



From Innovative Design to City-wide Implementation

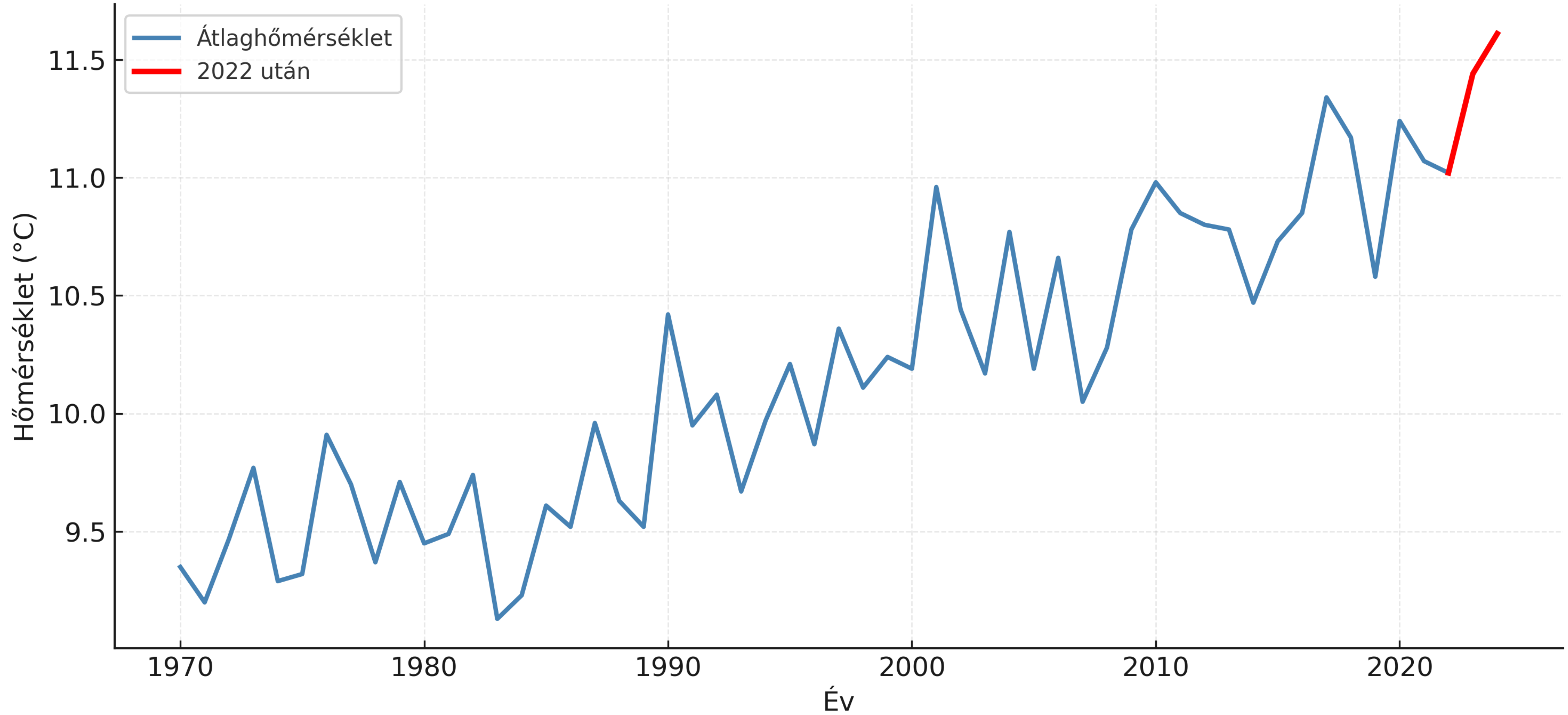
Dezsényi Péter Chief Gardener of Budapest





# The New Climate Reality

Éves átlaghőmérséklet változása Magyarországon (1970-2024)



