# Design Thinking

For Teaching, Research, & Development in Computing

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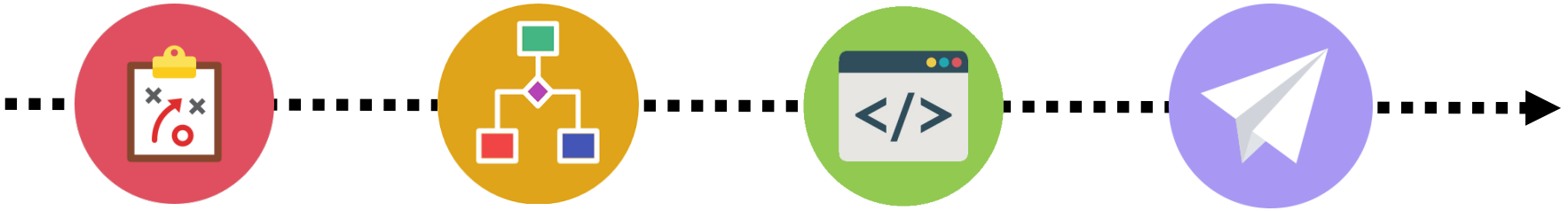
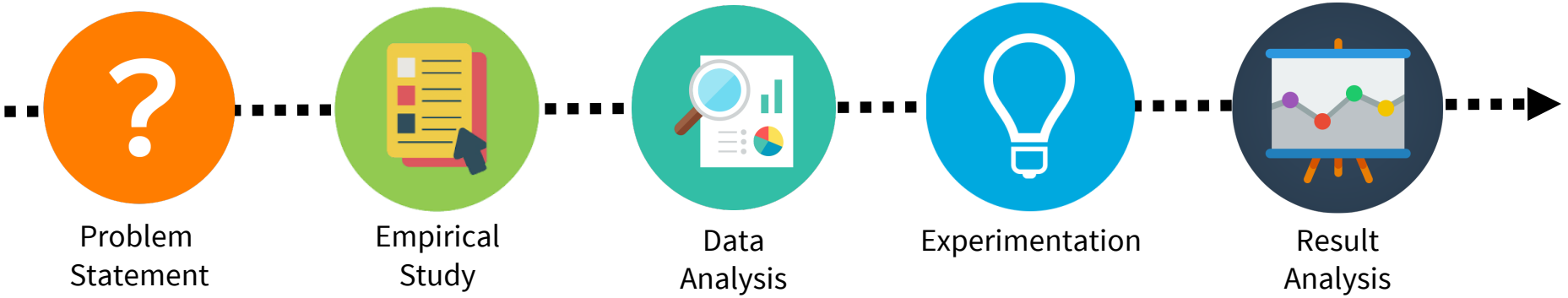
# Design Thinking

