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TECHNISCHE UNIVERSITÄT BERLIN

Building Health Lab

University of Cyprus

CHALMERS UNIVERSITY OF TECHNOLOGY

UNIVERSITÀ DEGLI STUDI FIRENZE

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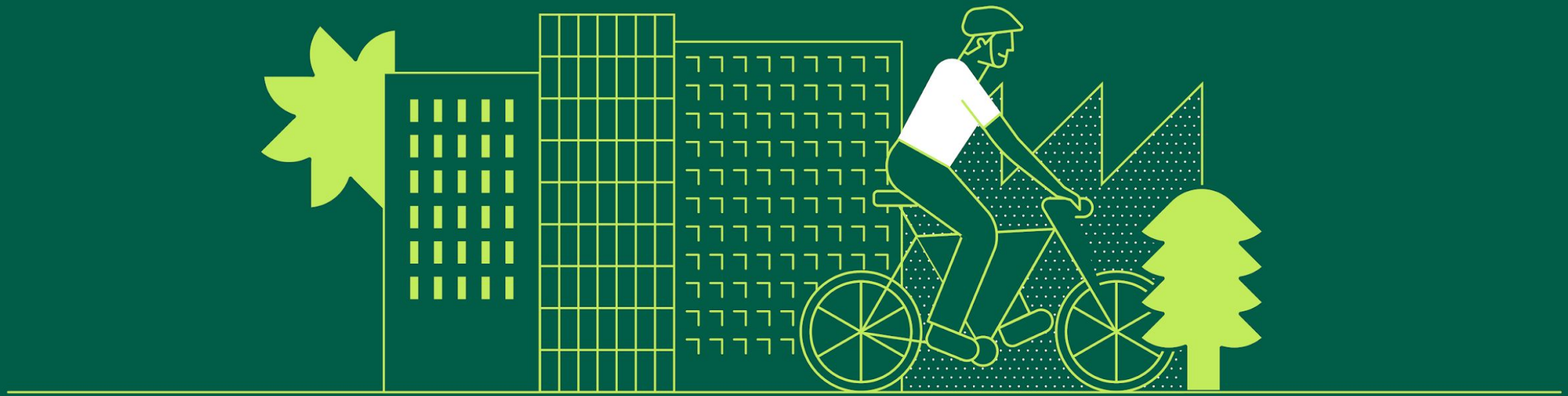

