

How do we get to a carbon neutral world?





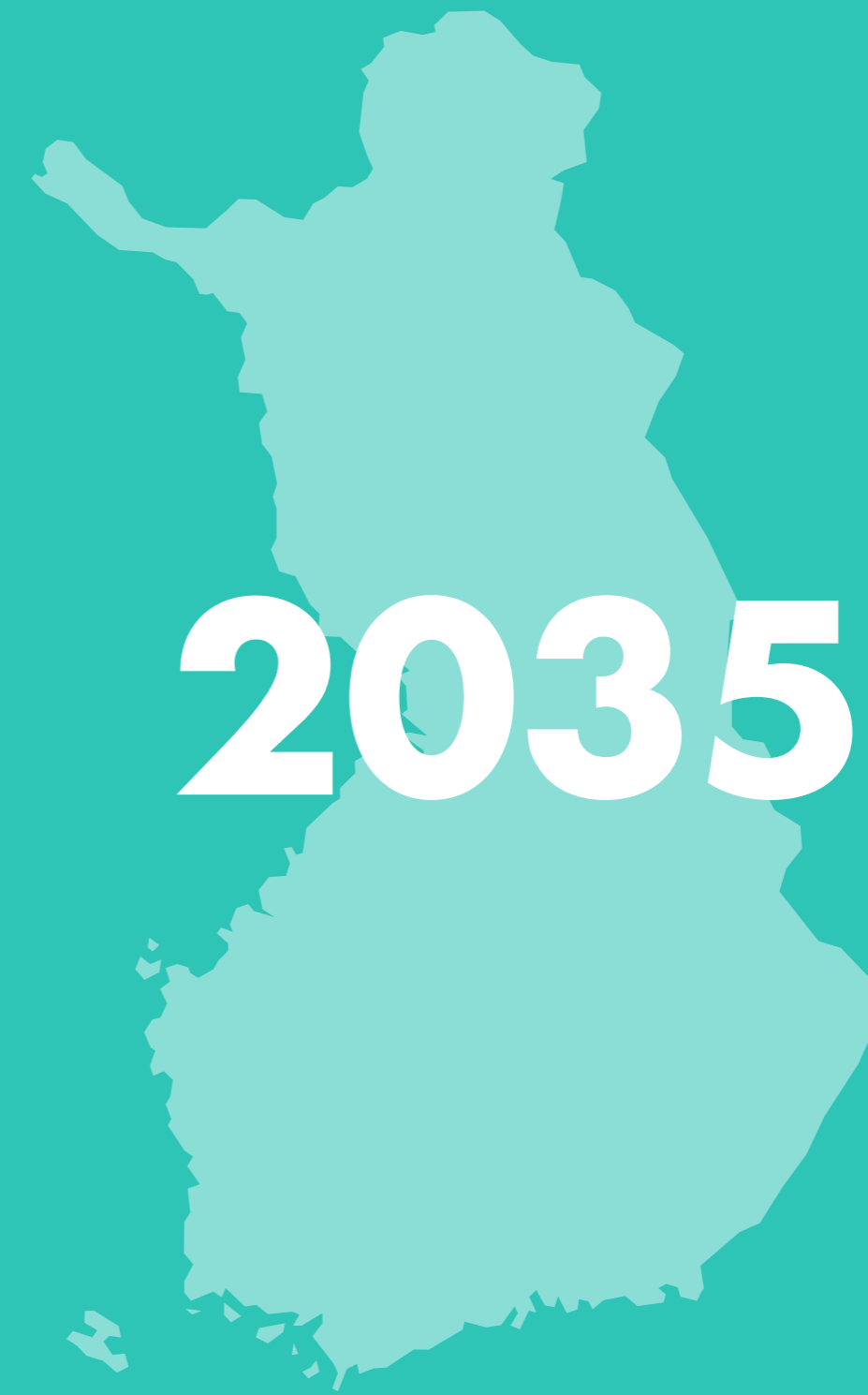
2020

* Marin Governmental program 2019



2020

15 years



2035

Carbon Neutral

* Marin Governmental program 2019

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Rinna Saramaki, Zhengshuang Han,
Noah Peysson and Design for Government course at Aalto University

Our View

Students who engage with high-quality climate education build **empathy**, learn to **combine facts**, **reflect critically** and know how to transform their thoughts into **actions**.

■ Team Introduction



Zhengshuang Han

Creative Sustainability



Rinna Saramäki

Creative Sustainability



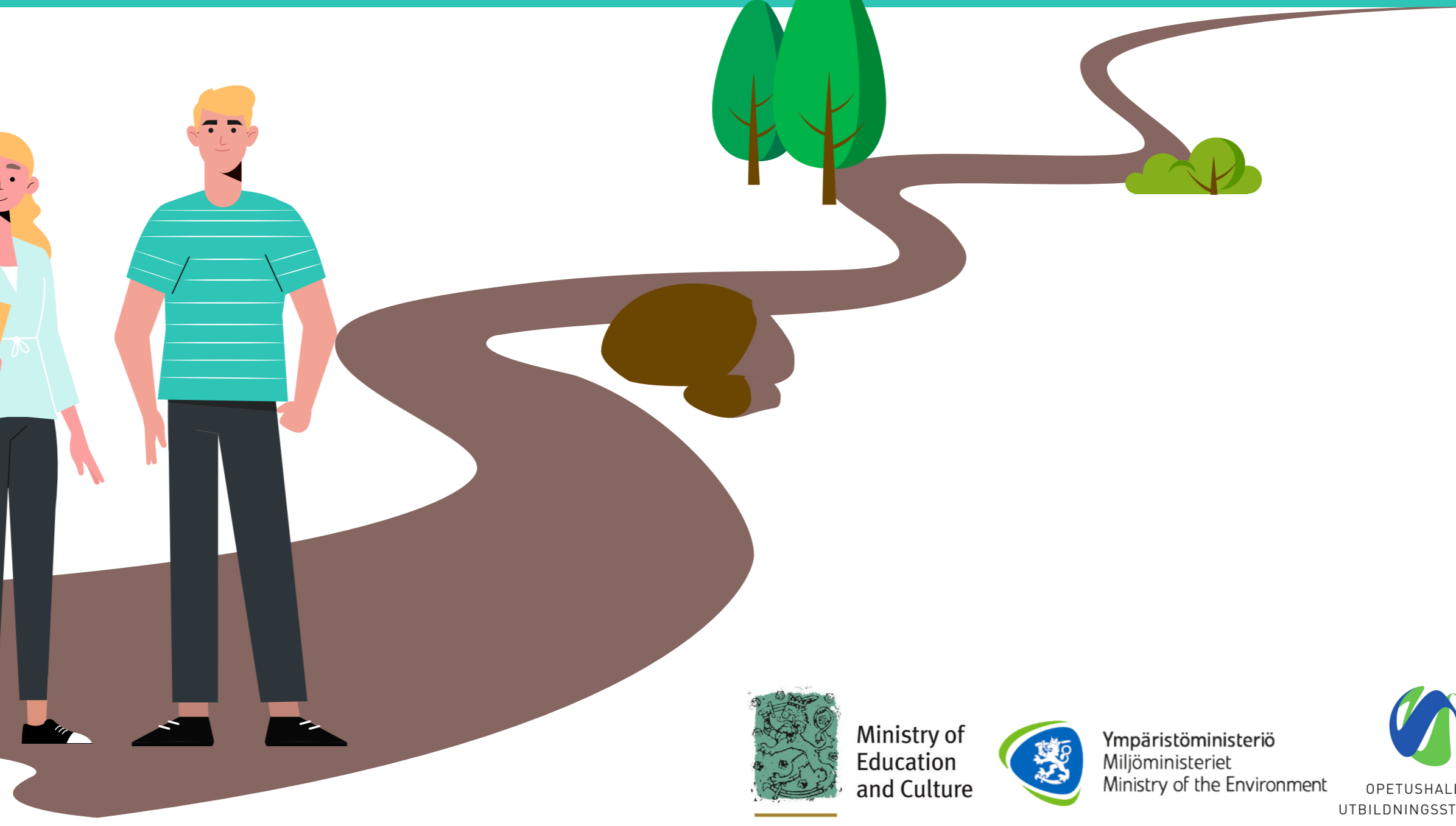
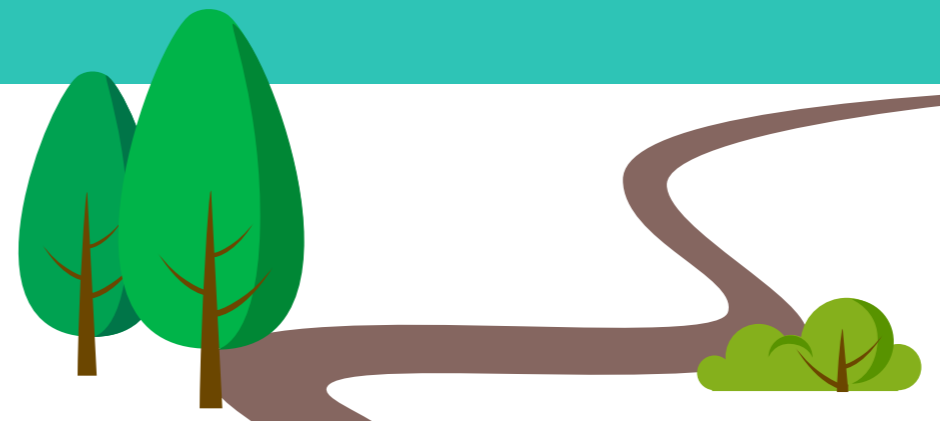
Jelske van de Ven

Collaborative and Industrial Design



Noah Peysson

Creative Sustainability



Ministry of Education and Culture



Ministry of the Environment



Finnish National Agency of Education



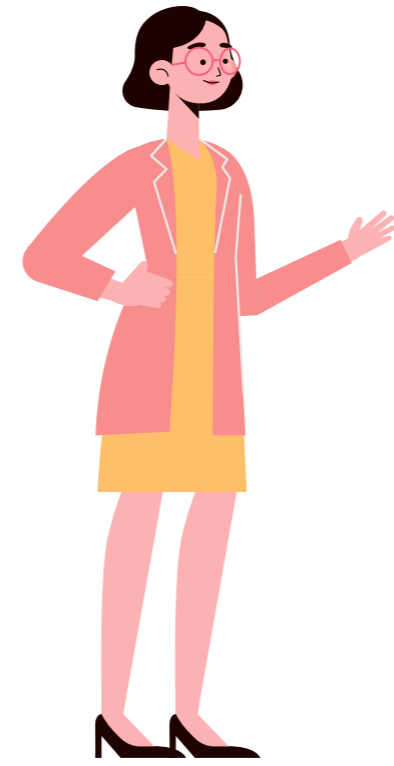
Aalto University school of Arts, Design and Architecture

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Research



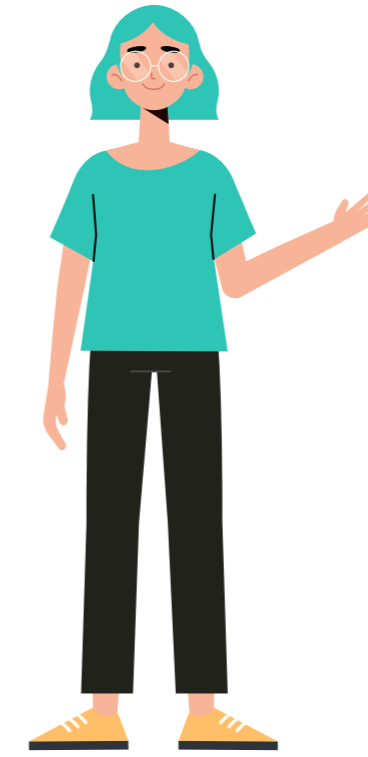
Ministry personnel



Climate Experts



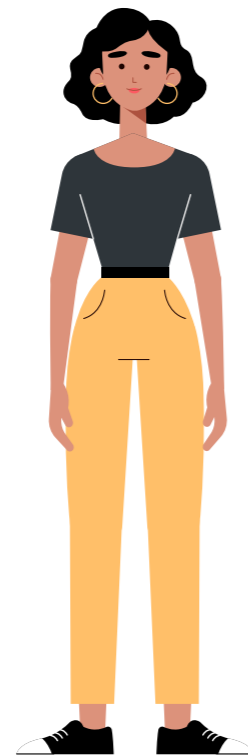
Curriculum Makers



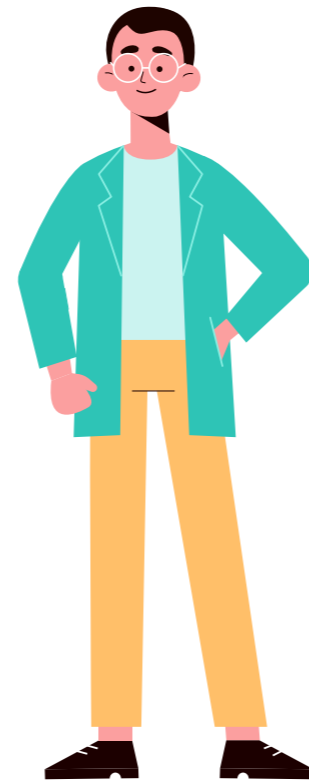
School Book Writers

FEB

MAY



NGO



Headmasters



Teachers



Students

What did we learn?



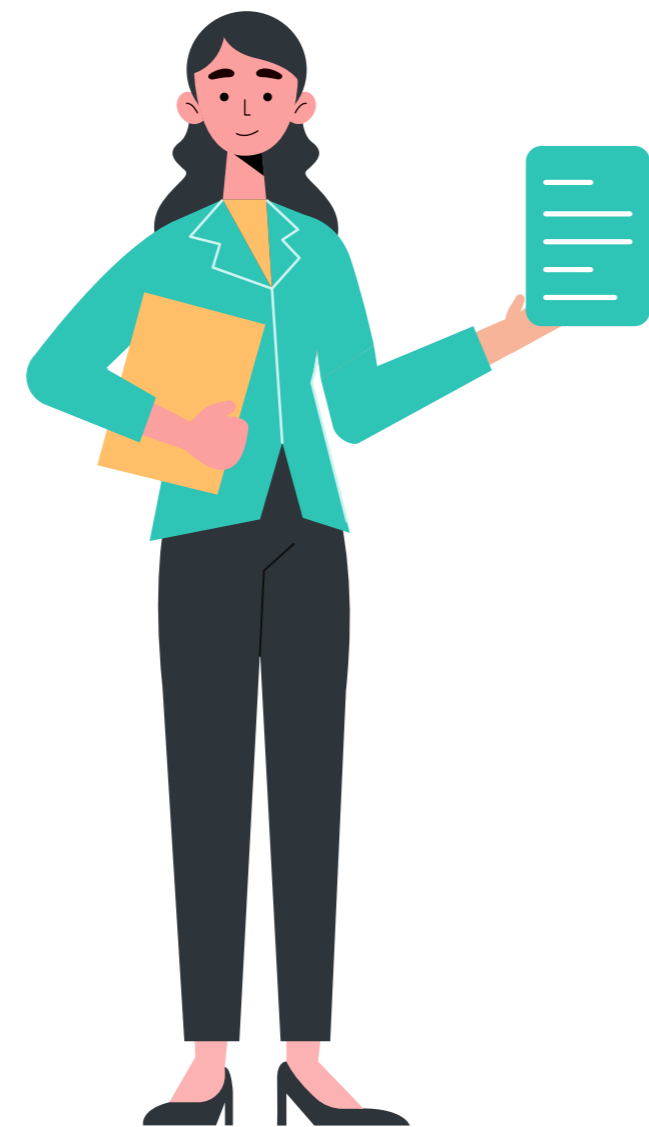
■ Current Situation



Current Situation

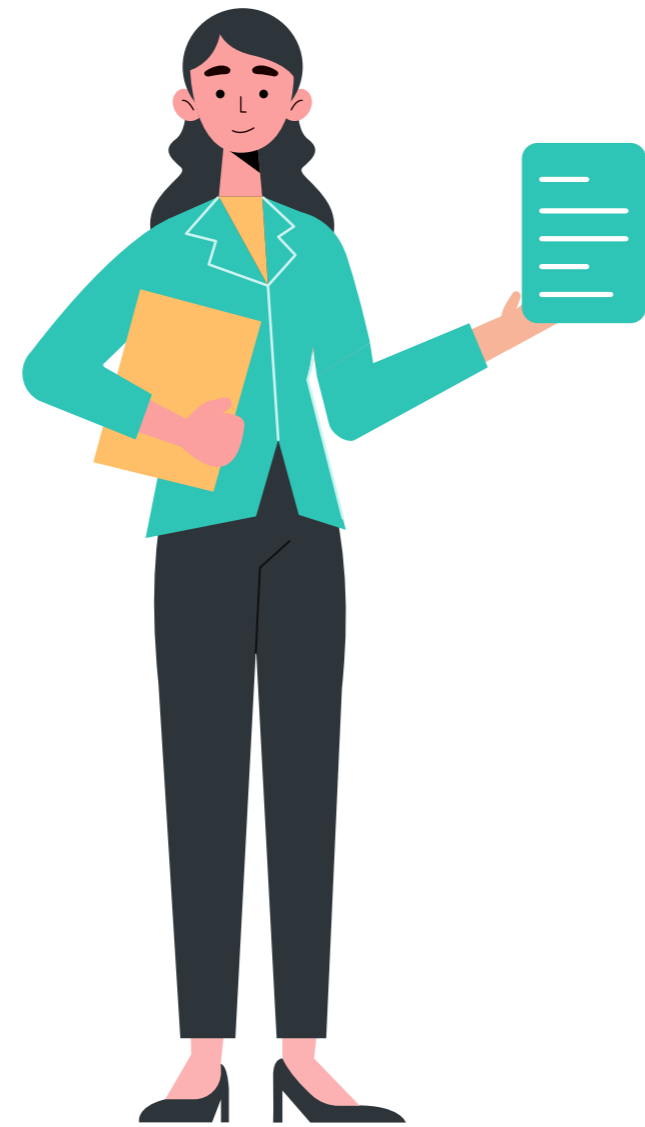


■ Current Situation

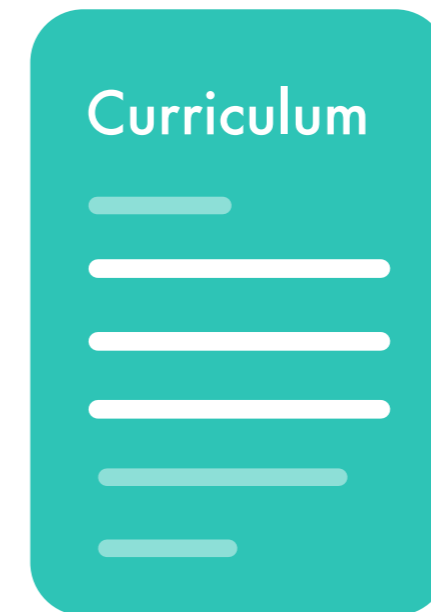


Enough Material

■ Current Situation



Enough Material



Curriculum

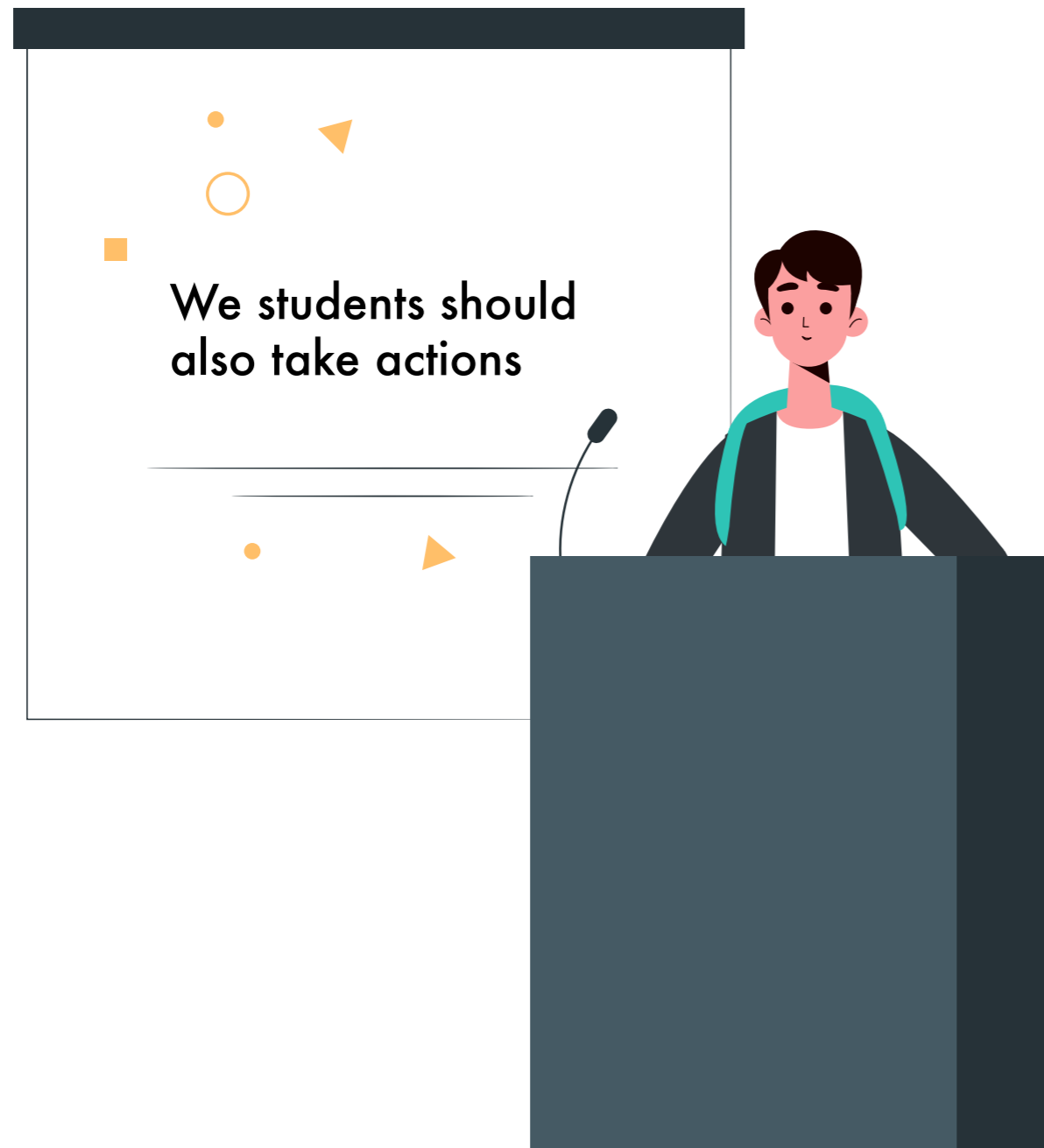
Current Situation



Ministry perspective



■ Active Citizenship



“Climate Active citizenship is engaging in a broad range of activities to consciously participate in democratic processes and shape society.”

