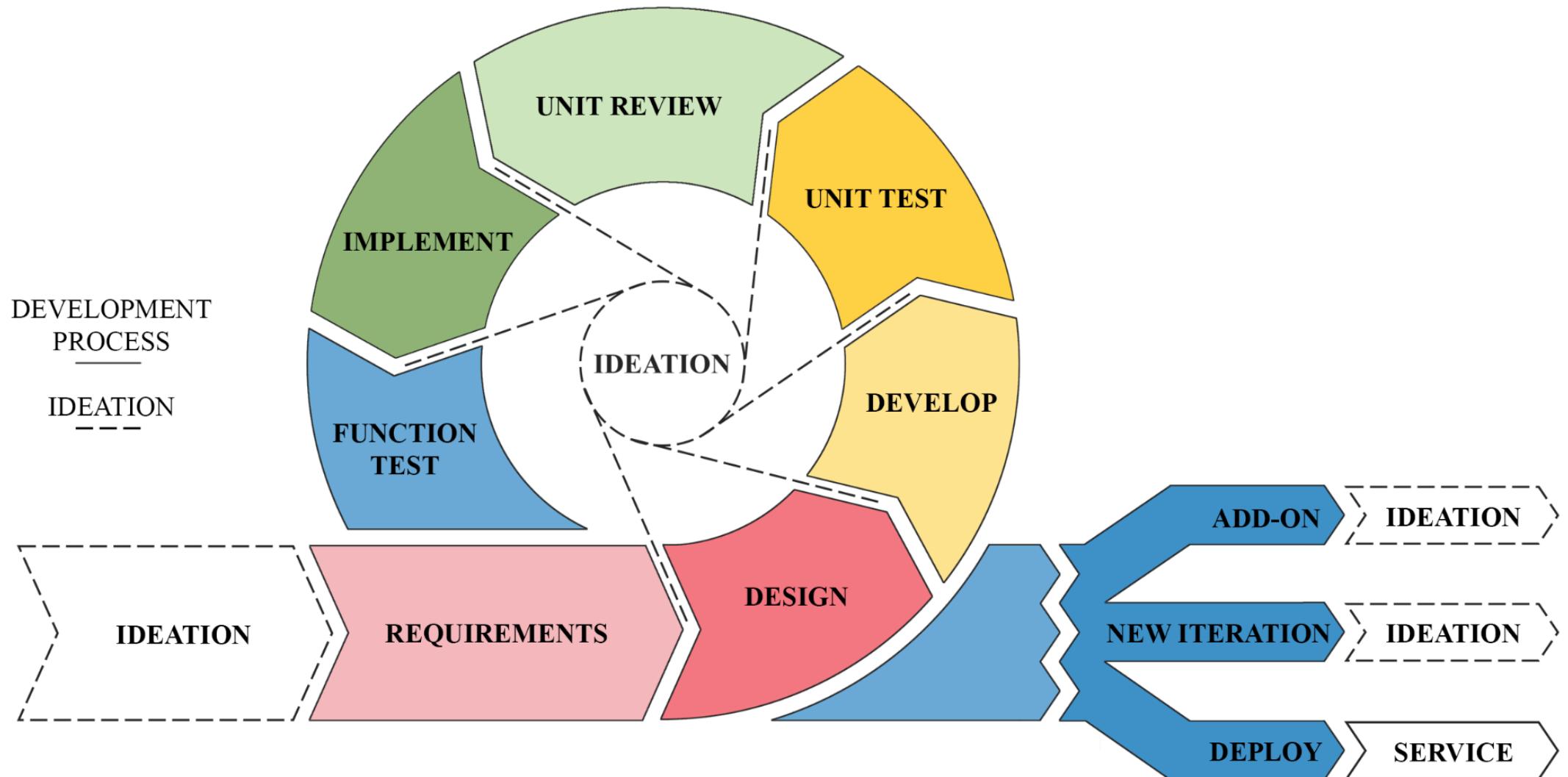


Company Development Process

