



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

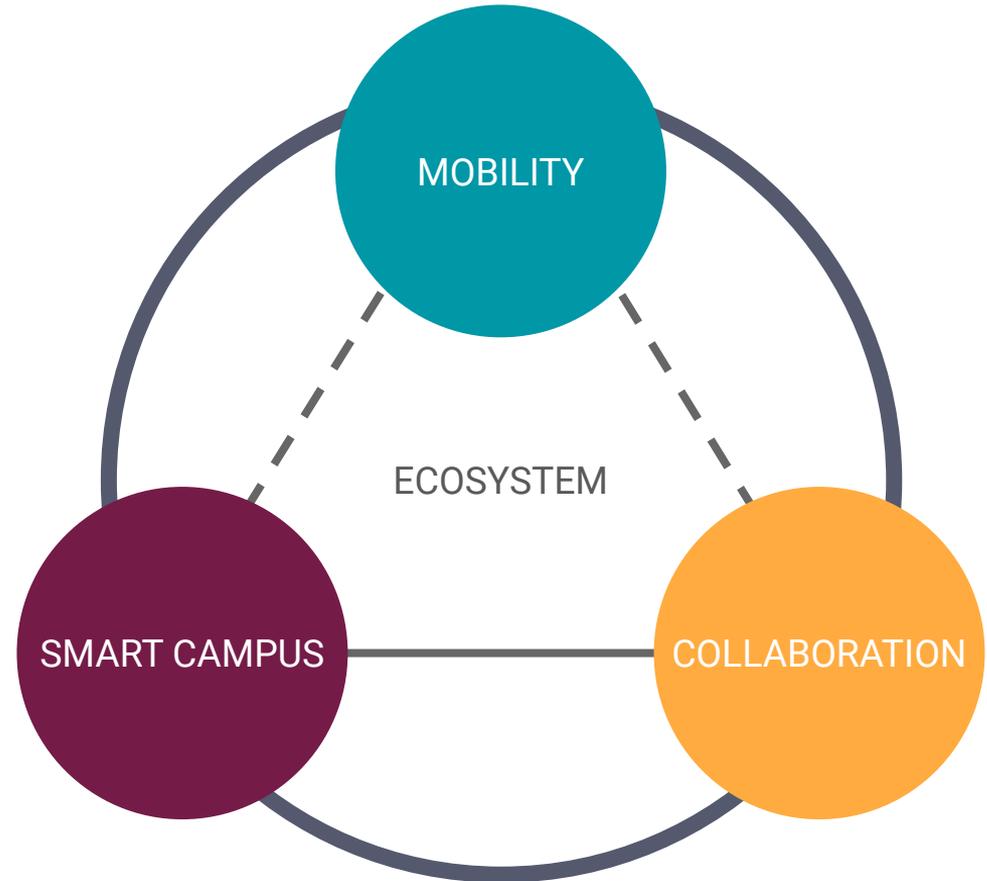
We wanted to explore this change in mobility in the context of a smart campus environment. The smart campus provides an opportunity space where integrated technologies can be harnessed to better facilitate collaboration and mobility.

