



Finding new ways of resolving waste management through Litter-boom intervention

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Clean ups and Litter booms coordinator Tri-Eco

17th March 2022

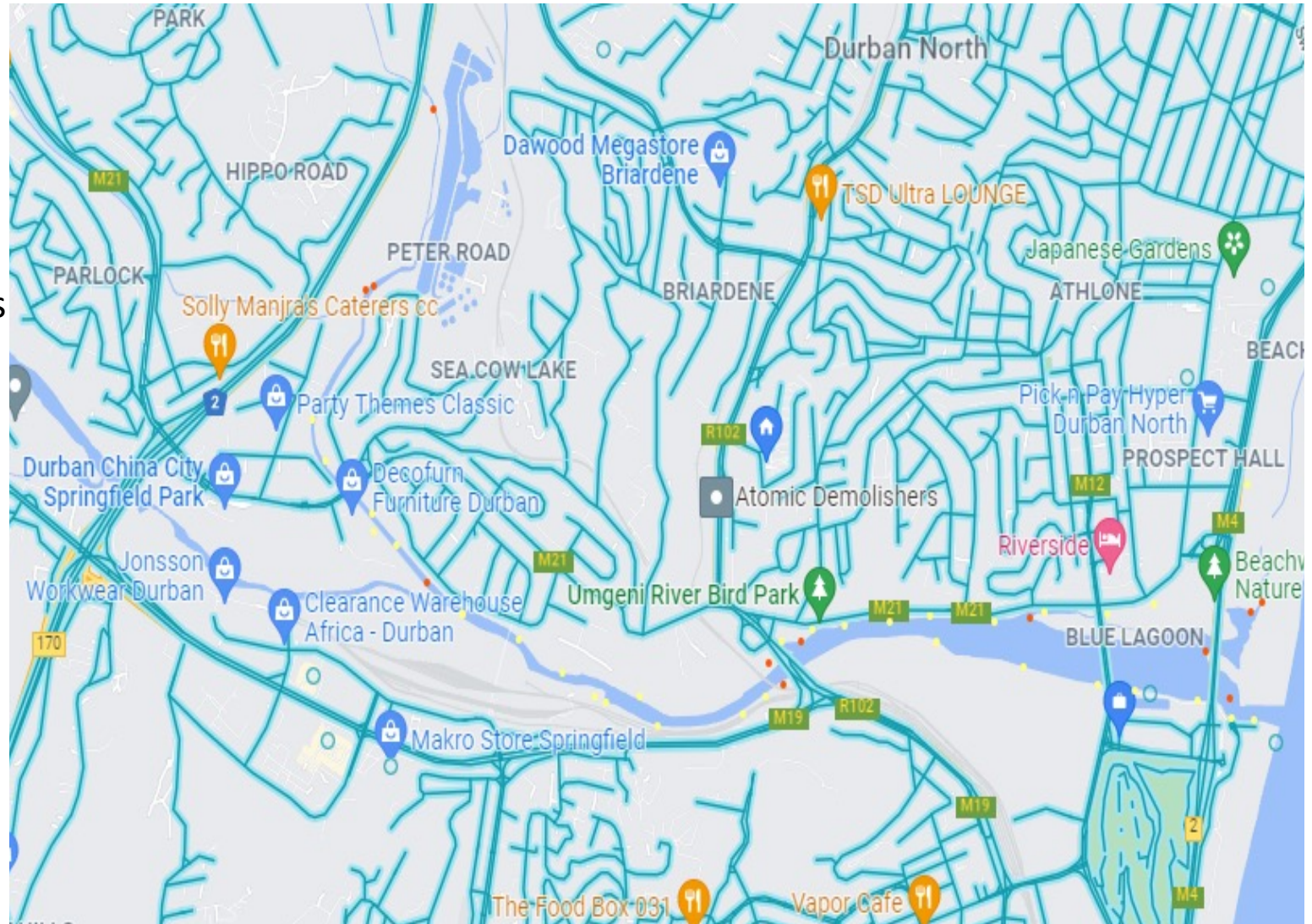
Rivers are just like blood vessels of the earth