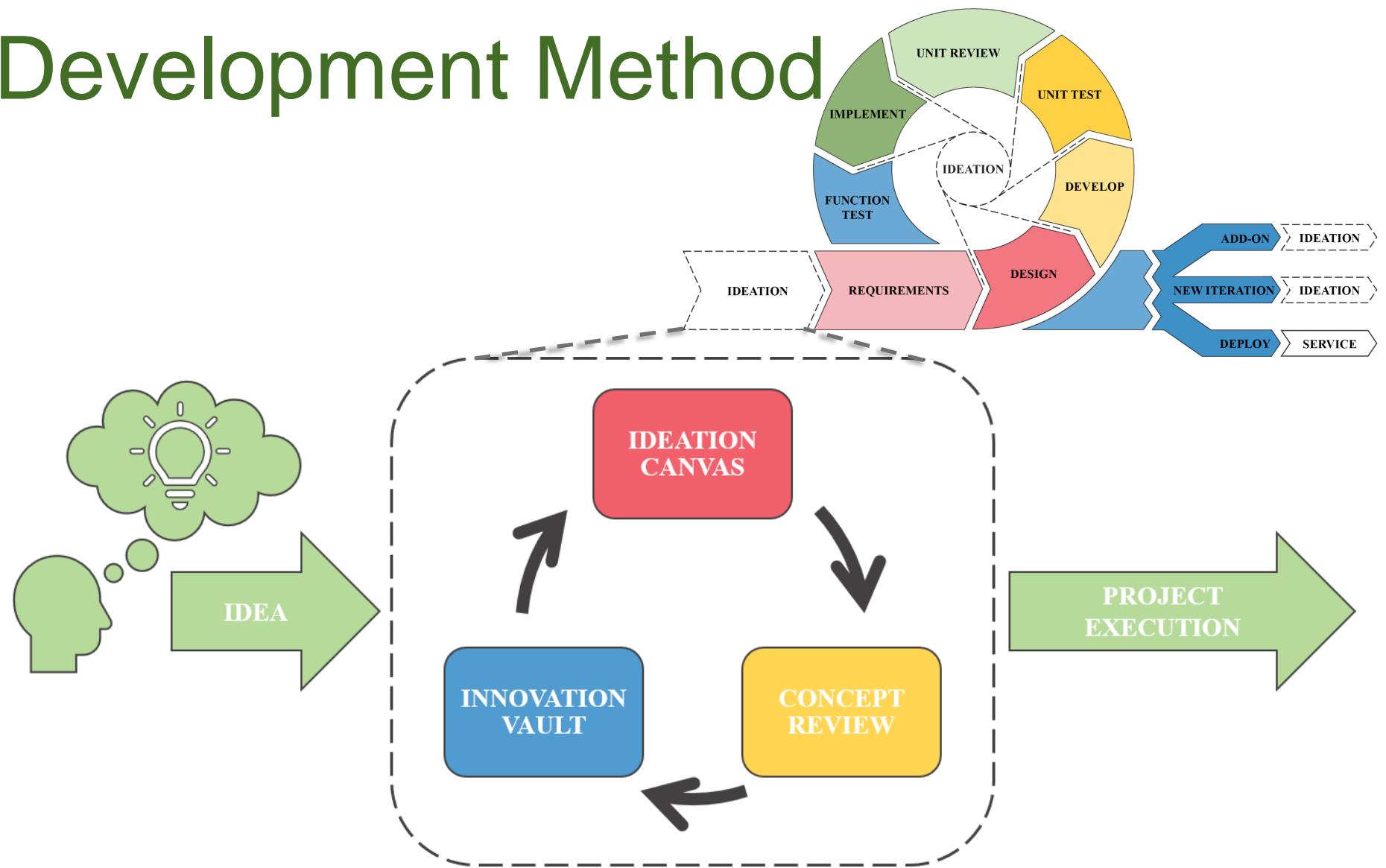