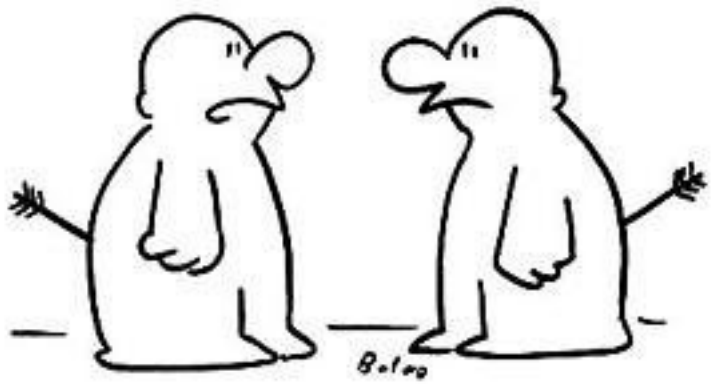
Software Development Lifecycle

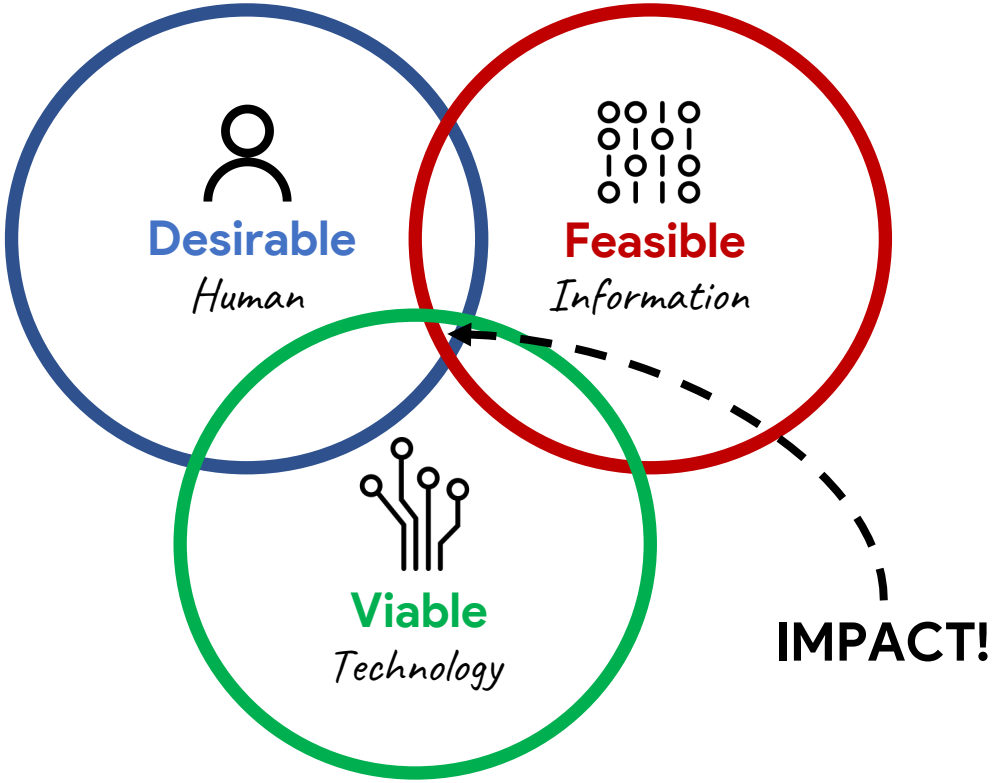



Research Methodology



# Empathy


"I know how you feel."


Desirable
Human
Feasible
Information
Viable
Technology
IMPACT!

# Identify Problem

Persona (User)

Goal

# Activity #1 Post-It

Form a group (at least 4 members) with common research interests or current project team or just thinking a new idea in research. Think about **ONE BIG** project related to the interests. Discuss about:

1. Problems need to be addressed
2. Current progress toward solving the problems
3. Advantages of the current solutions
4. Potential new solutions

