

THALES



IVVQ in PLE: a quick win?

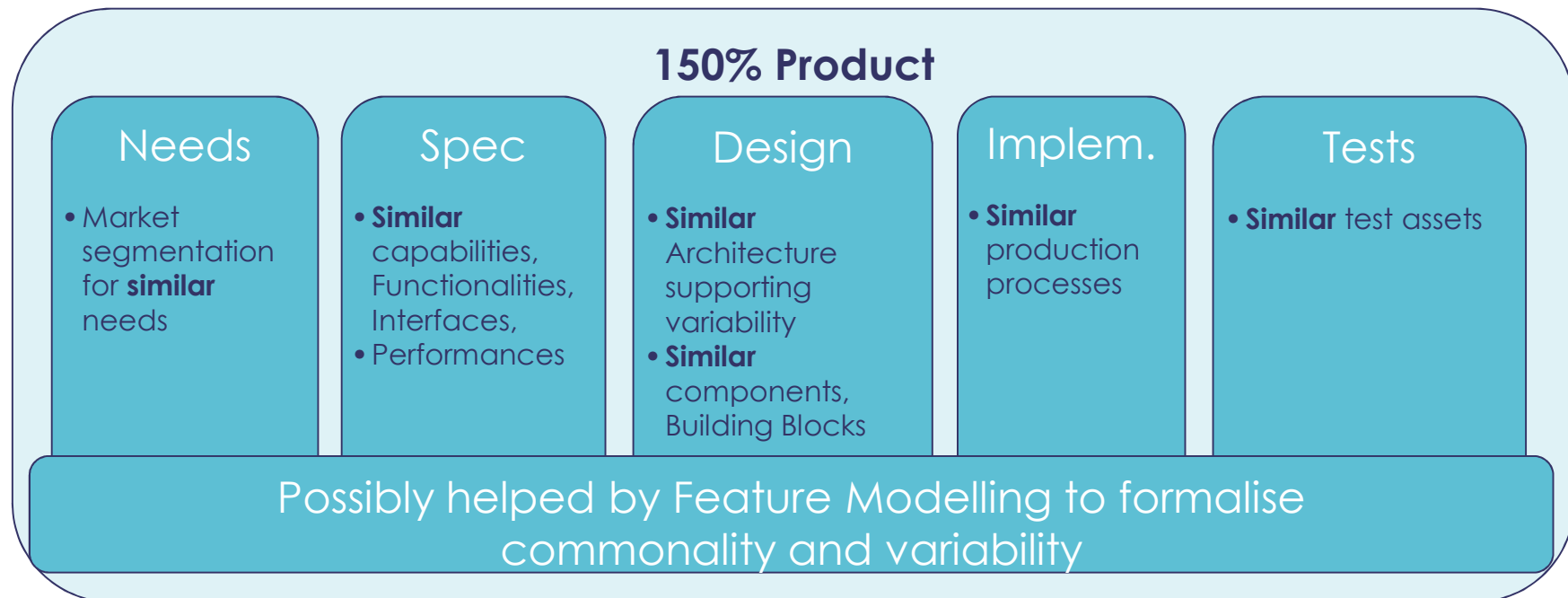
EMEA WORKSHOP 2019 - UTRECHT
11TH OCT. 2019

