

**AALTO
VENTURES
PROGRAM**

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Intelligence in buildings

User centered design

Håkan Mitts

Aalto Ventures Program

avp.aalto.fi

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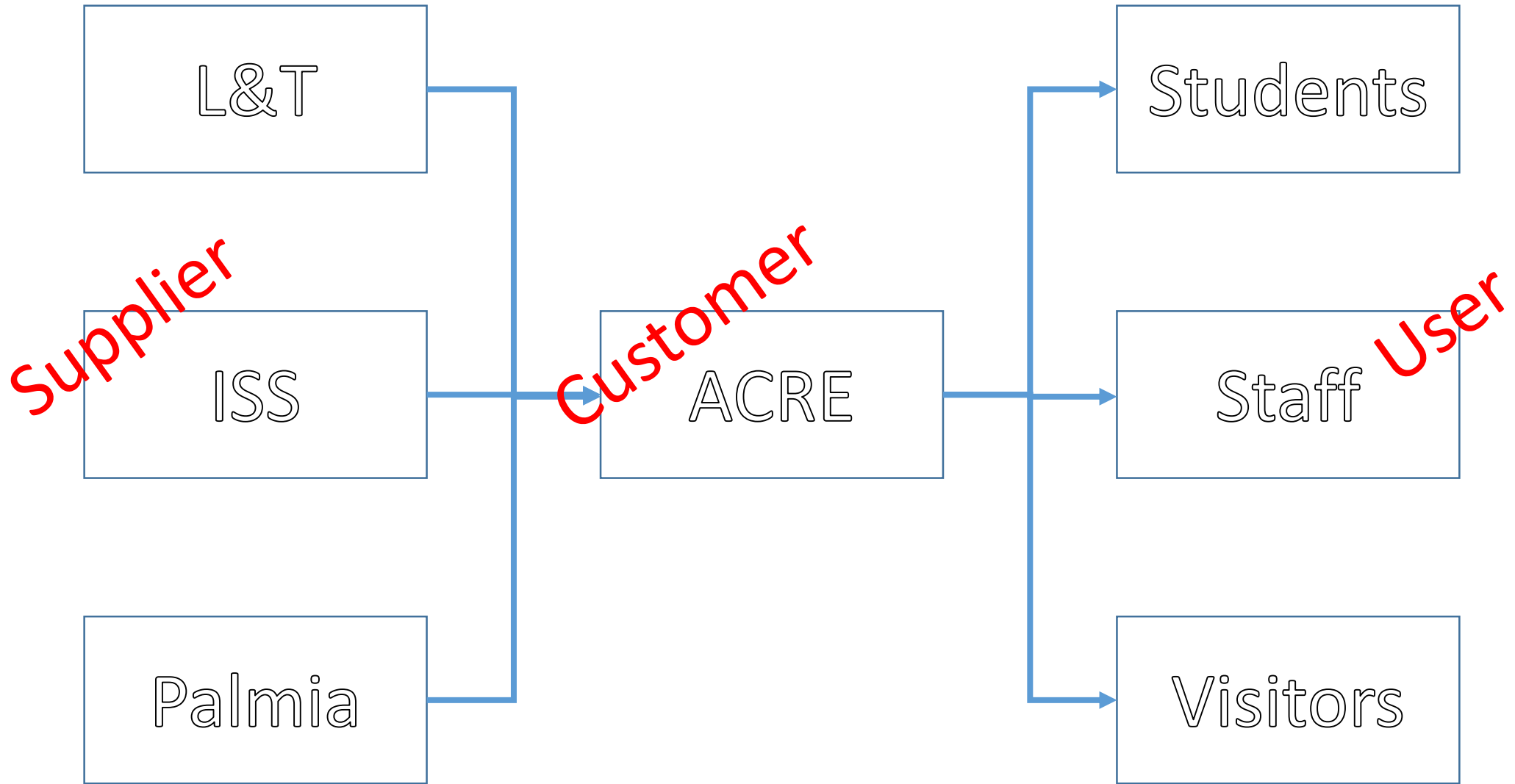
Course assignment details

In practice

- Last week
 - Do background research on the company that you have chosen
 - (Visit the campus to investigate maintenance from a user perspective)
 - Team should prepare questions for the presenters
- 2.11: Learning about your customer - User research
 - Lecture/workshop
- 4.11: Prepare interview questions for the company
 - Choose an initial “angle” to your solution
 - Send initial questions to your company
- 9-12.11 Interviews
 - Interview with representatives from your target company
- 13.11 Clinic
 - Workshop working on the interview results

