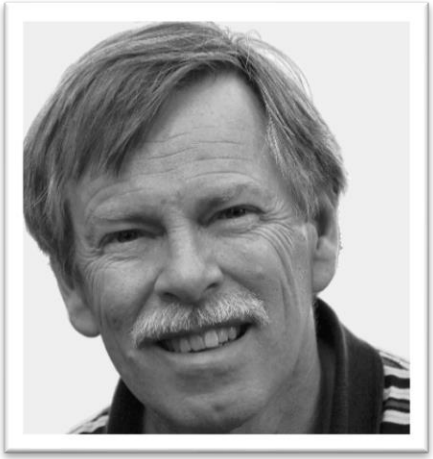
RE, the Next Generation

from **requirements** engineering
to requirements **engineering**

Pleased to meet you



- Hans van Loenhoud
- 35+ years ICT, 20 years testing, 5 years RE
- Trainer | coach | consultant
  - Taraxacum, the Netherlands
- Member of the International Requirements Engineering Board (IREB)

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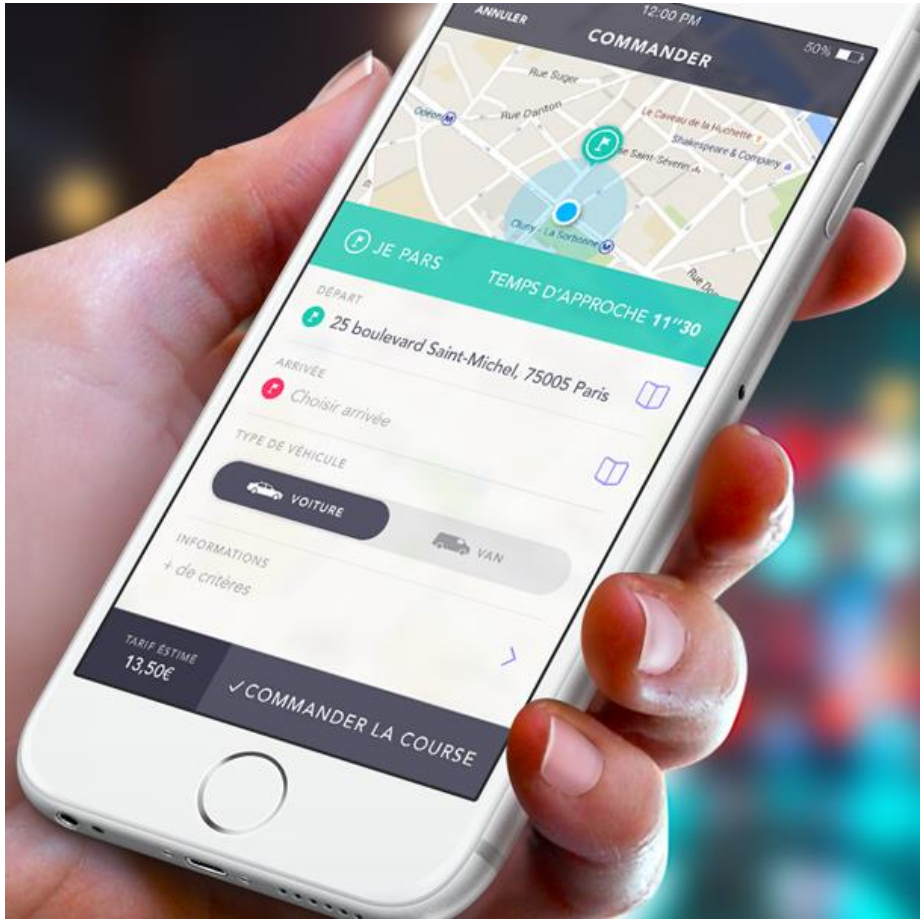
www.taraxacum.nl

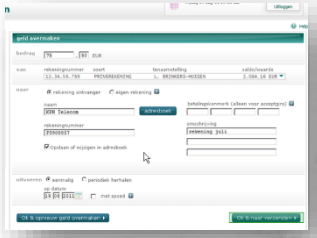
Route

Taxi!



Digi … what?

digitization → digitalization → digital transformation



bitcoin

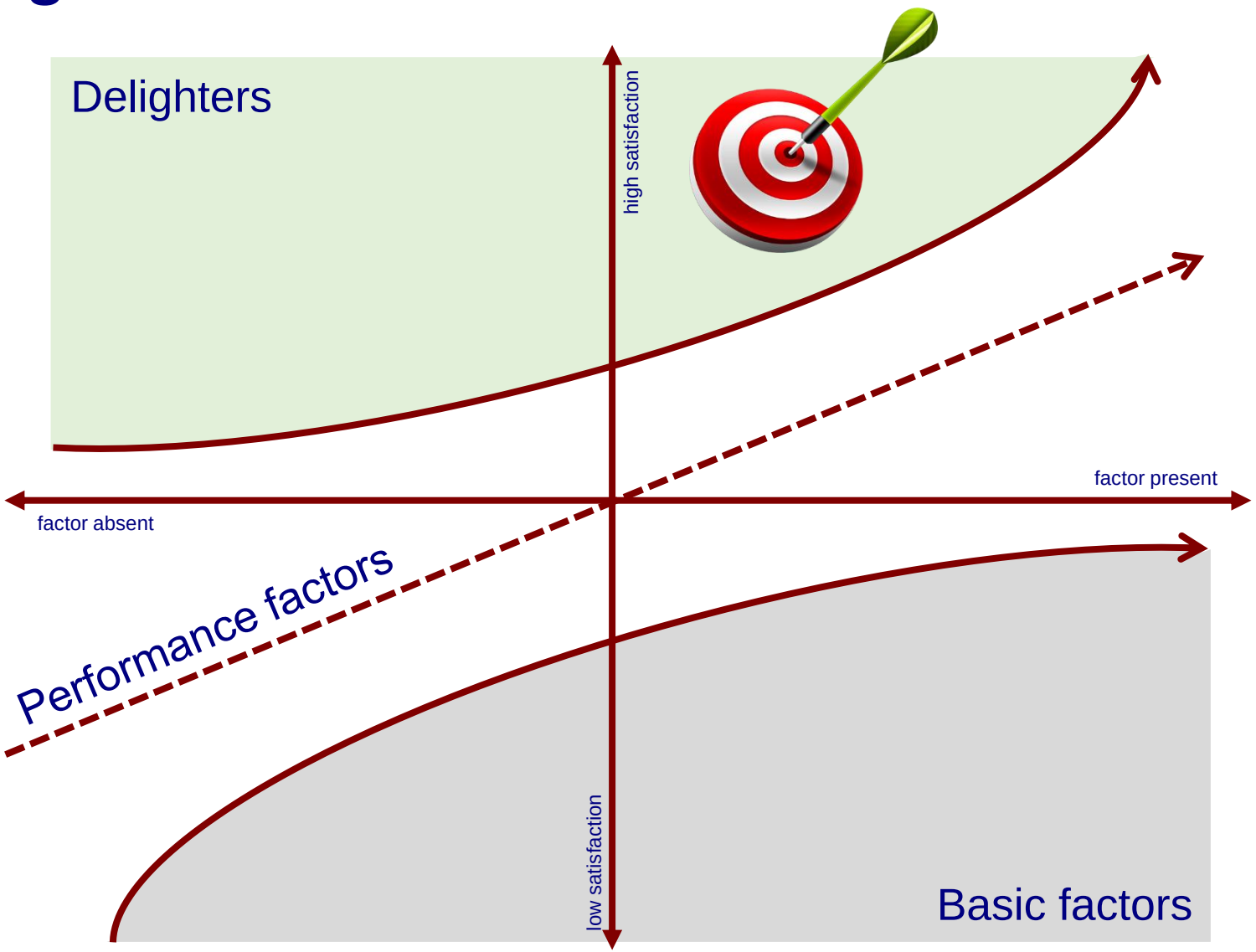
Spotify®

twitter

The innovation challenge

- It is a green field
  - No examples
  - No stakeholders
  - No customers (yet…)

