

TreesAI

Establishes nature as an investable part of urban infrastructure.

18.10.22

Framing tools for cross-organisational collaboration

1.4tCO2 sequestered

-€162 water treatment



PARTNERS



Innovate UK

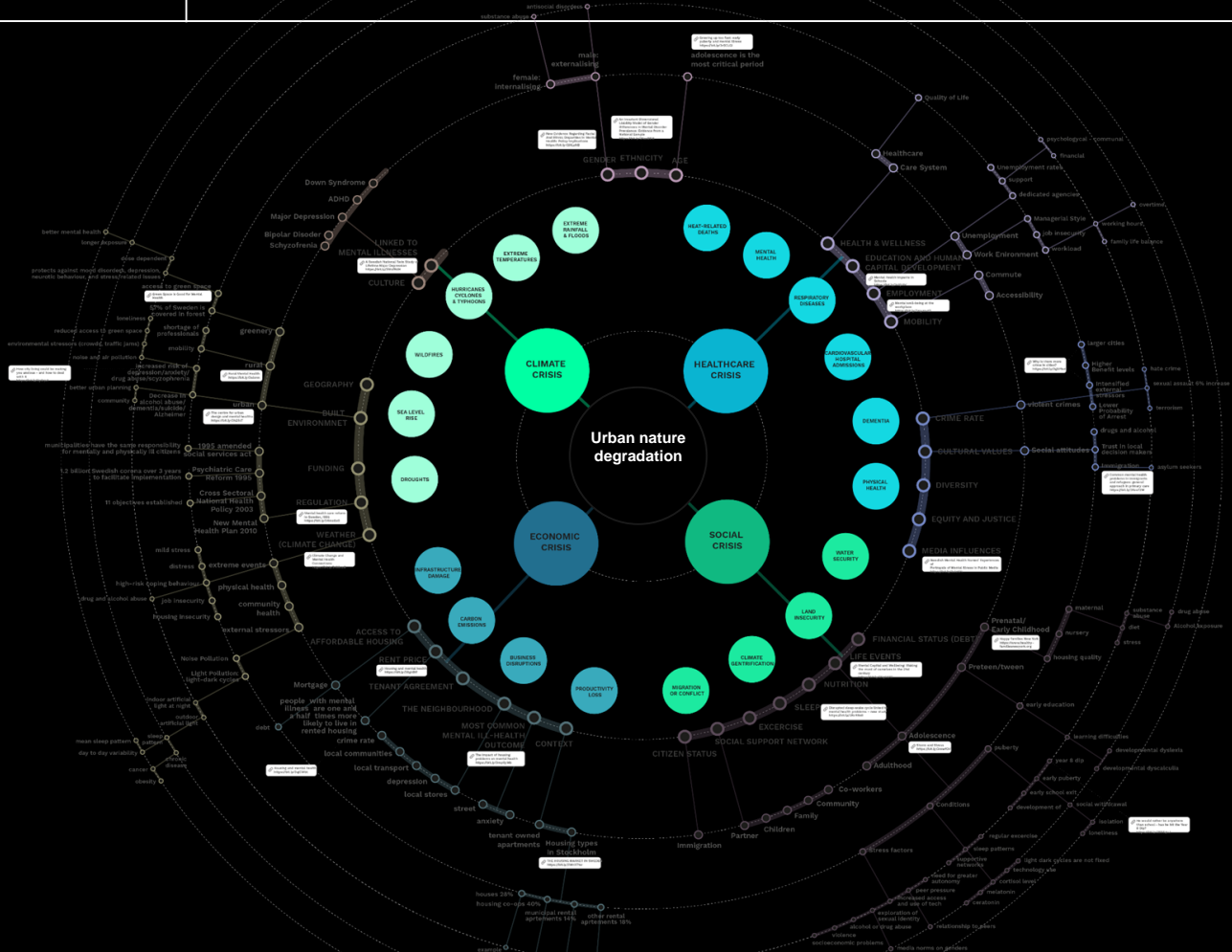
Morgan Stanley

Google.org



Co-funded by the European Union





Growing investment in nature

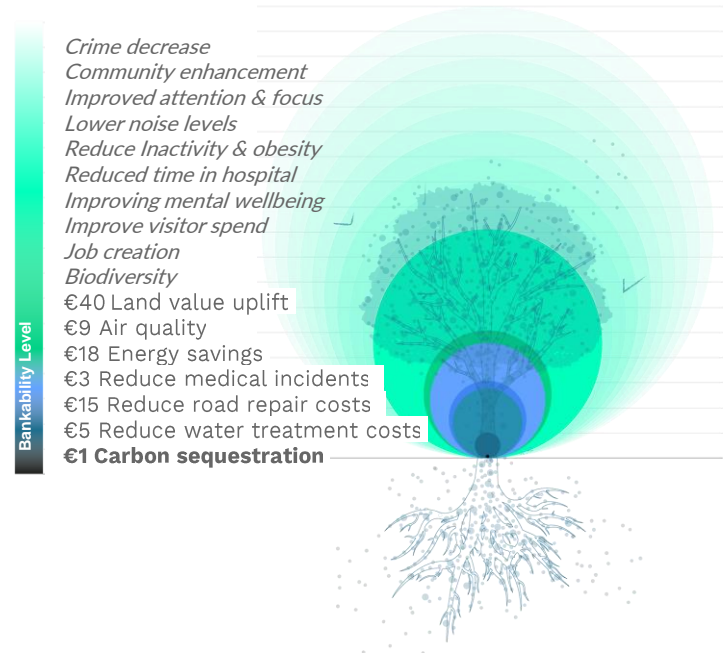
X 4

Voluntary Carbon Market quadrupled
“driven by an acceleration of nature-
based solutions trading volume and
higher prices for these”

“There is a general consensus that Ecosystem
Services will become tradable in the near future.”

Phil Wilkes, ELMs seminar

Urban tree co-benefits



see appendix 1 for assumptions

Problem

Corporates climate related risks are being crystallized by standards and regulation.

Yet we are failing to achieve real impact.

TNFD


Climate
Biennial
Exploratory
Scenario
(CBES)

art.6

\$890 Billion

FINANCE

GAP