Team Miro boards

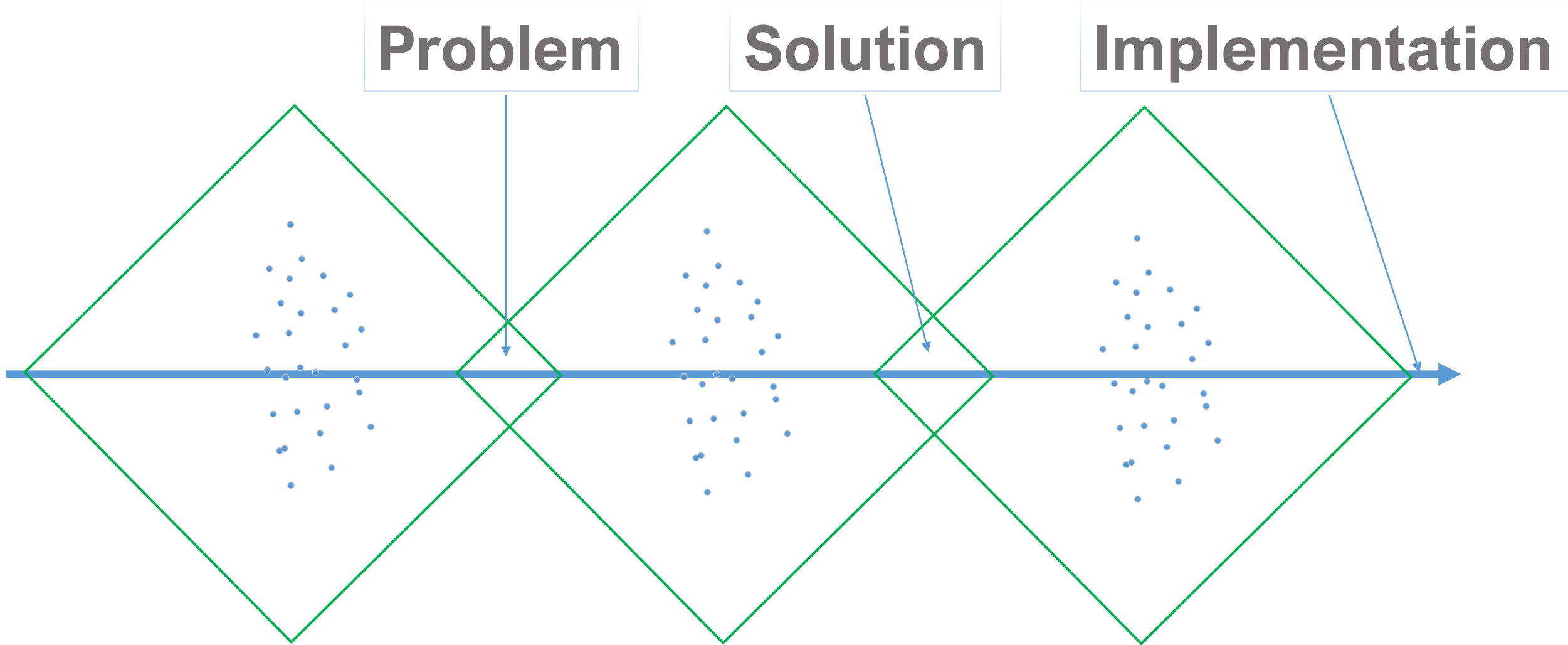
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Summary of companies

Company	Activity	Other observations
L&T	Indoor technical maintenance, outdoor areas maintenance	Dominant incumbent
ISS	Indoor technical maintenance, outdoor areas maintenance	Just 2 building on campus, expansion strategy?
Palmia	Cleaning	

