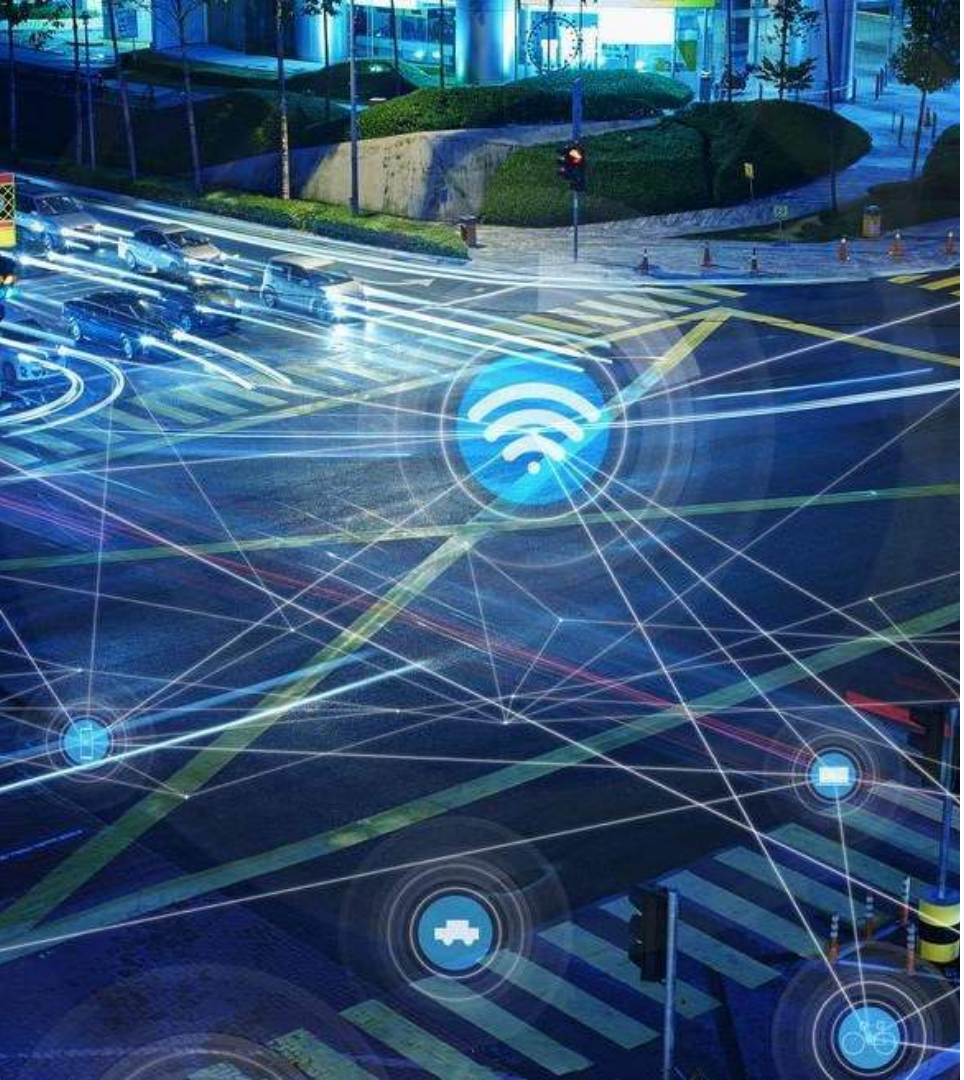
Utilizing mobility to improve
collaboration on the smart campus
+
ID



# **Mobility** is changing

Mobility is becoming boundaryless. Today, mobility encompasses more than the act of moving from one physical place to another.

*“We don't need to be in one place to be productive. We have a choice. Where you go and work is now a choice, you have options.”*

Design expert from Gensler

# **Motivation** for mobility

Different motivations are driving individual's mobility preferences. We discovered that one of the biggest motivations to move is to meet with other people, moreover, to **COLLABORATE** with them.

*"You have to spend a lot of time communicating by phone, by email, by powerpoint where things can be lower key **by being in the same room.**"*

Design expert from Allstate Innovation

# Collaboration on the **Smart Campus**

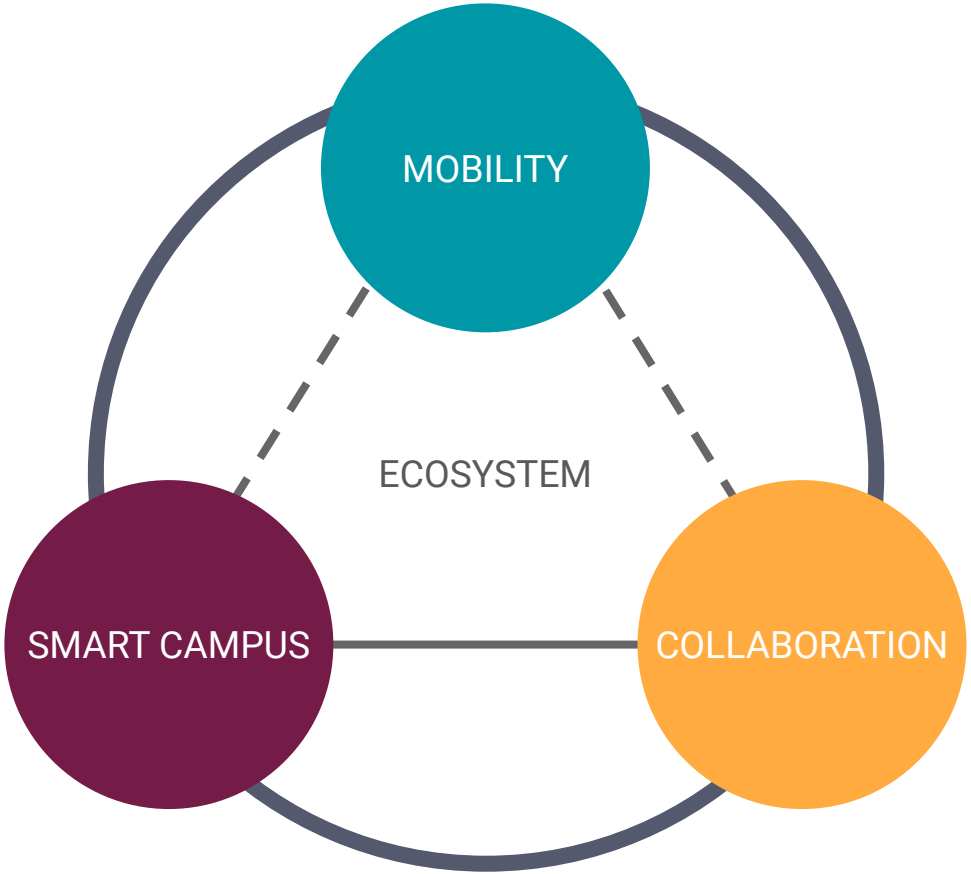
We wanted to explore this change in mobility in the context of a smart campus environment. The smart campus provides an opportunity space where integrated technologies can be harnessed to better facilitate collaboration and mobility.

*"Smart campuses will not only use technology and IoT to support tasks like collaboration, virtual meetings and autonomous mobility, but they will also securely gather data on how students and staff move."*

Vasileva, R, author of smart campus report

## MOBILITY IN THE CONTEXT OF COLLABORATION

Mobility is **less about moving** people and things from point A to point B and increasingly about **service ecosystems** that support people's changing motivations to move.



