

# Mastering Systems Integration; Early Validation

by *Gerrit Muller* TNO-ESI, University College of South East Norway

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

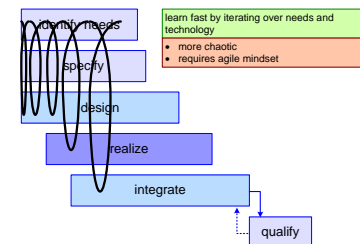
## Abstract

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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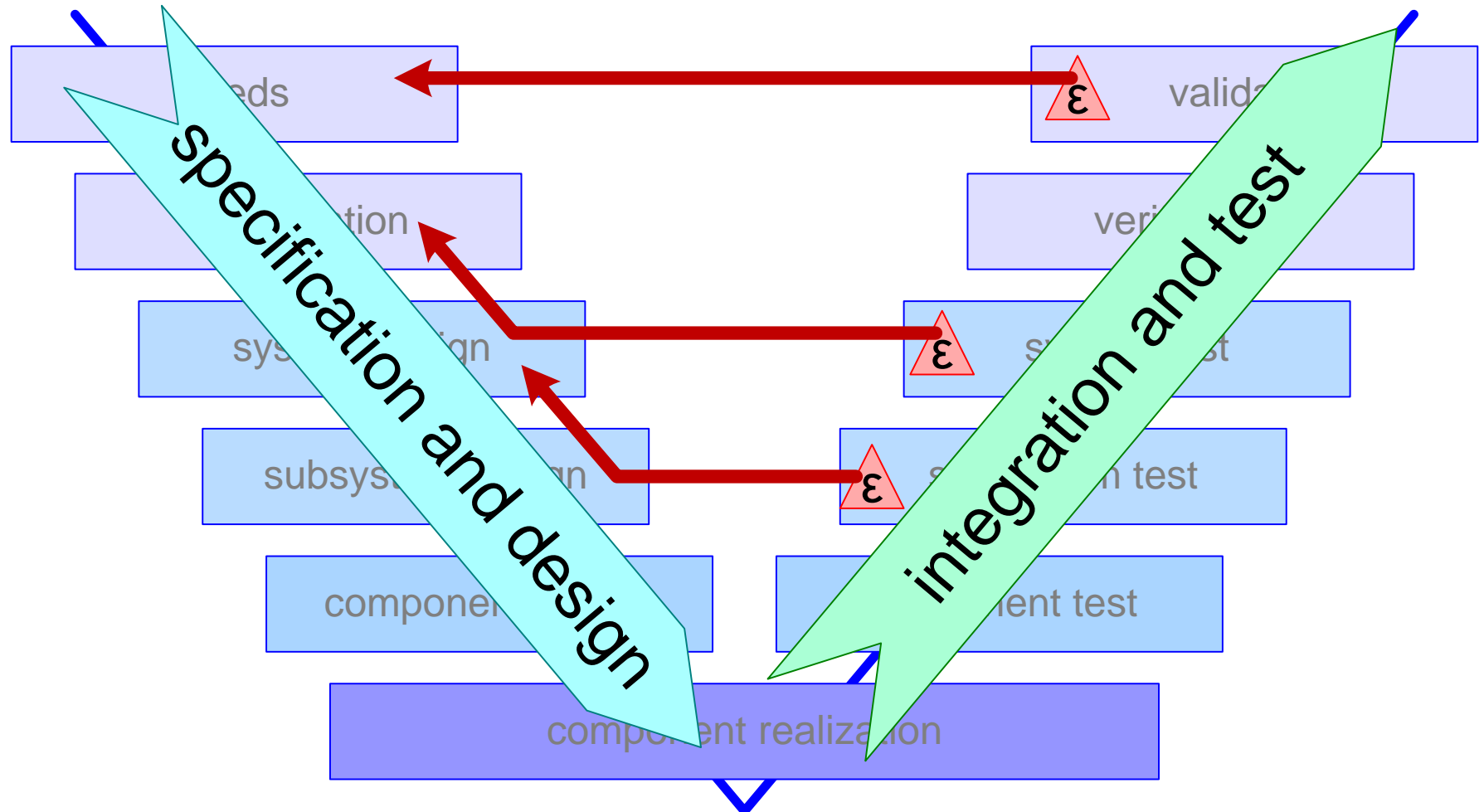
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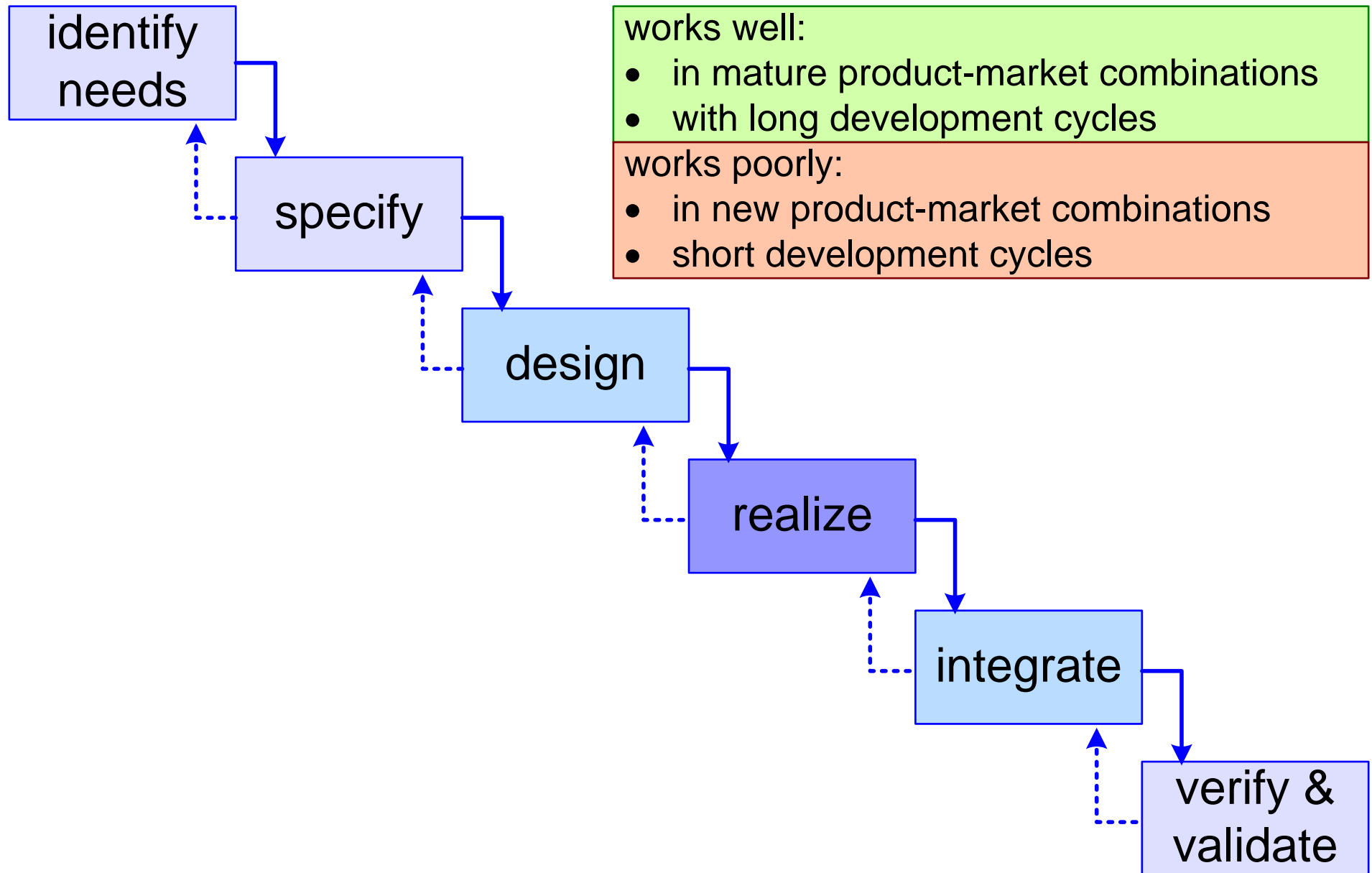