UrbanCare Session 1: Walkability Diagnostics & Value Creation

by **Alvaro Valera Sosa** | November 2025

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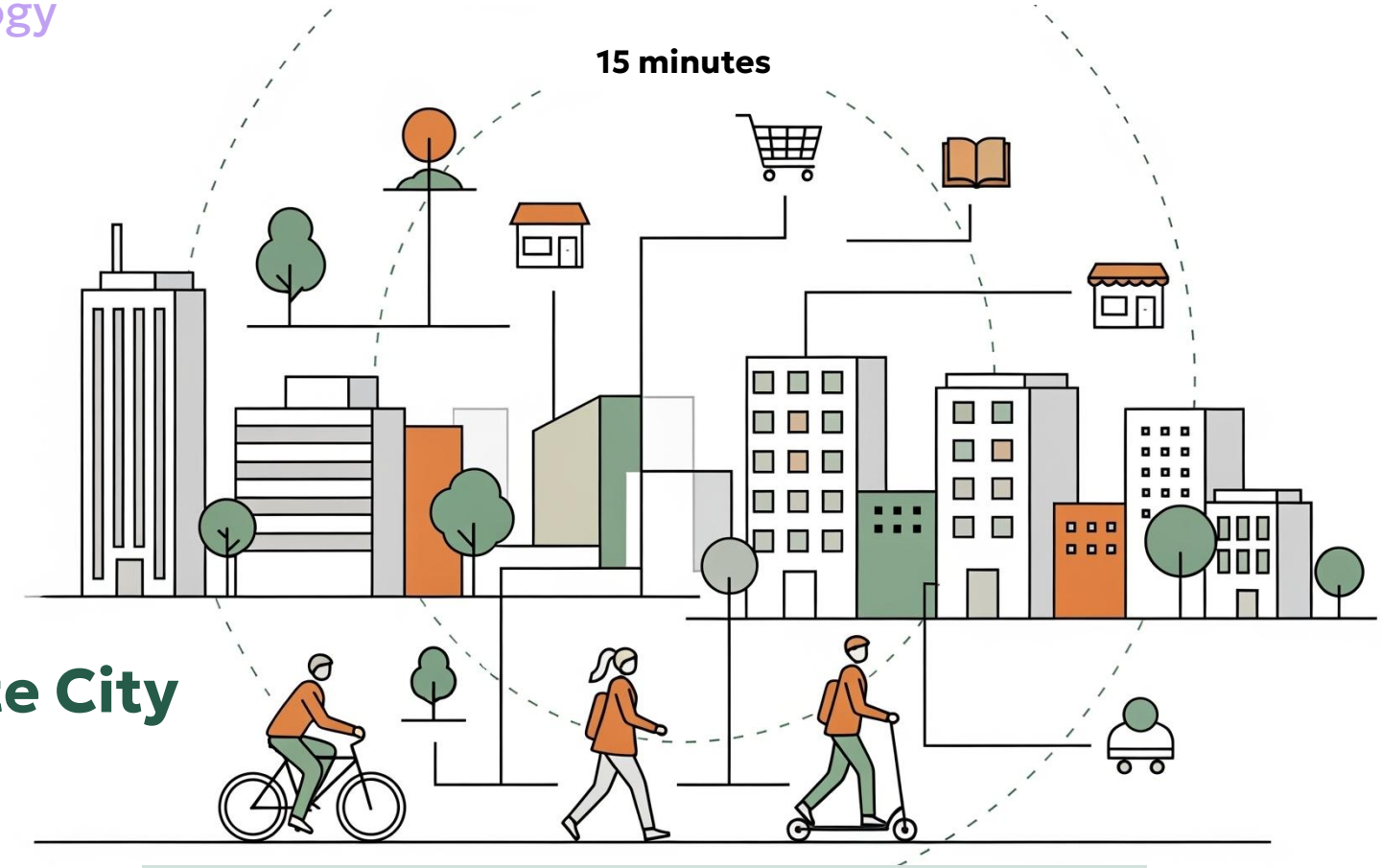
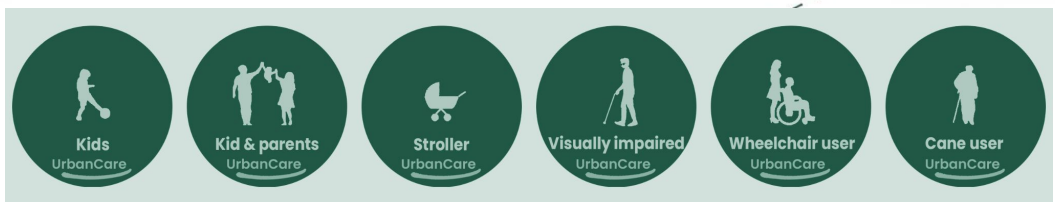


15-minute City



How far do slower paced groups travel in 15-minute Cities?

