Facing the Challenges of Teaching Requirements Engineering

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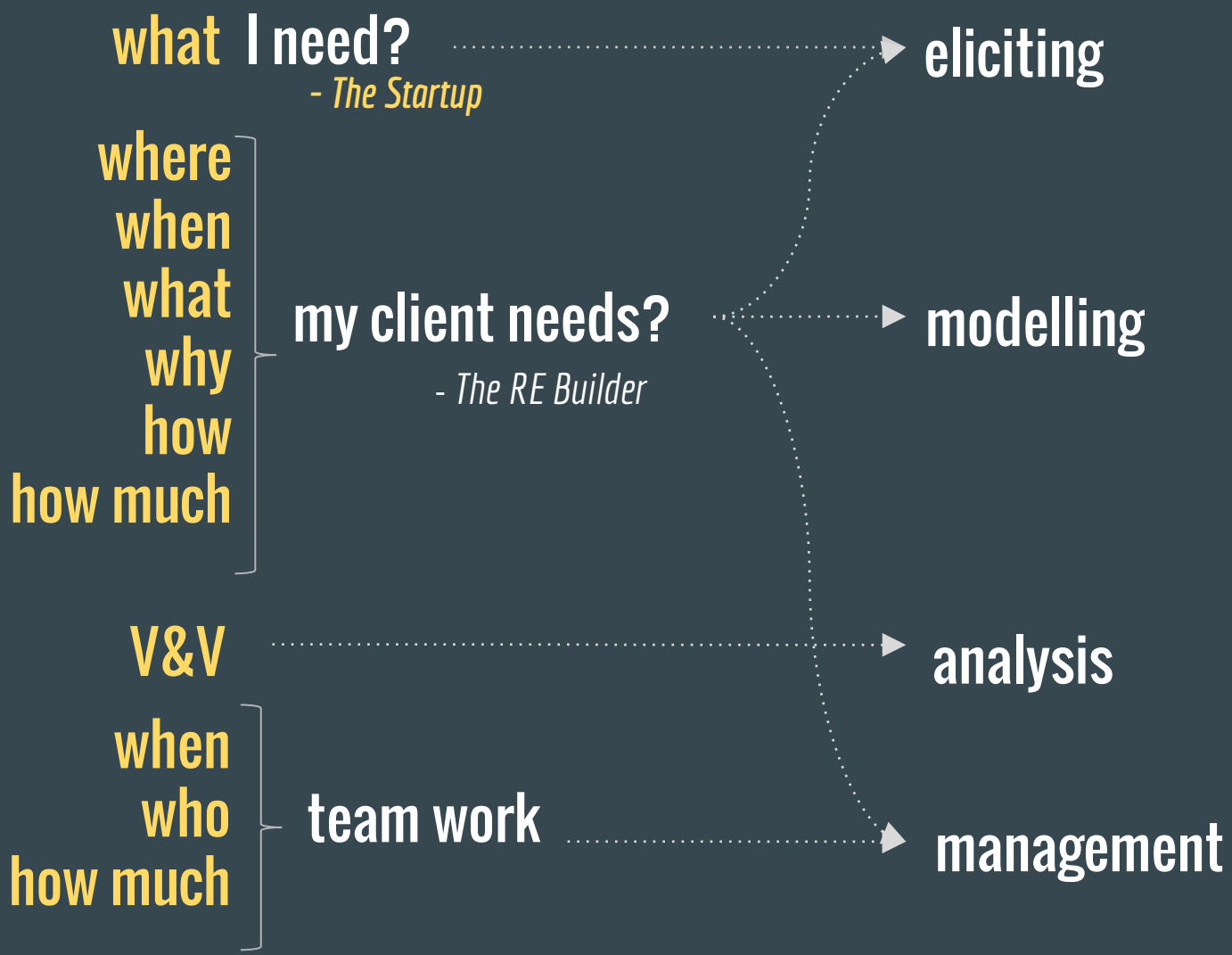
Problems

