

Architecting System Performance; Level of Abstraction

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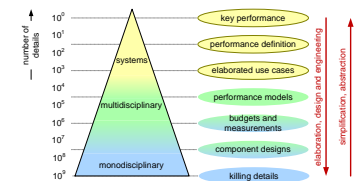
Abstract

A recurring question in modeling and performance analysis is when to stop digging. What level of detail is needed to achieve acceptable performance? What level of abstraction result in credible and sufficiently accurate results? How to cope with many levels of abstraction?

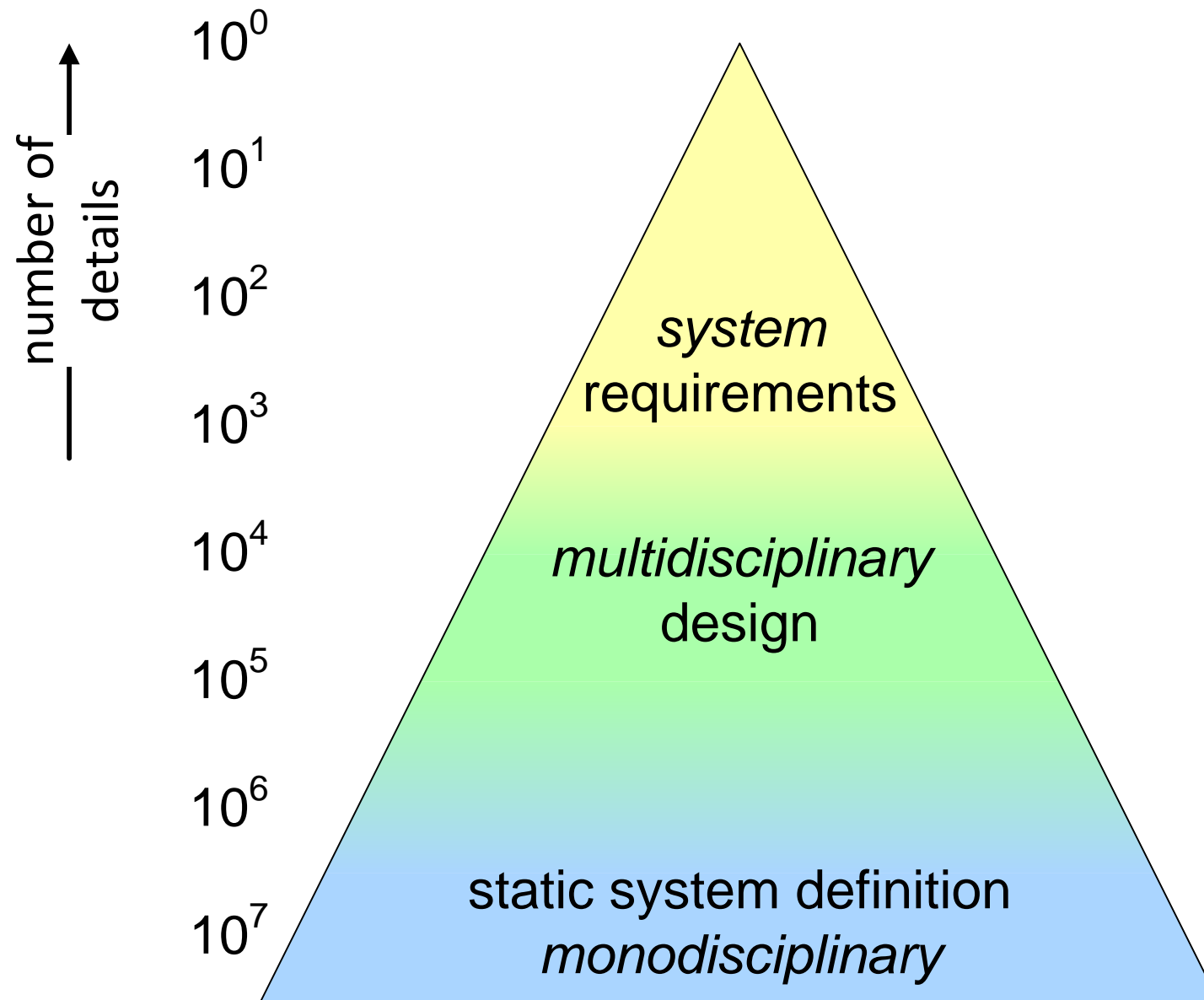
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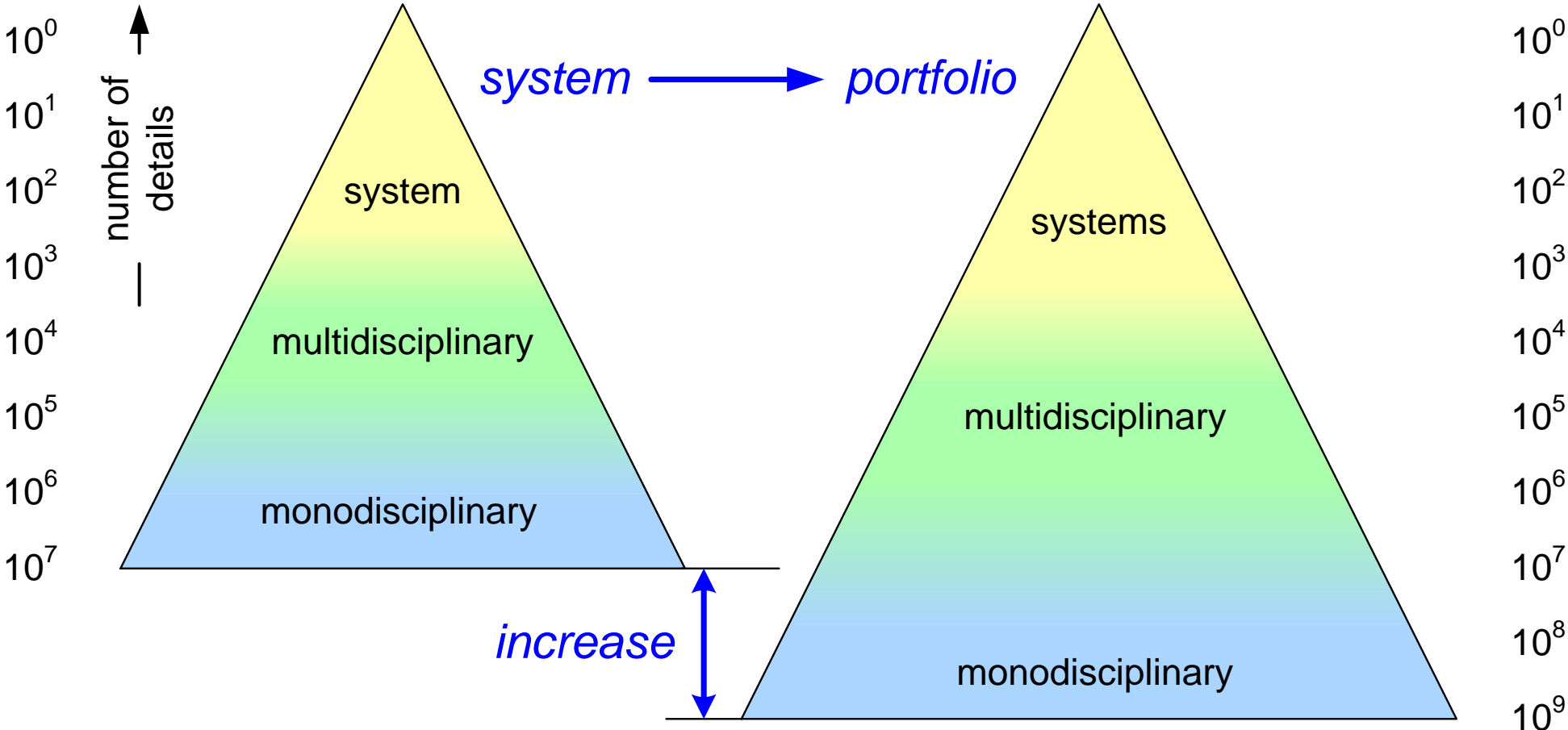
August 16, 2025
status: preliminary
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version: 0