Jean-Christophe ORHANT



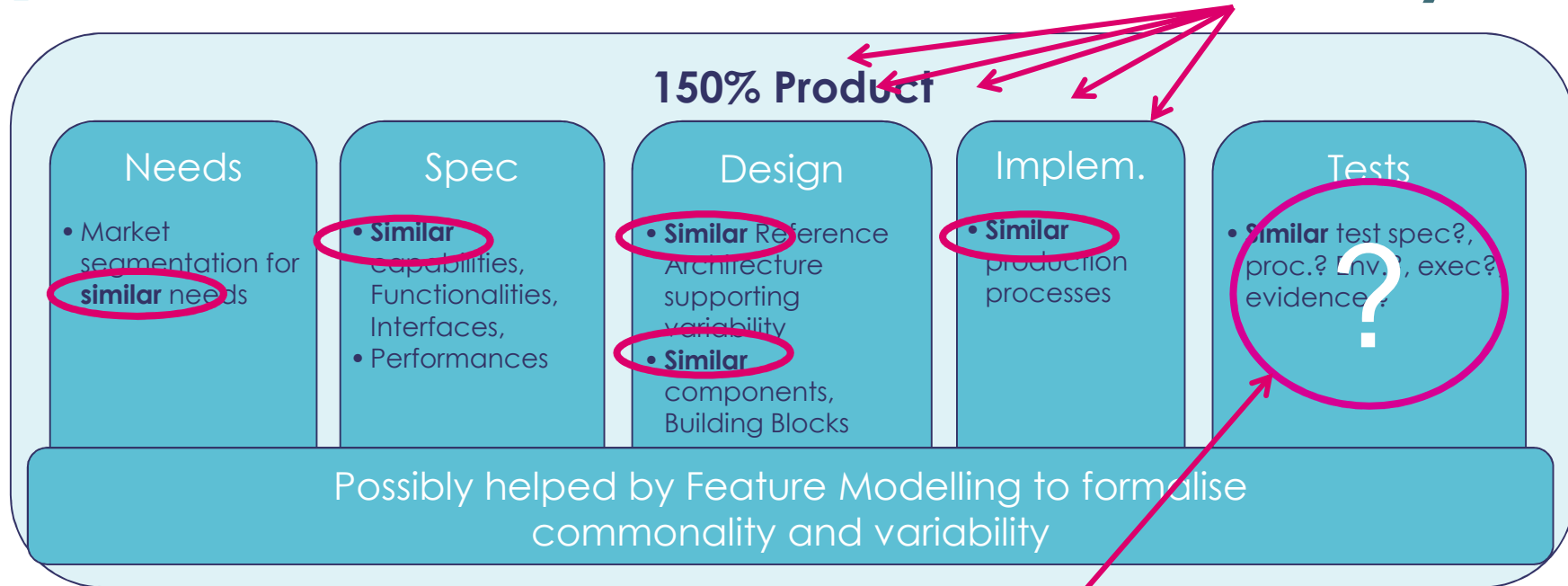
Product Line Engineering stakes

Maximize return on investment (ROI) by **reusing** a maximum of engineering assets



SIMILARITY : The fundamental principle of product lines

The 150% product is built organising and reusing the **similarity**



... but reusing tests assets its not so obvious, **similarity** studies are more complex

What are the issues with building and reuse the product test assets?

➤ Building in product

Because of the variability, the combinatorial explosion of valid potential configurations implies

- that it is not realistic to test all configuration in the context of the product,
- and most of them will never become real projects sold

➤ Reuse in project

Even if test assets are available from a previous sold project configuration, quite close to a new one, is it pertinent to reuse them ?