Teaching with perfect problem descriptions

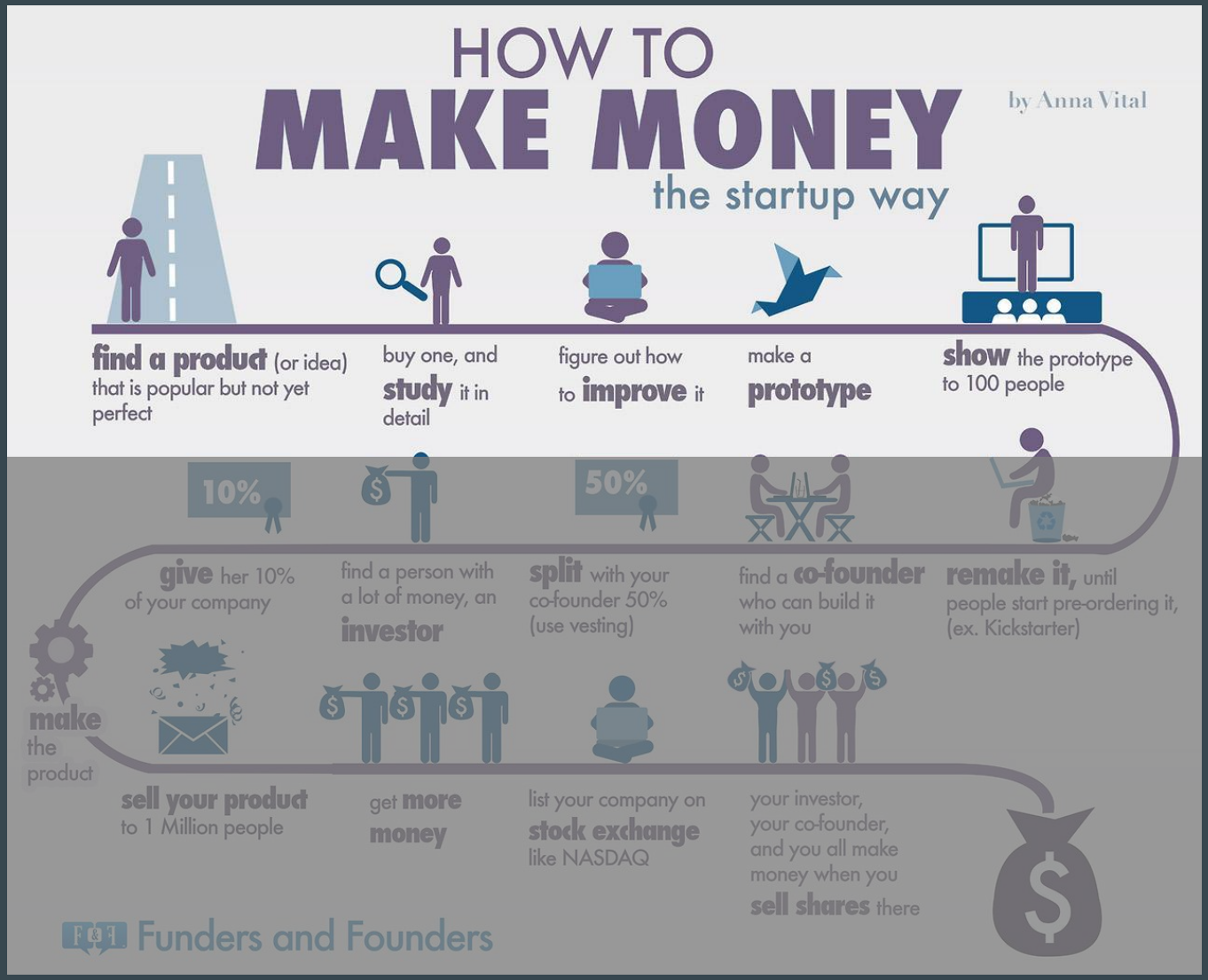
No interaction with real clients and problems