A silver car is parked on a street next to a tree stump. The car is partially visible on the right side of the frame. The tree stump is in the foreground, and the ground is covered with fallen leaves. A large black diagonal shape is on the left side of the image, containing white text.

A

**FINANCE
DELIVERY**

GAP

Urban NbS Delivery challenges

1

Desirability

Confidence in NbS

-
- a. Lack of data
 - b. Lack of modelling to calculate the contribution of locationally calibrated NbS (e.g. in NfM)
 - c. Lack of data-sharing practices (and protocols) & proprietary modelling

2

Feasibility

Technical Delivery

-
- a. NbS projects too small to be investable
 - b. Small market/ Limited number of contractors
 - a. Unfamiliarity with capex and opex (maintenance) costs

3

Viability

Collaboration

-
- a. Interorganisational challenges e.g. siloed departments
 - a. Bureaucratic processes (e.g. procurement), complex ownership structures etc.
 - a. Lack accounting standards to justify investment

TreesAI

A **cloud-based open source platform** to connect NbS impact to finance:



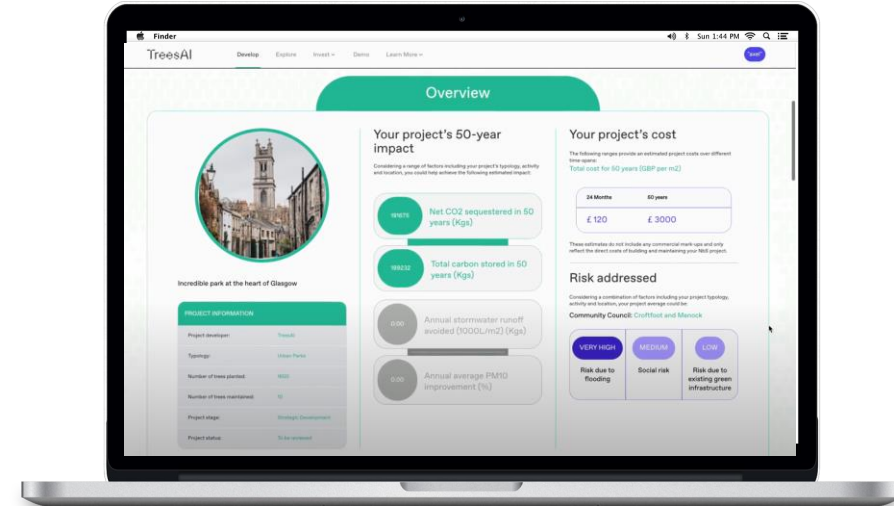
Agent-based modelling to predict ecosystem services