# “Problems in teaching programming at primary school”

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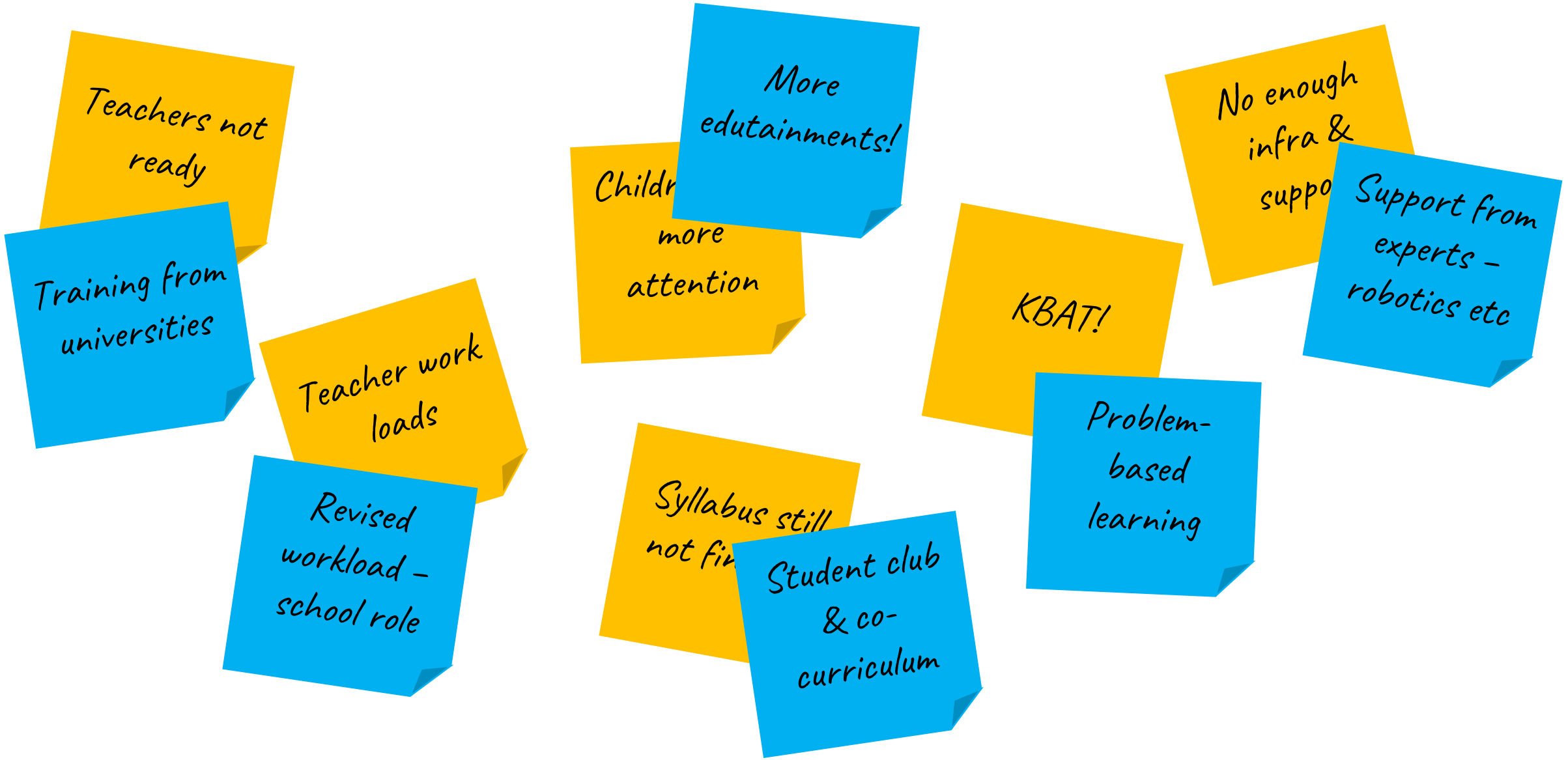