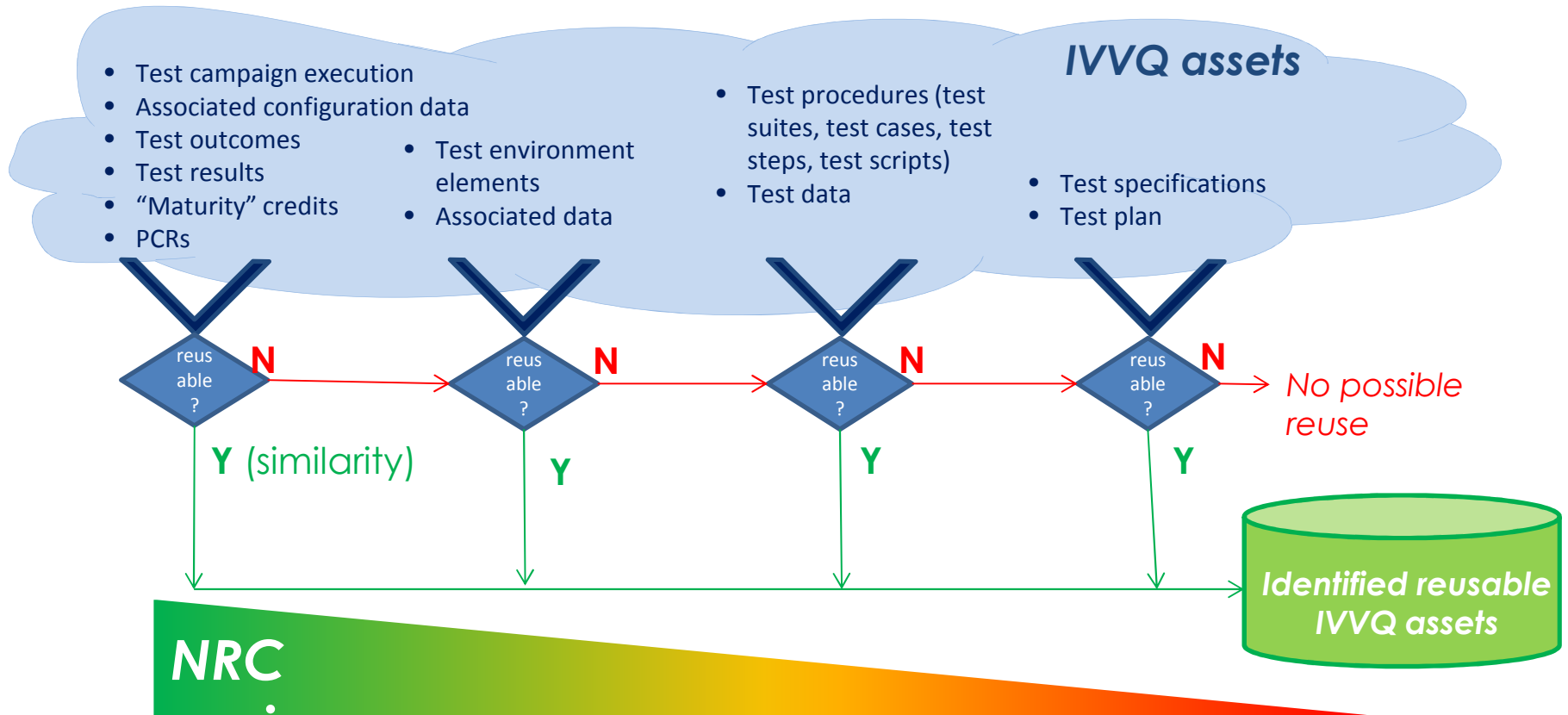
Tests

- **Similar** test spec ?, procedure? Evidence?
- For **similar** Build? Environment?, Usage?

