Sustainable Mobility as a Service
SMAAS is a project within A Challenge from Sweden, a platform for need-driven innovation founded by the Swedish Energy Agency, and co-developed with Swedish Incubators & Science Parks.
Vision

In the future, people won’t need to own a vehicle to transport themselves.

But new forms of mobility must be sustainable. SMAAS is a project to develop new approaches to mobility and to further eliminate carbon pollution.
INTRODUCTION & SUMMARY

Barriers

1. Private car ownership is deeply ingrained in society.
2. It’s easy to promise more than can be delivered today.
3. The mobility ecosystem itself is fraught with complexity.
Response

To bring sustainable mobility as a service to life, SMAAS aligns people’s real needs and natural mindsets with what’s possible and what’s most necessary for progress now.
Yours to build

We want to support progress, not create unnecessary complexity.

Today, and in the next months, we invite:
• your feedback on this program
• your help in making it better before we launch
• your support to create an optimistic, collaborative spirit
INTRODUCTION & SUMMARY

Start with people

By understanding people’s everyday relationships with mobility and sustainability we can better connect initiatives to real needs and behaviours, and increase the likelihood of them making different choices.
What People Need
WHAT PEOPLE NEED

1. Everyone’s needs are a little different. While people’s expectations of transportation are highly personal, the system isn’t yet sophisticated enough to deliver on them.

“General information about transportation needs to be transformed into what it means for me, not the world.”

“Control makes me feel safe.”
WHAT PEOPLE NEED

1. Everyone’s needs are a little different. While people’s expectations of transportation are highly personal, the system isn’t yet sophisticated enough to deliver on them.

People need personalised experiences that reliably deliver better results than private car ownership.

“General information about transportation needs to be transformed into what it means for me, not the world.”

“Control makes me feel safe.”
2. We all want to belong to something bigger than ourselves. While people experience mobility as individuals, they often associate the system with groups, shared needs, and common interests.

"The government only thinks about the cities."

"As Swedes, we’re very aware of negative things. We need to show progress and be positive to engage people."

— Malin A.
WHAT PEOPLE NEED

2. We all want to belong to something bigger than ourselves. While people experience mobility as individuals, they often associate the system with groups, shared needs, and common interests.

People need solutions that align with their shared interests, identities, and geographies; and evidence that individual change contributes to collective progress.

““The government only thinks about the cities.”

“As Swedes, we’re very aware of negative things. We need to show progress and be positive to engage people.”

— Malin A.
3. We all want to be seen to be doing the right thing. While people attend to their own practical needs, they still ascribe value to social status and cultural norms. ‘Right’ may mean popular, or ethical, or logical.

“The cool kids don’t wear bike helmets.”
3. We all want to be seen to be doing the right thing. While people attend to their own practical needs, they still ascribe value to social status and cultural norms. ‘Right’ may mean popular, or ethical, or logical.

People need great examples and role models that connect to their beliefs and values.
4. When your life changes, you’re more able to change your life. Major life transitions create space for people to reflect on how well their normal behaviors align with their new circumstance, and to make other changes during the same moment.

“People without as much money are better at sustainability.”

“When CEOs trade in their car for a bike or a Tesla, they consider other behaviours in life, like they have a new identity.”

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What People Need

4. When your life changes, you’re more able to change your life. Major life transitions create space for people to reflect on how well their normal behaviors align with their new circumstance, and to make changes during the same moment.

People need compelling, natural opportunities to change their mobility behaviors.

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“When CEOs trade in their car for a bike or a Tesla, they consider other behaviors in life, like they have a new identity.”
5. We all think that there’s more behind the curtain. Making sense of the system is hard, and people often believe that no matter the amount of information that’s available to them, the truth is still hidden.

“Late trains get lower priority. So it’s better to wait for the next one.”
WHAT PEOPLE NEED

5. We all think that there’s more behind the curtain. Making sense of the system is hard, and people often believe that no matter the amount of information that’s available to them, the truth is still hidden.

People need confidence that the information they can access is accurate, actionable, and complete.

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6. Behaviour change is hard to sustain. We all know this intuitively, and it’s especially true when people are making a shift from deeply ingrained habits and patterns.
WHAT PEOPLE NEED

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People need support to build new behaviours that stick.
WHAT PEOPLE NEED

RECAP

1. People need personalised experiences that reliably deliver better results than private car ownership.

2. People need solutions that align with their shared interests, identities, and geographies; and evidence that individual change contributes to collective progress.

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How People Change
To give implementations the best chance of success, we should make the most of people’s natural inclinations towards change.

