

Mastering Systems Integration; Early Validation

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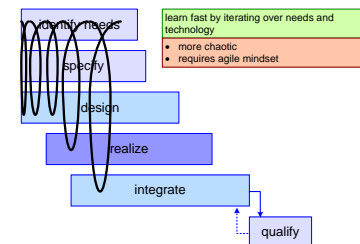
Abstract

The core principle of systems integration is early validation; are the assumptions of the needs, specifications and design decisions valid? it is better to fail early, then to hit faulty assumptions, unknowns, or uncertainties late in development.

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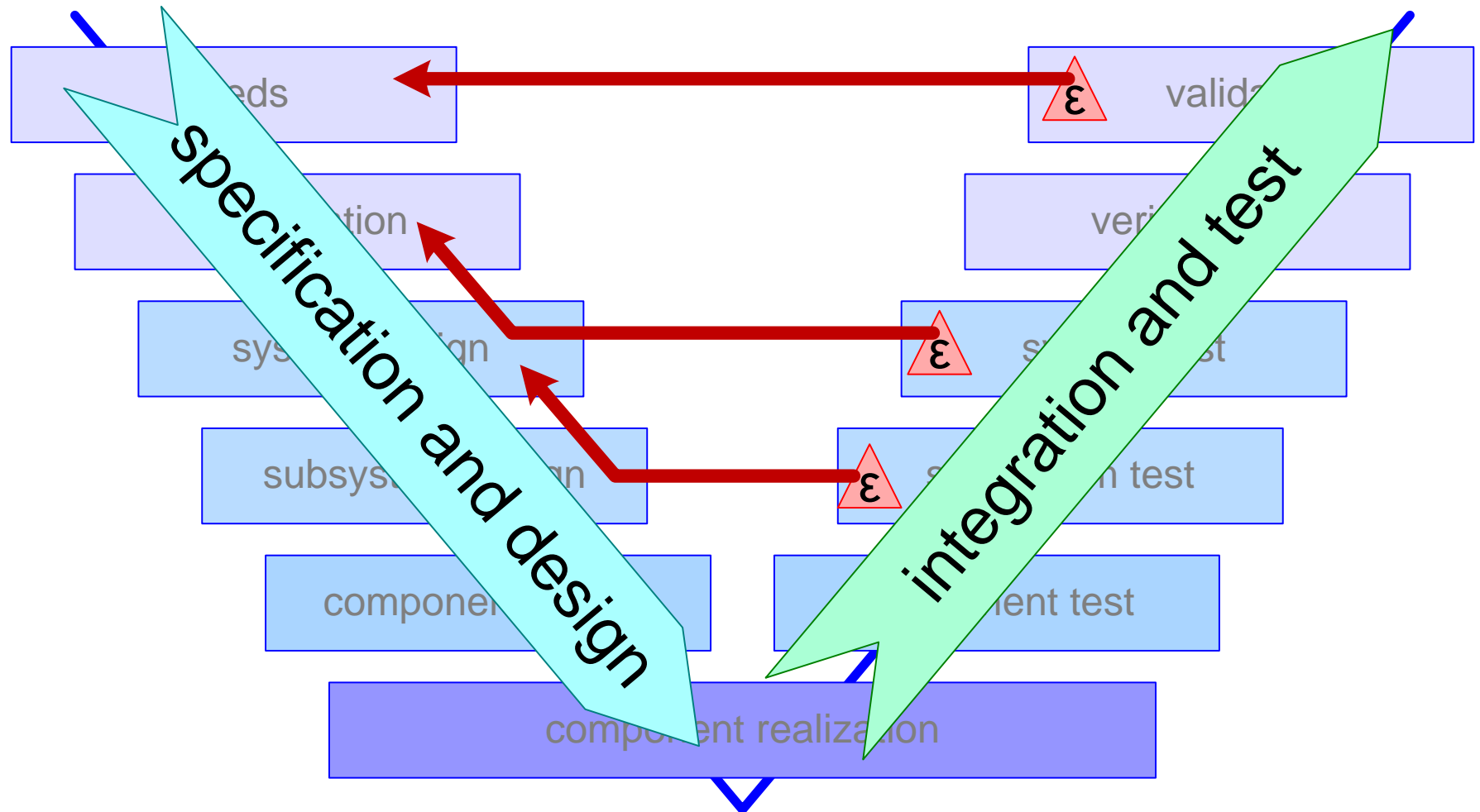
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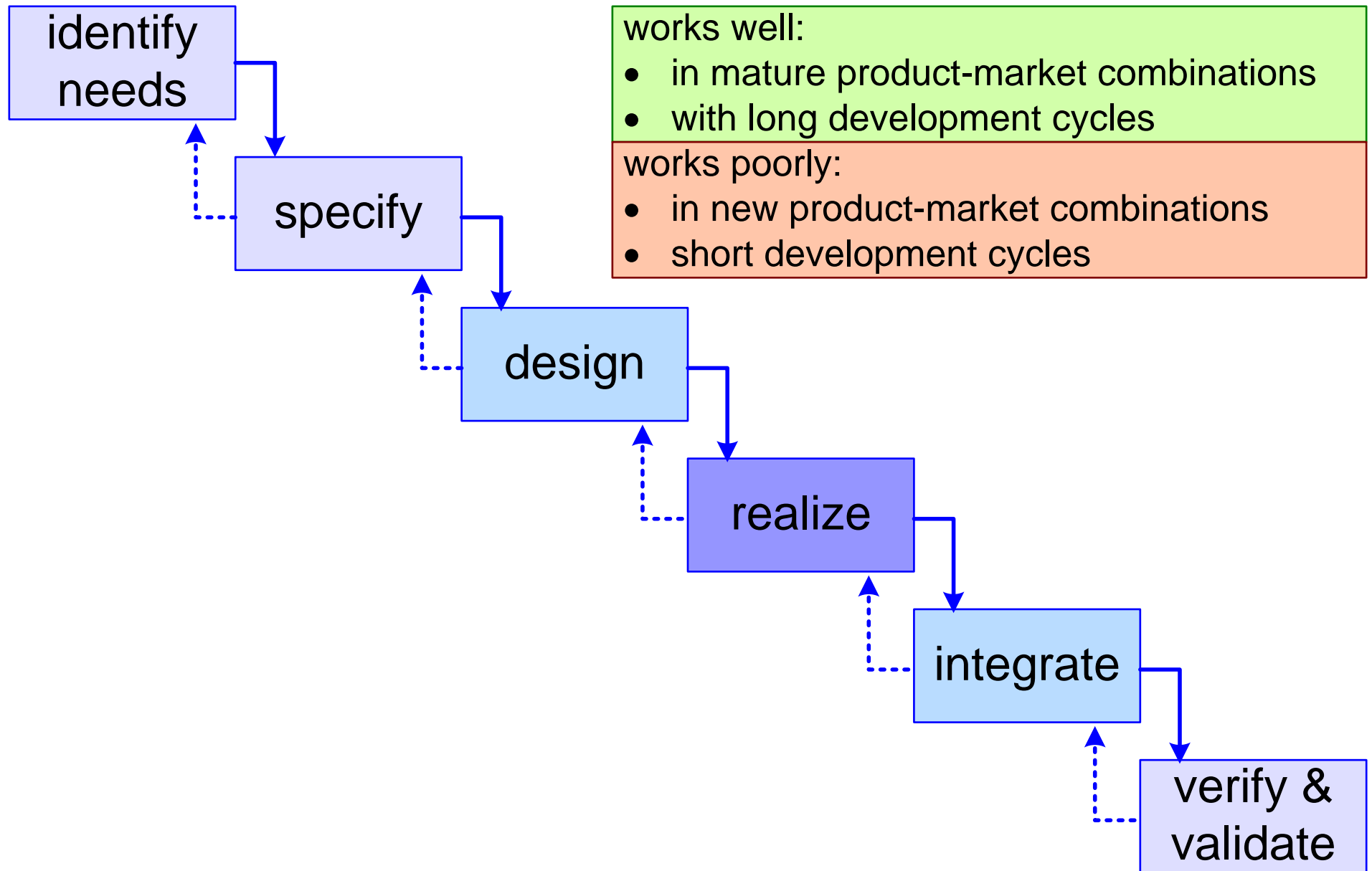