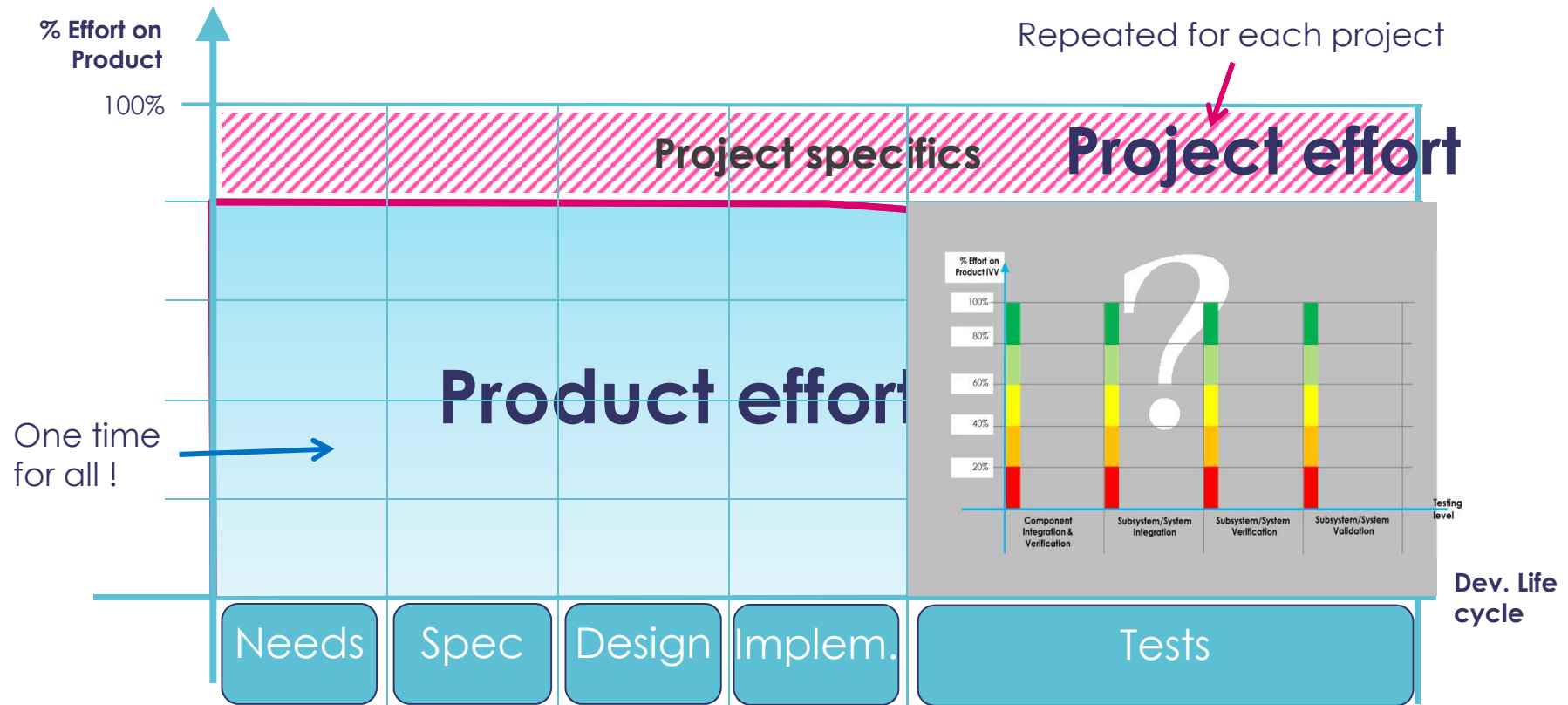


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Considering the type of IVV assets for reuse by similarity