RE tasks not used in practical experiences

Approach
Develop critical thinking



Startups

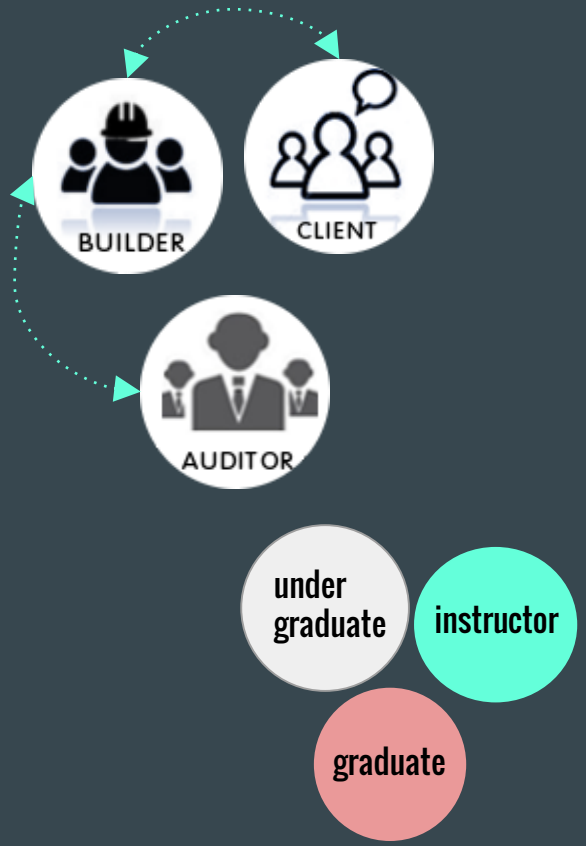

HOW TO
MAKE MONEY
the startup way
by Anna Vital
find a product (or idea) that is popular but not yet perfect
buy one, and study it in detail
figure out how to improve it
make a prototype
show the prototype to 100 people
10%
50%
give her 10% of your company
find a person with a lot of money, an investor
split with your co-founder 50% (use vesting)
find a co-founder who can build it with you
remake it, until people start pre-ordering it, (ex. Kickstarter)
make the product
sell your product to 1 Million people
get more money
list your company on stock exchange like NASDAQ
your investor, your co-founder, and you all make money when you sell shares there
Funders and Founders

Pedagogical Strategy

content-part

livro vivo [1]
blog [2]
Becker book [3]

role-playing



assessment

self-assessment
team / student
final report
observations
interviews
product validation

