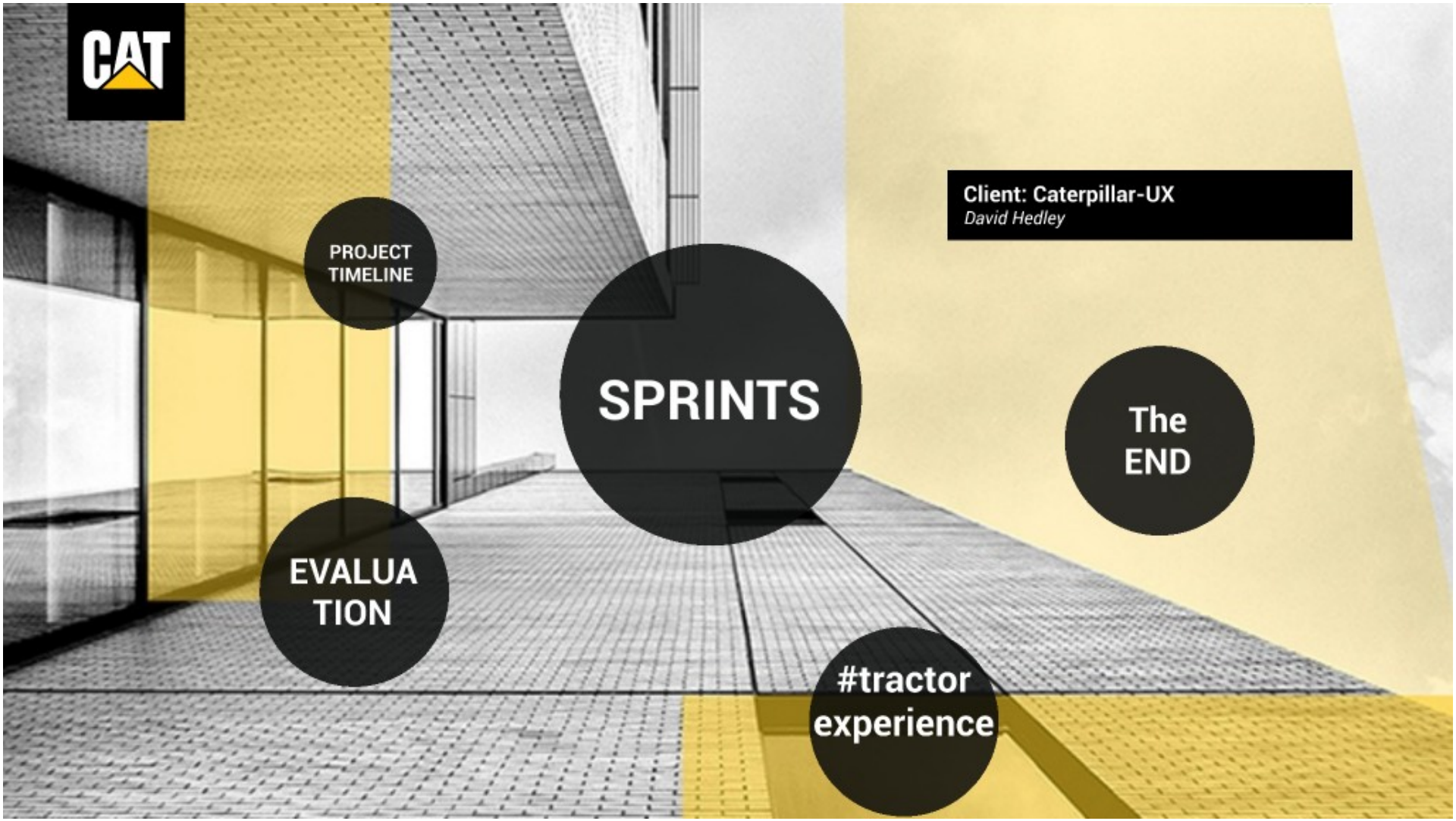
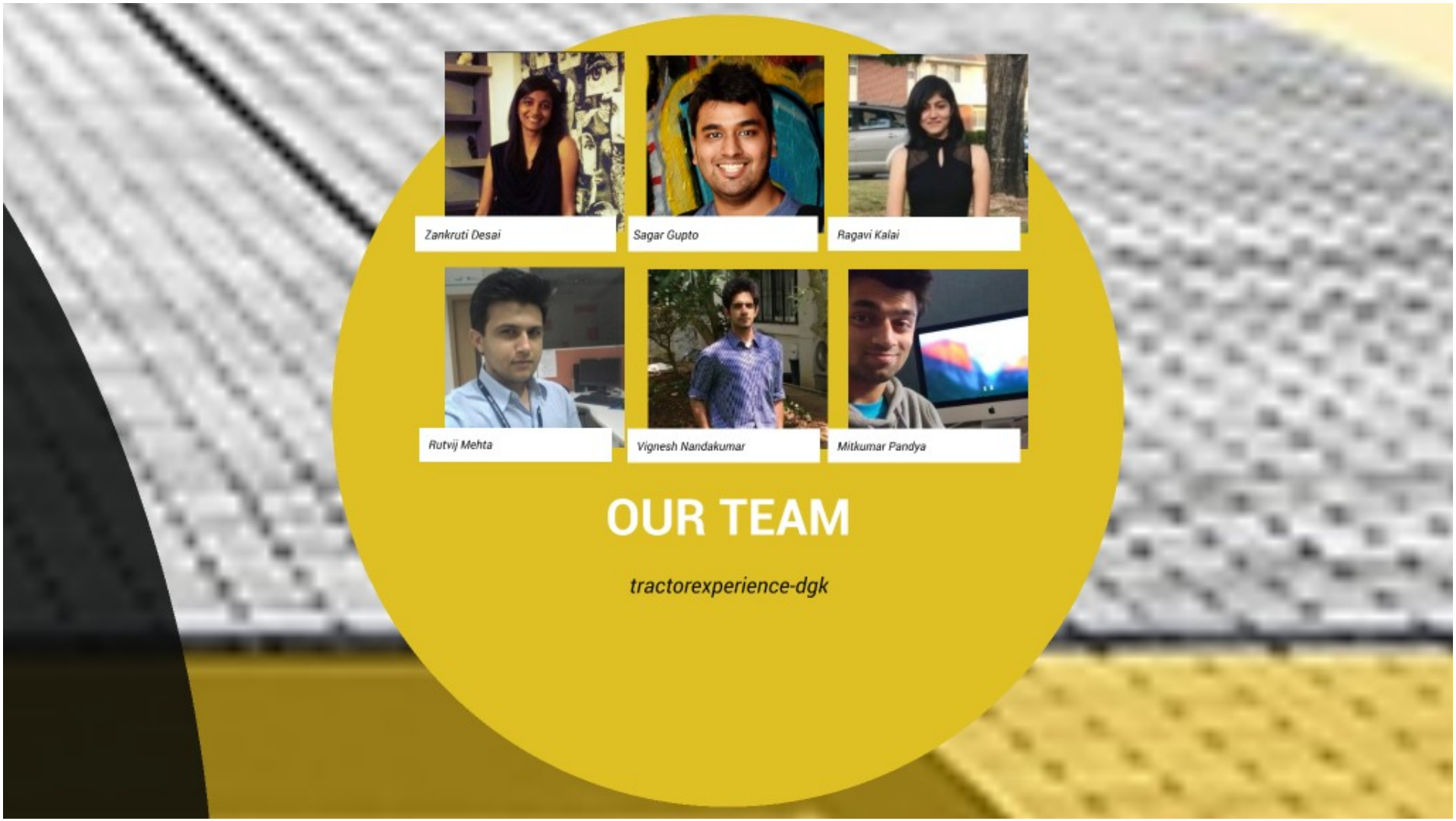

CAT
Client: Caterpillar-UX
David Hedley
PROJECT TIMELINE
SPRINTS
The END
EVALUA TION
#tractor experience


#tractorexperience
Our Team
Problem Statement

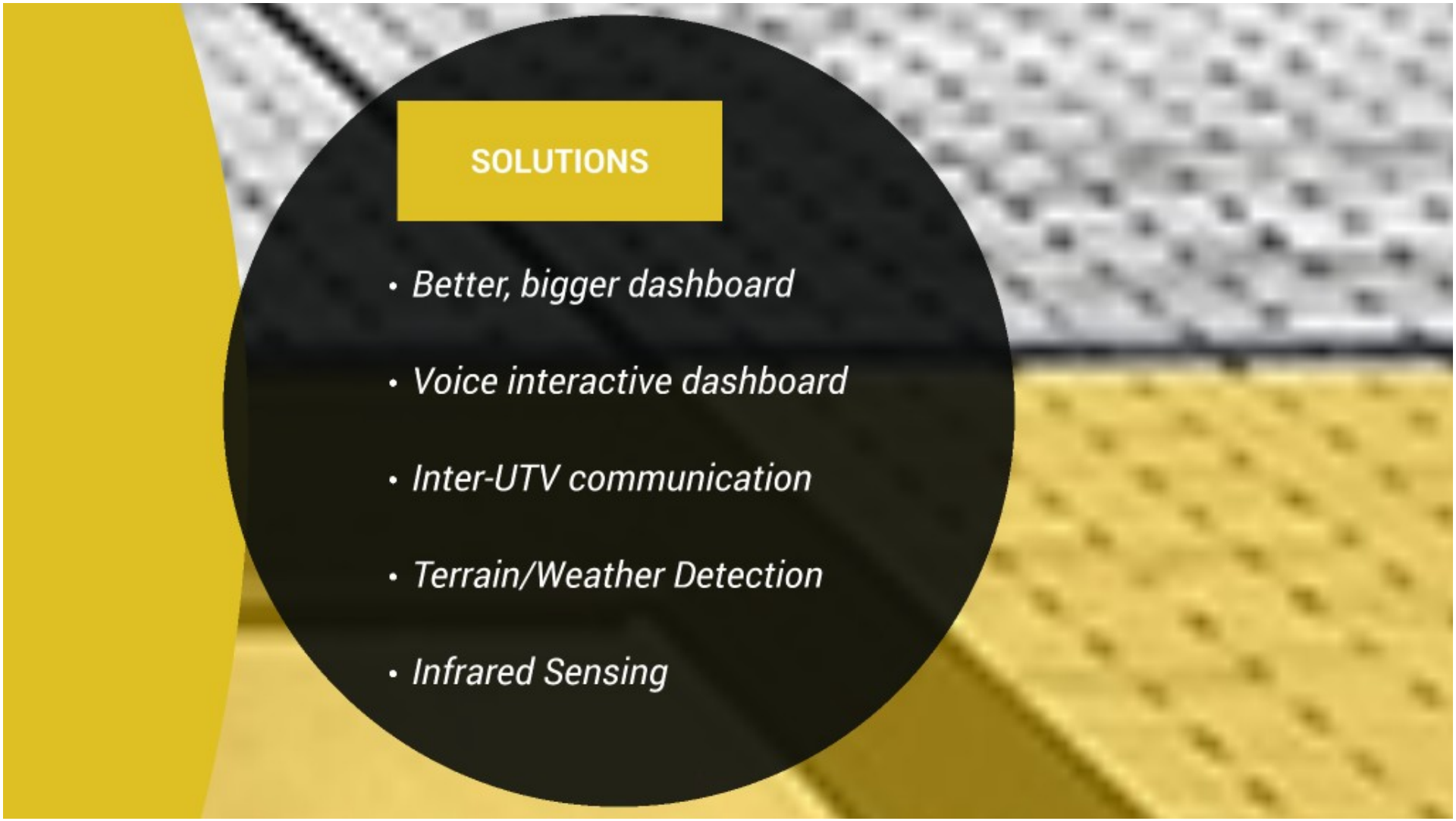

Zankruti Desai
Sagar Gupto
Ragavi Kalai
Rutvij Mehta
Vignesh Nandakumar
Mitkumar Pandya
OUR TEAM
tractorexperience-dgk

