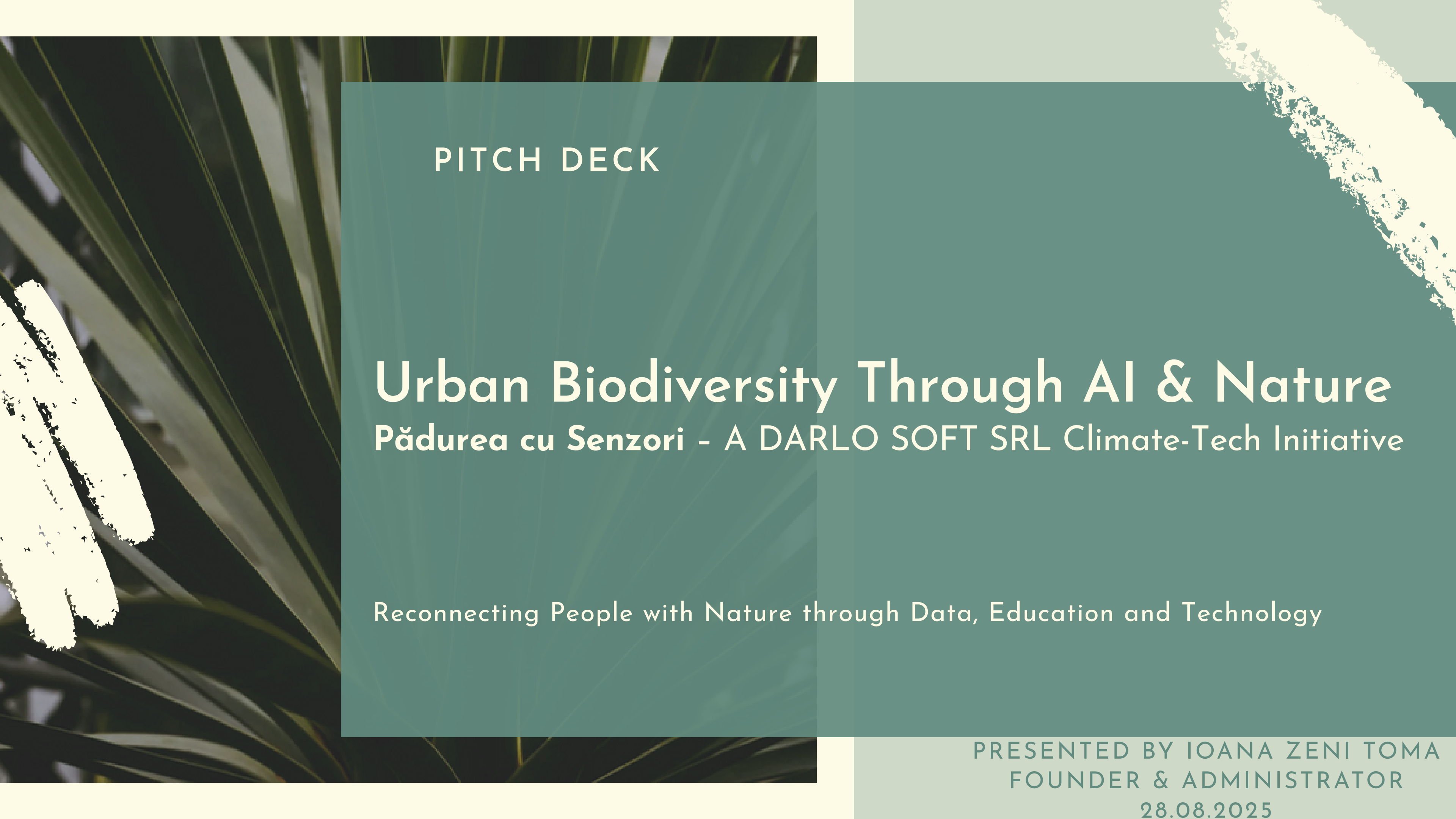


The background of the slide features a close-up photograph of green palm fronds on the left side, set against a solid teal background that covers the rest of the slide. The text is white and centered.