8 weeks | 6 weeks | 2 weeks

2015 - 1
2014 - 2
2014 - 1

Methods, Techniques, Languages

elicitation

interviews
observation
document reading
questionnaires
map-mind
brainstorming

management

planning
social-media groups
meeting minutes
traceability

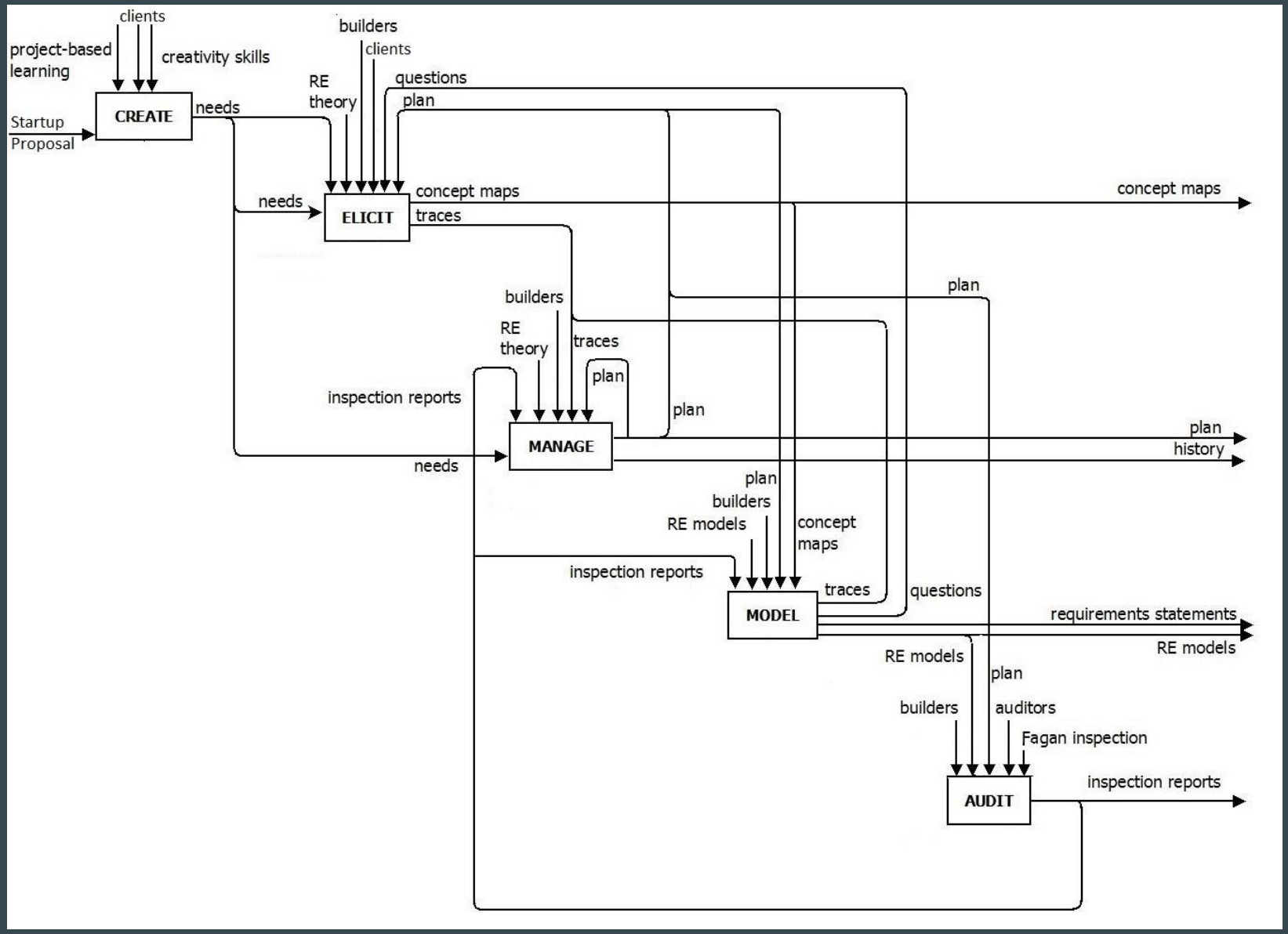
modelling

Language Extended Lexicon [4]
scenarios [5]
i* [6]
SADT [7]
E-R

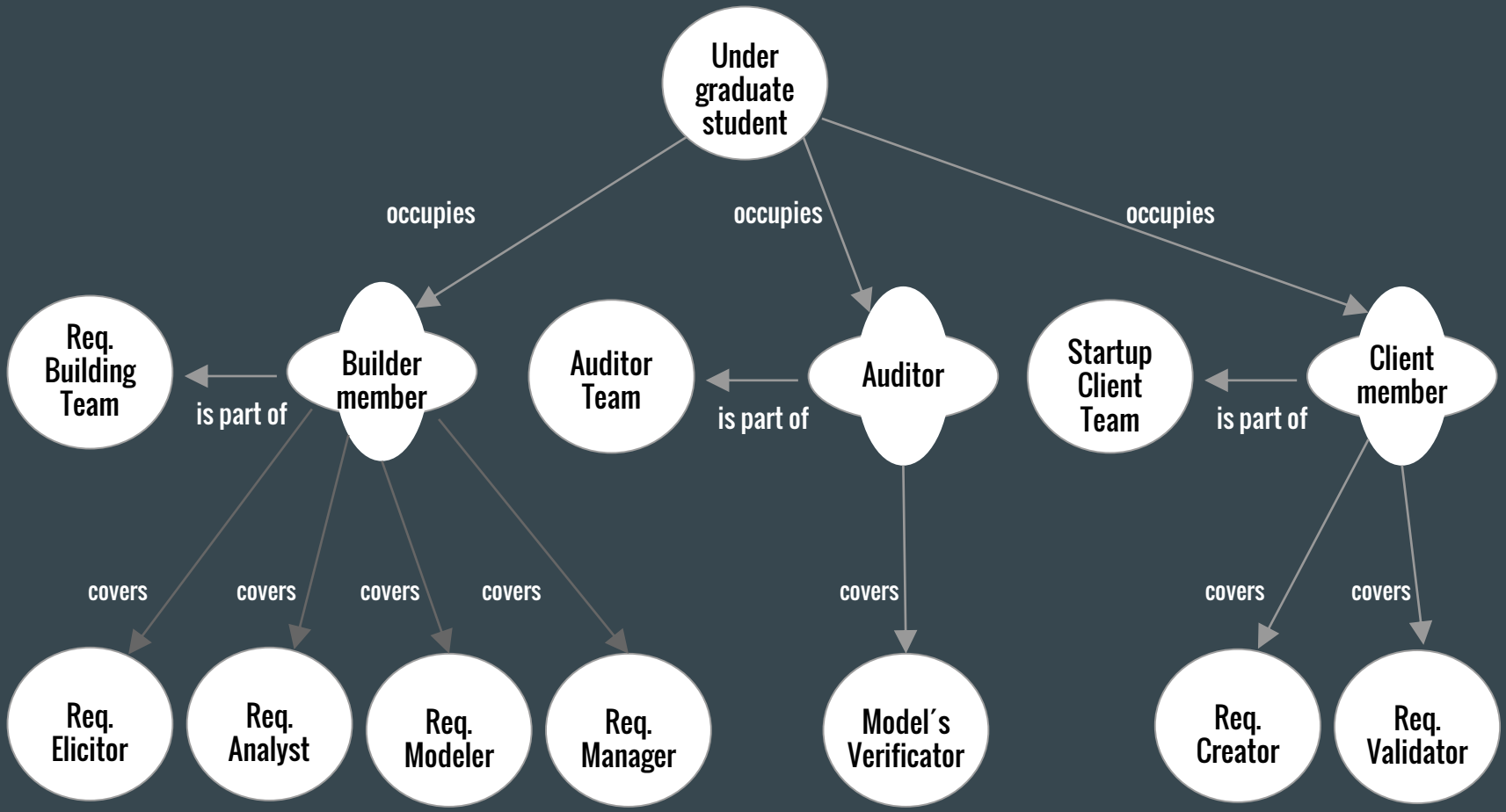
V&V

Fagan inspection [7]

Process


clients
project-based learning
creativity skills
CREATE
Startup Proposal
needs
builders
clients
RE theory
questions
plan
needs
ELICIT
concept maps
traces
concept maps
plan
builders
RE theory
traces
plan
inspection reports
plan
MANAGE
plan
history
needs
plan
builders
RE models
concept maps
inspection reports
traces
questions
MODEL
requirements statements
RE models
RE models
plan
builders
auditors
Fagan inspection
AUDIT
inspection reports