Most Problems are Found Late

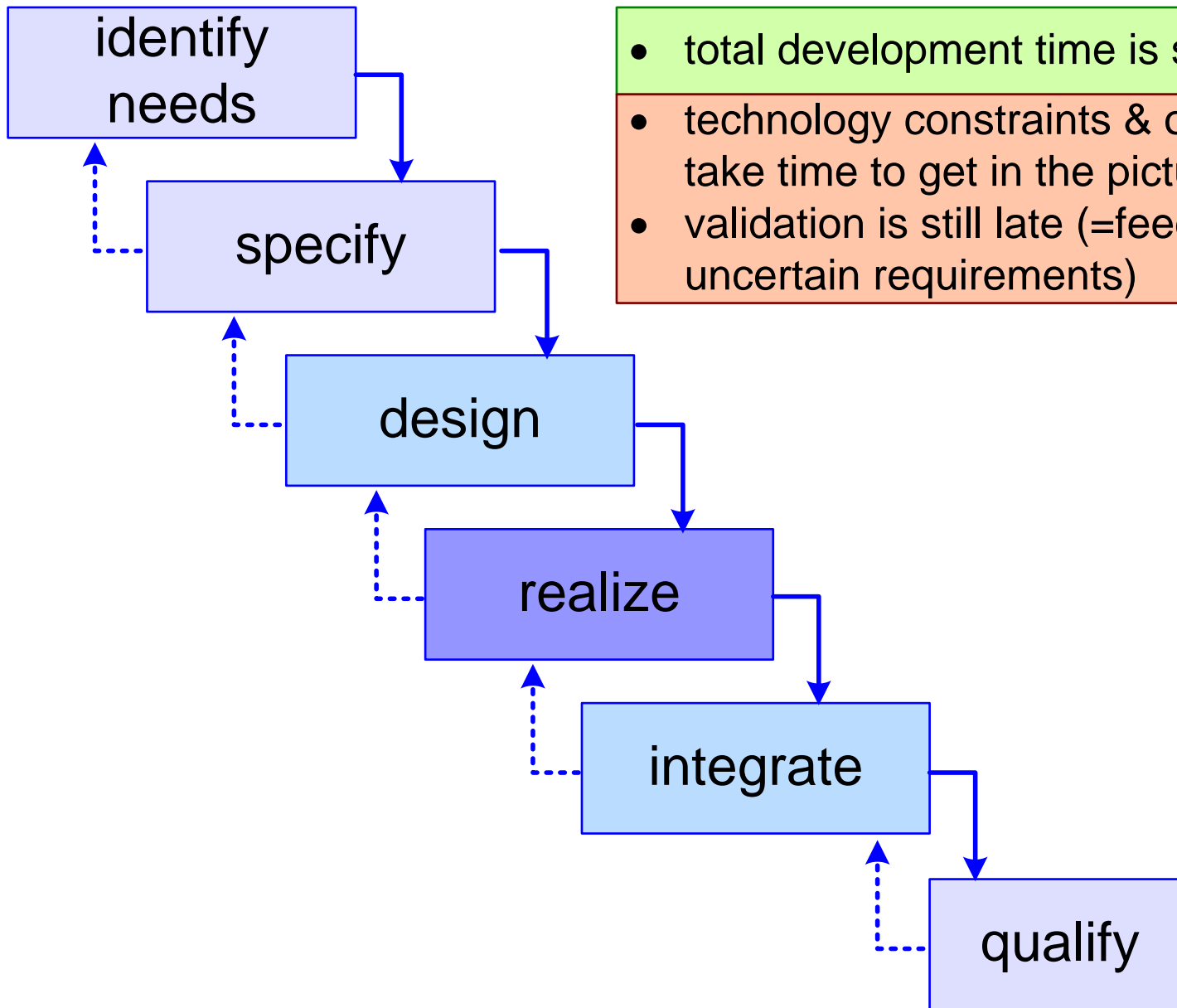
failures found during integration and test can be traced back to *unknowns*, *unforeseens*, and *wrong assumptions*