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Walkability Summary

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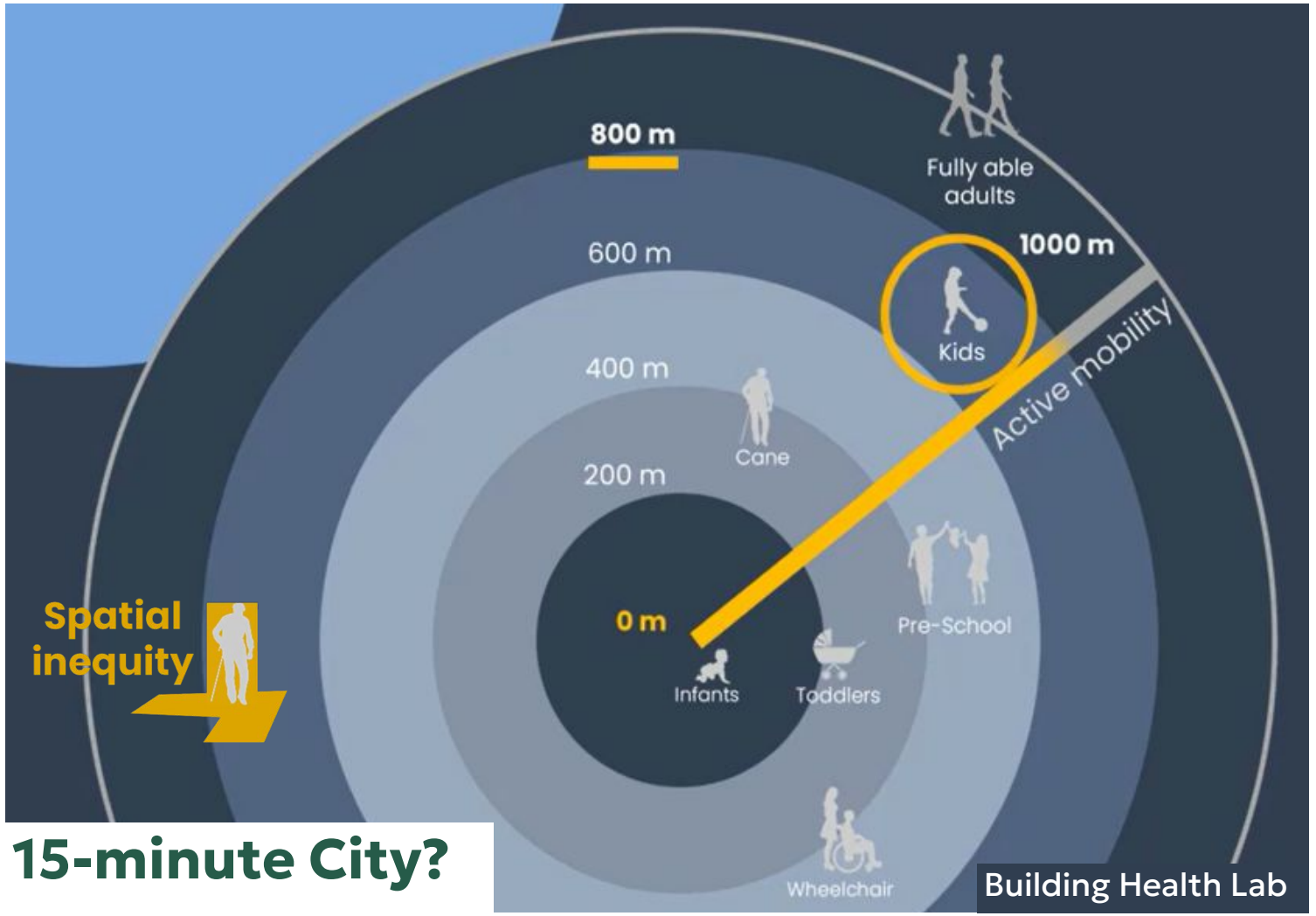

Effort

Walkability

Runoff

Heat

Exposure

Biotope

15-minute City?

What happens to slower paced groups in 15-minute Cities?

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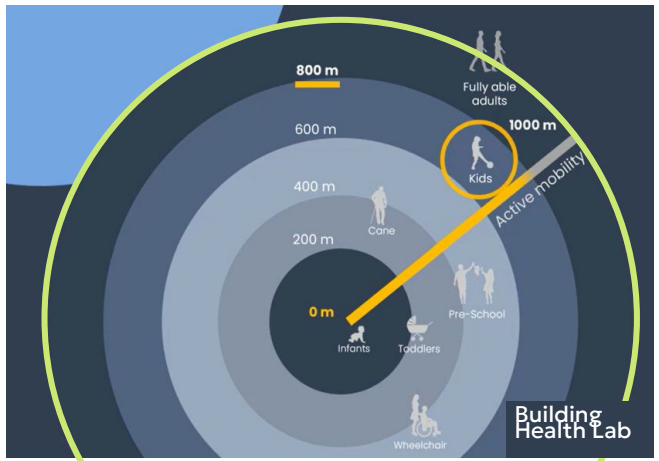