"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

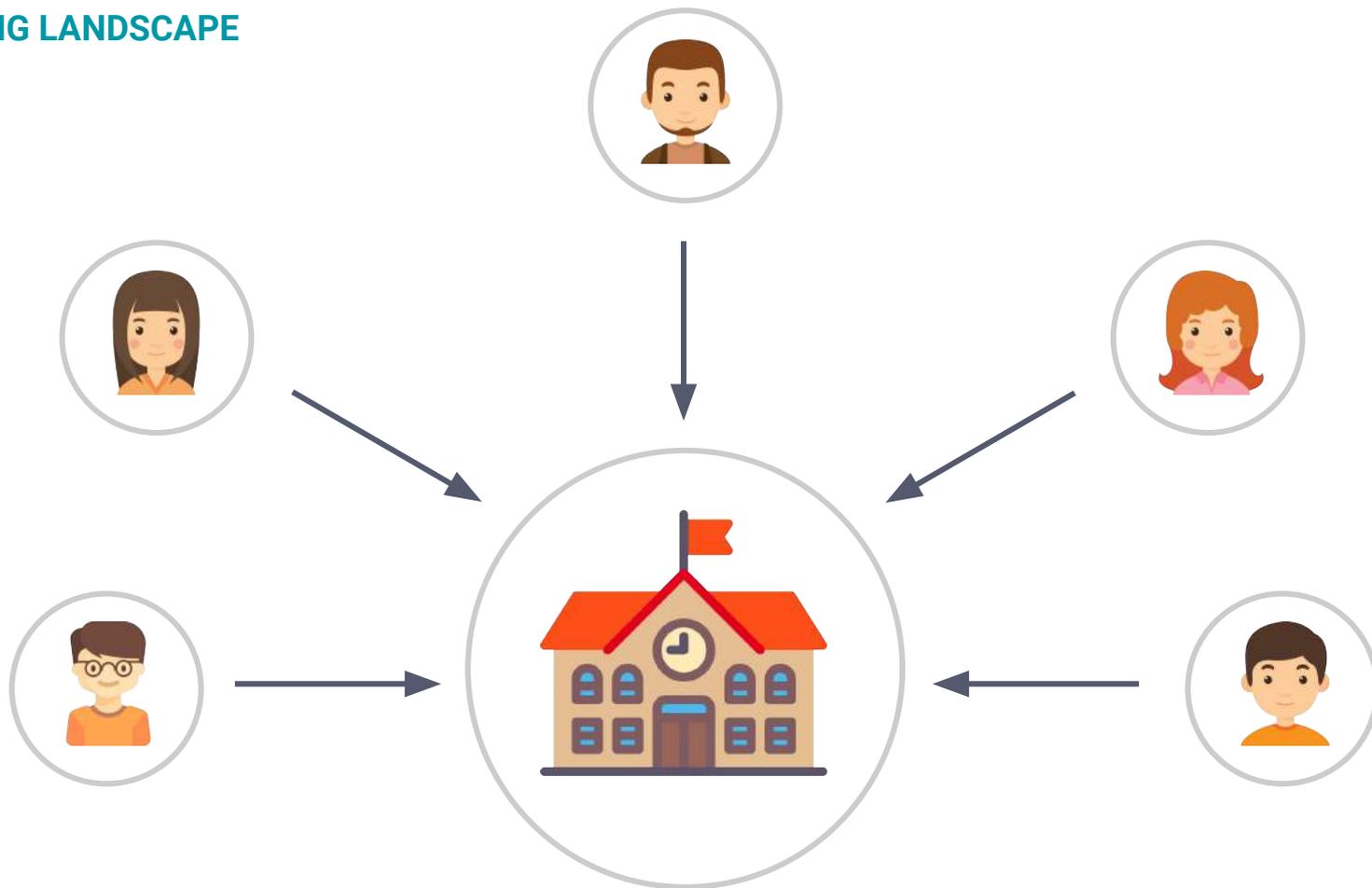


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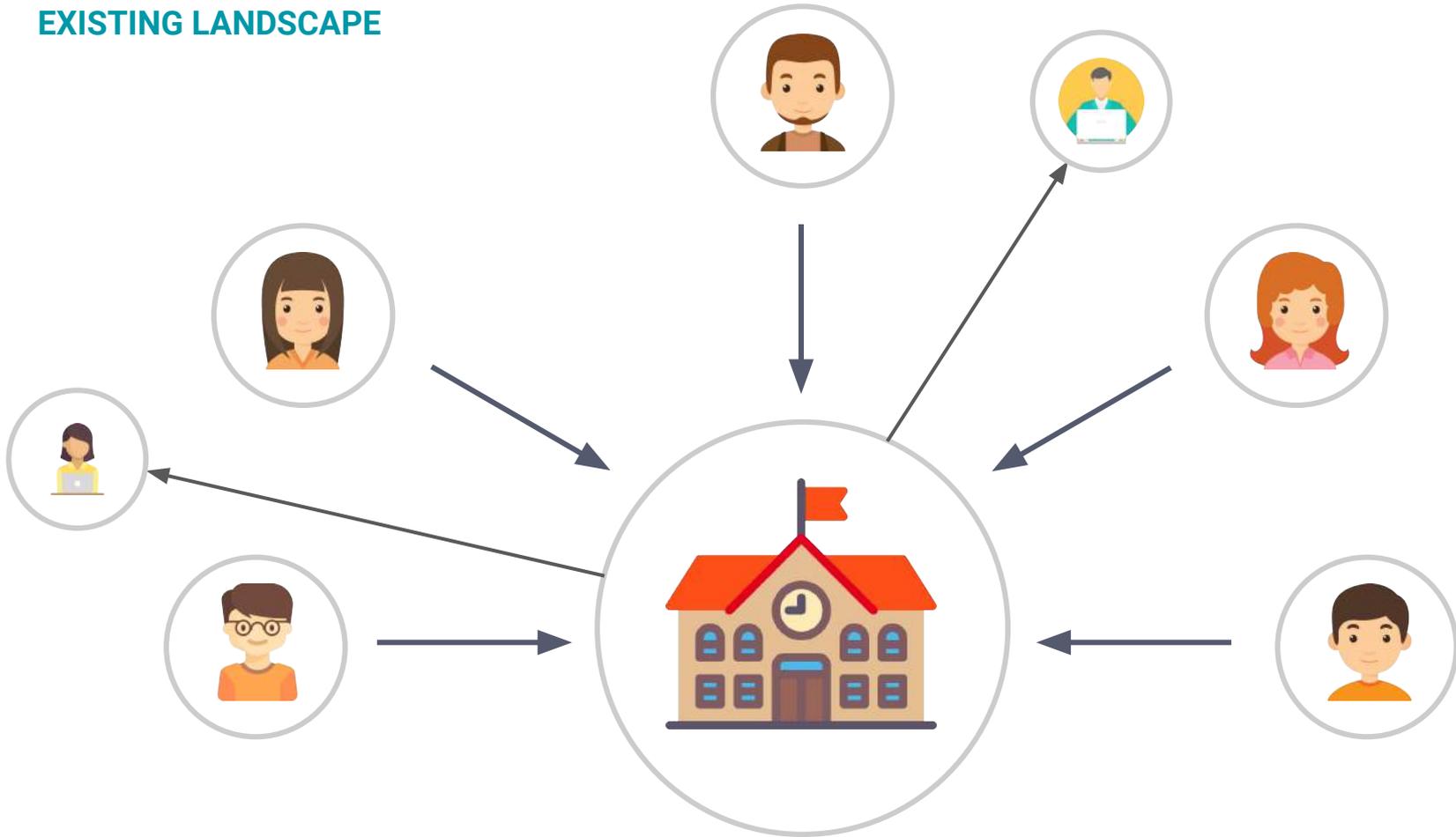
I am an **online platform** that helps students and educators by integrating smart technologies and **optimizing their experiences** across virtual and physical place.

”