Looking for Kano

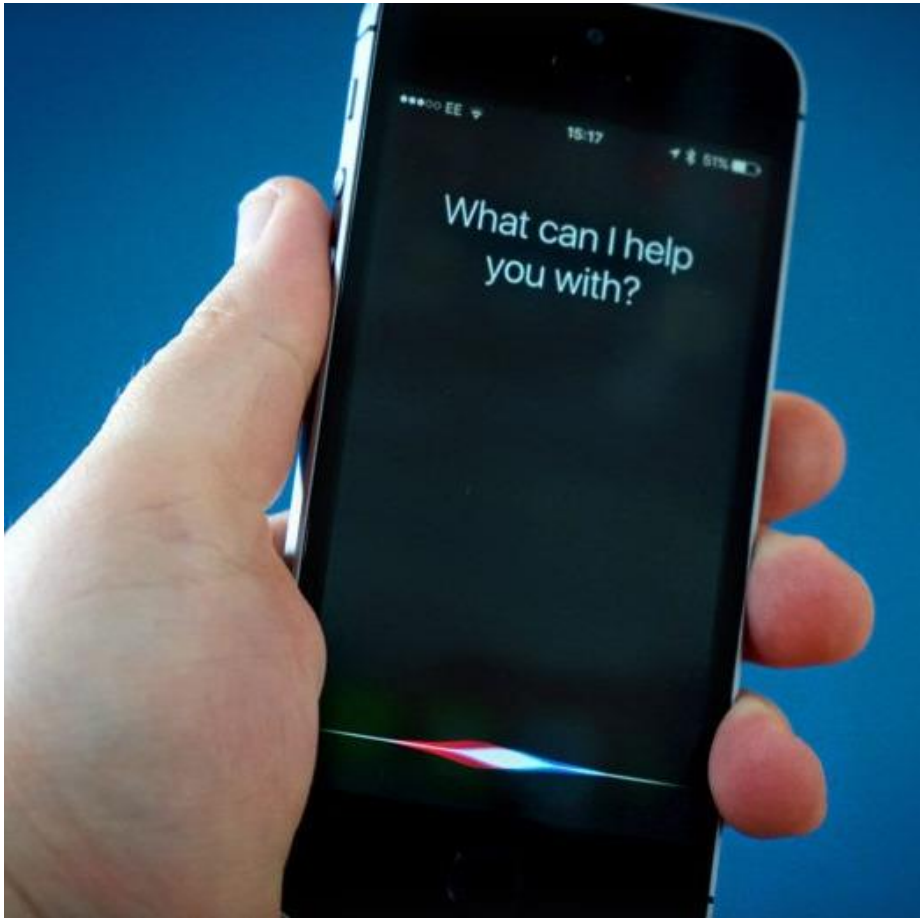


Supplier centered ⇨ customer centered

Customer affected ⇨ customer involved

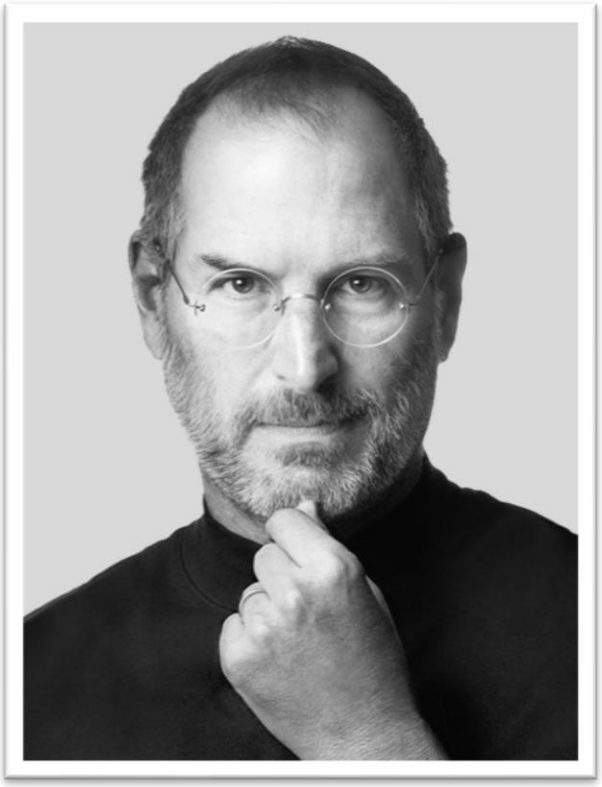
Product oriented ⇨ service oriented

IT supported ⇨ IT enabled



Engineered ⇨ designed

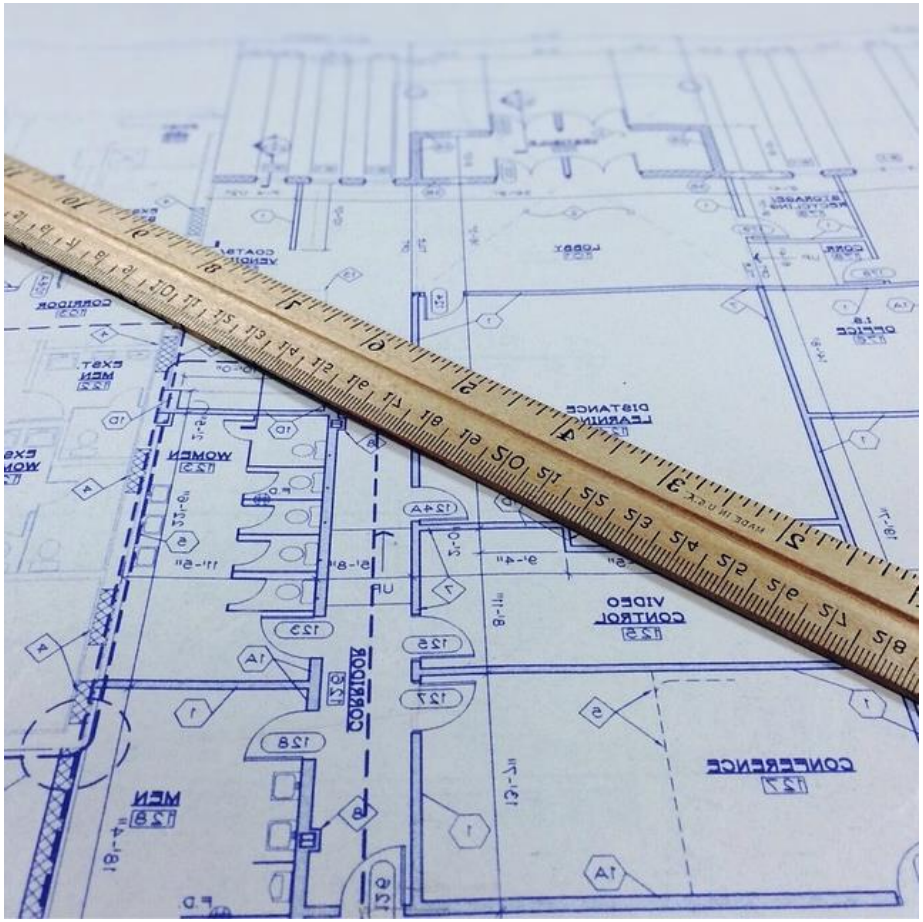
Steve Jobs on Design



Steve Jobs
(1955 - 2011)

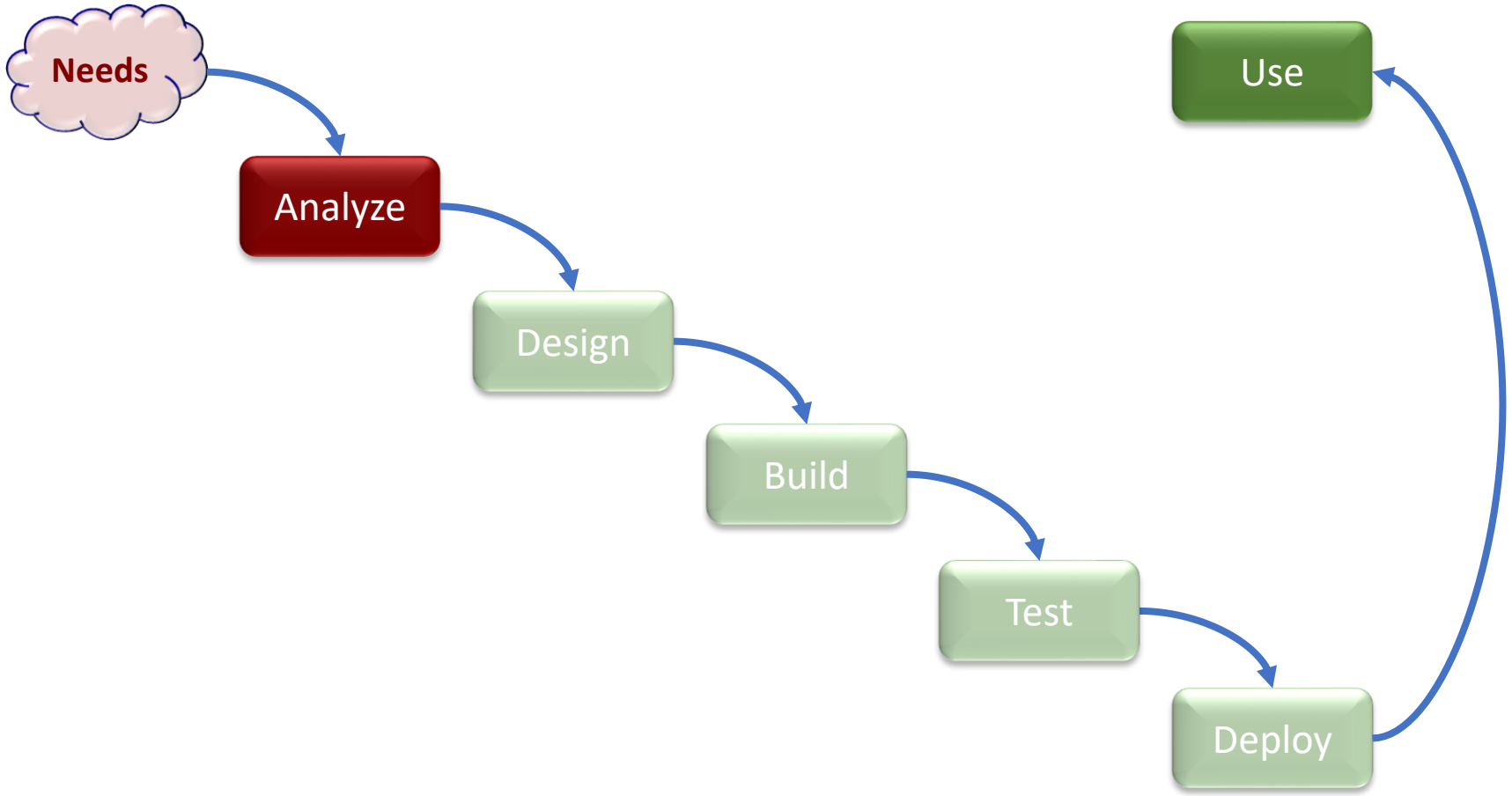
- *Design is not just what it looks like. Design is how it works.*
- *The broader one's understanding of the human experience, the better design we will have.*
- *Simple can be harder then complex. You have to work hard to make your thinking clean to make it simple.*
- *Most important, have the courage to follow your heart and intuition.*