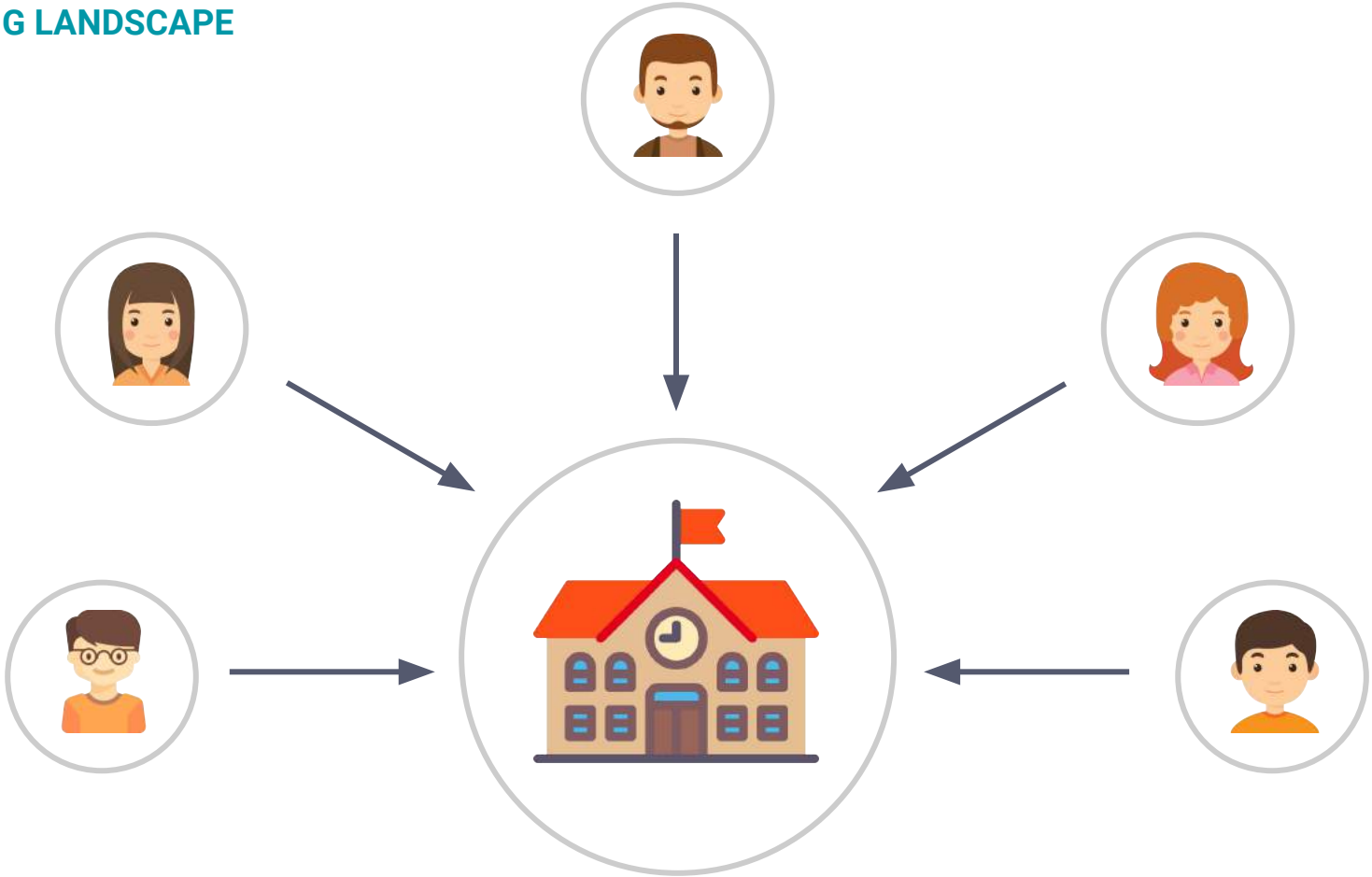
Let’s see how **mobility, collaboration, and the smart campus** can play together in the future.

# Hi, I am **scAI**.

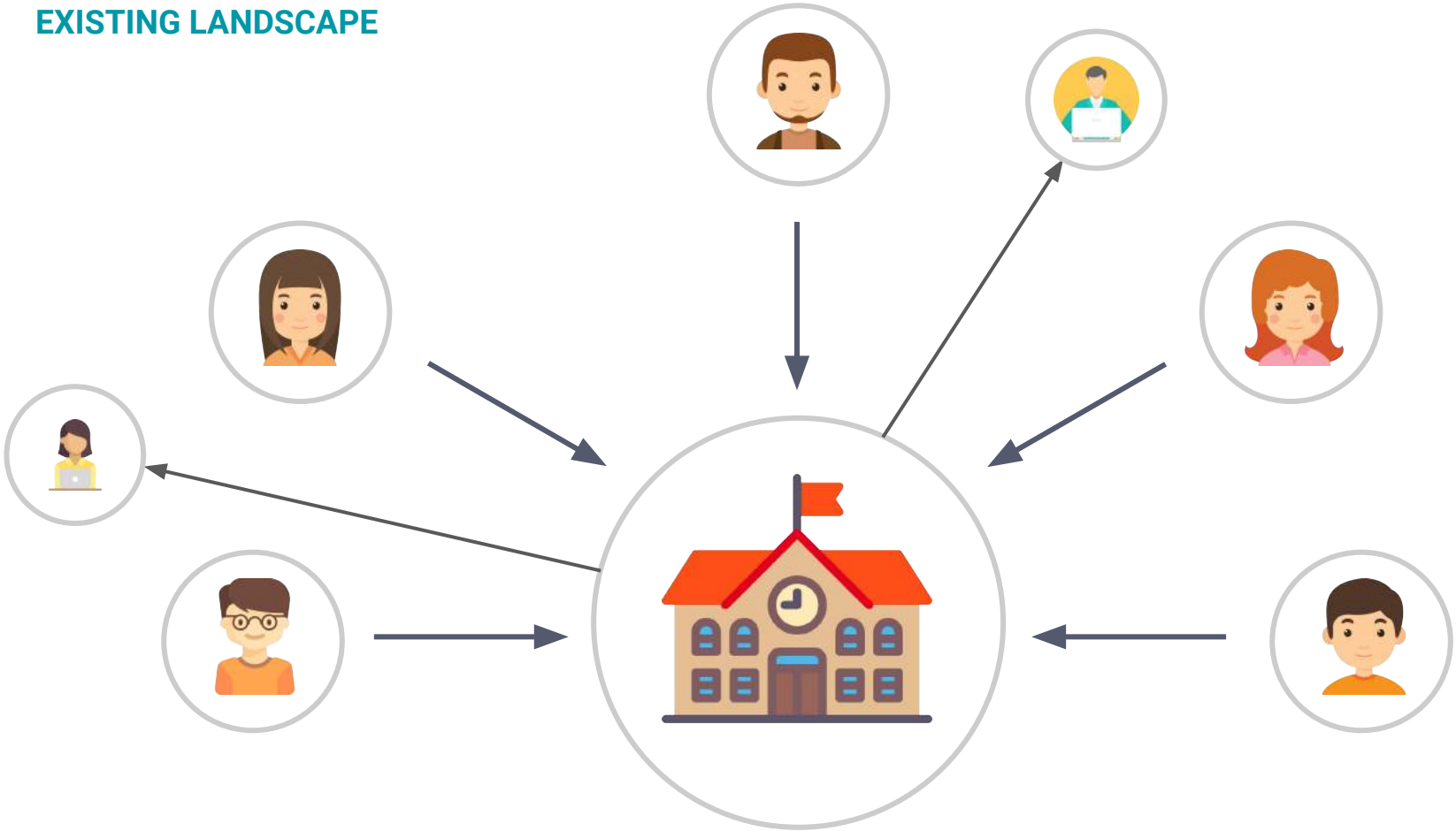
Taking campus to the cloud

“I am an **online platform** that helps students and educators by integrating smart technologies and **optimizing their experiences** across virtual and physical place.”