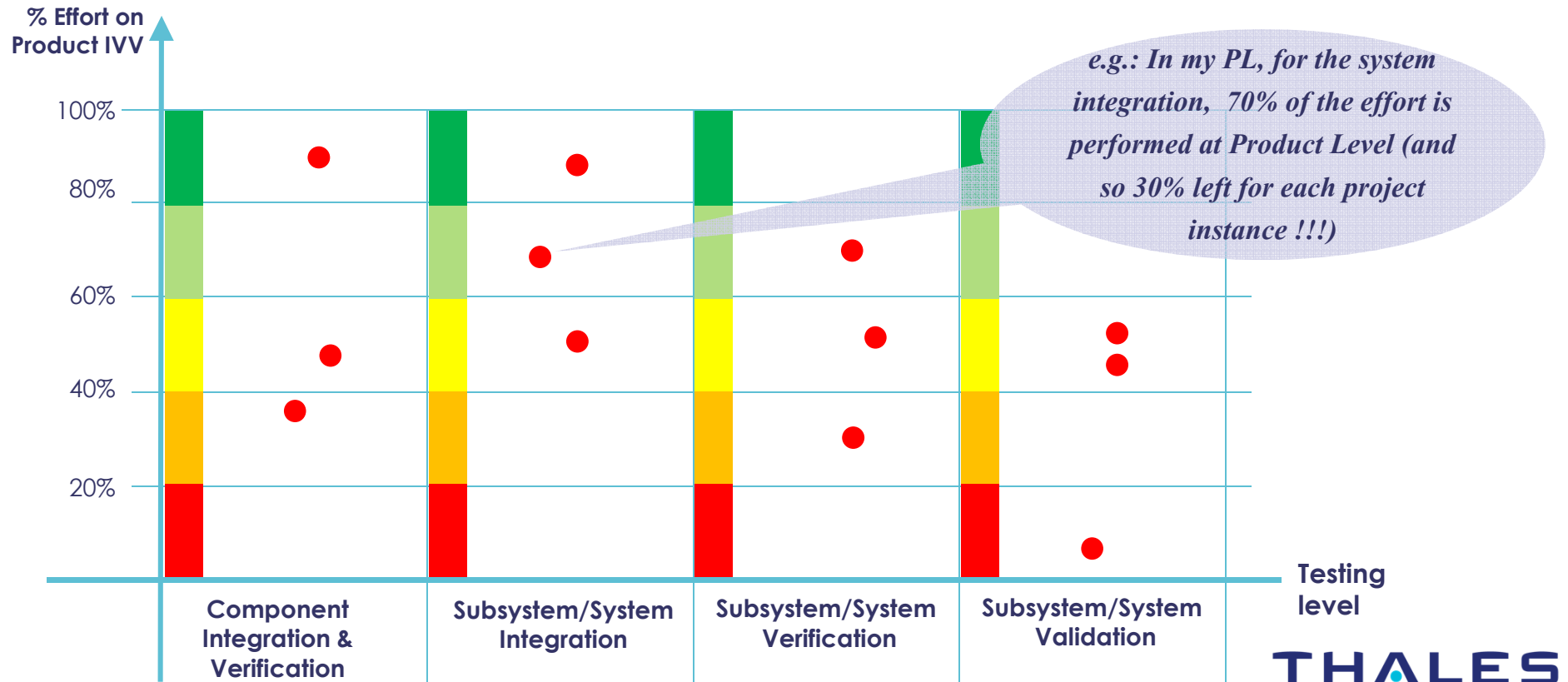


Typical effort distribution between product and projects



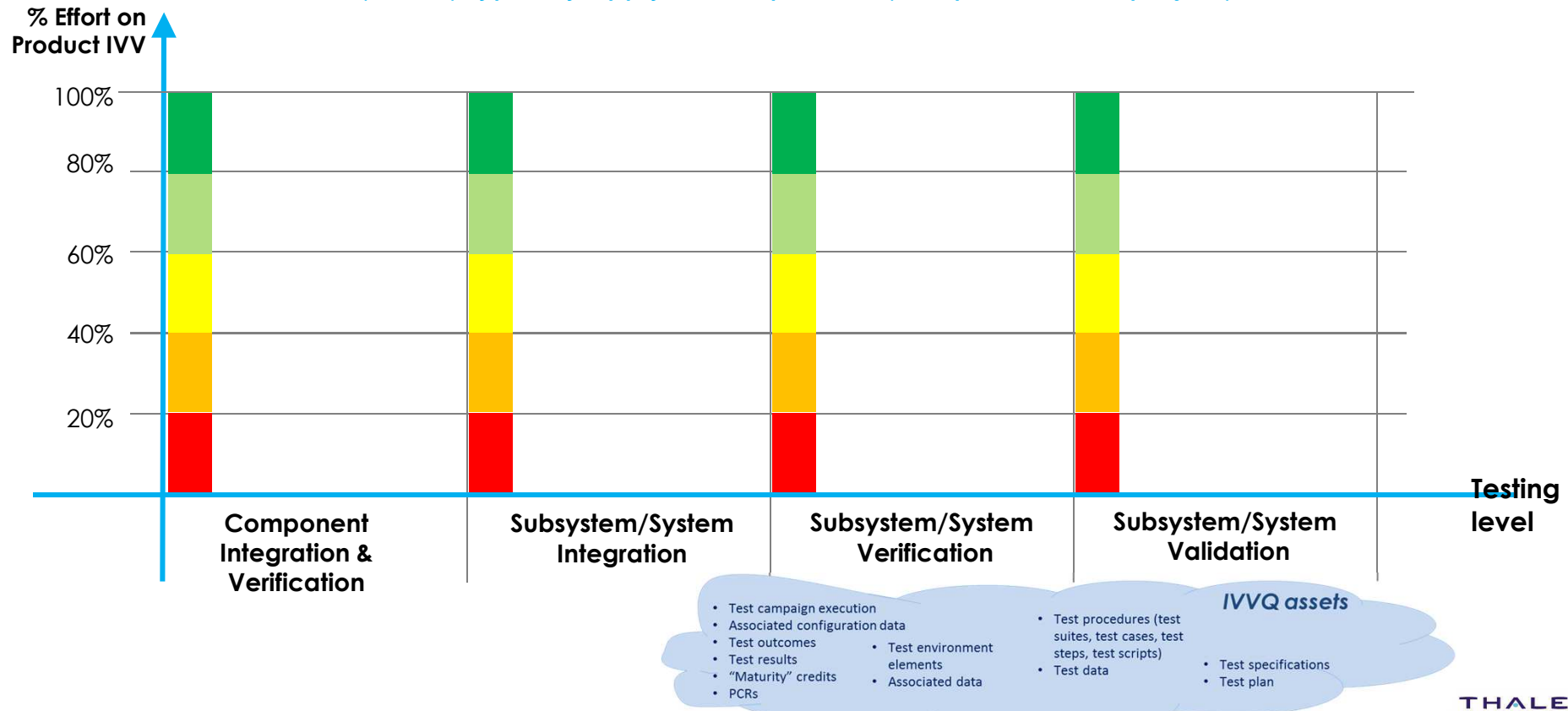
What about your product and project IVVQ strategies?

In each column corresponding to a testing level, put a sticker to indicate the ratio of the testing effort you (would) typically apply on the product (compared to the project):