Active Citizenship

■ Active Citizenship



Conscious Consumer

“Some teachers only focus on the conscious consumer side, and totally lack this active citizenship side.”

- Ministry employee

Teacher perspective





“Teachers tell me they are worried about climate anxiety and they want tools and ways to deal with emotions.”

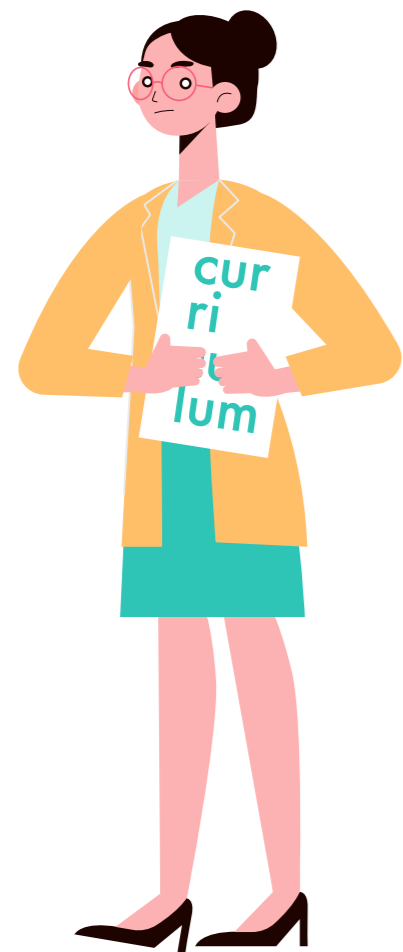
– Climate Educator

“Teachers who have access to a multidisciplinary group of teachers are more comfortable when approaching climate change as they can always forward the question to a more knowledgeable teacher.”