# “Problems in teaching programming at primary school”

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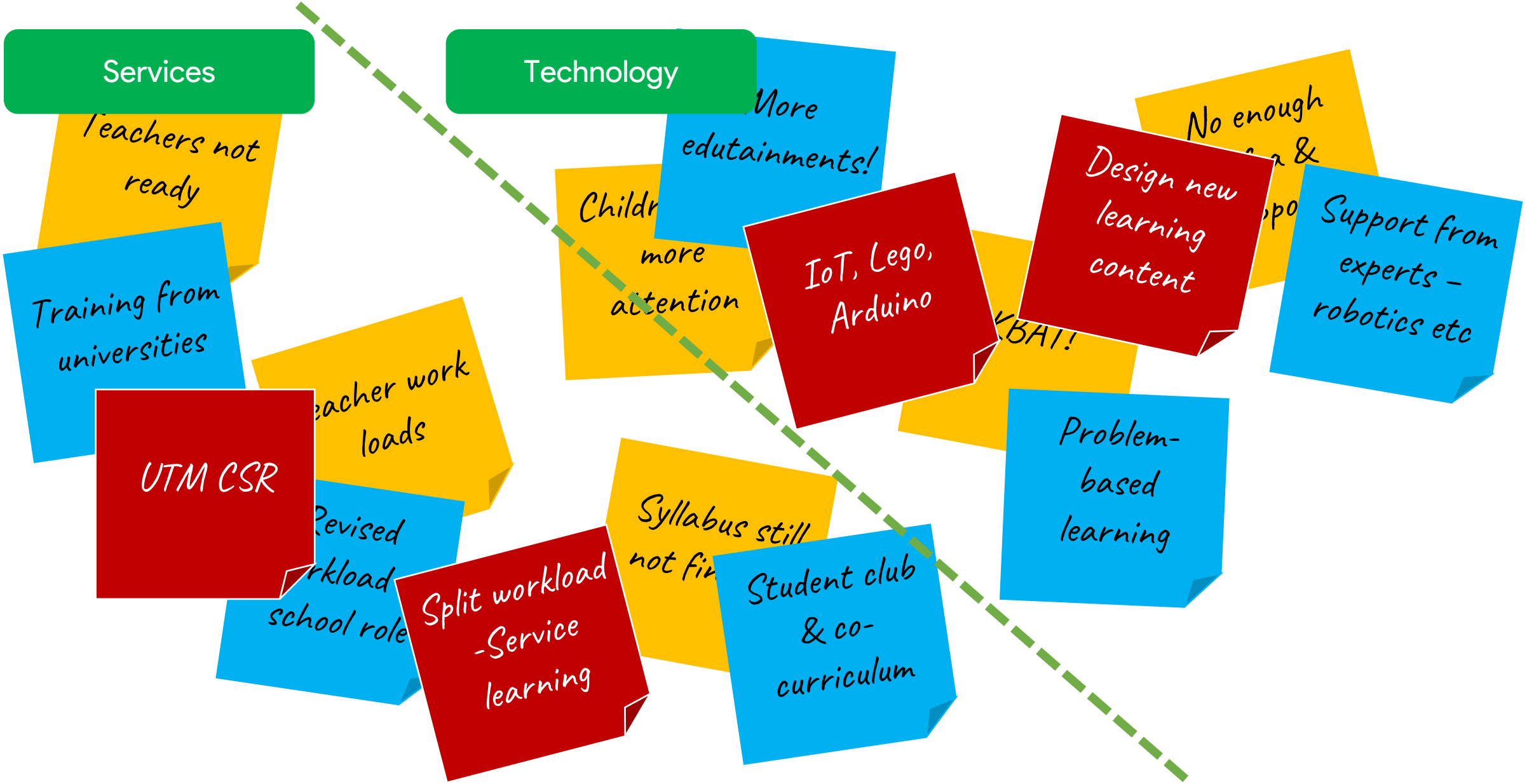
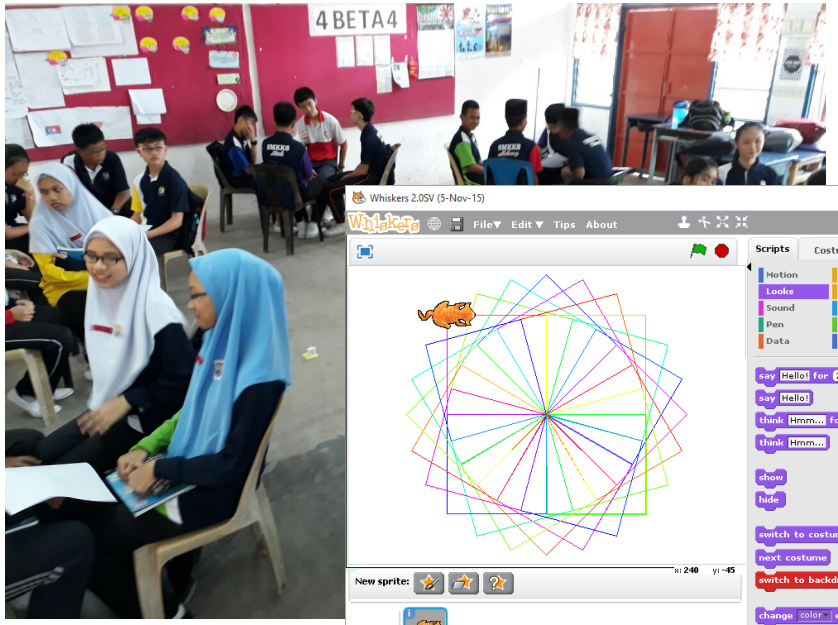