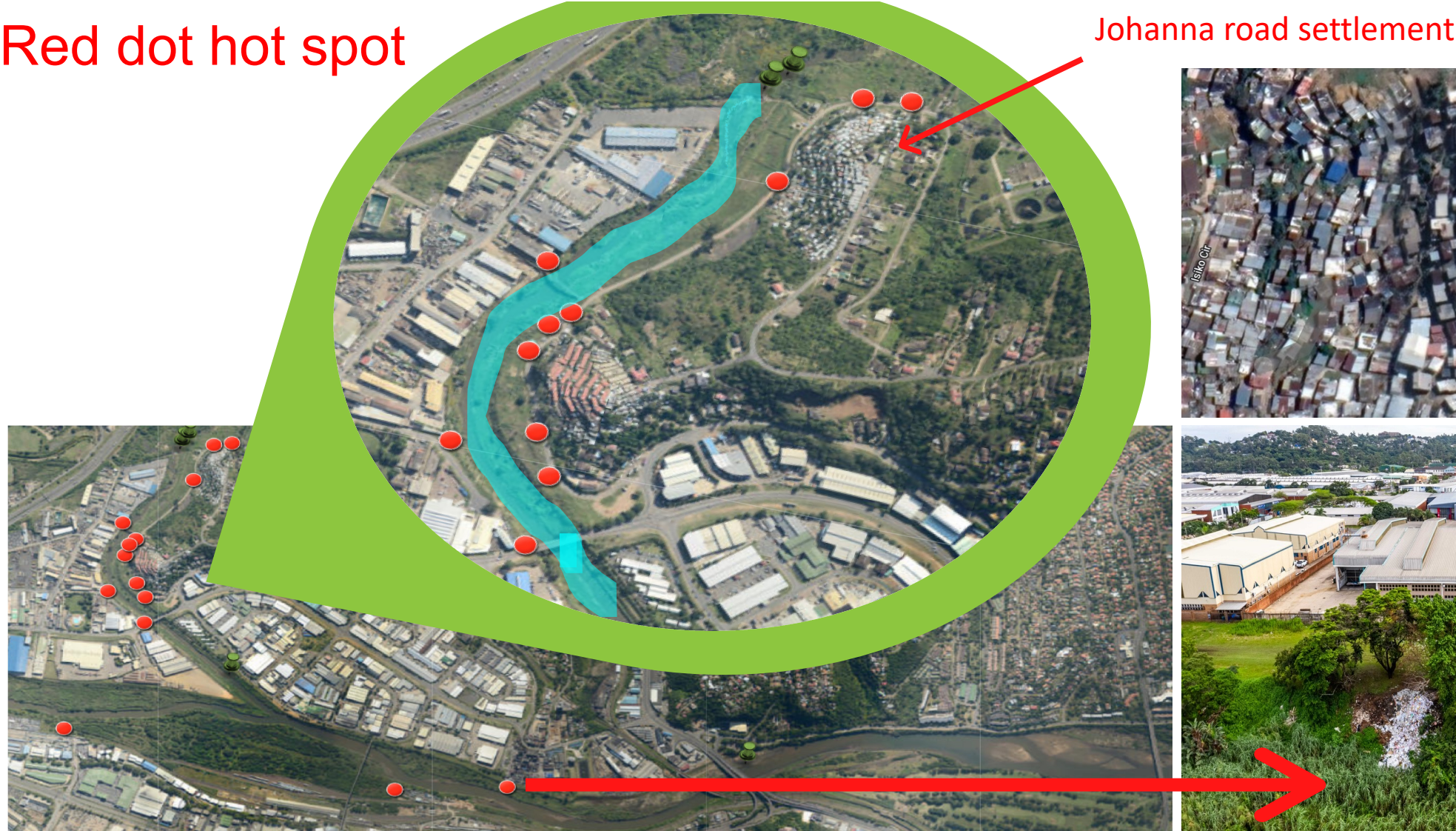
Roads vs Storm water drain entries

- Storm water drains system
- Street or road maintenance systems
- Infrastructure inherited system
- Waste trapped inside the drain systems
- Urban drains
- Roads become new rivers after rain