- Climate Educator



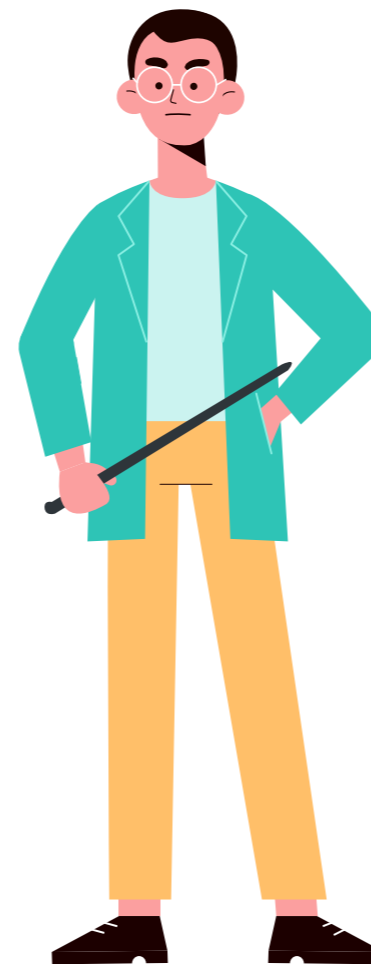
Teacher Type S



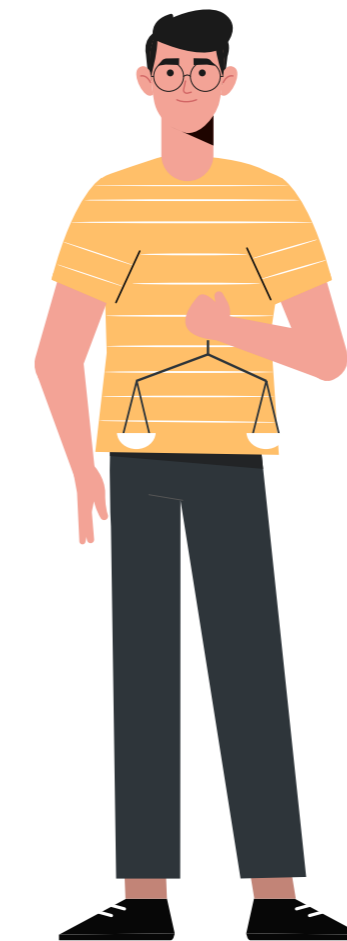
Norm-based



Conflict averse



Fact-based

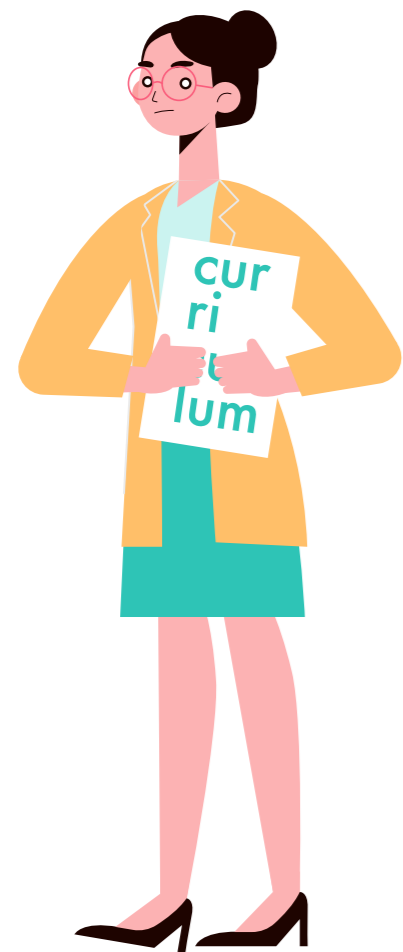


Pluralist



Environmental advocate

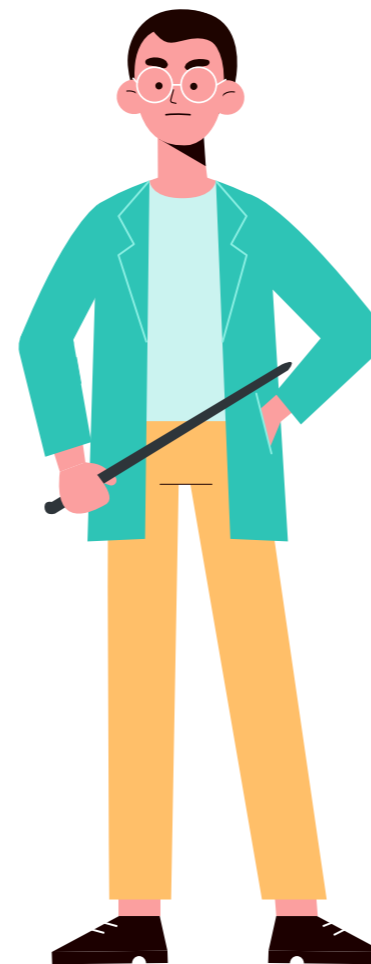
Teacher Types



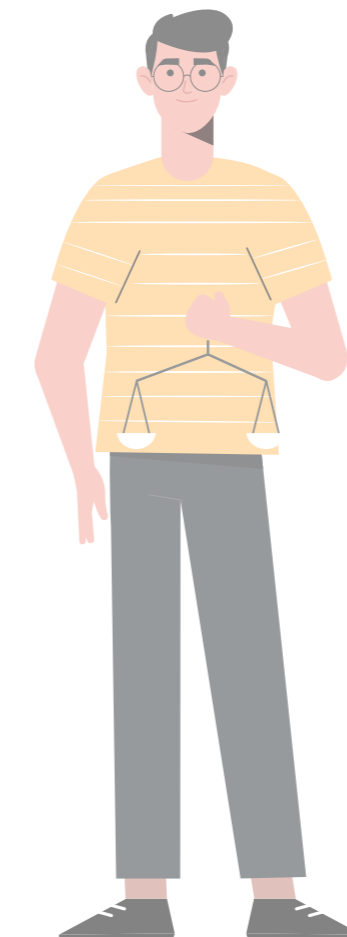
Norm-based



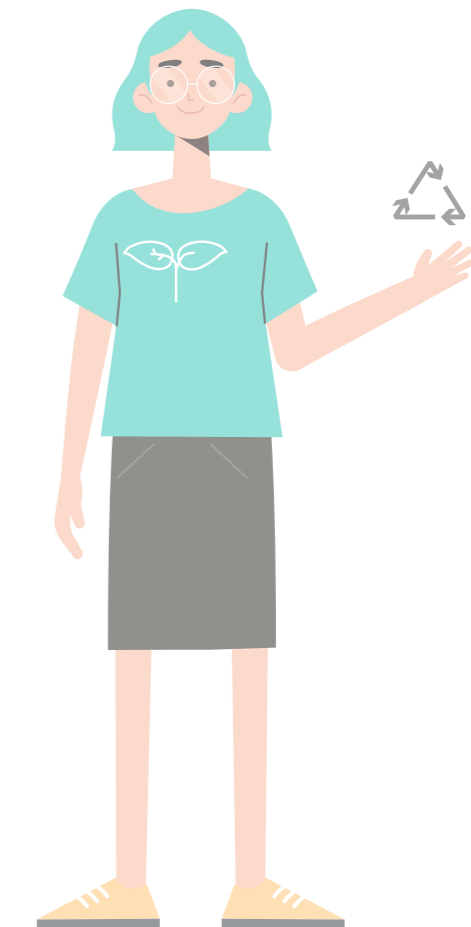
Conflict averse



Fact-based

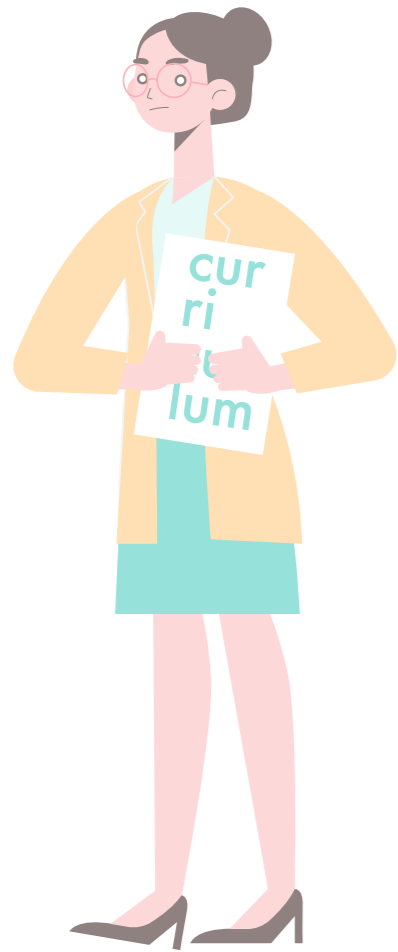


Pluralist

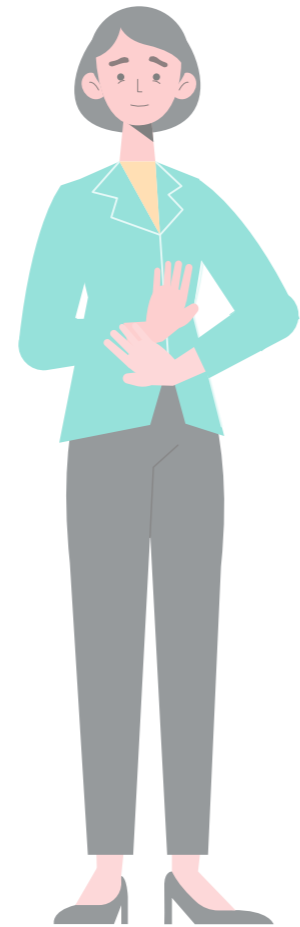


Environmental advocate

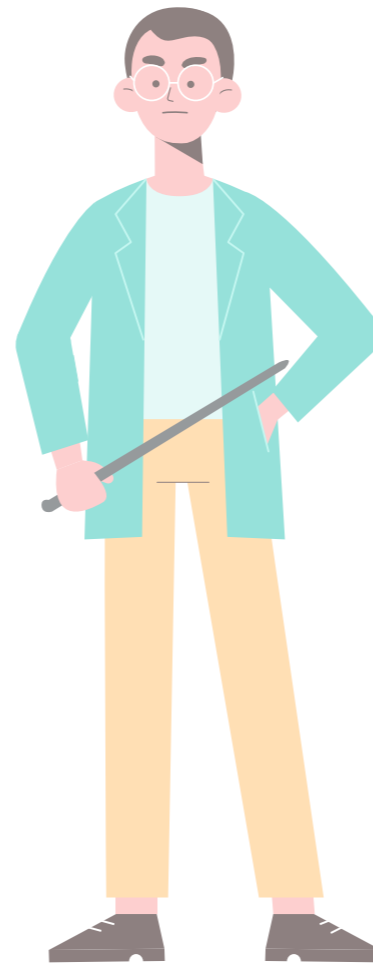
Teacher Types



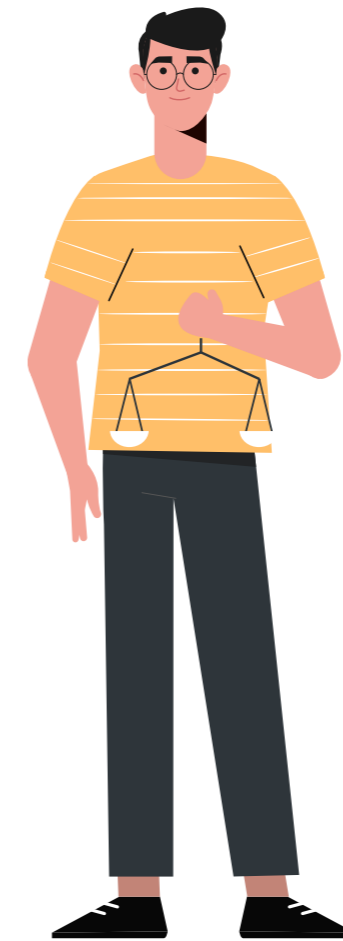
Norm-based



Conflict averse



Fact-based

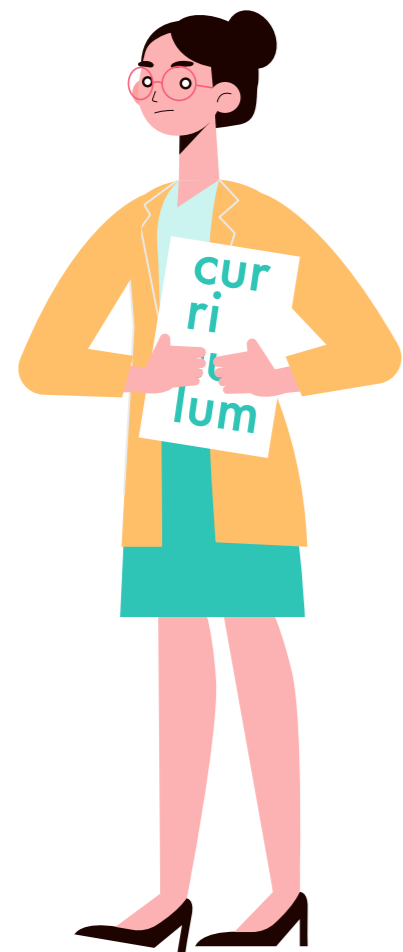


Pluralist



Environmental advocate

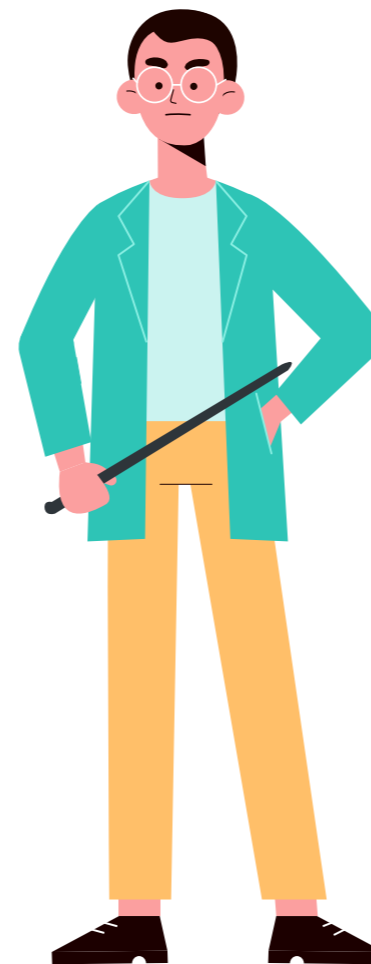
Teacher Types



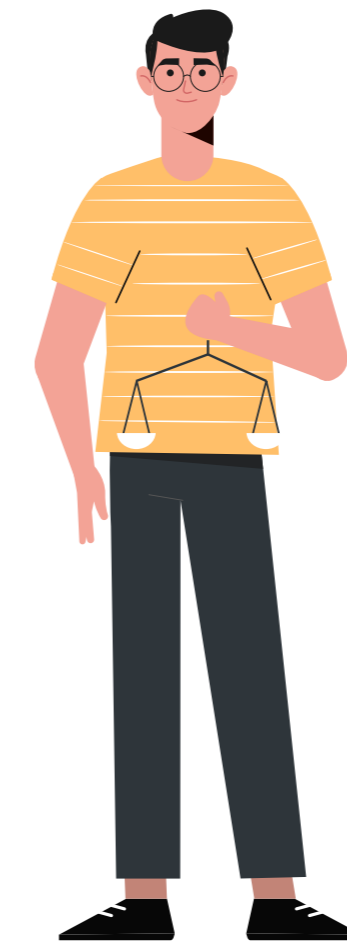
Norm-based



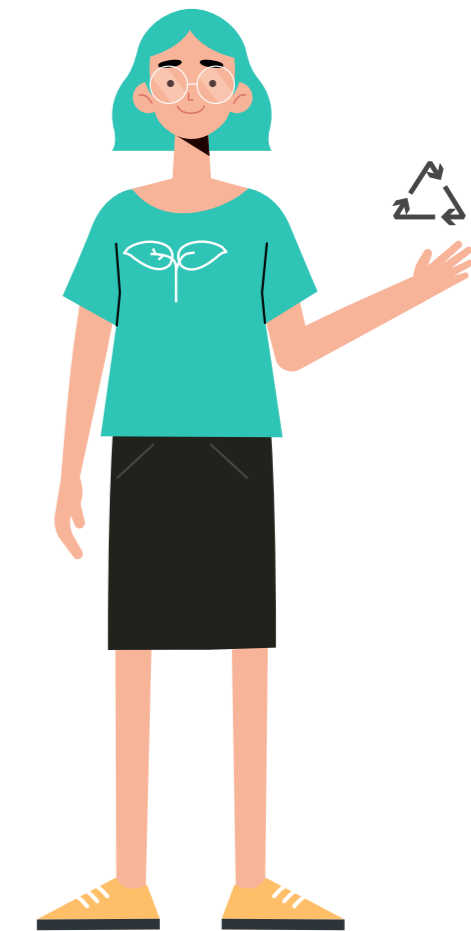
Conflict averse



Fact-based

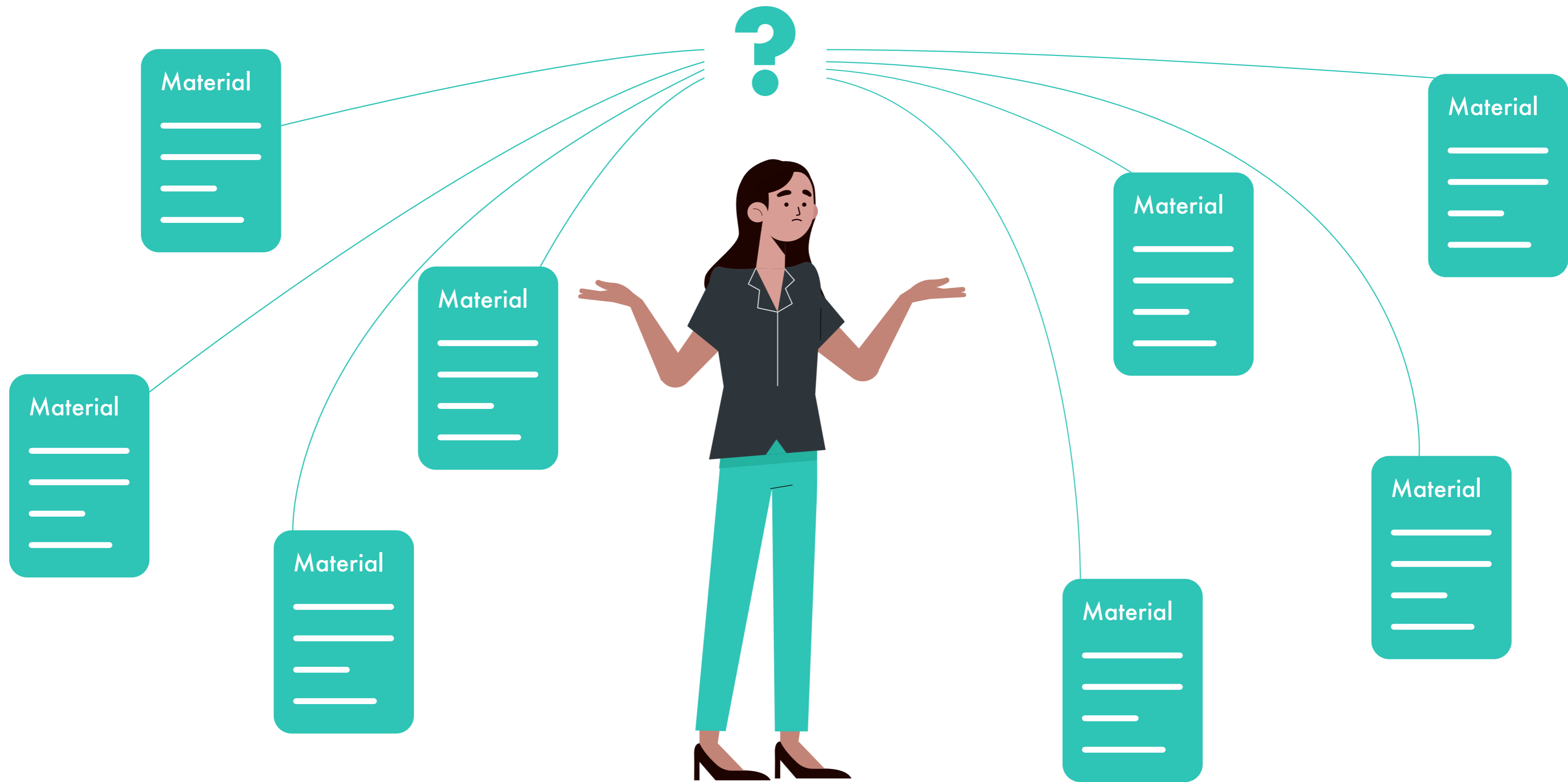


Pluralist



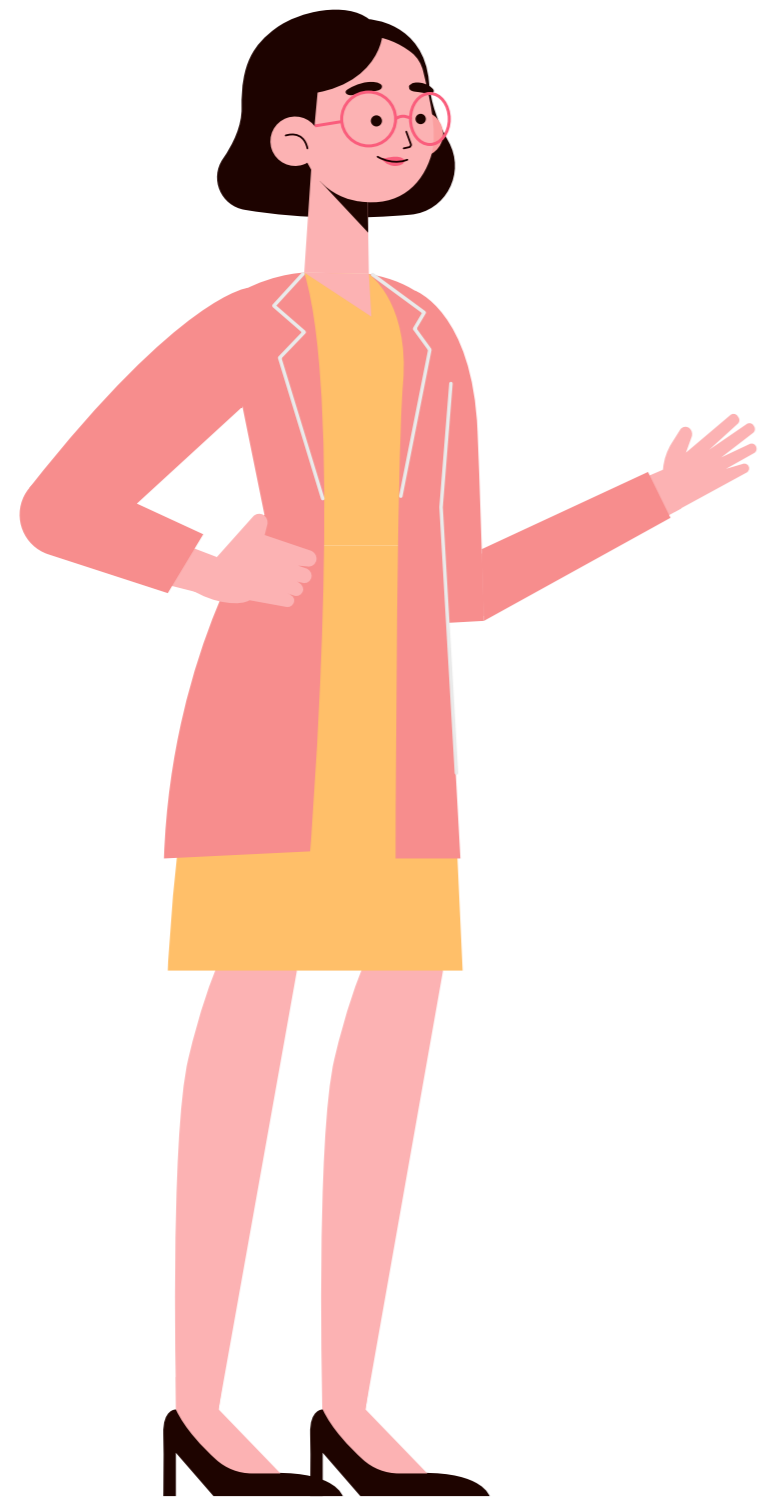
Environmental advocate

Selecting Material



Teacher

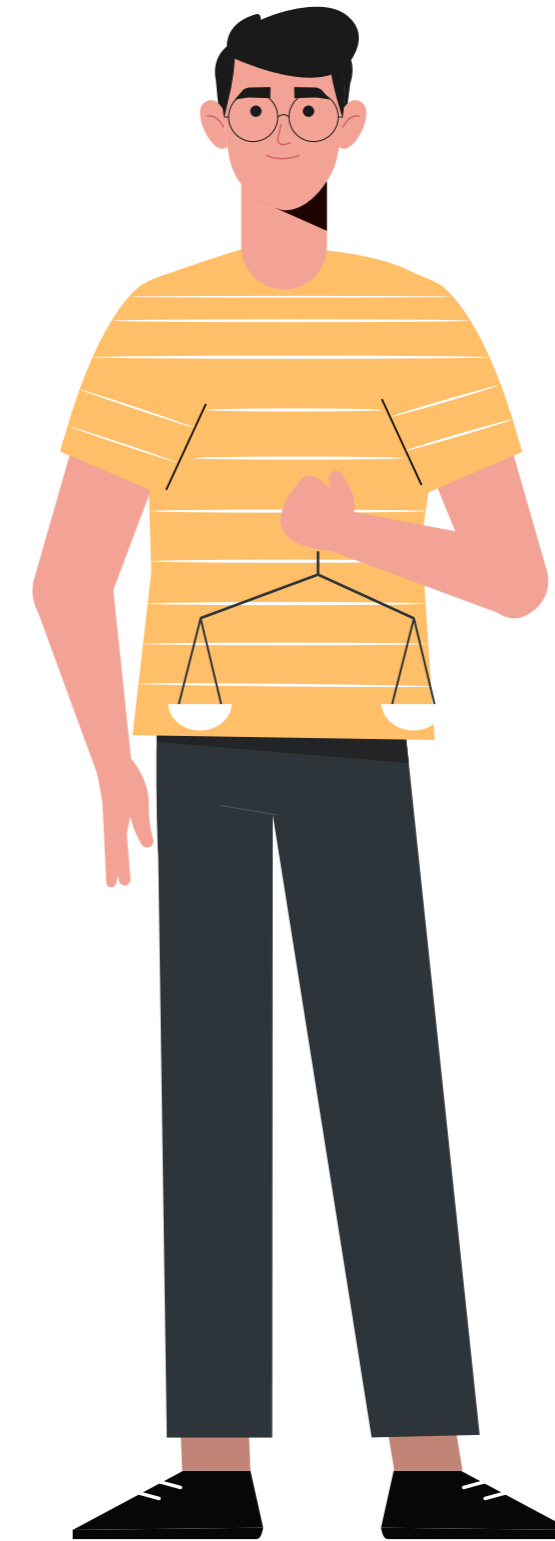
Teacher Education



Expert



Climate Education

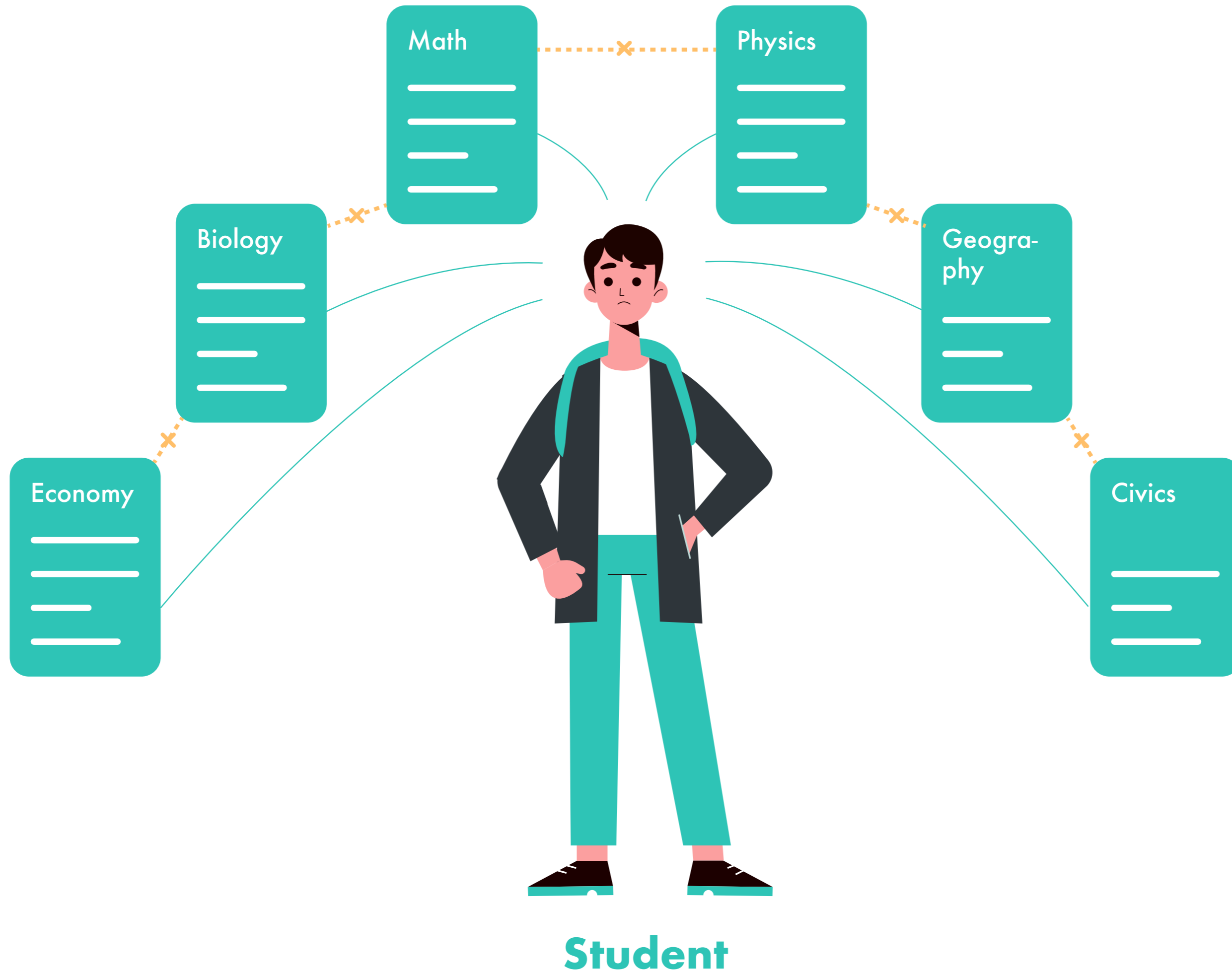


Teacher

Student perspective



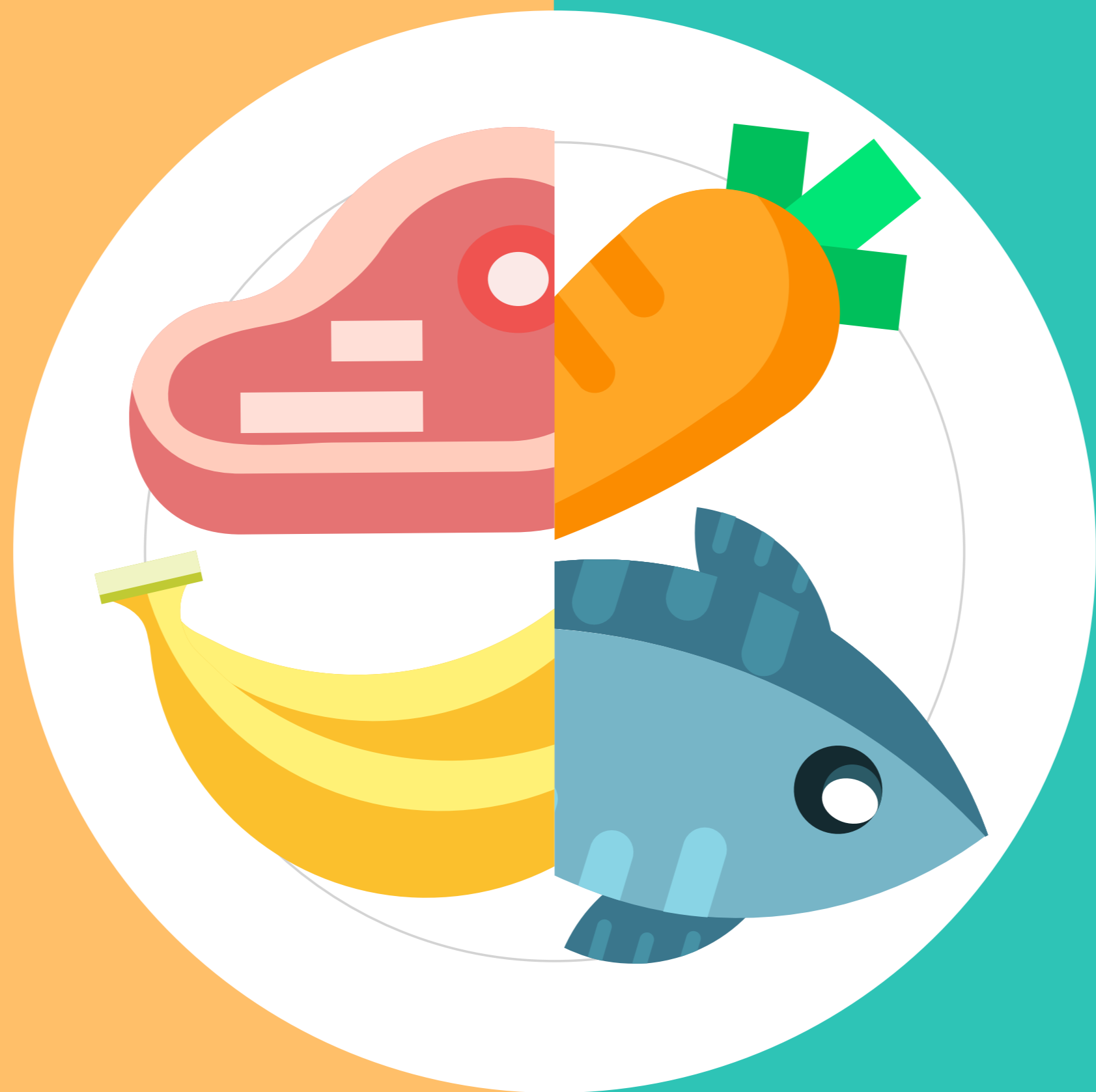
Holistic Perspective



“When the students came back from the climate strike, they are all over the stage. We had to give them time to talk about their feelings.”

