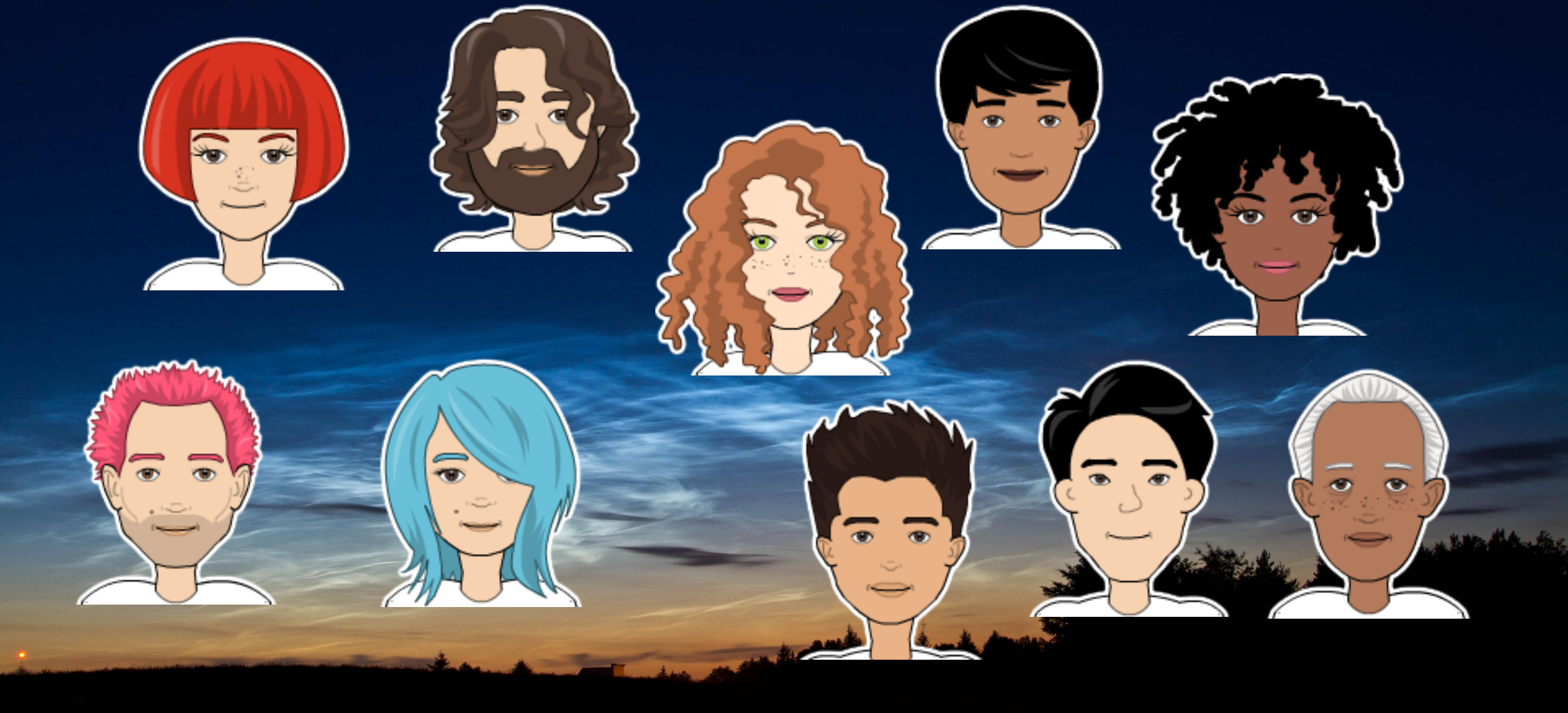
Islands Diversity for Science Educatio
2017-1-PT01-KA201-035919