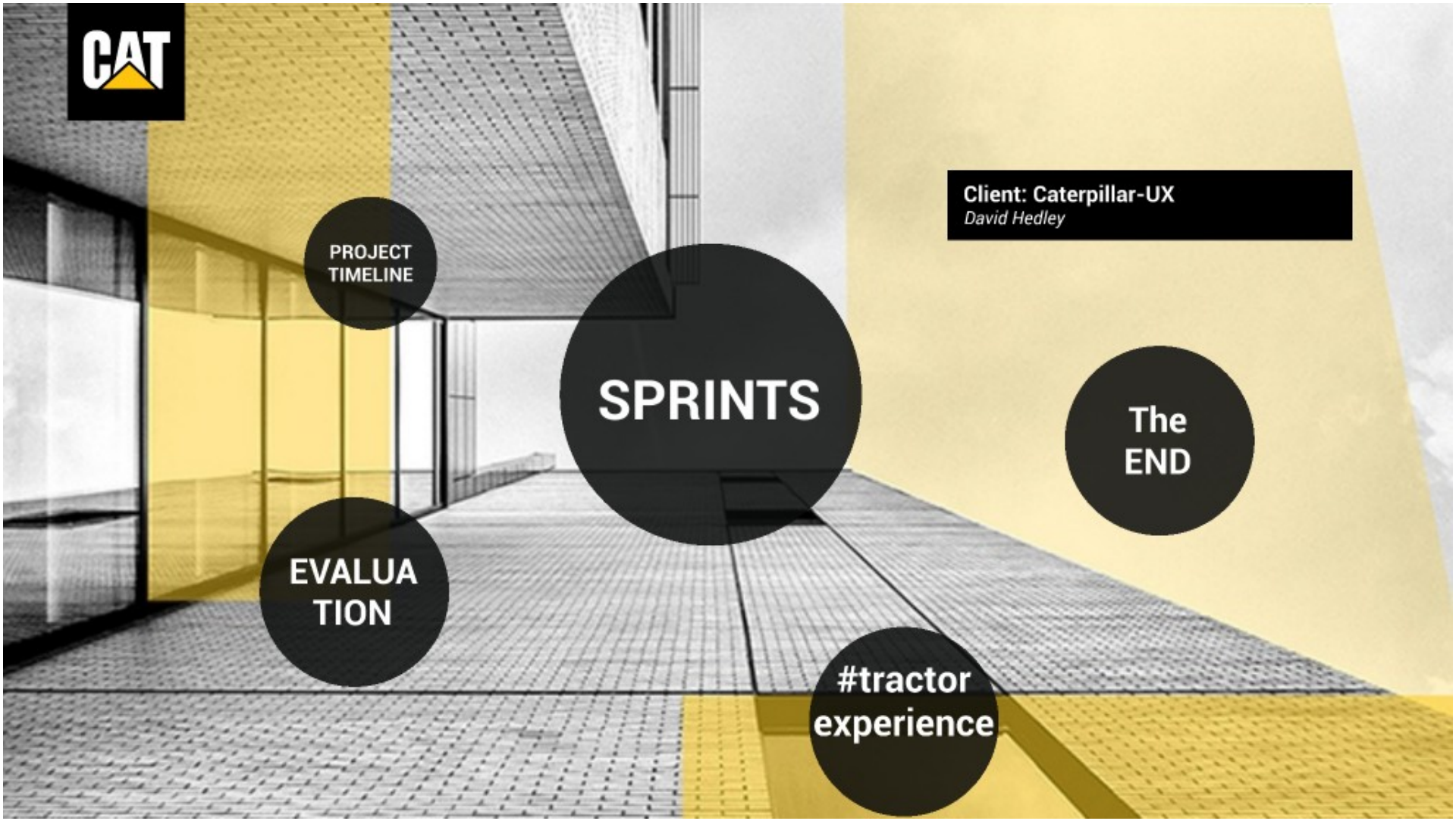
Problems

- How can we disrupt the UTV market and differentiate from the competetion?

- How can we create the safest UTV on the market utilising some cutting-edge technology?

Prototype Solution


SOLUTIONS
• Better, bigger dashboard
• Voice interactive dashboard
• Inter-UTV communication
• Terrain/Weather Detection
• Infrared Sensing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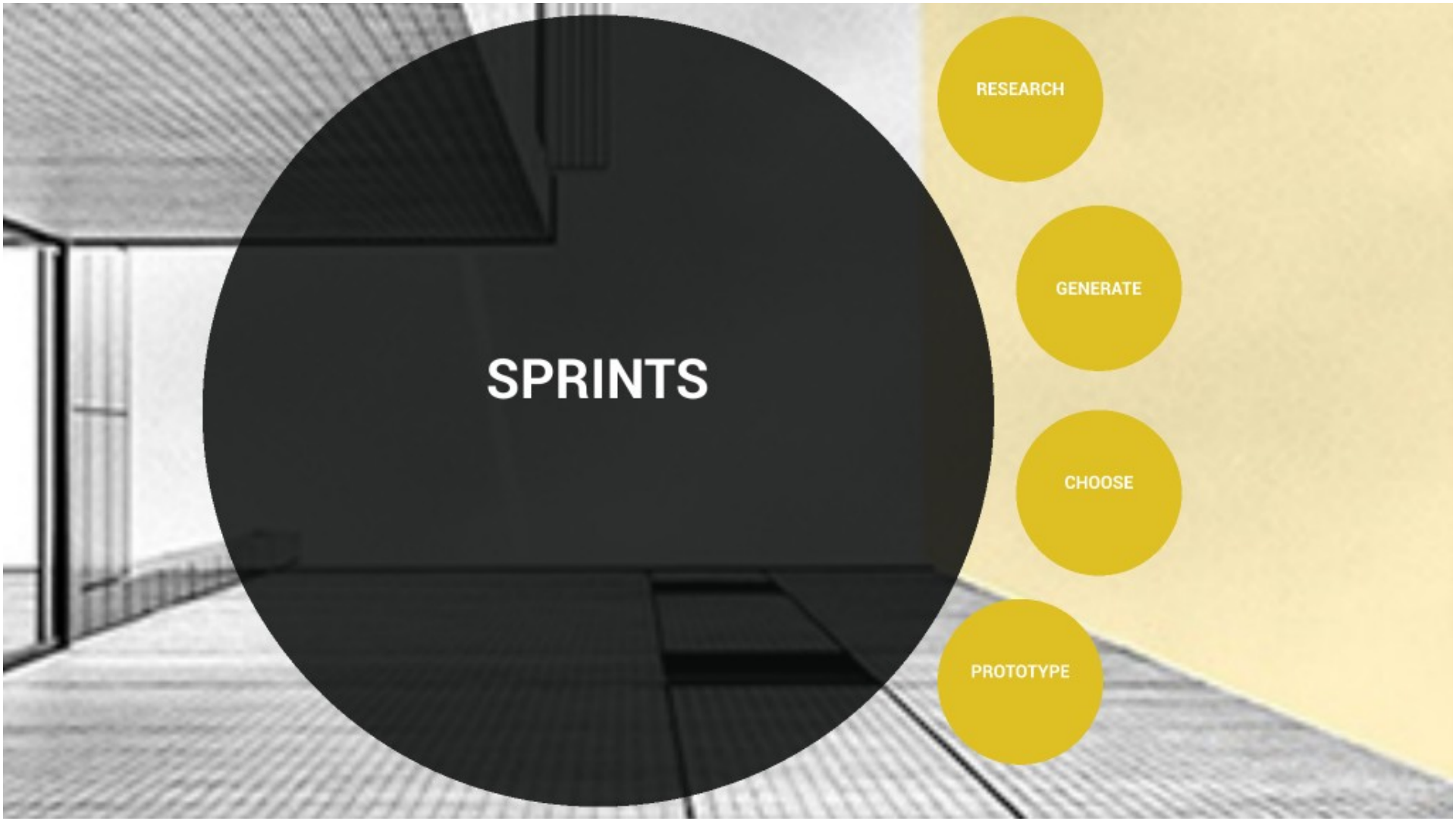
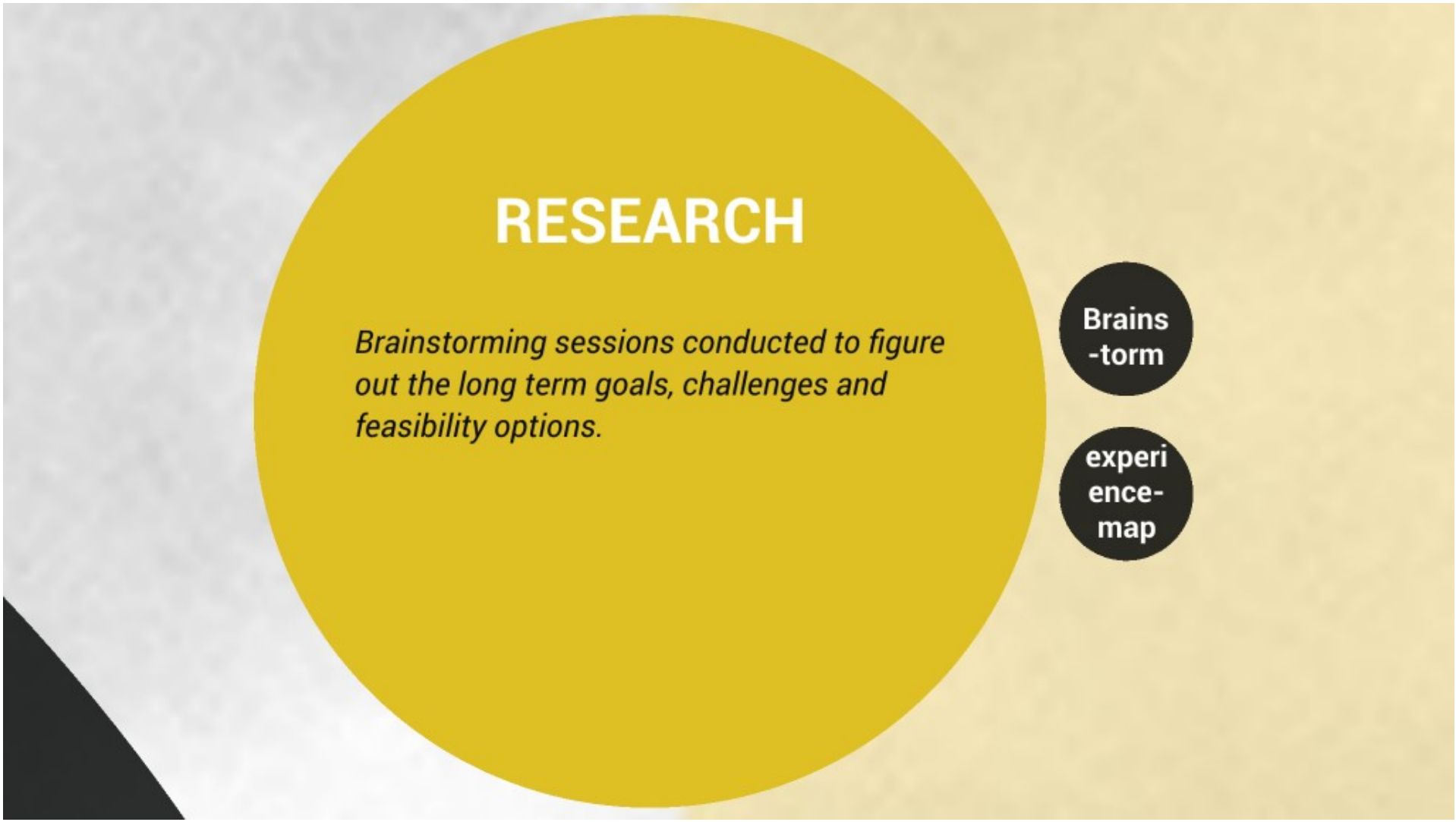
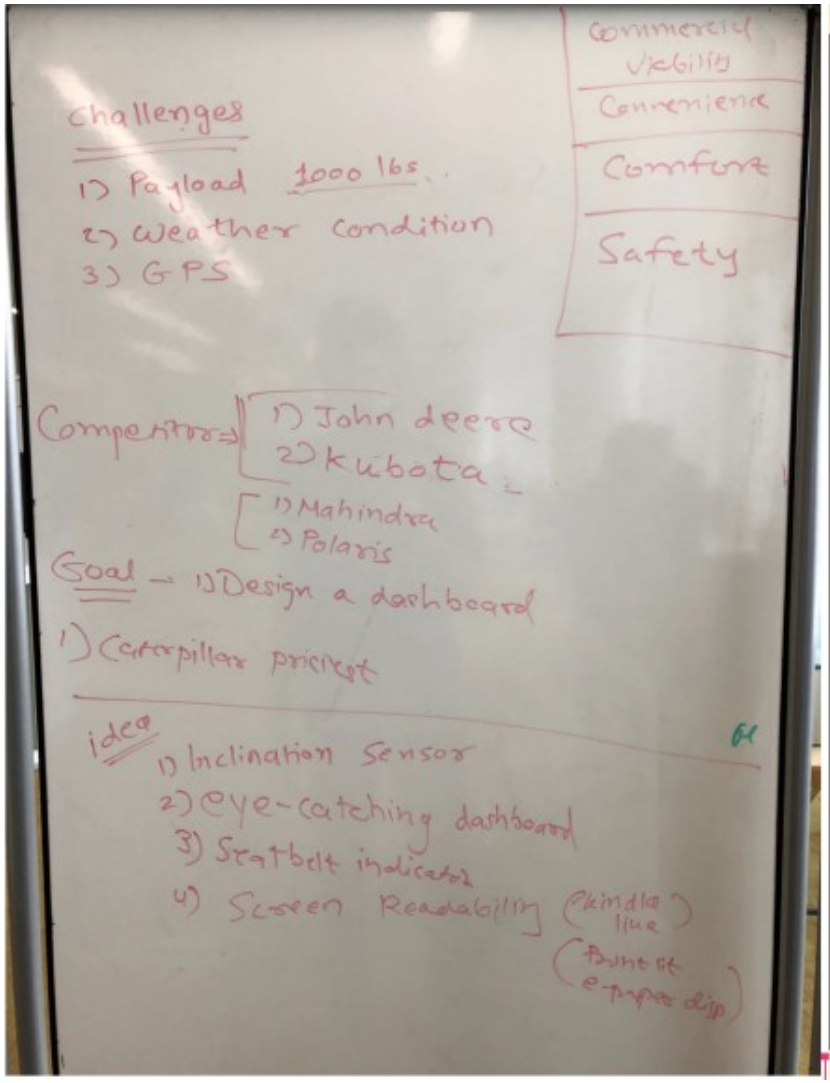
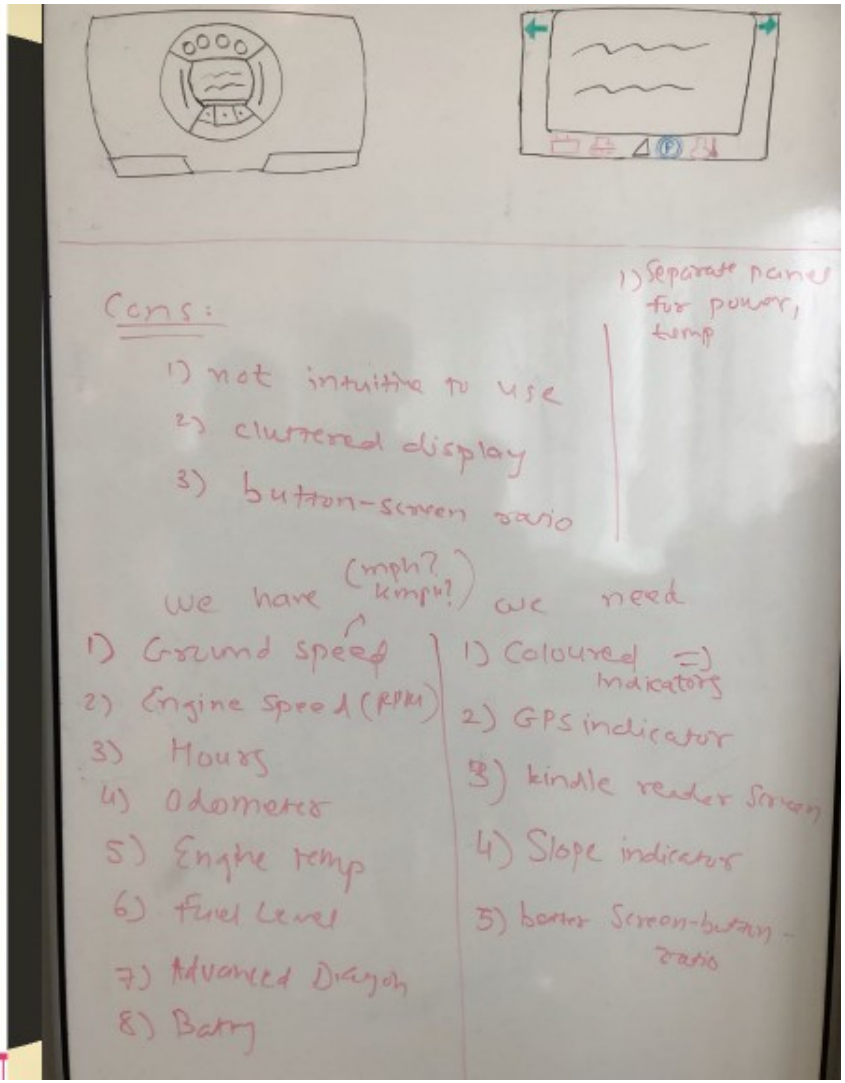
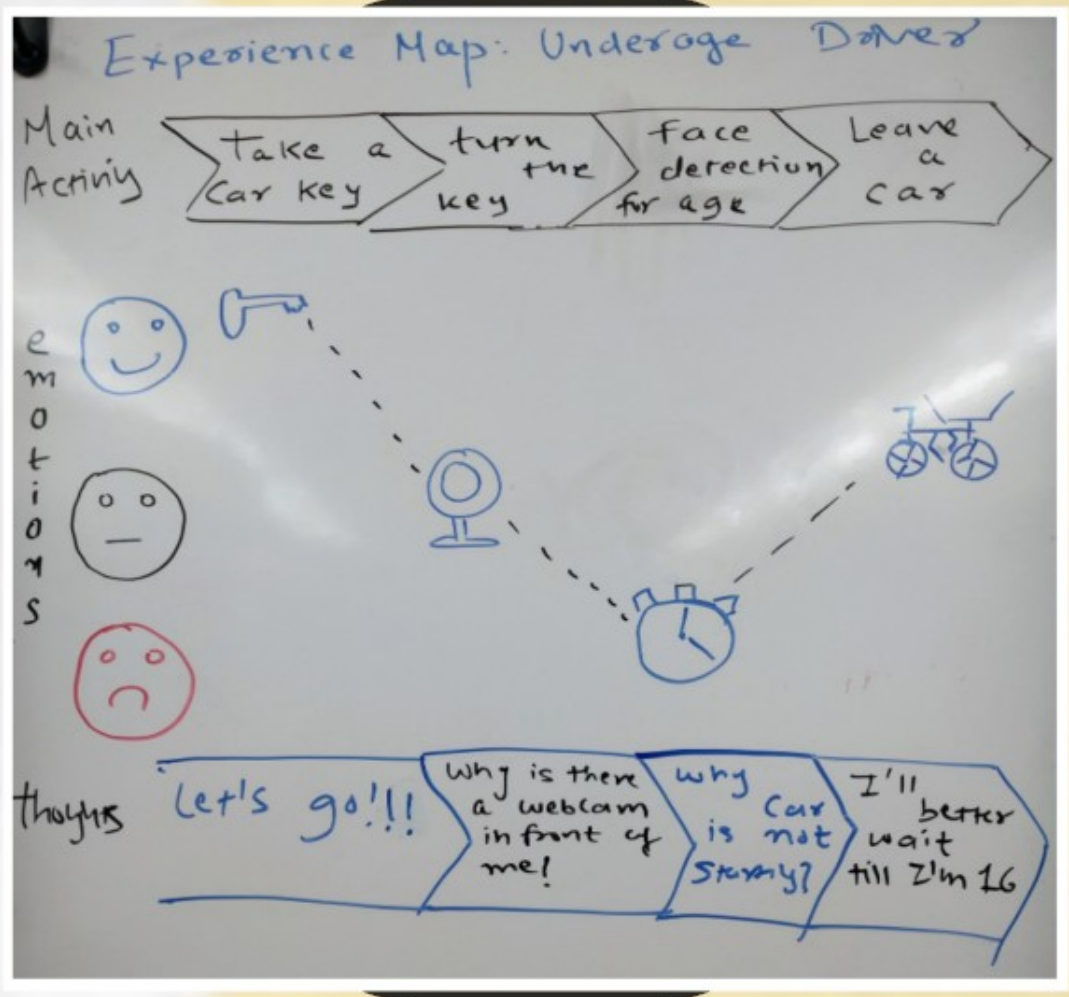