- Headmaster

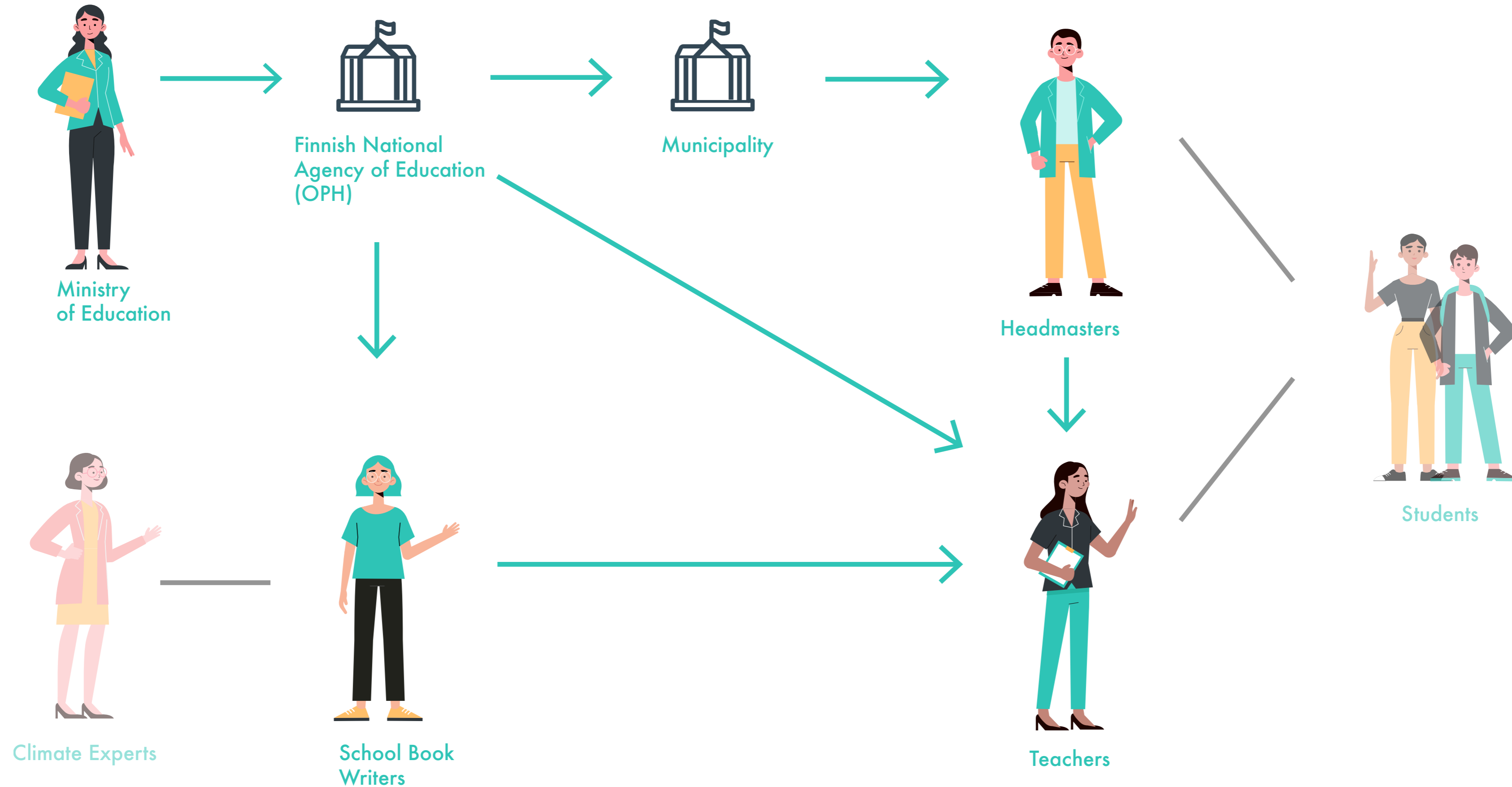




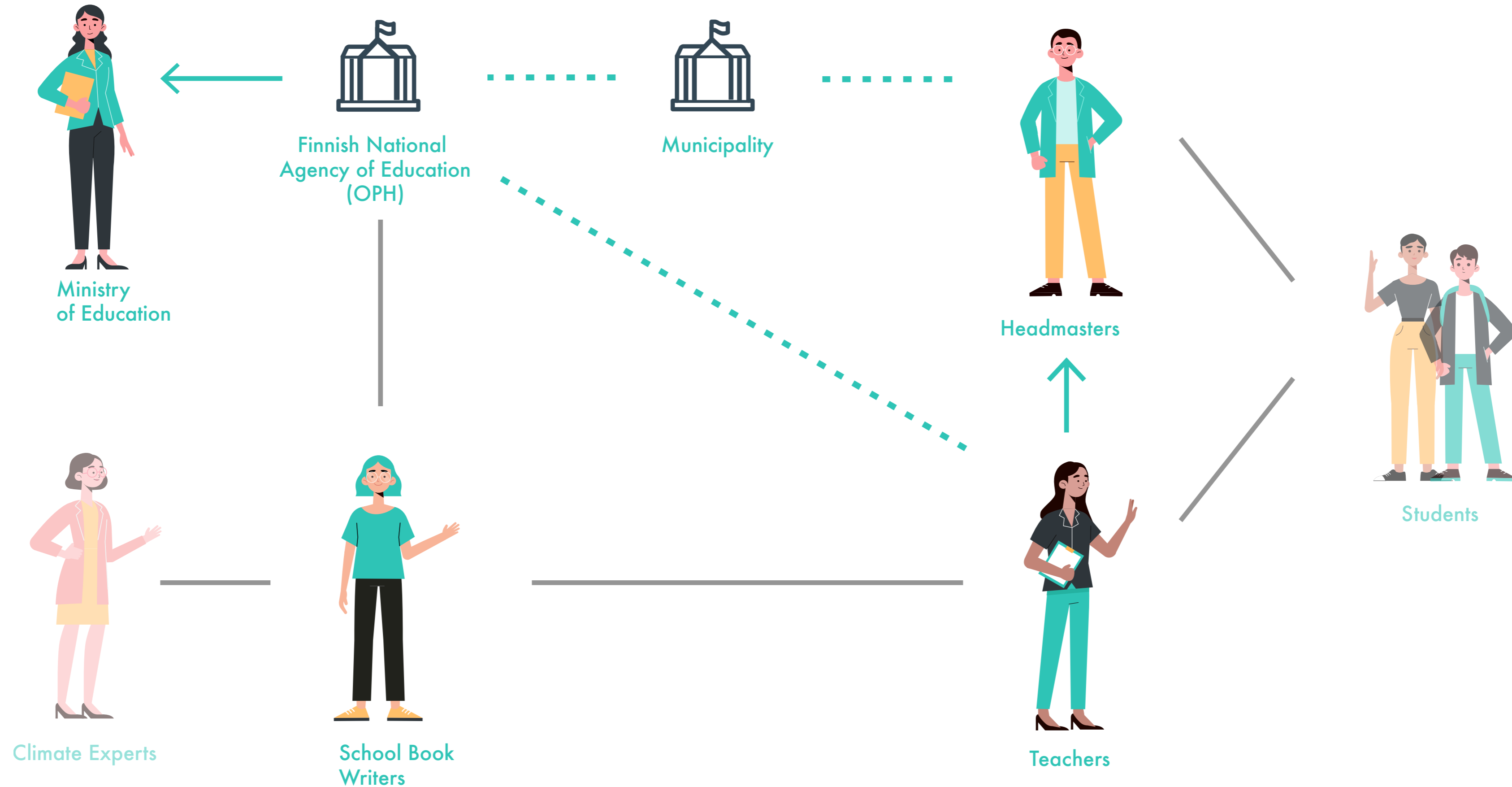
What explains the gap between policy and practice?



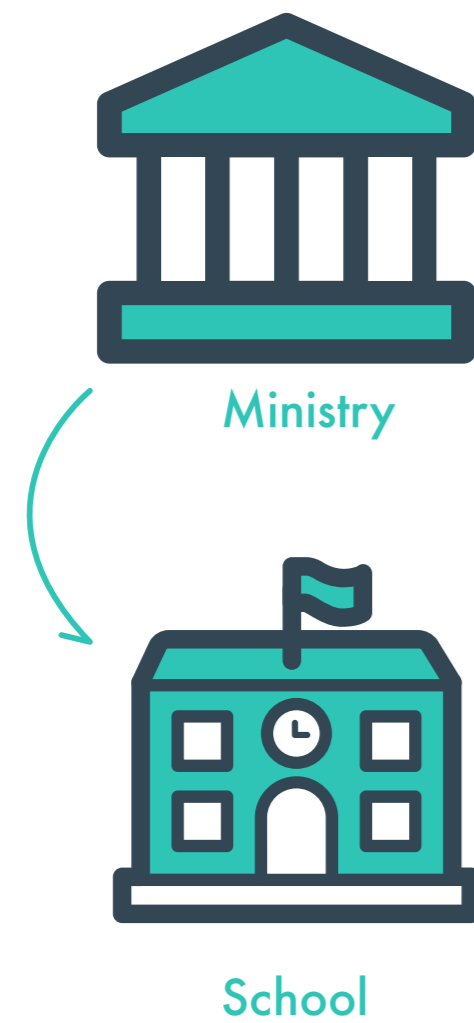
Top-down communication



Bottom-up communication

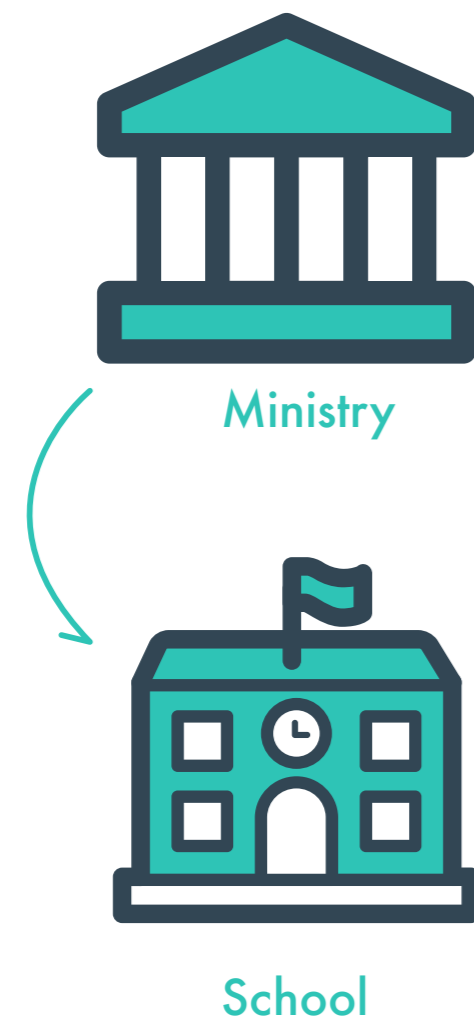


■ Problem Summary



Lack of feedback loop
Lack of active citizenship

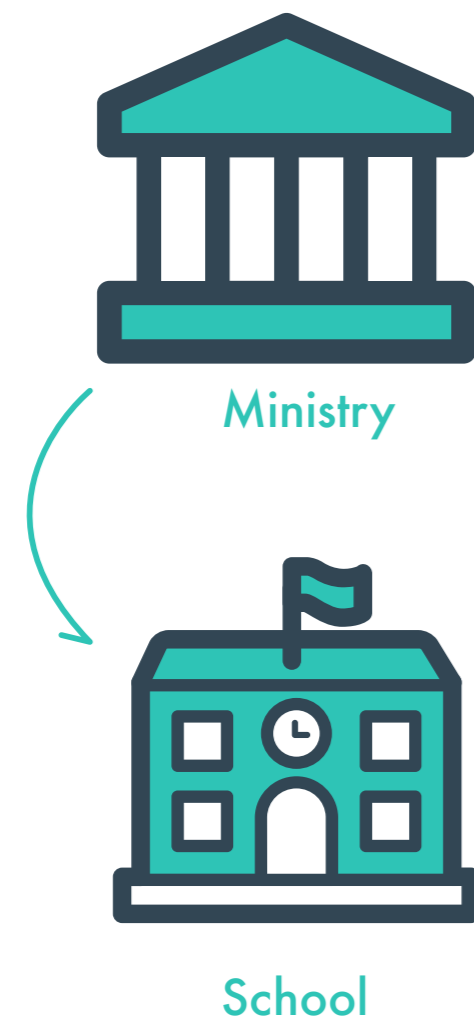
■ Problem Summary



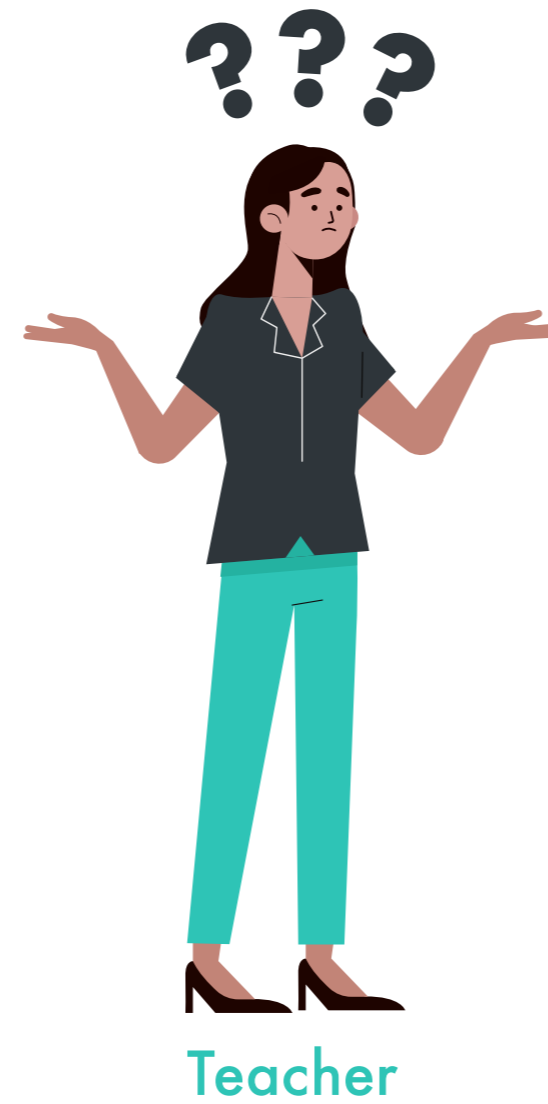
Lack of feedback loop
Lack of active citizenship

Need support
Need peer networks

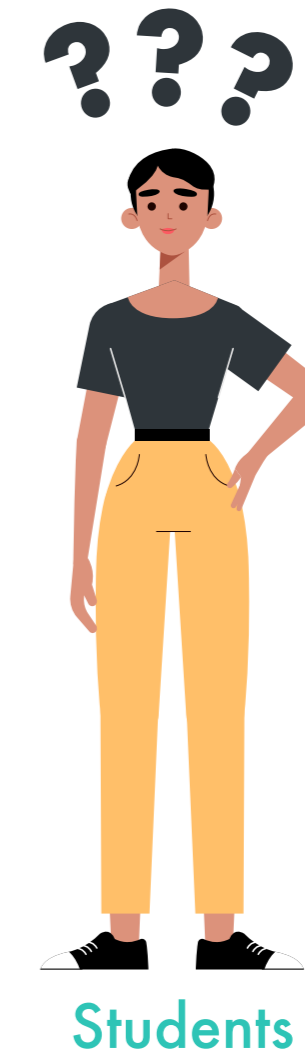
Problem Summary



Lack of feedback loop
Lack of active citizenship

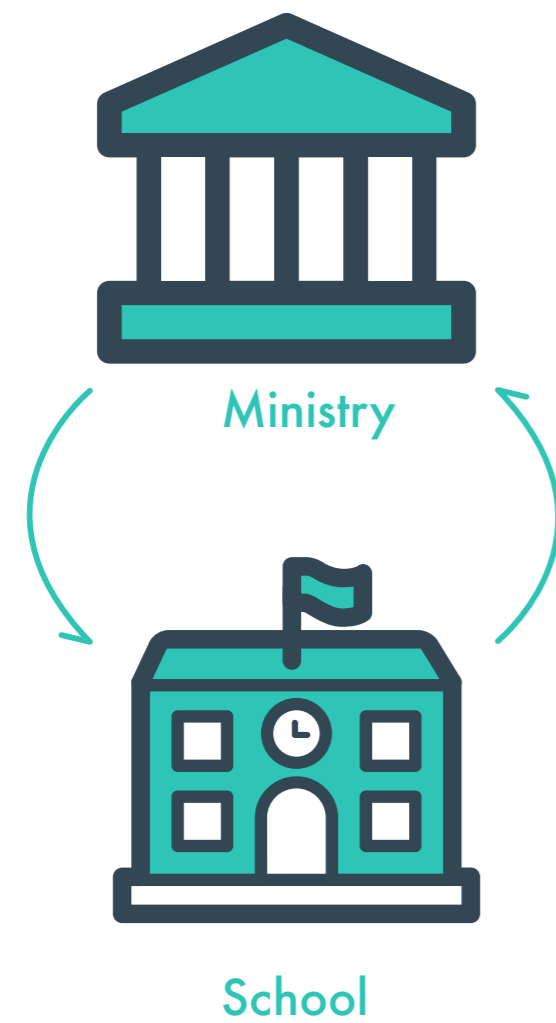


Need support
Need peer networks



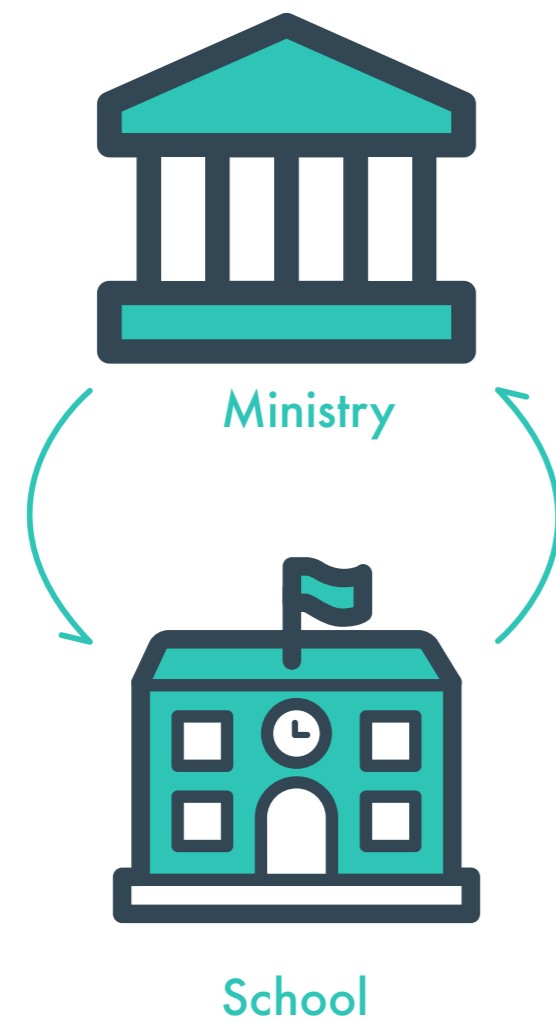
Need holistic perspective
Need active citizenship experience