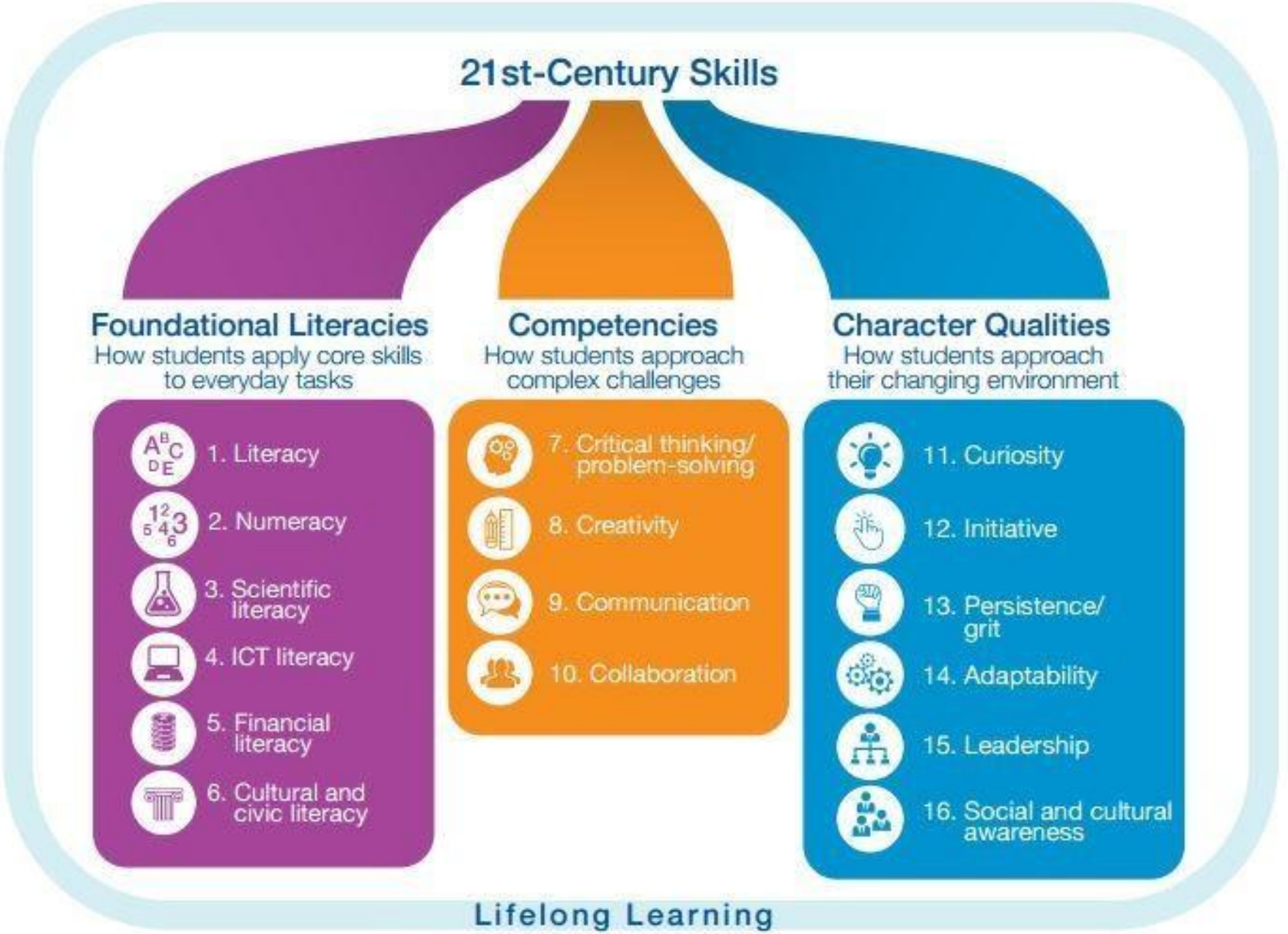
Co-funded by the
Erasmus+ Programme
of the European Union

Who are the future leaders of our planet ?



How do we want them to be educated?

Exhibit 1: Students require 16 skills for the 21st century



Note: ICT stands for information and communications technology.

What is expected from all of us !!!