PITCH DECK

Urban Biodiversity Through AI & Nature

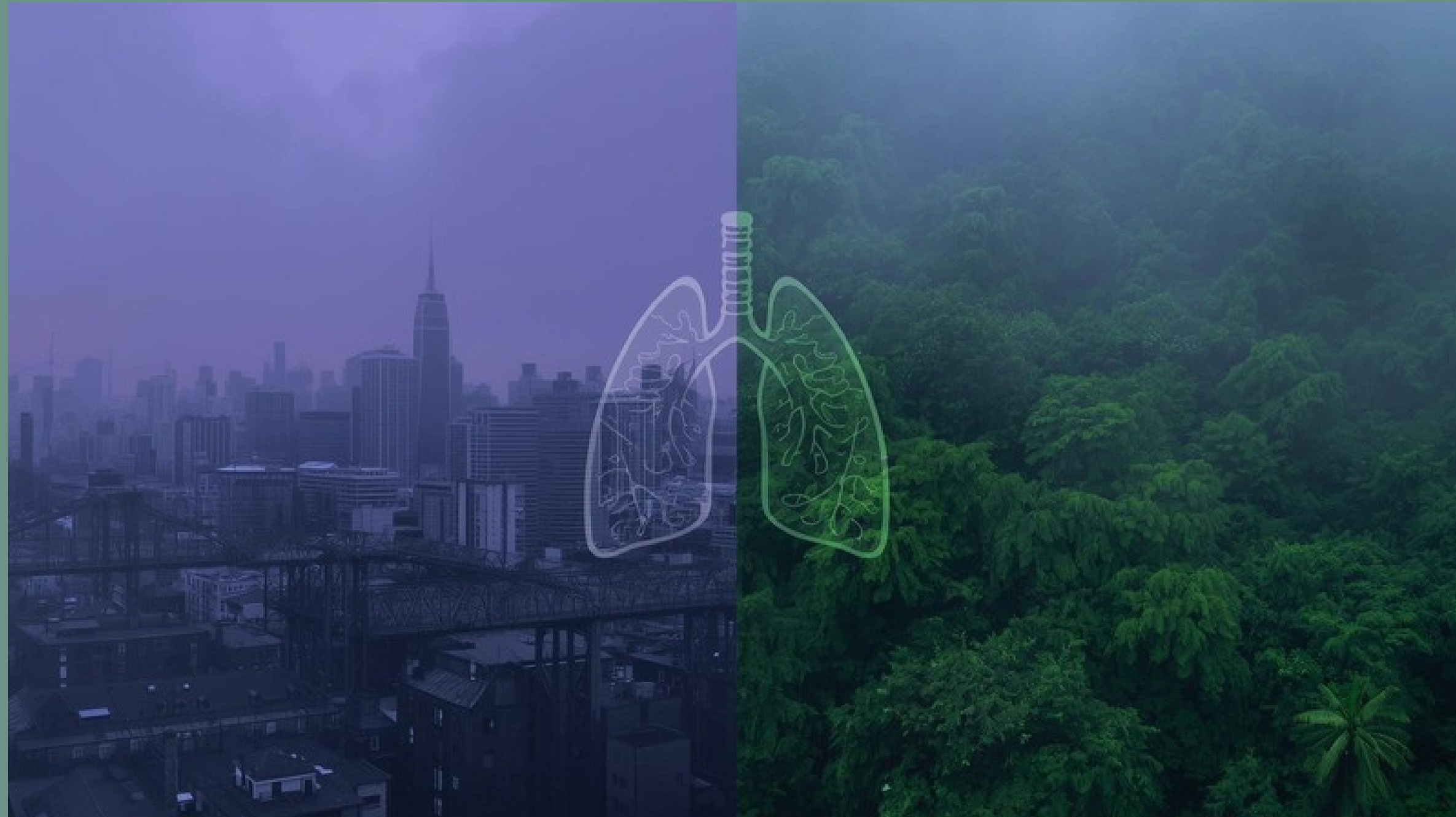
Pădurea cu Senzori - A DARLO SOFT SRL Climate-Tech Initiative

Reconnecting People with Nature through Data, Education and Technology

PRESENTED BY IOANA ZENI TOMA
FOUNDER & ADMINISTRATOR

28.08.2025

If Pollution Were Purple...