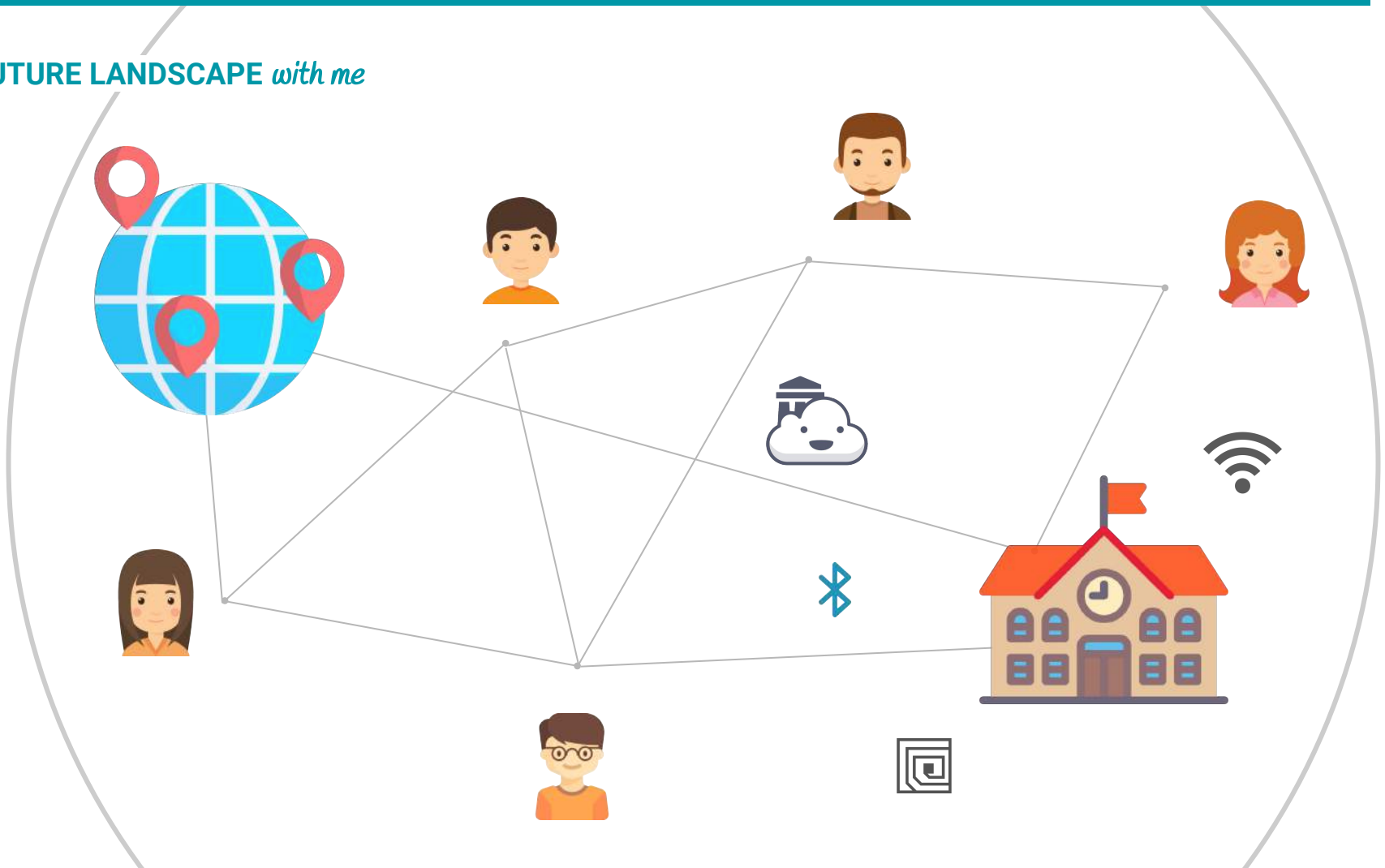
## EXISTING LANDSCAPE



## EXISTING LANDSCAPE

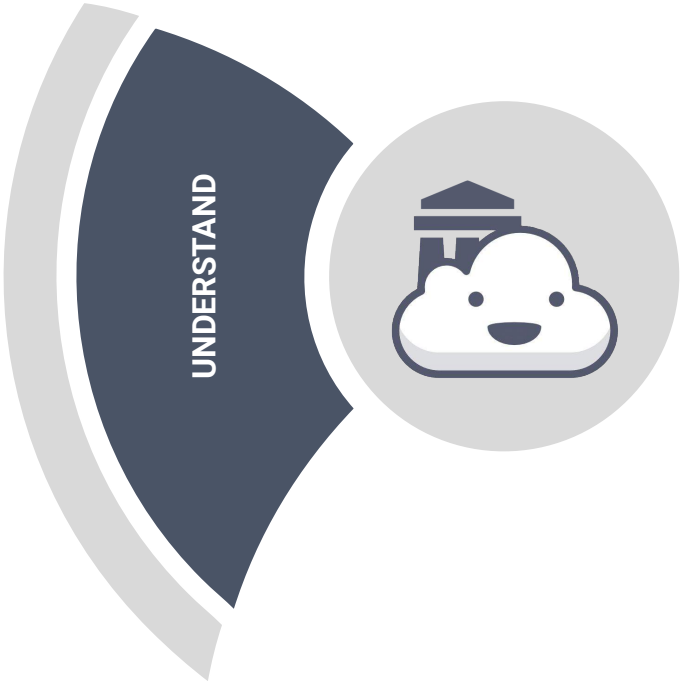


## FUTURE LANDSCAPE *with me*



“I operate as a **plug-in** to the university portal which also extends to individual applications.”

## WHAT I DO?



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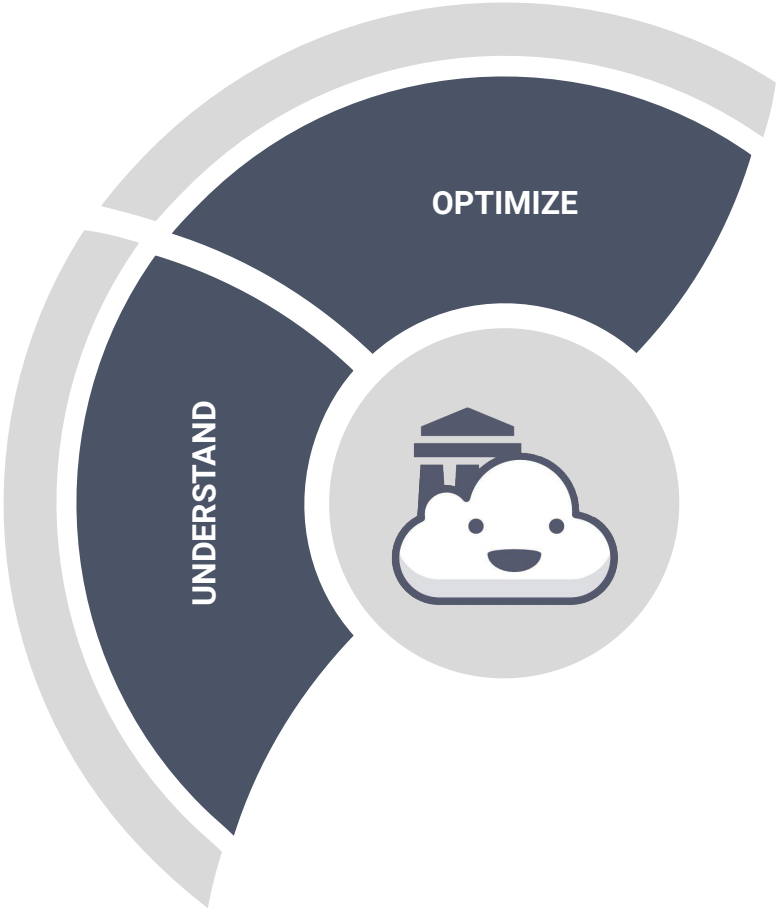

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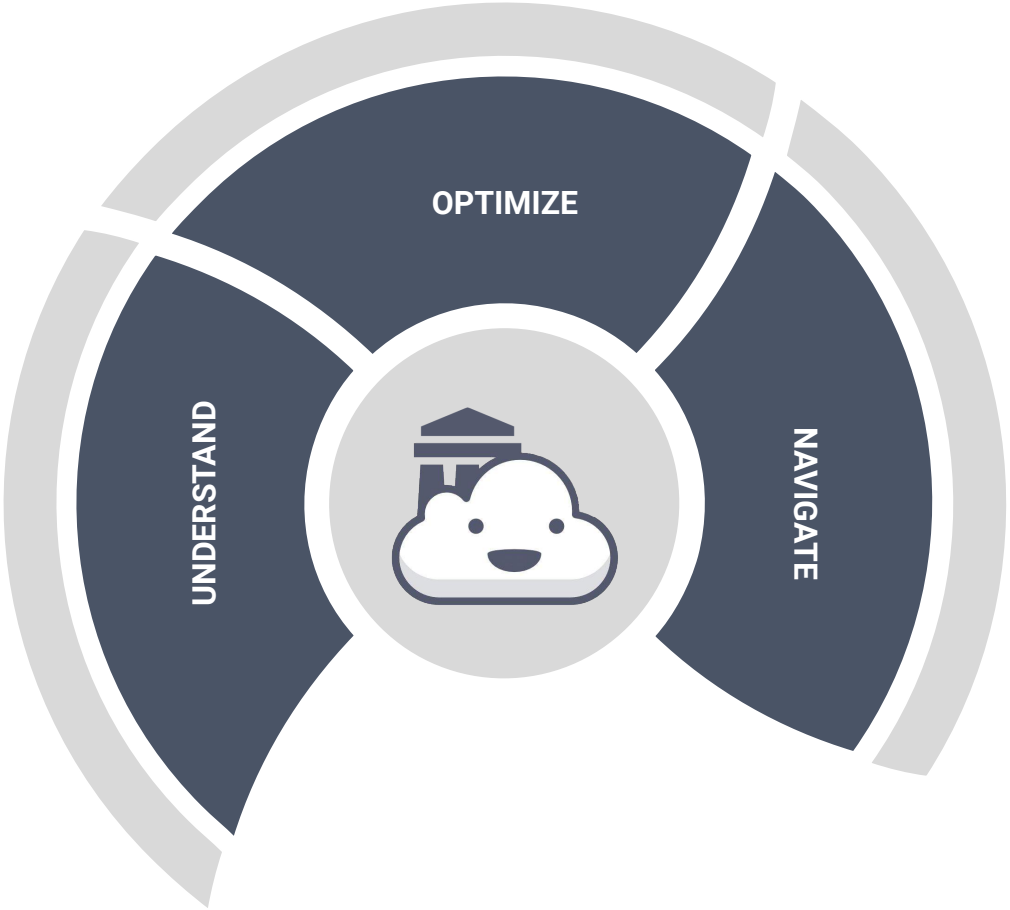