Design Thinking Process and UDL Planning Tool

goo.gl/OVOhOn

Share Out

Define Problem

Empathy and Perspective

Engagement

Universal Design for Learning®

Reflection

Action and Expression

Representation

Generate Ideas

User Feedback

Prototype - Test - Refine

Sketch Design

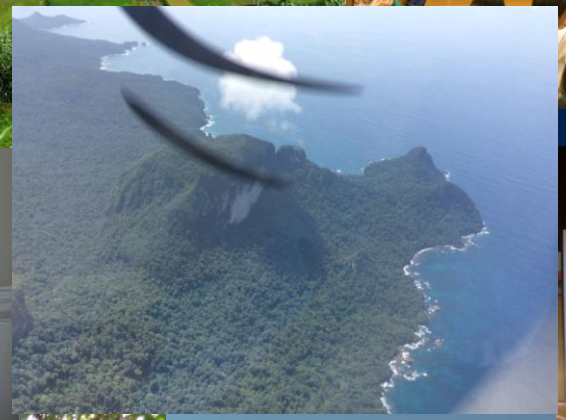
Barbara Bray
@bbray27

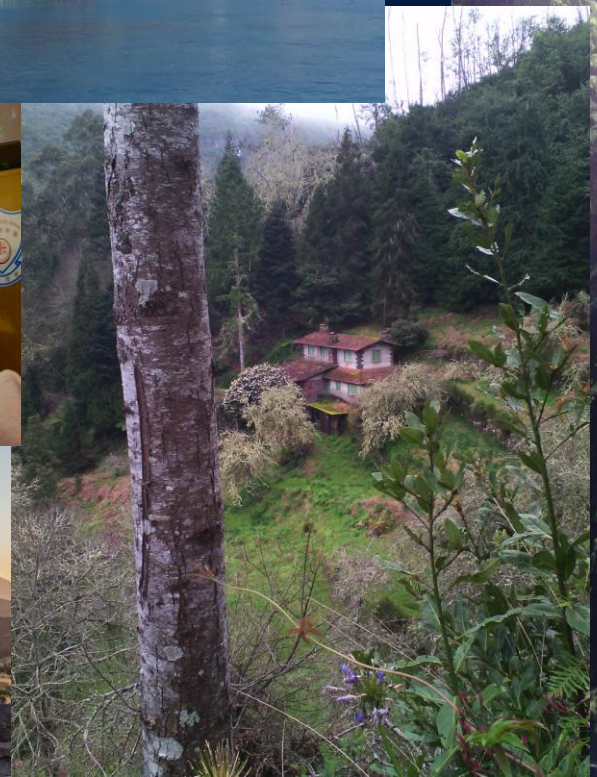
Jackie Gerstein
@jackiegerstein

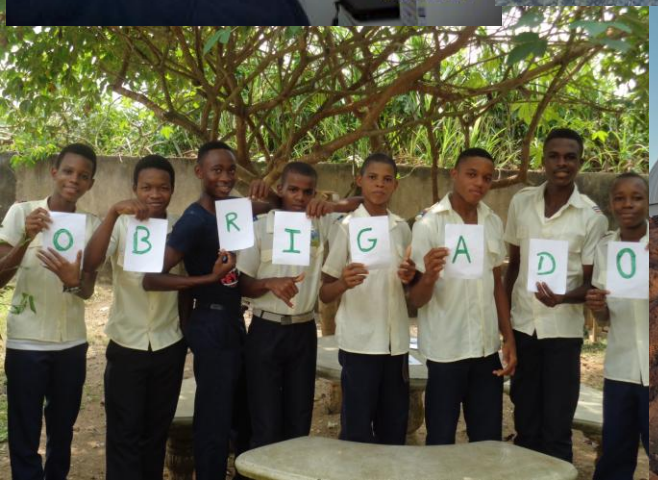
Welcome on board of

IDiverSE
island diversity

One people → One planet → One Sky







Main pillars of IDiverSE

Interdisciplinarity

Personal Geography

Collaborative inquiry

Ethno science

Local culture

Islands Diversity for Science Education
2017-1-PT01-KA201-035919

ILAET	EDHBG	ESJM	ESJEA	EA	UDEUSTO	NUCLIO	UAZORES	ABAE

Basic structure of IDiverSE

