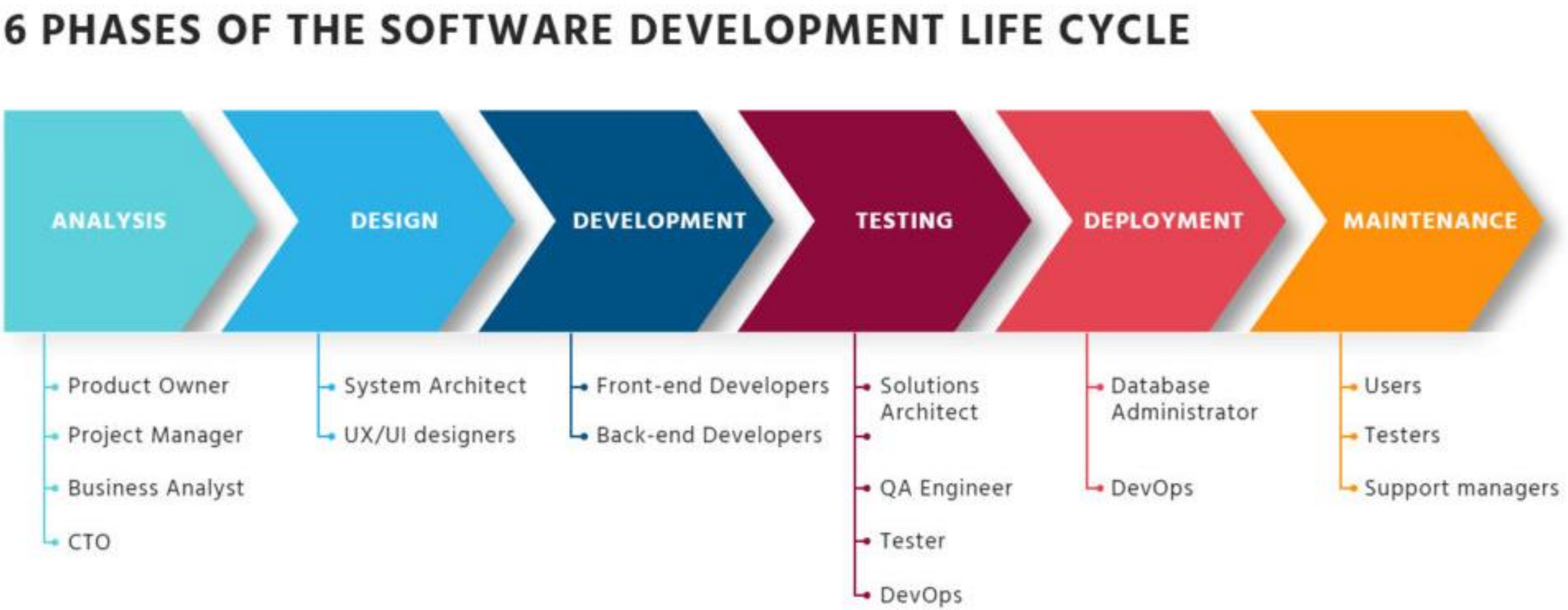
# Software Development Life Cycle


# Agenda