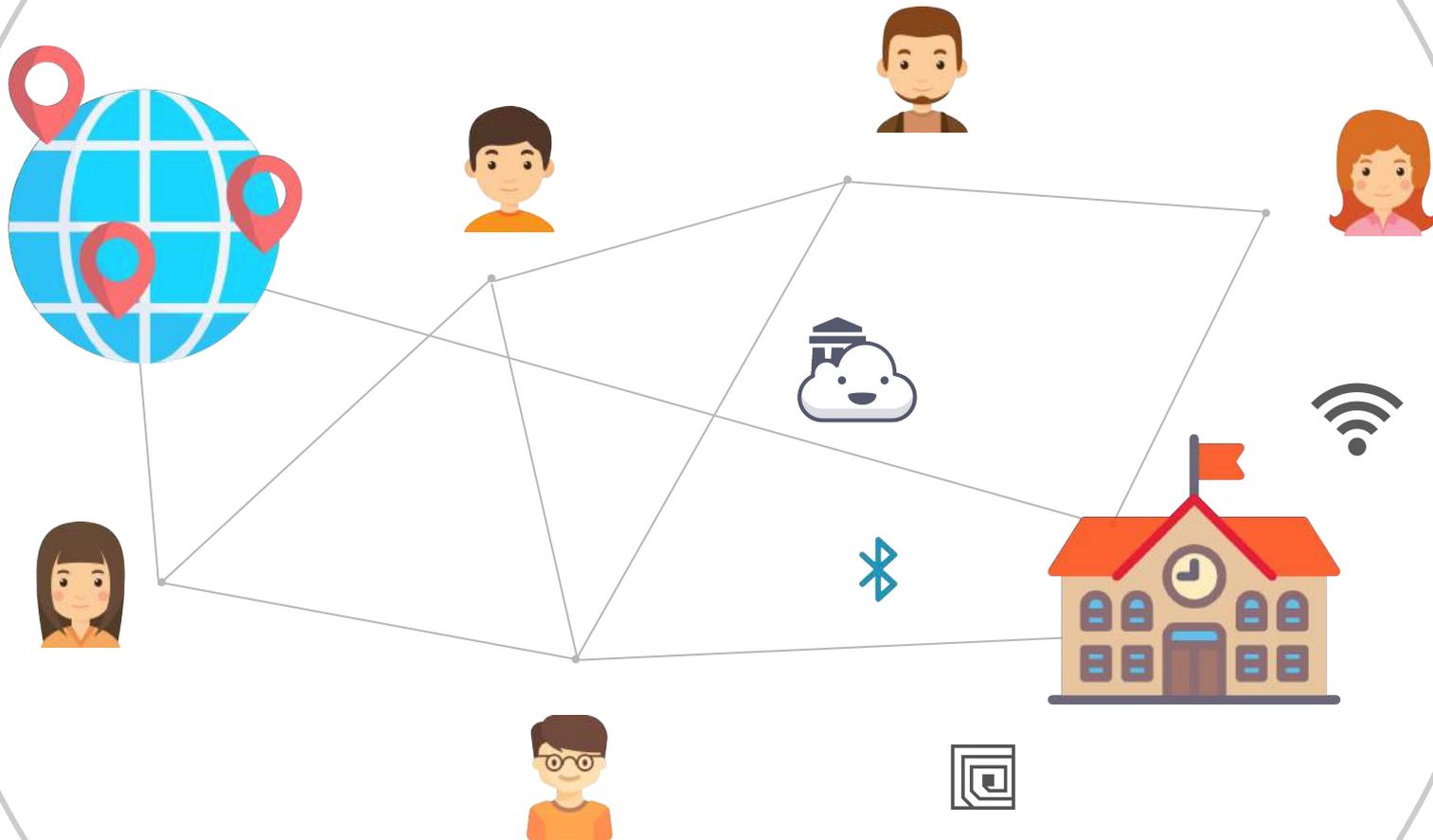
EXISTING LANDSCAPE



EXISTING LANDSCAPE



FUTURE LANDSCAPE *with me*



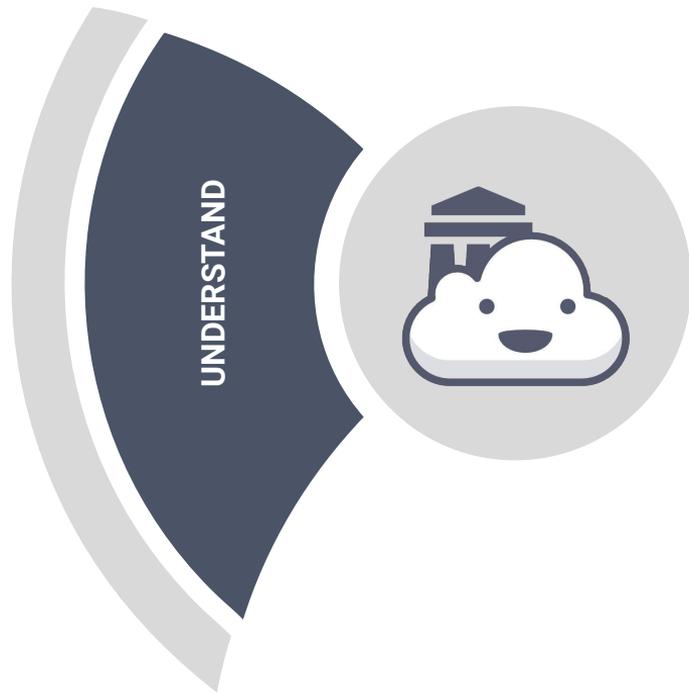


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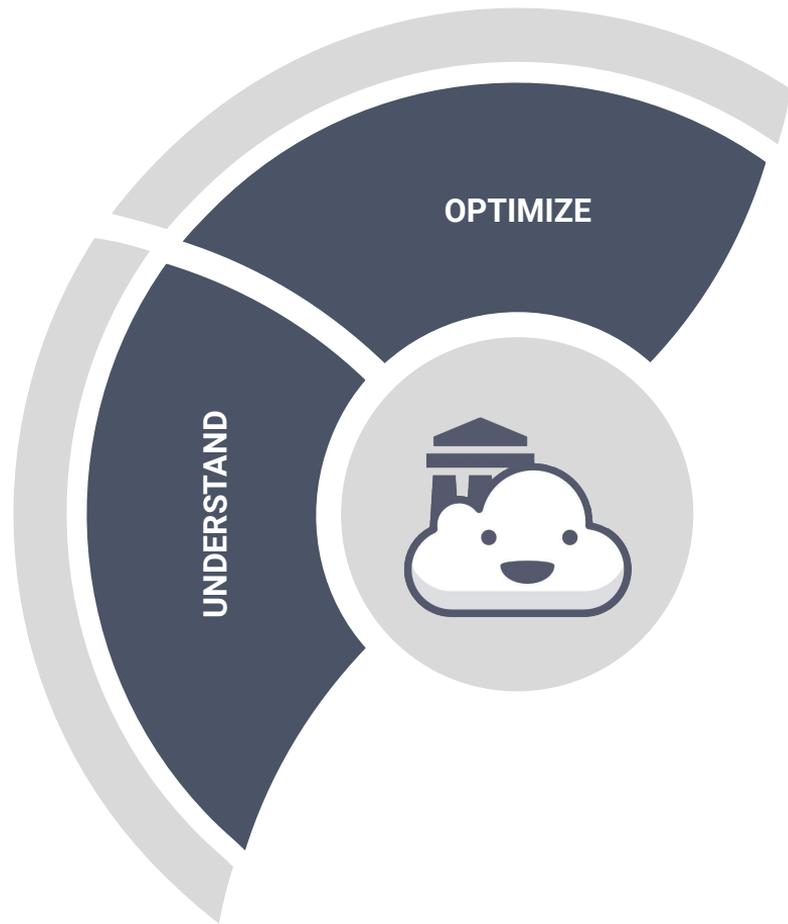
I operate as a **plug-in** to the university portal which also extends to individual applications.

”

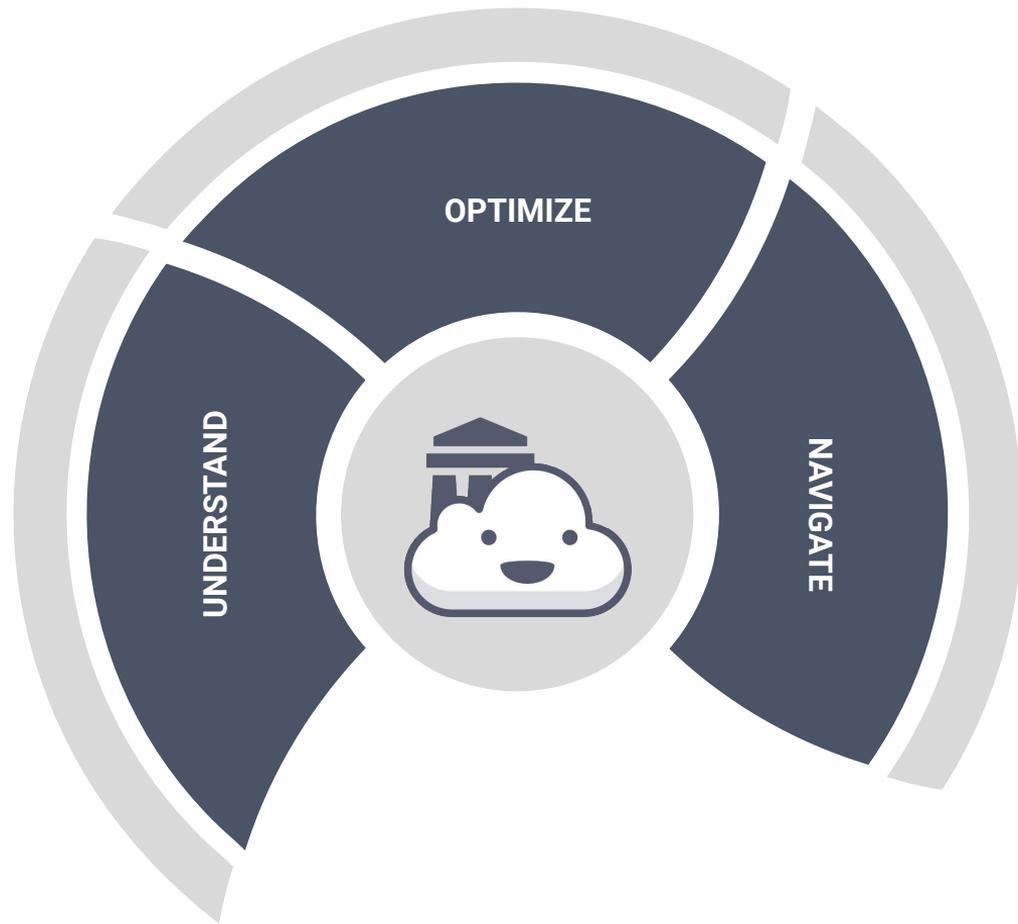
WHAT I DO?