Collaborative space

IDiverSE schools | IDiverSE schools

Collaborative inquiry

Interdiscipinary 3D map

IDiverSE activities

21st century skill assessment

Science Trail - From Sea to the Land

Science Trail - Between the Earth and the Sky

Roadmap

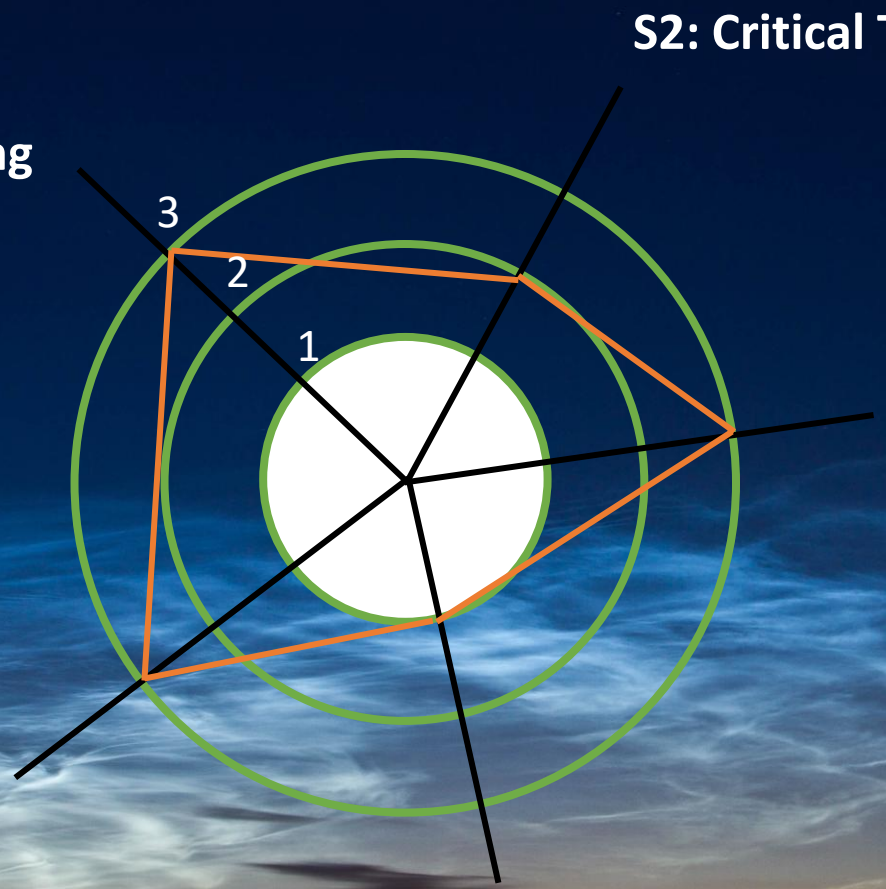
Promoting 21st Century Skills?

- Ways of Thinking
  - 1. Creativity and innovation
  - 2. Critical thinking, problem solving, decision making
  - 3. Learning to learn, Metacognition
- Ways of Working
  - 4. Communication
  - 5. Collaboration (teamwork)
- Tools for Working
  - 6. Information literacy
  - 7. ICT literacy
- Living in the World
  - 8. Citizenship – local and global
  - 9. Life and career
  - 10. Personal & social responsibility

S1: Problem Solving
S2: Critical Thinking
S3: Communication
S4: Reflection
S5: Collaboration