Requirements ⇨ ideas



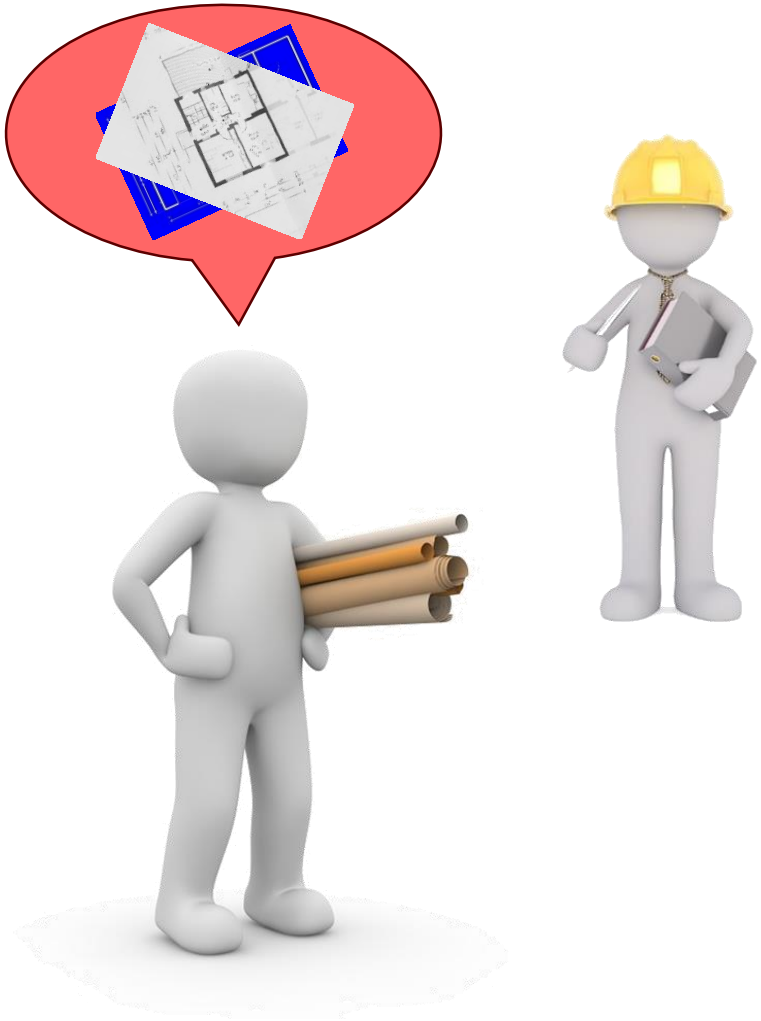
Route

… we developed by the waterfall

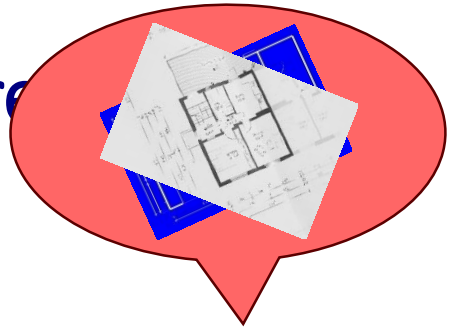


Requirements for a solution

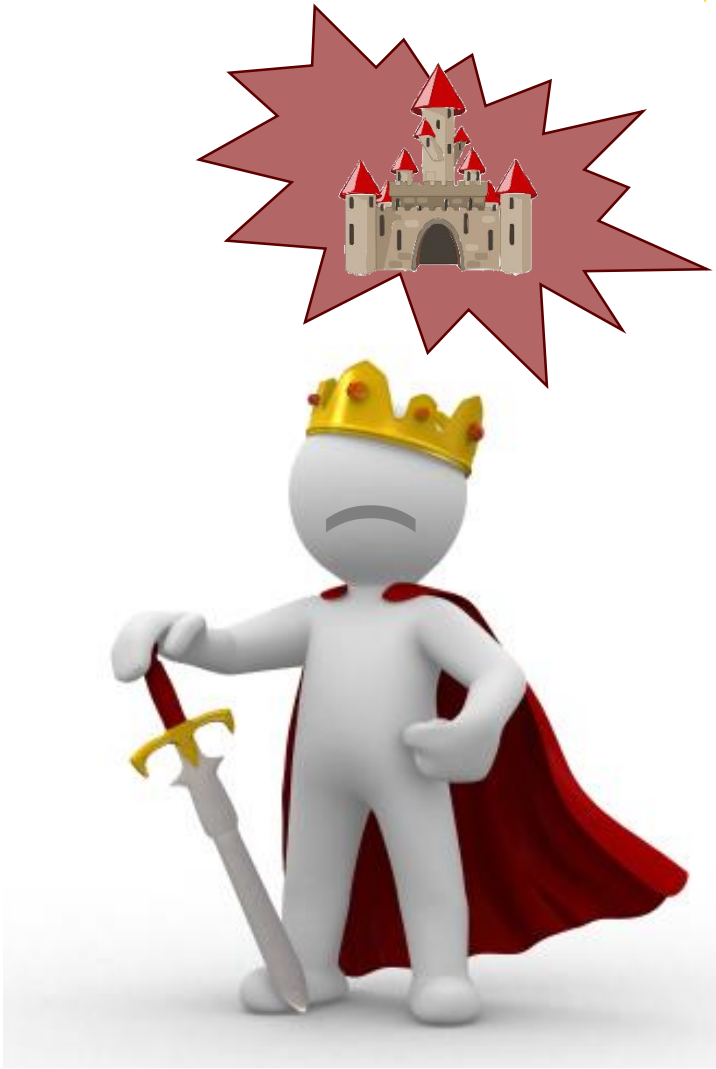
Using requirements



Using require