In our research, we identified four mindsets that cut across demographics and go beyond mobility:

- Explorers
- Mapmakers
- Believers
- Followers
HOW PEOPLE CHANGE

ACTIVE

EXPLORERS

MAPMAKERS

IDEALIST

PRACTICAL

BELIEVERS

FOLLOWERS

PASSIVE
Explorers want to see dramatic societal shifts that align with their values, and are able to imagine inspiring new ways of living more easily than others.

I want to create paradigm shifts in service of my beliefs and values.

I need people to see and feel things the way I do.

I’m essential because I offer a vision and a purpose that excites and rallies people.

I struggle because I imagine perfection, and it’s hard to gather enough evidence for my ideas.

“I want a self-driving car so I can do something better during all that time.”
Mapmakers want to make the best of whatever circumstance or system they are in, and optimise their experiences more deeply than others.

I want to make the absolute best of the system I’m in. I need sufficient information and authority to change the way things are done.

I struggle because it’s hard to feel confident enough to set a new course and commit to it. I’m essential because I want progress not perfection, and I build evidence for new approaches by acting now.

“Being efficient makes me less stressed and more relaxed.”
Believers look for great, values-aligned examples to follow, easy ways to act, and a community to join.

I want to be recognized for acting according to my values.

I need great examples to follow, easy ways to act, and a community to join.

I struggle because I face a lack of great options, and it’s easy to make poor choices.

I’m essential because I increase demand, and help create a critical mass.

“You need to show that things are actually happening and progress is being made.”

HOW PEOPLE CHANGE
Followers wait for easy-to-adopt solutions that are self-evident and everywhere to be found.

I want to do some things without having to think about them. I need easy-to-adopt solutions that are self-evident and everywhere to be found.

I struggle because there’s a lack of clarity about what to do, and insufficient direction. I’m essential because when I’m on board, everything changes—and stays that way.

“I don’t think about the environment, but I recycle. The bins are there; it’s easy and clear.”
Ecosystem Needs
ECOSYSTEM NEEDS

1. Some believe that combined mobility must come through incremental shifts from existing actors; others are waiting for dramatic disruptions from outsiders.

“The incentives to change are not as obvious for public transportation authorities.”
1. Some believe that combined mobility must come through incremental shifts from existing actors; others are waiting for dramatic disruptions from outsiders.

Ecosystem actors need a clear structure for progress that supports internal efforts, tackles long-standing barriers, and also invites powerful external contributions and solutions.
2. While many agree that public/private partnerships are crucial to the success of combined mobility, there are few protocols to guide effective, coherent collaboration.

“As a public company, it’s not OK for us to sell data commercially.”

— Annette E.
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Aators need a repeatable innovation structure with enough flexibility to account for varying incentives, priorities, resources, and speeds of work.
ECOSYSTEM NEEDS

3. Fatigue and insufficient progress from other initiatives may deter actors from seeing value in this work.

“There are plenty of ideas. The problem is implementation and testing.”
— Göran S.
3. Fatigue and insufficient progress from other initiatives may deter actors from seeing value in this work.

A Actors need proof that new ways of working are delivering value, and tangible evidence of progress toward their individual and shared goals.

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4. System ambiguity and complexity has created a confusing picture of leadership and accountability: everyone is talking, but it’s hard to make system-wide decisions.

“We have to take small steps today instead of writing reports and PowerPoints.”

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Setting Ourselves
Up For Success
What do we need right now?

1. PEOPLE OPEN TO CHANGE
2. TANGIBLE PROGRESS
3. BETTER WAYS OF WORKING
SETTING OURSELVES UP FOR SUCCESS

PEOPLE OPEN TO CHANGE
People need compelling, natural opportunities to change their mobility behaviours.

Prioritise implementations that serve people with focused needs at focused times in their lives. Start with the windows of opportunity that life transitions create, and piggyback on people’s natural openness to change to spark new mobility behaviours.
People need great examples and role models that connect to their beliefs and values.

Build a communications strategy that draws on social influencers to explain and showcase successes, and grow demand for more extensive pilots and implementations.
People need support to build new behaviours that stick.

Introduce ethical behavioural nudges, and give people the best chance to make meaningful shifts to new ways of living and create evidence for sustained change.
Focus on activating the types of people most open to trying new things.
Focus now on groups of people most open to trying out new things.

**EXPLORERS**

They want to see shifts that align with their values, and imagine new ways of living more easily than others.

Explorers want to be inspired.

**MAPMAKERS**

They want to make the best of the system they’re in, and optimise their experiences more deeply than others.

Mapmakers want lots of information.
SETTING OURSELVES UP FOR SUCCESS

TANGIBLE PROGRESS
In order to orchestrate work in a complicated environment, we organize projects into two types:
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**LIFE**

Life projects implement permanent new mobility solutions that address people's needs in real-life contexts, initially organized by major life transitions.