■ Solution space



Close the feedback loop

■ Solution space

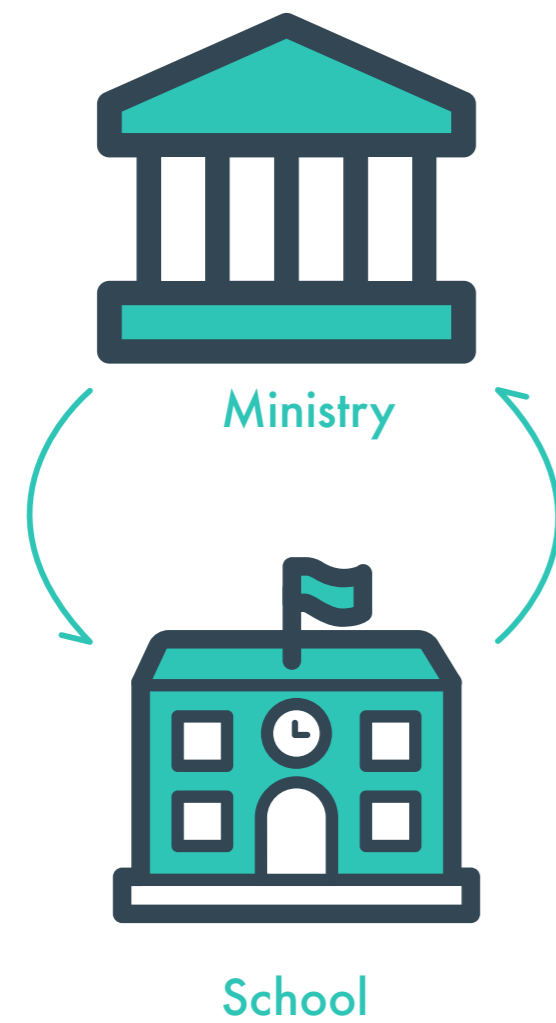


Close the feedback loop



Provide teacher support

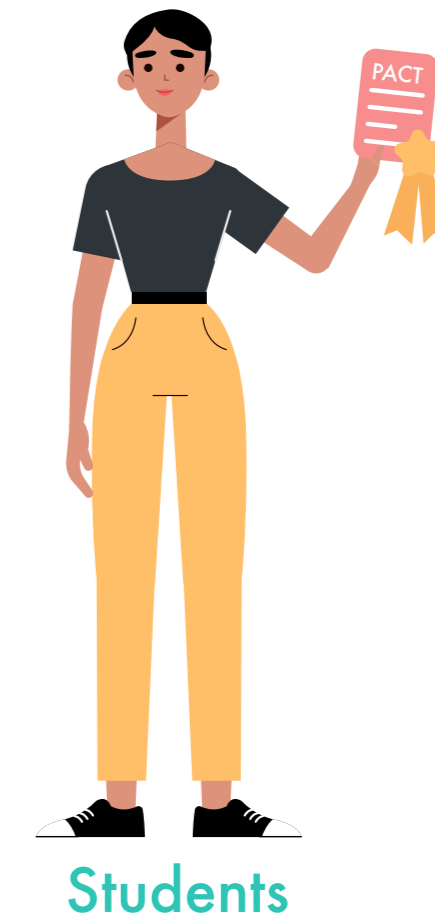
■ Solution space



Close the feedback loop



Provide teacher support



Active citizenship experience

HINKO

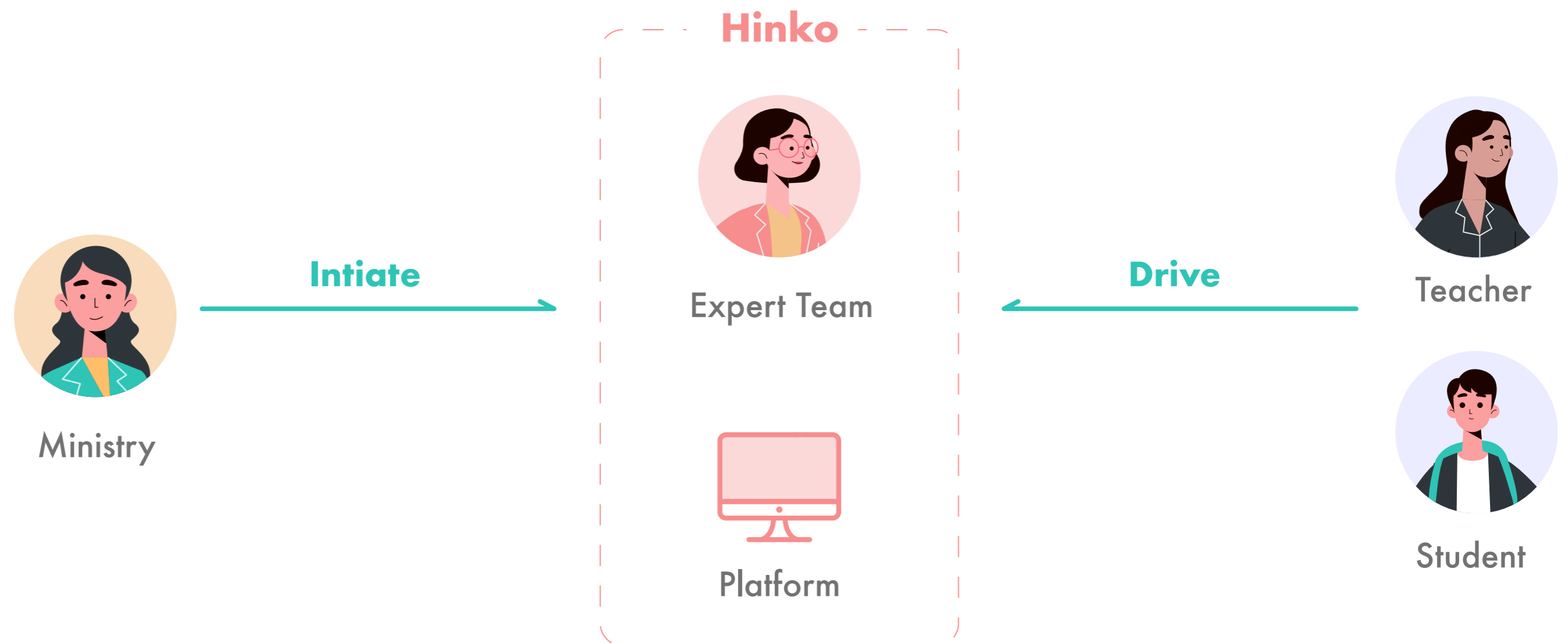
Climate education module & network



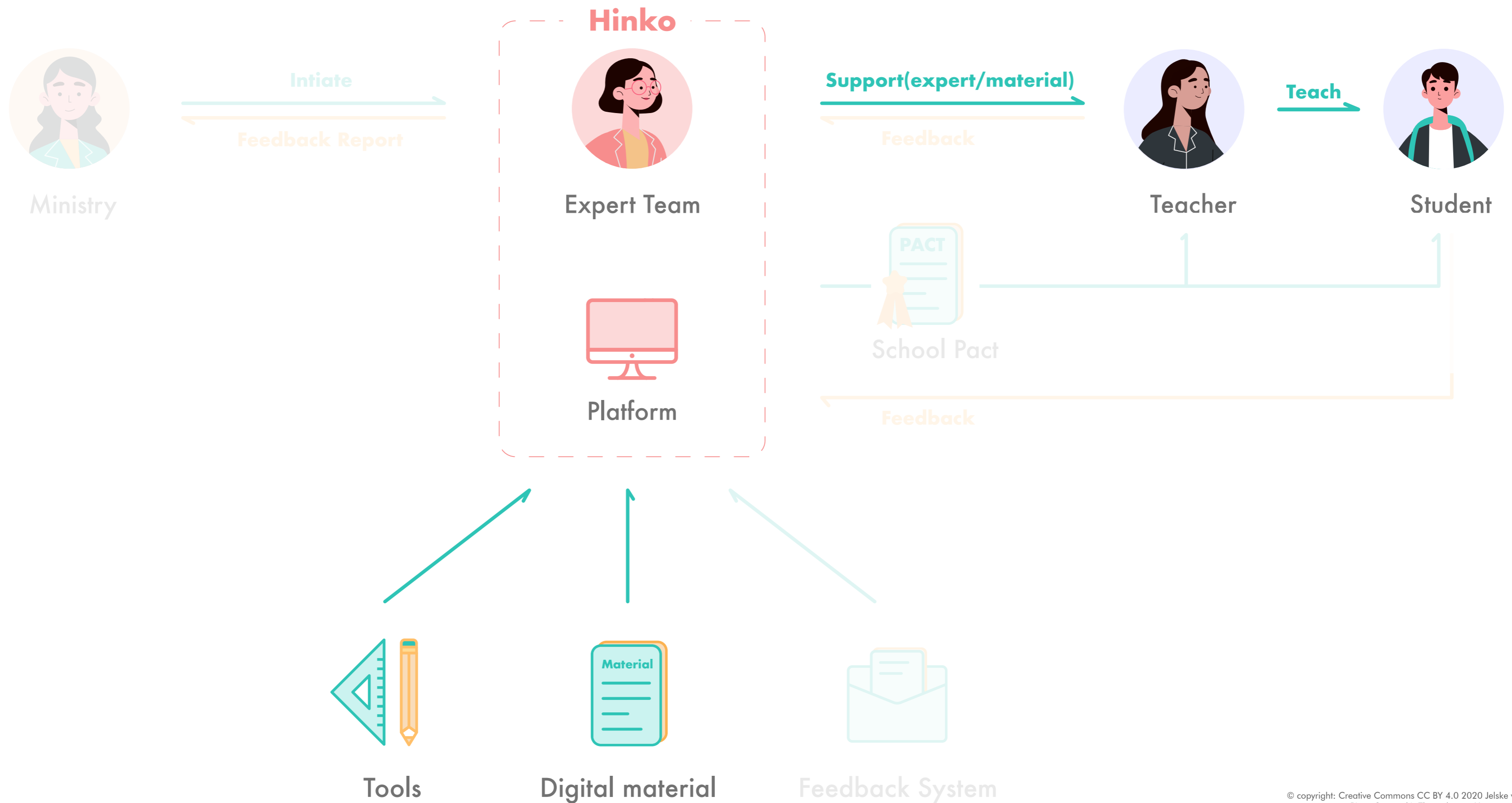
Hinko

Led by the
government, driven
by schools.

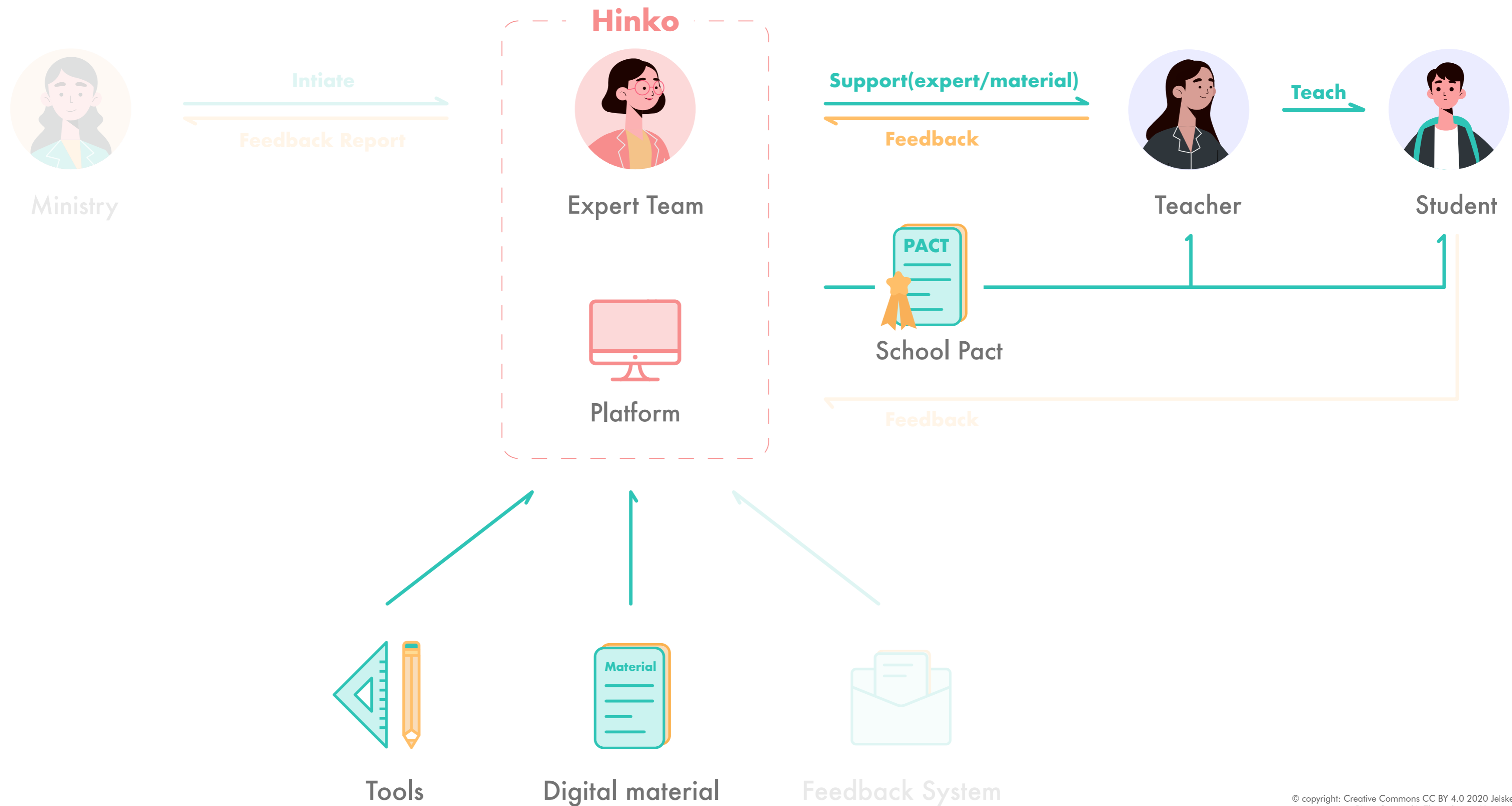
Transforming
knowledge into
action.