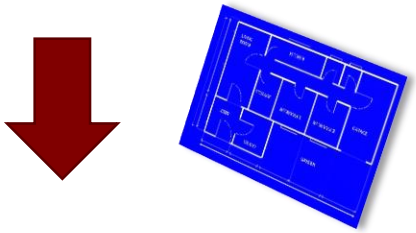
Sorry for that …



Old school

Client asks for system

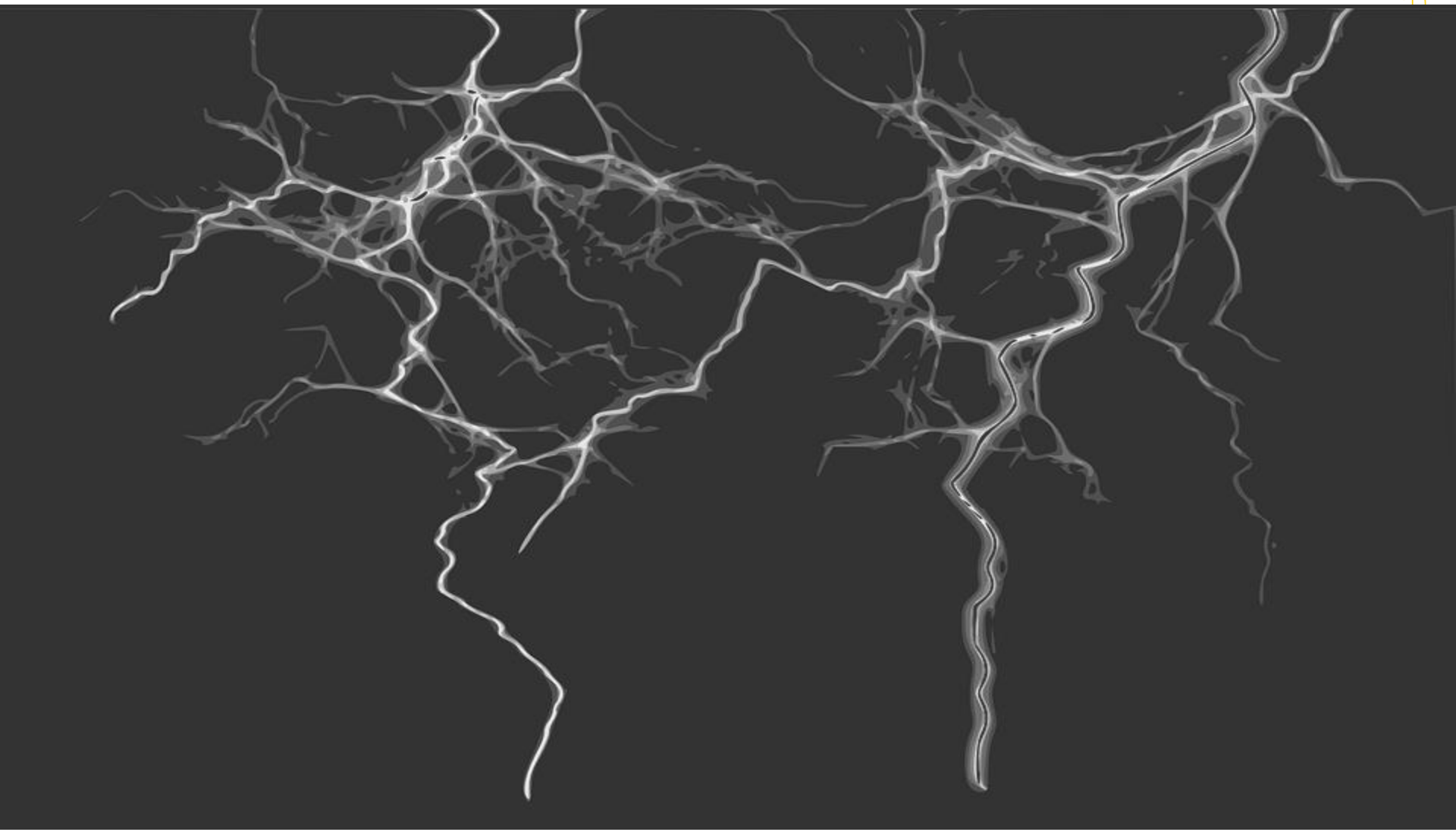
RE collects requirements



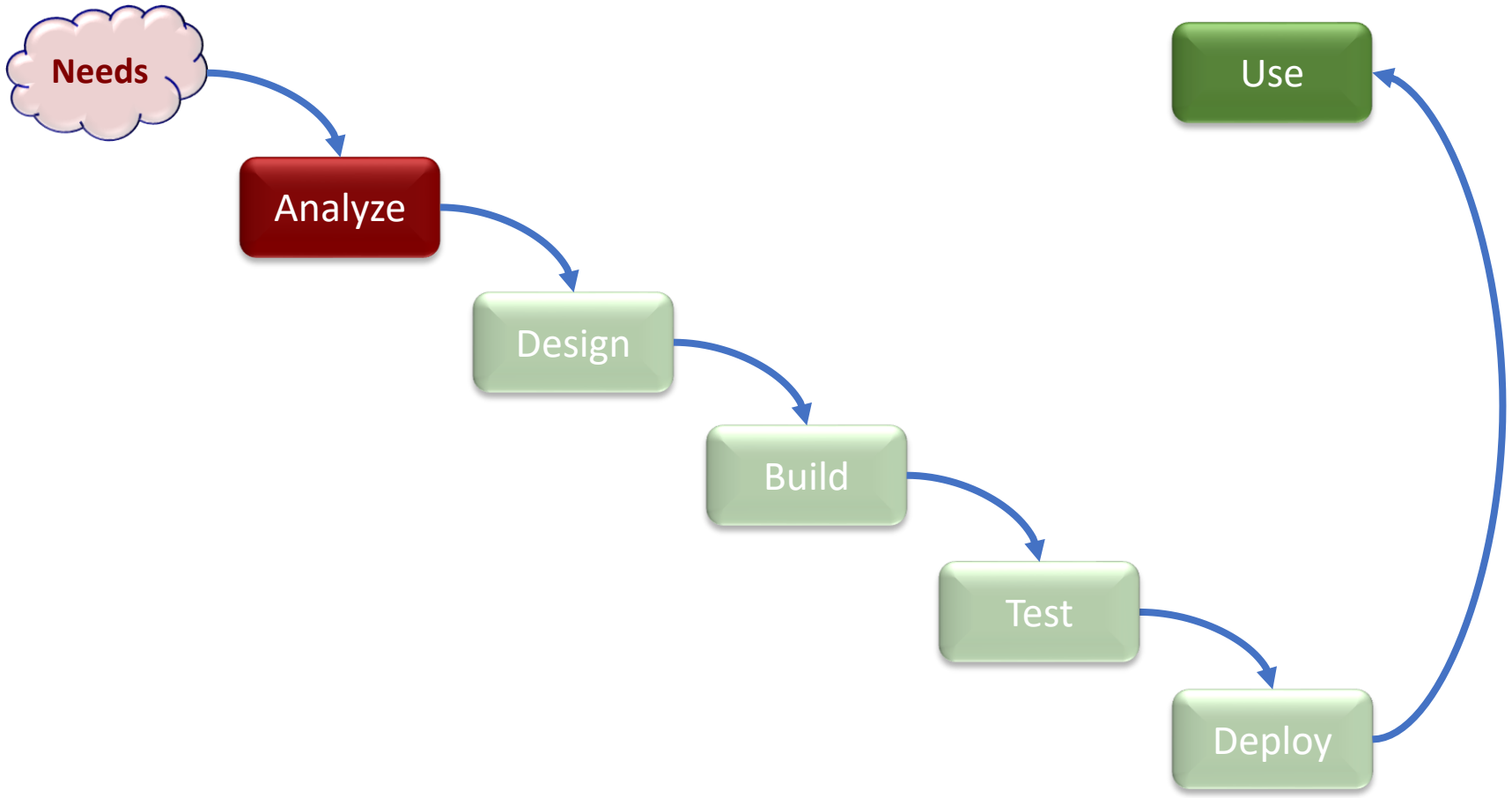
Project builds system

Route

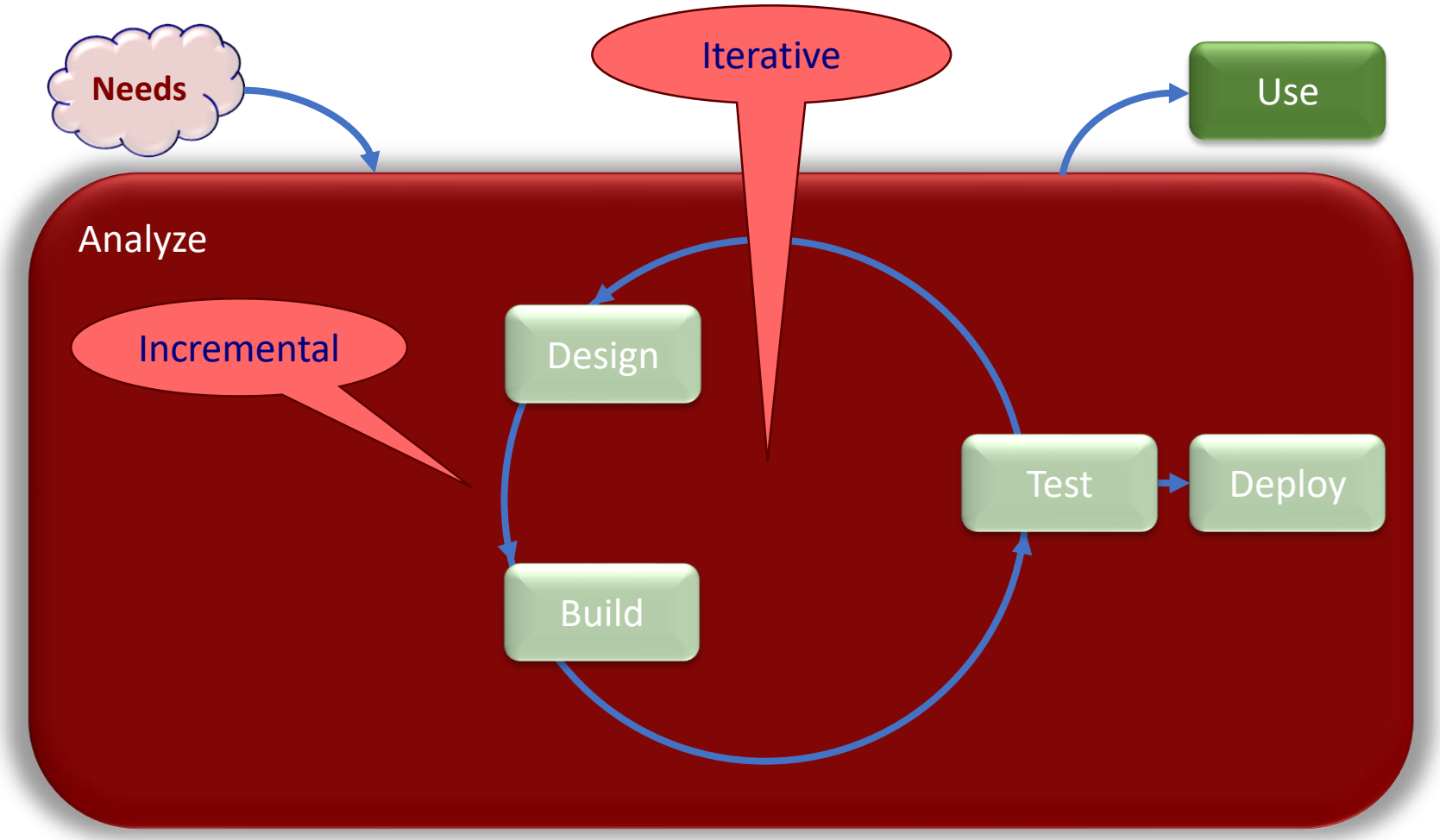
The Agile storm!