- NEW HOME
- NEW JOB
- NEW FAMILY
- NEW CONTEXT
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**FOUNDATION**
Foundation projects address universal barriers to progress shared by all members. Projects may include:

- OPEN API & TICKETING
- BUSINESS MODELS & IP
- BEHAVIORAL DATA
- LEGISLATION & POLICY
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SETTING OURSELVES UP FOR SUCCESS

BETTER WAYS OF WORKING
Shared scaffolding, not a fixed plan

Build confidence in all actors by creating and agreeing ‘scaffolding’ for shared efforts (such as Foundation + Life projects), but preserve meaningful space for co-creation and development.
Direction, not mandates

Support actors to shift to action with shared tools, resources and hands-on program leadership.
A choir, not competing voices

Amplify and align everyone’s efforts with clear, inspiring branding and communications.
SETTING OURSELVES UP FOR SUCCESS
Timeline
**TIMELINE**

2018: Spark

Focus on the most receptive people

Life transitions suggest focused groups of end users, natural industry champions, and specific tasks and goals that we can address. Start here, and prioritise participation by Explorers and Mapmakers.

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**MINDSET**

- EXPLORER
- MAPMAKER

**LIFE**

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- NEW JOB
- NEW FAMILY

**FOUNDATION**

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- LEGISLATION & POLICY
2019: Connect

Solve for groups and shared interests

Shift to interest-aligned groups as implementations work cross-regionally and when universal barriers are addressed. Provoke participation through values appeals and draw in the Believers.
TIMELINE

**2019 & after: Personalise**

Fine-tune solutions for everyone

Shift to broad societal adoption as the system allows for deep and comprehensive personalisation. Help people create their own version of change, focused on what matters to them personally. Draw in the Followers.
TIMELINE

2018: Spark

Focus on the most receptive people

2019: Connect

Solve for groups and shared interests

2019 & after: Personalize

Fine-tune solutions for everyone
Program Details

16-01-2018

11:00
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Each project is structured into five phases. Project duration and activities will vary according to scope and goals.

1 SCOPE
Find your focus, build your team, and align around shared goals and resources.
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1. SCOPE
   Find your focus, build your team, and align around shared goals and resources.

2. DEVELOP
   Set your constraints, build your solutions, and prepare for implementation.
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   Put your plan into action. Track progress and make adjustments as you go.
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4. **ACT**
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5. **LEARN**
   - Review the work, capture lessons and share with others, and get ready to go further.
Fare Payment
How might we divide up the fares for multiple mobility providers, in a way which is simple from the end user’s point of view?

**IMPLEMENTATION CHAMPION:** Regional Transportation Agencies

**REGIONAL LEADER:** TBD - 2+ regions

**RESEARCH CHAMPION:** Payment specialist

**PARTNERS:** Payment processors, App builders

**DURATION:** 3 months

**POTENTIAL USERS:** 5,000

**FORMAT:** One-stage competition

**SOLUTION PROVIDERS:** Open to all

**SPONSOR PRIZE:** 25,000.00 €

**CHALLENGE MATCH:** 25,000.00 €

**TOTAL:** 50,000.00 €

**IP:** Transferred to Implementation Champion with license to SMAAAS members

**JUDGING CRITERIA:** A proof of concept payment system which meets criteria defined by the Implementation Champion
New Home

School Drop-off
How might we design a zero-carbon mobility solution pilot for youth school dropoff, which involves the largest number of neighborhood participants?

IMPLEMENTATION CHAMPION:
Local municipality

REGIONAL LEADER:
TBD

RESEARCH CHAMPION:
Academia

PARTNERS:
Regional Transportation Agency
Mobility providers

DURATION:
2 weeks

POTENTIAL USERS:
300

FORMAT:
One-stage proof of concept

POSSIBLE PLATFORMS:
Self-hosted

SOLUTION PROVIDERS:
Pre-qualified mobility providers

SPONSOR PRIZE:
60,000 €

CHALLENGE MATCH:
120,000 €

TOTAL:
180,000 €

IP:
Open sourced

JUDGING CRITERIA:
Reducing private car use by x %
Total % neighborhood participation Best data capture & analyze plan
Design Brief: New Home Implementations

Project Goals

- Reducing private car use by x %, measured by y
- Increasing adoption of new services by x %, measured by y
- Ensure that the quality of information, processes and in-journey experiences is measurably better for residents than for non-residents during the implementation
- Build word of mouth about the offer and make it easy to share stories
- Create an implementation that’s predictable for residents but that can shift as you learn
- Gather and analyze data about end user patterns and behaviours
- Capture and communicate learnings to share with the wider real estate sector and with SMAAS
Design Brief: New Home Implementations