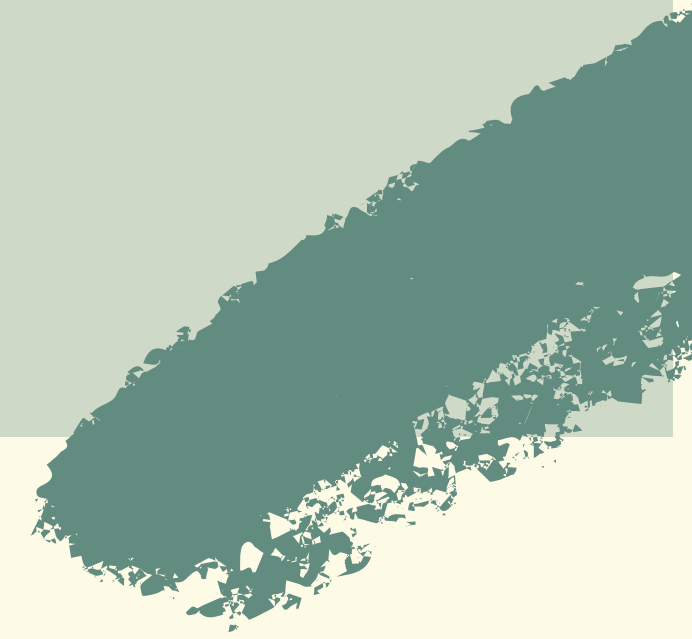


WE BREATHE 11,000 LITERS
OF AIR EVERY DAY

IN POLLUTED CITIES, IT'S
FULL OF INVISIBLE KILLERS

IF POLLUTION WERE PURPLE
SMOKE, WE'D PANIC

SENSOR FOREST: MAKING
THE INVISIBLE, VISIBLE



The Urban Climate Problem

- Air pollution kills 29,000 people annually in Romania (EU data).
- Cities lack enough green spaces → overheating & poor air quality.
- Environmental data is invisible → citizens can't act on what they don't see.
- Climate education is abstract → kids learn theory, not experience.