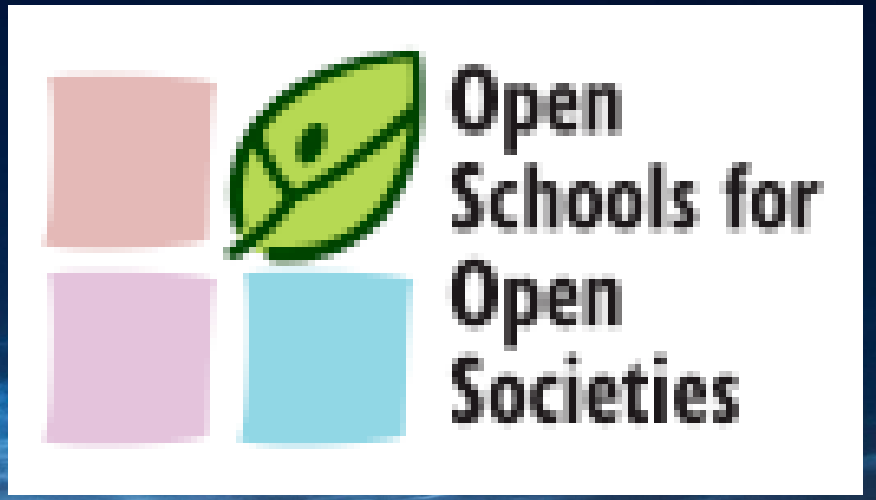
Students´ progress dashboard

Development of skills



IDiverSE inspirations / Partners

PLATON methodology



OSOS schools

MADEIRA ISLANDS

134 Eco-Schools

AZORES ISLANDS

83 Eco-Schools

Partners and Associate Partners

Sky
Water
Land

SKY

Cultural relation with sky
Stories, Observations

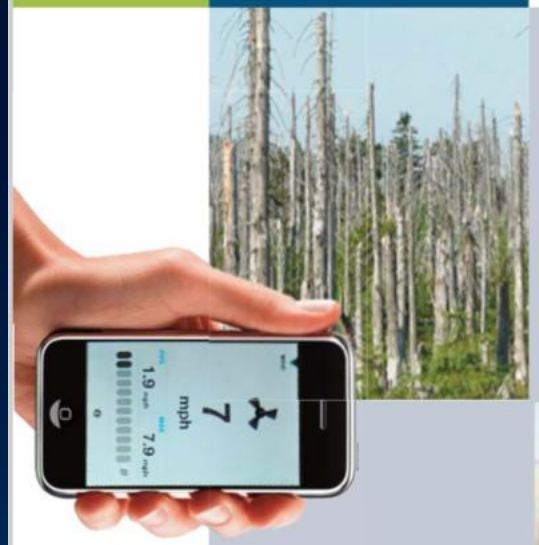
DARK SKIES RANGERS

Light pollution

http://dsr.nuclio.pt/

GlobalLab

Lowering the entry barrier



By loading the GlobalLab applications on a mobile device every student in the word can participate in the data-streaming crowdsourcing, participate in discussions and develop a sense of belonging to the worldwide network of citizen-scientist

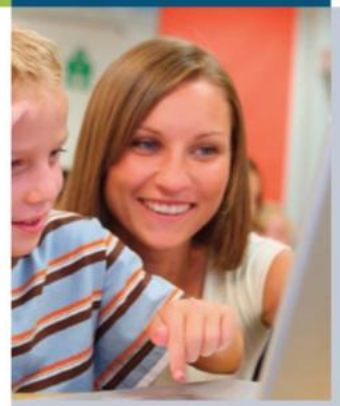
© GlobalLab LLC

www.globallab.org

GlobalLab

Comparing data globally

globallab

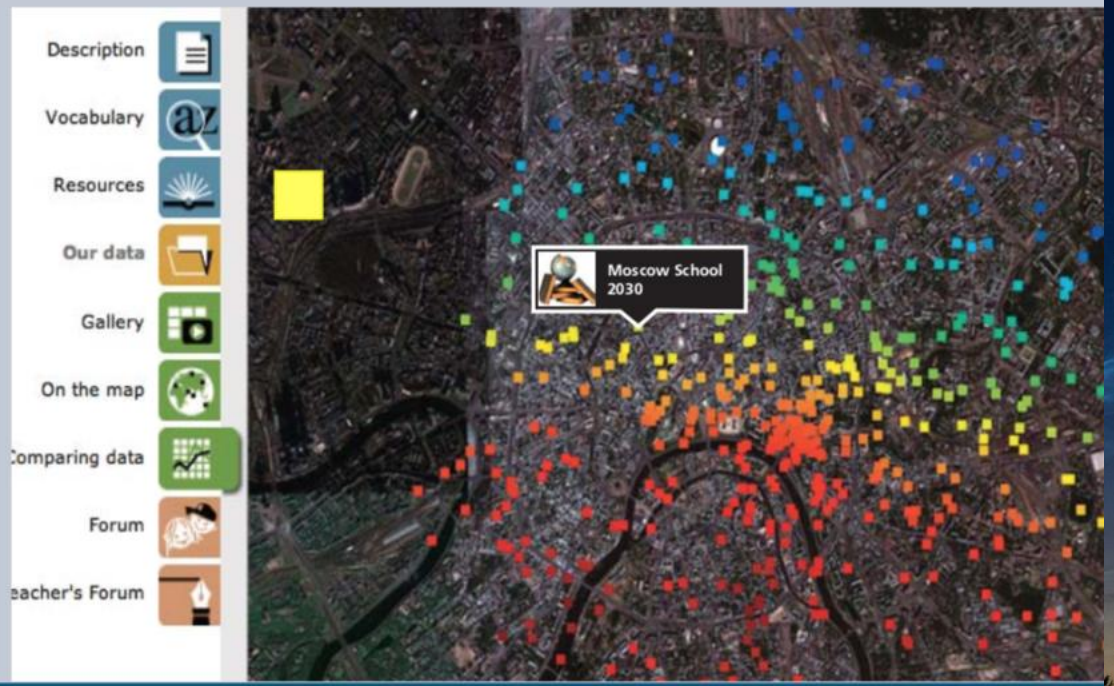


GlobalLab not only captures data, it also displays datasets on world maps

Users can compare their findings with data worldwide

Crowdsourcing & citizen science become

- Relevant
- Engaging
- Easy
- Fun



© GlobalLab LLC

www.globallab.org

When?