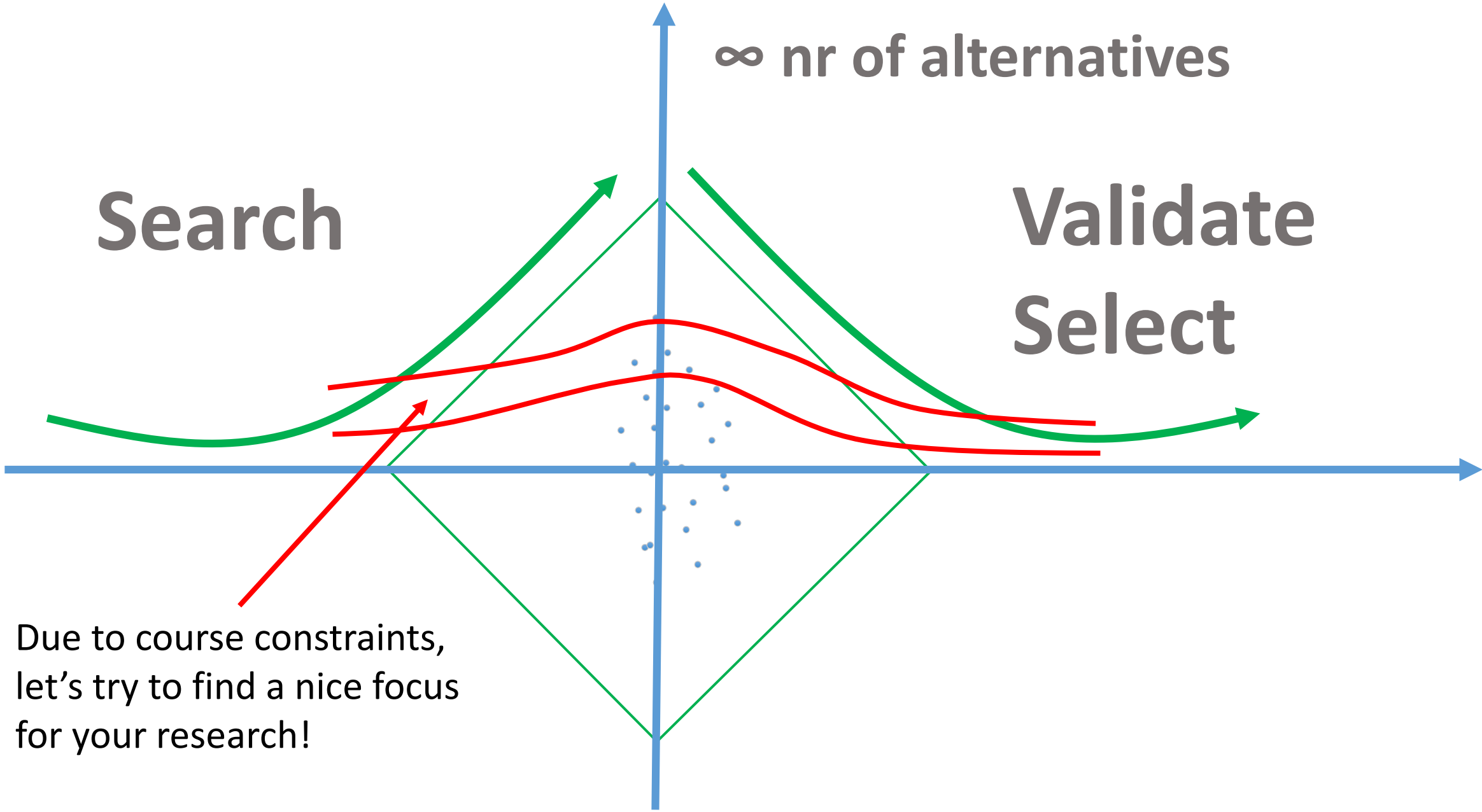
The triple diamond



∞ nr of alternatives

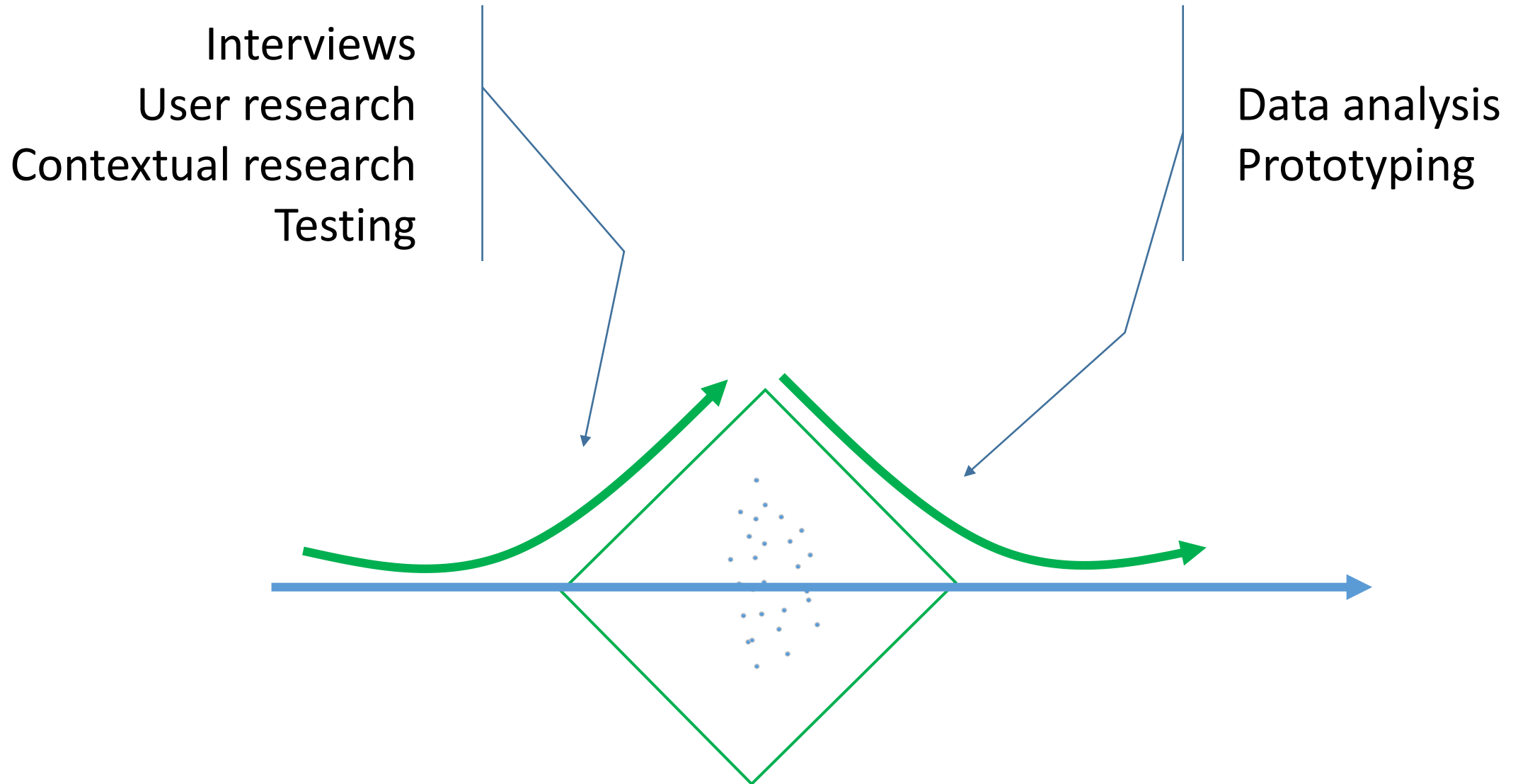
Search

**Validate
Select**



Due to course constraints,
let's try to find a nice focus
for your research!

Problem = understand user



Exercise 1 – Brainstorm a starting point

Brainstorm – step 1

- Personal exercise
- In 5 minutes, come up with at least 10 different maintenance activities related to your company that you could research
- Write them down “digitally” somewhere where you can easily cut and paste into Miro
- 5 minutes

Brainstorm – step 2

- Personal
- Open up your teams Miro board
- Create Sticky notes for each of your ideas
- Time 2 minutes

Brainstorm – step 3 - affinity map

- Fancy term for “grouping Post-It notes on a whiteboard”
- Tool for combining information into more meaningful information
- Find patterns, connections, etc
- This time: Find and AGREE on one initial starting point
 - This is JUST for this class, feel free to update for your actual interview!