Map-based interface to aggregate projects into portfolios



Outcomes-based financing for collective investment



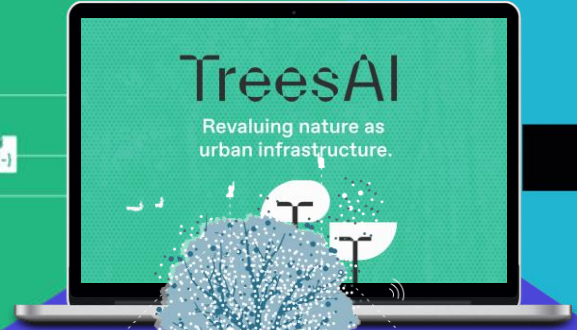
MAP



INVEST

TreesAI
Revaluing nature as
urban infrastructure.

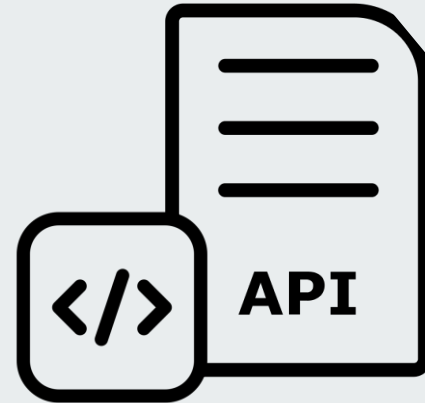
MODEL



Software as a service



API as a service



From Pilots to Platforms Theory of Change

2021

TreesAI
Impact Planner

launched at Cop26

2023

TreesAI
Explore, Develop,
Build

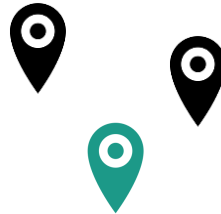
2030

TreesAI
Invest, Certify,
Monitor



Glasgow Pilot

Portfolio Structuring