EUROPE INVESTS BILLIONS IN
CLIMATE-TECH & SMART CITIES



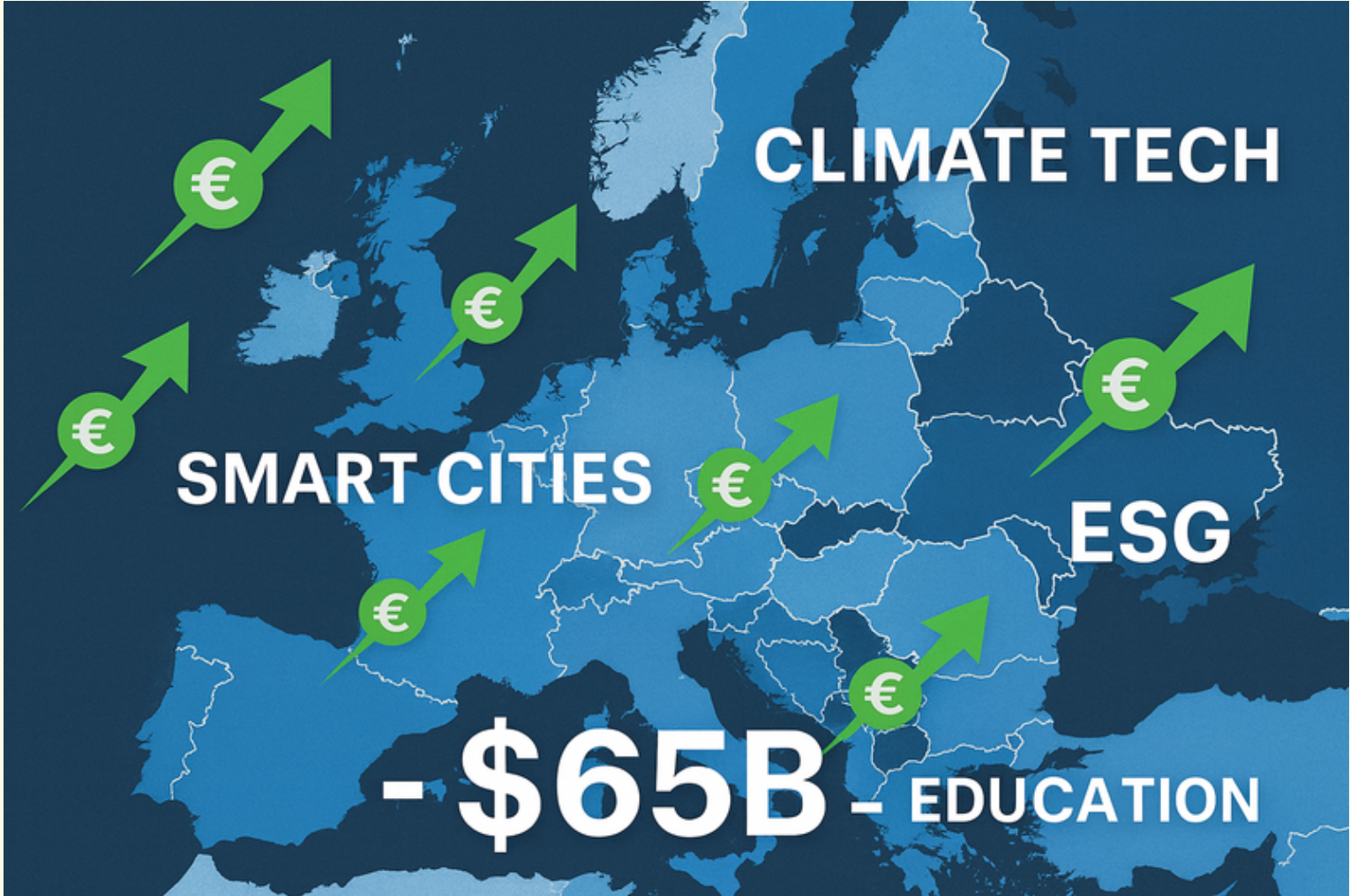
SCHOOLS NEED INTERACTIVE
CLIMATE EDUCATION



COMPANIES NEED VISIBLE ESG
& CSR SOLUTIONS



CITIES MUST ADAPT TO
POLLUTION & HEATWAVES



OUR SOLUTION: SENSOR FOREST

1. DENSE URBAN MICRO-FORESTS (MIYAWAKI METHOD): 30x FASTER GROWTH, 300% MORE BIODIVERSITY.

2. IOT ENVIRONMENTAL SENSORS: CO₂, AIR QUALITY, SOIL, HUMIDITY, TEMPERATURE.

3. INTERACTIVE APP & DASHBOARDS: DATA + GAMIFIED EDUCATION FOR SCHOOLS, FAMILIES & COMPANIES.



NATURE + SENSORS + EDUCATION = IMPACT

POTENTIAL

- PILOT 2025: 2,400 M² SENSOR FOREST IN ARAD
- 2026-2027: EXPAND TO 3 MORE ROMANIAN CITIES VIA SCHOOLS & MUNICIPALITIES
- BY 2030: CREATE A NATIONAL NETWORK OF INTERCONNECTED SENSOR FORESTS
- BEYOND 2030: EXPORT MODEL TO EUROPEAN SMART CITIES & STEM EDUCATION
- MODULAR MODEL: SCALABLE FROM 200 M² SCHOOL FORESTS → 2,000 M² CITY FORESTS
- TARGETING A SHARE OF THE €65B GLOBAL CLIMATE-TECH & EDTECH MARKET



CUSTOMER GROUPS



CITY HALL



SCHOOL



COMPANY



NGO



FAMILY

Municipalities & Public Authorities

- Buy: Urban Sensor Forest packages (planting + sensors + monitoring).
- Need: Green infrastructure, adaptation to climate change, citizen engagement.