CROCKERY RETURN SIGN UNCLEAR
 COAT RACK HIDDEN
 Only one cashier
 Soup between Salad Counter & Main Counter
 INFO DESK/BOARD DIRECTED TO MAIN DOOR
 Clean Interior need more Colors
 Spacious & not too noisy
 SALAD PLATES MISSING
 skip the bread table
 Missing Trays
 Confused about Main dish & Supplement
 SIGNS IN FINNISH
 TRASH BINS CONFUSING
 Plenty of rooms
 IS SOAP BOWL = SALAD PLATE?
 SOUP EATERS CONFUSED
 BACK DOOR VS MAIN DOOR
 OIL & VINEGAR ARE RACED TOO HIGH
 Novice Instruction
 SALAD IN GOOD PLACE
 Lack of space on bread table
 NAPKINS TOO CLOSE TO CASHIER
 USED NAPKIN SHOULD BE LAST
 BREAD AFTER CASHIER
 ONLY ONE CASHIER
 Short Cashier, Stressful
 No take-away & coffee cups
 150-200 Customers / day
 FORGET TISSUES WHEN PAYING THE BILL
 ONLY ONE CUTLERY RETURN BIN
 TRASH BINS SIGNS CONFUSING
 Lack of specified procedure
 invisible seeds & oil
 TOO SHORT PAYMENT COUNTER
 English Menu
 Open hour needs Extension
 GLASS RETURN BINS DIFFERENT THAN TAKING NEW
 Nice light vs. cold feeling
 Restaurant NAME???
 Busy paying the bill
 TOILET HARD TO FIND
 MAIN DISH VS SUPPLEMENTS ??? (PRICES)
 LACK OF BARRIERS & DIRECTION
 Mixed forks & knives
 Salad plus + soup
 One plate policy
 TOO SMALL TOILET
 CASHIER DESK TOO SHORT
 TRAYS ARE HIDDEN
 QUIET ATMOSPHERE
 LOCATION IS OK
 NOT TOO CROWDED
 hidden coat rack & Table
 CONFUSION ENTER/EXIT DOORS
 Didn't know how much food one can take
 unclear menu board
 FRUITS AVAILABLE WITH SALAD 😊
 A LA CARTE VS NORMAL LINE?
 LARGE SPACE
 OVERALL VERY PRACTICAL
 BREAD DESK TOO SHORT
 FORKS & KNIVES UPSIDE DOWN
 HIDDEN KETCHUP & CO.

ENTER/EXIT DOORS
 CROWDED
 RETURN SIGN UNCLEAR
 SMALL TOILET
 DESK TOO SHORT
 ATMOSPHERE
 AND NOT IN THE END
 Only window menu is visible
 COAT RACK HIDDEN
 Nice light vs. cold feeling
 Restaurant NAME???
 MISSING SALAD PLATES
 LACK OF BARRIERS & DIRECTION
 skip the bread table
 invisible seeds & oil
 OIL & VINEGAR ARE RACED TOO HIGH
 LOCATION IS OK
 Spacious & not too noisy
 Clean Interior need more Colors
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 BACK DOOR VS MAIN DOOR



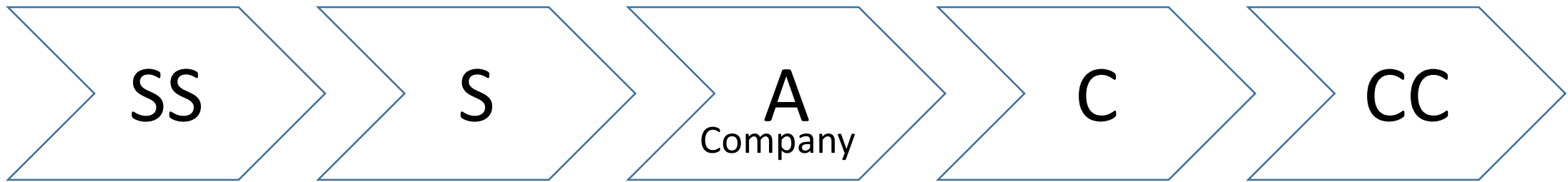
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 Confused about main dish & Supplement
 Didn't know how much food one can take
 FRUITS AVAILABLE WITH SALAD 😊
 FOOD NOTHING SPECIAL

Brainstorm – step 3 - affinity map

- In your teams, analyse the ideas that your team has generated
- Group the suggestions into groups of “better” starting concepts
- Once you have grouped the information, choose one as a starting point
- 15 minutes in breakout rooms

Value chain

Who are your customers?