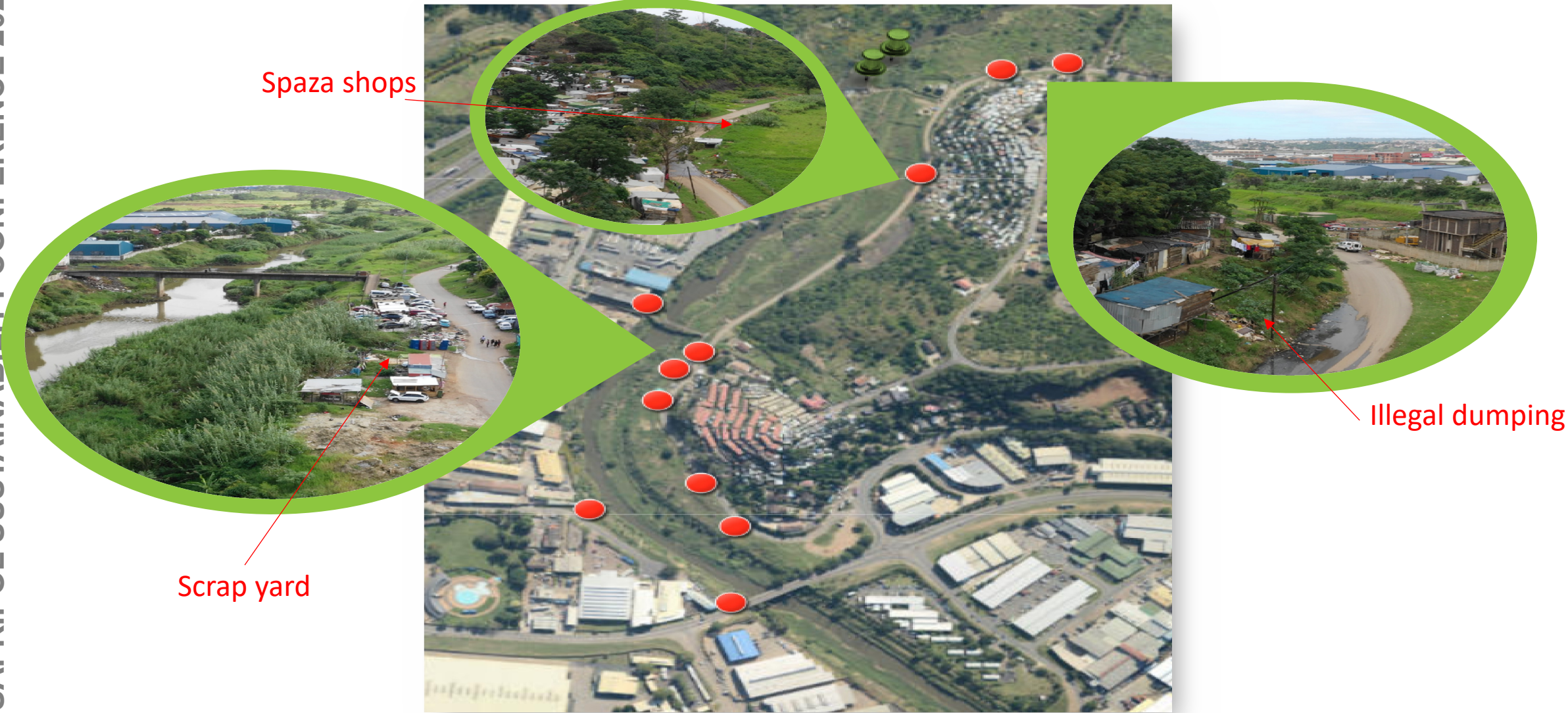


Informal Dumping site (uMhlangane river)





Activities on the riverbed



Industrial areas vs residential densification

Illegal hot spots
dumping sites

- Illegal dumping hot spot

- Waste management issues

Ongoing pollution
into the drain systems

- Contracted waste collectors

- Communication / Feedback

Property rentals
absent landlords





Johanna Road and Briardene settlements



Johanna road settlement 2022



Johanna road 2015



Briardene settlement



Johanna road settlement and Quarry settlement





The Problem



Inanda dam wall



Blue lagoon park



uMngeni River mouth

What is a litter boom?

- A *litter boom* or *trap* is a floating device installed at strategic locations along waterways to collect and retain floating *litter*, vegetation and other debris





Operational areas

uMngeni catchment / uMhlangane river /Johanna Rd

Quarry Road West

Beach Wood Mangrove Nature Reserve

River Horse Valley

Ohlange / other



Installations

1. Identify the area
2. Investigate, stakeholders, dept, community etc
3. Investigate the area specifically, soil erosion, storm water drains, snakes etc
4. Mapping riverine areas
5. Resources required





Preparing a litter boom installation





A strategy used to trap litter from the source



Low cost , easy to install, easy to maintain

Why litter booms?



An opportunity and Model

Responding to a plastic pollution crisis on the coastal and Marine environments



Types of waste differs on different rainy days



Johanna road settlement



Same litter boom different day





Litter booms at work





Waste Trapped





Team members and upskilling



- 1 coordinator
- Training provided
- Water safety training
- Canoeing training
- First aid
- Litter boom installation
- Invasive alien plant workshops
- How to use an App (Gen point)





Removing waste





Removing Waste and storage



Problem and a Solution

- Disadvantage of not having a litter boom



- Advantage of having a litter boom



Summary of waste recorded In a month

Waste type / Rivers	Waste generated per Month Feb 2022 (kg)	Total percentages
PET	460	60%
PS	201	9.2%
Nappies	90	2.1%
HDPE	60	8.7%
Glass	13	6%
Wood /trees	200	10.1%
Other	20	3.9%
Total	1044	100%



Comparing months (Oct 21, Nov 21, Dec 21, Jan 22 ,Feb 22)