From the waterfall…



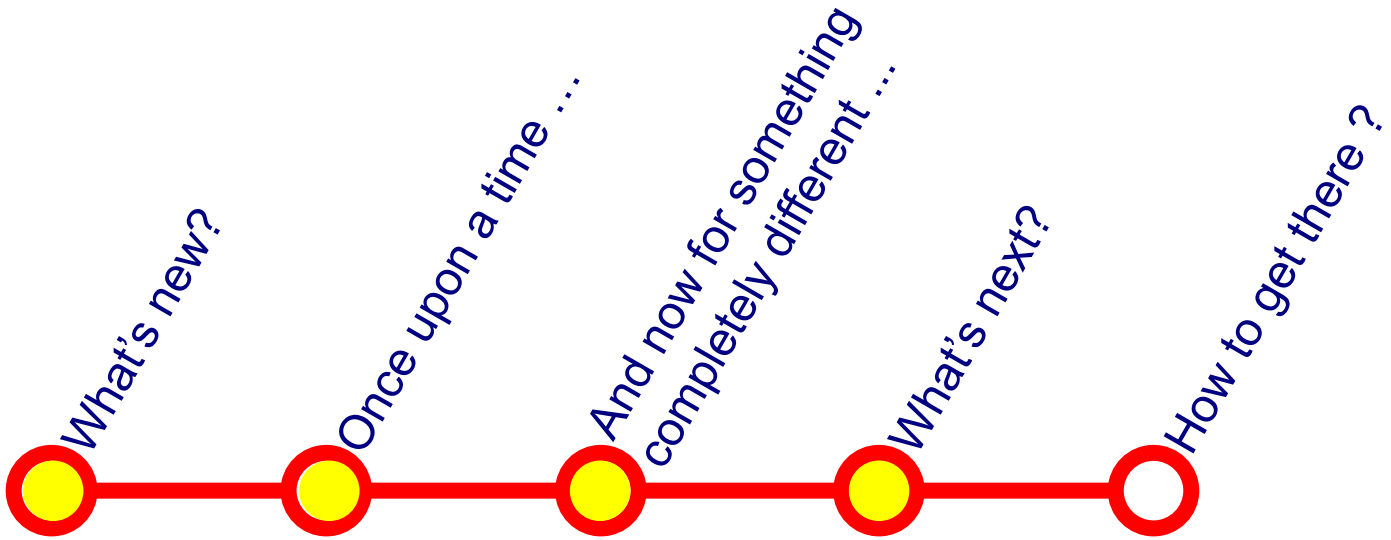
… to Agile



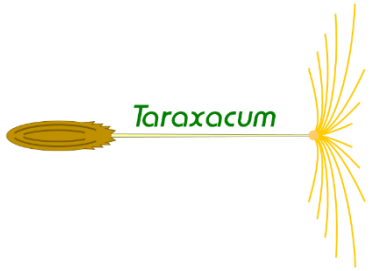
Requirements?
Just ask the Product Owner!

Four common misunderstandings about requirements today

Route



The Next Generation



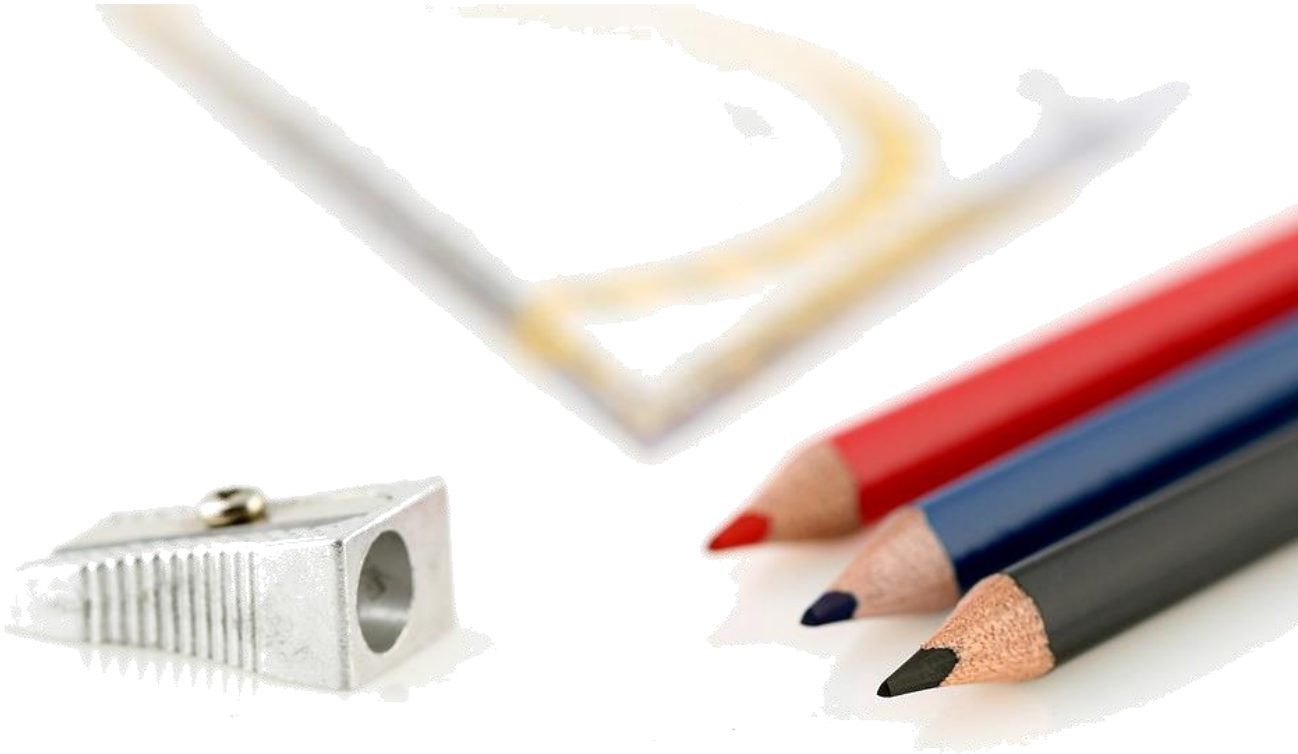
- From requirements engineering
  to requirements engineering
  - From descriptive to creative

- RE to create business value by providing solutions
  - Participate in projects creating IT-systems that effectively support the needs of clients

Requirements

A requirement is ‘a condition or capability
needed by a user to solve a problem or achieve an objective’