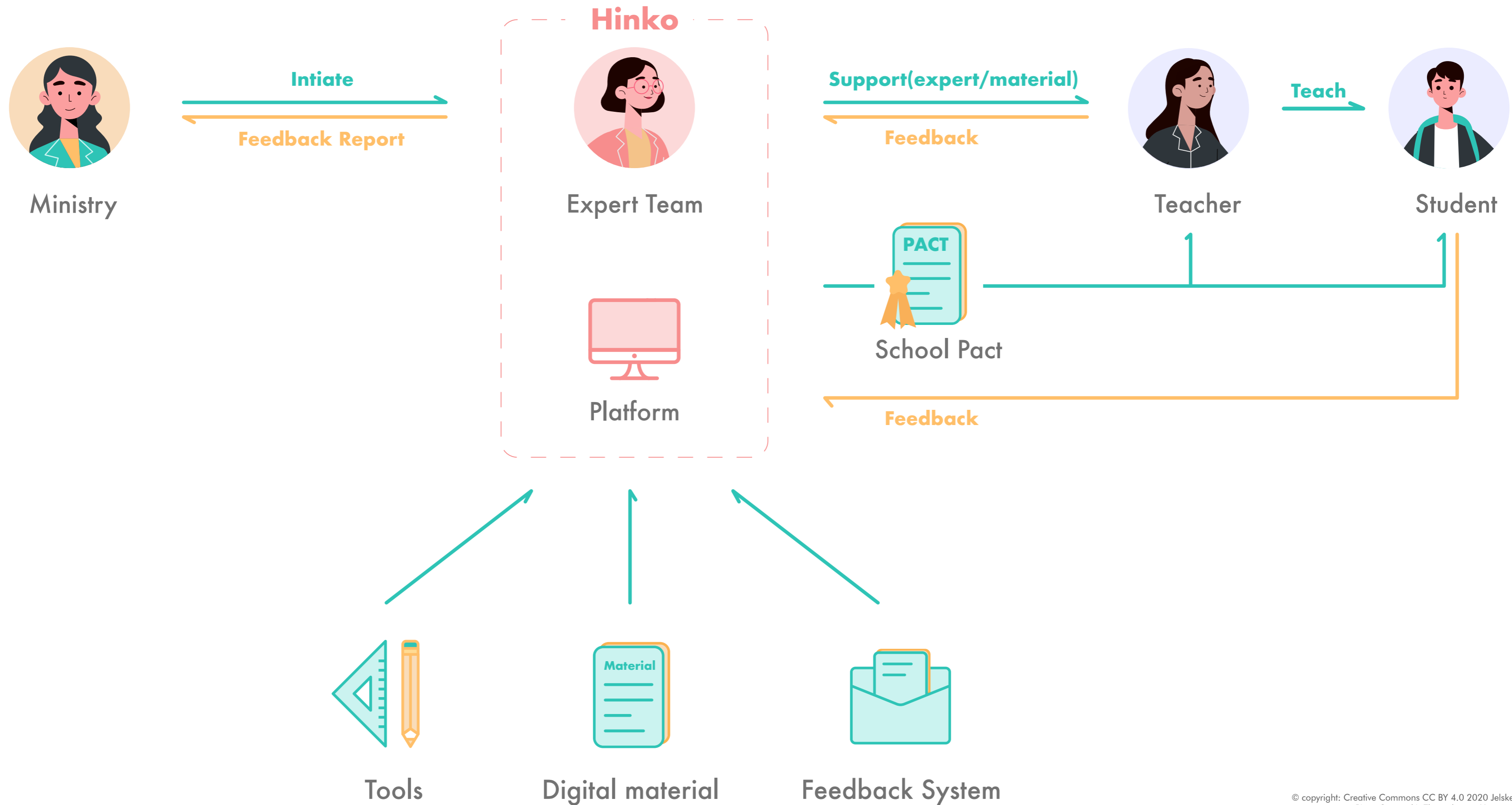
Hinko module and network



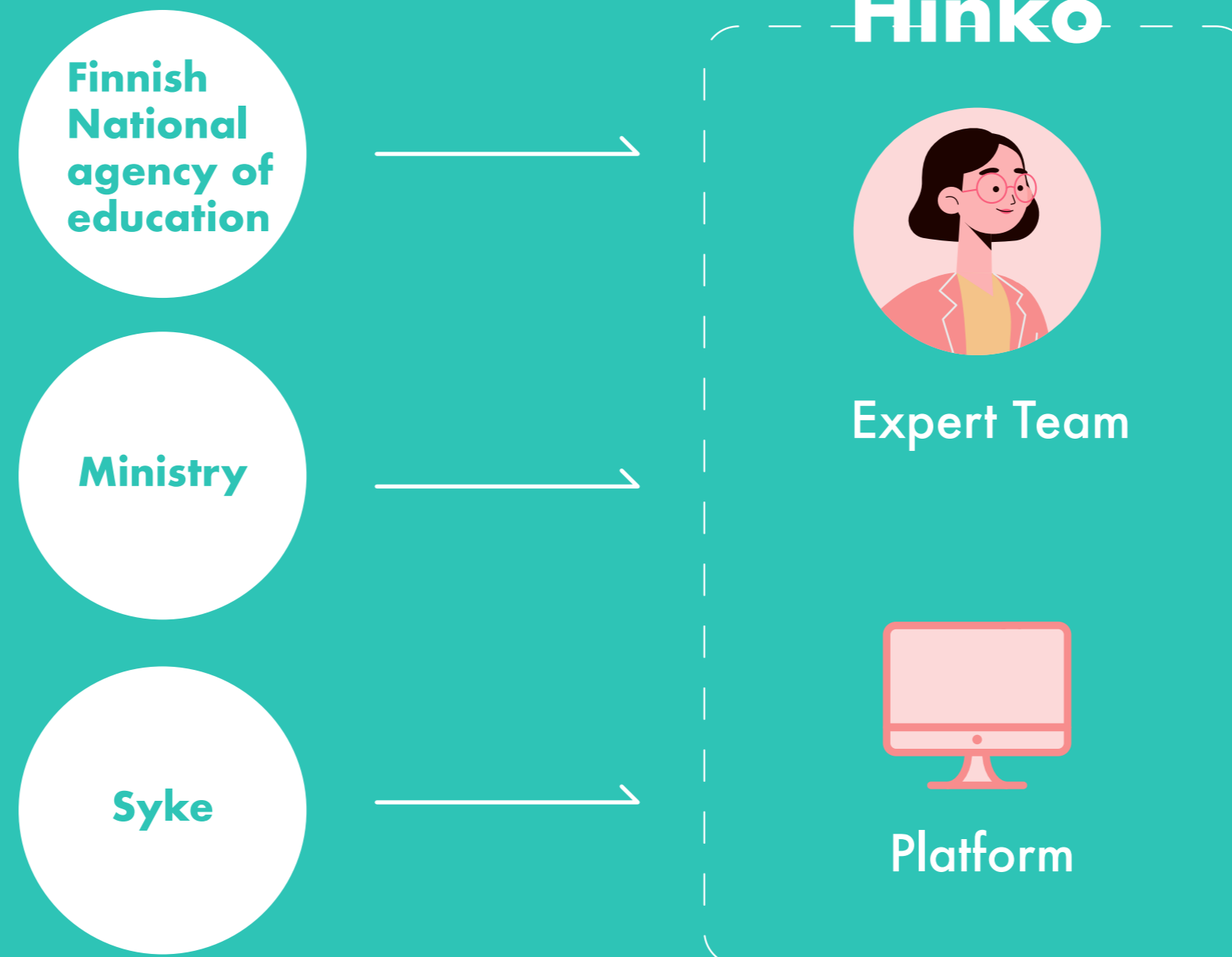
Hinko module and network



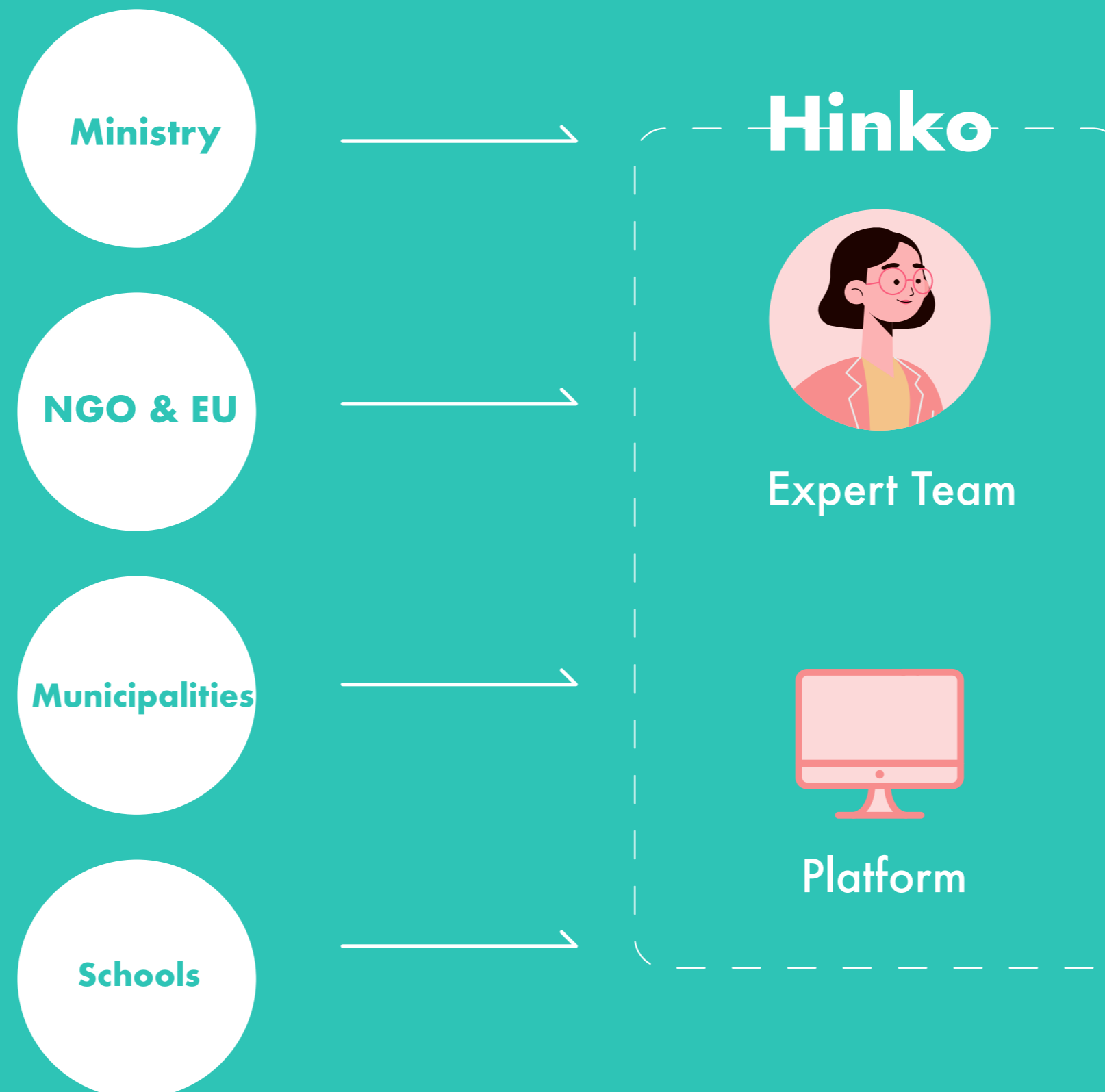
Hinko module and network



Who is responsible for Hinko?



Who is funding Hinko?



Cooperation opportunities?

Sustainable
Schools



Green flag
Schools



Hinku



Hinko



Expert Team

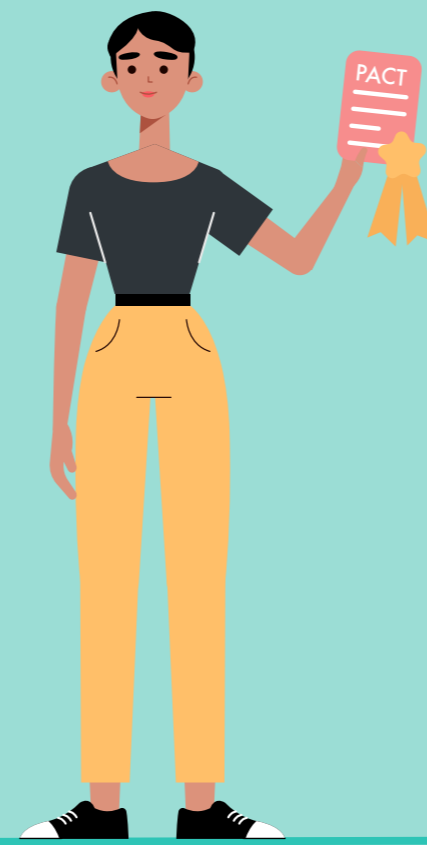


Platform

Hinko in practice



Training



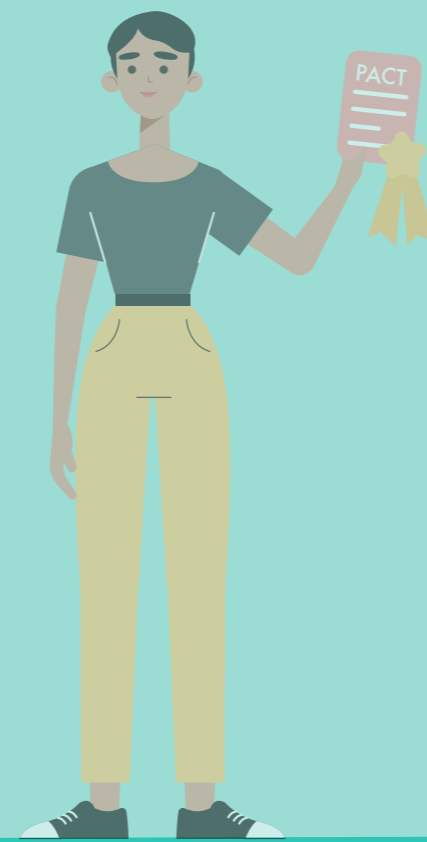
Action pact

Hinko in practice

Part 1: Teacher Training



Training

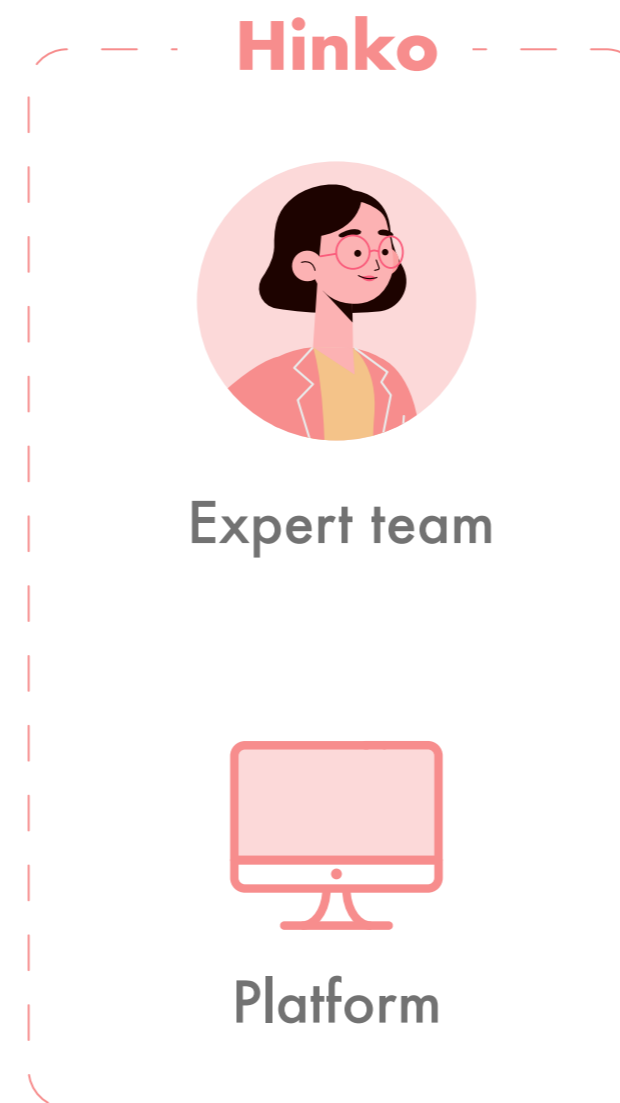


Action pact

Step 0

Contact

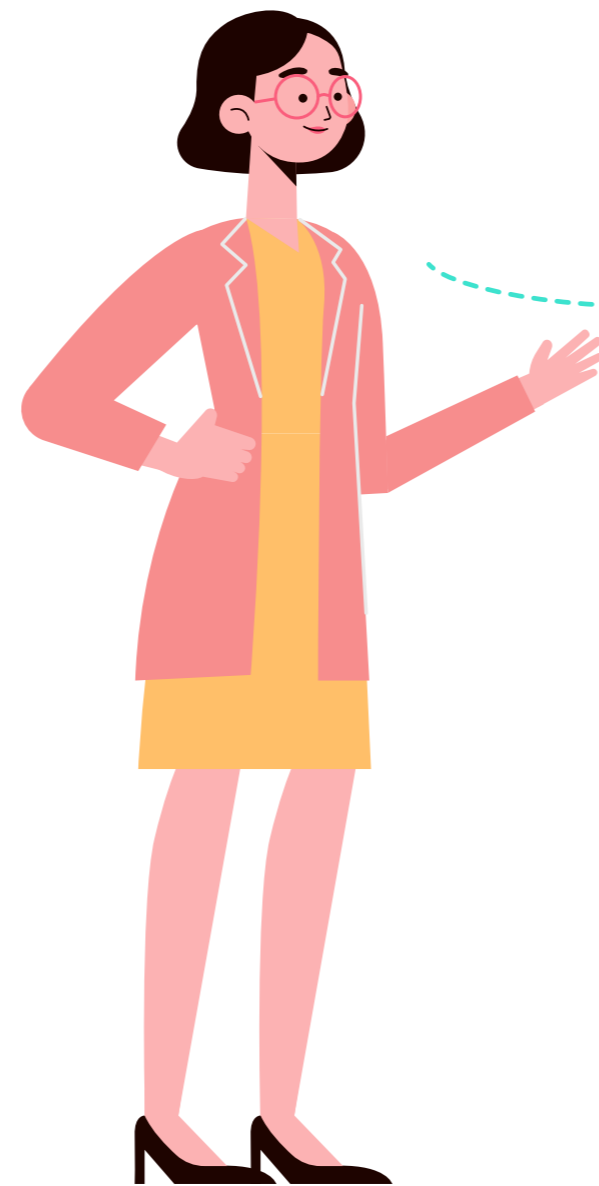
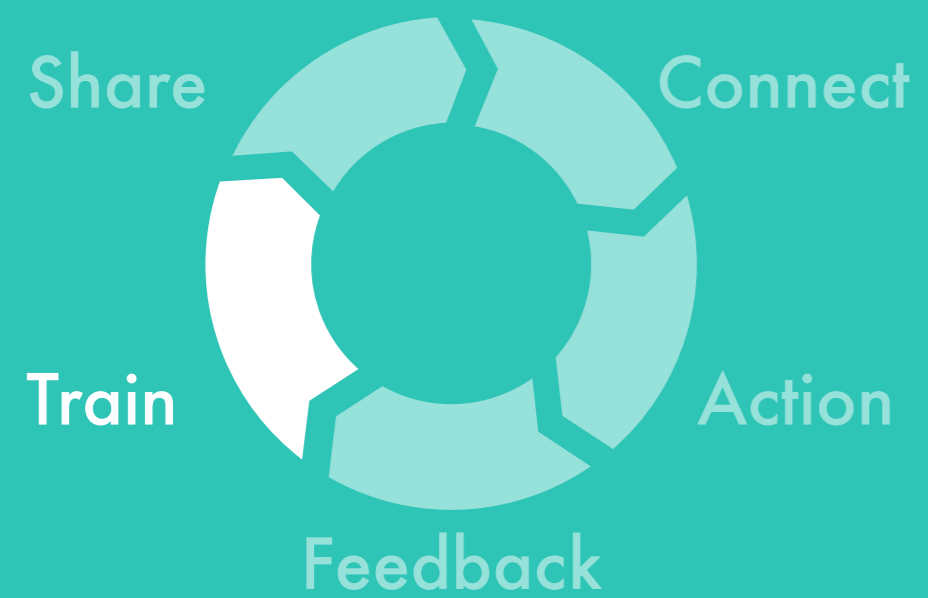
Initiating school pact and joining the Hinko program.



Step 1

Train & Teach

Expert helps teacher to prepare lessons with climate focus.



Expert

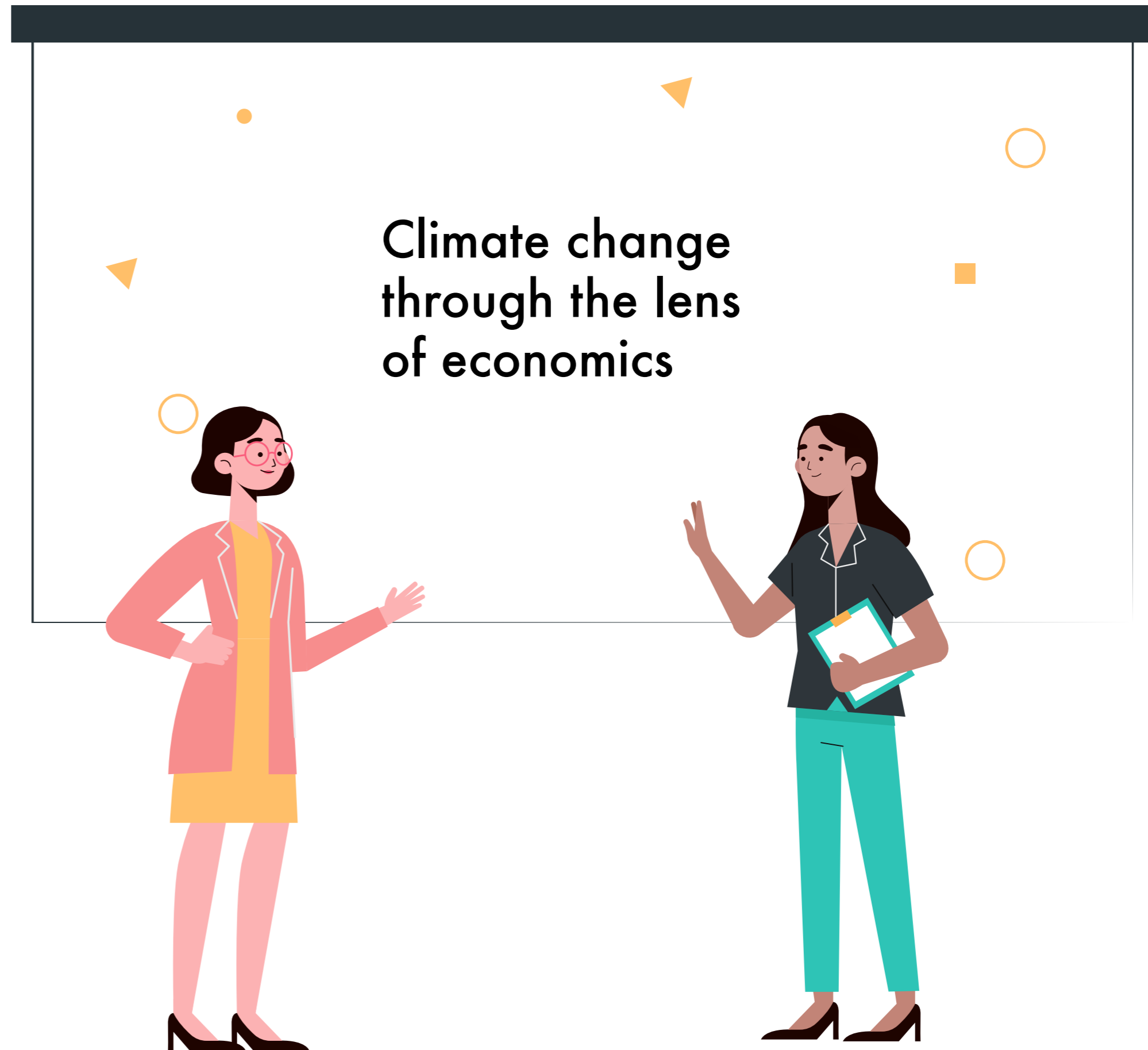


Teacher

Step 1

Train & Teach

Teacher and expert co-teach class.
Teacher gets direct support to face
difficult emotions.

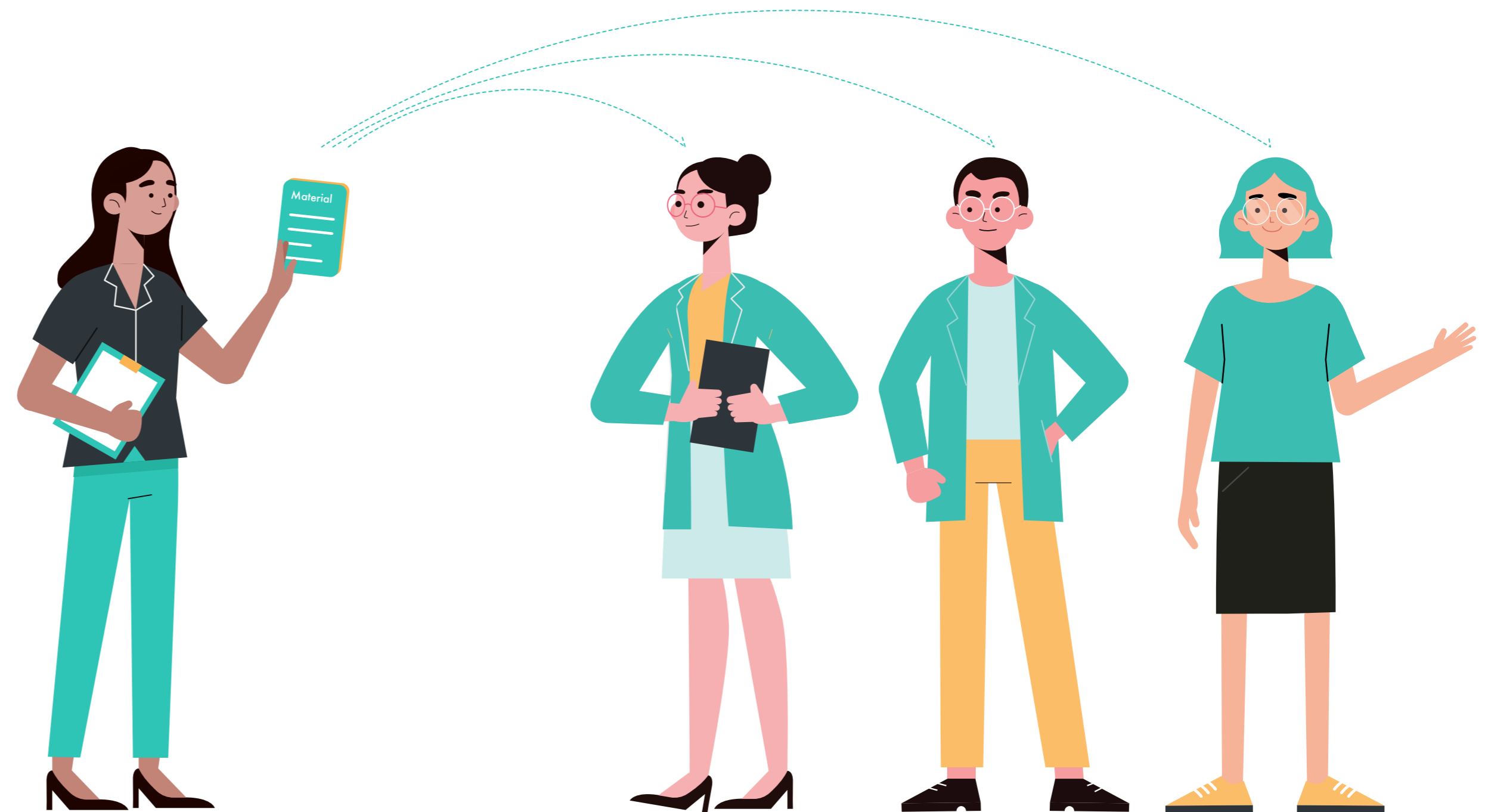


Co-teach the class

Step 2

Share & Support

Teacher shares new knowledge and skills with other teachers.