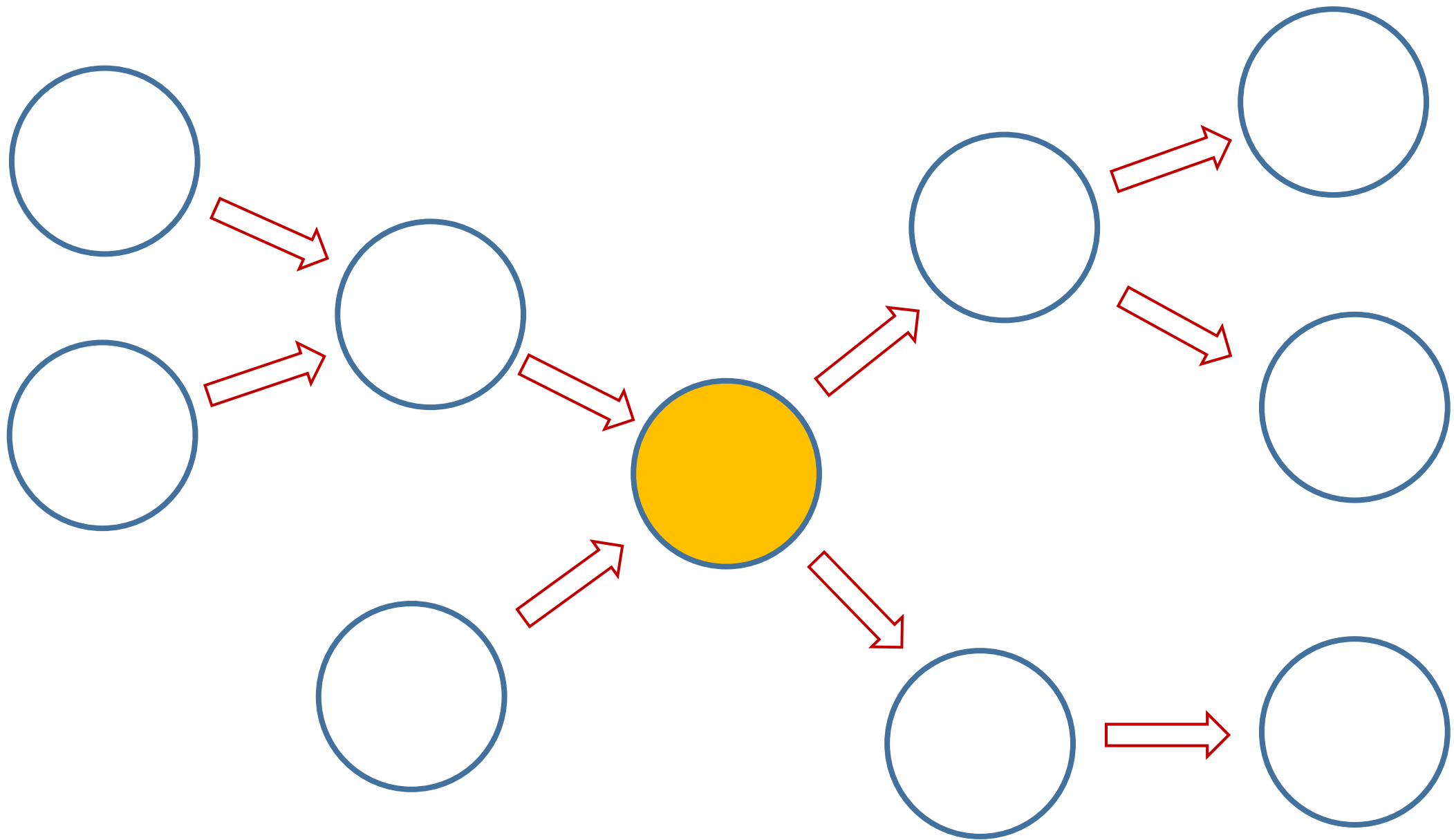
Industry value chain

Value chain – flour



Lifecycle





Value map

Value chain – exercise 2

Create a value network for your selected service

- Add entities and descriptive value definitions to your Miro board
- Addition to normal value chain: what is the feedback?
 - Data, sensors, ...
- Breakout rooms – 15 minutes