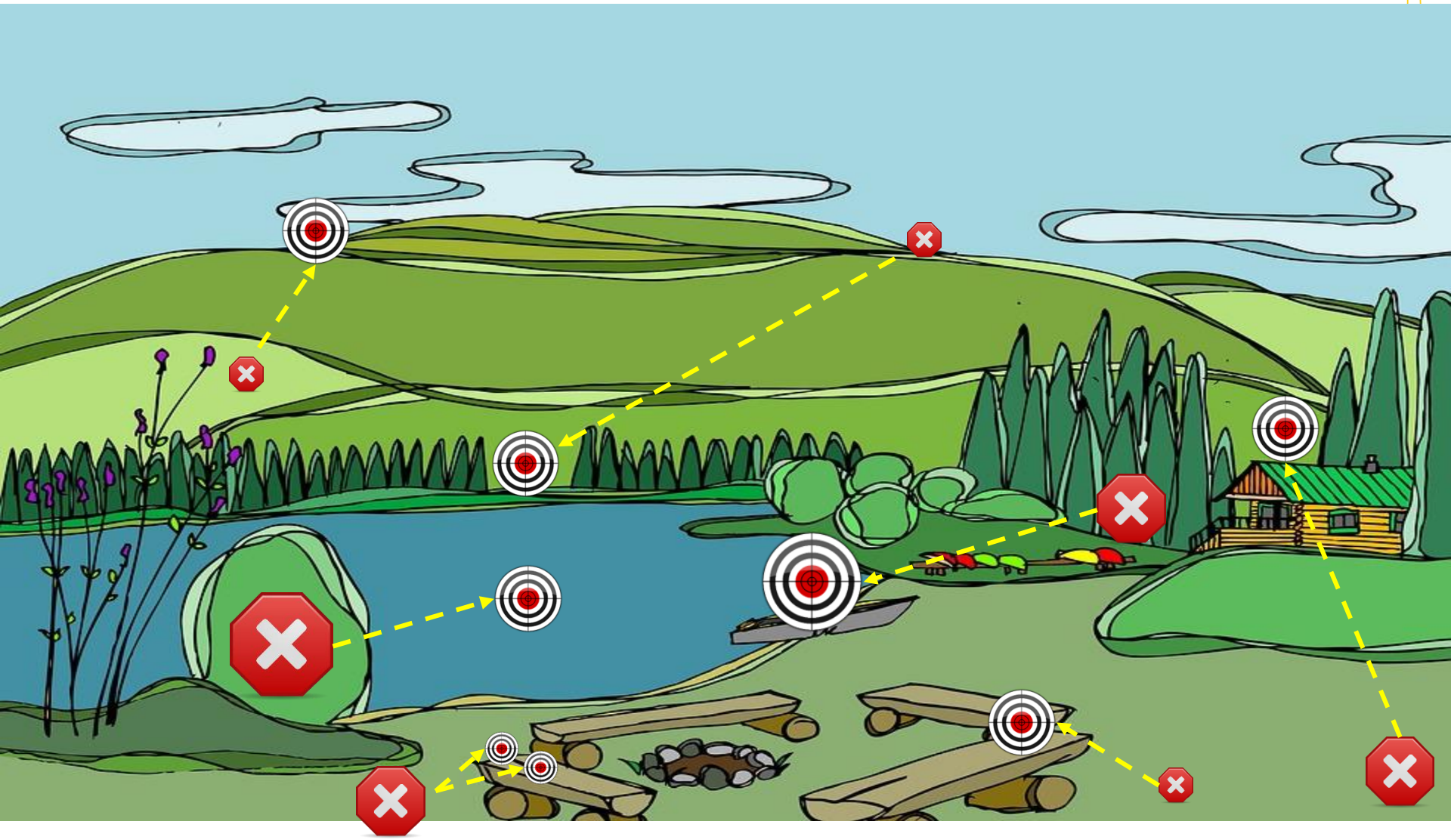
(IEEE Std 610.12 - 1990)



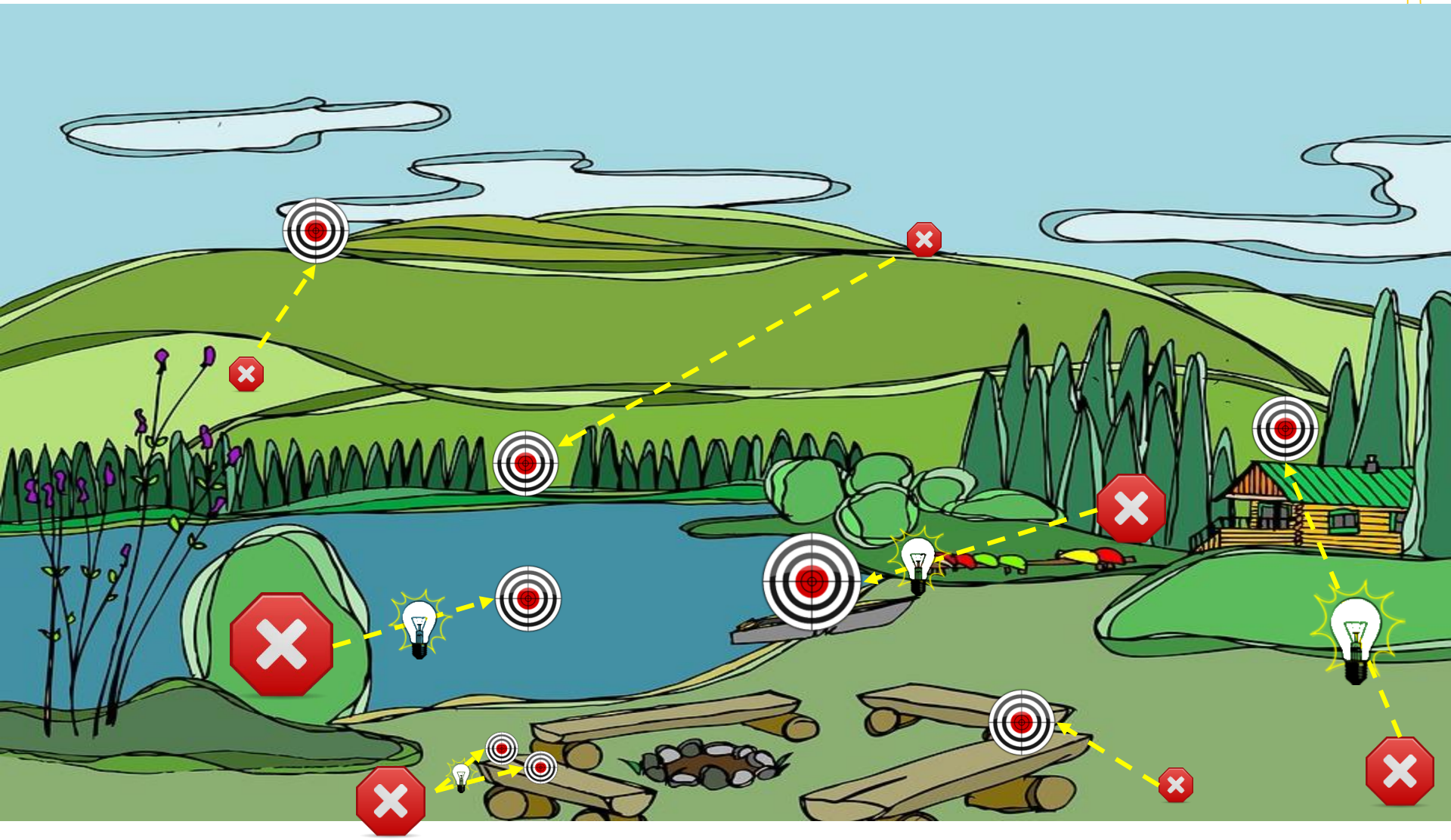
Engineering

Engineering is ‘the creative application of scientific principles to design or develop structures, [… etc. …] all as respects an intended function, economics of operation or safety to life and property’
(American Engineers' Council for Professional Development)