Waterfall model

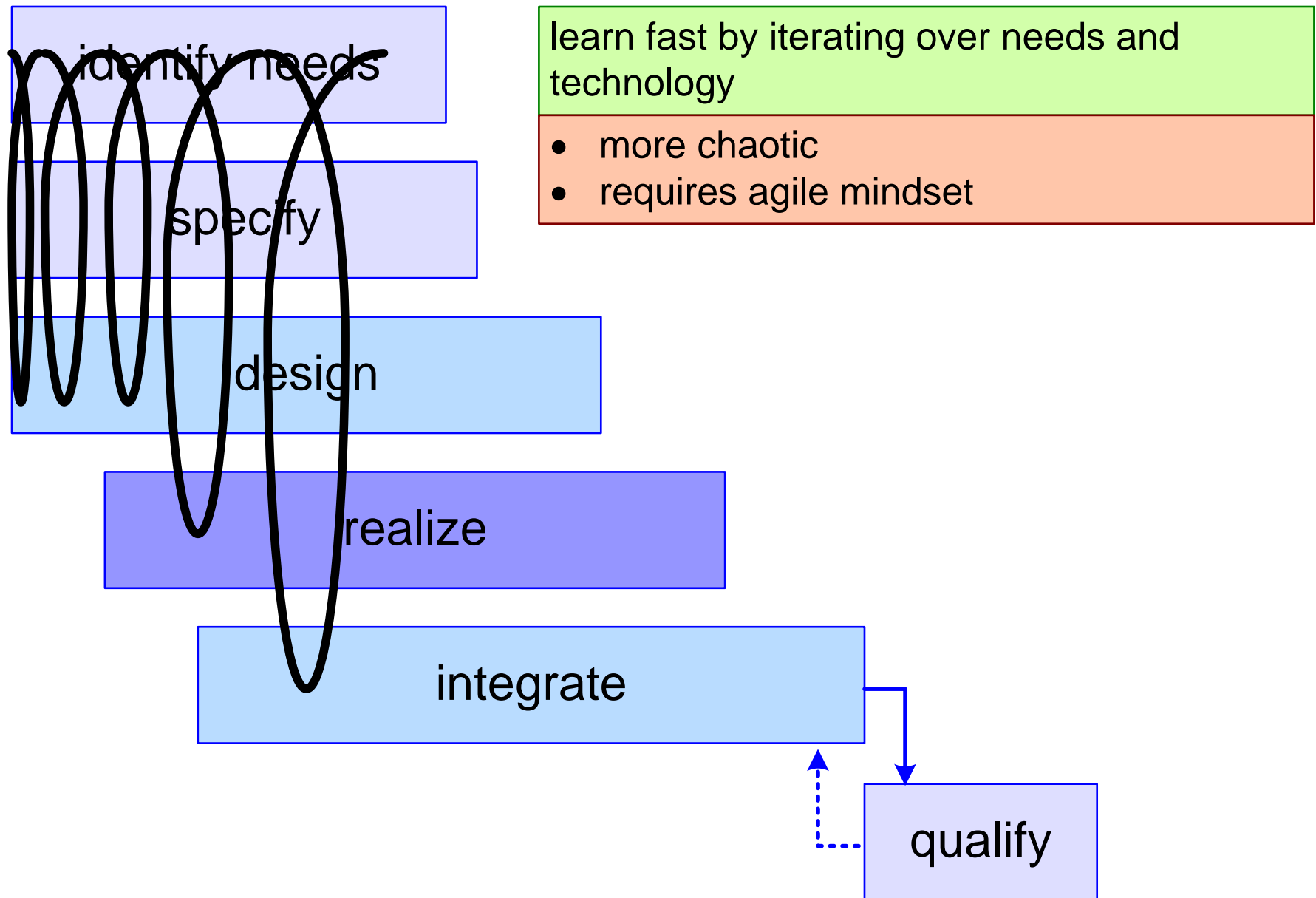


Concurrent Engineering

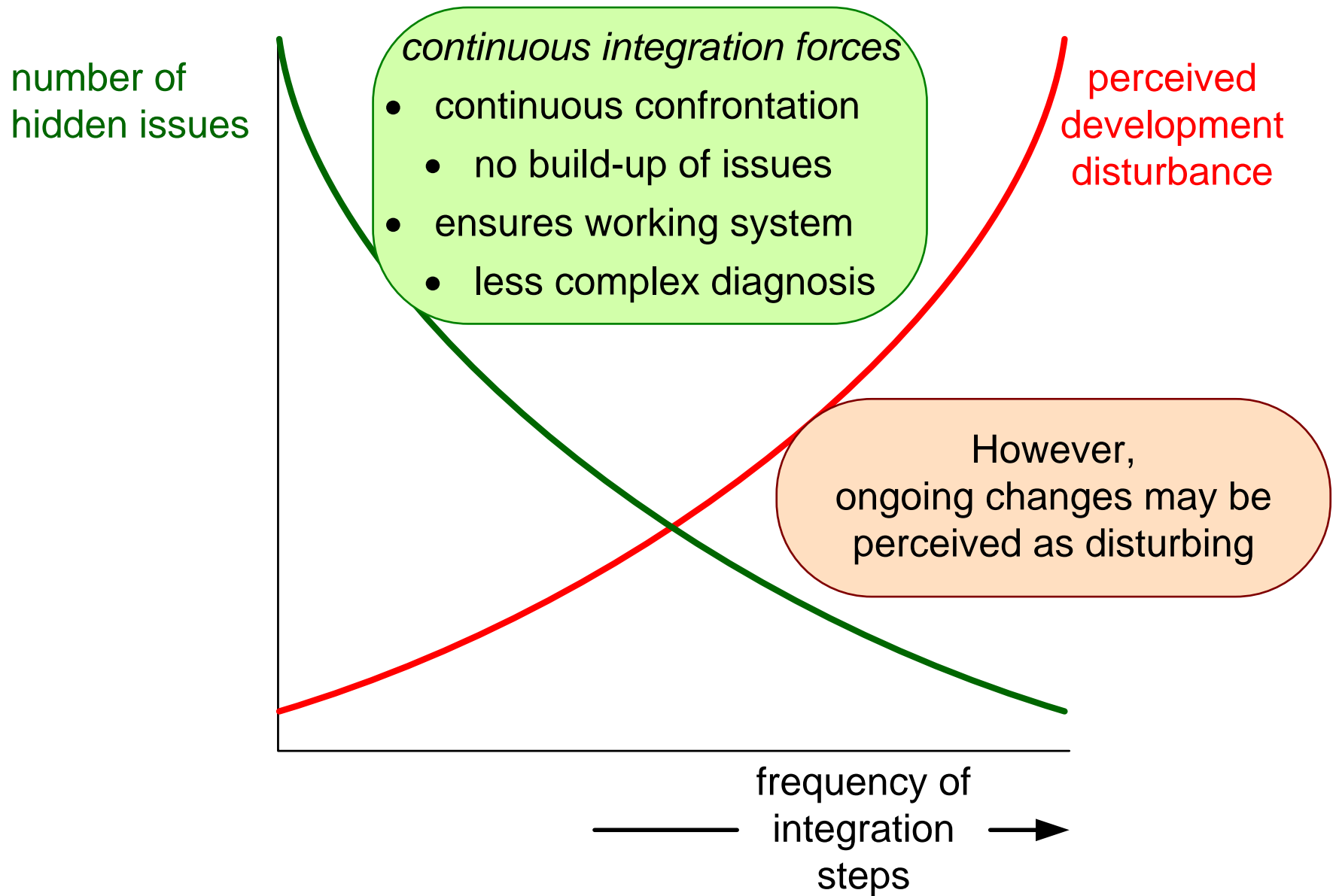


- total development time is shorter
- technology constraints & opportunities take time to get in the picture
- validation is still late (=feedback on uncertain requirements)