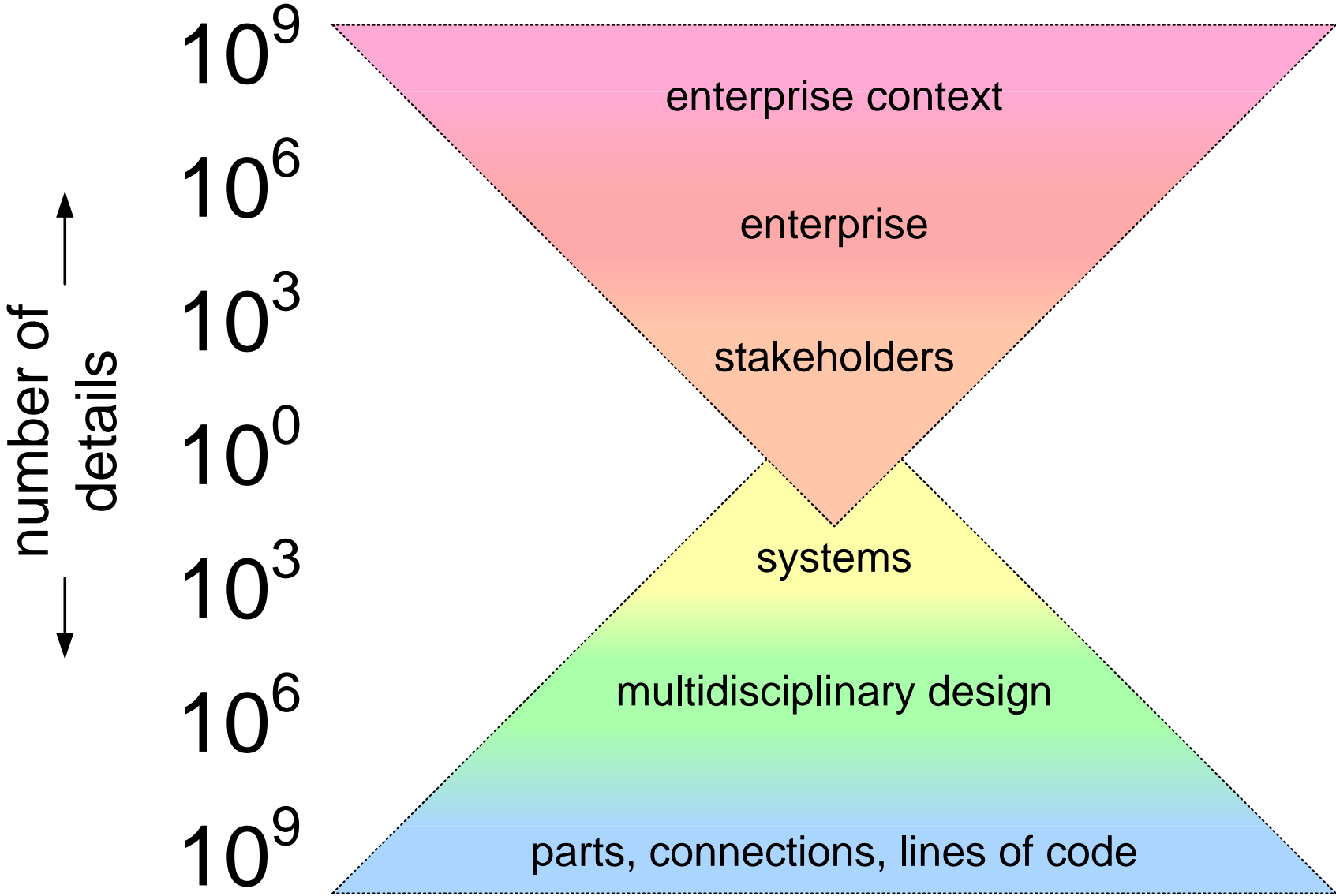
Level of Abstraction Single System