SPRINTS
RESEARCH
GENERATE
CHOOSE
PROTOTYPE


RESEARCH
Brainstorming sessions conducted to figure out the long term goals, challenges and feasibility options.
Brains -torm
experi ence- map

fter a few
ours of
ainstorming ...






Experience Map: Underage Driver
Main Activity
Take a Car key
turn the key
face detection for age
Leave a car
emotions
thoughts
Let's go!!!
Why is there a webcam in front of me!
Why Car is not Starting?
I'll better wait till I'm 16

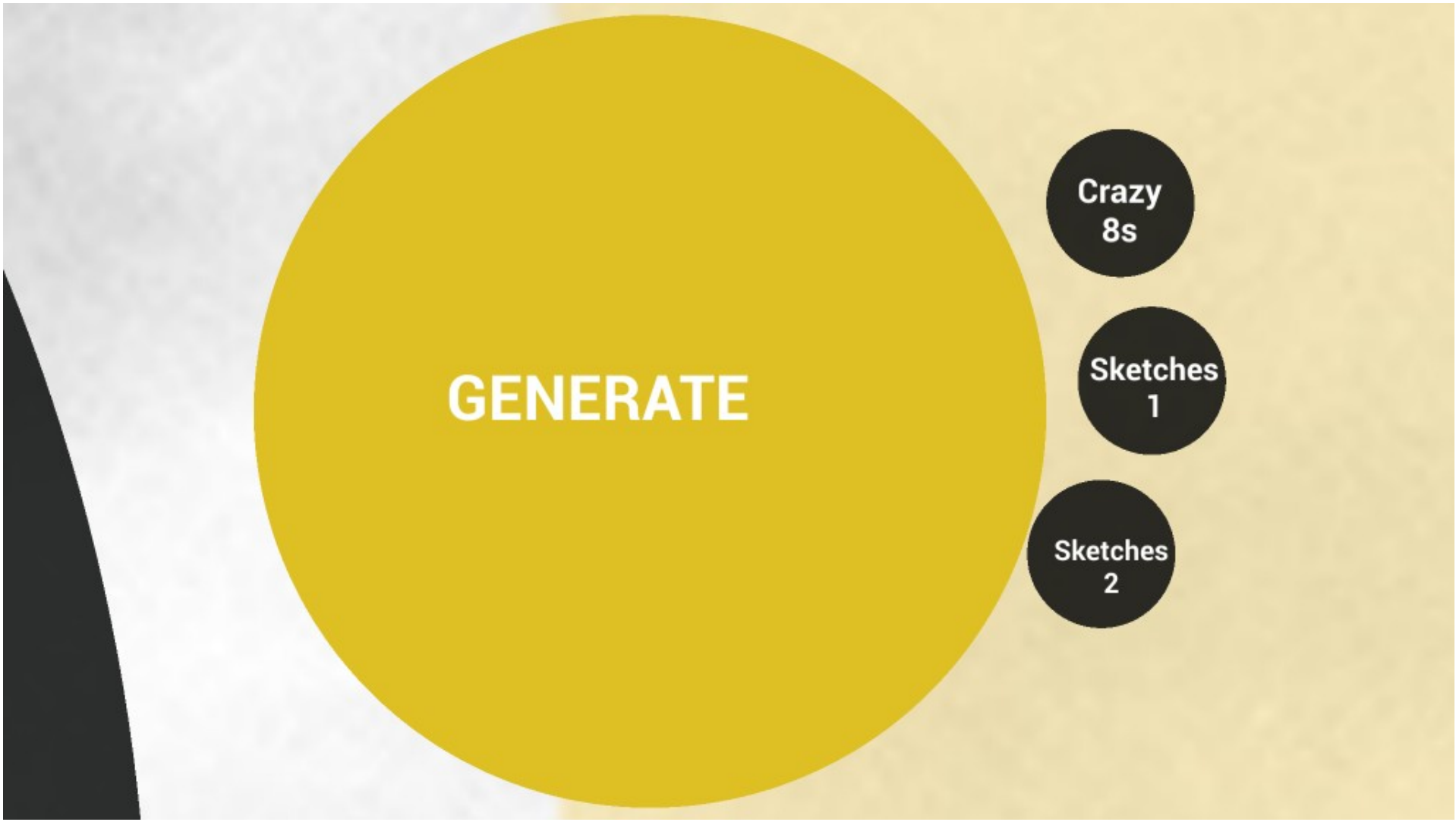
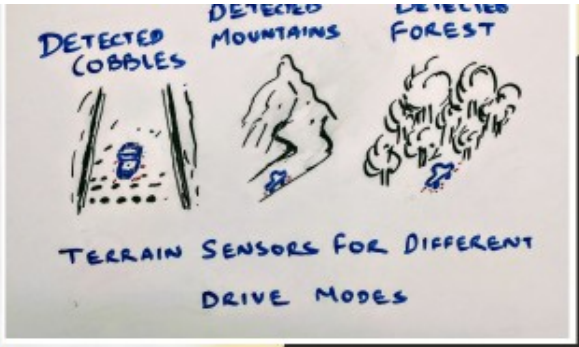

GENERATE
Crazy 8s
Sketches 1
Sketches 2


IMAGE RECOGNITION
VOICE INTERACTIVE DASHBOARD
LOAD SECURED?
TOWING?
DROWSY DRIVER?
DRUNK DRIVER?
Finger Print Sensor
Child lock
Bigger display panel
Payload Sensor
Optimum path locator
Slope detection
UTV to UTV communication
Speed Control feature
CRAZY 8s
GPS SOS
TERRAIN SENSOR
CLOSED CABIN WITH CLIMATE CONTROL
AUTO GEAR SHIFT
HEAD UP DISPLAY
28 mph
TRACTION CONTROL
CONTROL USING MOBILE
RADAR SENSORS
UTV - Unique Code Communication
Eye catching Control
GESTURE CONTROL
UTV
Winding Road
RIGHT
LEFT
Dynamic Boarding
Mobile Charging Station
RADAR
LANDSLIDE
Blind SPOT DETECT
vibrators
Drone P.O.V. on dash board
alert Payload capacity exceeded
Elephants nearby
FIRE