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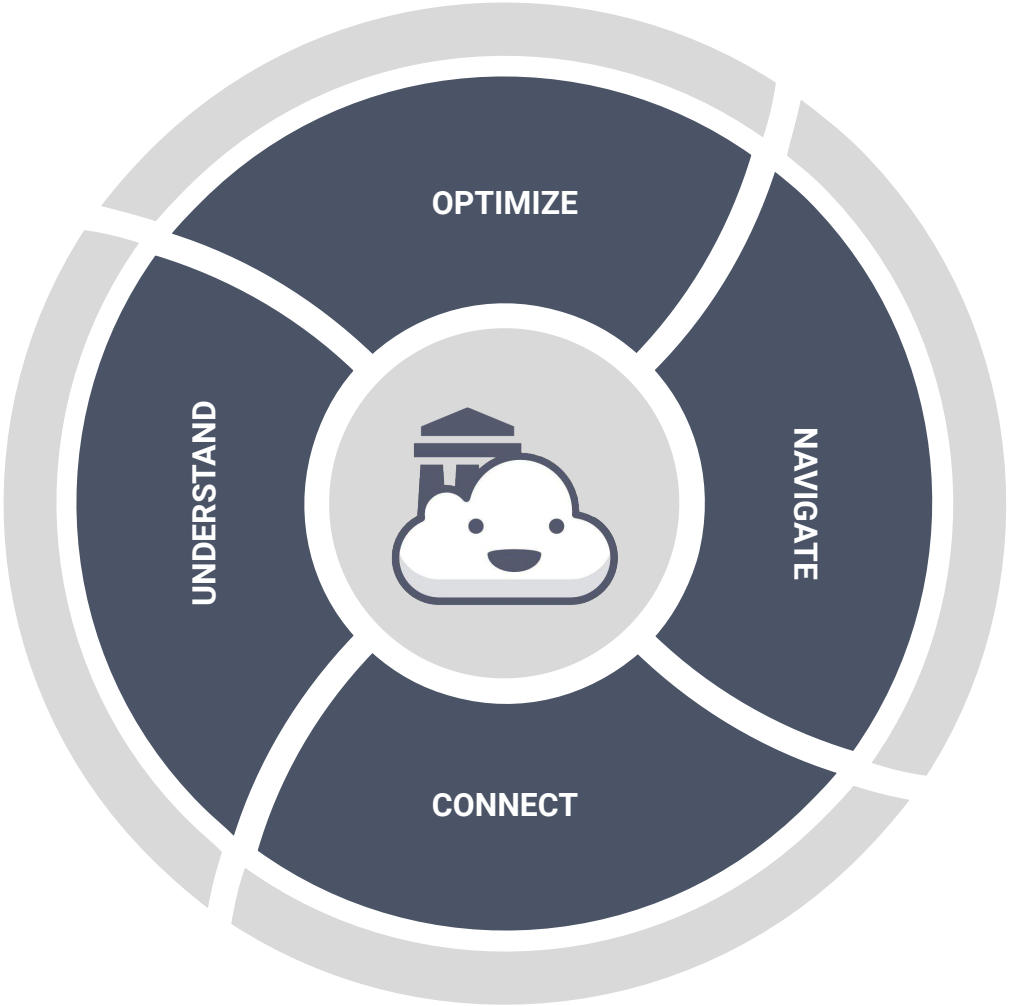


## HOW I WORK

### scAI harnesses the power of AI

scAI learns from user behaviors and preferences while using the platform, making scAI's suggestions smarter and more personalized each time.

### scAI integrates disparate tools

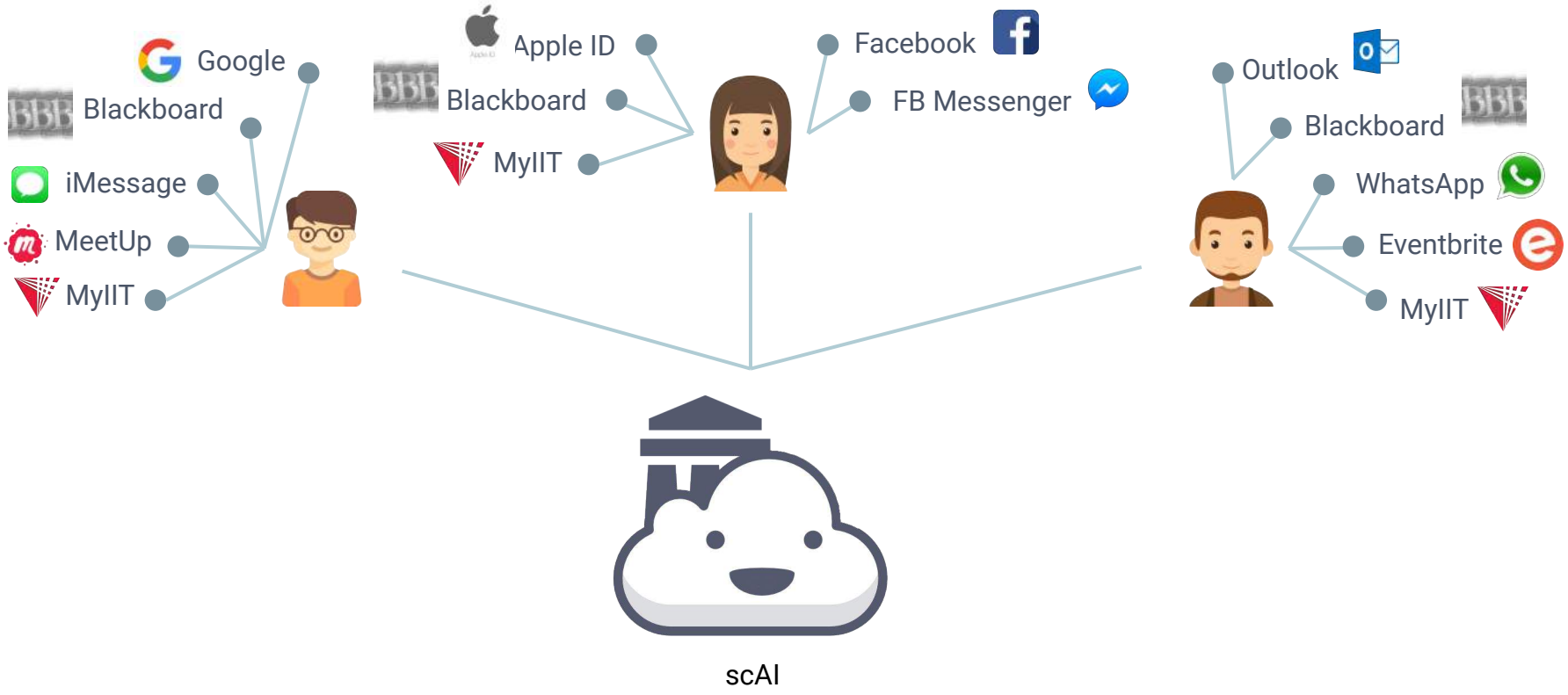
scAI integrates **users' preferred communication and organization applications on one platform** allowing each person to work with the tools that best support their needs while eliminating disparity.

### scAI connects to smart campus technologies

scAI connects people to people by harnessing and analyzing data collected from smart campus technologies to reduce barriers of collaboration across distance and time.

### scAI shares data between applications

scAI is a platform that allows for data sharing between different products and services to allow for an optimized collaboration experience.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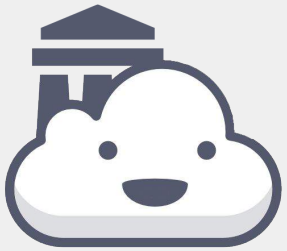
Blackboard
iMessage
MeetUp
MyIIT
Apple ID
Blackboard
MyIIT
Facebook
FB Messenger
Outlook
Blackboard
WhatsApp
Eventbrite
MyIIT
scAI

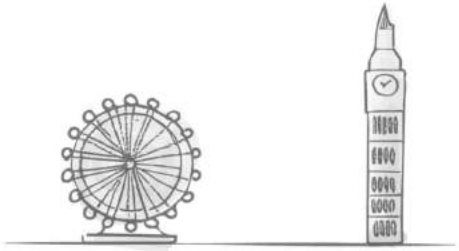


“Let’s see how a smart campus life would be like with me.”

## THE TEAM

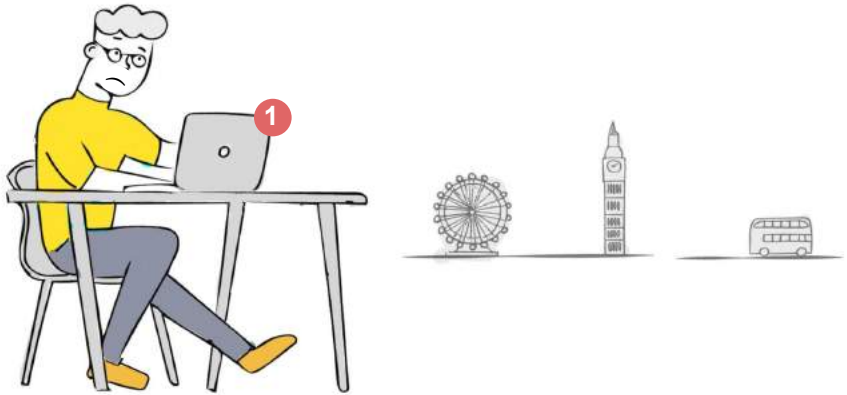
**Tom** mostly works from home when he does not have class. For commuting, he uses his own car.

**Alice** lives near school, so she spends most of her time on campus. She prefers walking to school.



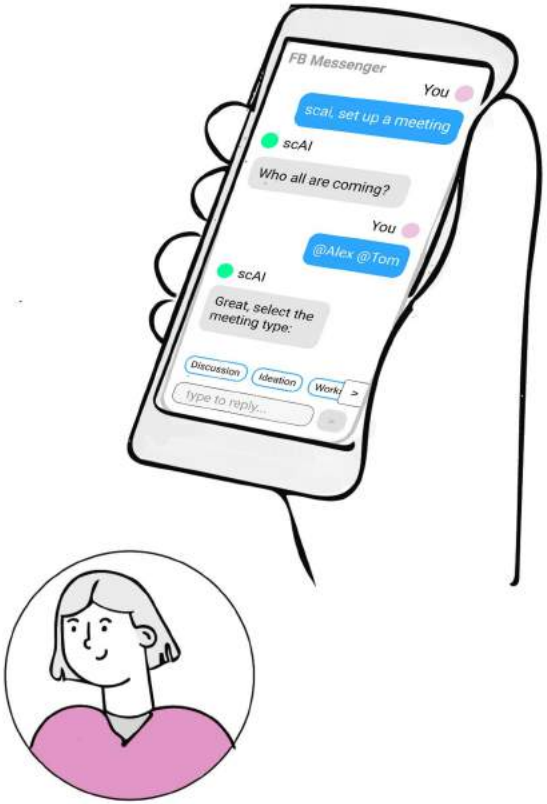
**Alex** is a part-time student who travels a lot due to work. Currently, he is in London.