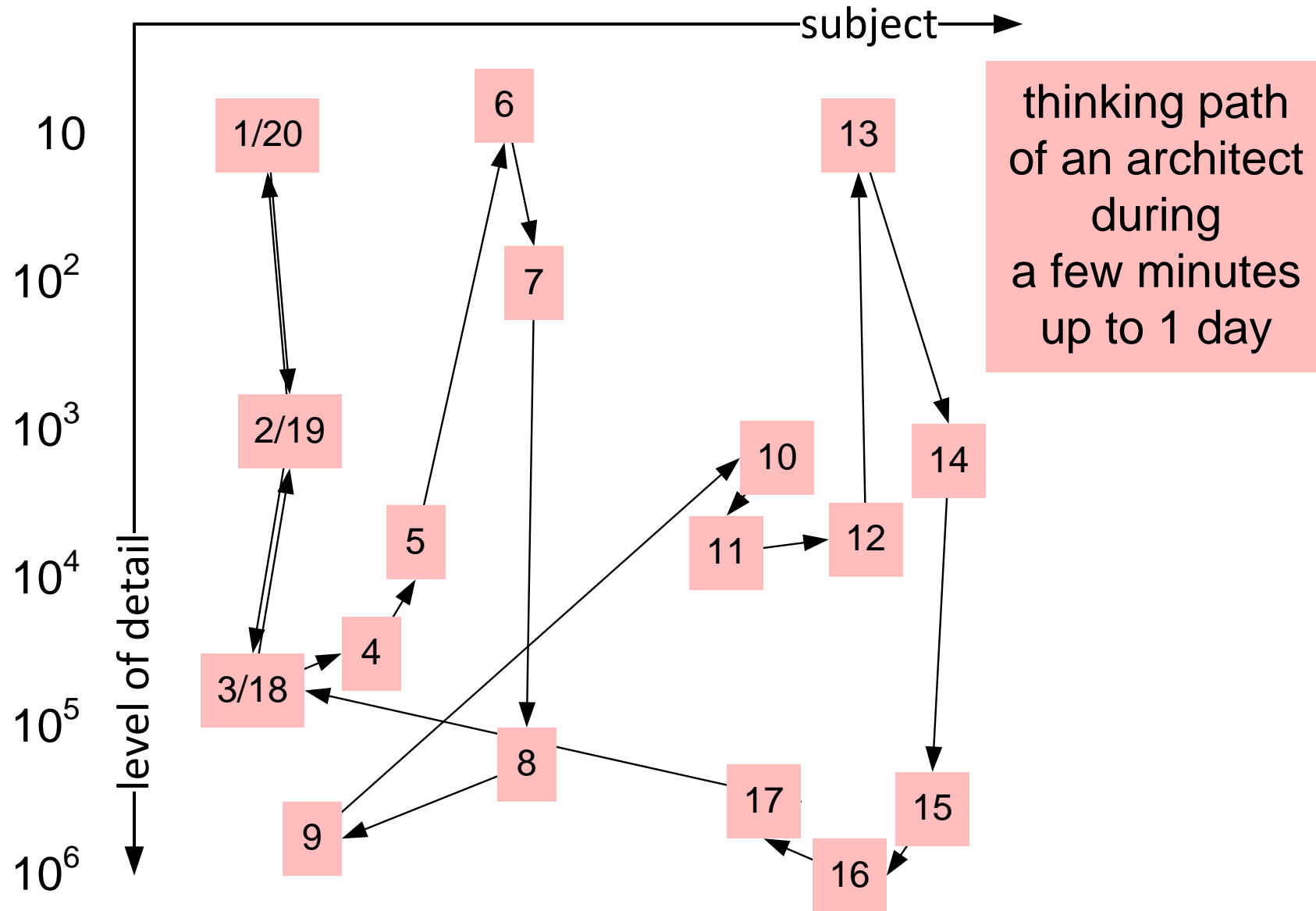
From system to Product Family or Portfolio