Schools & Universities

- Buy: Educational forests, STEM content, dashboards, kits.
- Need: Hands-on environmental education aligned with curriculum.

Companies (CSR & ESG)

- Buy: Sponsored forests with branding + measurable ESG reports.
- Need: Visible, credible sustainability projects.

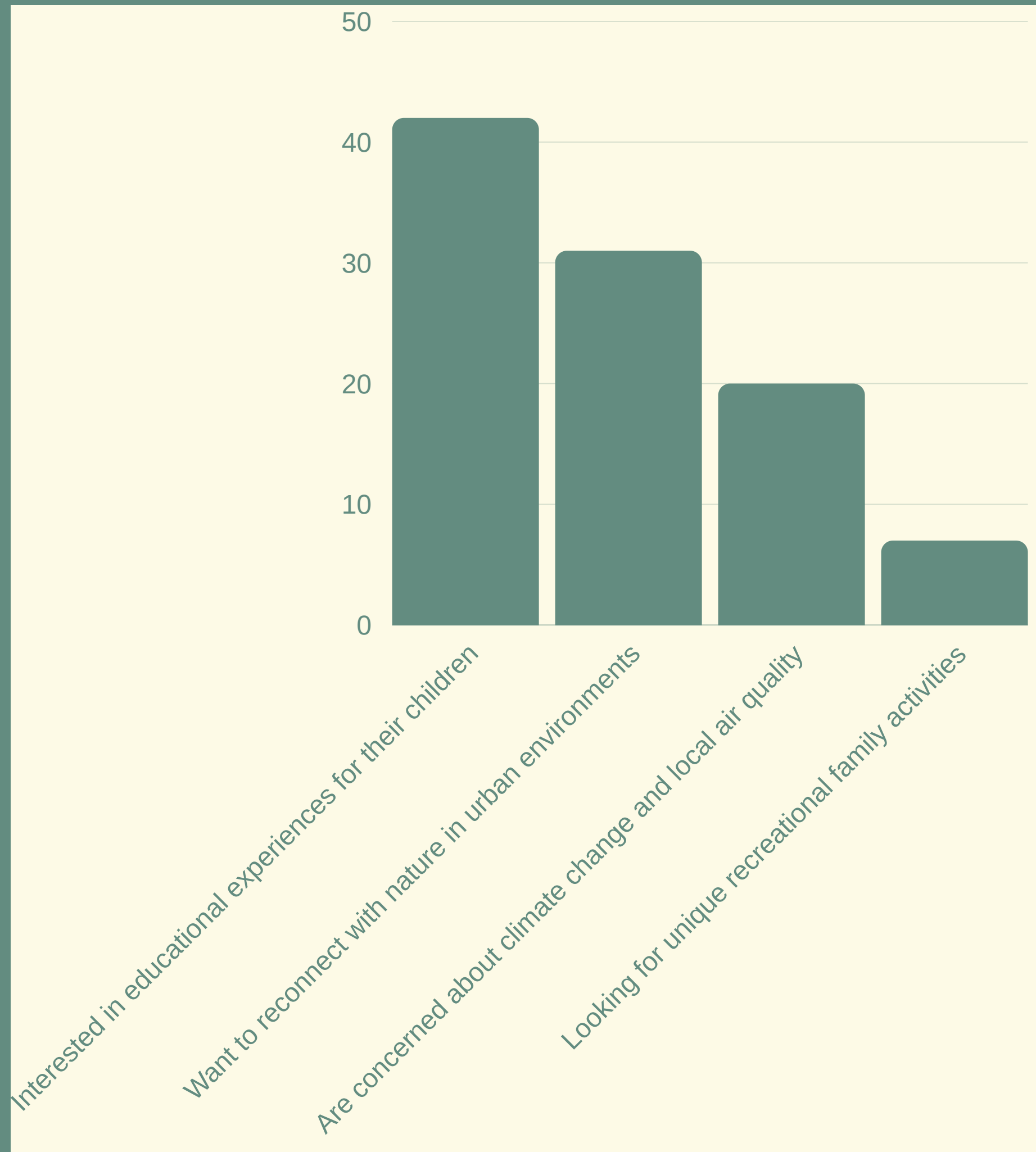
NGOs & Local Communities

- Buy: Mini-forests & engagement kits.
- Need: Community cohesion & environmental action.

Families & Individuals (B2C)

- Buy: DIY eco-kits, workshops, mobile app.
- Need: Educational and fun ways to connect kids with nature.

Market Survey



PURCHASE MOTIVATION

Why do people support
our green-tech initiative?

Educational Experience

Bring Nature Closer

Educational Trails & Interactive Panels

Our microforest will feature a sensory path and educational stations explaining biodiversity, CO₂ impact, and the role of native vegetation. Visitors will explore, touch, scan and learn through a dedicated mobile app and IoT-connected displays.



GOING DIGITAL



We're building an engaging digital experience to support our educational and ecological mission.

Coming soon:

- ◆ Website with live sensor data from the microforest
 - ◆ Virtual guided tours & biodiversity maps
- ◆ Interactive dashboards for schools & families
 - ◆ Tools for climate education & CO₂ tracking



Other Services

PERSONAL ADVICE