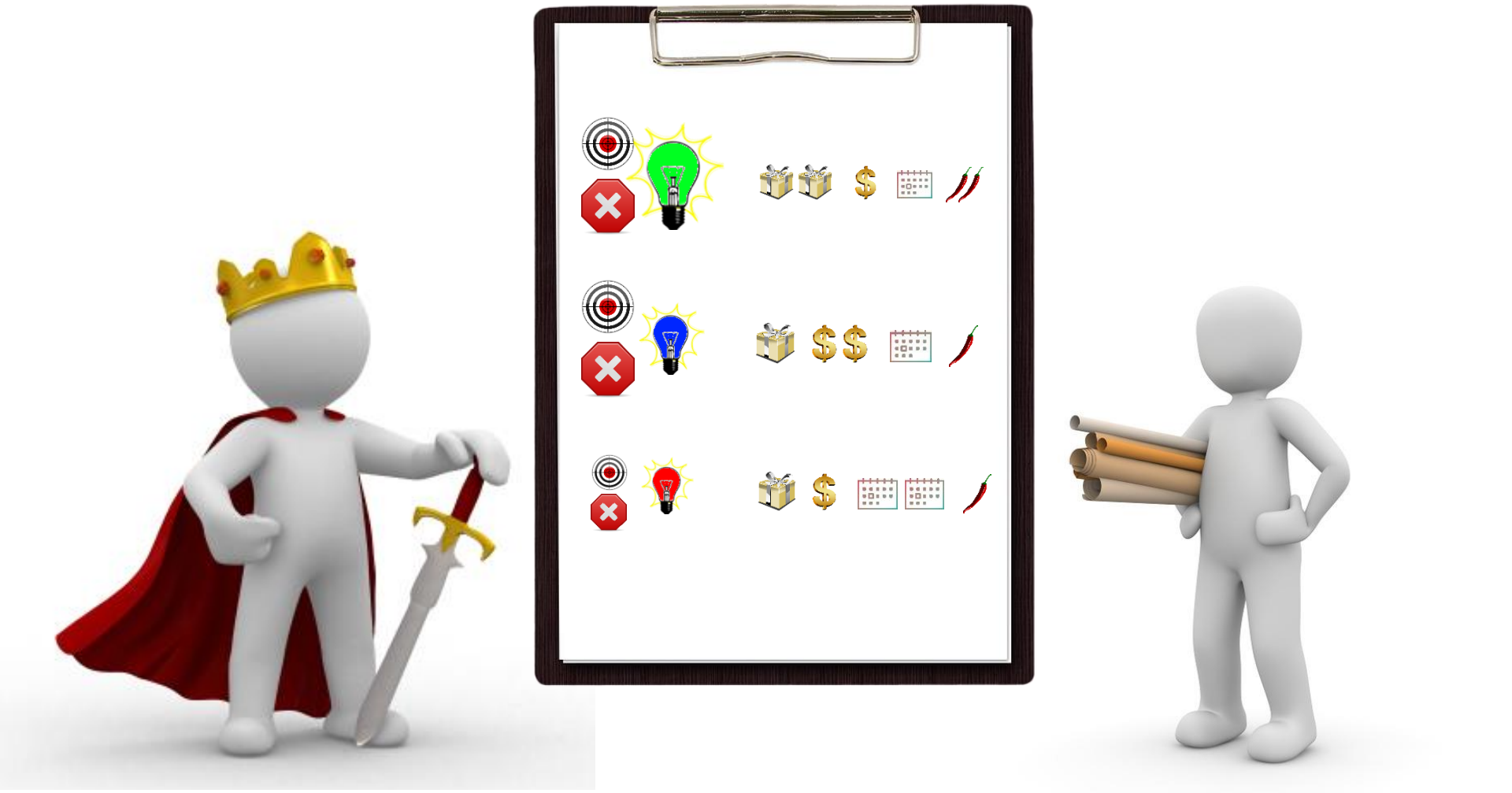
The landscape of problems and goals



Solutions for relevant P/G pairs



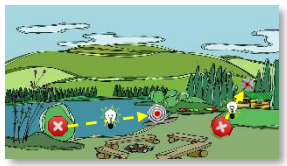
Help the client to decide



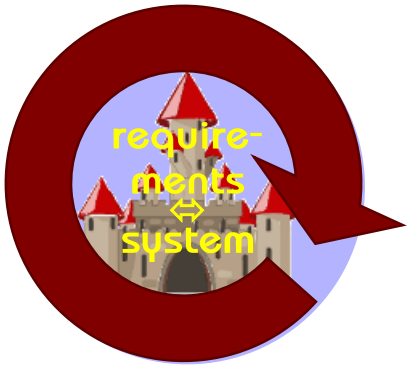
New school

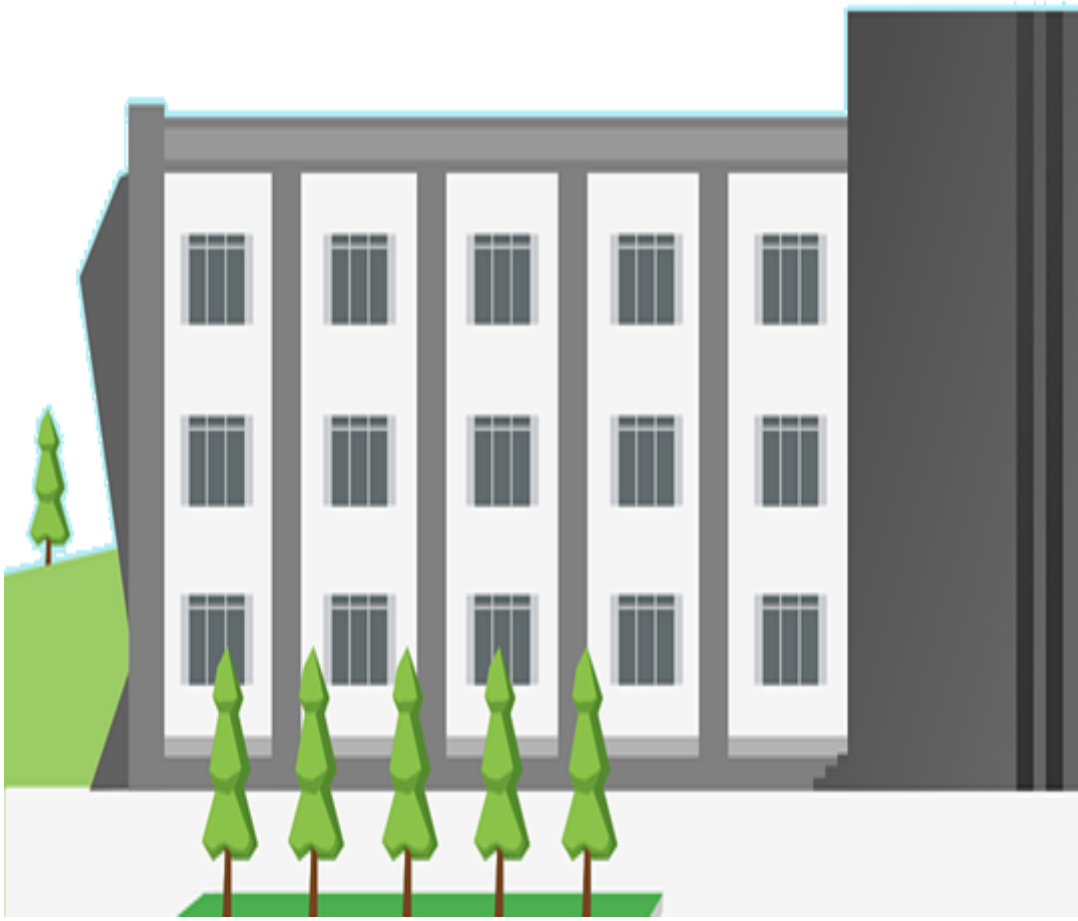
Client asks for help

RE analyzes context
and proposes solutions

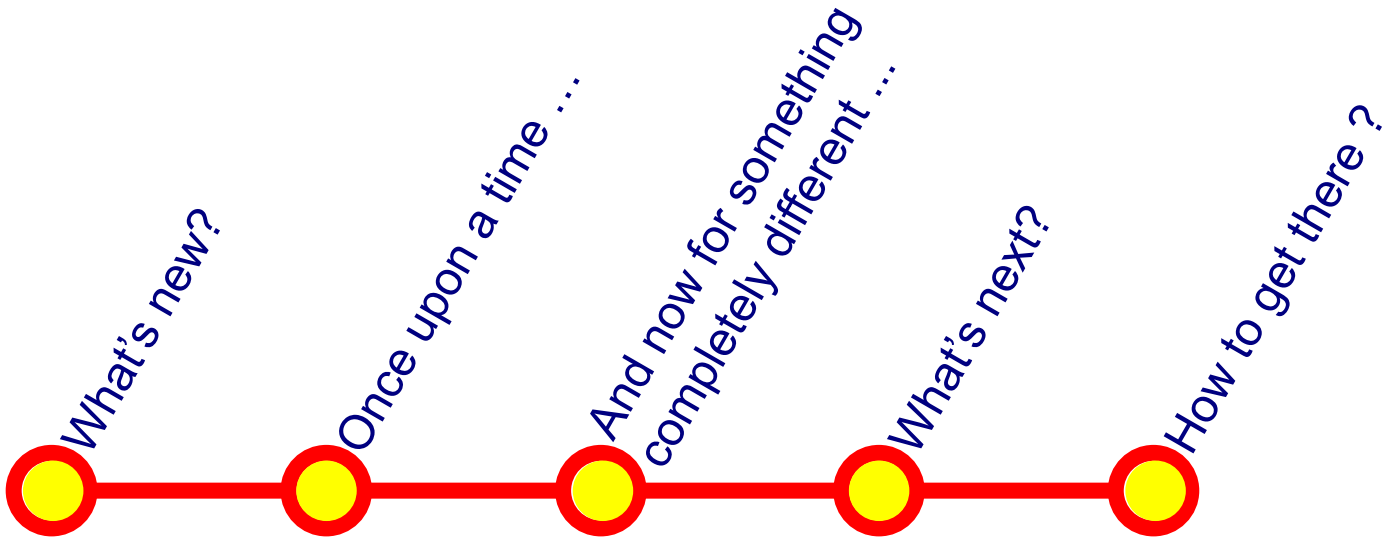


Project builds chosen solution



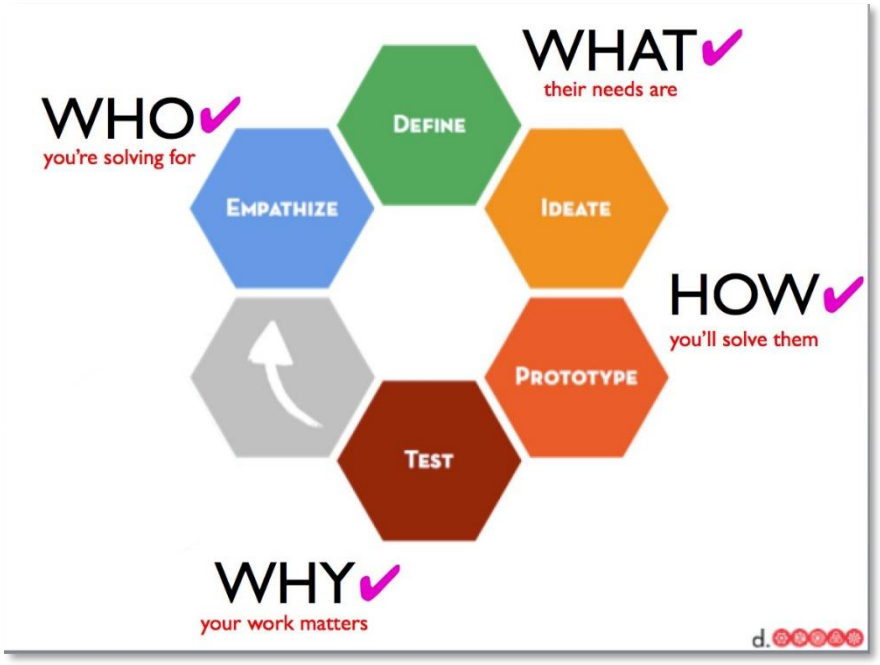


Route



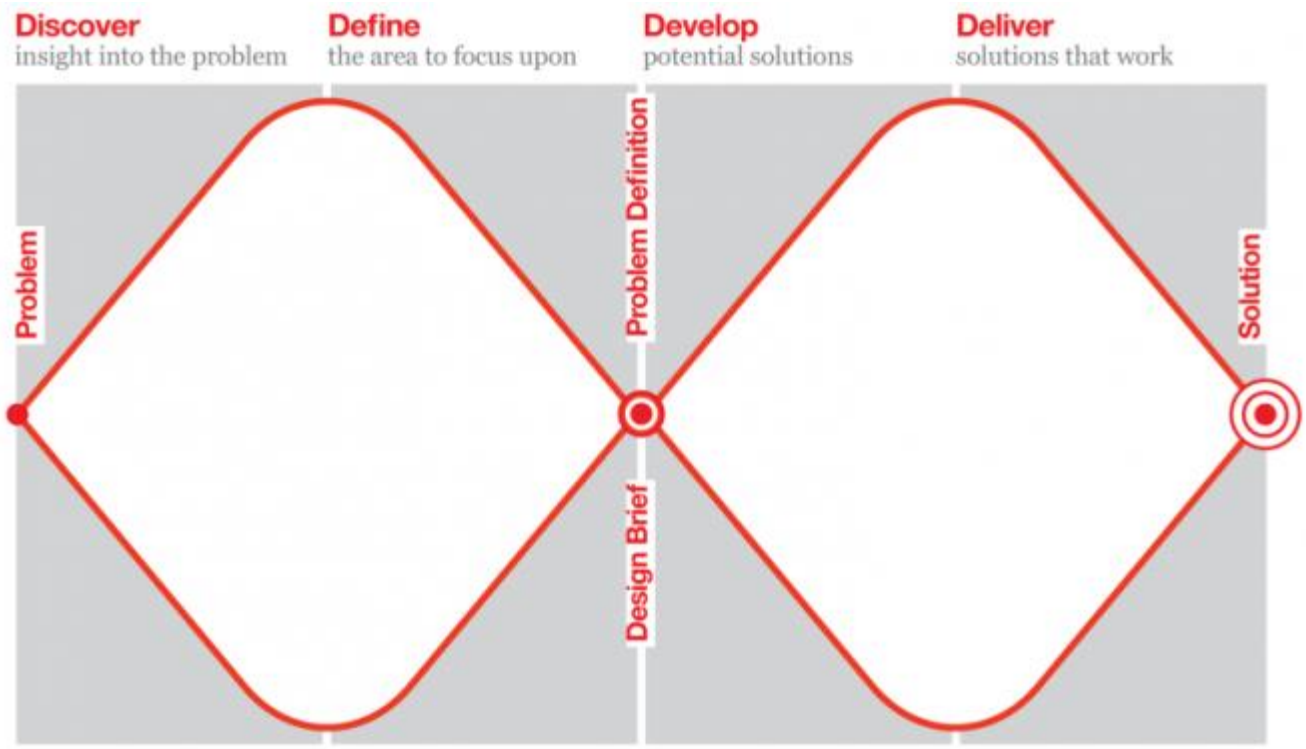
Design Thinking

- Develop practical and sustainable solutions for wicked / ill-defined problems
- A light-weight process using different methods & techniques
- Focus on developing cheap and quick prototypes



- *'Fail faster to succeed sooner'*

Design Thinking (cont.)



The Double Diamond

http://www.designcouncil.org.uk/news-opinion/design-process-what-double-diamond