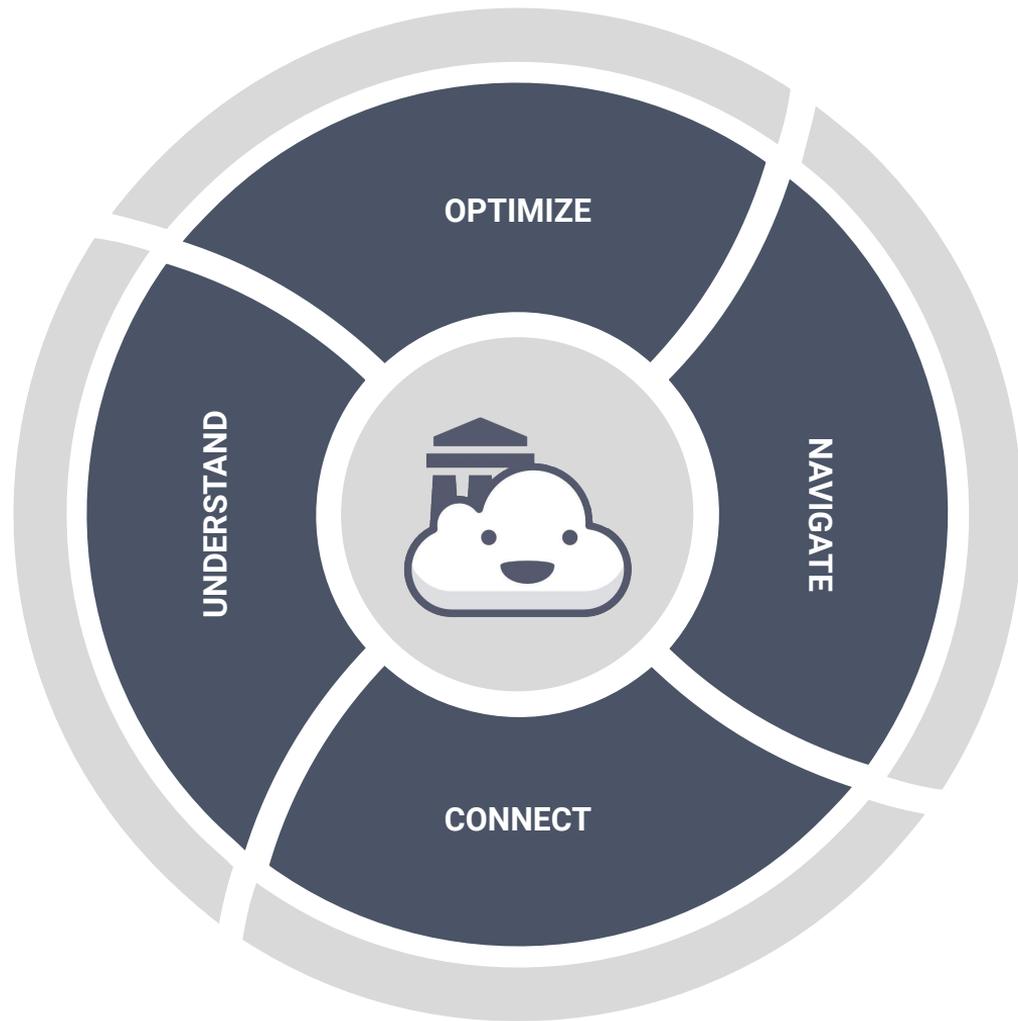
WHAT I DO?



WHAT I DO?



WHAT I DO?



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 connects to smart campus technologies

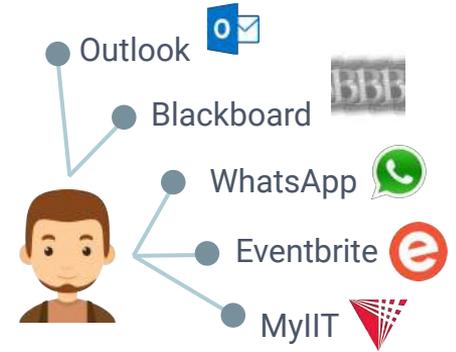
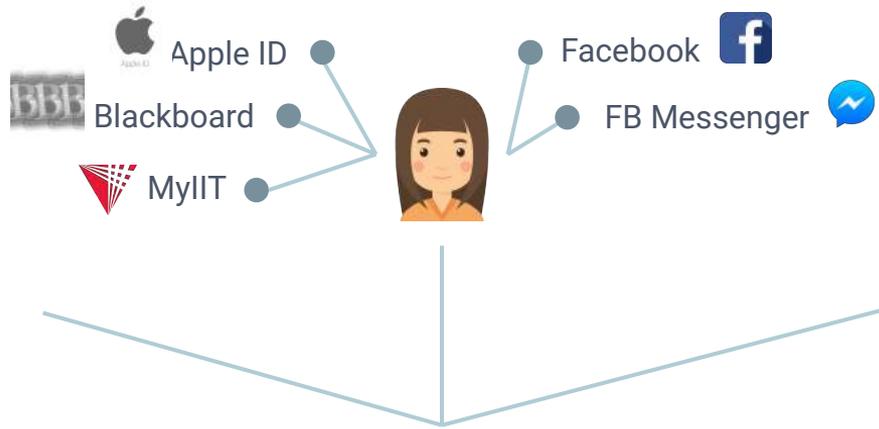
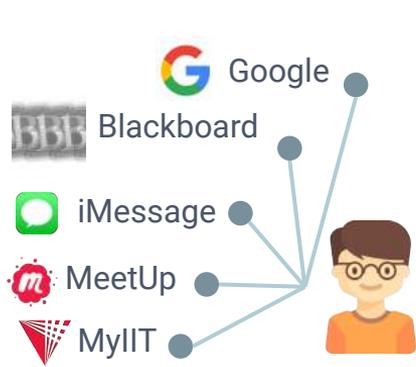
scAI connects people to people by harnessing and analyzing data collected from smart campus technologies to reduce barriers of collaboration across distance and time.

scAI 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 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.



scAI



“

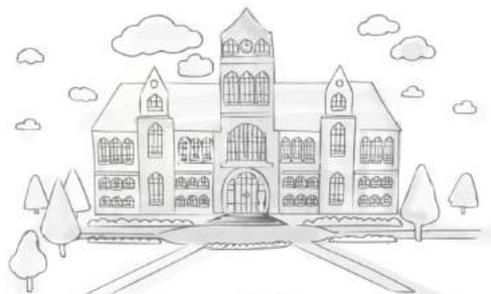
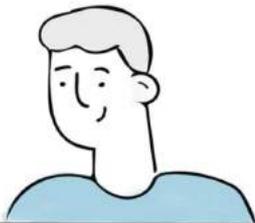
Let's see how a smart campus
life would be like
with me.

”

THE TEAM



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

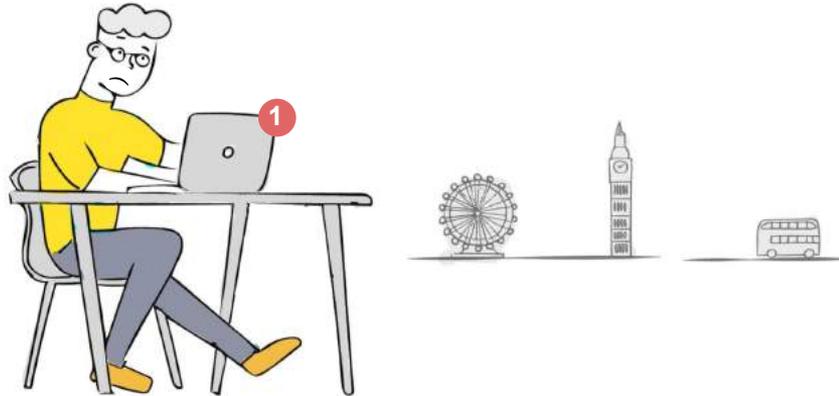


Alice lives near school, so she spends most of her time on campus. She prefers walking to school.



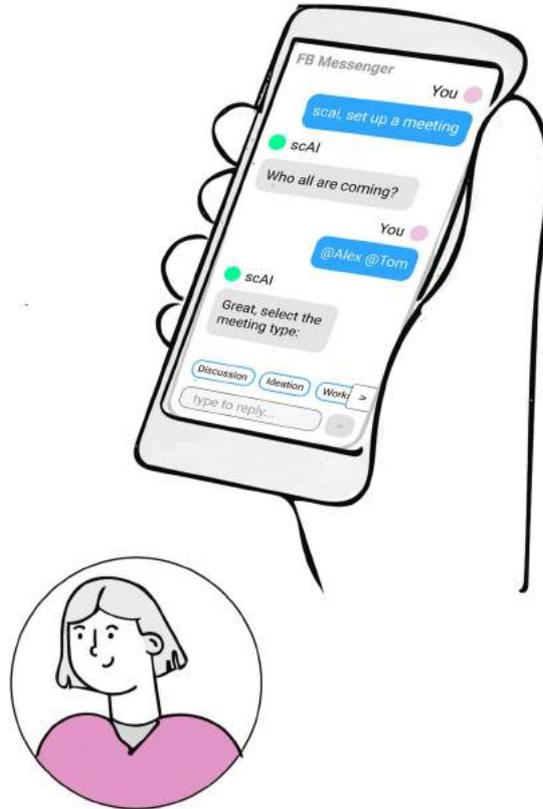
Alex is a part-time student who travels a lot due to work. Currently, he is in London.