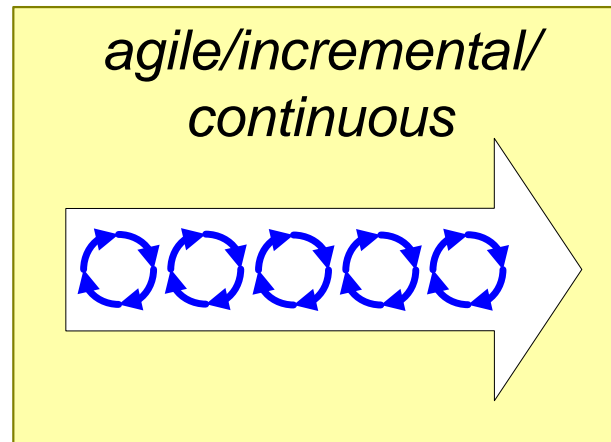
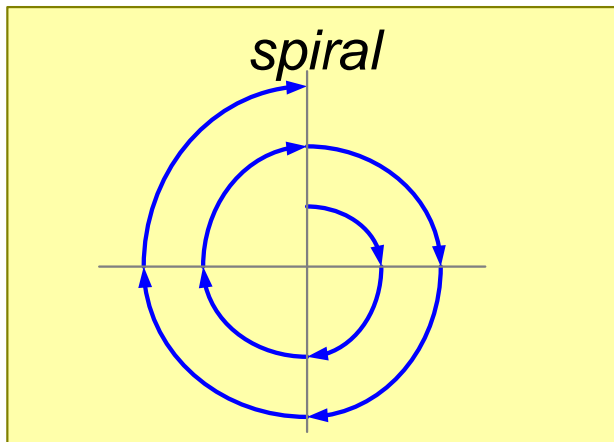
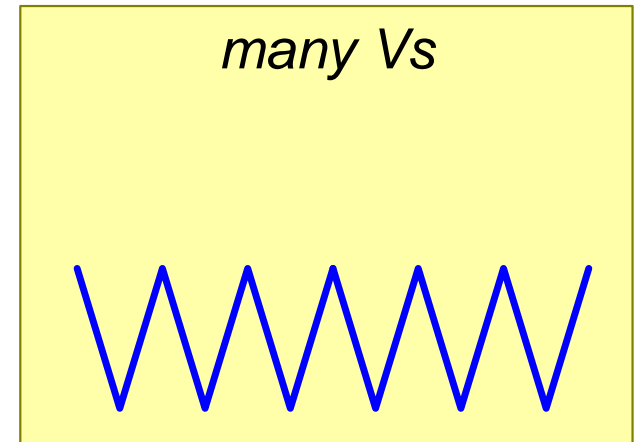
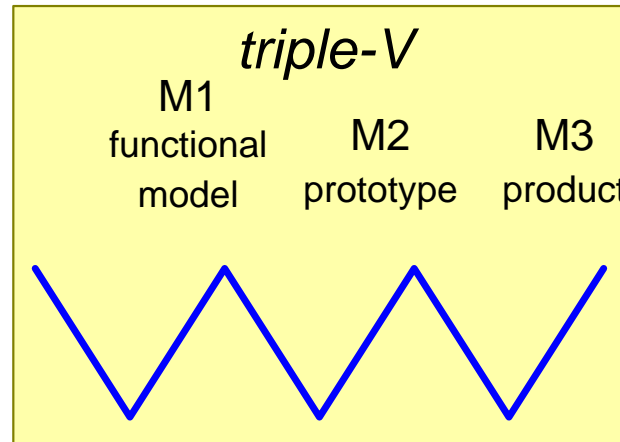
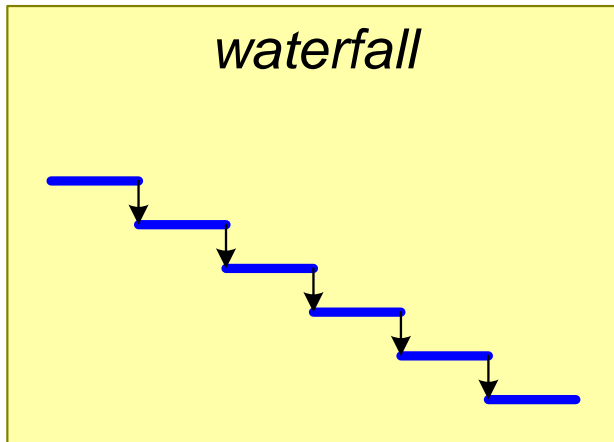
Iterative Approach



Continuous Integration



Development Processes From Waterfall to Agile



and all kinds of hybrids