# Technology

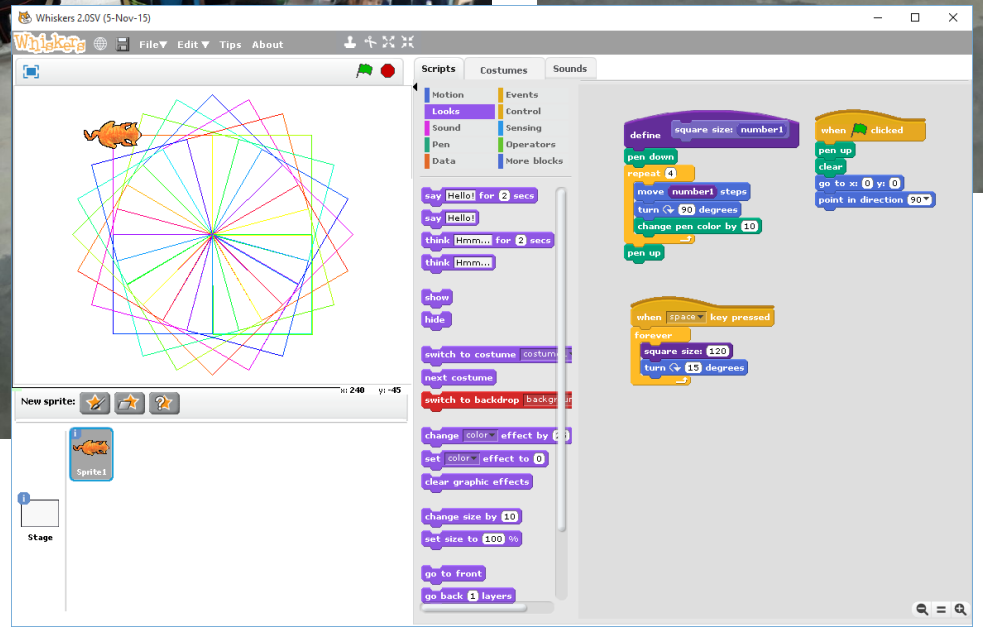
# Services

Gerak
Gerak
LOMPAT
Gerak
Gerak
Ambil
LOMPAT
Gerak
Gerak

4 B


4BETA4

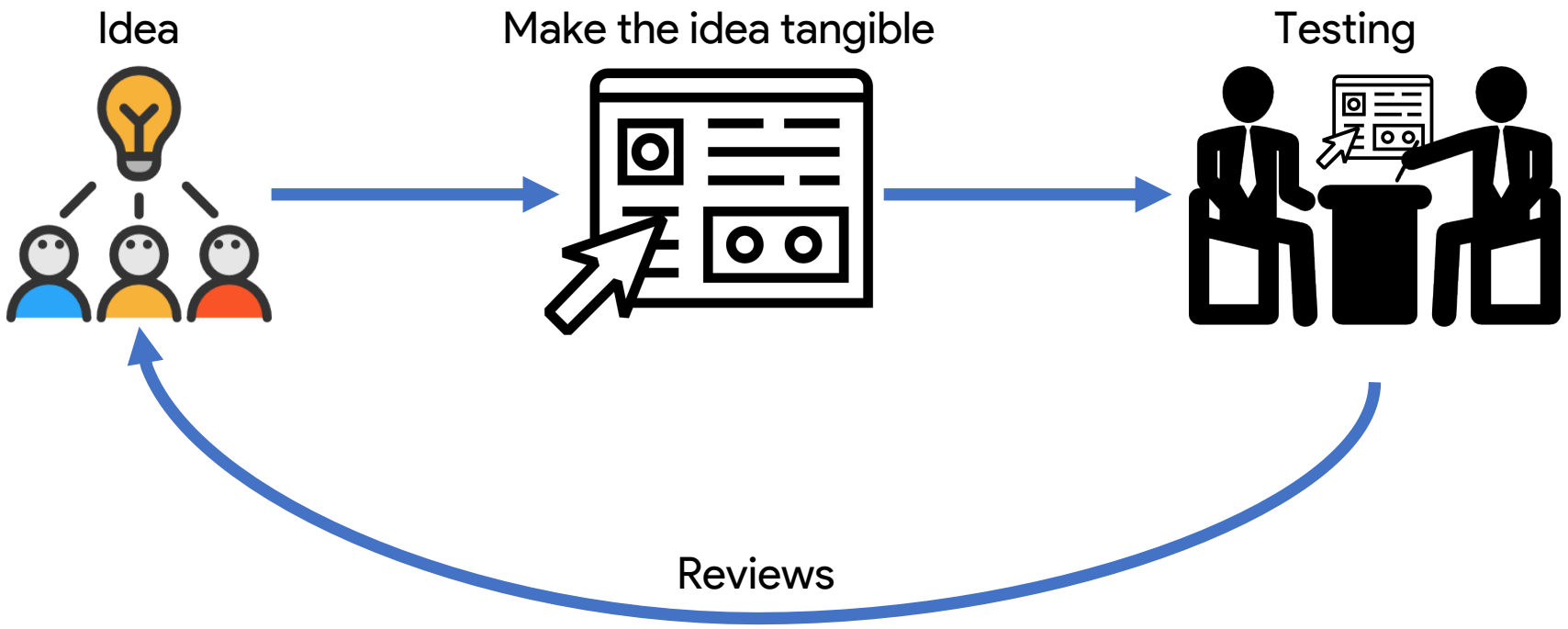
Ambil
Pusing Kiri
Pusing kanan
LOMPAT
Gerak