## 01: Notification from professor




The team receives feedback from their professor on a project they are working on together. They are missing a piece of their presentation that is due the next day and need to organize a last minute meeting to fix the problem.

## 02: Initiating the meeting

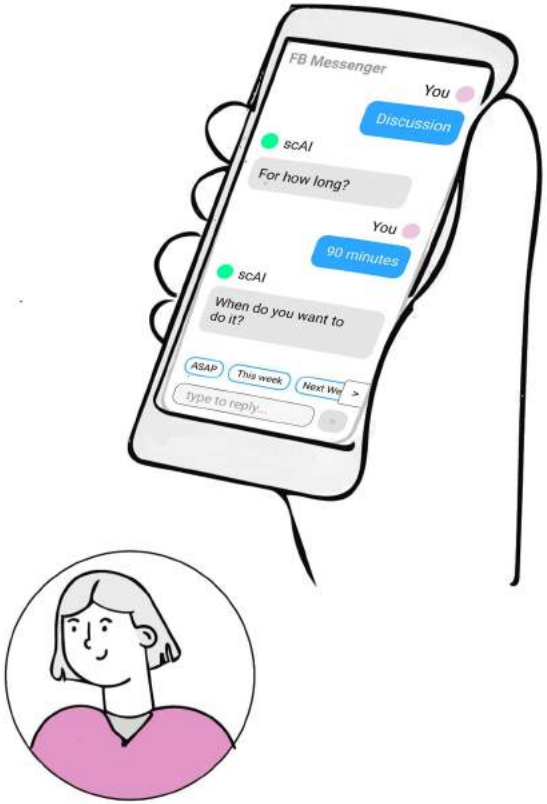



Alice initiates the meeting request to the other team members.

Platform prompts with questions for:

- Who are the members? @Alex @Tom
- What is the meeting type? Ideation
- Meeting immediacy?
- What is the meeting length?

## 02: Initiating the meeting

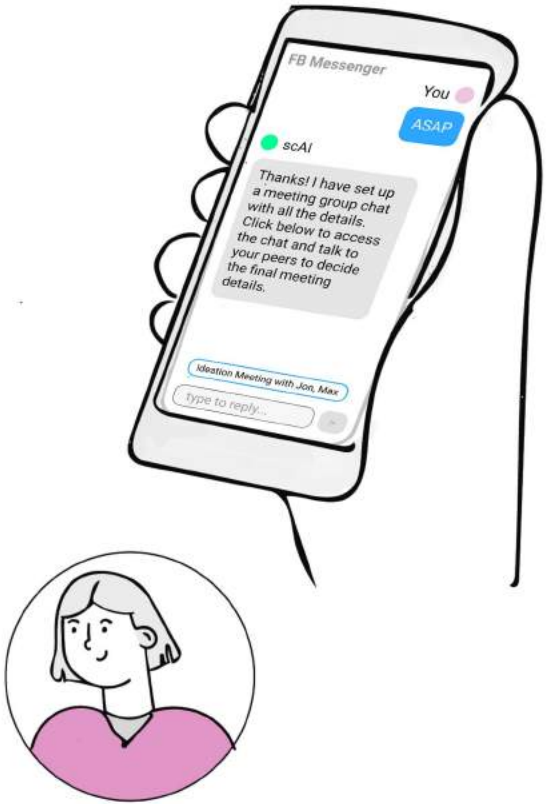



Alice initiates the meeting request to the other team members.

Platform prompts with questions for:

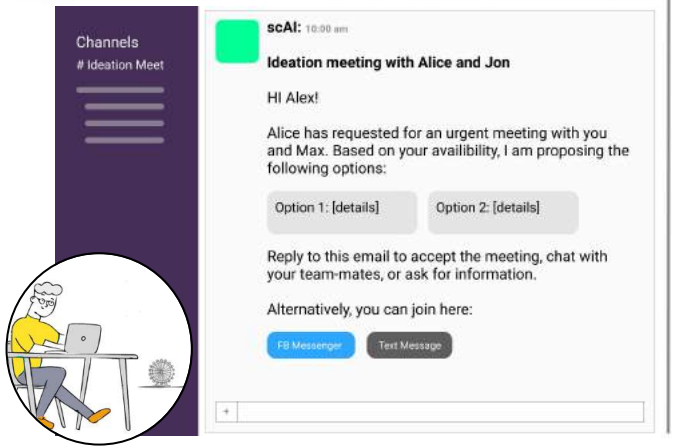
- Who are the members?
  @Alex @Tom
- What is the meeting type?
  Ideation
- What is the meeting length?
  90 Minutes
- Meeting immediacy?
  ASAP

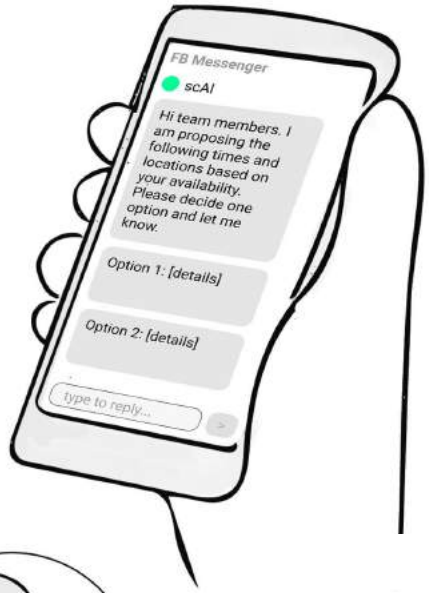
## 02: Initiating the meeting




scAI prompts Alice that the meeting has been initiated and provides a link to the new group created for further discussion.