Personalized recommendations for choosing the right plants based on the space, lifestyle, and experience level of the client.

LANDSCAPE DESIGN

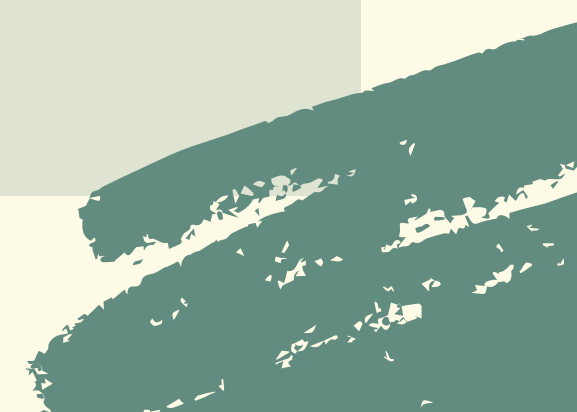
Consulting and planning for green space arrangements - urban gardens, balconies, terraces, or ecological yards.

DECORATIVE POTS

Handmade or customized products created in collaboration with local artists, ideal for a unique and sustainable decor.

WORKSHOPS

Interactive workshops for children, adults, and companies (CSR), focused on ecological education, planting, and plant care.



Competition

- NGOs / Reforestation projects → focus on planting trees, no tech/data
- Air monitoring platforms → provide data, but no nature or education
- Conventional education programs → theoretical, not experiential

Differentiation

- First solution in Romania (and rare in Europe) to combine Nature + IoT + Education in one scalable model
- Gamified & data-driven → visible impact for schools, families, companies
- Creates living classrooms that measure, teach, and inspire action

FINANCES & REVENUE MODEL

I. PILOT COSTS (ARAD 2025)

FOREST PLANTING & MAINTENANCE (2,400 M² MIYAWAKI):	€30,000
IOT SENSORS & INSTALLATION (AIR, CO ₂ , SOIL, WEATHER):	€20,000
PLATFORM DEVELOPMENT (DASHBOARD, MOBILE APP MVP):	€15,000
WORKSHOPS, EDUCATIONAL MATERIALS, COMMUNITY EVENTS:	€ 5,000