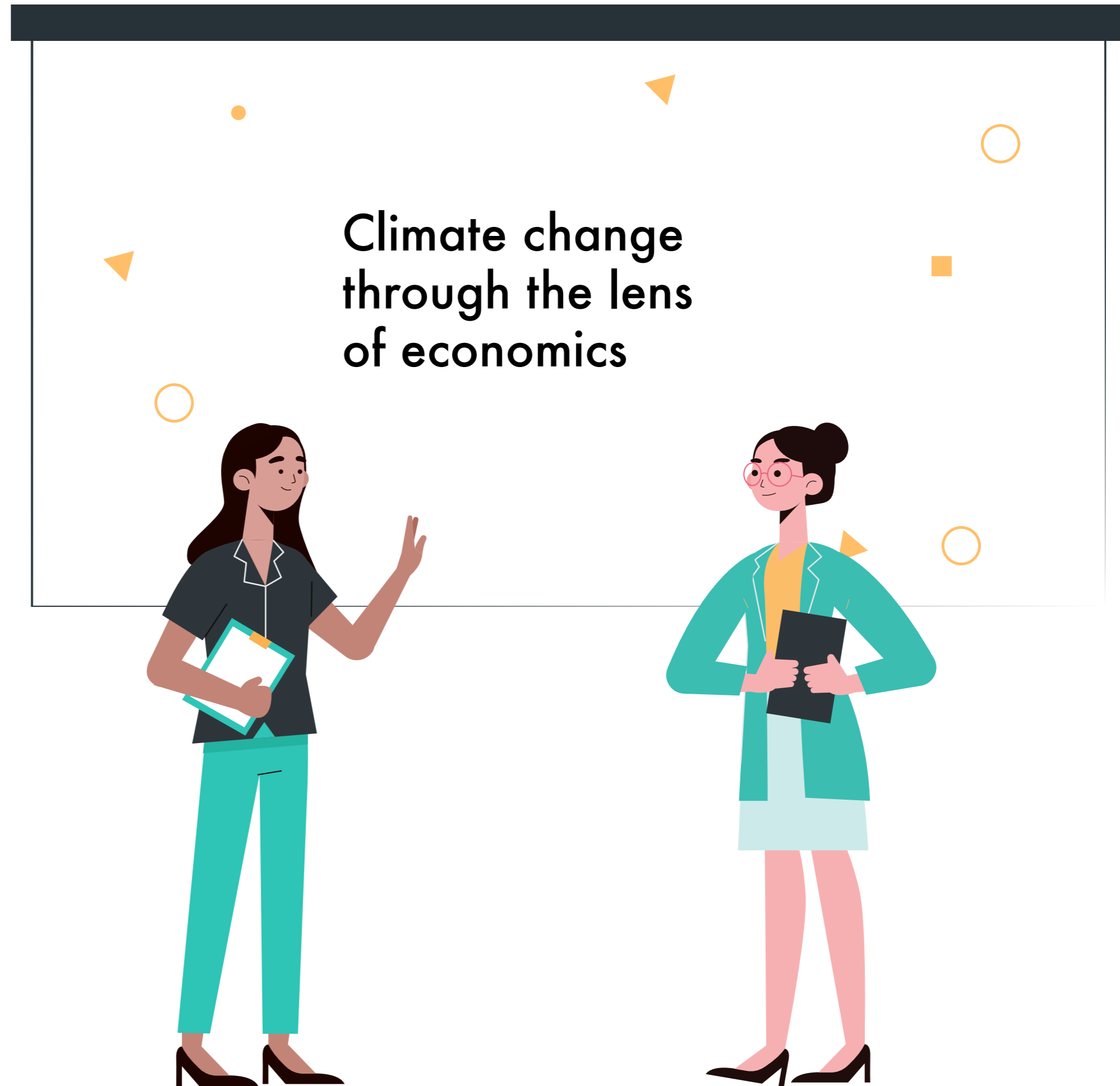
Teacher

Other teachers

Step 2

Share & Support

Hinko-trained teacher co-teaches classes with other teachers to share support and skills.



Step 3

Connect the dots

Holistic perspective is developed across courses through discussions.



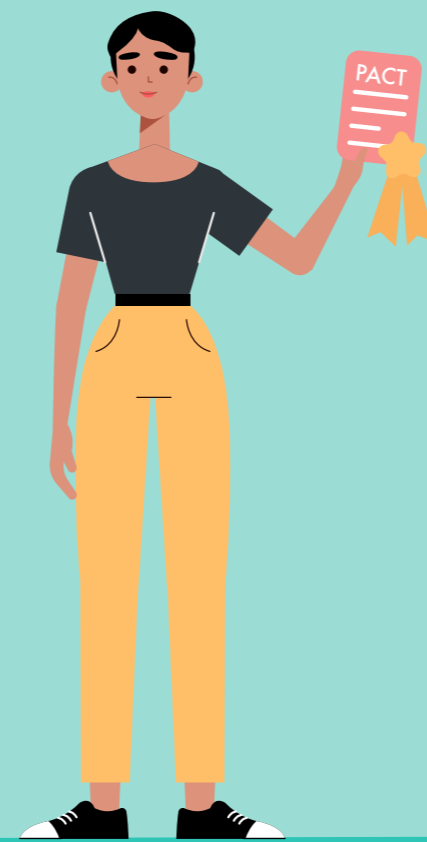
Students discuss with teachers and experts

Hinko in practice

Part 2: School pact



Training

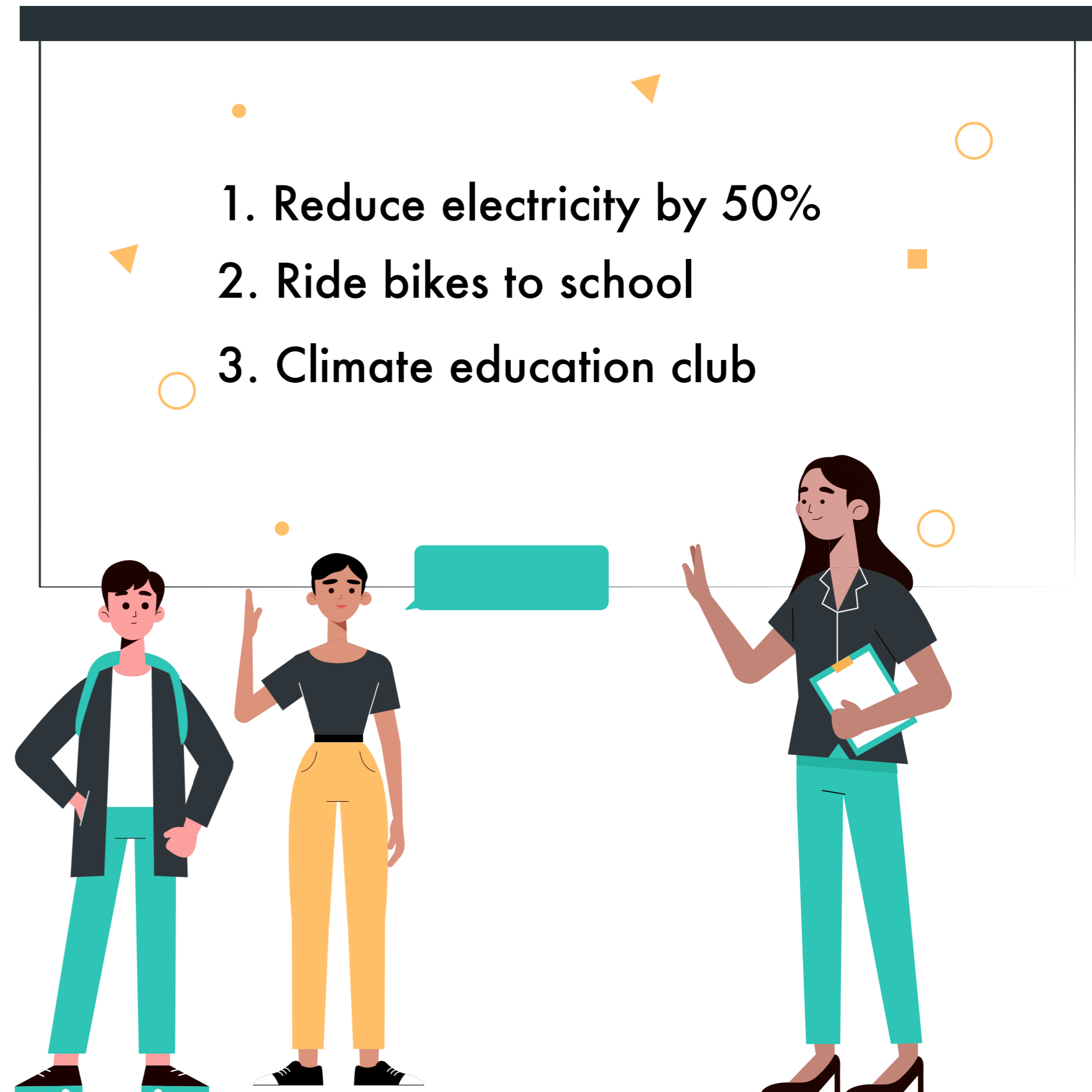


Action pact

Step 4

School action

Students propose climate targets for their school. They are discussed with teachers, headmaster, school staff and municipality.



Step 4

School action

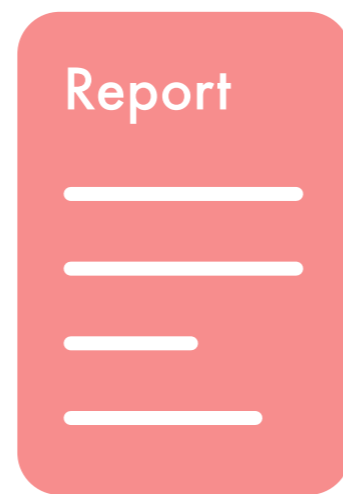
Students vote for their favourite targets and these are validated by the school. Targets are put into action!



Step 5

Feedback & Adapt

Teachers, students and experts give feedback during the process.

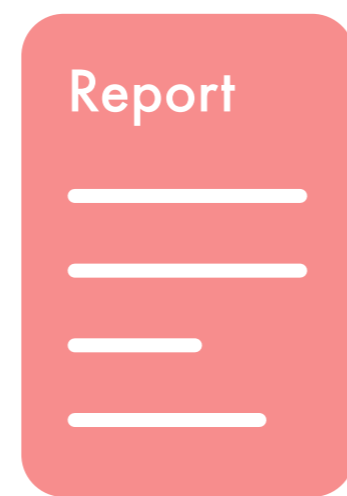


Hinko

Step 5

Feedback & Adapt

Hinko analyses the feedback and forwards this in a report to the ministry.



Hinko

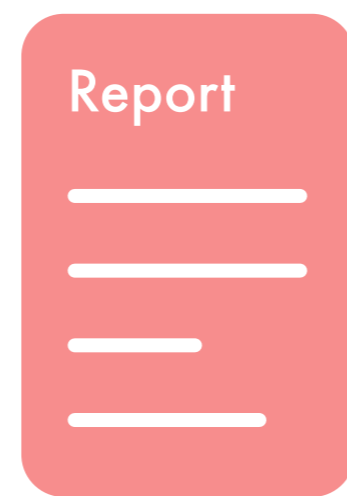


Ministry

Step 5

Feedback & Adapt

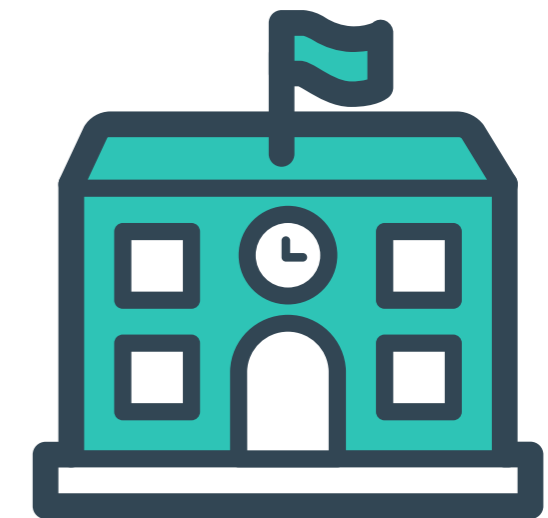
Teachers' reports guide the development of the program and resource allocation.