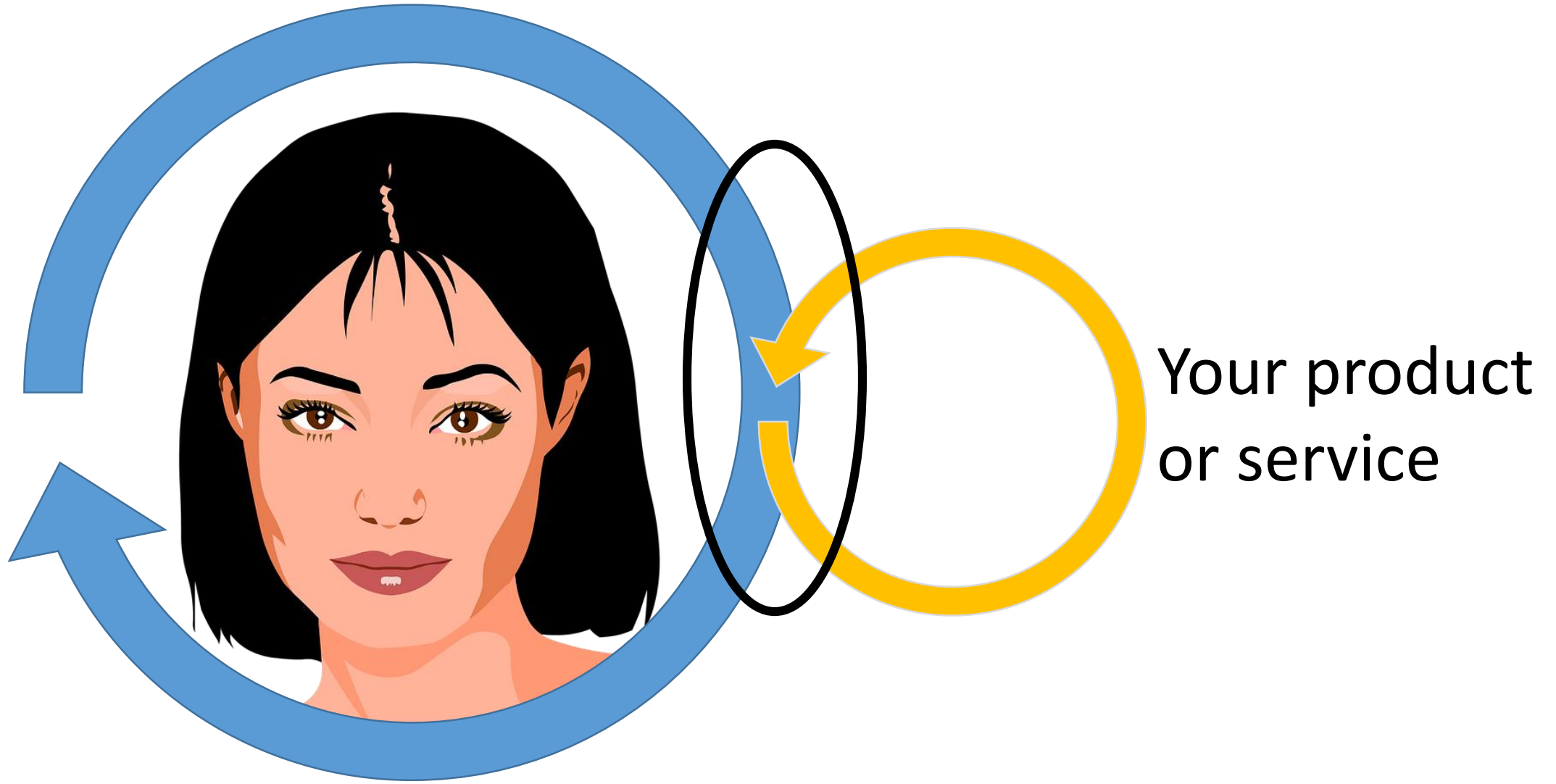
Break

Conducting an interview



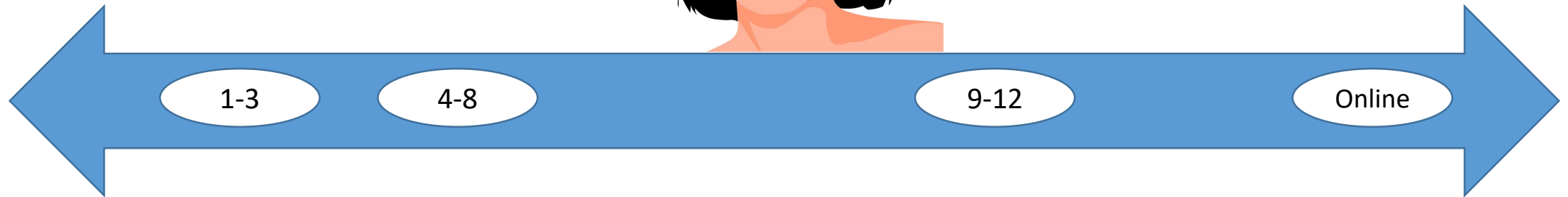
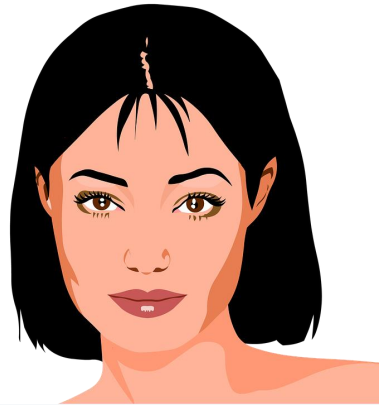
Interviews = verbal communication

Method to gain new data	Goals and examples	Stakeholder involved	Artefact	Price/performance	Pre-requisites
User research	Understanding user situation and problem, using eg interviews, contextual research, observations	Yes	No	Low reliability	Almost none
Other research	Competitor analysis, expert interviews, benchmarking, calculations, modelling ...	No	No	Variable, mostly setting context and boundaries	Experts, software, specific qualification
Experiments	Analysing user behaviour and preferences in a more neutral way	Yes	Yes, but not of the end-product	Improved reliability, a bit higher cost	Almost none
Prototyping	Testing solution acceptance, eg. features, customer experience, usability, design and aesthetics	Yes	Yes, subset of end-product	Best reliability, highest cost	Materials, certain qualification



A day in the life of your customer

Interviewing is not an event, it's a process



Open-ended interview
Learn about what you do not know

Survey/poll
Check that you have understood it right

Progression of interview

1-3

Open interview to learn about the problem area

4-8

Open interview but with some specific talking points
More specific selection of interviewees

9-12

Advanced interview technique such as on location
Well-qualified (e.g beta customer) group

Online

Quantitative survey, either f-2-f or online
Qualified user base

Progression of interview

1. half

Open interview to learn about the problem area

2. half

Open interview but with some specific talking points
More specific selection of interviewees

Later

Advanced interview technique such as on location
Well-qualified (e.g beta customer) group

Online

Quantitative survey, either f-2-f or online
Qualified user base

The 3 main points of an interview

- Good target group
 - Too wide vs too narrow
- Helping customer express themselves
 - You want to learn what the customer thinks!