TOTAL PILOT COST: €70,000

II. REVENUE STREAMS

- URBAN FOREST PACKAGES (B2B/B2G): €5K-€20K/PROJECT
- MUNICIPALITIES, COMPANIES, SCHOOLS PURCHASE TURNKEY SENSOR FORESTS.
- SAAS SUBSCRIPTIONS: €29-€199/MONTH
- ACCESS TO DASHBOARDS, ESG/CSR REPORTS, AND OPEN DATA.
- EDUCATIONAL ECO-KITS (B2C/B2B): €50-€200/KIT
- FAMILIES, TEACHERS, NGOS PURCHASE KITS WITH SENSORS & GUIDES.
- CSR WORKSHOPS & EVENTS: €300-€1,000/WORKSHOP
- CORPORATE TEAM-BUILDING, SCHOOL PLANTING DAYS.
- SPONSORSHIPS & GRANTS: COMPLEMENTARY FUNDING FOR SCALE (NEXT : PHOTONQBOOST - WARSAW 2025-S2 BIOTECH)

FINANCES & REVENUE MODEL

3-YEAR PROJECTIONS

2025 (PILOT YEAR):
REVENUE: €25K (1 CITY FOREST + 100 KITS + 5 WORKSHOPS).
EXPENSES: €70K (PILOT SETUP).
NET: -€45K (COVERED BY CLIMACCELERATOR & CO-FUNDING).

2026:
REVENUE: €120K (3 NEW FORESTS + 400 KITS + 20 WORKSHOPS + SAAS SUBS).
EXPENSES: €85K
NET: +€35K

2027:
REVENUE: €250K (5-6 CITY FORESTS + 1K KITS + 50 WORKSHOPS + SAAS GROWTH).
EXPENSES: €150K
NET: +€100K



Statistics for Arad

YEAR	CO2 ABSORPTION (tons/year)	URBAN TEMP (*C)	PM2.5 (ug/m3)	SOIL ORGANIC MATTER (%)
2022	138.8	33.16	18.8	1.73
2023	144	33.33	18.4	1.76
2024	150	33.5	18	1.8

YEAR (estimated after implementation)	CO2 ABSORPTION (tons/year)	URBAN TEMP (*C)	PM2.5 (ug/m3)	SOIL ORGANIC MATTER (%)
2026	180	32.8	17	2
2027	200	32.5	16	2.2
2028	220	32.2	15	2.5

1. CO₂ SEQUESTRATION

2. URBAN COOLING EFFECT

3. AIR QUALITY
IMPROVEMENT

4. SOIL & BIODIVERSITY
REGENERATION

5. CLIMATE EDUCATION
IMPACT



OUR TEAM



TOMA IOANA ZENI

Entrepreneur

BACKGROUND IN IT & MANAGEMENT

10+ YEARS IN DIGITALIZATION,
EDUCATION AND EU FUNDING

EXPERIENCED TRAINER & PROJECT
MANAGER

PASSIONATE ABOUT CLIMATE
EDUCATION

(AND A MOTHER OF TWO -
PERSONAL MOTIVATION).

COLLABORATORS

- IT DEVELOPER - BUILDING
PLATFORM & IOT INTEGRATION
- STEM EDUCATORS - CREATING
INTERACTIVE CURRICULUM
CONTENT
- LANDSCAPE ARCHITECTS &
HORTICULTURISTS - MIYAWAKI
METHOD SPECIALISTS
- NGOS & VOLUNTEERS -
COMMUNITY ENGAGEMENT &
PLANTING ACTIVITIES

ADVISORS AND NETWORK

MENTORS FROM
CLIMACCELERATOR,
PHOTONQBOOST,
ACADEMIA DE
SUSTENABILITATE

PARTNERSHIPS WITH
SCHOOLS,
COMPANIES,
MUNICIPALITIES AND
LOCAL
COMMUNITIES IN
ARAD & WESTERN
ROMANIA

THANK YOU FOR YOU ATTENTION!

TOMA IOANA ZENI
PĂDUREA CU SENZORI