# Most Problems are Found Late

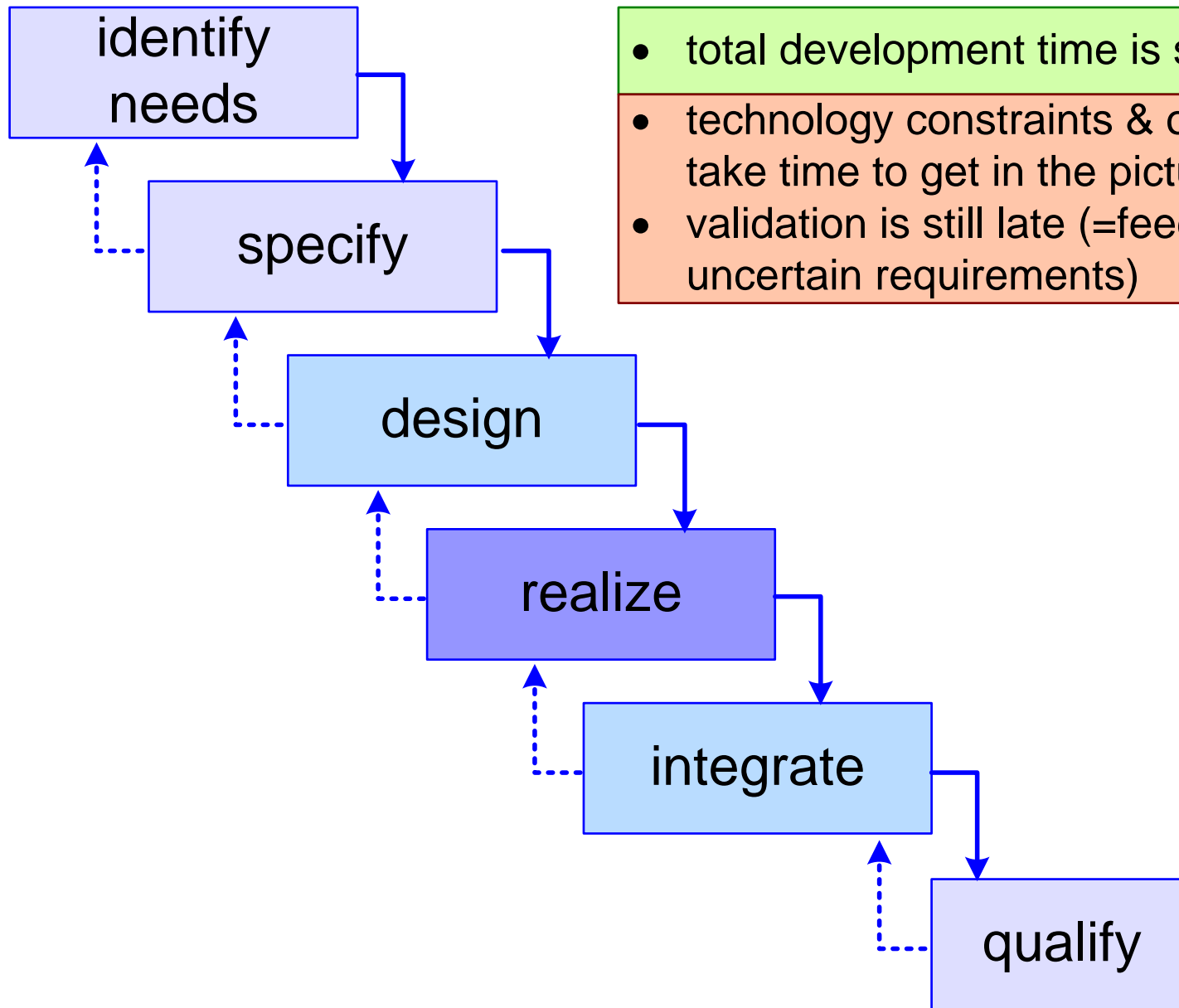
failures found during integration and test can be traced back to *unknowns*, *unforeseens*, and *wrong assumptions*