Impact modelling
Contracting

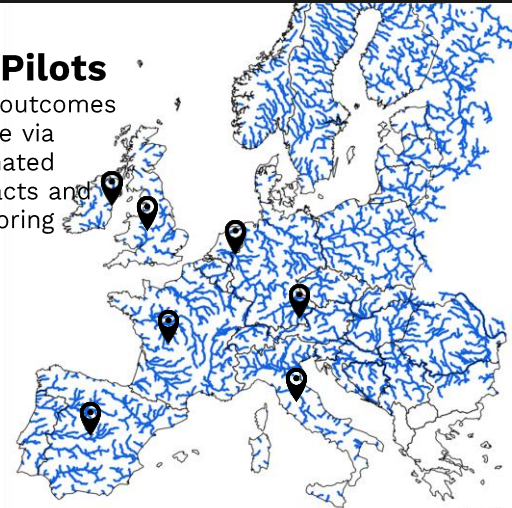


+3 Pilots

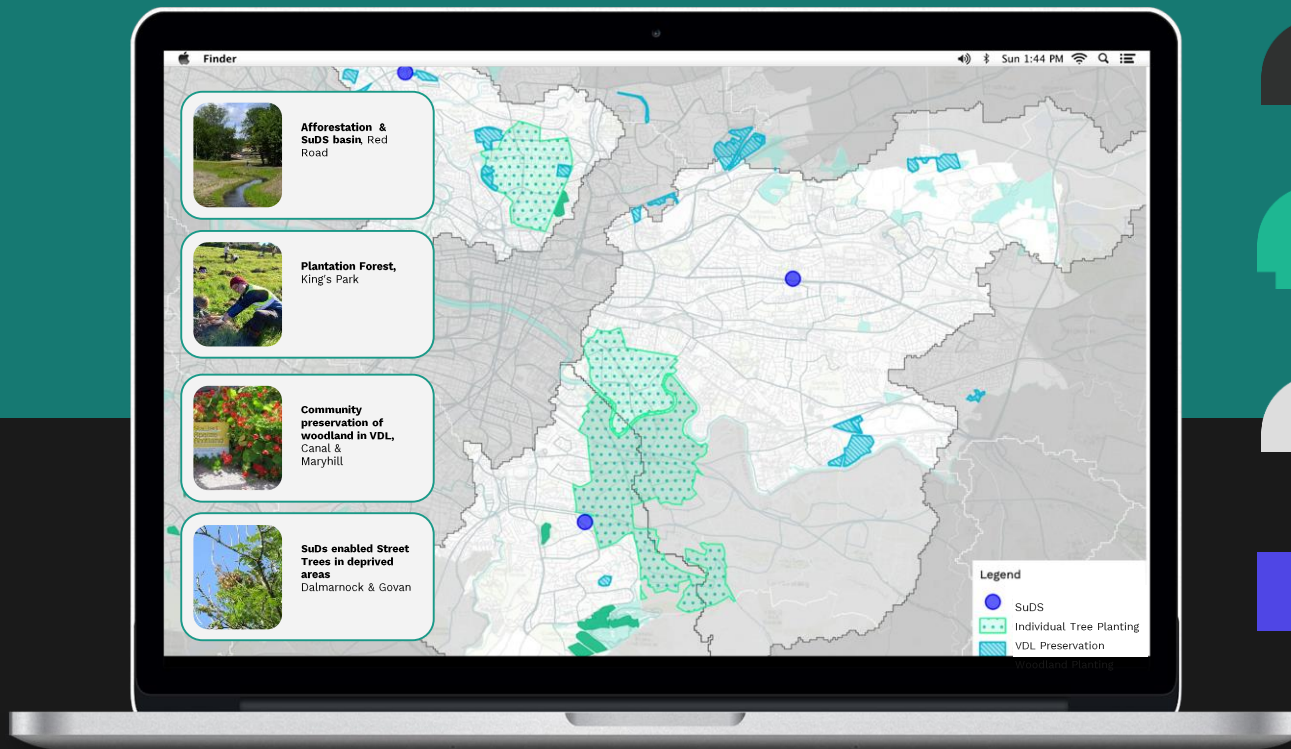
Adapt portfolio in new landscapes
Replicate governance model

+10 Pilots

Scale outcomes
finance via
automated
contracts and
monitoring



We're developing...



1

A **collaborative model** for planning & delivering Natural flood management

2

Collaborative **modelling & monitoring** of ecosystem services

3

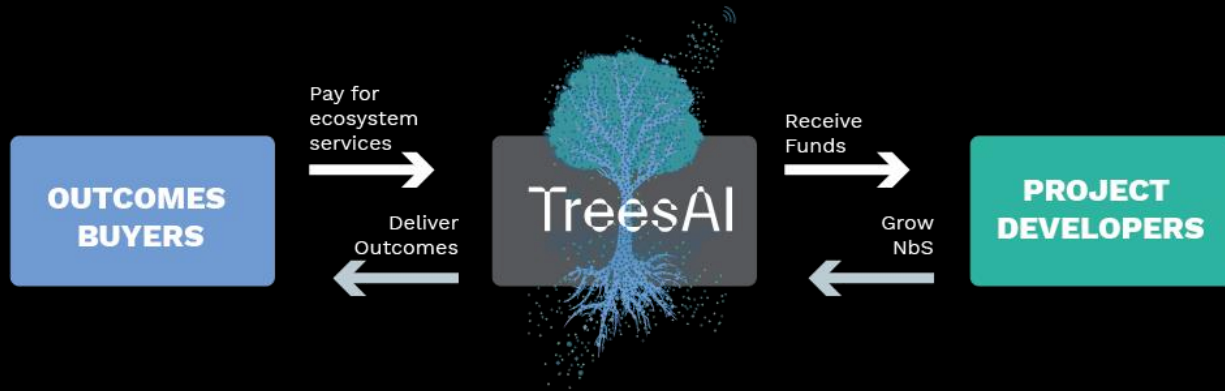
A scalable model for **using city-wide data & innovative technologies** for NbS