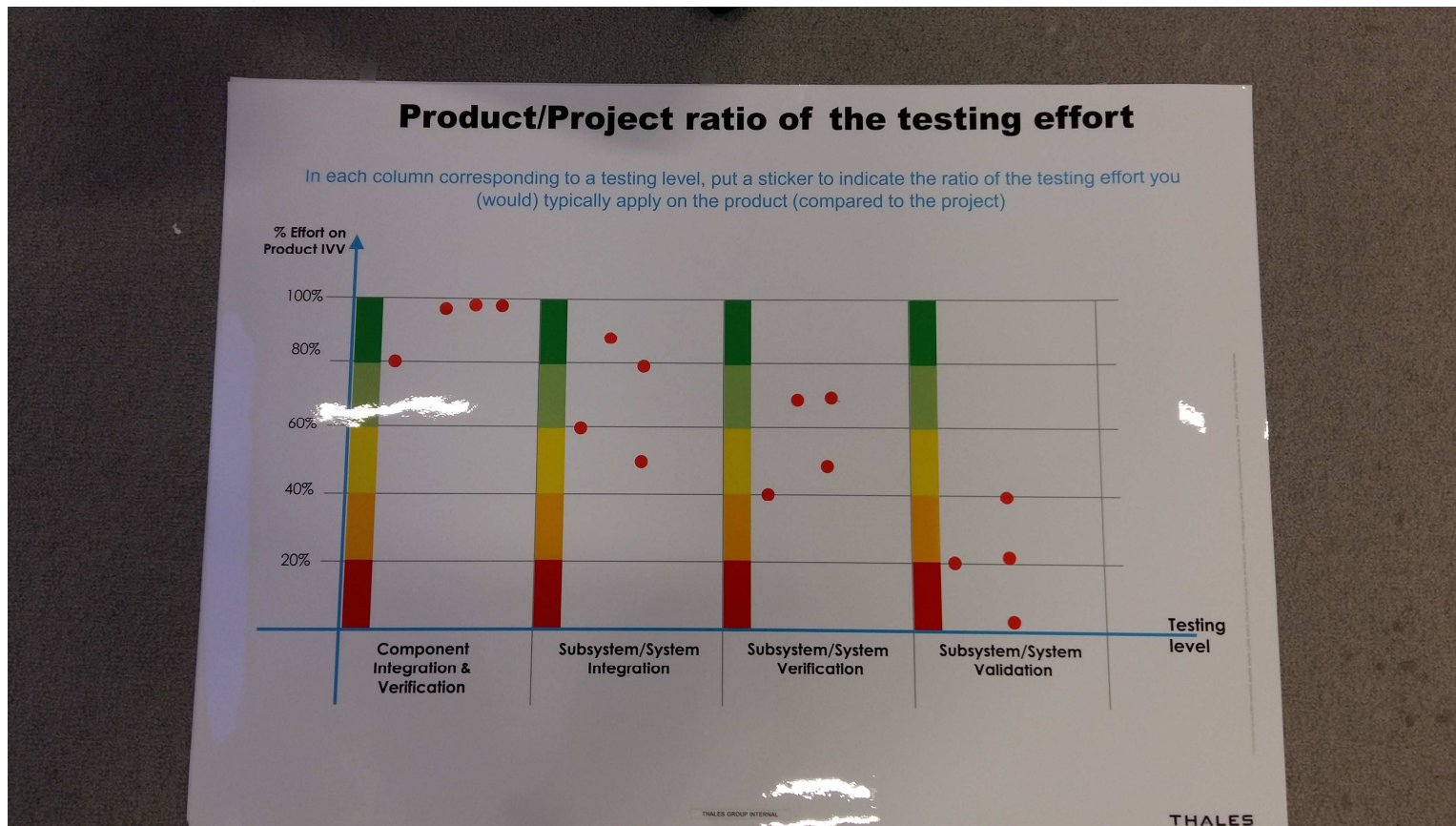


Product/Project ratio of the testing effort

In each column corresponding to a testing level, put a sticker to indicate the ratio of the testing effort you (would) typically apply on the product (compared to the project)