- The work ain't over 'till the paperwork's done
 - Analyze and react to the results

Understanding the customer

- Current state
- Problems/needs/wants
- Competing solutions (substitutes/alternatives)
- Where and how now (time and space)
- How to reach the customer (channels)
-

Yes

Find out things you did not know before
(and therefore did not know to ask about!)

No

You are not selling your idea

You don't need to convince the customer

You should not (just) validate your own thinking

Interview vs survey

Interview

- Learn about customer
- Find out new insights
- Qualitative understanding
- Results via interpretation of data
- Low number of customers

Survey

- Validate assumptions
- Find frequency of insights
- Quantitative understanding
- Numerical analysis and cross-correlation of data
- Statistically meaningful numbers of customers

Avoid interviewer induced bias

Make sure that the interviewees can voice their opinions

Do not give hints as to what is the “right” answer

Recognize interviewee bias

Adhering to social and other norms
Presenting one-self in a “good light”

The 5 why's

Get to the root cause

Also good technique if you run out of questions

Practicalities

- Even for open interview, have a rough plan
 - How to direct your interviewee towards your topic
- 1 + 1
 - One person doing the interview, the other person taking notes
- Permissions
 - Photos, video and recording are good
 - Always make sure that the interviewee understands how the interview is recorded and used

Assignment

Plan your 2 initial questions
for the first half of the interview

Plan your 2 initial questions
for the second half of the interview

10 minutes

Breakout rooms

Homework

- Prepare your interview
 - Send in your questions (open questions mainly)
- Prepare your interview
 - 1st and 2nd half “strategy”
 - Roles
- For your clinic (Nov 13) I will send out new Miro boards
 - Homework before clinic: Document your interview findings on the Miro board

Documenting your findings

Your insight in
4-6 words

- Document on Miro sticky notes
- 1 observation/sticky note
- 30-40 observations