2539 kg = 2 ton

6785 kg = 6 ton

1044 kg = 1 ton



- PET
- PS
- Nappies
- HDP
- Glass
- Wood /trees
- Water hyacinth

4568 kg = 4 ton

3560 kg = 3 ton





Challenges

Soil erosion

Steep riverbed

Sand mining

Fast flowing
water

Rocky areas in
the river

Storm water
drains

Sewerage /
Chemical spills

Rituals
Ceremonies &
Water hyacinth

Huge trees

Water level too
high / Low

Venomous
Snakes



Current role players





Sustainability and upcycling Vision (Tri-eco)



Waste Management solution for informal settlements etc



Community recycling stations

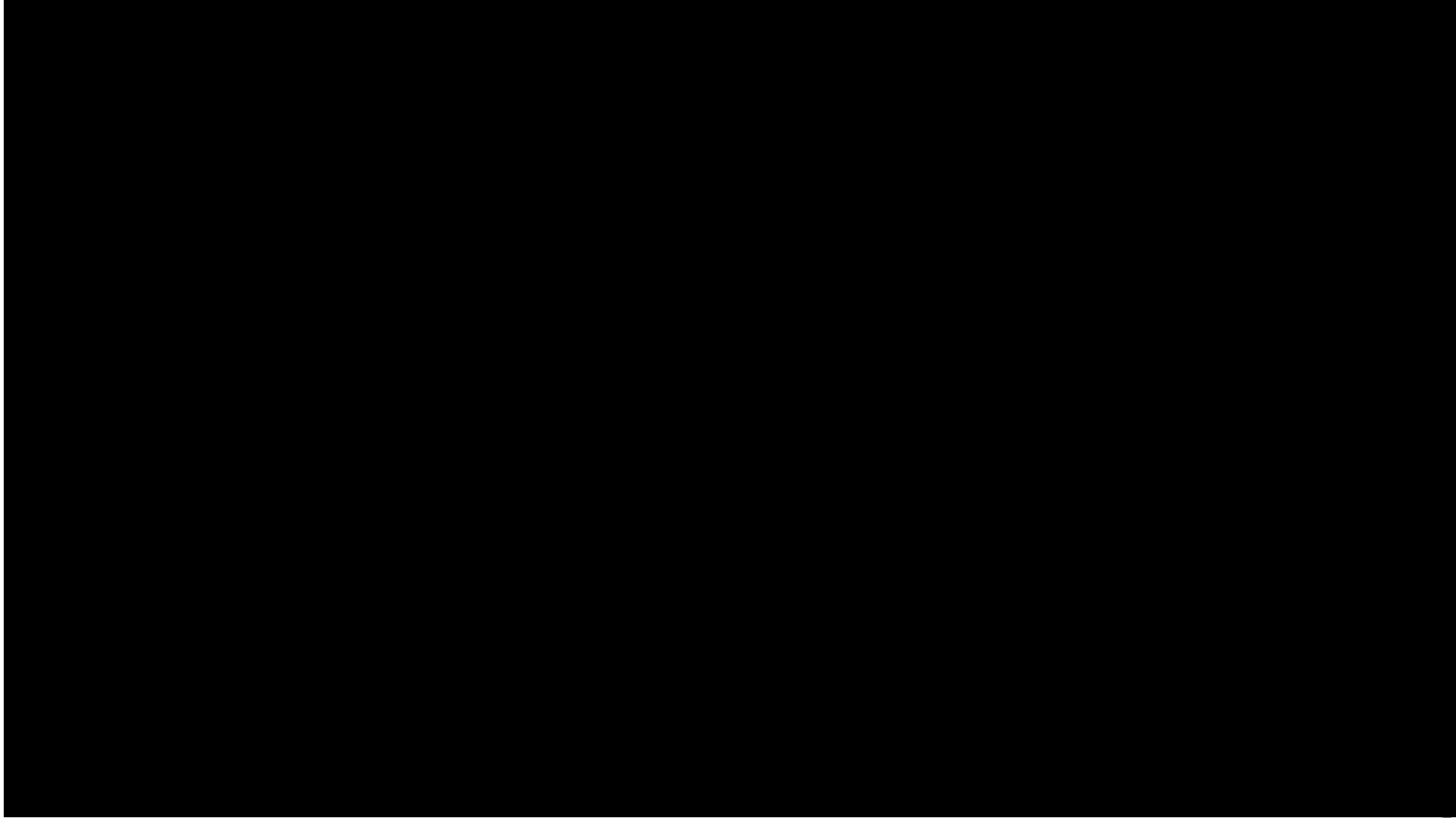


Environmental education



Upcycling programmes

- Waste job opportunities and rewards for communities
- Community sustainable development programmes as business model
- Awareness / behaviour change etc.
- Baling centre / Mobile baling
- Waste beneficiation opportunities





Thank you

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