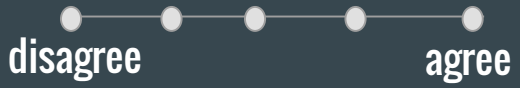
Role-playing Dynamic

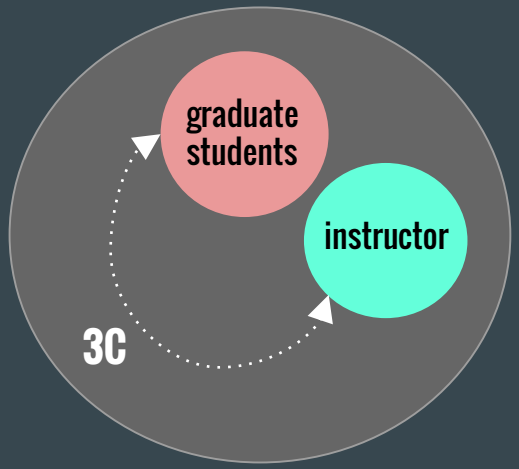


Assessment
Using Elicitation Techniques

questionnaires
week 1 — week 16

email - questionnaire
Likert scale





document reading
project report

interviews
concerns

observation
blog
reports

questionnaire
product validation

Assessment Analysis

Quantitative

RE process	
2014.2	48%

Client experience	
2015.1	65%

Auditor perfomance	
2014.2	76%

How your group performed the construction of requirements?
"1st Elicitation, 2nd Modelling, 3rd Inspection"

How did you understand the client role?
"It helps to understand the elicitation process"

How do you believe the inspection task helped in the understanding ofquality?
"We understand that the inspection helps in quality"

Qualitative

Before class

"I expect the necessary theory to deal with the elicitation and modeling of requirements"