School community

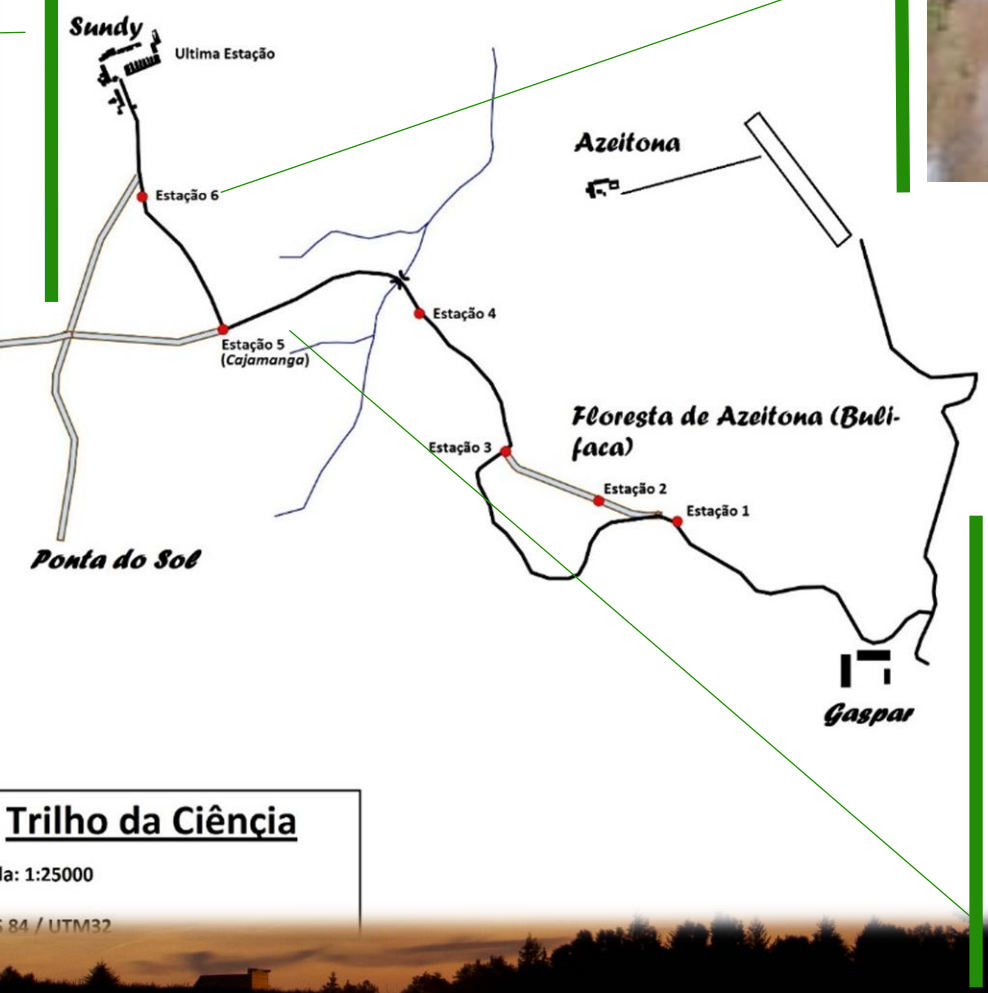
Communicate results of the researches to...

.....