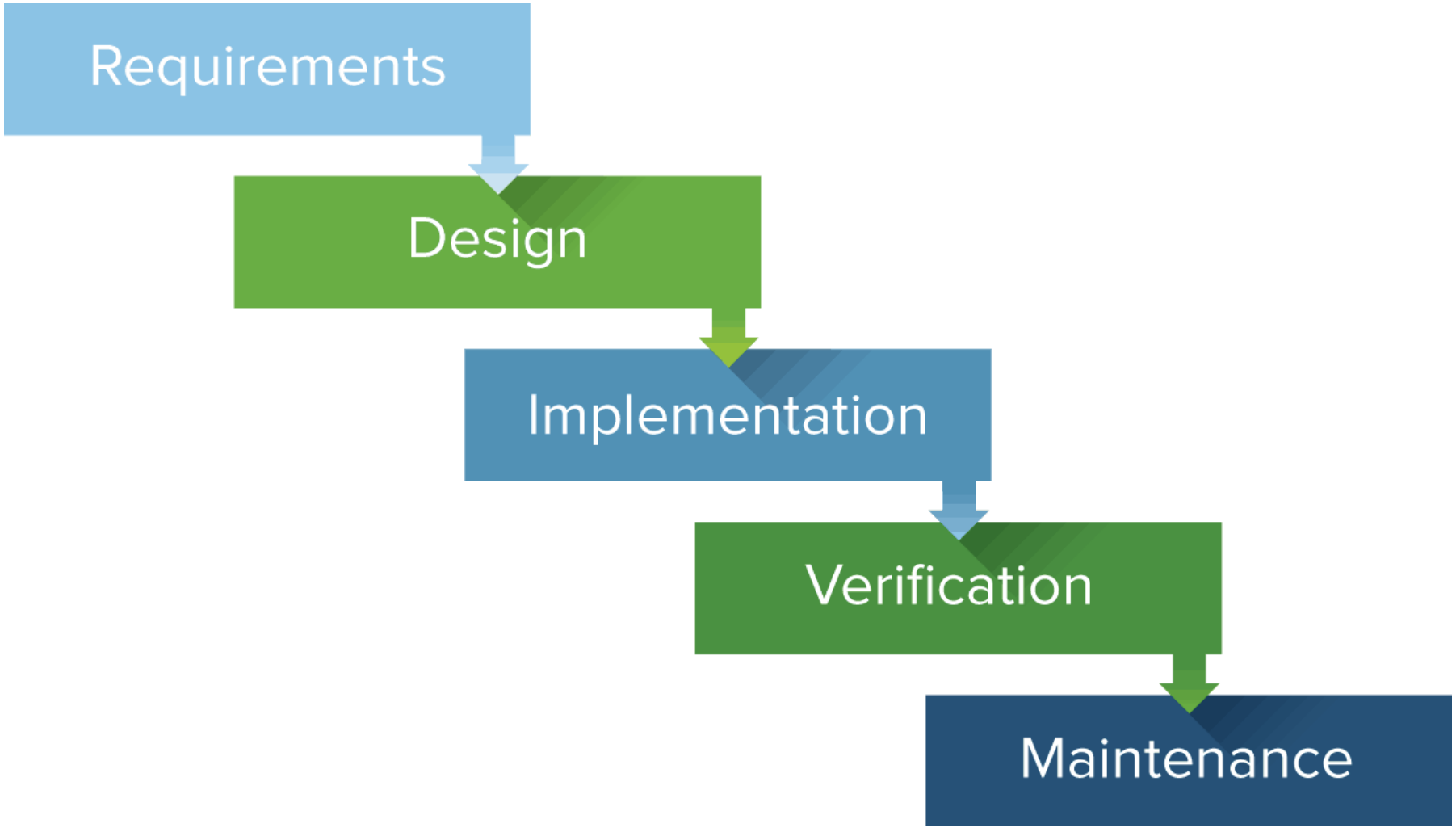
- Introduction
- SDLC
- Waterfall
- Iterative
- Agile