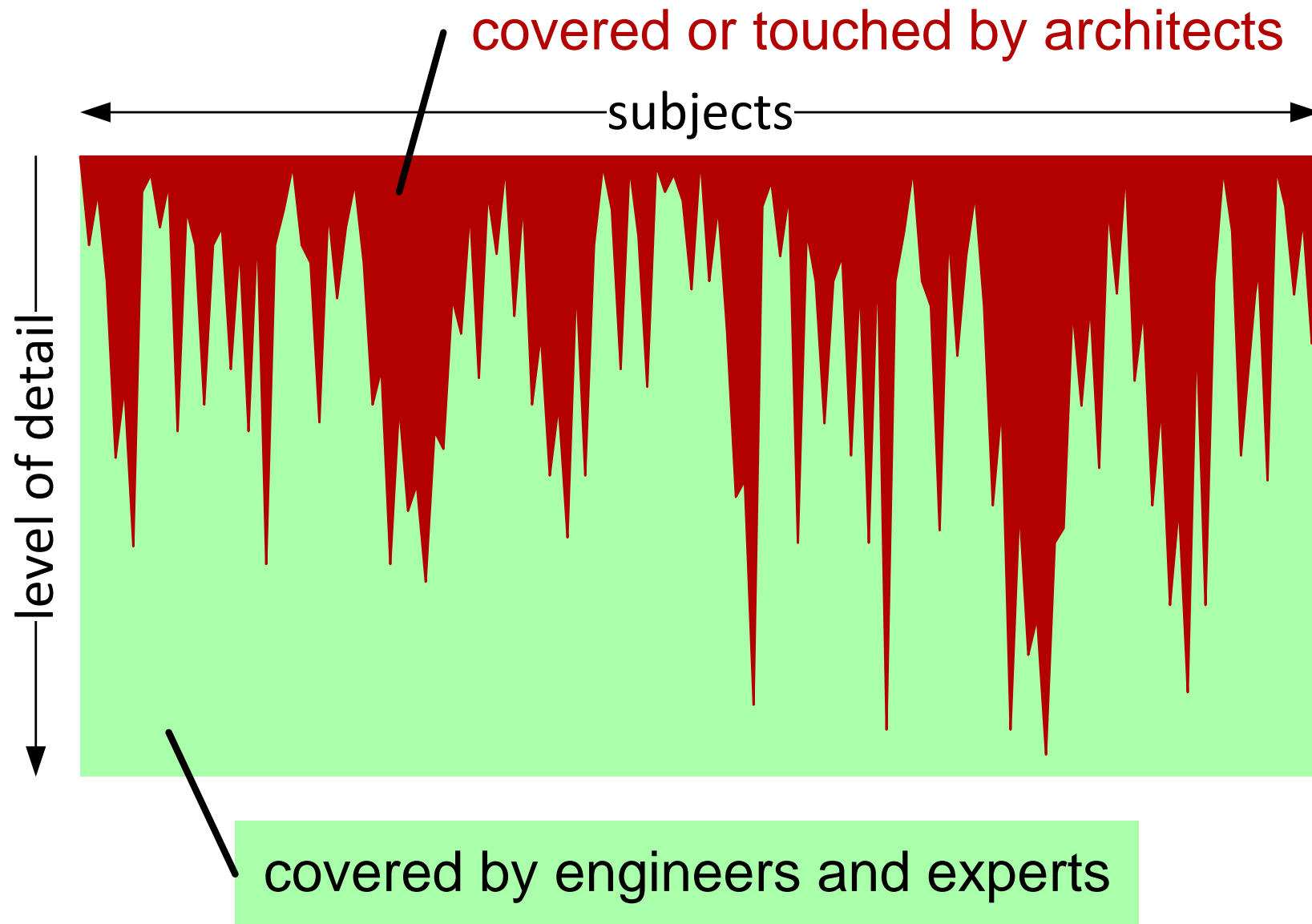
Product Family in Context



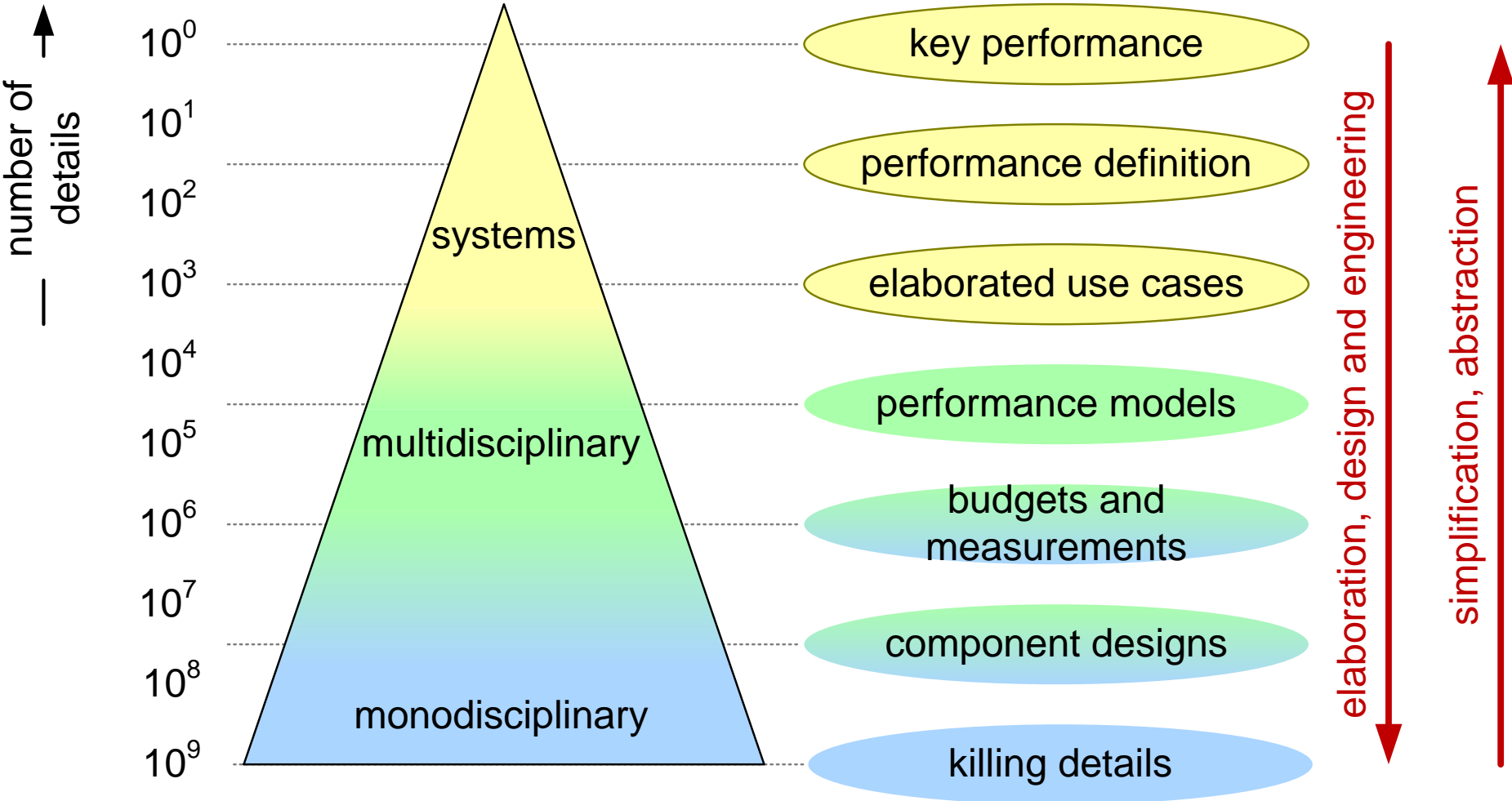
The seemingly random exploration path