Whiskers 2.0SV (5-Nov-15)
File Edit Tips About
Scripts
Costumes
Sounds
Motion
Looks
Sound
Pen
Data
Events
Control
Sensing
Operators
More blocks
define square size number1
pen down
repeat 4
move number1 steps
turn 90 degrees
change pen color by 10
pen up
when clicked
pen up
clear
go to x: 0 y: 0
point in direction 90
when space key pressed
forever
square size 120
turn 15 degrees
say Hello! for 2 secs
say Hello!
think Hmm... for 2 secs
think Hmm...
show
hide
switch to costume
next costume
switch to backdrop
change effect by
set effect to 0
clear graphic effects
change size by 10
set size to 100 %
go to front
go back 1 layers
New sprite:
Sprite1
Stage

# What is #mydigitalmaker

*#mydigitalmaker is a joint public-private-academia initiative to transform Malaysian youth from digital users to producers in the digital economy*

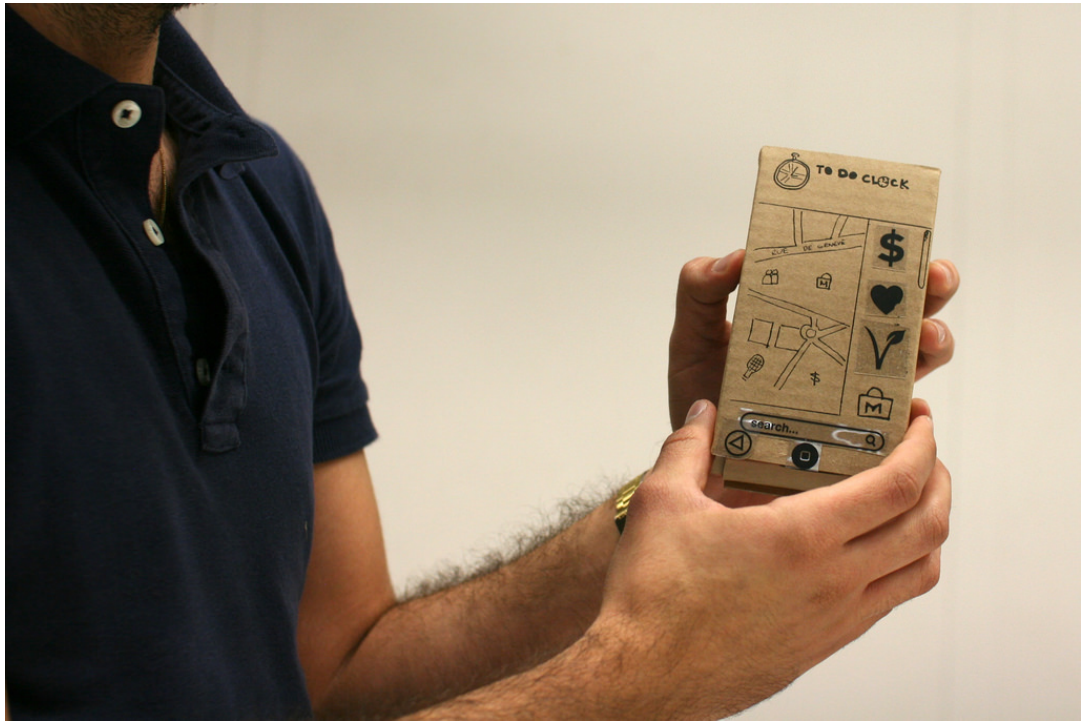
# Prototyping



# Activity #2 Paper Prototype

Based on the problem identifies, discuss on how to materialize your idea. You are provided with papers, pencils, glue, scissors, marker pens, and manila cards

1. Decide what platform will be used to the solutions
2. Use the card boards as the platform and papers as the screen
3. Design the user interface using marker pens (or sharpie)
4. Present your prototype to potential users (can do video recording etc)
5. Improvise


To Do clock
search...

$120