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

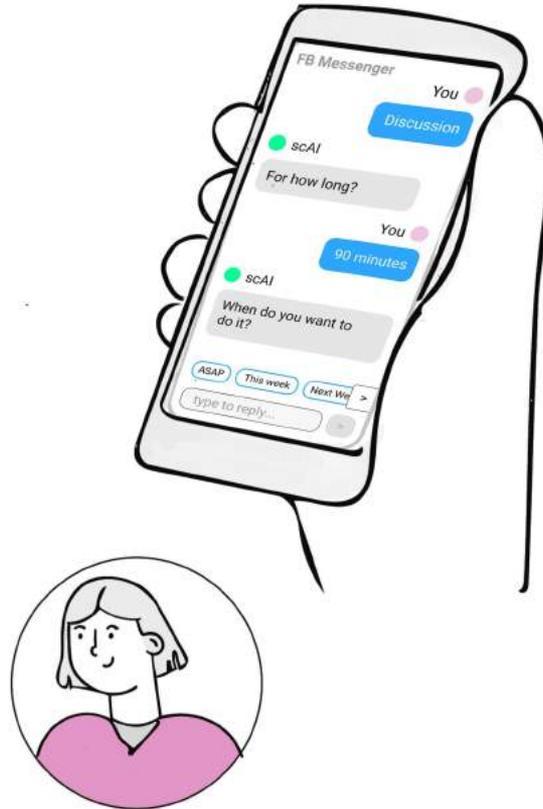


Alice initiates the meeting request to the other team members.

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

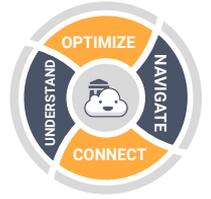


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Platform prompts with questions for:

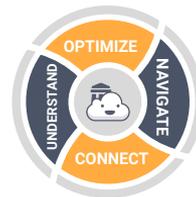
- Who are the members?
@Alex @Tom
- What is the meeting type?
Ideation
- What is the meeting length?
90 Minutes
- Meeting immediacy?
ASAP

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.

Channels
Ideation Meet

scaI: 10:00 am
Ideation meeting with Alice and Jon

Hi Alex!

Alice has requested for an urgent meeting with you and Max. Based on your availability, I am proposing the following options:

Option 1: [details] Option 2: [details]

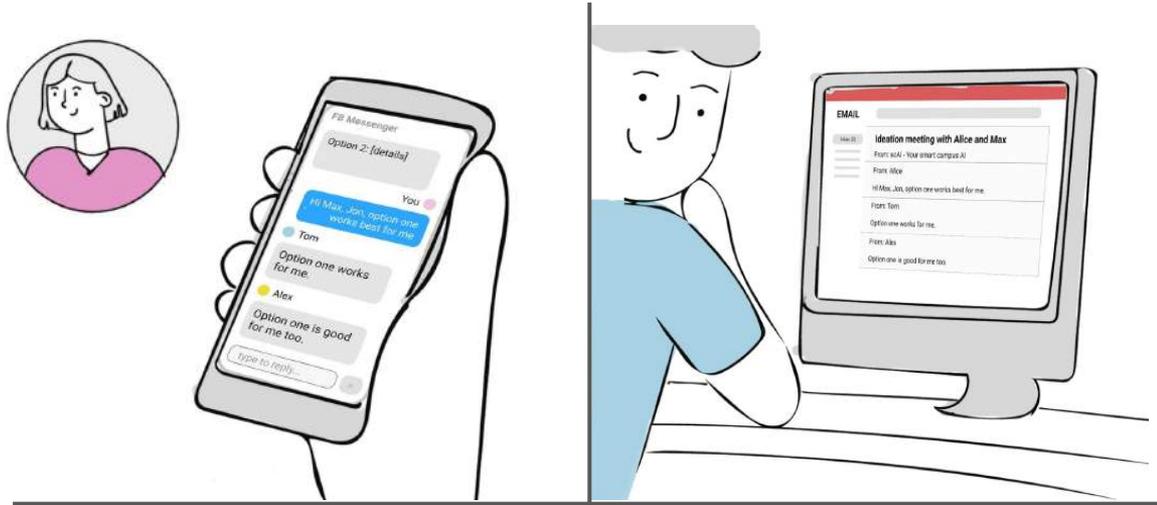
Reply to this email to accept the meeting, chat with your team-mates, or ask for information.

Alternatively, you can join here:

FB Messenger Text Message



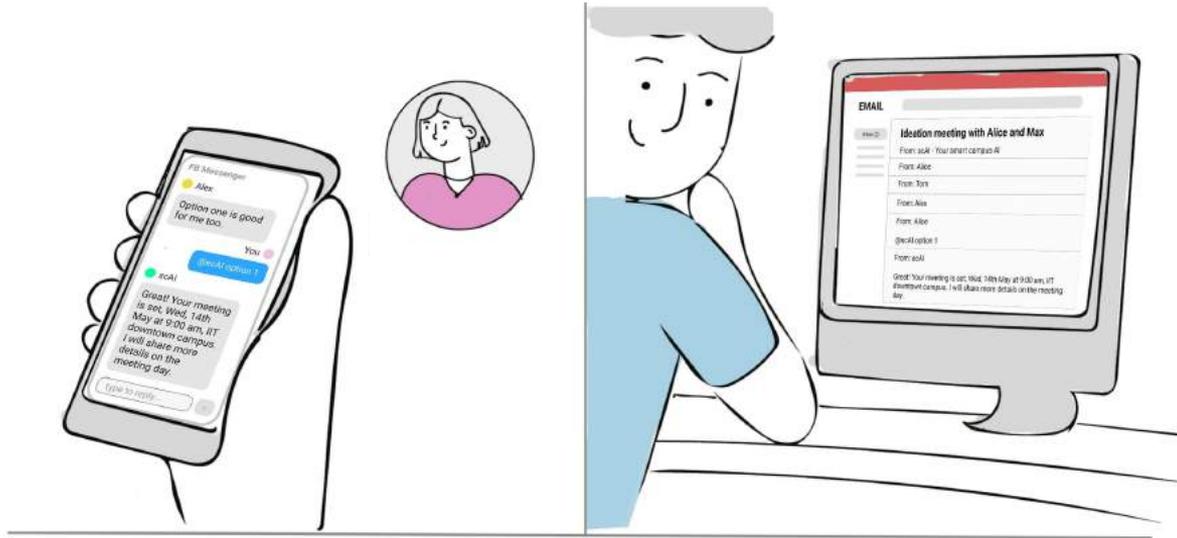
03: Receiving meeting notification



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



FB Messenger

scAI

Hi Alice! You are meeting with Tom at IIT Downtown campus and Alex will join virtually from Heathrow Airport.

Take the CTA bus at 9.00 am

Scan the barcode at scAI Kiosk in the location to find room and unlock it:



Type to reply...



EMAIL

Inbox (2)

Ideation meeting with Tom and Max

From: scAI - Your smart campus AI

From: scAI, Alice, Alex

From: scAI

Hi Tom! You are meeting with Alice at IIT Downtown campus and Jon will join virtually from Heathrow Airport.

Start from your home at 9.30 am to reach the Downtown campus on time



Scan the barcode at scAI Kiosk in the location to find room and unlock it:



Channels

Ideation Meet

scAI

Hi Alex! You are meeting with Alice and Tom by joining them virtually from WeWork location at the Heathrow Airport.

Take uber from your hotel at 1.30 pm to reach the location at time. Click on the link below to **Book the Uber Directly.**



Scan the barcode at scAI Kiosk at the Airport to find the WeWork location and unlock it.