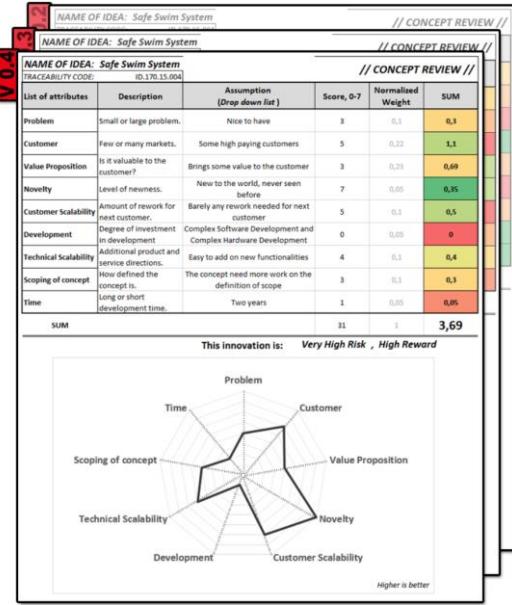
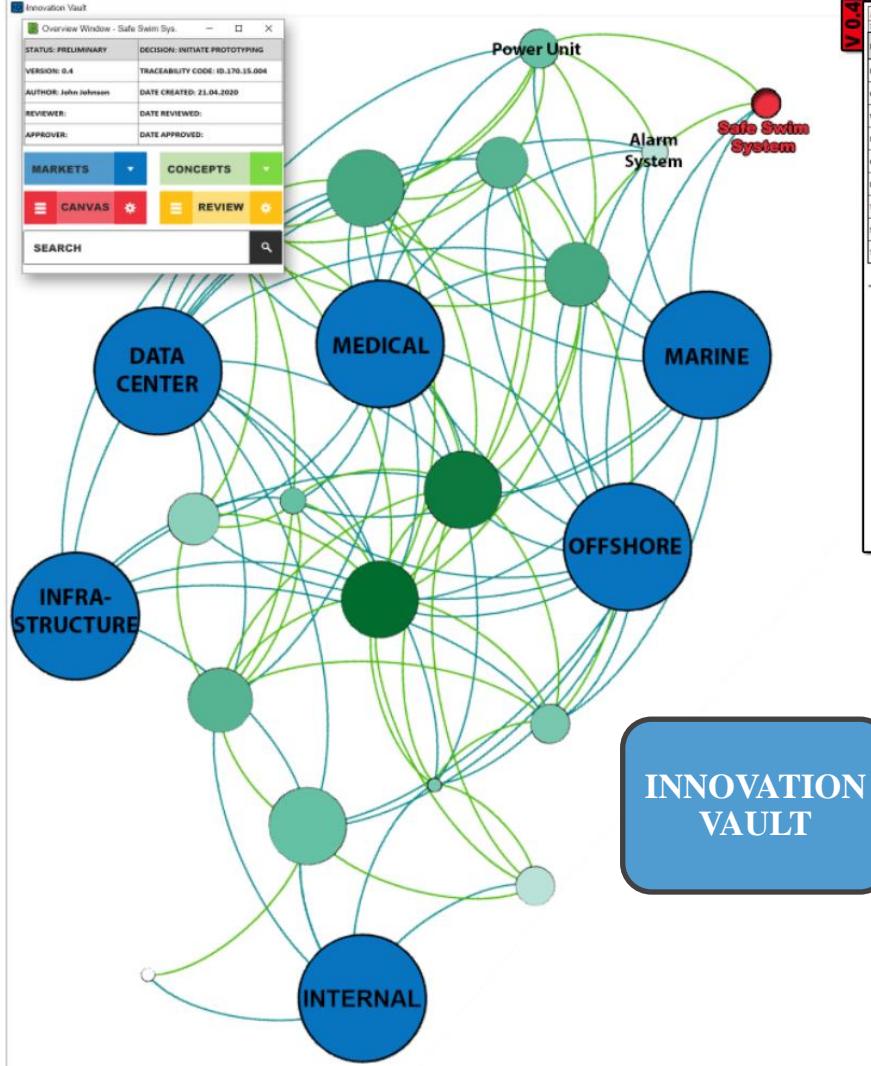