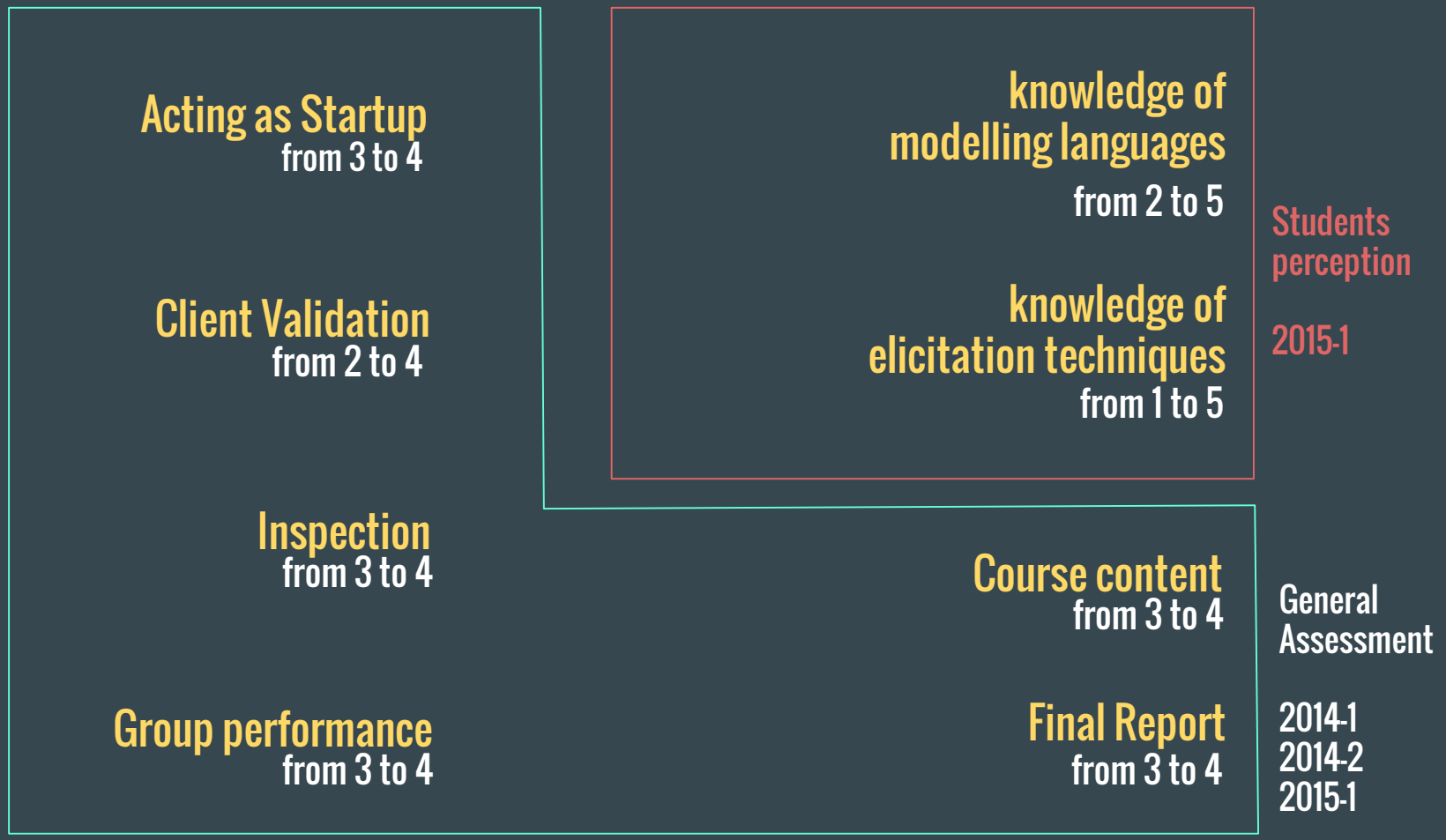
After class

"I expected a more intensive teaching style, with more emphasis on the concepts and more extensive and specific material"

All data from lower values

Assessment Analysis

Using Likert points



All data from highest values

New challenges

difficulty in creating models

perception that requirements management was well performed

Some complains about the lack of a problem description

Deal with large groups

more time for inspections

Conclusion

we tackle the elicitation challenge
students have to learn that requirements are not there in written form, they have to be elicited in the building process

awareness that, in real projects
there are several stakeholders, so large groups are frequent.

References

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Questions?

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RE research group:

http://bit.ly/re-group-pucrio