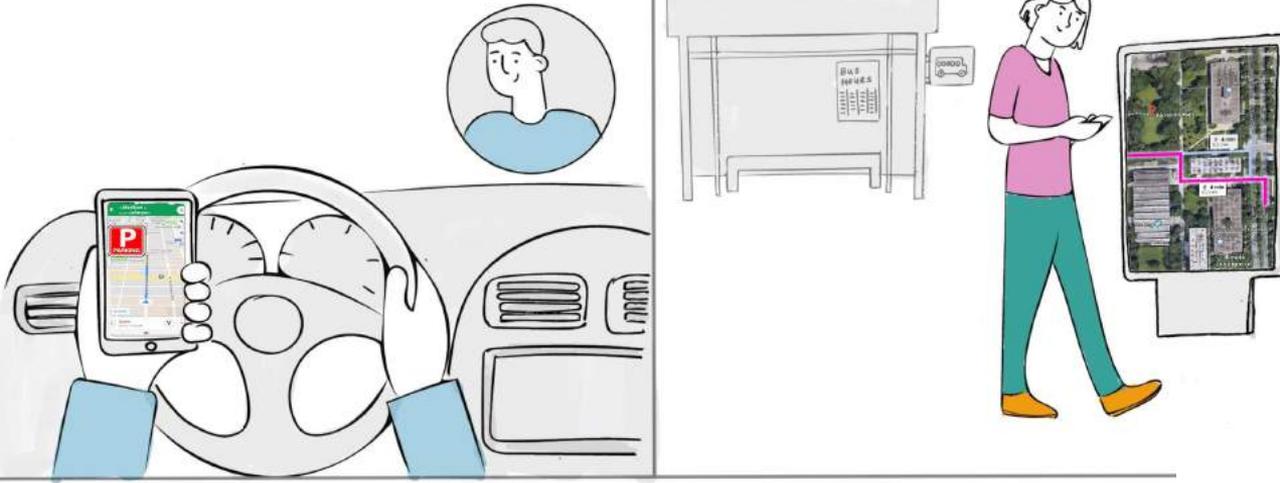


Type to reply...



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

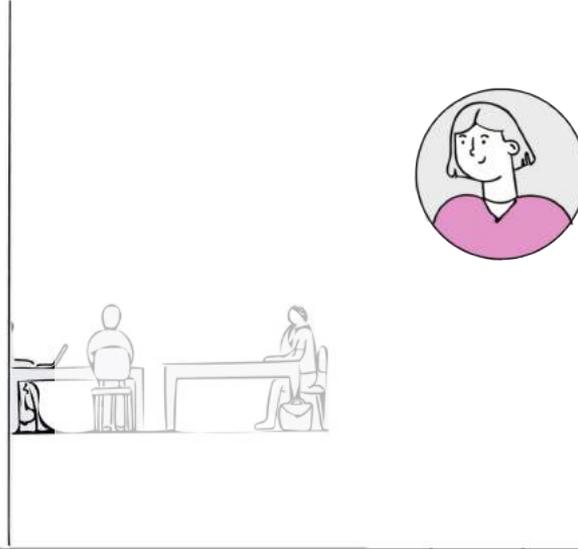
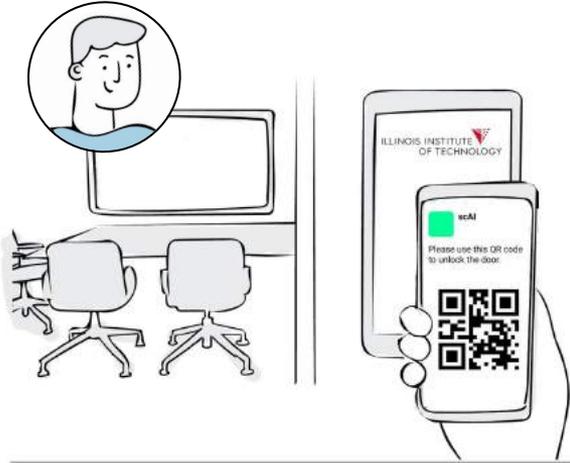
Each team member is provided with navigation and meeting instructions.

Technology/ System

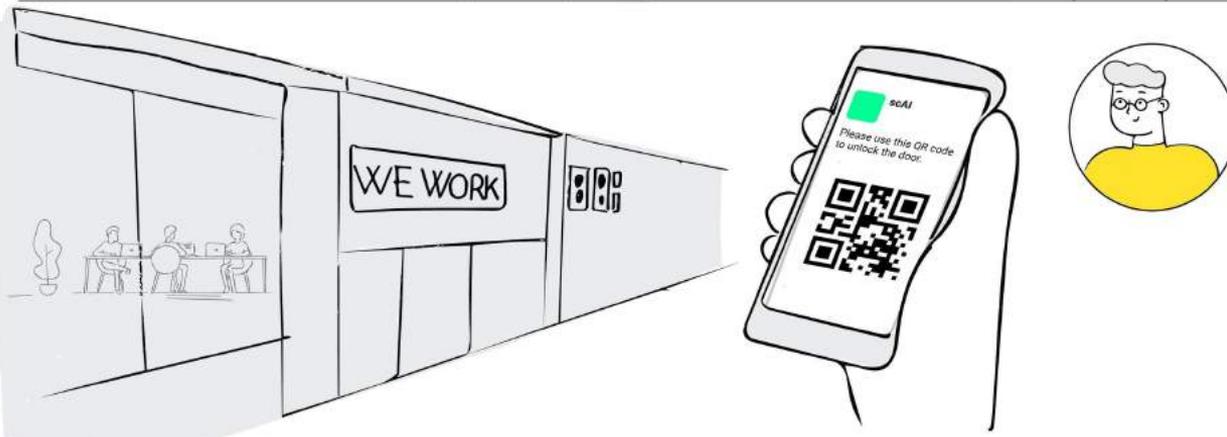
scAI syncs to smart campus devices and analyzes data to provide the team with optimized route planning, directions, and access to spaces/places if necessary (parking, buildings, rooms, etc.)



05: Accessing the locations



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



06: Collaborating and Transcribing

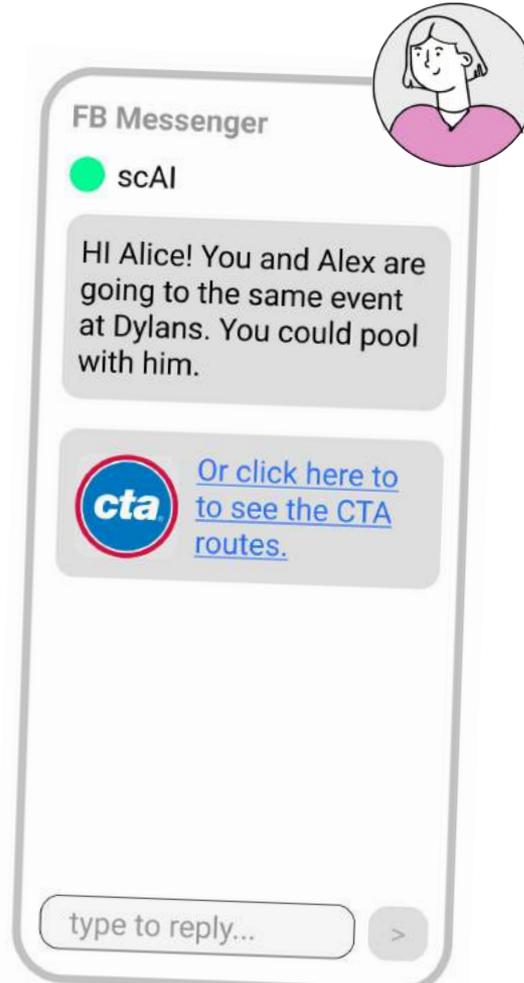
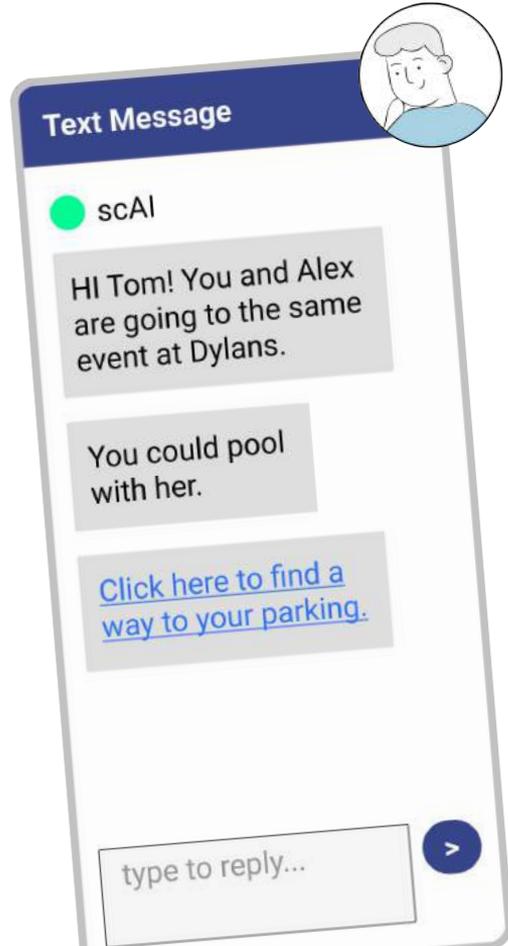