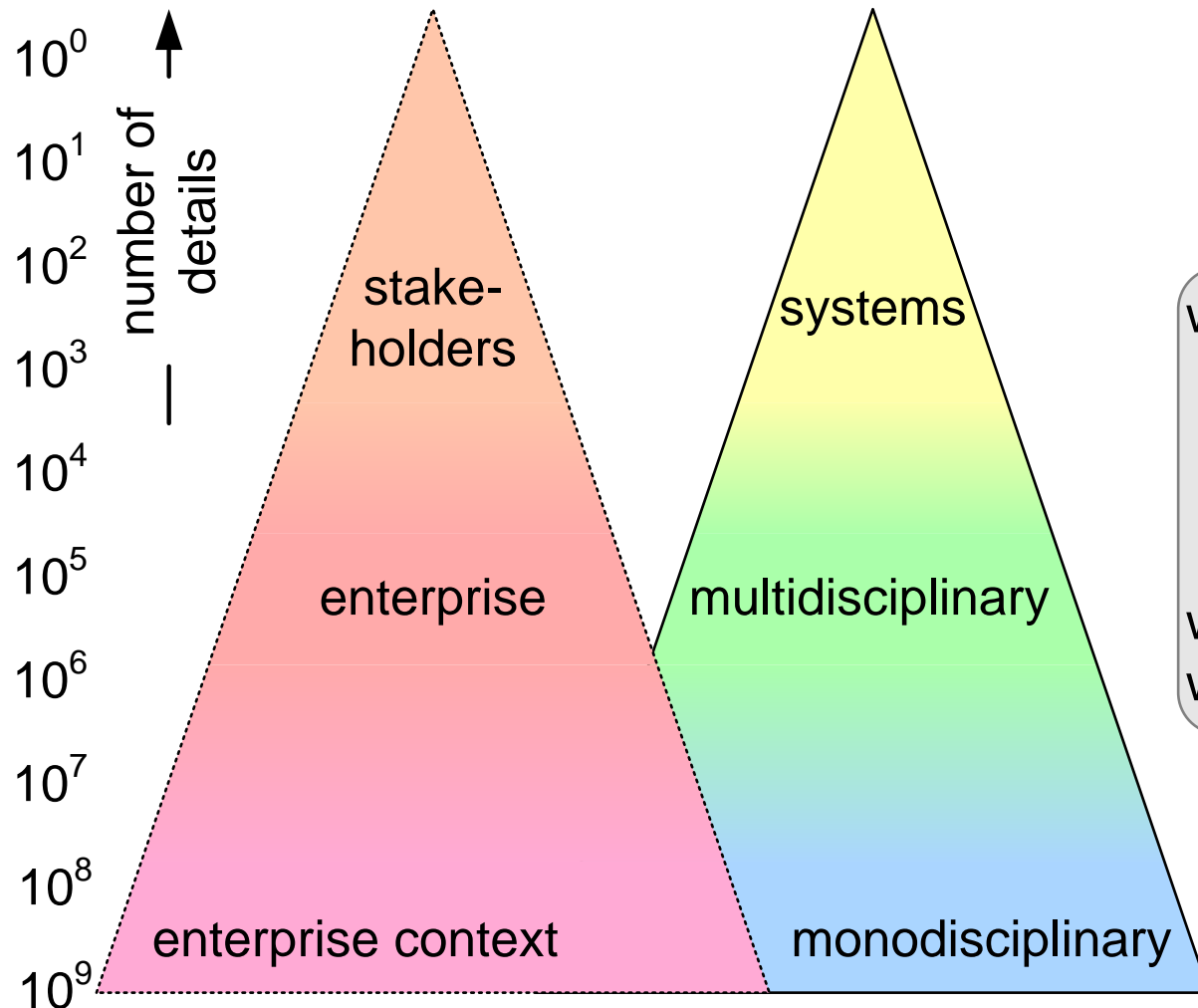
Coverage of problem and solution space



Many Levels of Abstraction



Fidelity Properties



low fidelity

low effort

fast

what fidelity is needed for:

planning

training

validation

design exploration?

what configurations do we need?

what can we afford?

high fidelity

large effort

slow