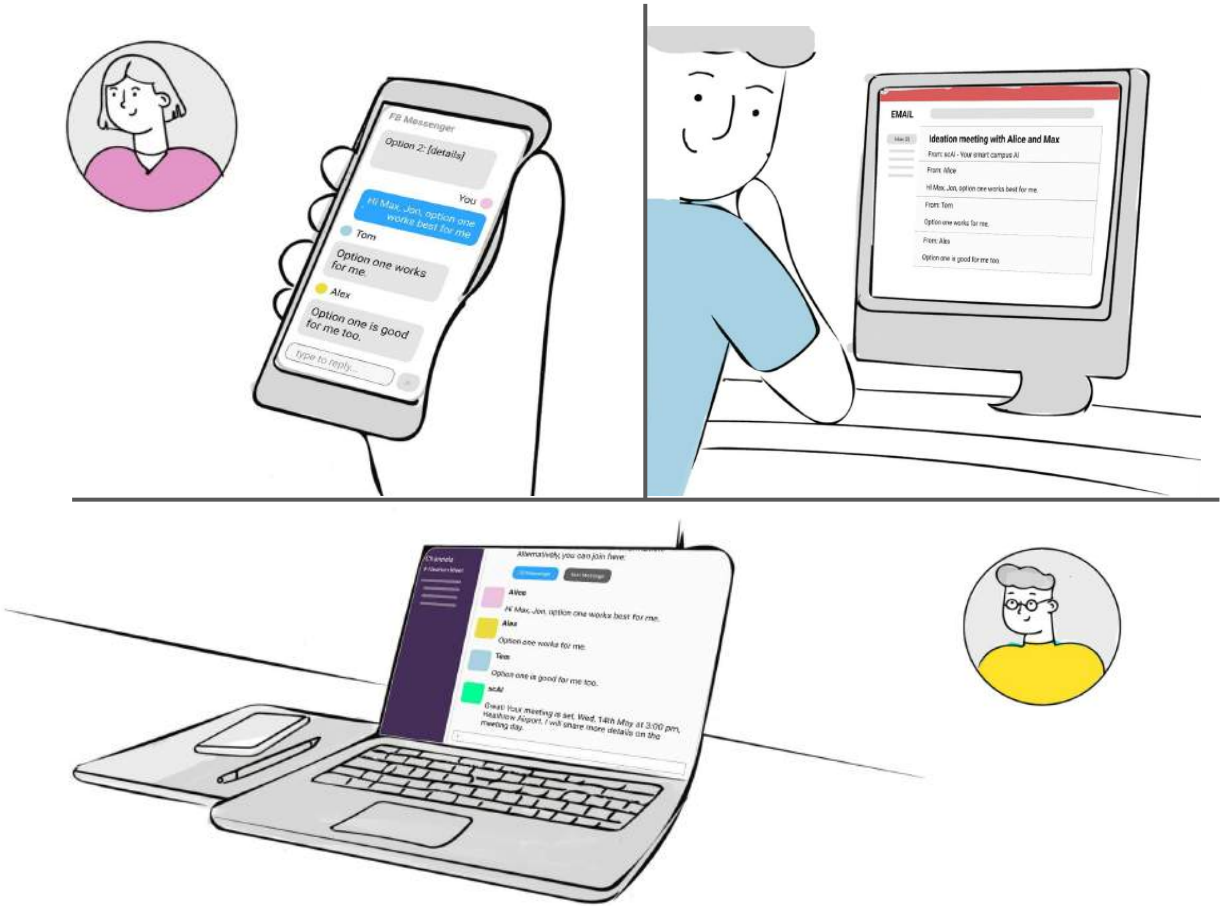
# 03: Receiving meeting notification



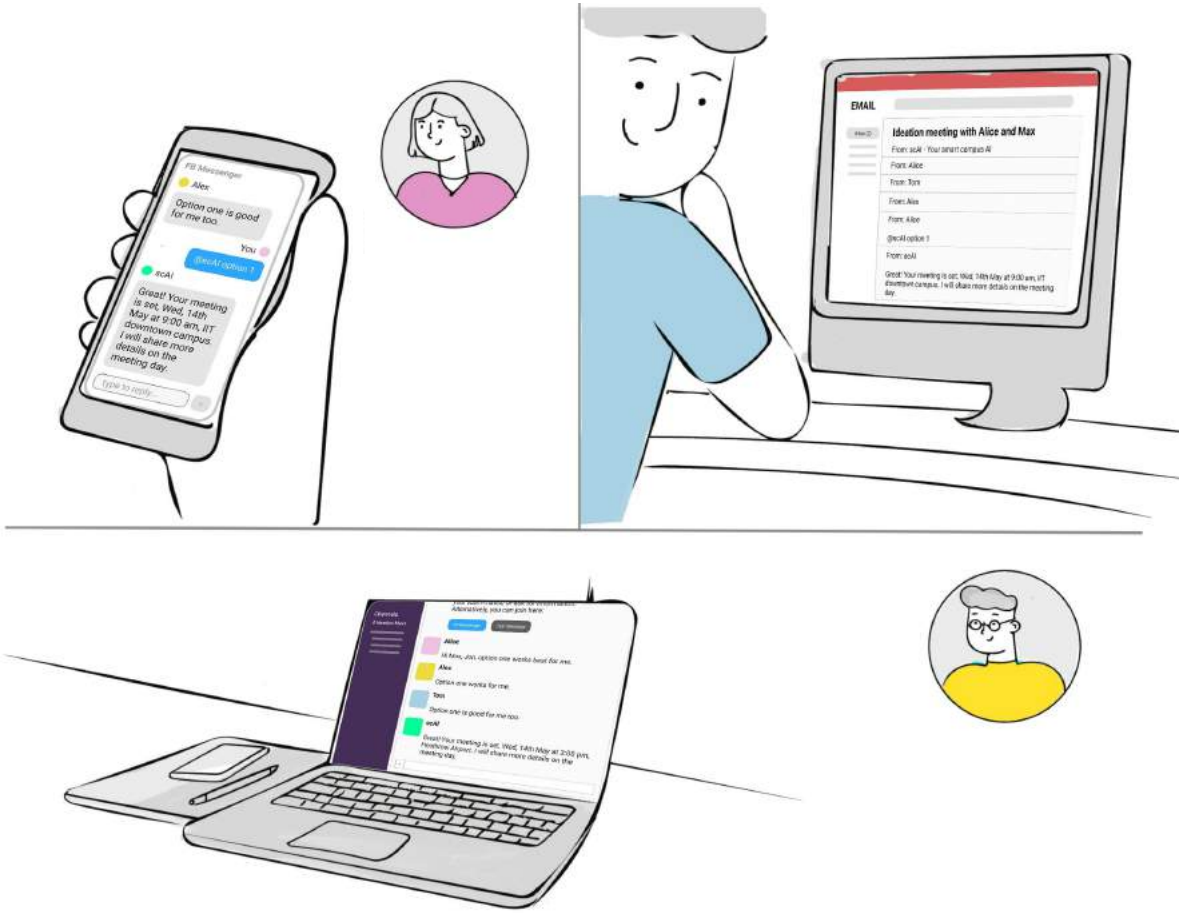
Team receives request with two options that is best suited to them according to their schedule and location.

## 03: Receiving meeting notification



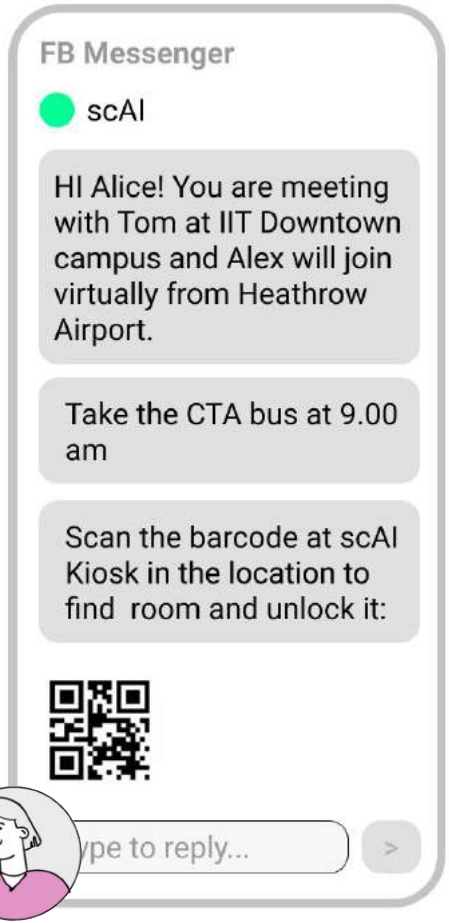

The team chats to decide on best choice and tell scAI about their selection.

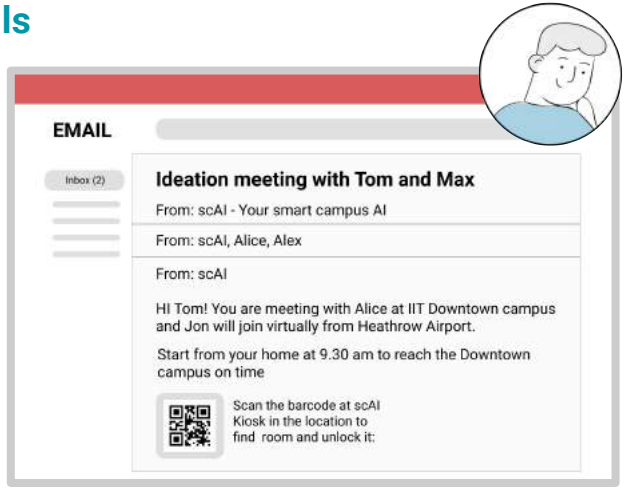
## 04: Confirming the meeting

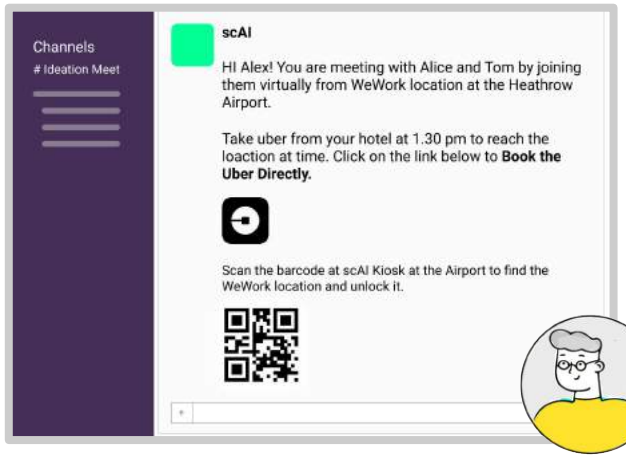



scAI confirms meeting time, date and place. Sends a booking confirmation to each member.

## 04: Receiving meeting details

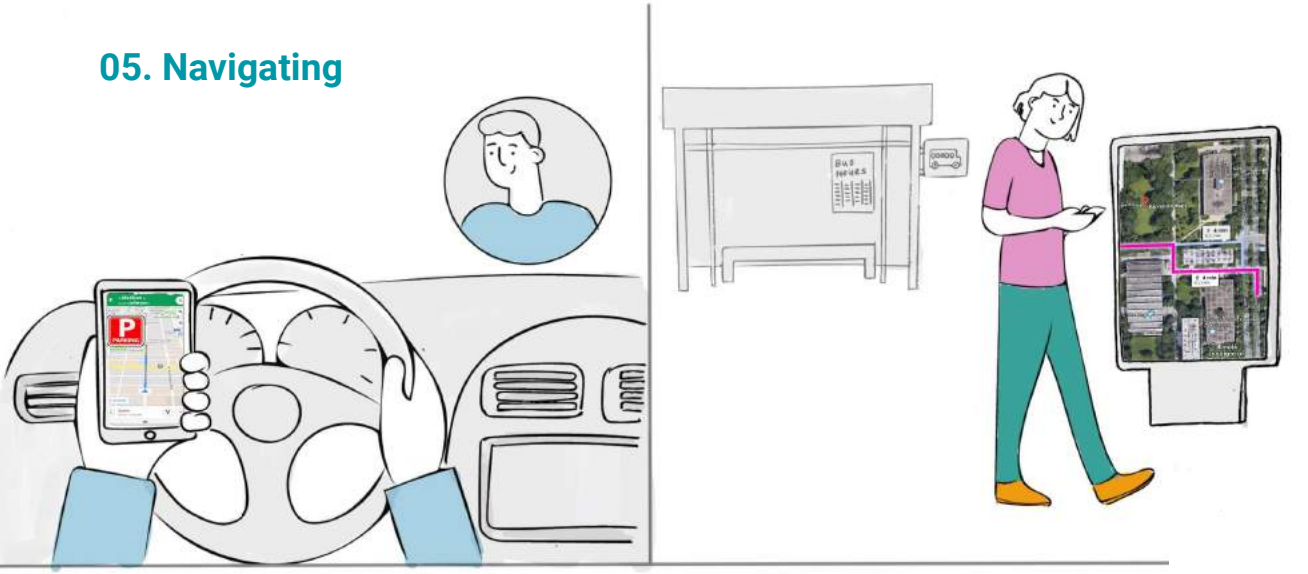



On the day of the meeting, scAI sends the users additional details about the meeting location, access, and navigation to the location.