scAI records collaboration / meeting assets (notes, voice recordings, images, etc.)

It integrates with existing collaboration platforms

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

07: Social Extension



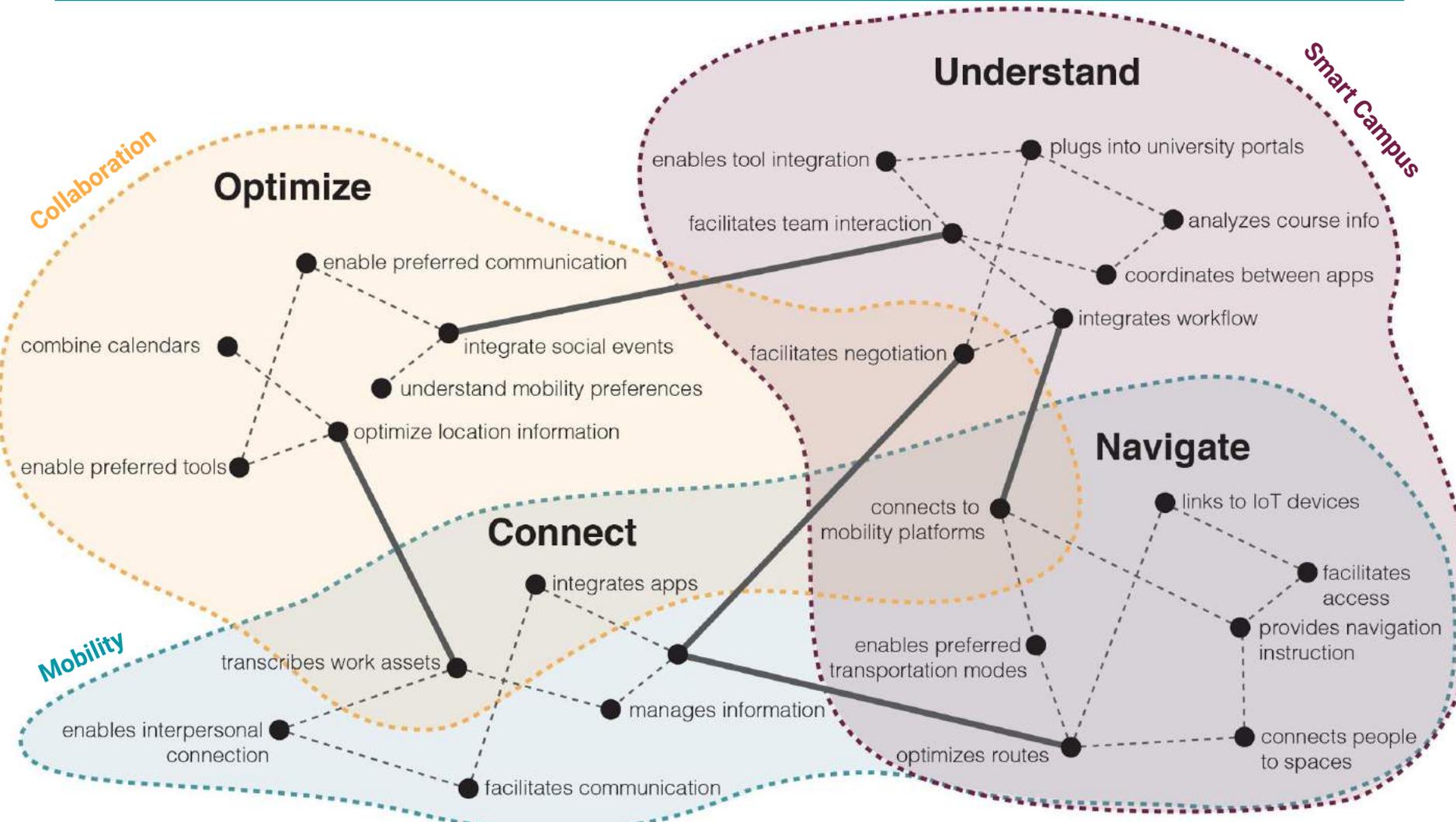
Tom and Alice get an update about a social event that they are both attending.

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!