# Waterfall model

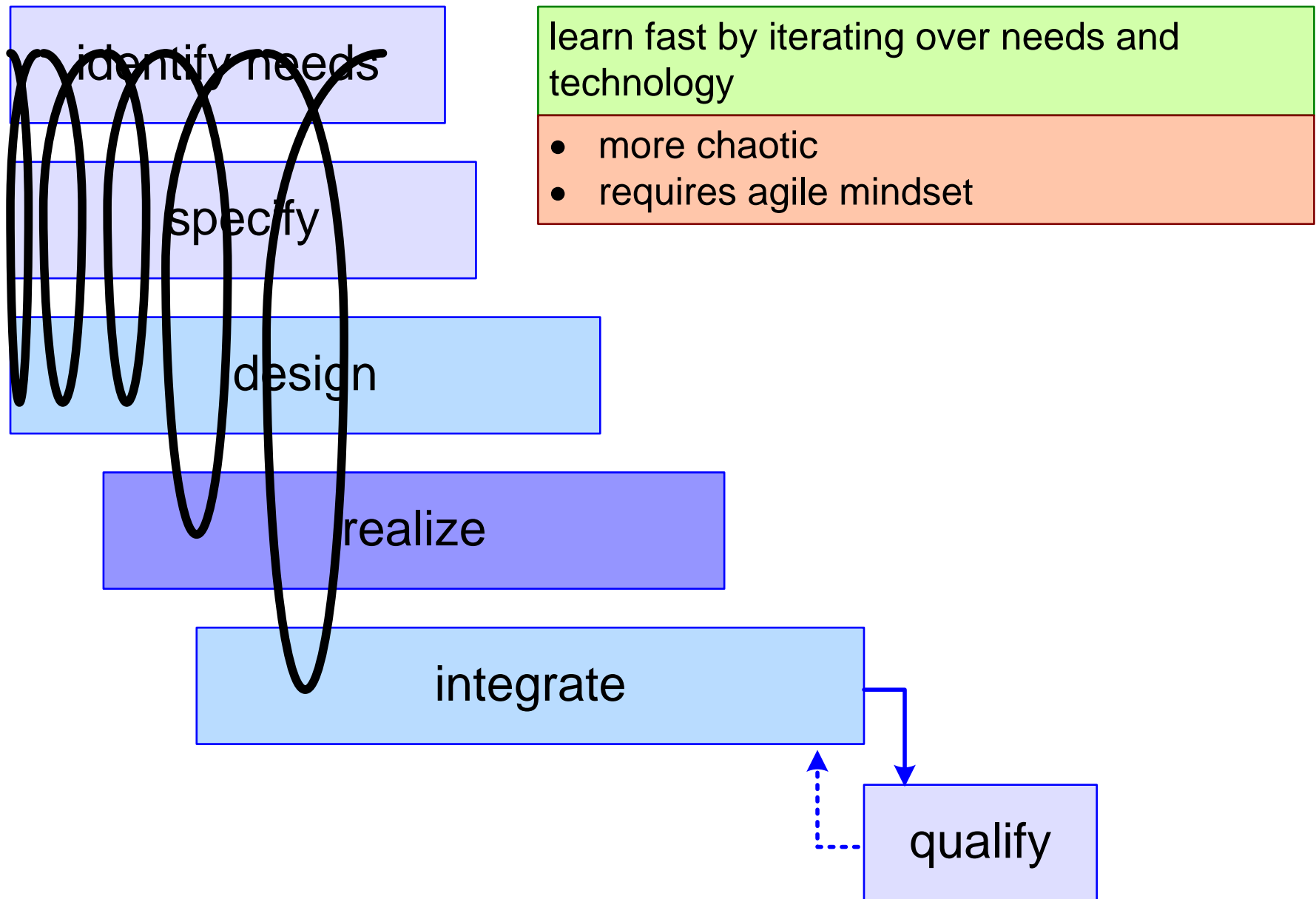


# Concurrent Engineering

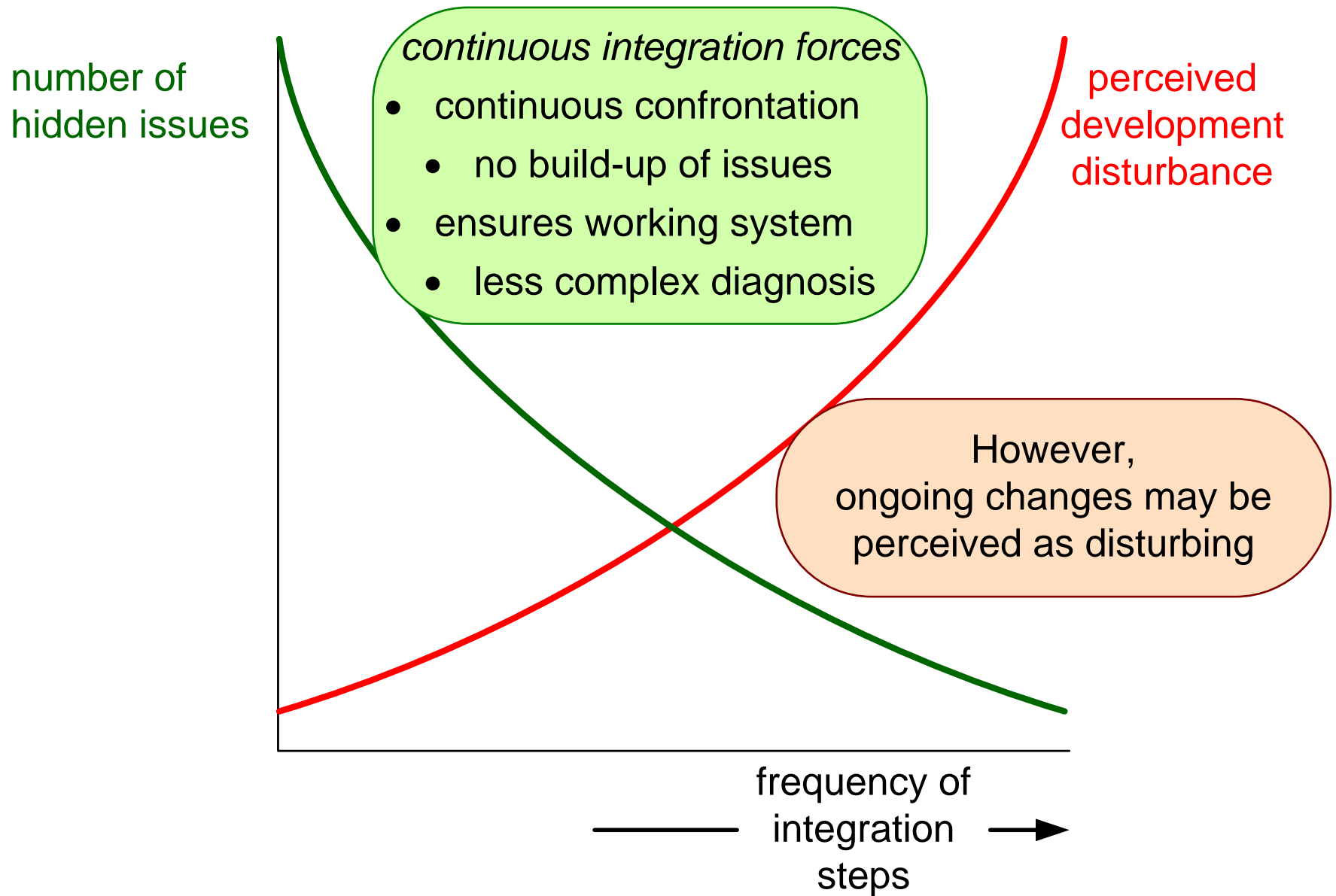


- total development time is shorter
- technology constraints & opportunities take time to get in the picture
- validation is still late (=feedback on uncertain requirements)

# Iterative Approach



# Continuous Integration



# Development Processes From Waterfall to Agile