## 05. Navigating



**User Perspective**
Each team member is provided with navigation and meeting instructions.

**Technology/ System**
scAI syncs to smart campus devices and analyzes data to provide the team with optimized route planning, directions, and access to spaces/places if necessary (parking, buildings, rooms, etc.)

## 05: Accessing the locations

Team members enter their reserved work areas by using the QR codes provided by the platform.

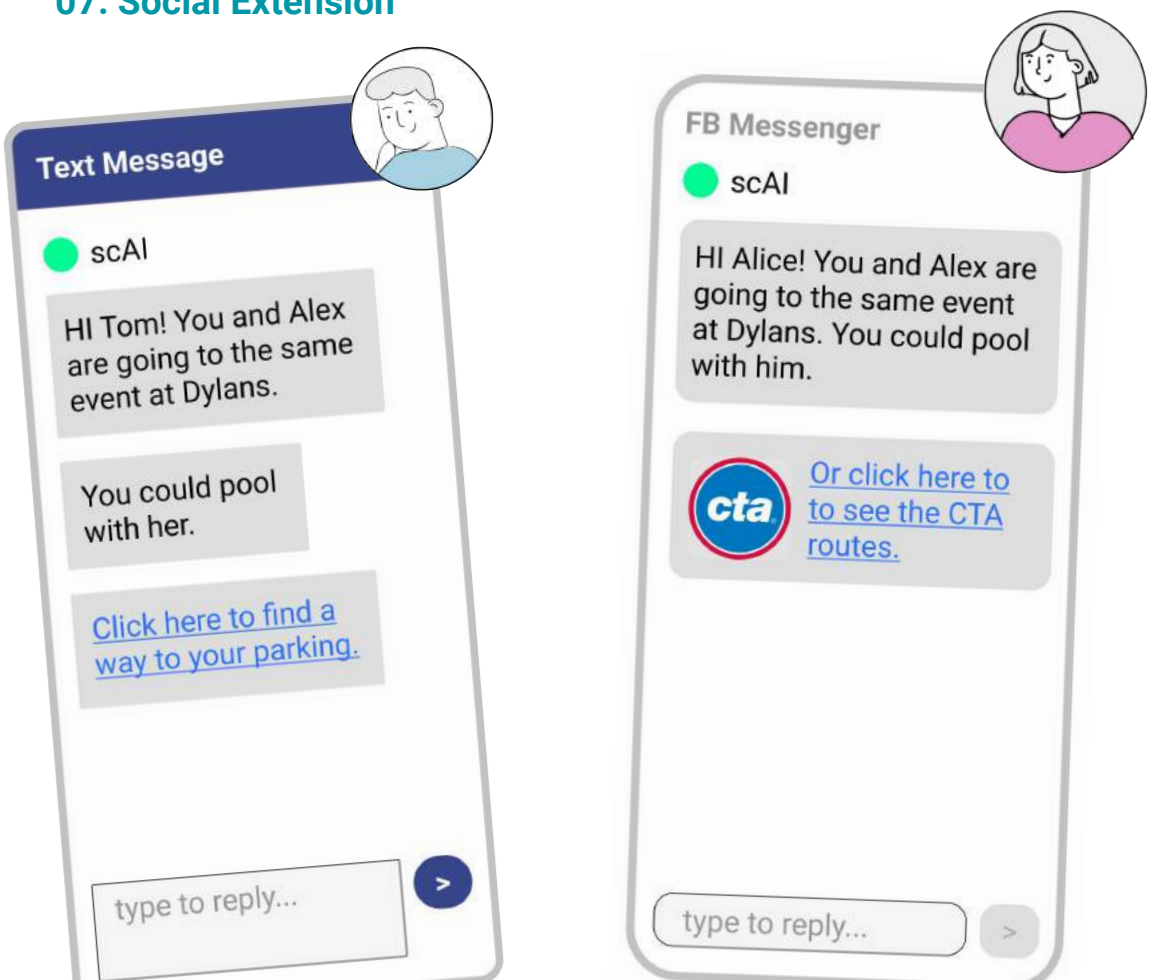
## 06: Collaborating and Transcribing

scAI records collaboration / meeting assets (notes, voice recordings, images, etc.)

It integrates with existing collaboration platforms

- Miro/Mural
- Skype
- Google Drive
- Cisco Collaboration

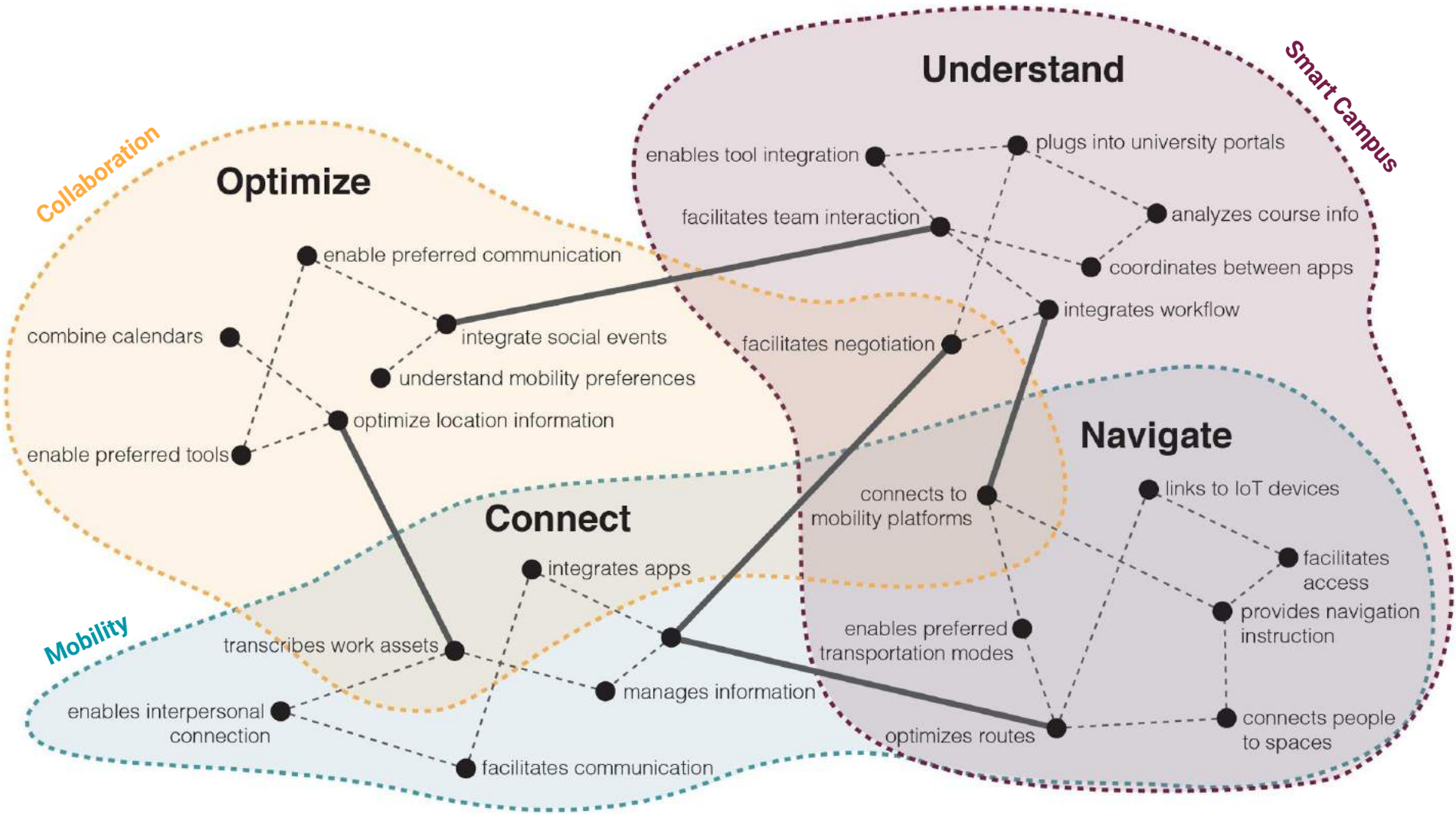
## 07: Social Extension




Tom and Alice get an update about a social event that they are both attending.

scAI integration with Facebook, MeetUp, and other social platforms.

Hey Alice, are you going to Dylan's too? I can give you a ride!
Oh that would be awesome! Thanks Tom!