DETECTED COBBLES
MOUNTAINS
FOREST
TERRAIN SENSORS FOR DIFFERENT DRIVE MODES

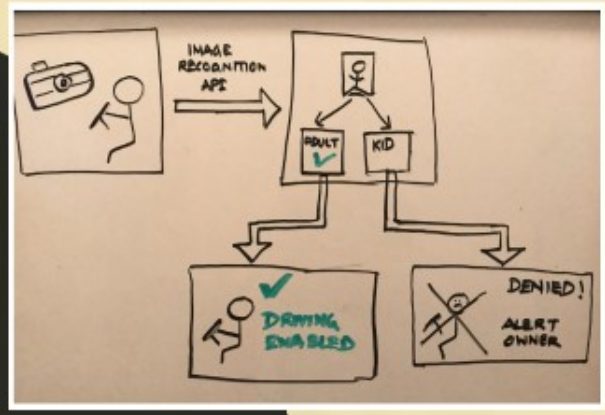
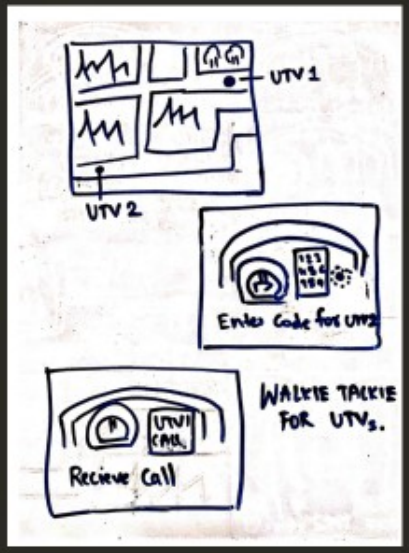
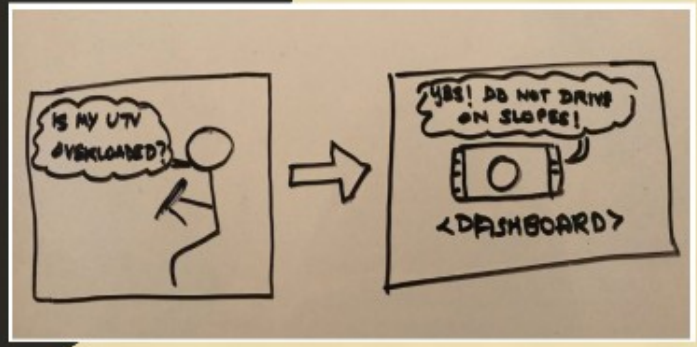


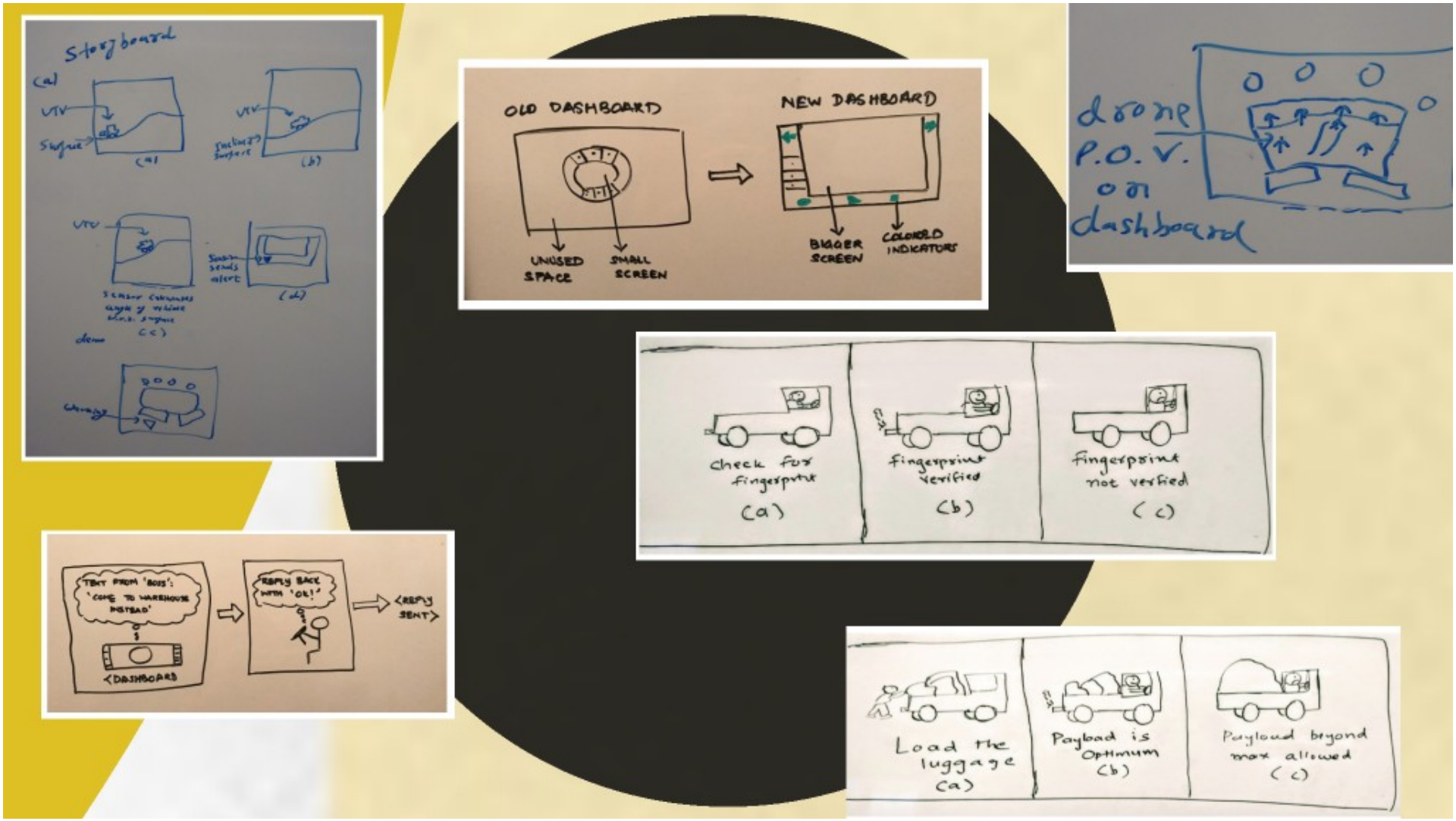
IMAGE RECOGNITION API
ADULT
KID
DRIVING ENABLED
DENIED!
ALERT OWNER

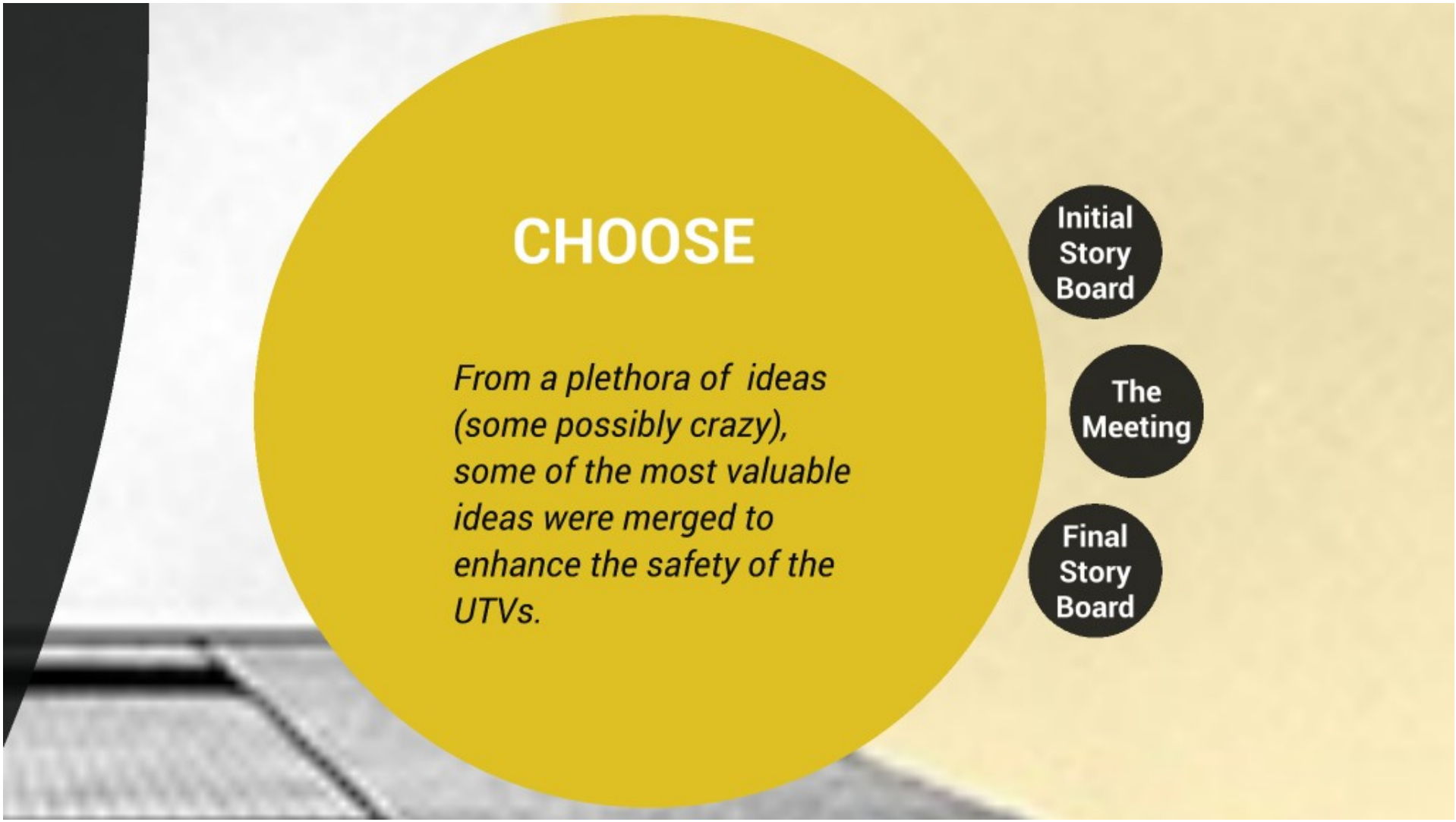

CLOUD
INFORMATION LOGGING SENT BY UTV DRIVER
Another UTV gets Dynamic Routed to Route B

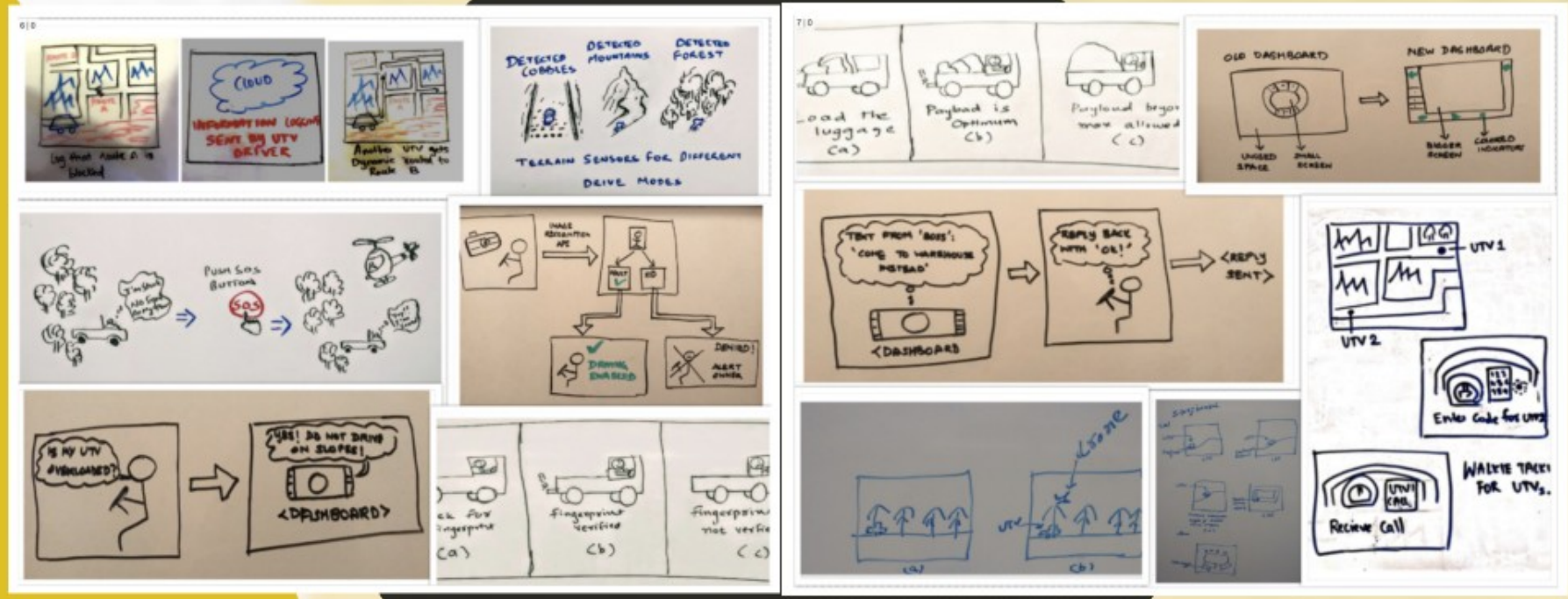

UTV 1
UTV 2
Enter Code for UTV2
Recieve Call
WALKIE TALKIE FOR UTVs.