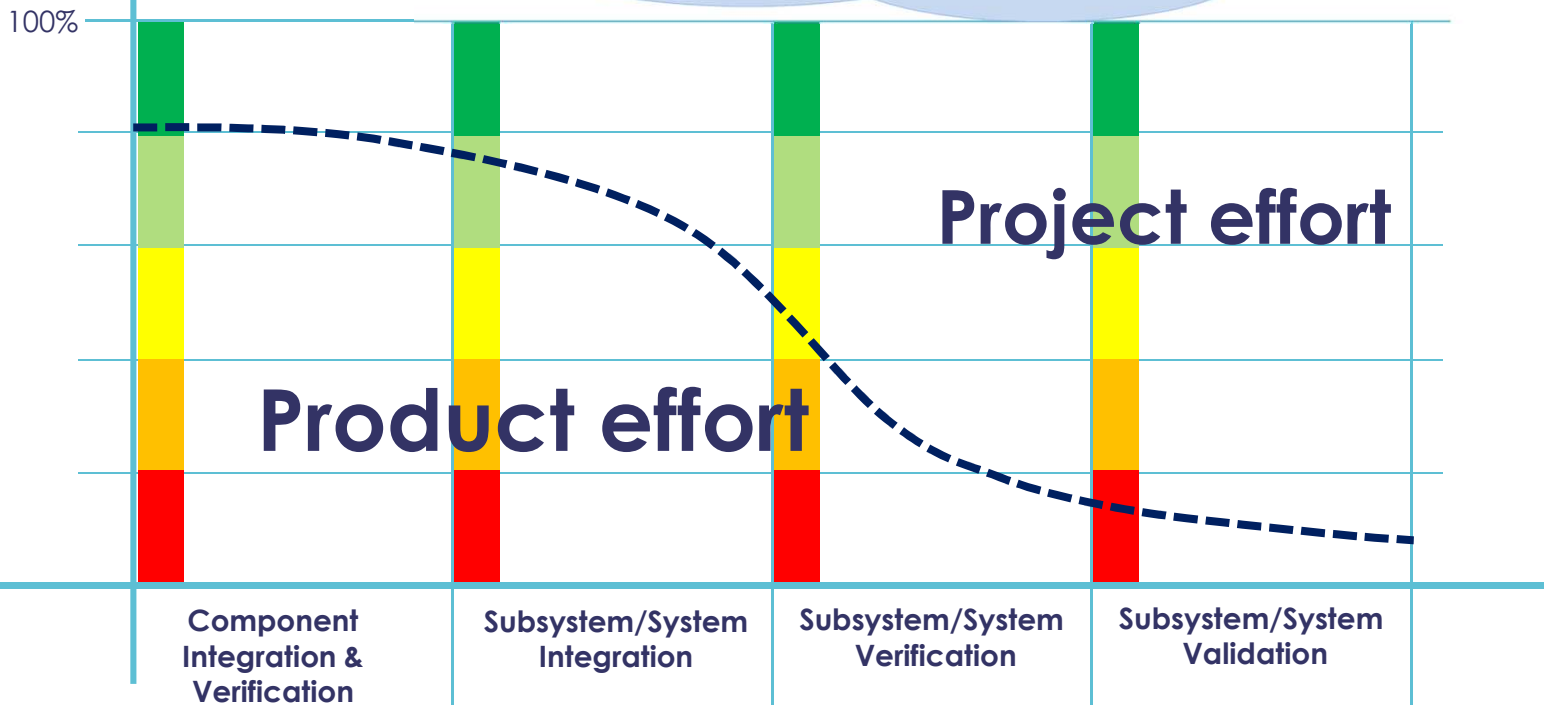


Real example



Focusing on tests

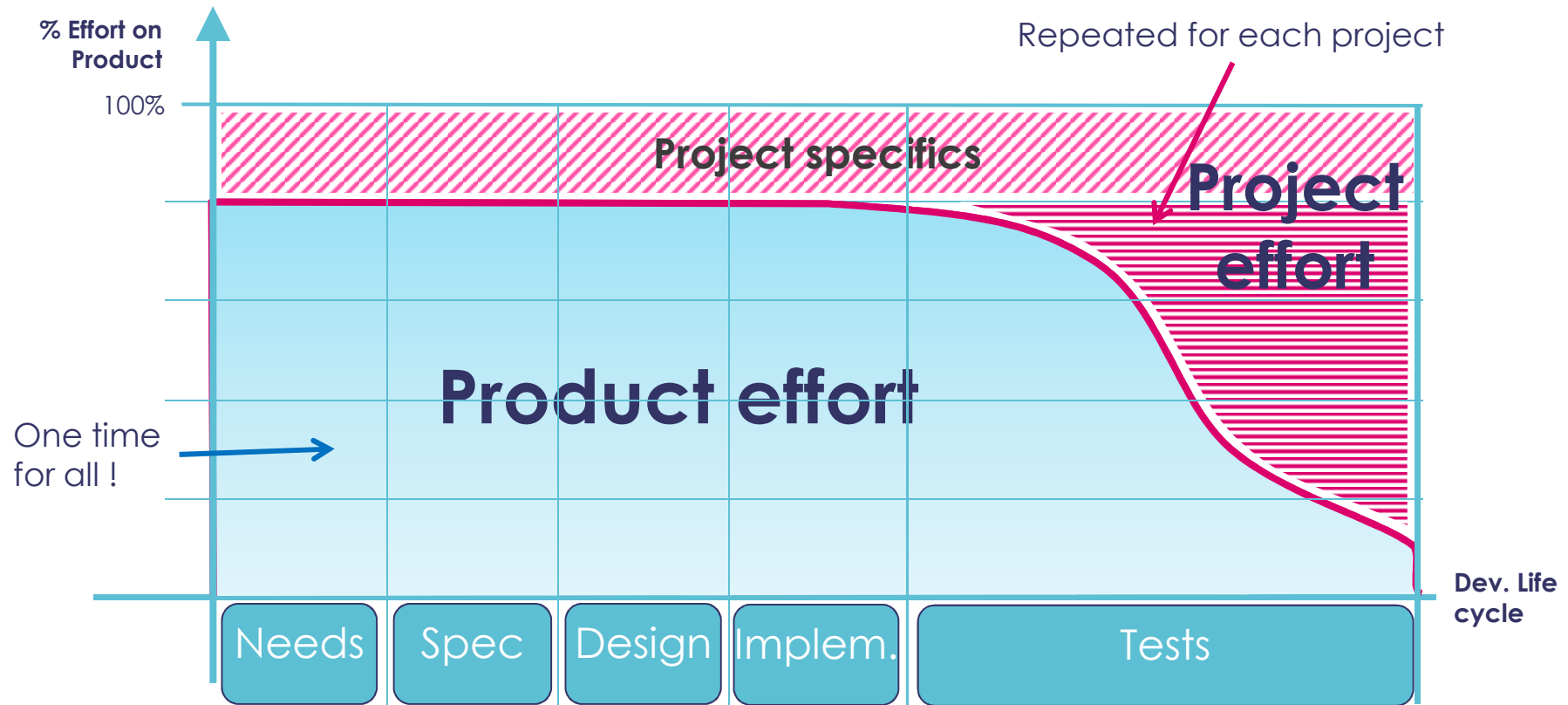
% Effort on Product IVV



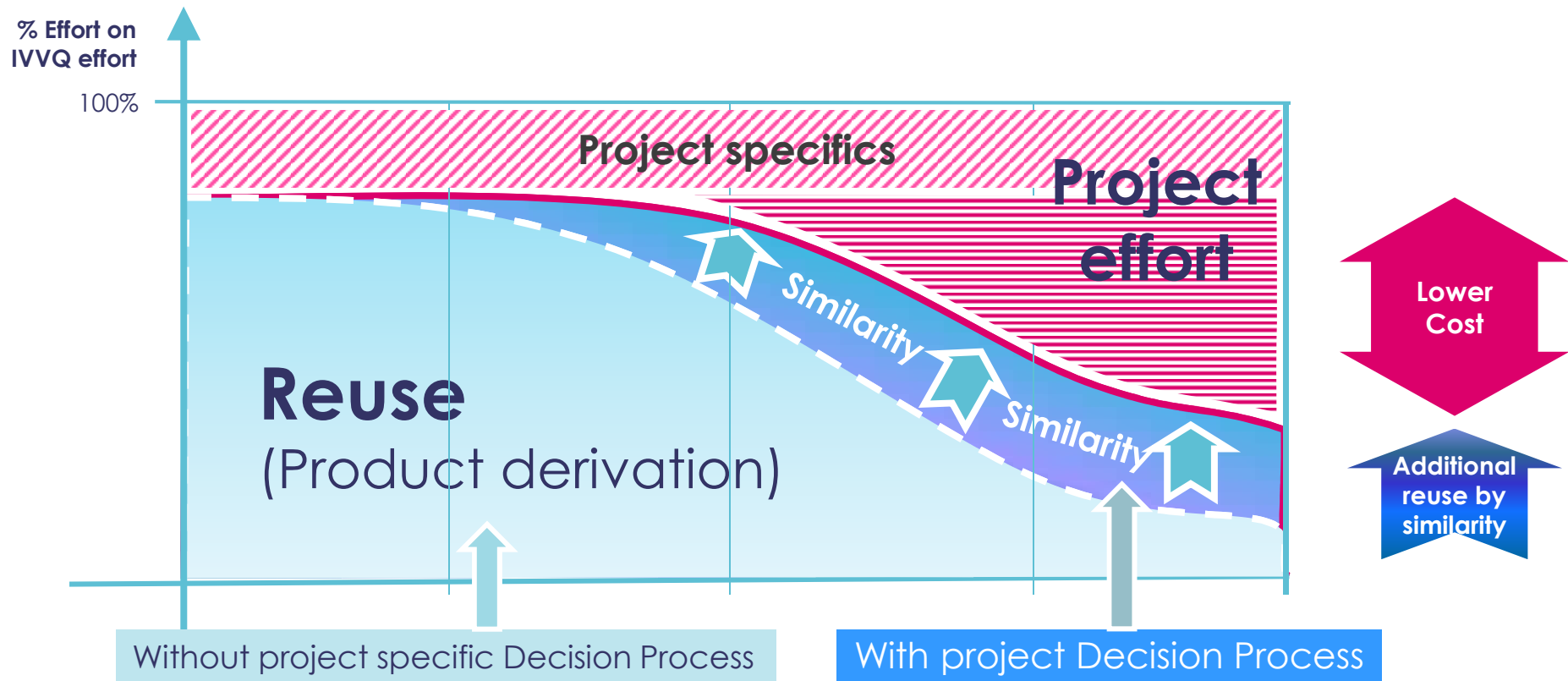
- Test campaign execution
 - Associated configuration data
 - Test outcomes
 - Test results
 - "Maturity" credits
 - PCRs
 - Test environment elements
 - Associated data
 - Test procedures (test suites, test cases, test steps, test scripts)
 - Test data
- IVVQ assets**
- Test specifications
 - Test plan

Testing levels

Typical effort distribution between product and projects



The stake : More IVV NRC saving with reuse by Similarity





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