Design Thinking (cont.)

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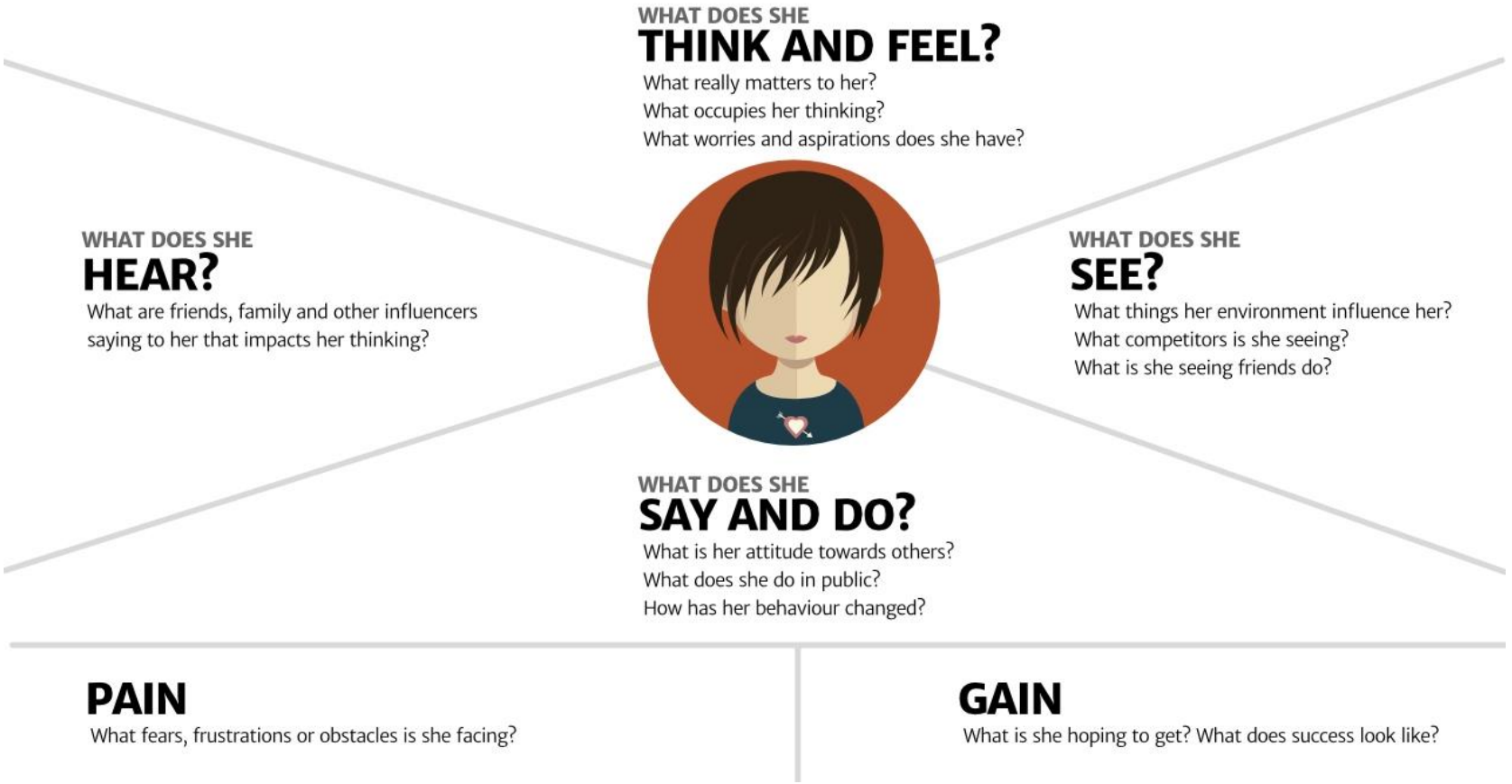
➢ Empathy map



Design Thinking (cont.)

- Define: POV – Point of Vue

- Ideate: HMW – How might we?

Prototyping, prototyping, prototyping

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The end

RE Manifesto

Over the years, we have developed requirements as a cornerstone for the delivery of successful IT-systems. Through this work we have come to value:

While there is much value in the basic factors on the right,

Genuine empathy *and*
techniques, models, and templates

Creative solution design *and*
comprehensive elicitation

In-time elaboration *and*
upfront specification

Shared understanding *and*
proper documentation

we recognize that the success factors are on the left.