# Software Development Life Cycle

BIAS

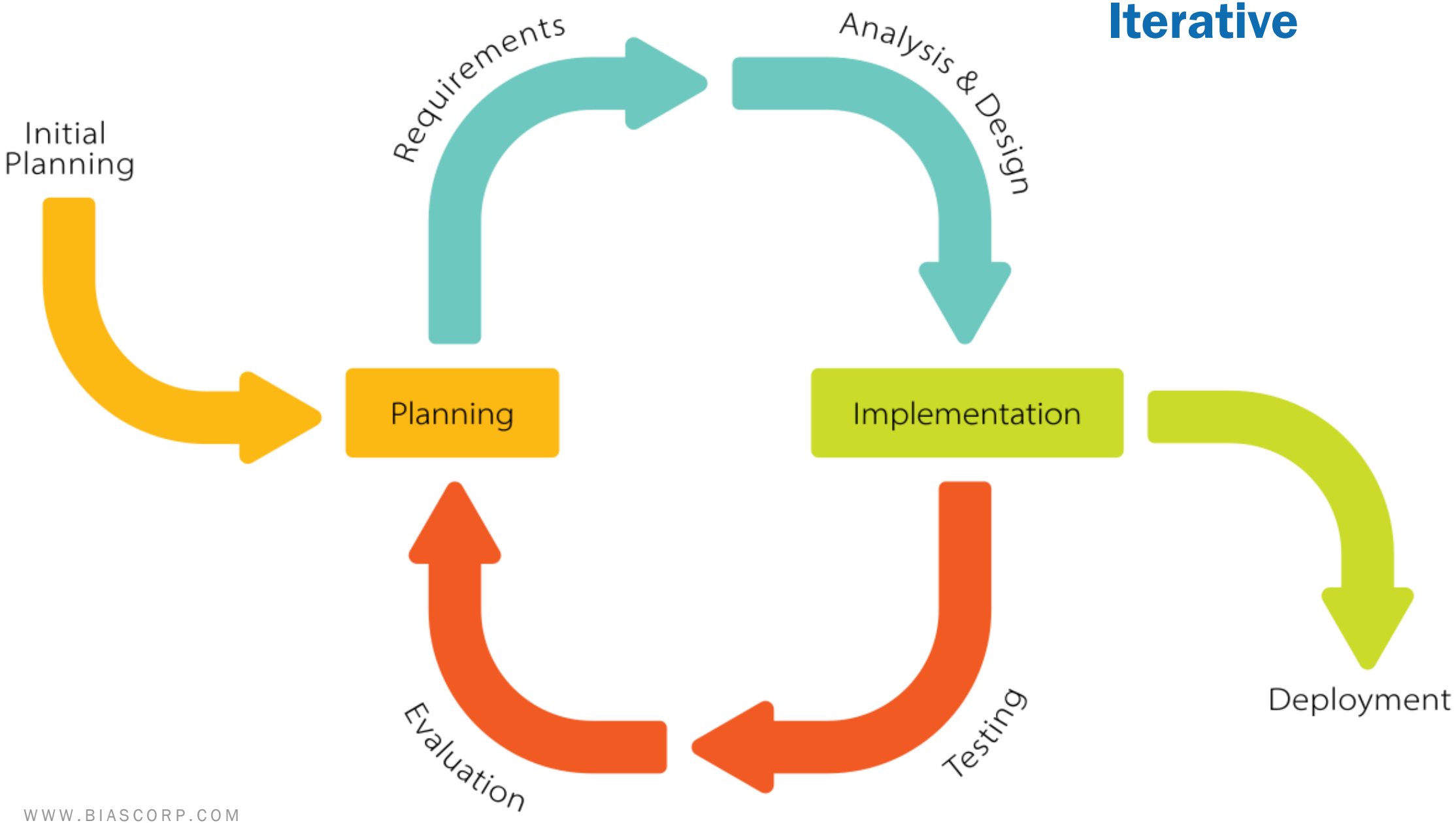


# Water Fall


Requirements
Design
Implementation
Verification
Maintenance

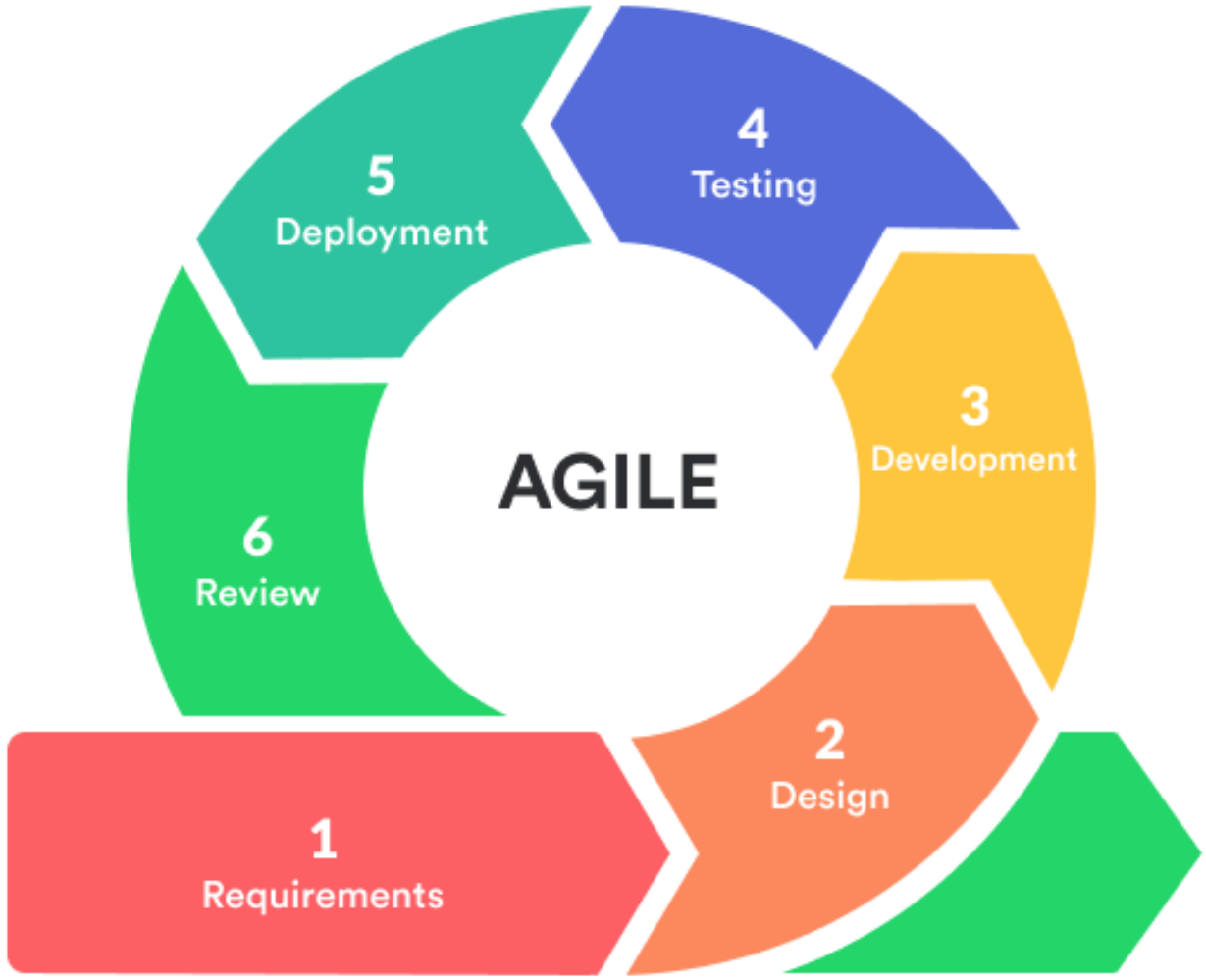
| Advantages | Dis-Advantages |
| --- | --- |
| •Before the next phase of development, each phase must be completed | •Error can be fixed only during the phase |
| •Suited for smaller projects where requirements are well defined | •It is not desirable for complex project where requirement changes frequently |
| •They should perform quality assurance test (Verification and Validation) before completing each stage | •Testing period comes quite late in the developmental process |
| •Elaborate documentation is done at every phase of the software's development cycle | •Documentation occupies a lot of time of developers and testers |
| •Project is completely dependent on project team with minimum client intervention | •Clients valuable feedback cannot be included with ongoing development phase |
| •Any changes in software is made during the process of the development | •Small changes or errors that arise in the completed software may cause a lot of problems |

# Iterative


Initial Planning
Requirements
Analysis & Design
Planning
Implementation
Deployment
Evaluation
Testing

| ADVANTAGES | DISADVANTAGES |
| --- | --- |
| Some functions can be quickly developed at the beginning of the development lifecycle | Iterative model requires more resources than the waterfall model |
| The paralleled development can be applied | Constant management is required |
| The progress is easy measurable | Issues with architecture or design may occur because not all the requirements are foreseen during the short planning stage |
| The shorter iteration is - the easier testing and debugging stages are | Bad choice for the small projects |
| It is easier to control the risks as high-risk tasks are completed first | The process is difficult to manage |
| Problems and risks defined within one iteration can be prevented in the next sprints | The risks may not be completely determined even at the final stage of the project |
| Flexibility and readiness to the changes in the requirements | Risks analysis requires involvement of the highly-qualified specialists |

# Agile


AGILE
1
Requirements
2
Design
3
Development
4
Testing
5
Deployment
6
Review

| ADVANTAGES | DISADVANTAGES |
| --- | --- |
| It is focused client process. So, it makes sure that the client is continuously involved during every stage. | It is not useful method for small development projects. |
| Agile teams are extremely motivated and self-organized so it likely to provide a better result from the development projects. | It requires an expert to take important decisions in the meeting |
| Agile software development method assures that quality of the development is maintained | Cost of implementing an agile method is little more compared to other development methodologies |
| The process is completely based on the incremental progress. Therefore, the client and team know exactly what is complete and what is not. This reduces risk in the development process. | The project can easily go off track if the project manager is not clear what outcome he/she wants |