IS MY UTV OVERLOADED?
YES! DO NOT DRIVE ON SLOPES!
<DASHBOARD>

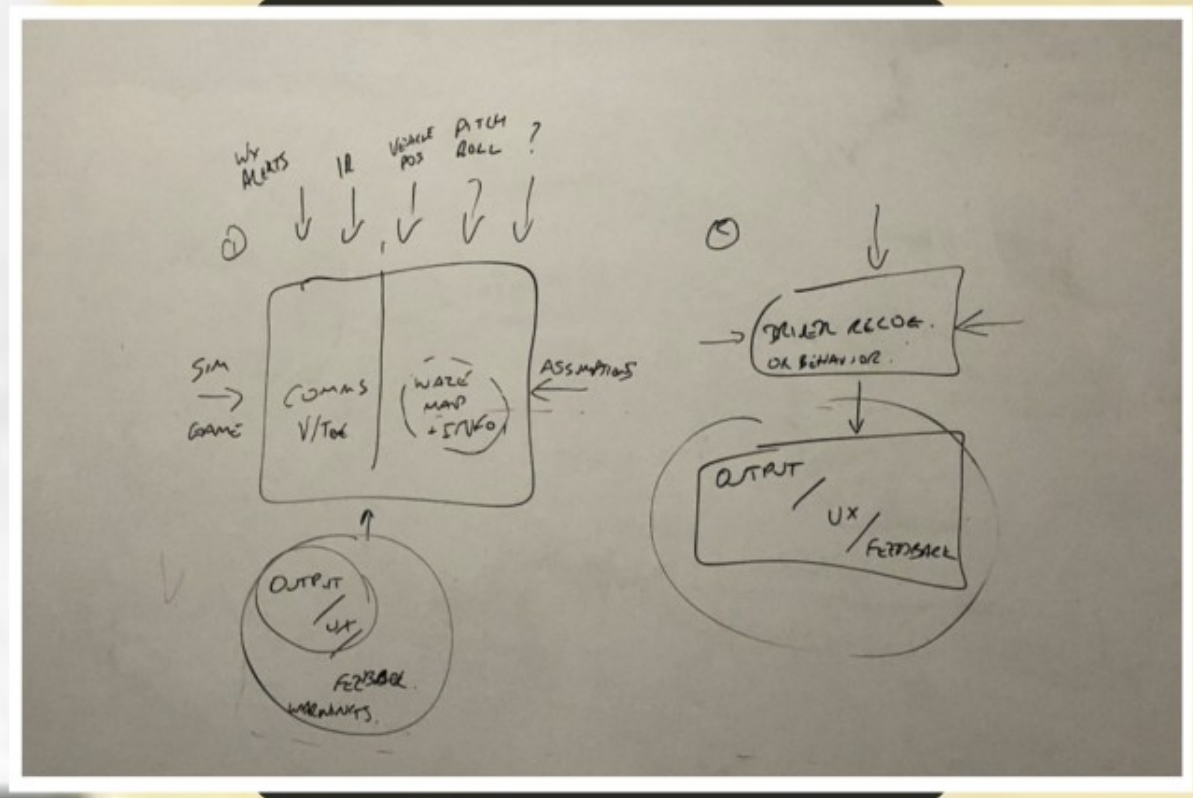

PUSH SOS BUTTON
SOS


Storyboard
OLD DASHBOARD
NEW DASHBOARD
UNUSED SPACE
SMALL SCREEN
BIGGER SCREEN
COLORED INDICATORS
drone P.O.V. on dashboard
Check for fingerprint
(a)
Fingerprint verified
(b)
Fingerprint not verified
(c)
TEXT FROM 'BOSS': 'COME TO WAREHOUSE INSTEAD'
<DASHBOARD
REPLY BACK WITH 'OK!'
<REPLY SENT>
Load the luggage
(a)
Payload is Optimum
(b)
Payload beyond max allowed
(c)

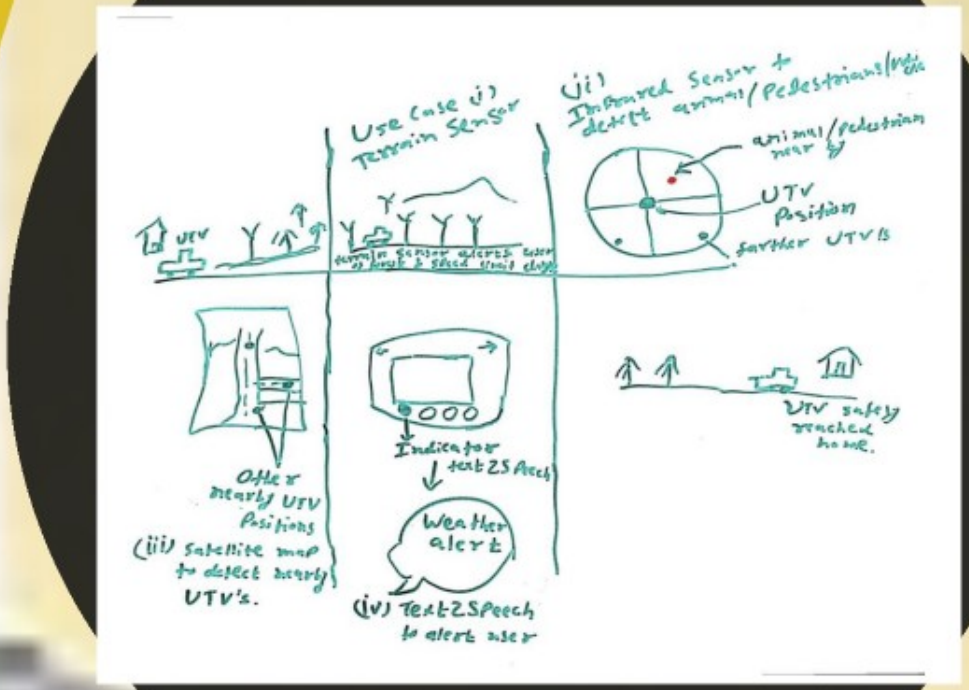

CHOOSE
From a plethora of ideas (some possibly crazy), some of the most valuable ideas were merged to enhance the safety of the UTVs.
Initial Story Board
The Meeting
Final Story Board

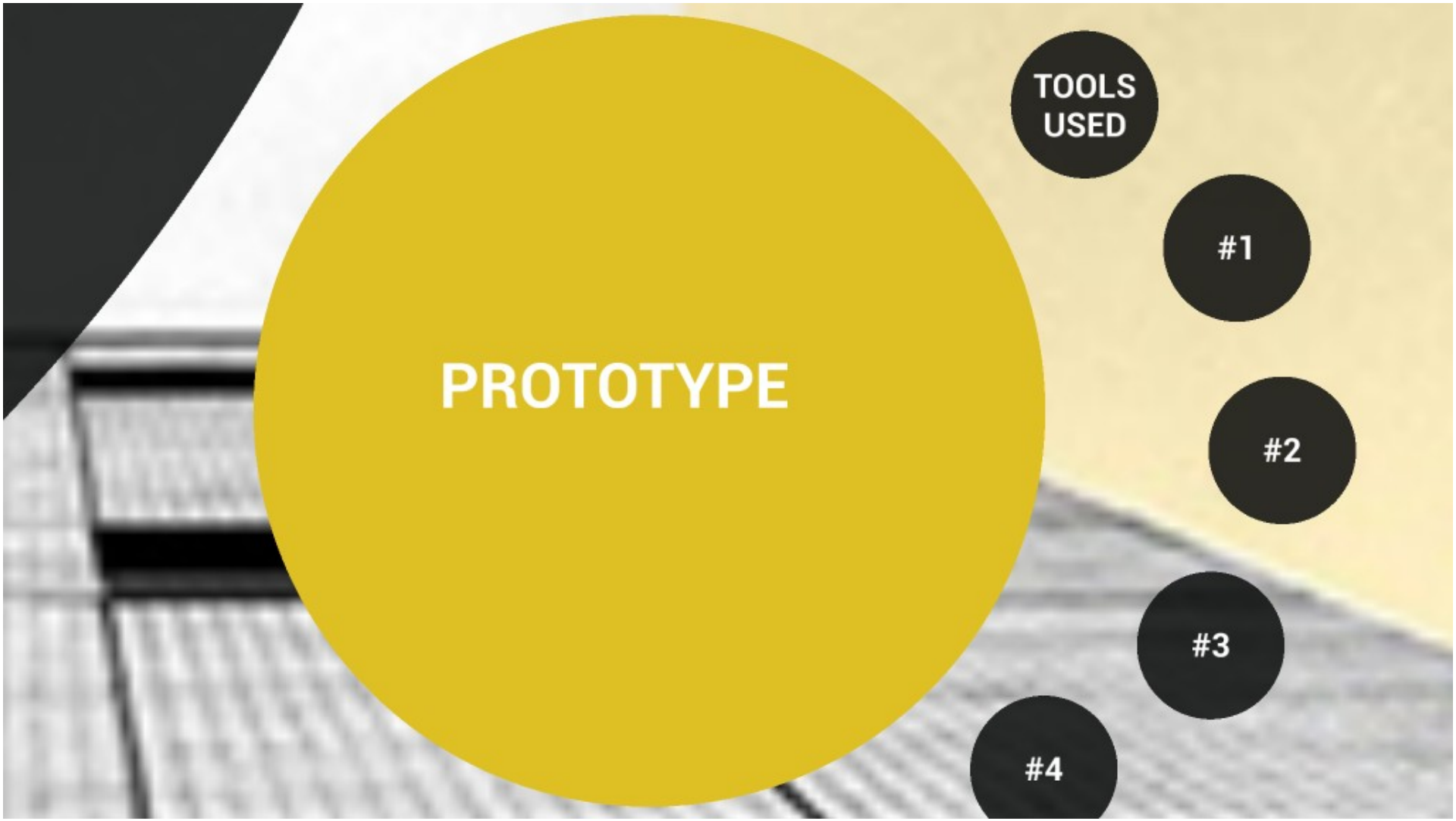

CLOUD
SENT BY UTV DRIVER
DETECTED COBBLES
DETECTED MOUNTAINS
DETECTED FOREST
TERRAIN SENSORS FOR DIFFERENT DRIVE MODES
Load the luggage (a)
Payload is Optimum (b)
Payload beyond max allowed (c)
OLD DASHBOARD
NEW DASHBOARD
UNUSED SPACE
SMALL SCREEN
BIGGER SCREEN
COLORED INDICATORS
PUSH SOS BUTTON
SOS
TEXT FROM 'BOSS': 'COME TO WAREHOUSE INSTEAD'
REPLY BACK WITH 'OK!'
<REPLY SENT>
<DASHBOARD>
IS MY UTV OVERLOADED?
YES! DO NOT DRIVE ON SLOPES!
<DASHBOARD>
fingerprint verified
UTV 1
UTV 2
Enter Code for UTV2
Recieve Call
WALKIE TALKIE FOR UTVs.