Idea Development Creation

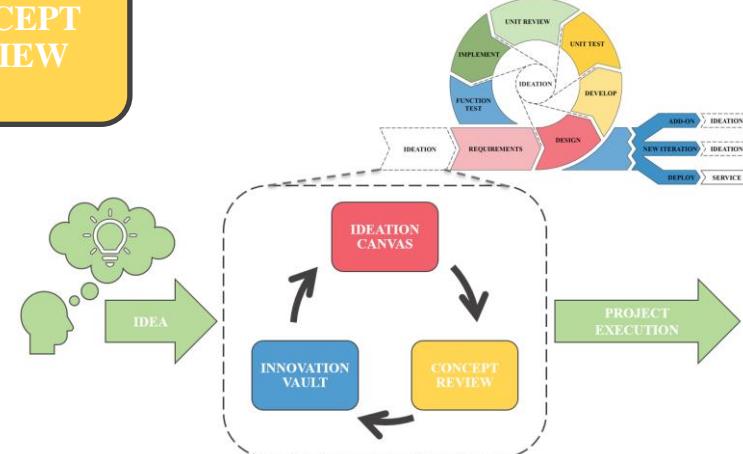


Idea Development Method

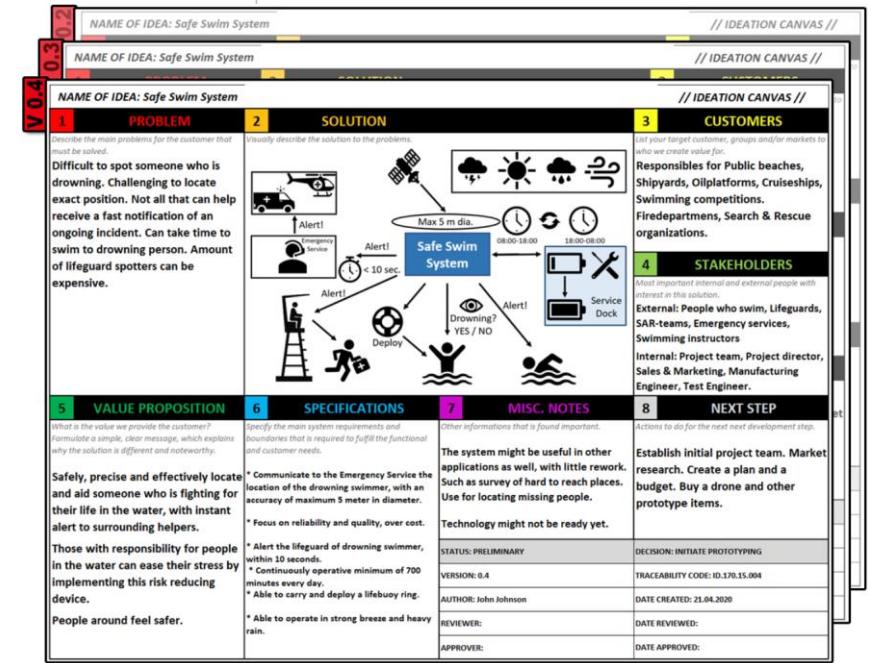




CONCEPT REVIEW



IDEATION CANVAS

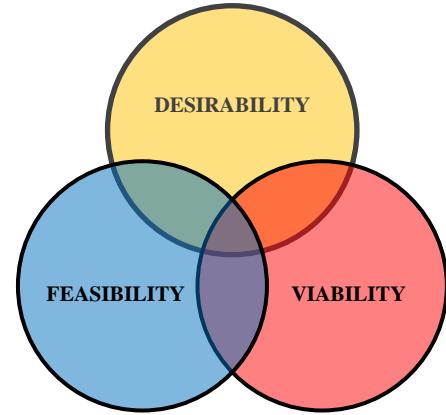