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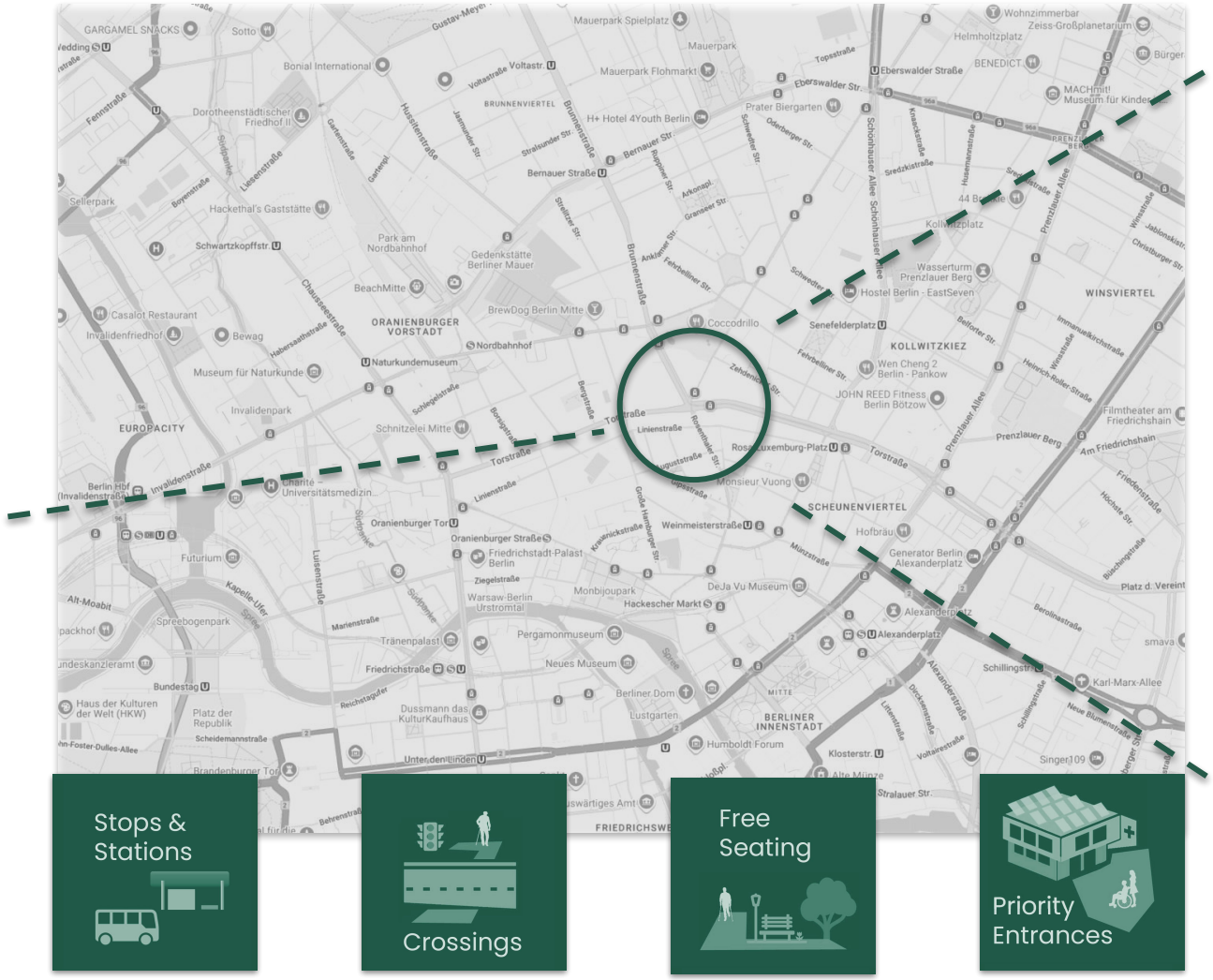

Effort

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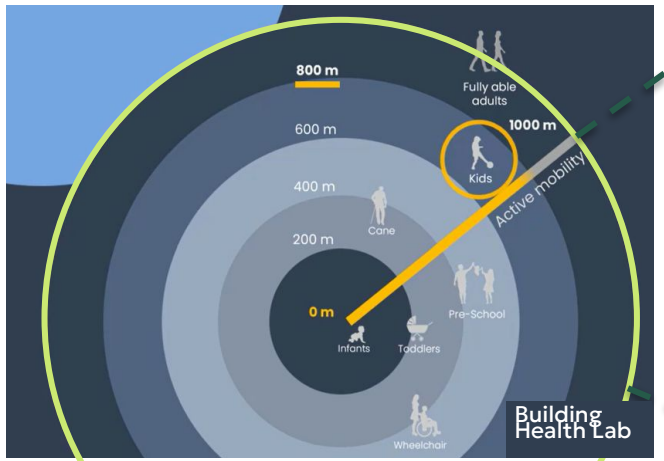

Effort

Walkability

Runoff

Exposure

Heat

Biotope

Small problems here ...

... and across the city, translates to enormous waste!

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UrbanCare cases: https://www.buildinghealth.eu/a-healthy-neighborhood-in-berlin/

How far do slower paced groups travel in 15-minute Cities?