Merged Ideas

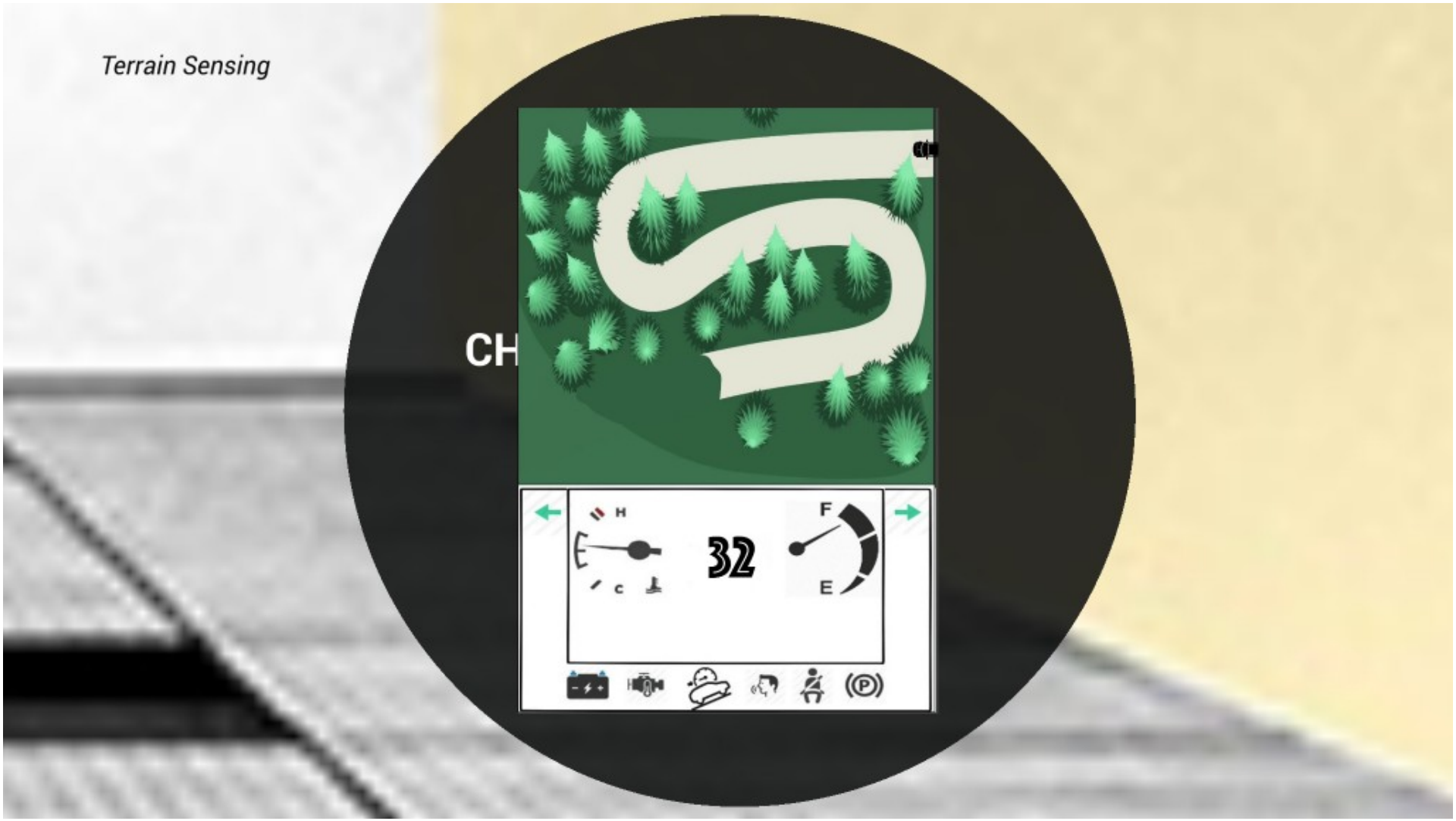


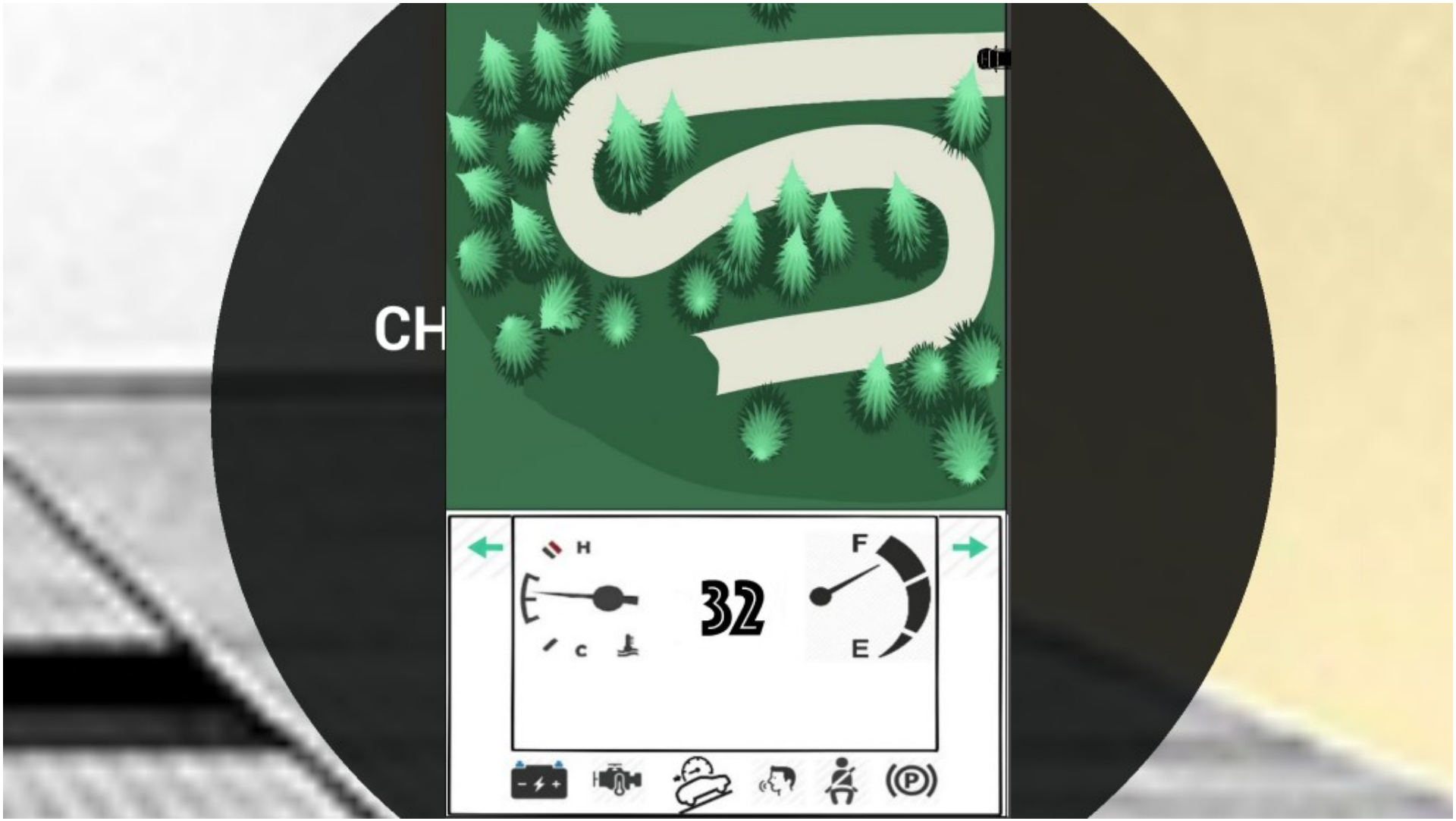
Chosen Merged Idea



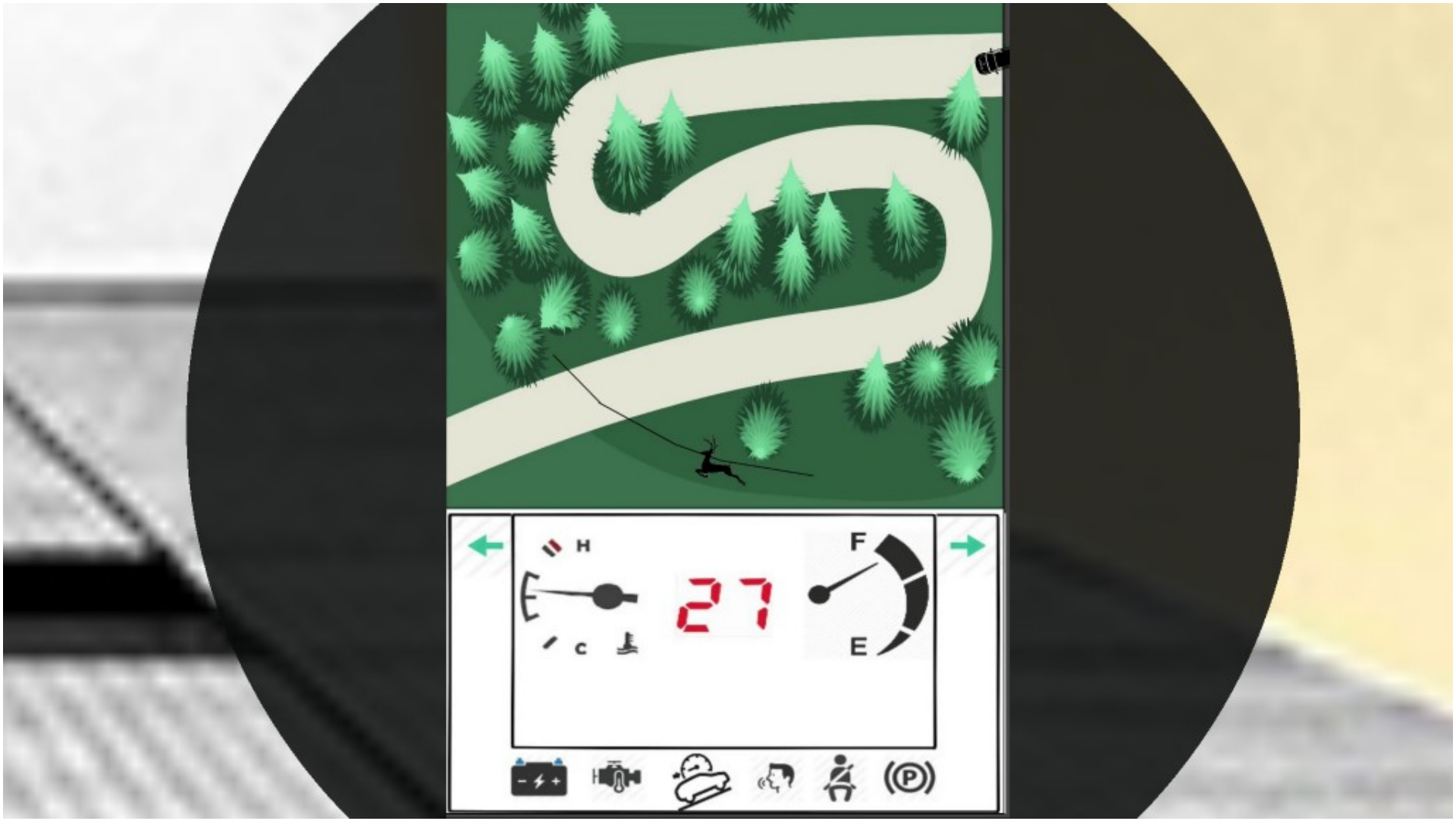

PROTOTYPE
TOOLS USED
#1
#2
#3
#4

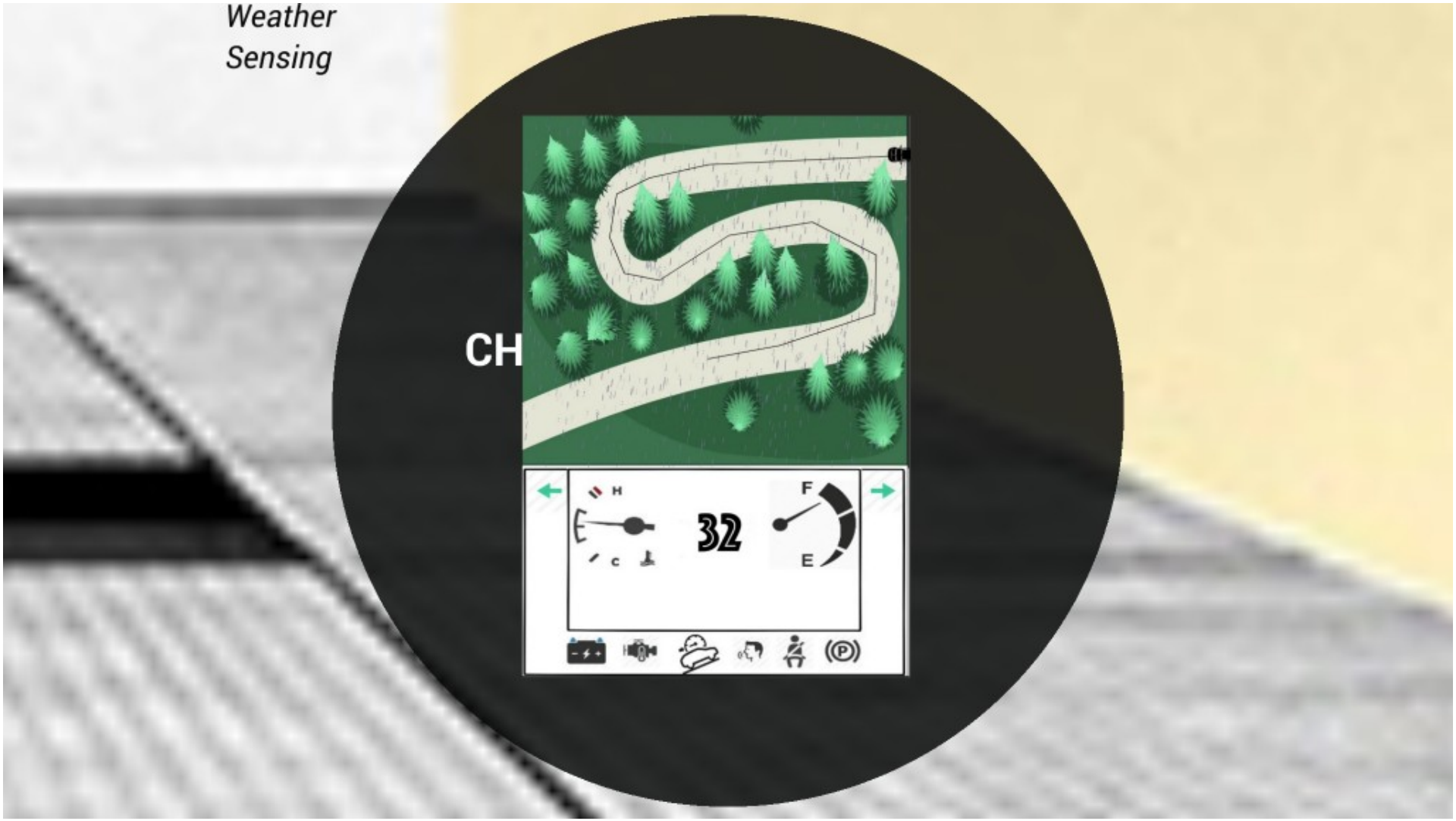

TOOLS USED
balsamiq
An

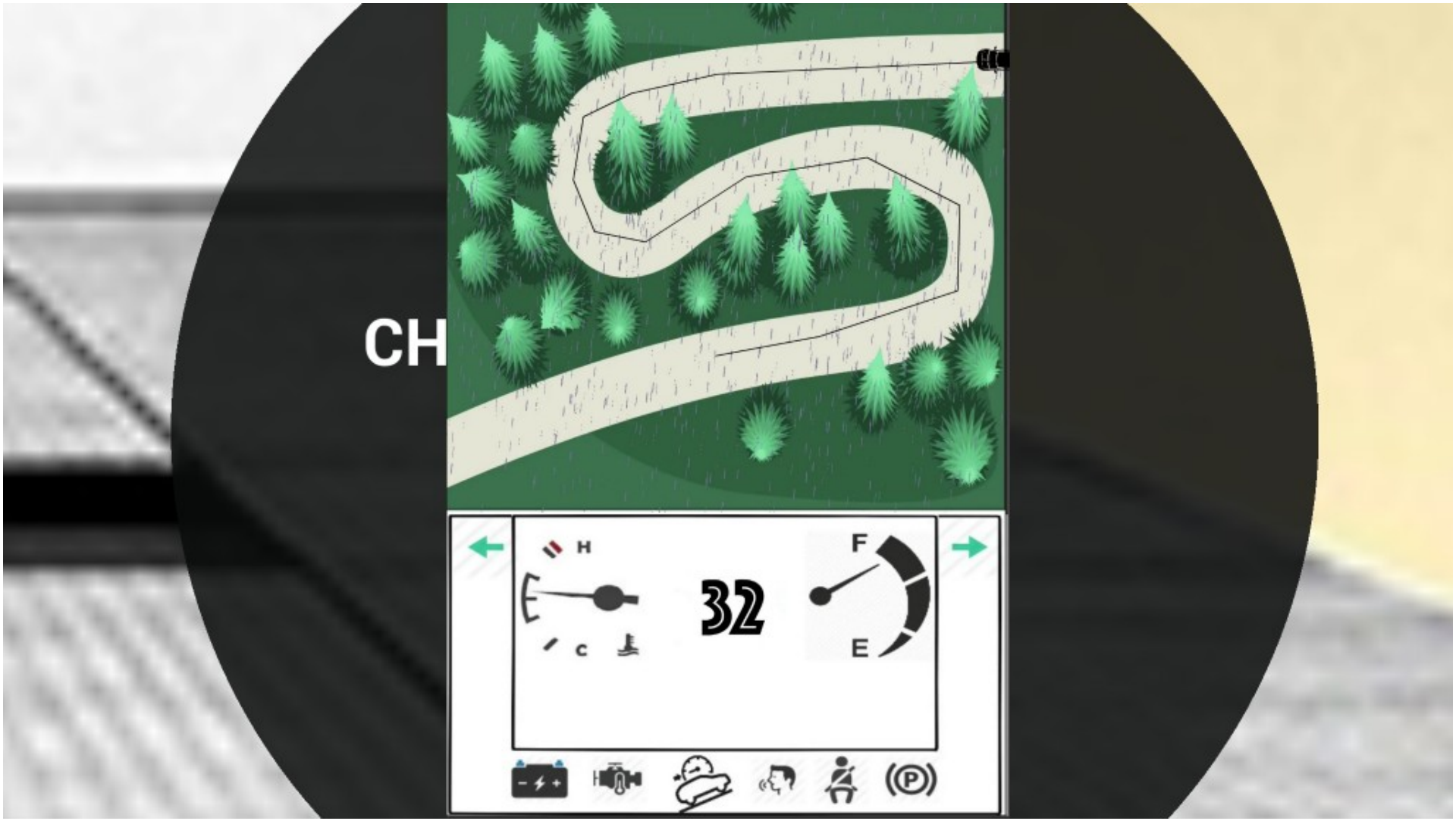

Terrain Sensing
CH
H
C
32
F
E


CH
H
C
32
F
E

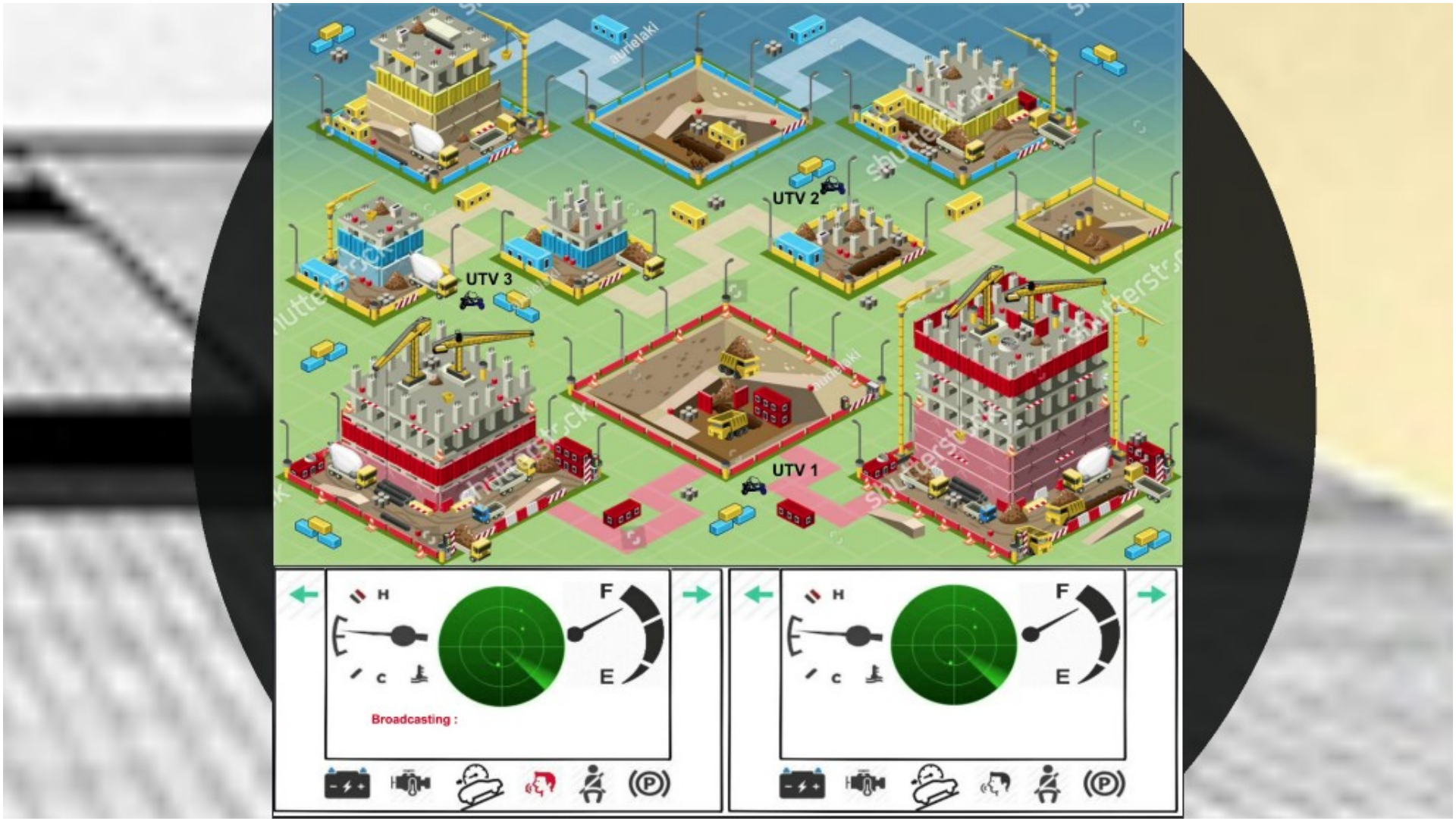

Obstacle
detection
H
C
27
F
E

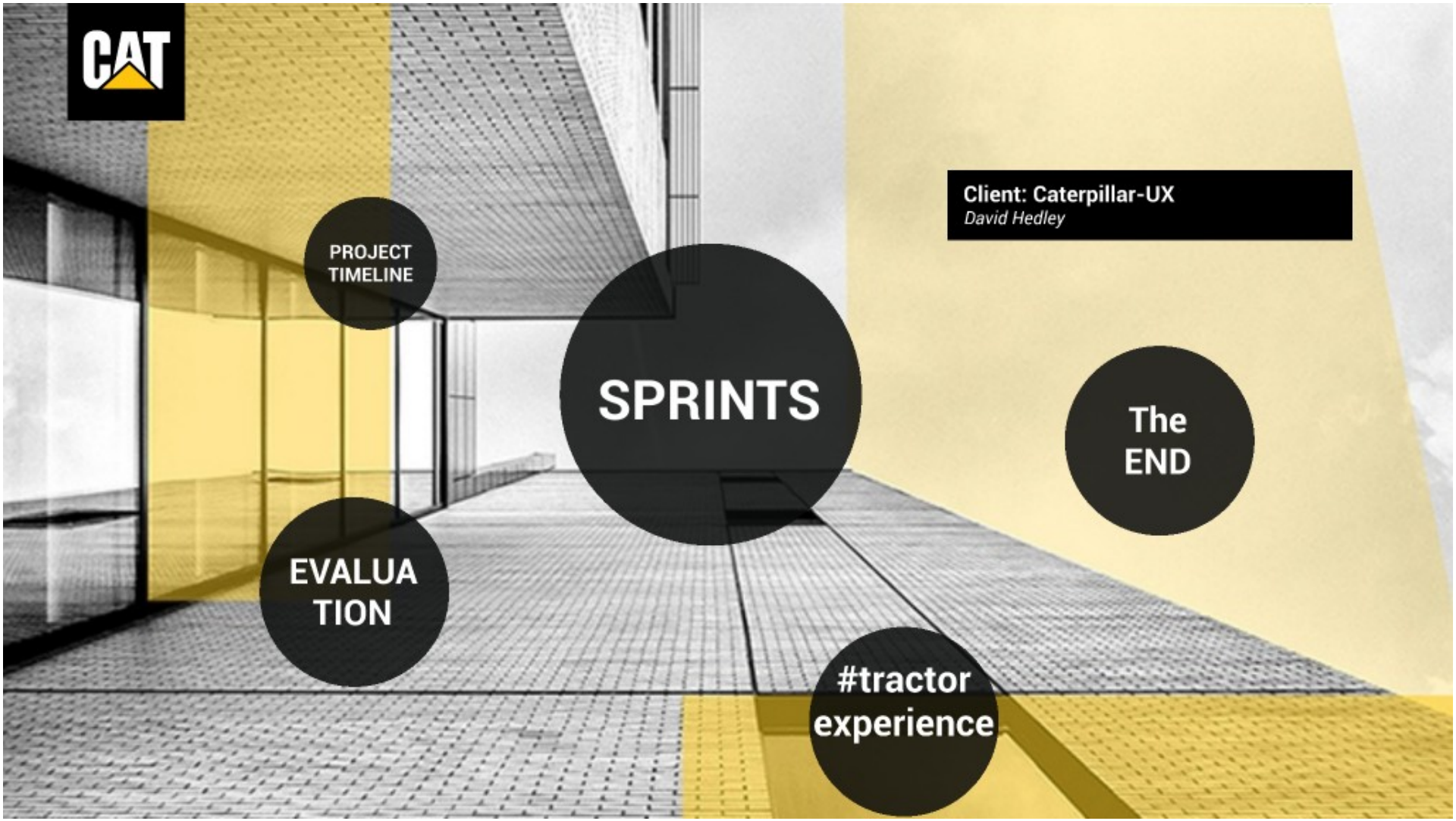

H
C
27
F
E


Weather
Sensing
CH
H
C
32
F
E

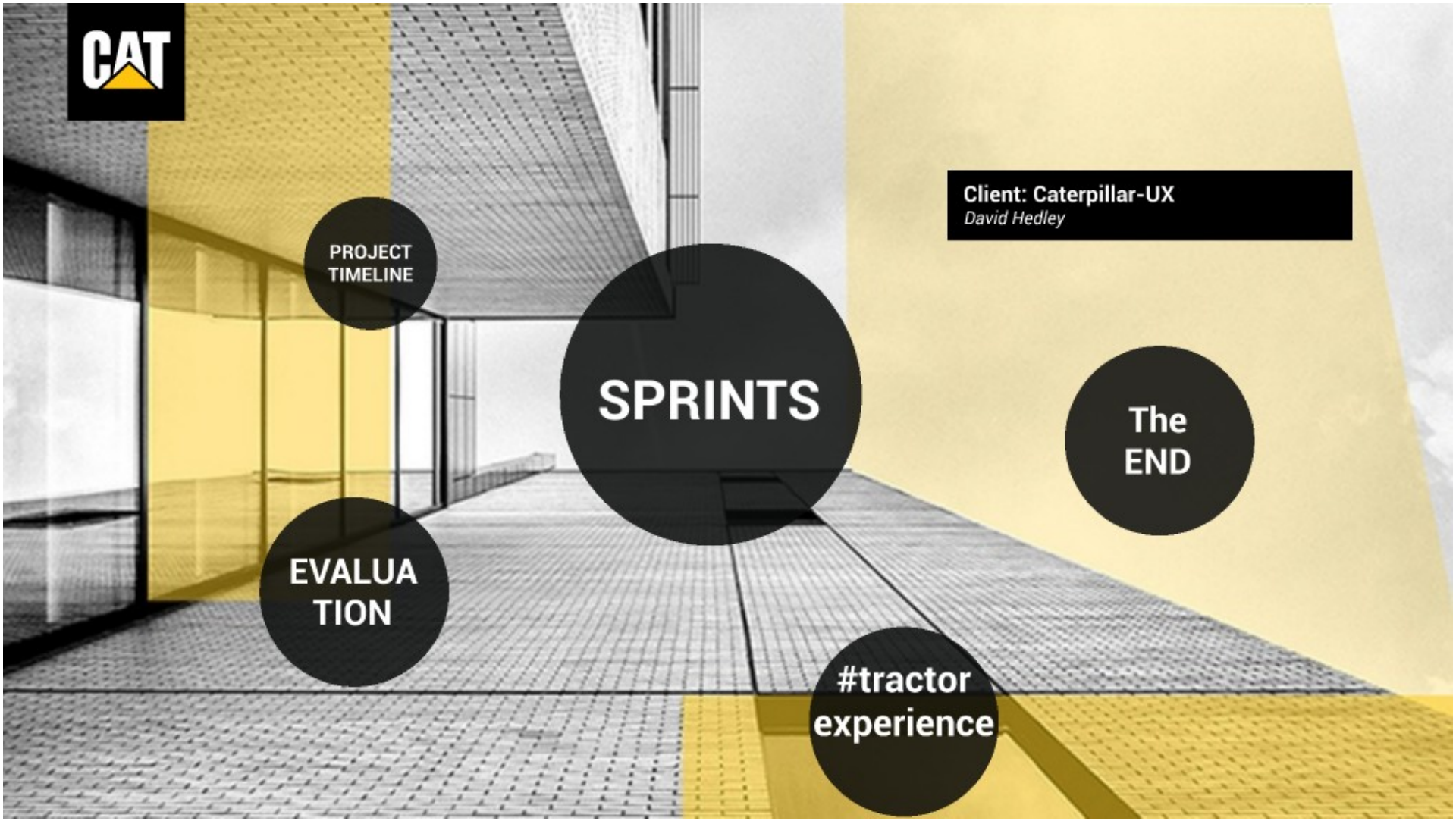

CH
H
C
32
F
E