Need finding in case company

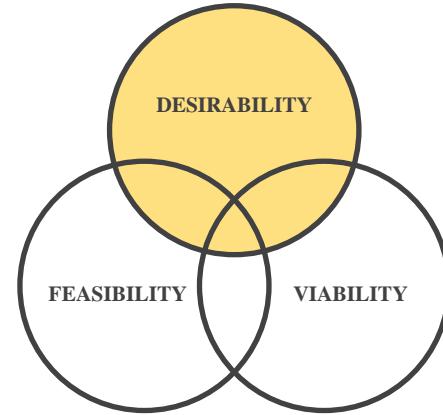
- Systems overview
- Resource- and user-friendly
- Formalization
- Communication

Survey

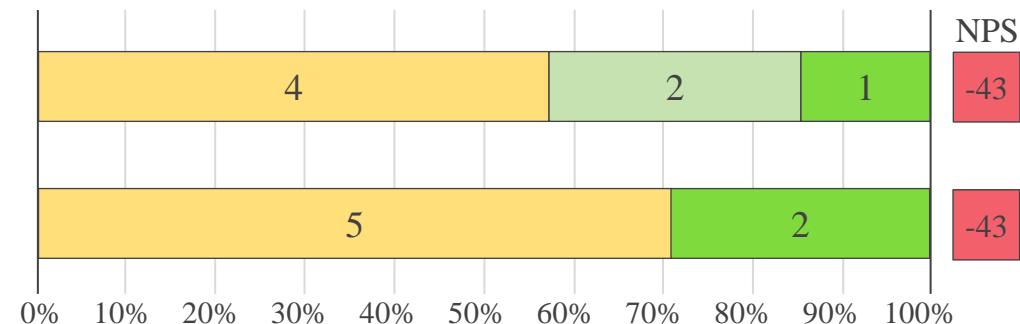
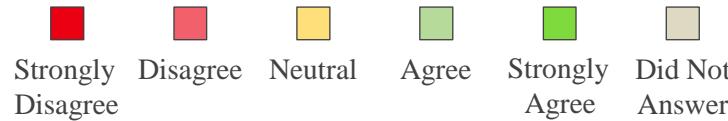