# Urban Tree Inventory Data

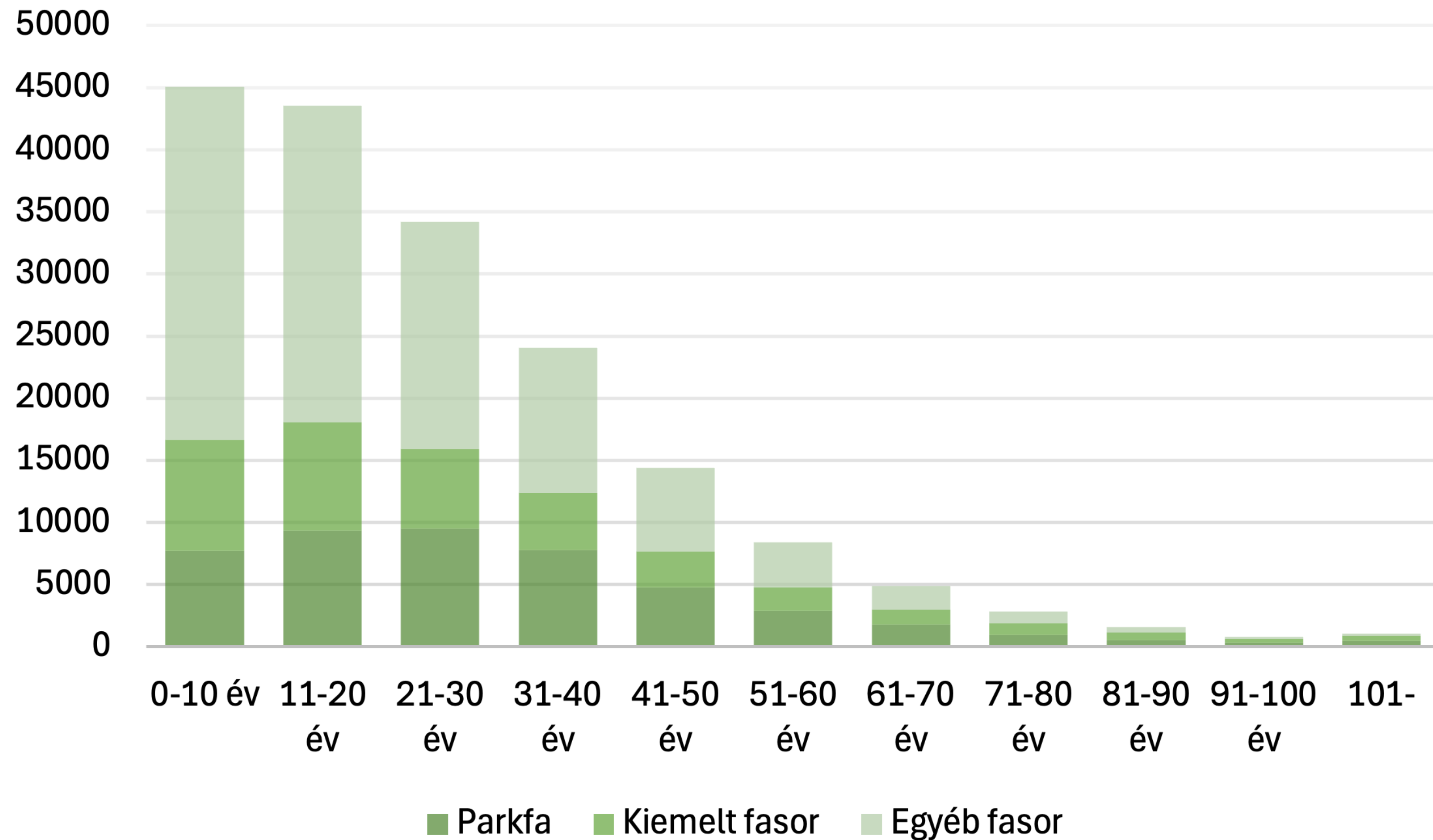
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110.000 park- and street trees