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Walkability

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Walkability: **Definition**

Walkability Mechanisms

Walkability

Path Continuity?

Block-to-block Connectivity?

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Walkability: Urban Health **Impacts**

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Walkability

1. Health:

lower physical activity; exclusion and reduced social interaction; higher chronic disease risk; accidents leading to physical trauma

2. Climate:

increased car dependence; higher emissions; reduced active mobility uptake; weakened potential for climate-adaptive streets; more heat from traffic volumes

3. Economy:

increased healthcare expenditure from chronic disease and traffic-related injuries; productivity losses from limited active mobility and travel delays; higher transport costs; reduced footfall for local businesses; higher maintenance and operational costs from car-reliant infrastructure

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Walkability: Planning & Design **Approach**

Walkability

1. Convenience:
directness and efficiency of pedestrian environments without detours or interruptions

2. Safeness:
protection of pedestrians from traffic conflicts and environmental hazards

3. Comfort:
physical quality of the walking experience

4. Attractiveness:
elements that make routes inviting and engaging

Convenience

Safeness

Comfort

Attractiveness

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Path Continuity?

Walkability

Path Continuity?
Look at pavement quality; obstacles; aesthetics

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Path Continuity?

Walkability

Path Continuity?
Look at obstacles; spatial arrangement; aesthetics

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Path Continuity

Walkability

Value: pavement quality, aesthetics

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Path Continuity

Walkability

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Walkability

Block-to-block Connectivity ?

Connectivity?
Look at obstacles

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Walkability

Block-to-block Connectivity ?

Connectivity?
Look at visual structure

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Walkability

Block-to-block Connectivity

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Path Continuity

Walkability

Block-to-block Connectivity

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Walkability **Assessment**

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Walkability

Walkability Score = C + S + Co + A

Combined Pedestrian Performance

A higher score means better walking conditions for slower-paced groups.

Runoff Score Range: 0.0–0.9

Higher scores = stronger capacity to reduce surface runoff.

C = Convenience Rating

0.0–0.25: Directness and continuity of routes without detours.

S = Safeness Rating

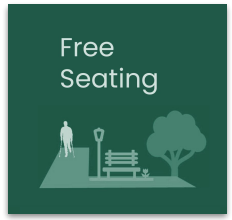
0.0–0.25: Protection from traffic conflicts and environmental hazards.

Co = Comfort Rating

0.0–0.25: Physical ease of walking, including surfaces and microclimate.

A = Attractiveness Rating

0.0–0.25: Visual quality, greenery, and engaging street features.



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Walkability **Evidence Task**

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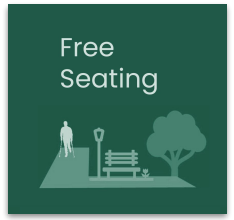
Walkability

Task A:

Select an Urban Scene type and take photographs that represent the four walkability attributes: Convenience, Safeness, Comfort, and Attractiveness.

- Map walking routes and identify barriers or interruptions.
- Assign a score (0.0–0.25) for each attribute:
- C, S, Co, A.
- Compute the combined Walkability Score:
- Walkability = C + S + Co + A
- Write a short interpretation (5–7 lines) explaining:
  - directness and continuity of paths,
  - safety conditions and exposure to conflicts,
  - physical comfort and microclimate,
  - visual and social attractiveness,
  - one intervention that could increase the overall score.



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Walkability **Evidence Task**

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Task B:

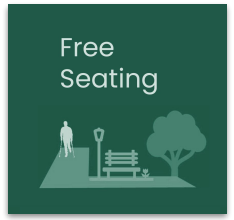
Find quick, reliable evidence linking walkability with economic outcomes.

Task:
Do a short online search; identify 2–3 reliable sources that show how higher walkability with:

- higher real estate value or retail activity
- reduced healthcare costs from fewer chronic diseases or injuries
- less productivity loss from travel delays
- lower transport and mobility costs
- lower infrastructure and maintenance costs

Deliverable:
Write 3–5 sentences summarizing:
the key findings from your sources, and
how they relate to the importance of walkability in your chosen Urban Scene

Search keywords:
“walkability economic benefits”; “walkability property value”; “active mobility cost savings”