- 10-question survey
- 60 % of employees

Desirability

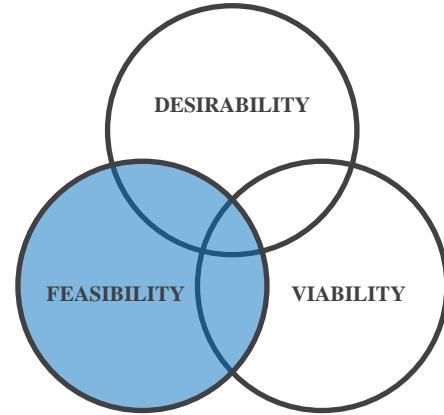


1. The process and its tools are user-friendly.
2. This process does not require much resources/time to complete.





Feasibility

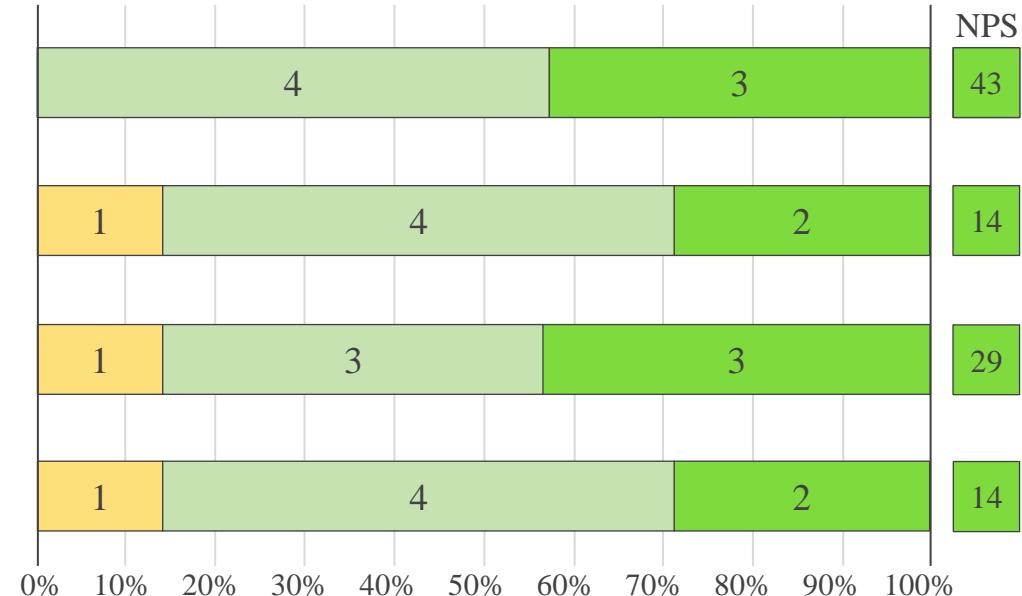
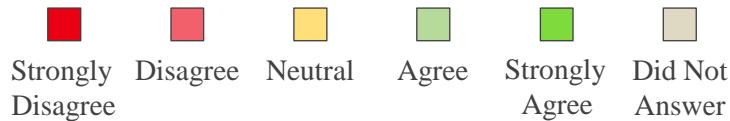


3. Presentation and communication of ideas will improve with this method.

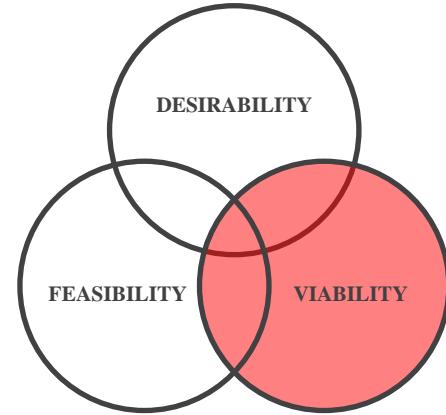
4. This method can be used before, during and/or after a project to improve new and existing ideas.

5. It is possible to incorporate this method into this company.

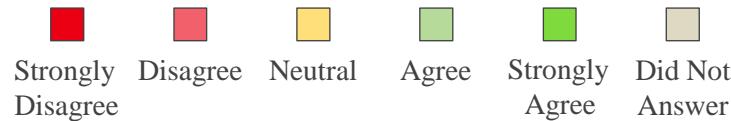
6. I believe this method has scalability opportunities.



Viability



7. This method will help develop ideas.
8. This method makes it easier to prioritize which ideas to develop further.
9. This method improves the understanding of mutual benefits between different products, services, and ideas in the company.
10. These tools will help to understand both the technical and market related aspects of ideas.





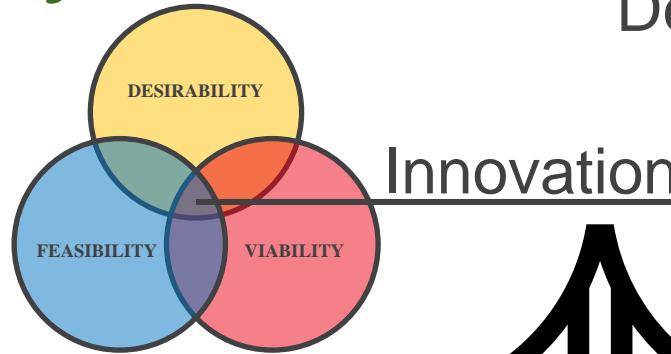
Takeaway

- **Systems Design Thinking in the Ideation Phase**
 - Strengthening communication
 - Easier prioritizing of ideas
 - Enhanced systems overview
 - Improves the ideas
 - Formalization improved the ideation process
- **Systems Design Thinking in a Very Small Entity**
 - Feasible and Viable in VSE when align with the critical process attributes of the specific entity
 - Desirability could be improved