3,4 million m<sup>2</sup> shade

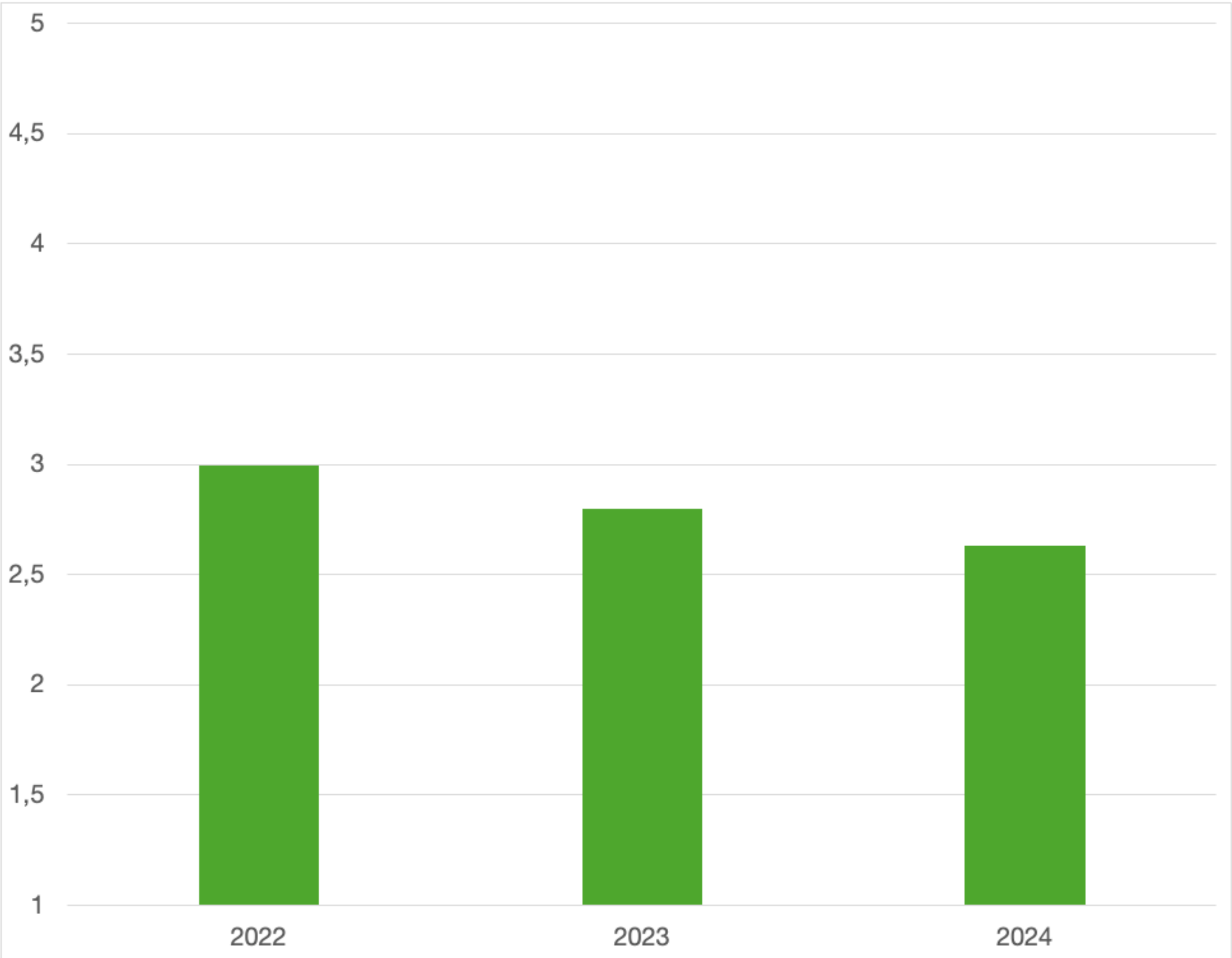
25,8 million m<sup>3</sup> canopy volume