Project Activities

1. DEFINE THE CORE GROUP OF END USERS
   • Focus on prospective or existing residents, or both
   • Agree a single project ‘voice’, and establish non-intrusive communications channels with end users
   • Invite residents’ associations or other groups to offer feedback and guidance

2. INSPIRE PEOPLE WITH THE OFFER
   • Build anticipation for the services and articulate benefits
   • Connect the vision to both social values and pioneering ways of life (explorers) and to measurable, practical benefits (mapmakers)
   • Leave space for people to make up their own minds. Don’t oversell

3. DEFINE THE OFFER
   • Shape end user’s mental models of available services and benefits
   • Articulate what’s available as an everyday benefit, not a technical advance
   • Anticipate and answer questions
   • Create space for people to assess the risk/reward of participation themselves

4. ACTIVATE THE OFFER
   • Celebrate participation, and invite people to see themselves as explorers or mapmakers
   • Invite people to share their participation, but without exerting unwelcome pressure
   • Make the first step incredibly easy; create clear, inspiring instructions

5. DELIVER THE OFFER
   • Support selected, key practical tasks associated with moving into a new home: deliveries, IKEA trips, local orientation
   • Help people establish a focused set of core, repeatable travel patterns: school, commute, groceries.
   • Offer human, comprehensive support to smooth bumps along the way

6. IMPROVE THE OFFER
   • Solicit feedback throughout, and invite active respondents deeper into the process
   • Share feedback with confidence; show evidence of listening early and often
   • Introduce changes with care; adjust only what you can communicate effectively, and explain your reasoning

PROGRAM DETAILS
Roles & How to Participate
It’s up to you and your partners to decide what roles each of you play in a project.

Core Team:
Collaboratively helps align project members, commits to seeing the work through, and is present at all key moments.

Partners & Solution Providers:
Essential players in every project and implementation.

SEA/SISP:
Facilitates and guides members through SMAAS
Roles & How to Participate

Core Team:

**Regional Project Leader**
Takes the widest view of the project, and ensures all members have what they need to succeed. Sometimes this role will be performed by two people.

- Facilitate regional and national connections
- Marshal and propel the project members
- Unblock barriers
- Identify and include existing related work and members
- Cross-share work with other regions and other projects
- Act as conduit and translator to politicians and policymakers

**Implementation Champion**
Takes the fastest view of the project, and drives the team towards action. Focused on their own particular sector, they are especially well-suited to:

- Supply potential groups of end users
- Maximize project efficiency
- Generate evidence at scale
- Speak publicly on behalf of the project
- Offer actionable testbeds and other resources

**Research Champion**
Takes the deepest view of the project, and supports action by supplying evidence. Research Champions may include academics with a specific area of interest related to a project, and connect to teams via SEA. They are especially well-suited to:

- Share the latest research with team members
- Provoke the team into exploring new approaches
- Design experiments and extracting lessons
- Bridge the gap between bold ideas and sector needs
Partners & Solution Providers:

They include all other team members, and may assume a greater or lesser degree of participation and decision-making according to the needs and focus of the project. They include:

- Solution providers, including from beyond Sweden
- Public transport authorities (PTAs)
- Ancillary policy experts
- Branding and communications teams
- Political leaders and operatives
SEA/SISP:

- Gathers the network of actors and brings cross-sector leaders together
- Supports regional project leaders
- Makes decisions about what work fits within the general project
- Defines methodology to identify world-class solutions and to test them
- Builds and enables open and transparent process to find solution providers
- Secures access to experts and facilitates effective collaboration
- Helps locate additional budget
- Supports individual and group efforts with communications and branding
To get going:

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<tr>
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<th>FIND YOUR PARTNERS</th>
<th>CONFIRM GO-AHEAD</th>
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<td>Choose a focus area that aligns with your interests, offers, and goals</td>
<td>Identify like-minded collaborators that share your problem, and define your own role in partnership with them</td>
<td>With the Swedish Energy Agency, receive initial project resources; launch project on the SMAAS website</td>
<td>Clarify the resources you can offer, and shape your project and its outcomes in the best interests of all partners</td>
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ROLES & HOW TO PARTICIPATE

Recap:

FOCUS:

MINDSET
- EXPLORER
- MAPMAKER
- BELIEVER
- FOLLOWER

LIFE
- NEW HOME
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FOUNDATION
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ROLES
- CORE TEAM
- PARTNERS & SOLUTION PROVIDERS
- SEA/SISP

PROJECT STRUCTURE:

1. SCOPE
2. DEVELOP
3. PRE-LAUNCH
4. ACT
5. LEARN