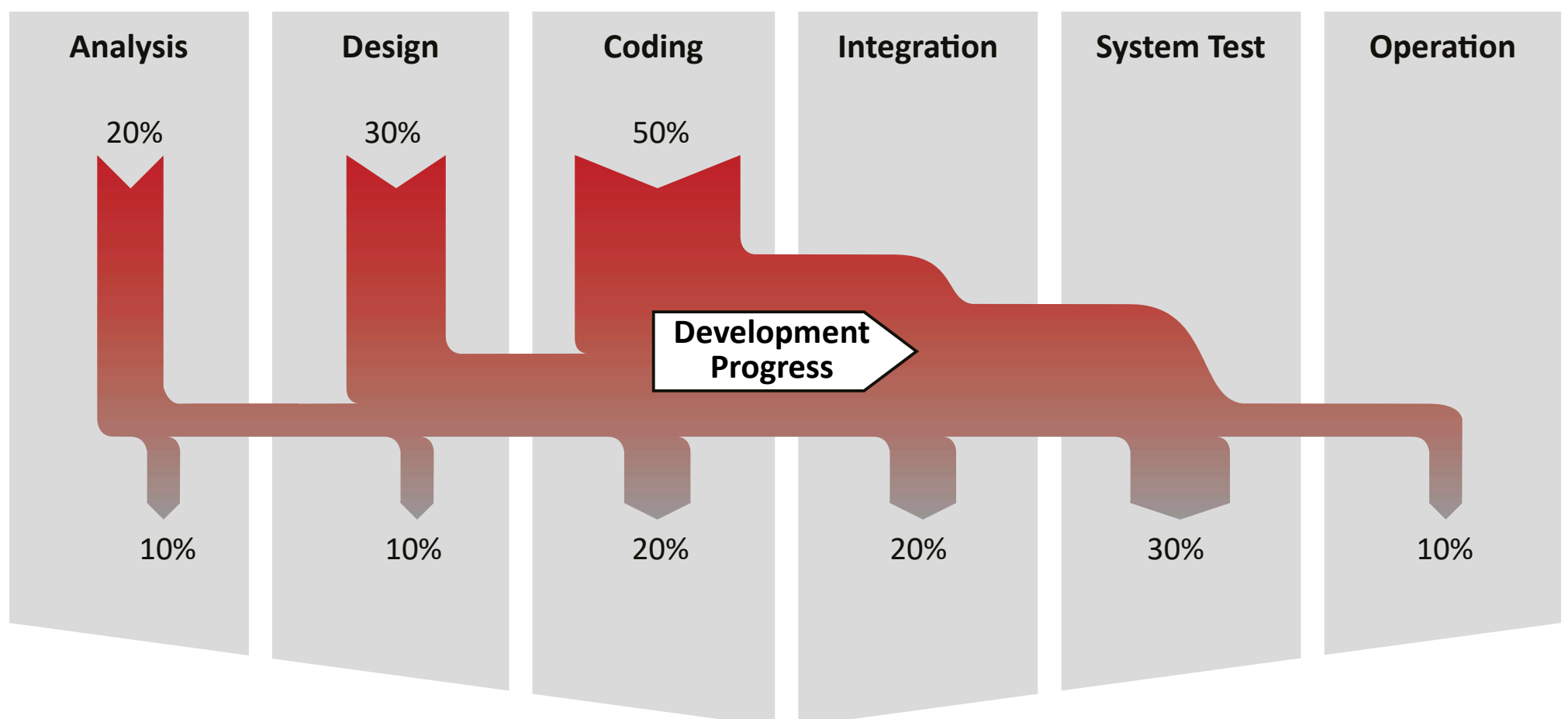


Defect Origin and Defect Avoidance/Removal Strategies

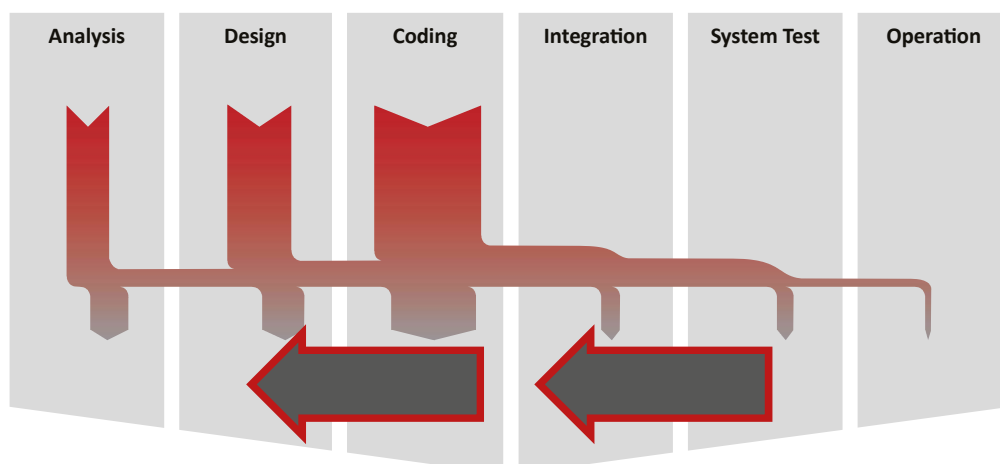
Defect Introduction



Defect Detection

Front Loading

Avoid defects in the first place, or find and remove as many defects as possible. This can be achieved by emphasizing the early life cycle phases, in particular the validation activities.

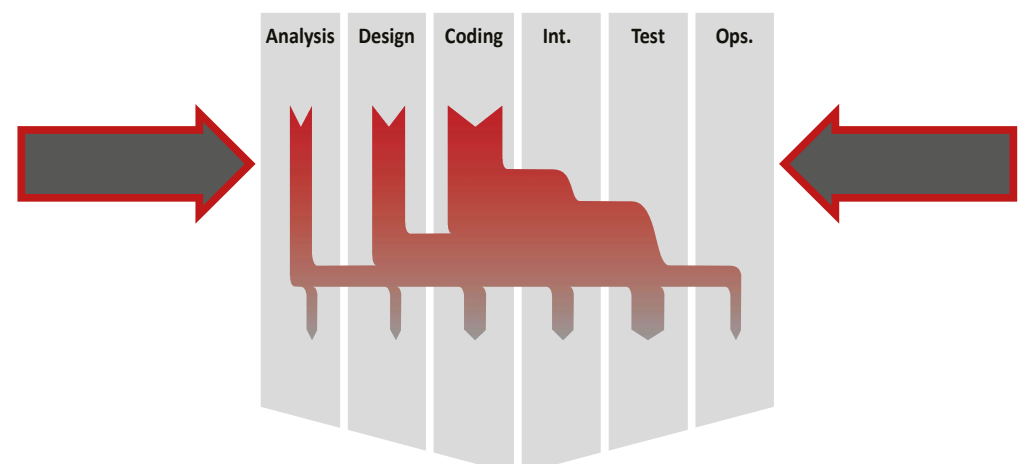


Development approaches focusing on Front Loading include Model-Driven Development and Requirements Engineering.

High tooling effort makes it difficult to deal with technology variations. Also, the conceptual complexity of the early phases requires methodological and technology support currently not available.

Iteration Squeezing

Maximize the opportunities for finding defects earlier by reducing iteration duration and deploying smaller increments faster. Control additional effort through test and deployment automation.



High-agility methods like XP, DSDM, Scrum, DevOps and more exploit Iteration Squeezing and aspire to continuously deliver very small increments ("minimal viable product"). Crosscutting concerns are difficult to address iteratively. Also, large complex projects require more control than is offered by highly flexible methods.