# Age distribution of our trees



# Changes in street tree health condition (2022 - 2024)

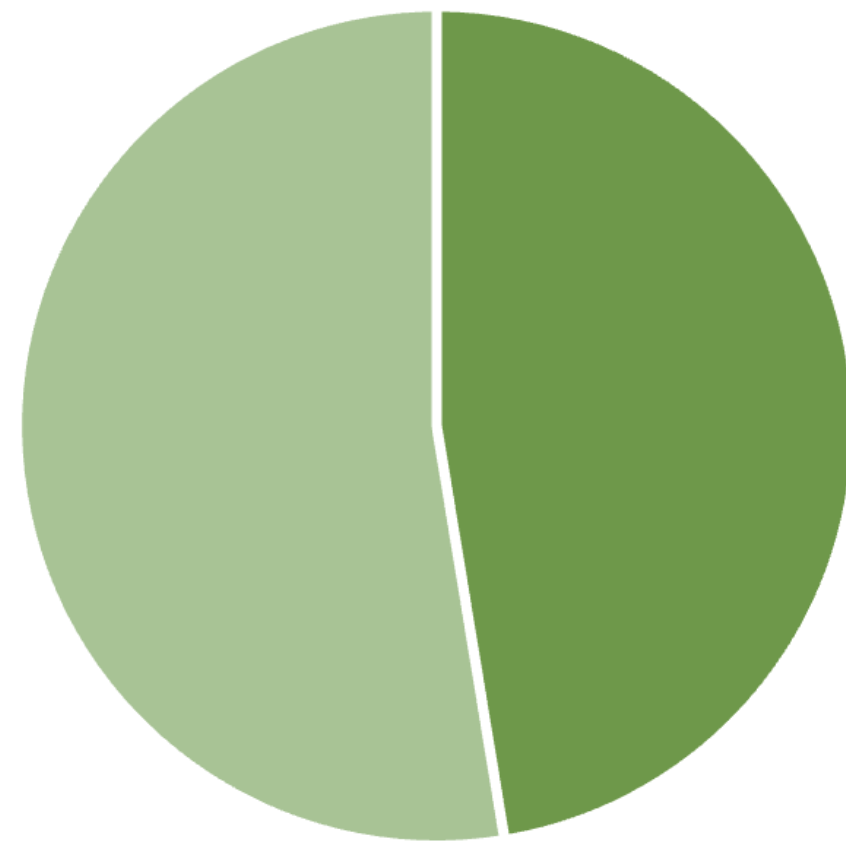
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# Age - canopy mass relationship

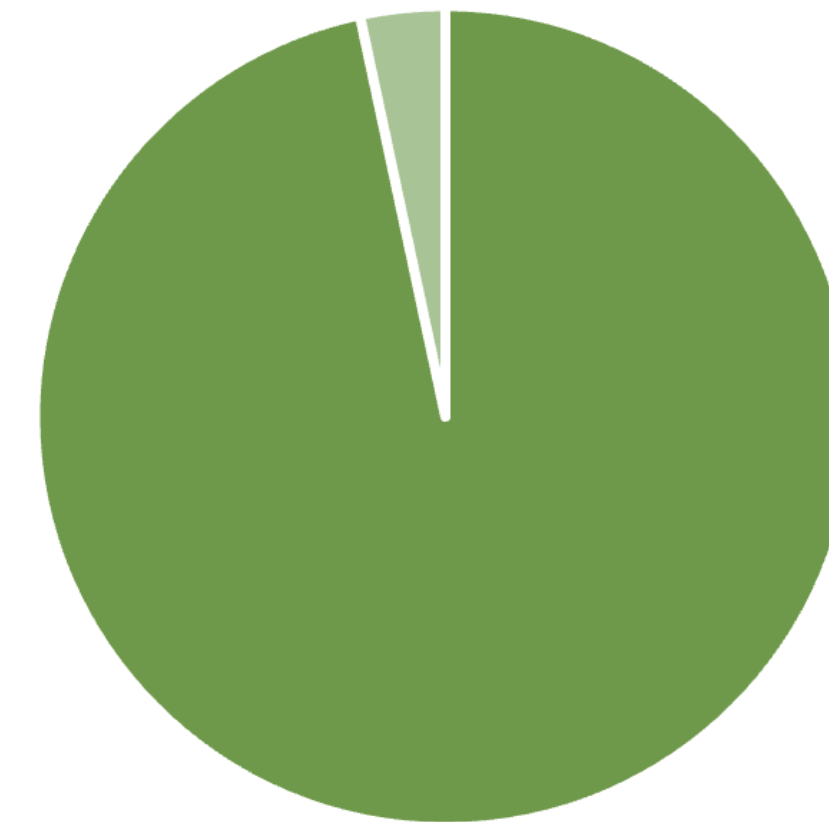
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Fák száma (db)



■ 25 évnél idősebb ■ 25 évnél fiatalabb

lombtömeg (m3)



■ 25 évnél idősebb ■ 25 évnél fiatalabb

# Tree Crisis

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- 60-80% of Urban Ecosystem Services are provided by Trees
- Average age: 25 years and declining
- Canopy volume reduction in the next decade

# The Real Problem

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- Growing public demand
- CAPEX (development) ↑
- OPEX (maintenance) ↓
- Declining quality
- Shorter Lifecycle