Inter UTV communication

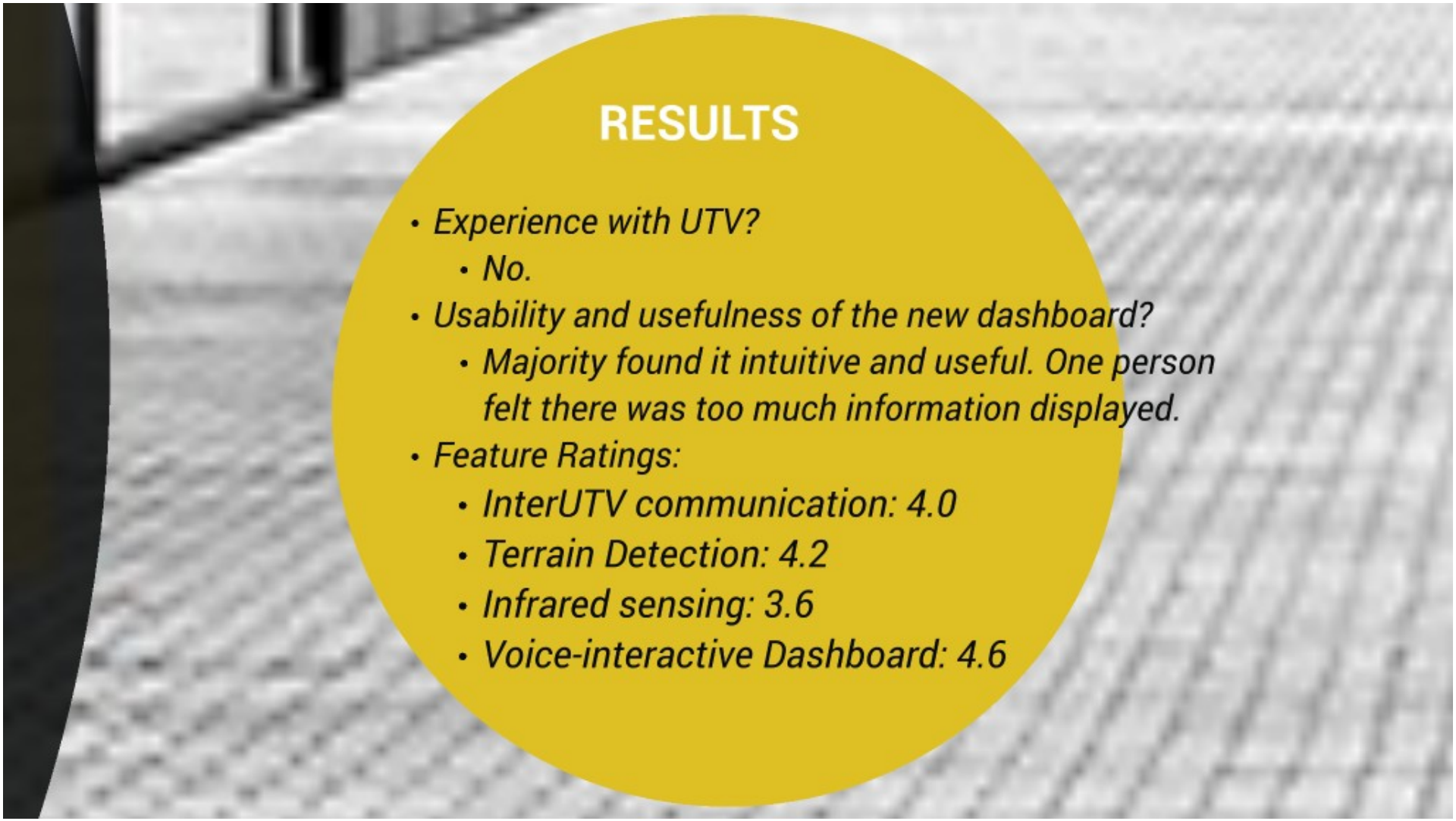

UTV 2
UTV 3
UTV 1
H
C
F
E
Broadcasting :
H
C
F
E

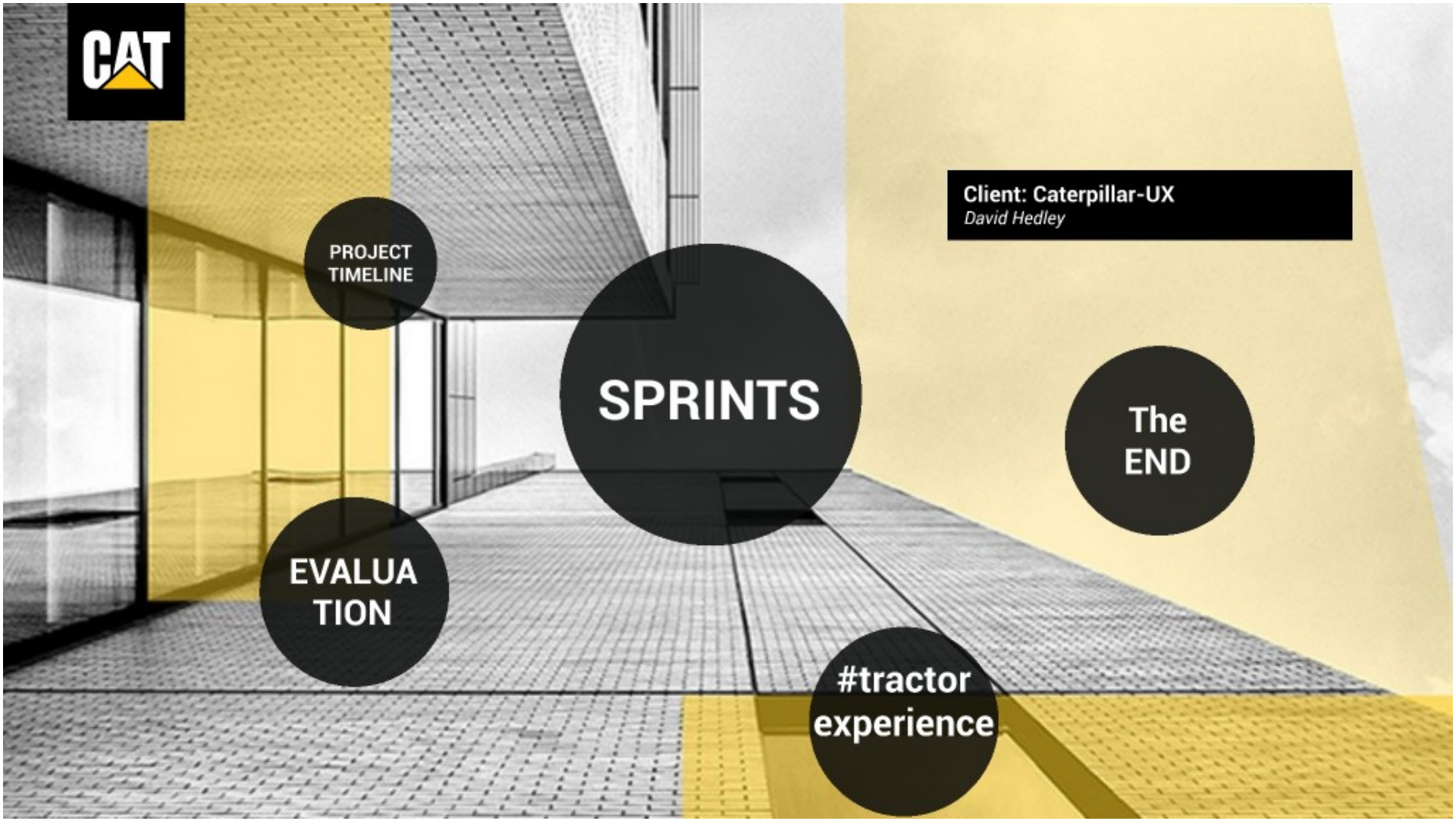

CAT
Client: Caterpillar-UX
David Hedley
PROJECT TIMELINE
SPRINTS
The END
EVALUA TION
#tractor experience


PROJECT
TIMELINE
Research
Generate
Choose
Prototype
Evaluation

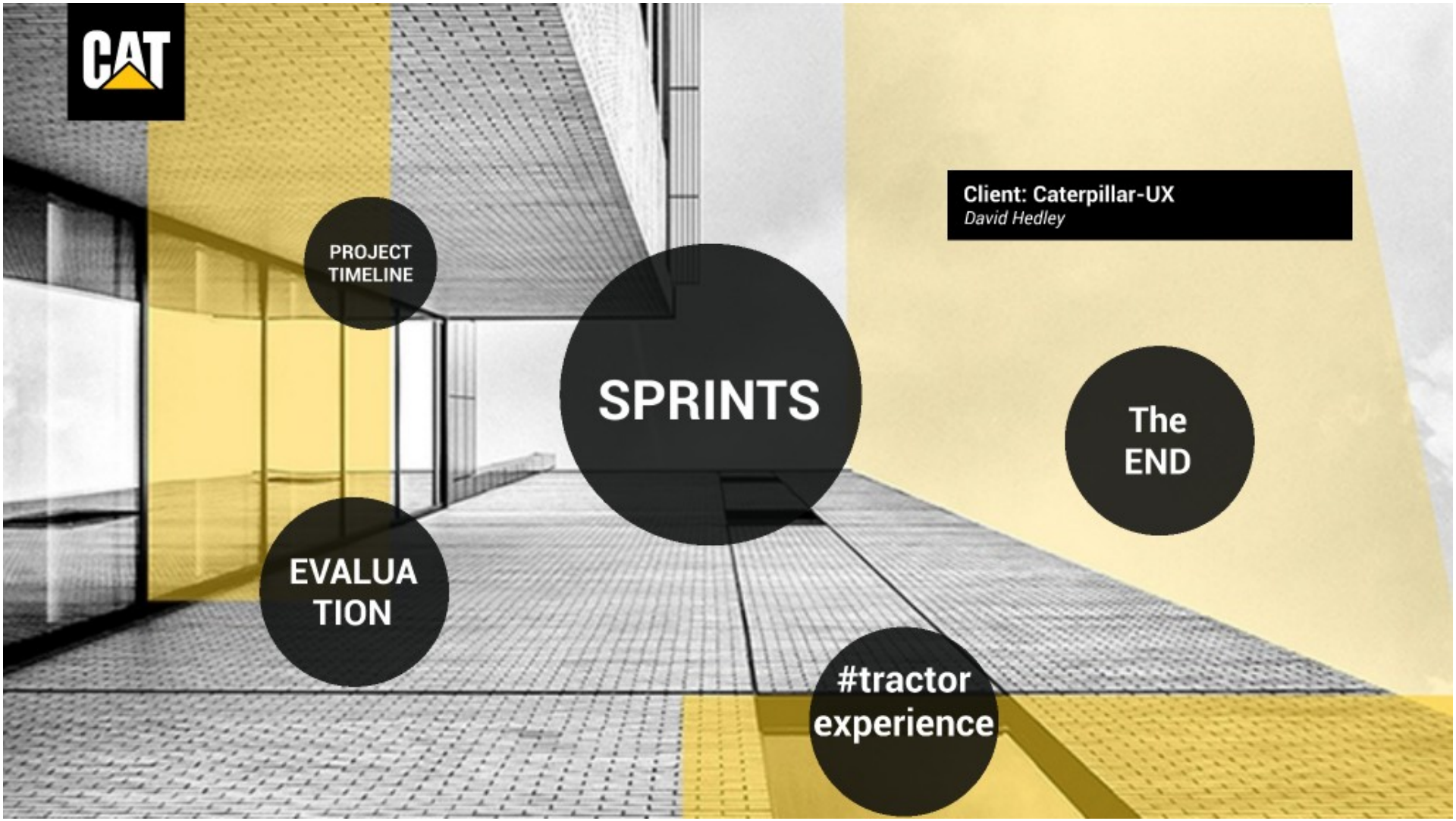

CAT
Client: Caterpillar-UX
David Hedley
PROJECT TIMELINE
SPRINTS
The END
EVALUA TION
#tractor experience


Interviews
• Lab: Grad Common Space, Hunt Library
• 5 interviewers
• 5 participants
RESULTS


RESULTS
• Experience with UTV?
• No.
• Usability and usefulness of the new dashboard?
• Majority found it intuitive and useful. One person felt there was too much information displayed.
• Feature Ratings:
• InterUTV communication: 4.0
• Terrain Detection: 4.2
• Infrared sensing: 3.6
• Voice-interactive Dashboard: 4.6


CAT
Client: Caterpillar-UX
David Hedley
PROJECT TIMELINE
SPRINTS
The END
EVALUA TION
#tractor experience


THANKS FOR YOUR ATTENTION
PLEASE CLAP AND DON`T ASK TOUGH QUESTIONS
memegen.es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