Hinko

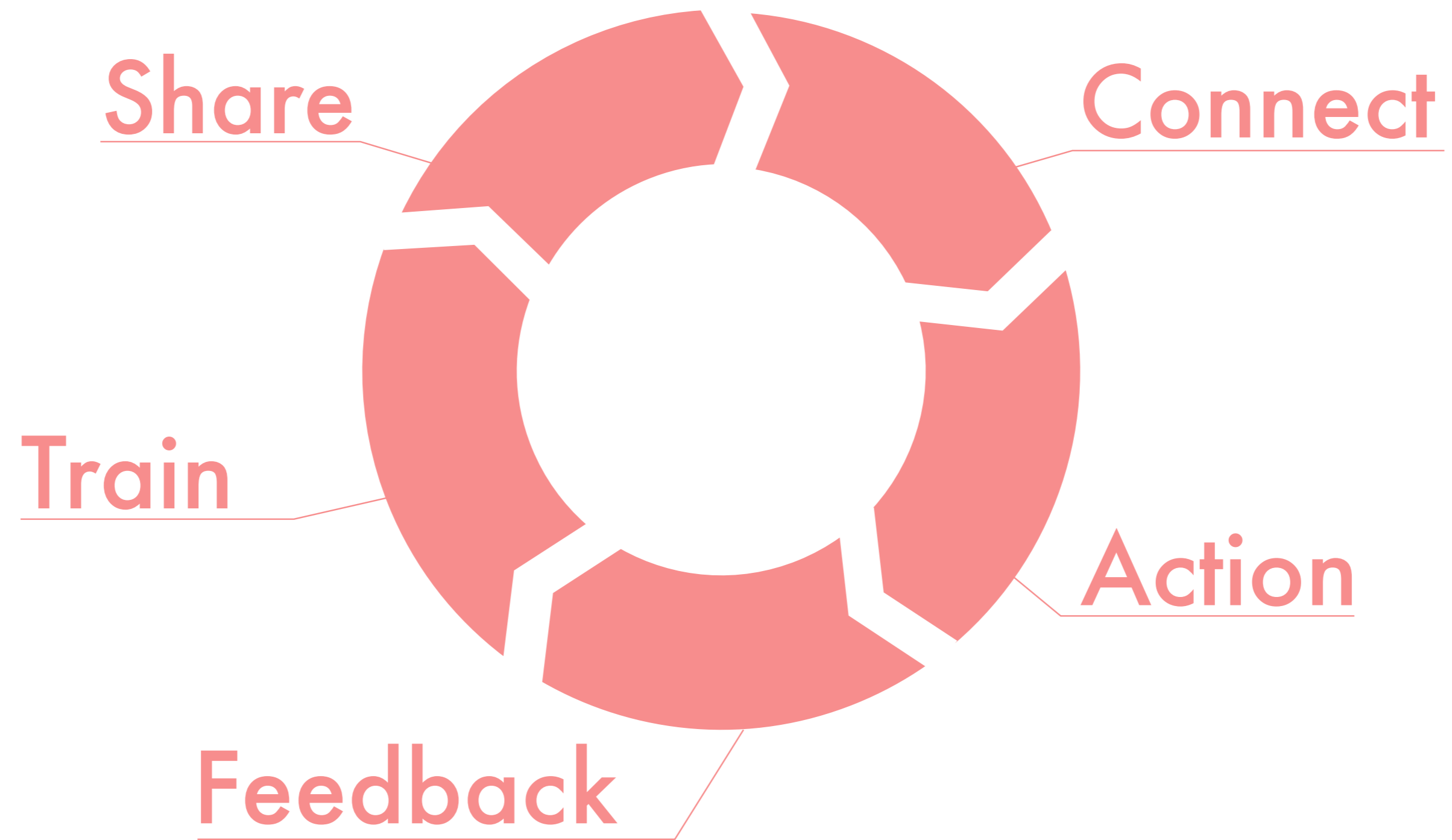


Ministry

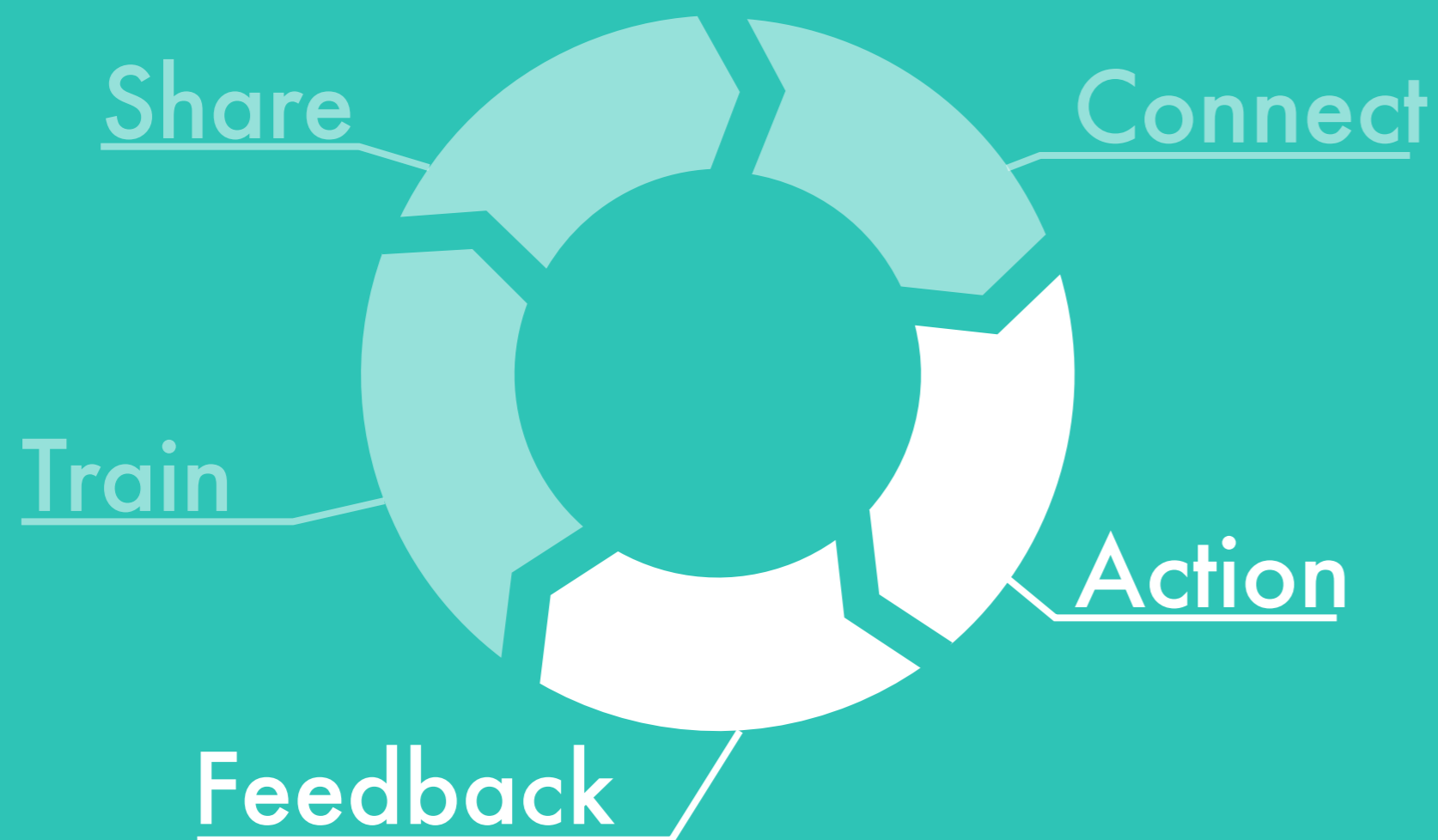


School

■ Hinko Steps



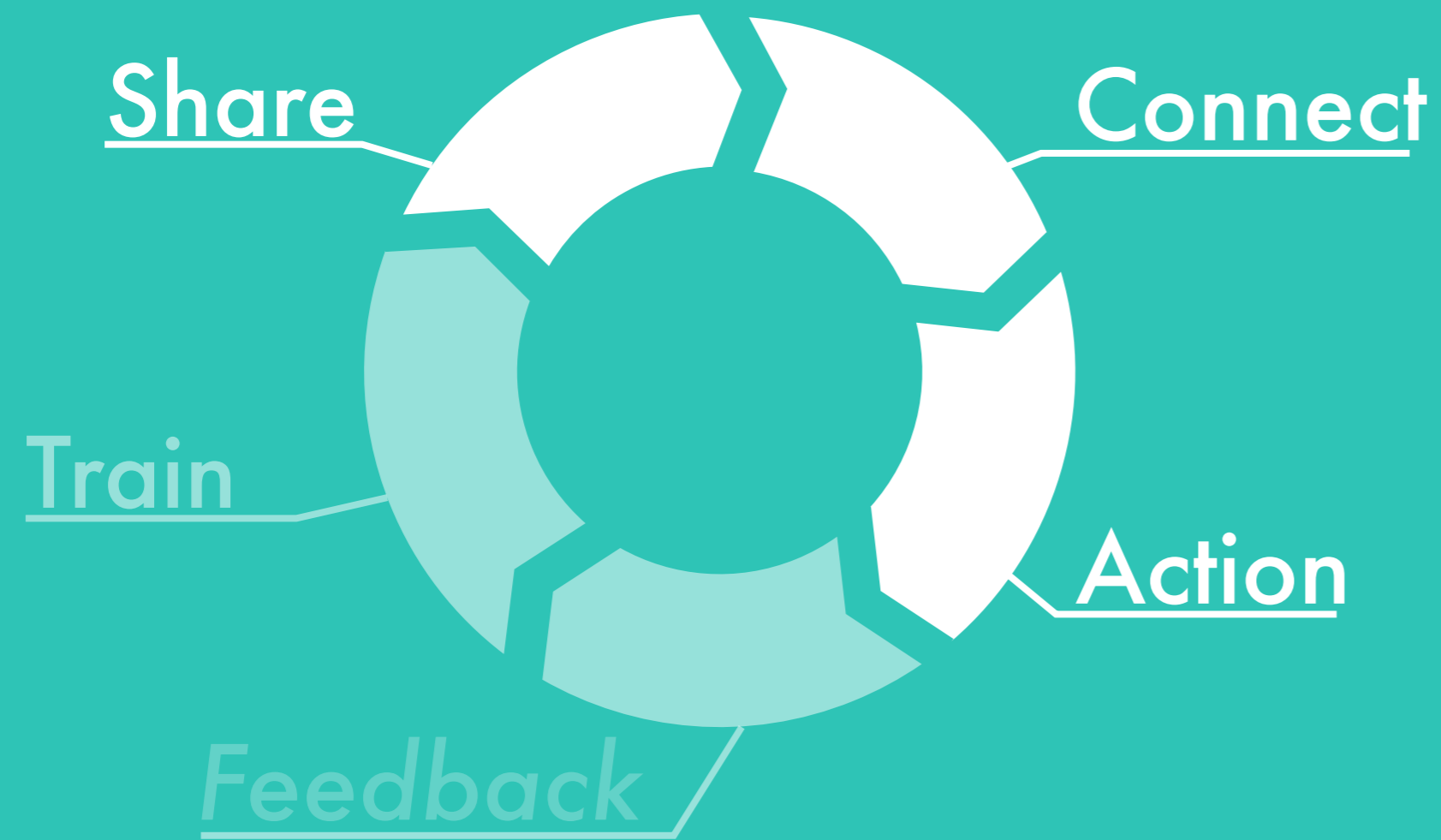
■ What is in it for



Ministry

- Feedback loop
- Effective resource allocation
- Accessible and scalable
- Progress towards 2035 goal

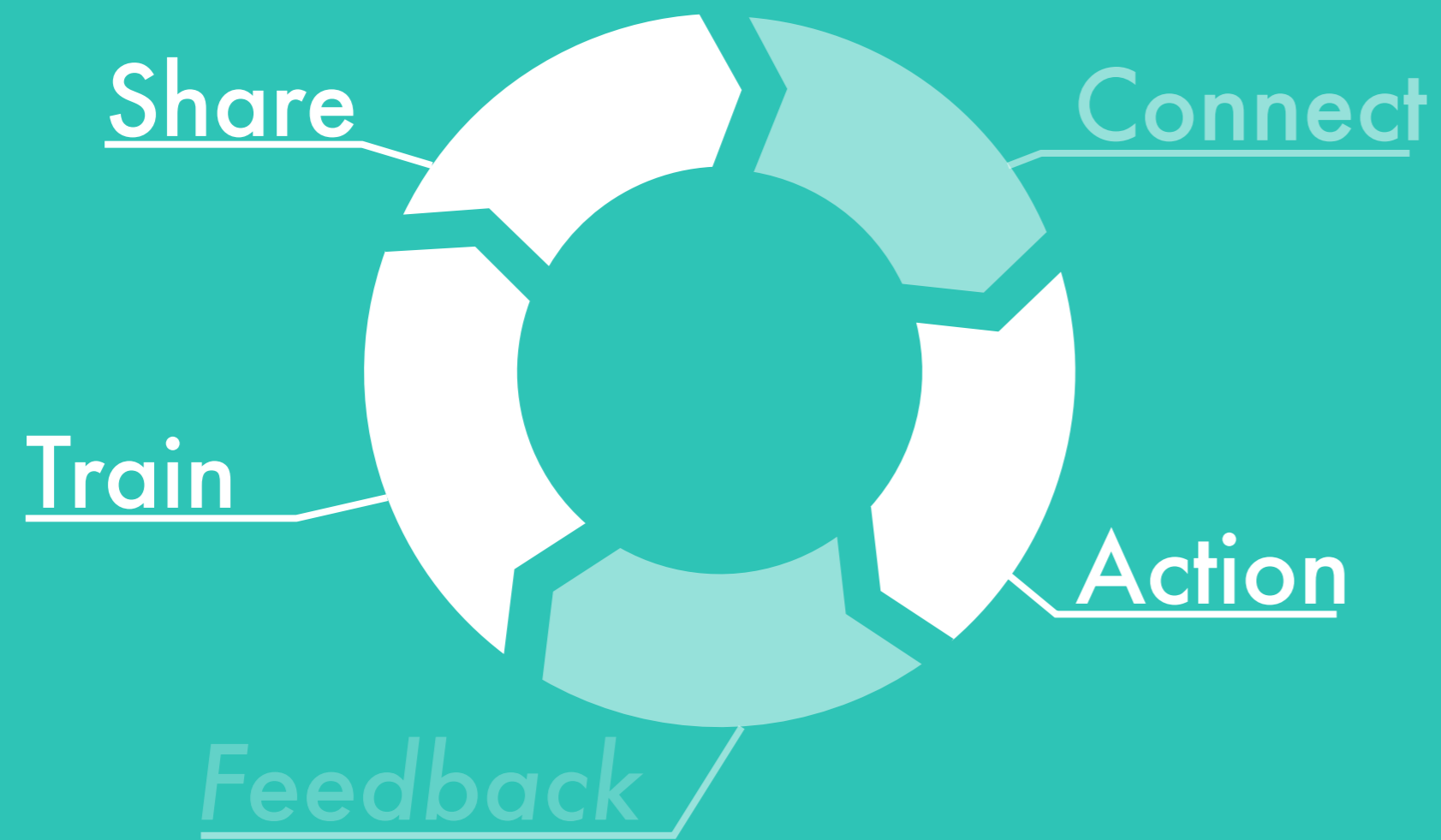
■ What is in it for



Students

- Quality climate education
- Holistic perspective
- Active citizenship experiences

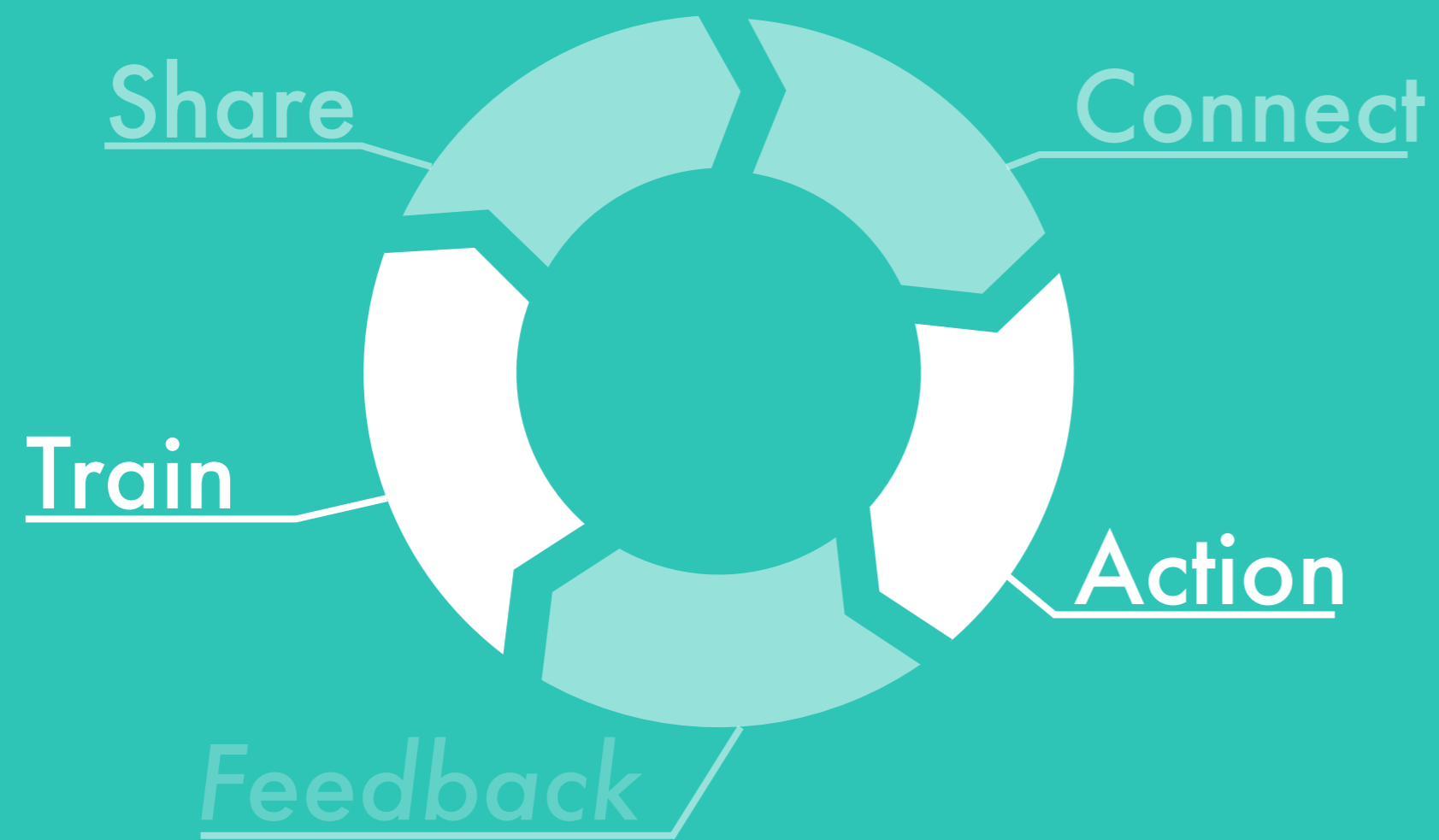
■ What is in it for



Teachers

- Confidence
- Peer support
- Facilitating active citizenship

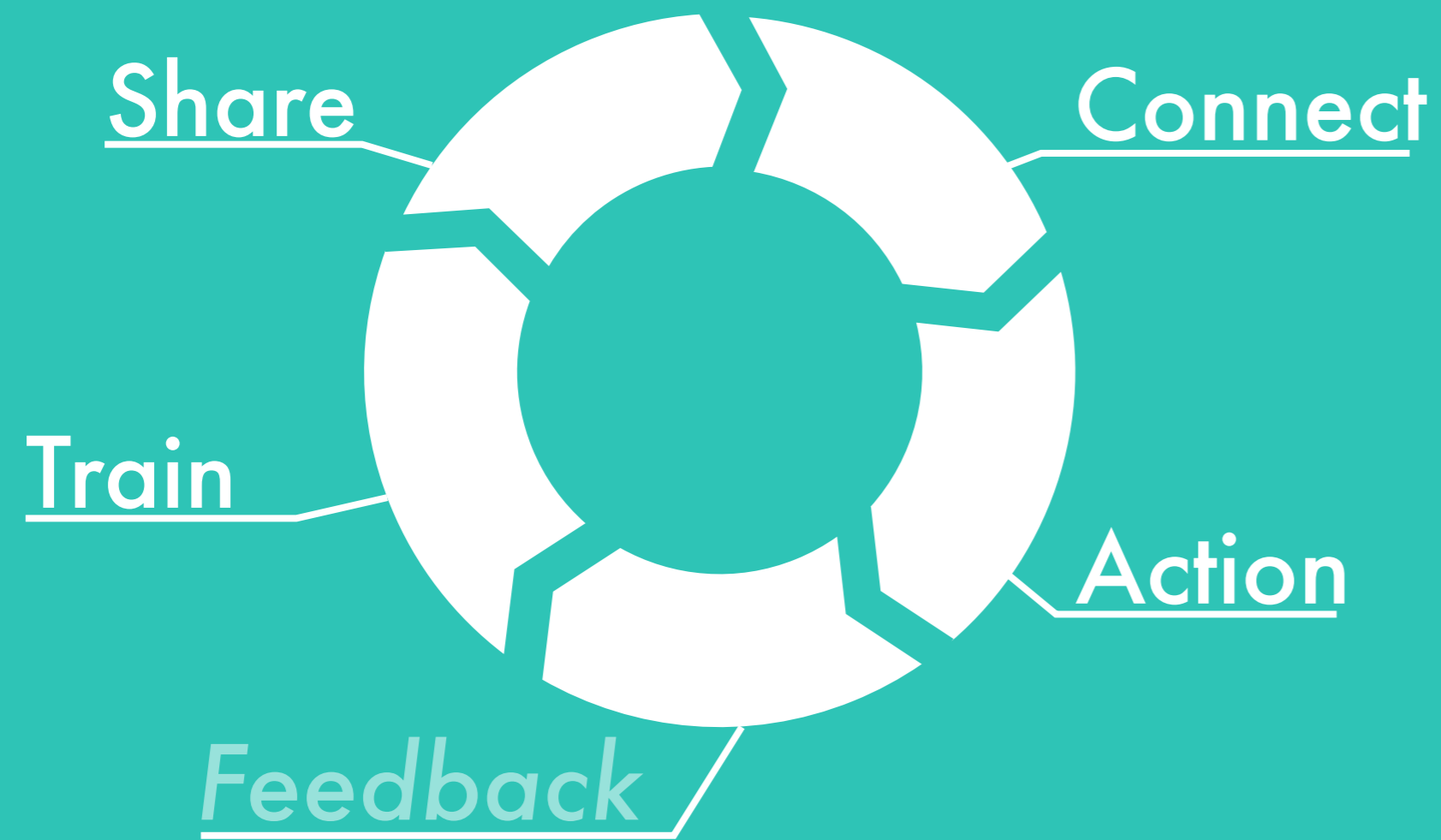
■ What is in it for



Schools

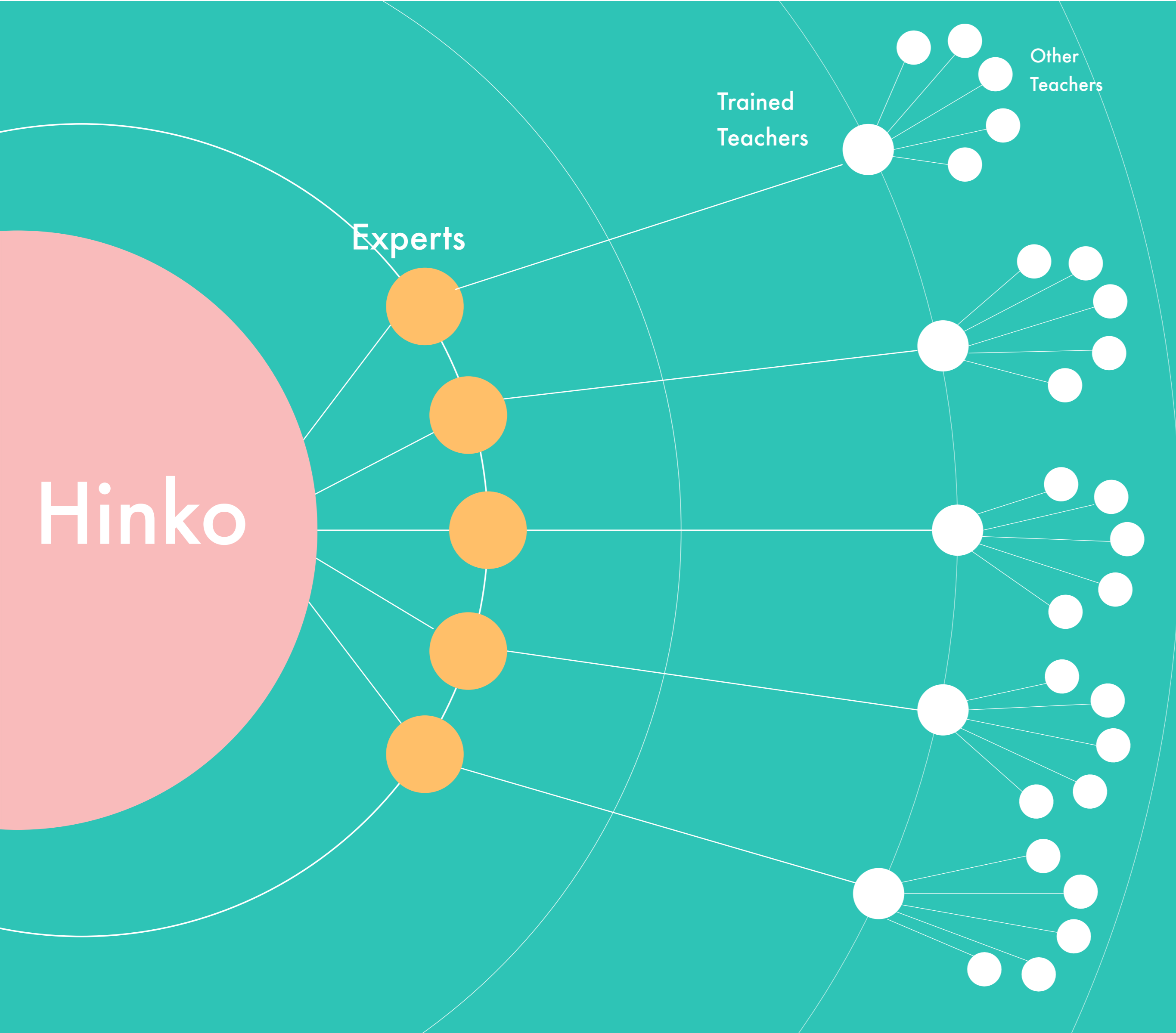
- Multidimensional learning project
- Positive publicity
- Possible financial rewards

■ What is in it for



Experts

- Opportunity to advance climate education in Finland
- Bridge between schools and ministries
- Meaningful and impactful job



Spread the training

By training one teacher with the help of an expert a cumulative effect takes place of spreading teacher knowledge and climate education implementation.

■ Strengths

Agile

Scalable

Human-
centered

Time-
effective

Strengths

Agile

Scalable

Human-centered

Time-effective

Now!
Now!
Now!

■ External confirmation

"The fastest way to boost climate education would be offering more in-service teacher training"

— Researcher

"We have a lot of teachers with a lot of knowledge, they can be peer tutors to one another."

— Headmaster

What we propose

Climate knowledge into schools, active citizenship experiences for students.

How it works

Experts support teachers, teachers spread the knowledge, platform assists.

Why we think it works

Time is ticking and we thus need to find fast and agile ways to boost climate education in school.

HINKO

Climate education module & network



■ References

1) Marin government programme, 2019

<https://valtioneuvosto.fi/en/rinne/government-programme/carbon-neutral-finland-that-protects-biodiversity>

2) Essi Aarnio-Linnanvuori, 2018

Ympäristö ylittää oppiainerajat: Arvolatautuneisuus ja monialaisuus koulun ympäristöopetuksen haasteina

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Noah Peysson and Design for Government course at Aalto University



Thanks for your attention



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