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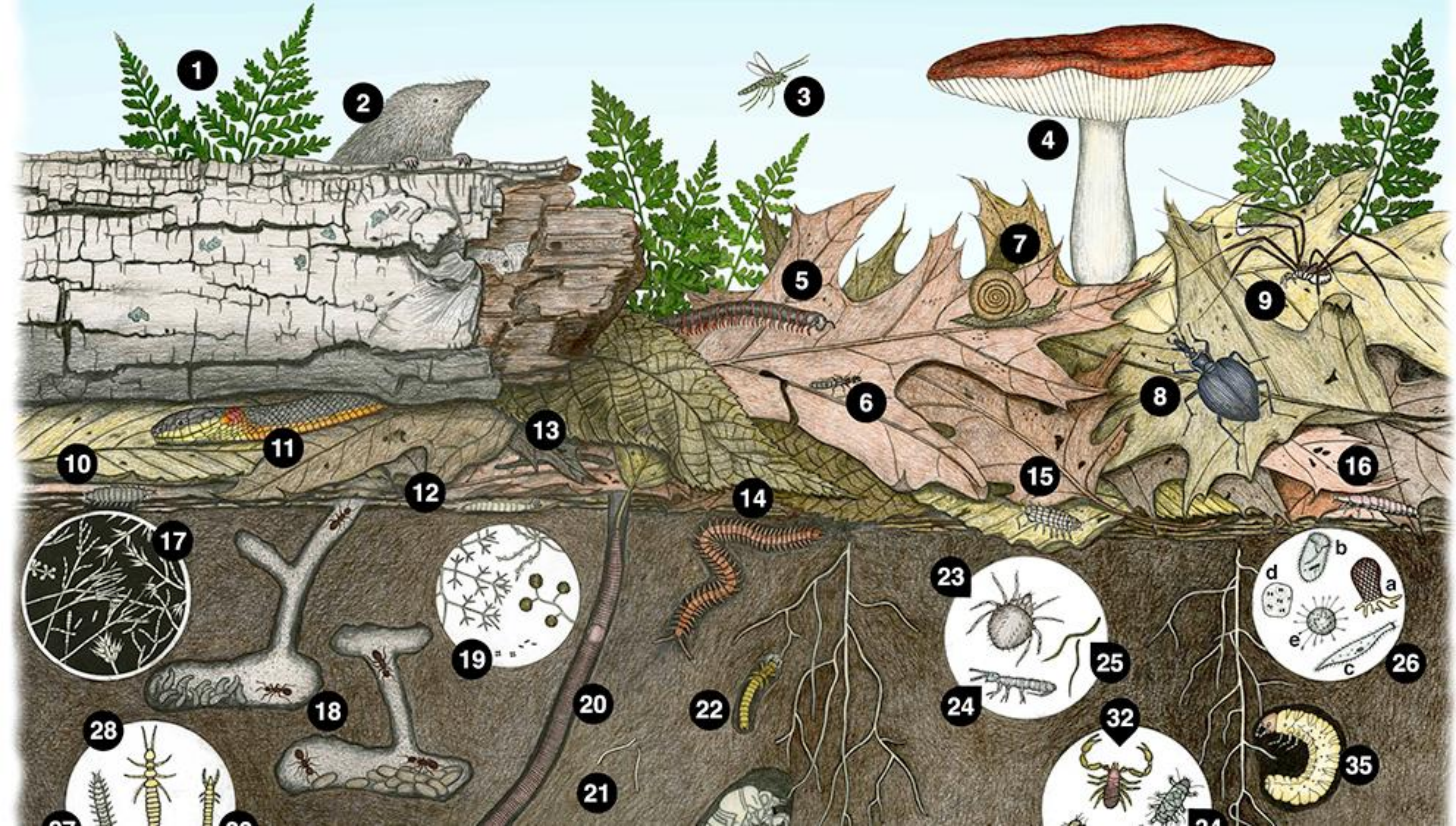
Technology **Shift**

# Technology Shift focus areas

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-  Soil management
-  Water management
-  Plant design

**Soil management**



# Root Zone – the 4th dimension of green infrastructure

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- Living Soil vs. Construction Waste
- Applying Mineral Based Substrates
- Soil Improvement with “Televény”
- Soil Improvement with Functional Plants
- Shift in Green Waste Management