4

Outcomes-based financing mechanisms to collectively invest in nature

4 | Co-Invest in a business case

Co-developing the instrument to invest in ecosystem services



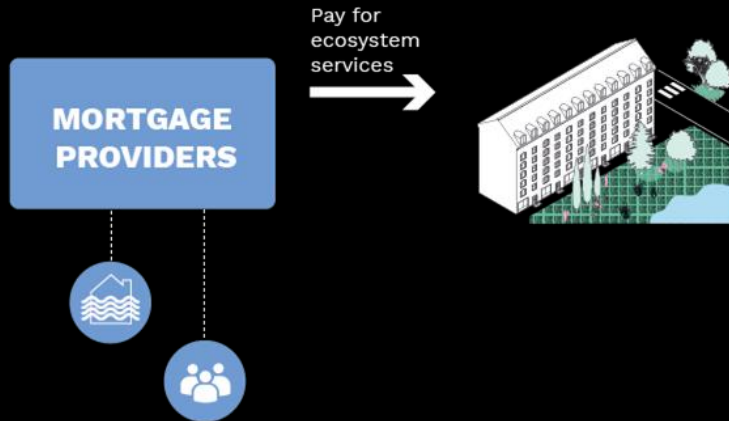
4 | Co-Invest in a business case

Co-developing the instrument to invest in these outcomes



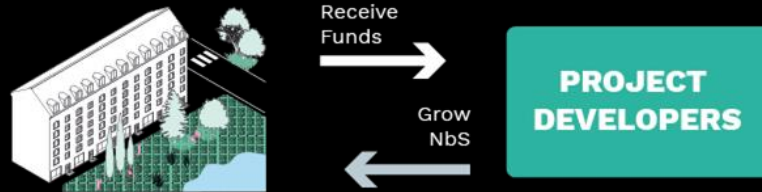
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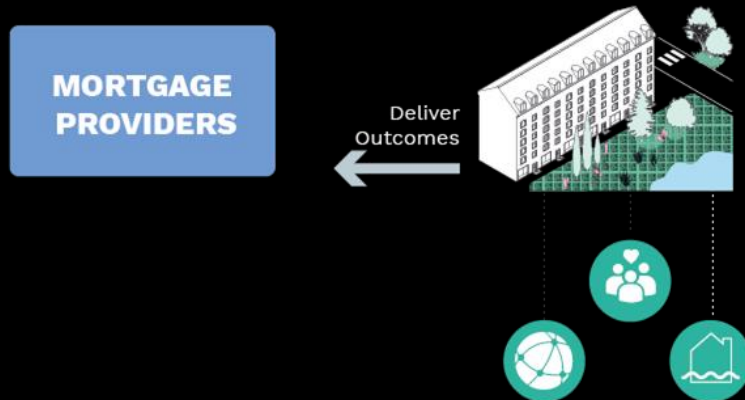
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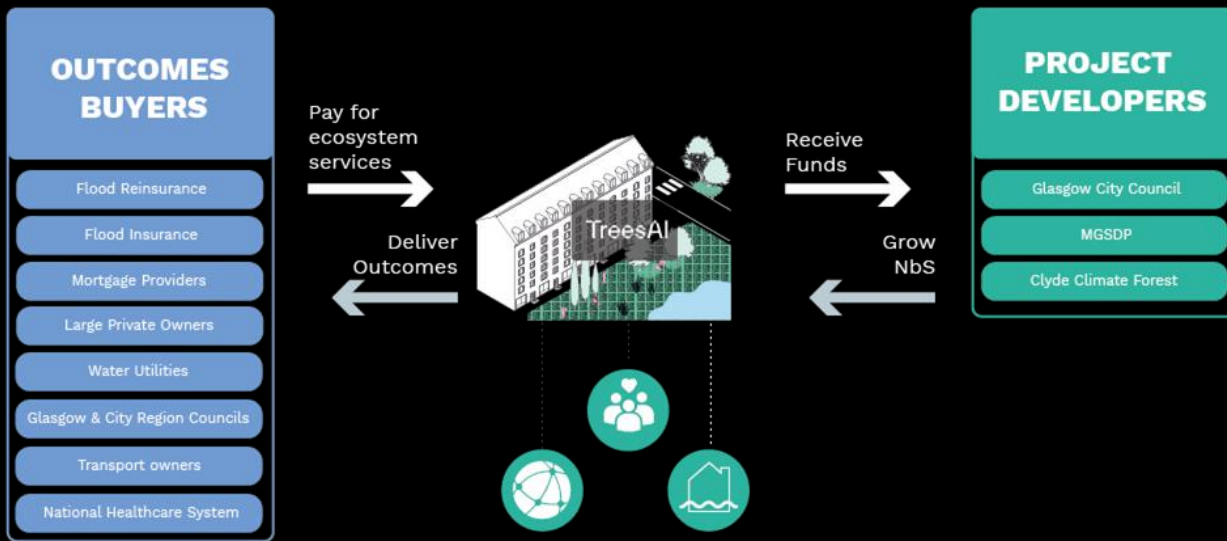
4 | Co-Invest in a business case

Co-developing the instrument to invest in these outcomes



4 | Co-Invest in a business case

Co-developing the instrument to invest in these outcomes



Collaborative governance for Co-investing in natural assets

TreesAI Glasgow Partnership

"Improving on modelling for surface flooding & the evidence [for NbS] within flood schemes."