Local community

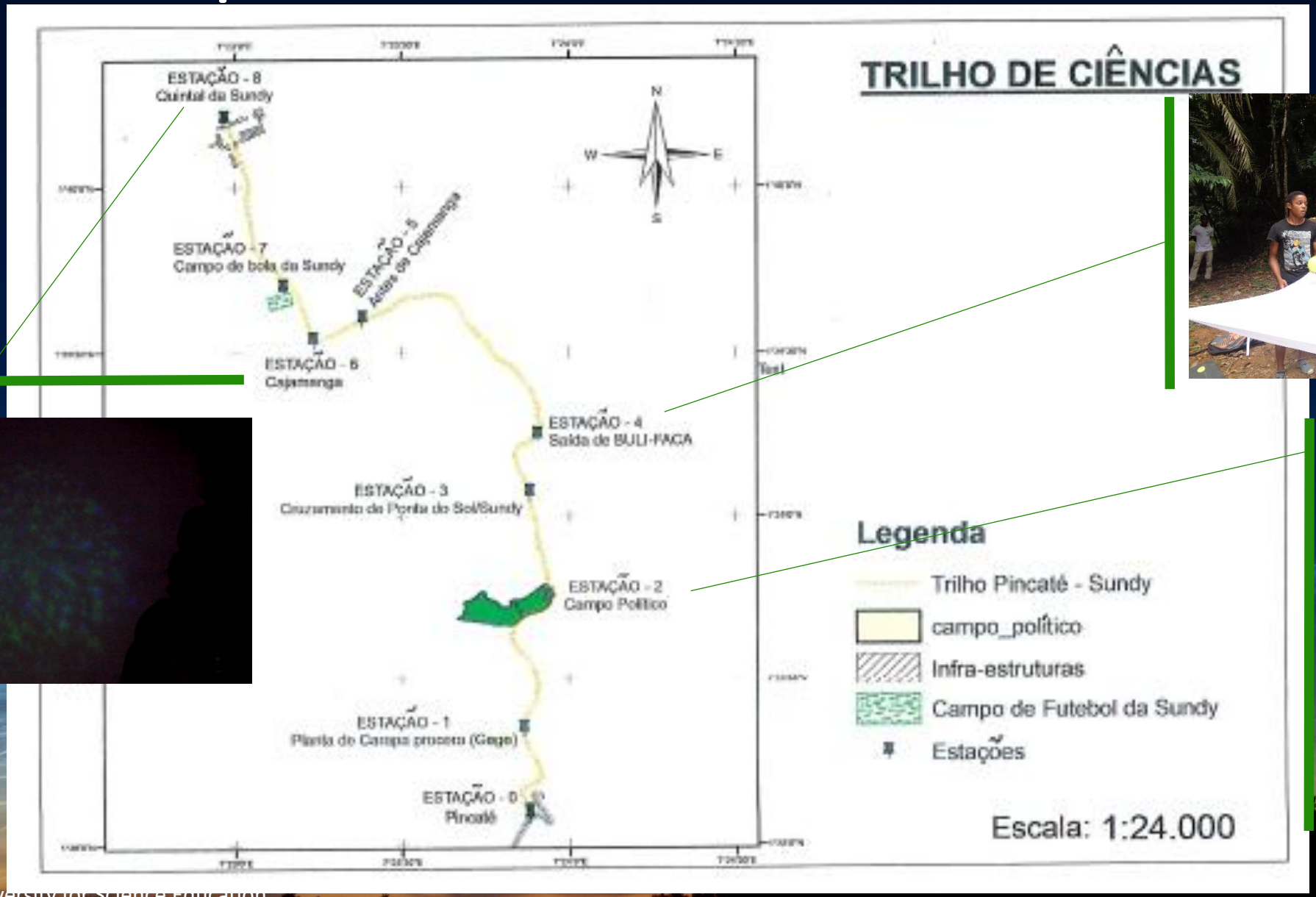
Island visitors

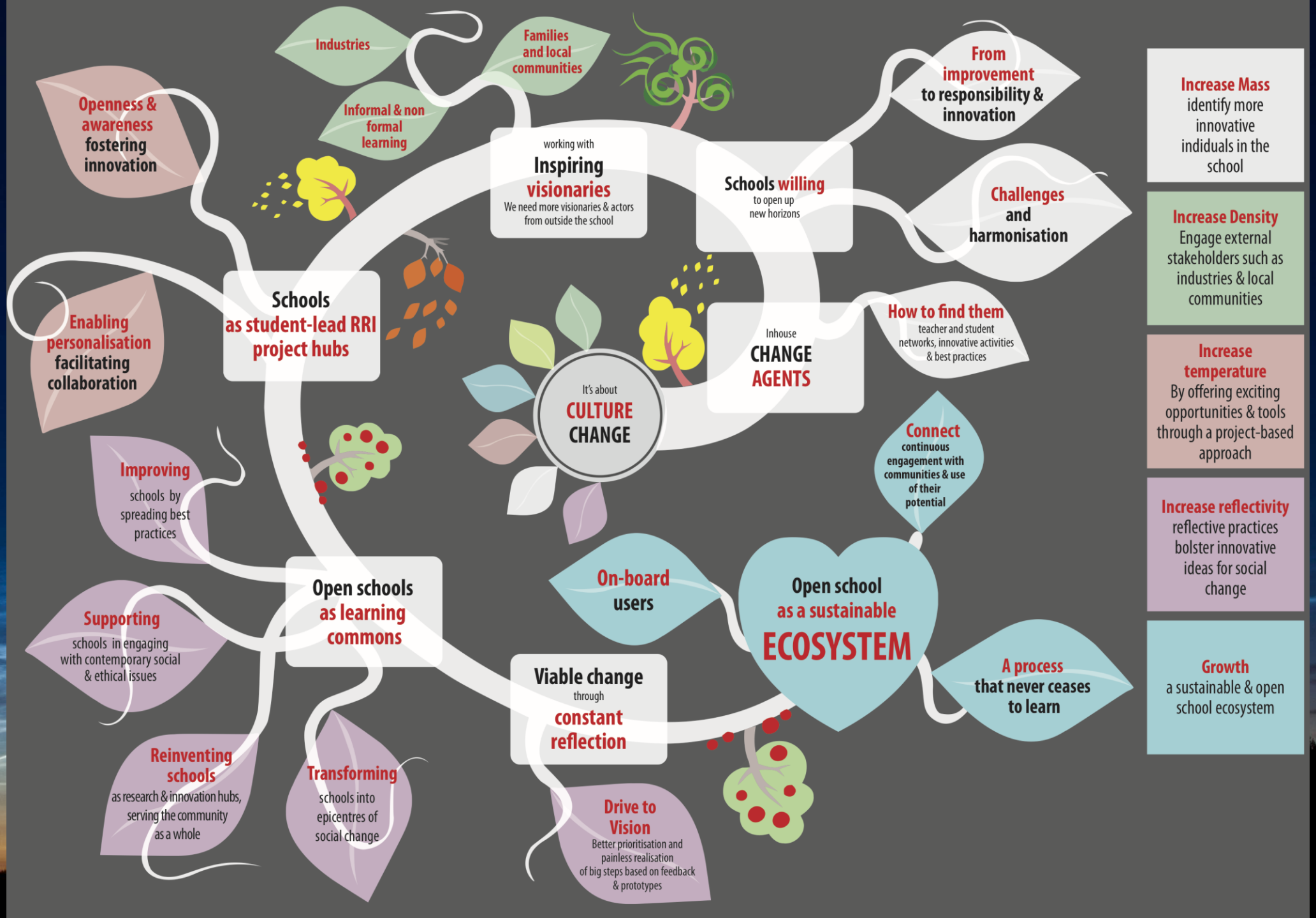
Station examples



1
1
2
3
5
8
13
21, …

Station examples




Industries
Families and local communities
Informal & non formal learning
Openness & awareness fostering innovation
working with
Inspiring visionaries
We need more visionaries & actors from outside the school
Schools willing
to open up new horizons
From improvement to responsibility & innovation
Challenges and harmonisation
Schools as student-lead RRI project hubs
Enabling personalisation facilitating collaboration
It's about
CULTURE CHANGE
Inhouse
CHANGE AGENTS
How to find them
teacher and student networks, innovative activities & best practices
Improving
schools by spreading best practices
Connect
continuous engagement with communities & use of their potential
On-board users
Open school as a sustainable
ECOSYSTEM
Open schools as learning commons
Supporting
schools in engaging with contemporary social & ethical issues
Viable change
through
constant reflection
A process that never ceases to learn
Reinventing schools
as research & innovation hubs, serving the community as a whole
Transforming
schools into epicentres of social change
Drive to Vision
Better prioritisation and painless realisation of big steps based on feedback & prototypes
Increase Mass
identify more innovative indiduals in the school
Increase Density
Engage external stakeholders such as industries & local communities
Increase temperature
By offering exciting opportunities & tools through a project-based approach
Increase reflectivity
reflective practices bolster innovative ideas for social change
Growth
a sustainable & open school ecosystem

Science on Stage Portugal - 2019

SCIENCE ON STAGE PORTUGAL

Skills for the Future

100th Aniversary of IAU
50th Aniversary of Moon Landing
100th Aniversary of Eddinton@Sundy

400 teachers from all over Europe sharing best practices

Co-funded by the
Erasmus+ Programme
of the European Union

Thank you

globallab
ABAE
UNIVERSIDADE DOS AÇORES
NUCLIO
Núcleo Interactivo de Astronomia
JCA
HBG
escola secundária
Universidad de Deusto
University of Deusto
Deusto