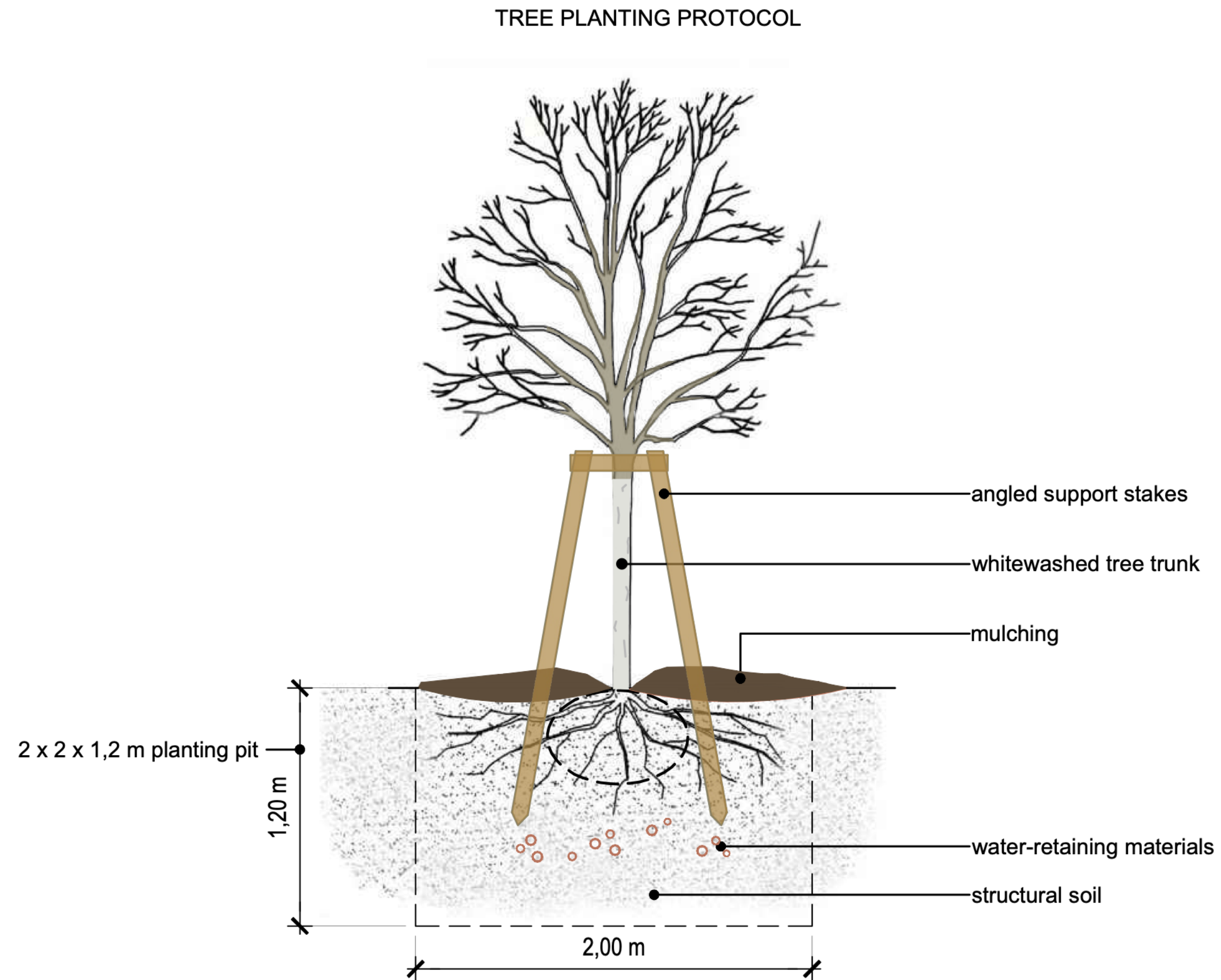






# New tree planting protocol

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- Acceptance protocol (checklist)
- List of urban-tolerant trees suitable for planting