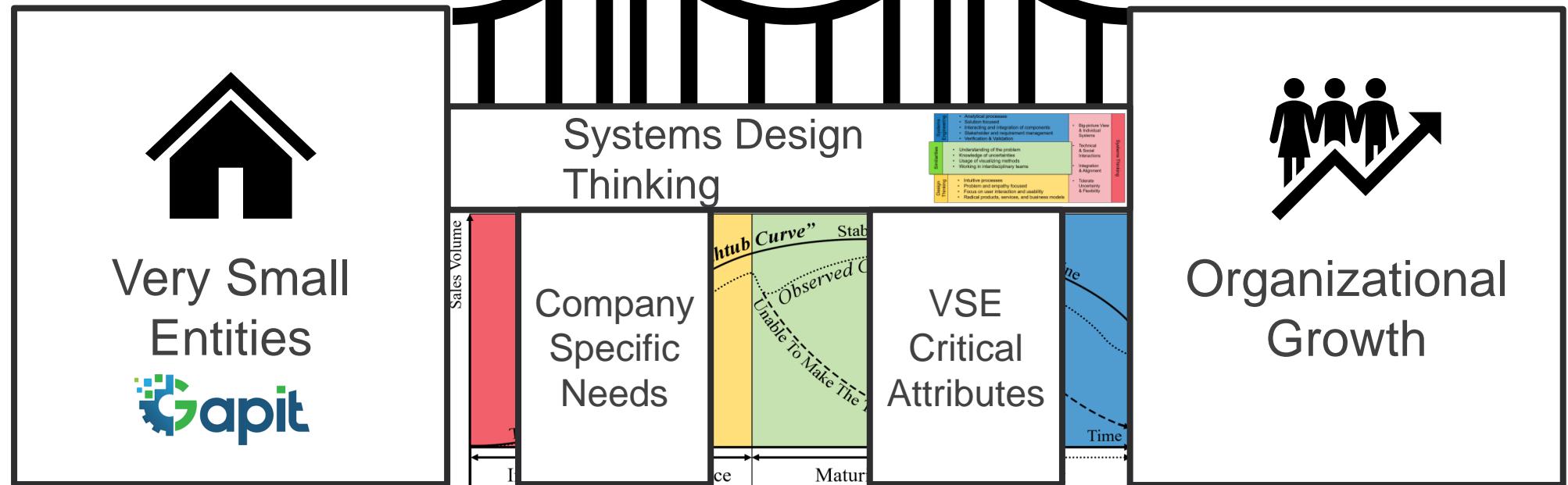
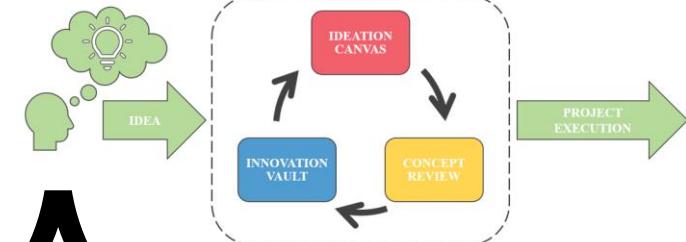
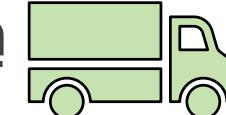
Summary



Idea Development Method



Innovation



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Thank you

- Questions
- Contact Information



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