"Better coordination around planning, figuring out how to manage stormwater more proactively."

"Testing out a portfolio approach, rather than funding is piecemeal - project by project basis"

Board

Steering Group

Technical Group

Pilot Management

Modelling & Monitoring

Portfolio Management

Outcomes-based finance

Communications



Timeline

I. PORTFOLIO STRUCTURING

II. PORTFOLIO BUILDING

III. PORTFOLIO INVESTING

Step 0
Structure the Portfolio

Step 1
Find Projects

Step 2
Build an NbS
Map

Step 3
Build an NbS
Portfolio

Step 4
Secure
commitments

Step 5
Develop and
close deals

Step 6
Build and Monitor
projects to
provide returns

**Feasibility
phase**

**Advanced
testing**

**Design
phase**

**Delivery
phase**

From Pilots to Platforms Theory of Change

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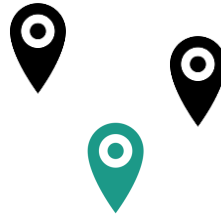
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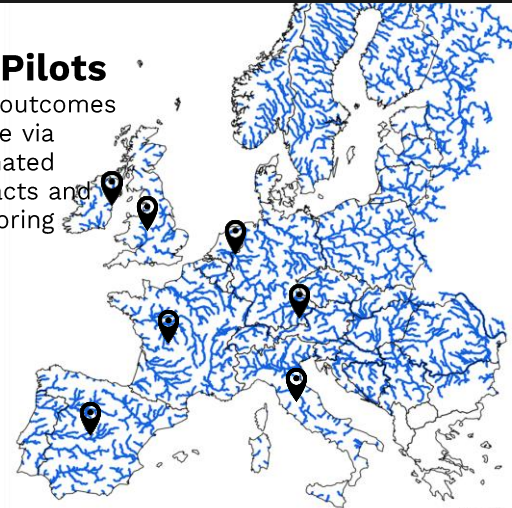


+3 Pilots

Adapt portfolio in new landscapes
Replicate governance model

+10 Pilots

Scale outcomes
finance via
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Find out more

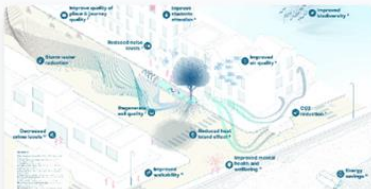


Paper

TreesAI - Blue Paper

A platform to value and invest in Nature:
Carbon and beyond.

Trees as Infrastructure
Dec 17, 2021 - 2 hours read



Report

Trees as Infrastructure Report 1

Why municipalities are struggling to reach
tree-planting targets

Trees as Infrastructure
Feb 10, 2020 - 15 min read



Report

Trees as Infrastructure Report 2

A proposition for supporting cities to
transition towards resilient urban forest
infrastructures

Trees as Infrastructure
Mar 6, 2020 - 15 min read



Report

Delivering urban Nature-based Solutions in Scotland at Scale: Growing regenerative cities

Growing regenerative cities

Trees as Infrastructure
Nov 27, 2020 - 11 min read

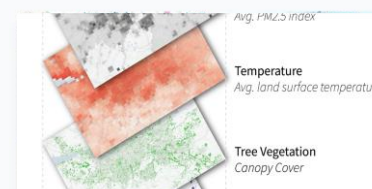


Report

Green Urban Scenarios

A series of peer-reviewed journal articles that create the documentation for a set of tools to explore the impact NBS by estimating multiple ecosystem service, such as air-pollution removal or flood risk reduction.

Trees as Infrastructure
Sep, 22



Report

TreesAI Landscape Scale Portfolio Strategy

A paper focusing on our theory of portfolio building that aims at financing Portfolios of NbS projects that are diversified in order to reduce climate related financial risks.

Trees as Infrastructure
Aug, 22

TreesAI

Let's collectively
invest in nature.

Get in touch

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treesai@darkmatterlabs.org

Key Material

[recent article](#)

[strategy paper](#)

[Podcast](#) by our project lead



Morgan Stanley

Google.org