BP FATÁR





















**Water** management

# Water management

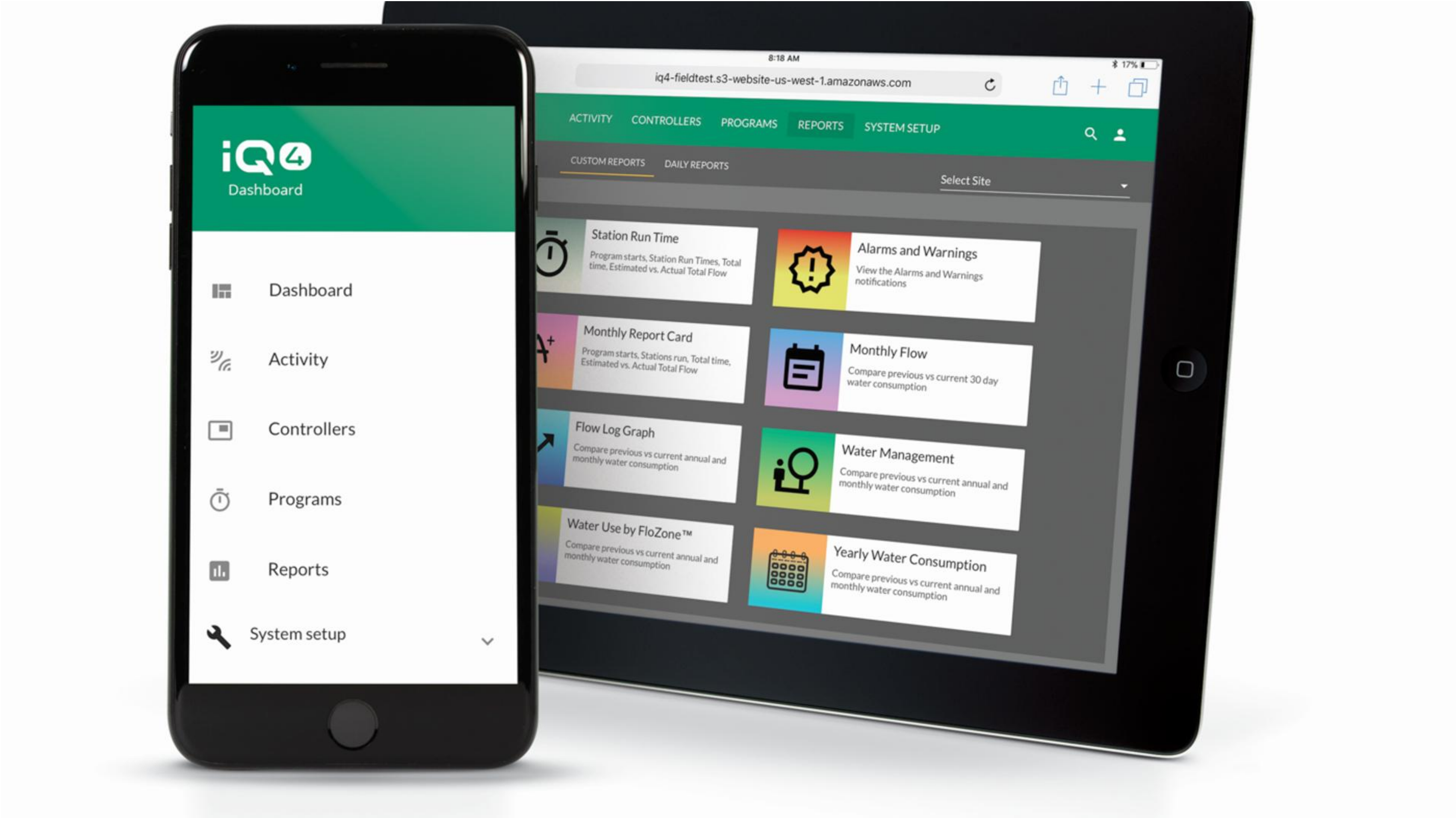
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- Redefining maintenance zones
- Smart Irrigation in *Intensive Park Zones*
- Water Retention with NBS in *Natural Zones*
- Shift away from *Intermediate zones*

# Redefining maintenance zones



# Smart irrigation





Water retention











# Shift in Plant Design

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- Societies and Ecosystems vs. Mass of individual Plants
- Climate Resilient Plant Selection
- Perennials vs Annuals
- Our Budapest Wild Meadow Program
- New Street and Park Tree Selections
- *Soil and Substrate Management is Vital*













TAHI-FÖKERT

BUDAPEST MAGKEVERÉK

AAK  
2

X

1/2 kg

**BUDAPEST**  
MAGKEVERÉK



**BUDAPEST**  
MAGKEVERÉK









# Summary

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- Maintenance matters
- Focus: Soil, Water and Plant Application
- New Maintenance Zones
- Upscaling NBS Technologies



Thank You!

Dezsényi Péter Chief Gardener of Budapest