Smart Campus
Collaboration
Mobility
Understand
Optimize
Connect
Navigate
enables tool integration
plugs into university portals
facilitates team interaction
analyzes course info
coordinates between apps
integrates workflow
enable preferred communication
integrate social events
combine calendars
facilitates negotiation
understand mobility preferences
optimize location information
enable preferred tools
connects to mobility platforms
links to IoT devices
facilitates access
integrates apps
provides navigation instruction
enables preferred transportation modes
transcribes work assets
manages information
enables interpersonal connection
optimizes routes
connects people to spaces
facilitates communication

## ROADMAP

**Users/clients**
Students and educators/ university

**Navigation Services**
Apple Maps
Google Maps
Here Maps

**Locations**
University campus, University locations outside the main campus

**Mobility Services**
Uber
Lyft
CTA
Metra

**Communication Services**
Gmail
Facebook
Outlook
Whatsapp
Slack

**Users/clients**
Professionals/ Business or organizational campuses

**Locations**
Company's campuses across different cities, WeWork, Convene, restaurants, private meeting and convention spaces for rent.

**Digital Assistants**
Google Assistant
Amazon Alexa
Other virtual assistants

**Locations**
Airports, Train stations, Public Libraries

Location Partners

Integration Partners

Users/Clients

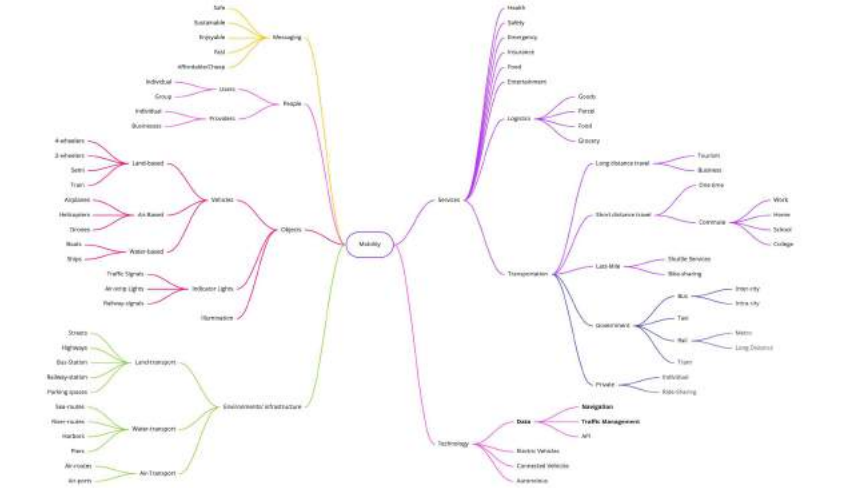
**University**

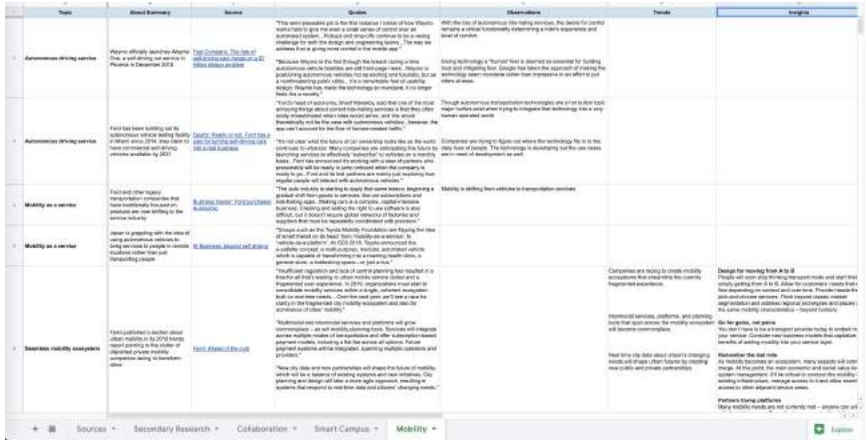
**Companies**

**City**

# **Appendix:** Our Process

# **BUILDING CONTEXT:** MIND MAPPING, STAKEHOLDER MAPPING, & SECONDARY RESEARCH DATABASE



## **BUILDING INSIGHTS:** STUDENT & EXPERT INTERVIEWS AND AFFINITY MAPPING

## INSIGHTS

Increasing the **seamlessness** of people's commute reduces cognitive load, stress, and frustration.

Giving people the ability to customize their mobility gives them a valued sense of **control and choice**.

Individual **needs for physical interaction** change with the **mode of collaboration** (generative, informative, evaluative).*

* For generative collaboration, people prefer the physicality of face to face interactions.

Individuals are struggling to find easy **access and connection** with each other when **collaborating across distance**.

People find **collaboration tools** to be more effective when they are **socially desirable** (accepted and used by majority) rather than technologically robust.

**Campus relationships lie on a spectrum** of goal-oriented interactions to emotional interactions.

Students are comfortable **sharing their personal data**, but want an improved **college experience** in return.

DESIGN PRINCIPLES

## Mobility:

**1 Seamless Commute**
Support and streamline the trade-offs people make around their commute.

**2 Sense of Control**
Provide customizable mobility options to create a sense of control.

## Collaboration:

**3 Integrated Tools**
Collaboration tools should be socially desirable not just technologically feasible.

**4 Desired Interaction Mode**
Design should align with people's desired interactions.

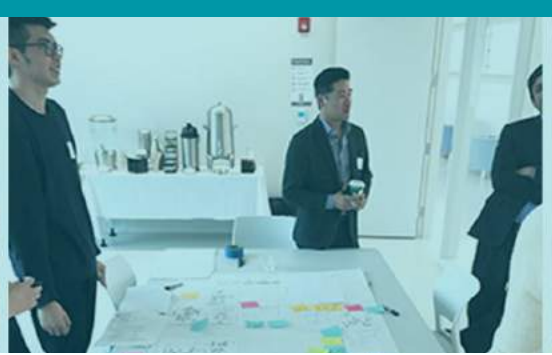
**5 Behavioral Based Solutions**
Leverage data to enable collaboration that plays to individual strengths.

## Smart Campus:

**6 Optimizing user experience**
Use data to optimize the user's experience on the campus.

**7 Barrier Free Interaction**
Design for collaboration should enable the immediacy of physical presence.

# **IDEATION:** WORKSHOP



## WORKSHOP STRUCTURE

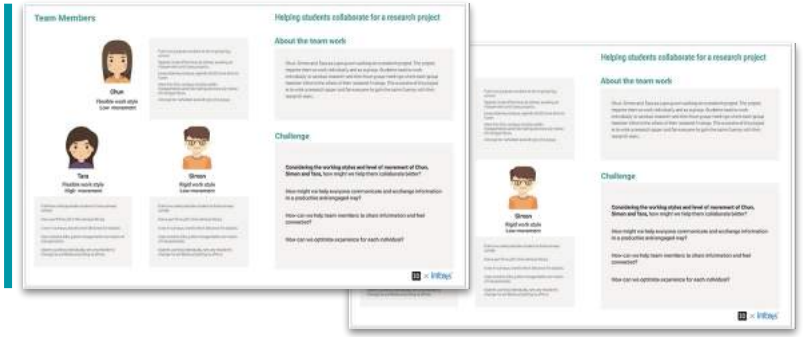
**2 Teams**
Approximately five participants on each team

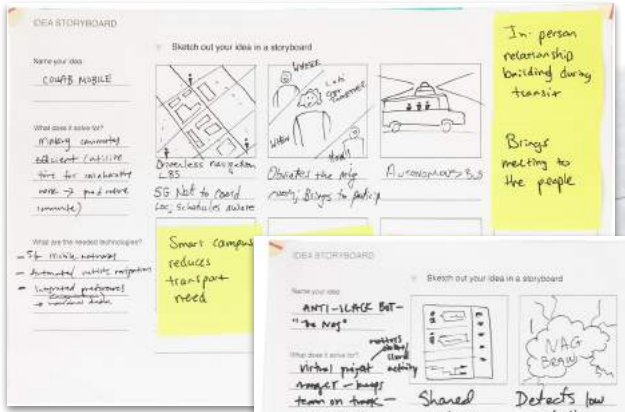
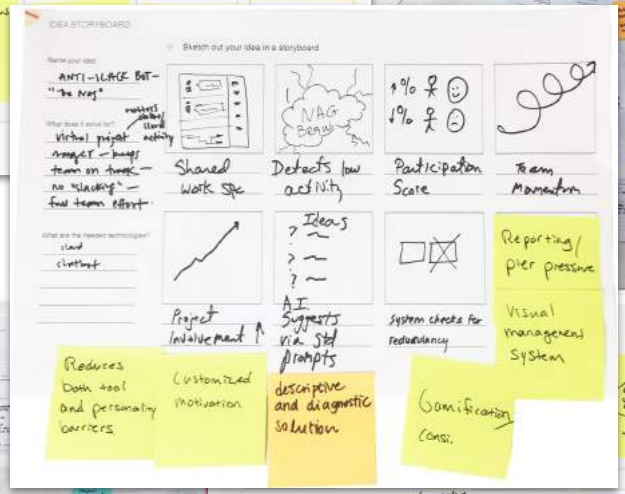
**6 Experts**
Four strategists from Infosys & two external

**4 Students**
Two ID students & two external students

# TOOLS

## PERSONAS & SCENARIOS




## DESIGN PRINCIPLE CARDS

# EXPLORING IDEAS