ROADMAP



Users/clients
Students and educators/
university

Navigation Services
Apple Maps
Google Maps
Here Maps

Users/clients
Professionals/
Business or
organizational
campuses

Digital Assistants
Google Assistant
Amazon Alexa
Other virtual
assistants

Locations
University campus,
University locations
outside the main
campus

Mobility Services
Uber
Lyft
CTA
Metra

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

Locations
Airports, Train
stations, Public
Libraries

Communication Services
Gmail
Facebook
Outlook
Whatsapp
Slack

University

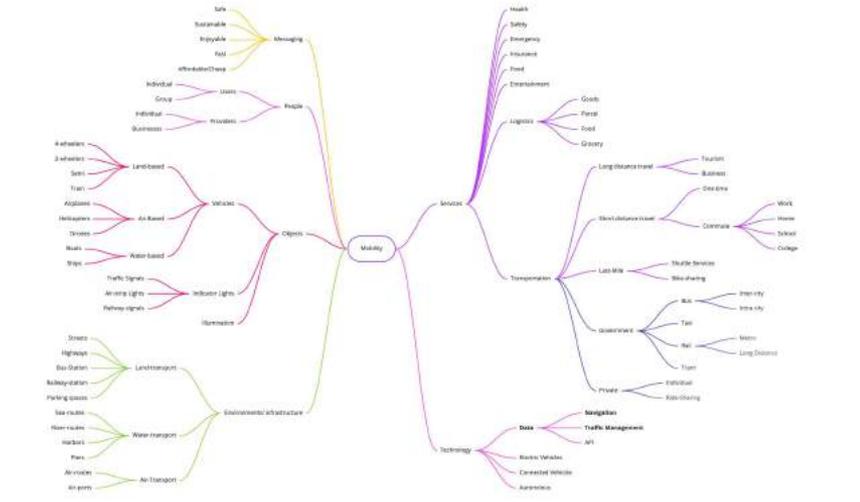
Companies

City

-  Location Partners
-  Integration Partners
-  Users/Clients

| **Appendix:** Our Process

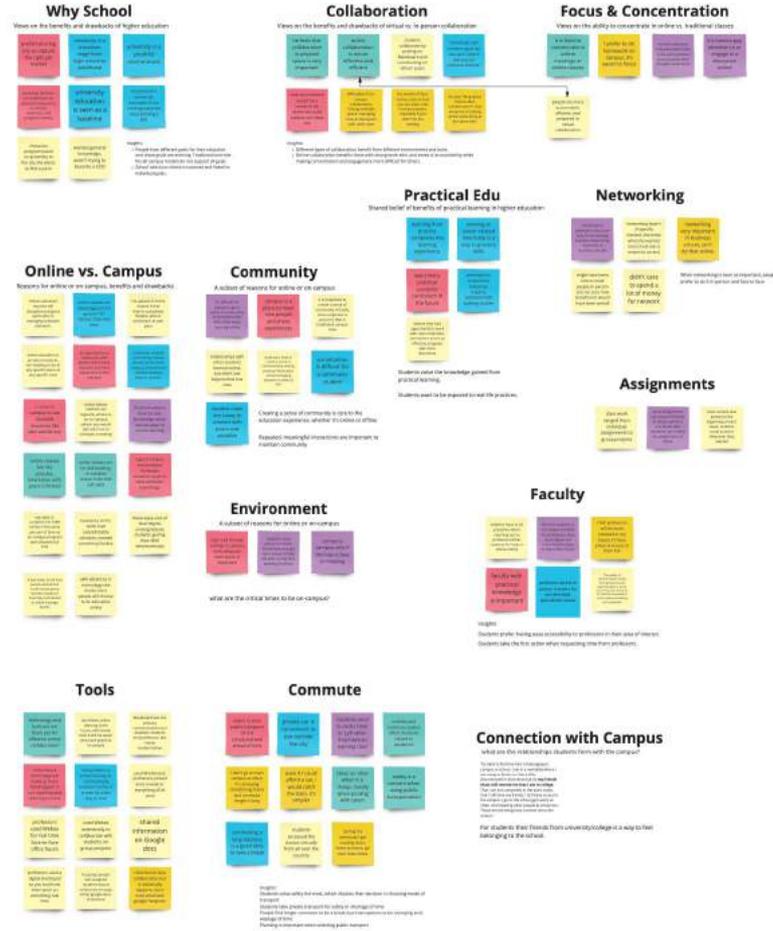
BUILDING CONTEXT: MIND MAPPING, STAKEHOLDER MAPPING, & SECONDARY RESEARCH DATABASE



Topic	Abstract Summary	Source	Quotes	Observations	Themes	Insights
Autonomous driving services	Waymo officially launches driverless taxis in San Francisco in December 2020	Forbes, CNBC, The Verge, TechCrunch, etc.	"This move positions us to be the leader in both of new Western cities as we continuously entering a more aggressive and scaled market. And we are confident to be using this as a platform to expand into other cities."	Waymo's focus on "rural" cities is aimed at addressing the needs of low-density areas and rural communities. This is a strategic move to expand their market reach.	Autonomous driving services	Waymo's focus on rural cities is aimed at addressing the needs of low-density areas and rural communities. This is a strategic move to expand their market reach.
Autonomous driving services	Ford has been building out its autonomous vehicle testing facility in Michigan since 2016, and now has the world's largest autonomous vehicle testing facility in Michigan	Automotive News, The Verge, etc.	"Ford has been building out its autonomous vehicle testing facility in Michigan since 2016, and now has the world's largest autonomous vehicle testing facility in Michigan."	Ford's investment in autonomous vehicle testing facilities is a key strategy to advance the technology and address regulatory challenges.	Autonomous driving services	Ford's investment in autonomous vehicle testing facilities is a key strategy to advance the technology and address regulatory challenges.
Mobility as a service	Ford and other major transportation companies that have traditionally been car manufacturers are now offering mobility as a service	Automotive News, The Verge, etc.	"Ford and other major transportation companies that have traditionally been car manufacturers are now offering mobility as a service."	Major manufacturers are diversifying into mobility services to provide more comprehensive transportation solutions.	Mobility as a service	Major manufacturers are diversifying into mobility services to provide more comprehensive transportation solutions.
Mobility as a service	Uber is launching its own autonomous vehicle fleet in San Francisco, and is also testing its autonomous vehicle fleet in other cities	Automotive News, The Verge, etc.	"Uber is launching its own autonomous vehicle fleet in San Francisco, and is also testing its autonomous vehicle fleet in other cities."	Uber's expansion into autonomous vehicle fleets is a significant step towards providing a fully autonomous mobility service.	Mobility as a service	Uber's expansion into autonomous vehicle fleets is a significant step towards providing a fully autonomous mobility service.
Shared mobility services	Shared mobility services are growing rapidly, and are becoming a key part of the transportation ecosystem	Automotive News, The Verge, etc.	"Shared mobility services are growing rapidly, and are becoming a key part of the transportation ecosystem."	Shared mobility services are becoming a key component of urban transportation, offering flexible and convenient options.	Shared mobility services	Shared mobility services are becoming a key component of urban transportation, offering flexible and convenient options.



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

Team Members

Helping students collaborate for a research project

About the team work

Challenge

DESIGN PRINCIPLE CARDS

Barrier Free Interaction:
Design for generative collaboration should enable the immediacy of physical presence.

Desired Interaction Mode:
Design should align with people's desired interactions along a spectrum from goal oriented to relationship building.

Seamless Commute:
Support and streamline the trade-offs people make around their commute decisions.

User Experience:
Use data to improve/optimize the user's campus experience.

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

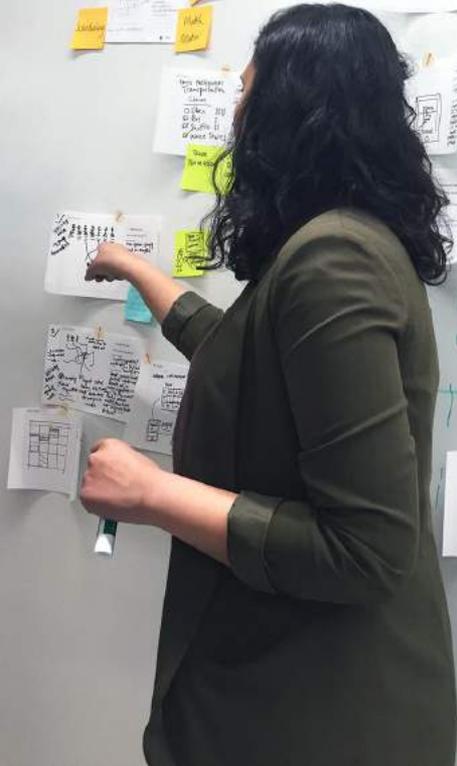
Integrated Tools:
Collaboration tools should be socially desirable, not just technologically feasible.

EXPLORING IDEAS

PLANNING

PREPARING

MEETING



IDEA STORYBOARD

Name your idea
COACH MOBILE

Sketch out your idea in a storyboard

What does it solve?
Making convenient education accessible for those for whom a car is not a viable solution

What are the needed technologies?
- 5G, mobile network
- Automated vehicle registration
- Improved performance of wireless data

In-person relationship building during transit
Brings meeting to the people

IDEA STORYBOARD

Name your idea
ANTI-GLITCH BOT - "the Mag"

Sketch out your idea in a storyboard

What does it solve?
Virtual project manager - keeps team on track - no meeting - fast team effort

What are the needed technologies?
cloud
clintchat

Smart campus reduces transport need

reduces cloud activity
Detects low activity
Participation Scale
Team Momentum

Shared work space
Ideas
Project Initiative map
AI suggests via 3D prompts
Reduces down tool and personality barriers
Customized Motivation
descriptive and diagnostic solution

Reporting / peer pressure
Visual management System
System checks for redundancy
Gamification cons.

What are the needed technologies?

Integrate with user zone
I know your first year + first choice TOP!

Integrate with user zone
You cannot afford to miss a meeting

How the final week!
6 projects due each!
YIKES!

But we got it covered!