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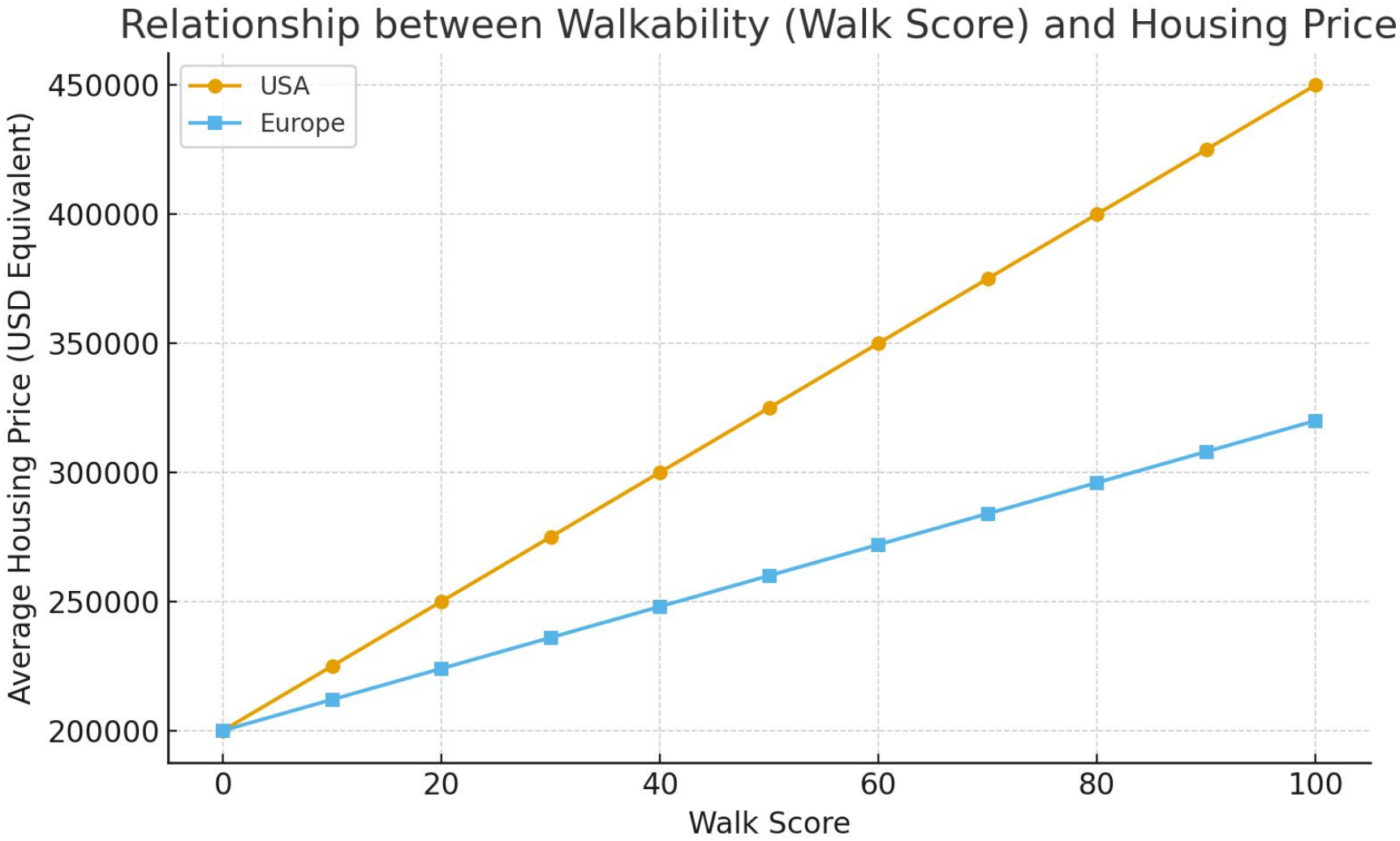
Walkability Evidence Task Example



CEOs for Cities, “Walking the Walk: How Walkability Raises Home Values in U.S. Cities” (Joe Cortright, 2009) found that: in U.S. metros an additional 1 point in Walk Score is associated with about **US $500-US $3,000 increase** in home value (after controls). NACTO+1

Redfin, “How Much Does Walkability Increase Home Values?”:
found in Boston a 29% premium (~US $140,724) for homes in very walkable neighborhoods, relative to less walkable ones. Redfin

Smart Growth America / “Foot Traffic Ahead 2023” shows:
broader U.S. data linking walkable urban places with higher for-sale housing price premiums, among other asset types. smartgrowthamerica.org+1

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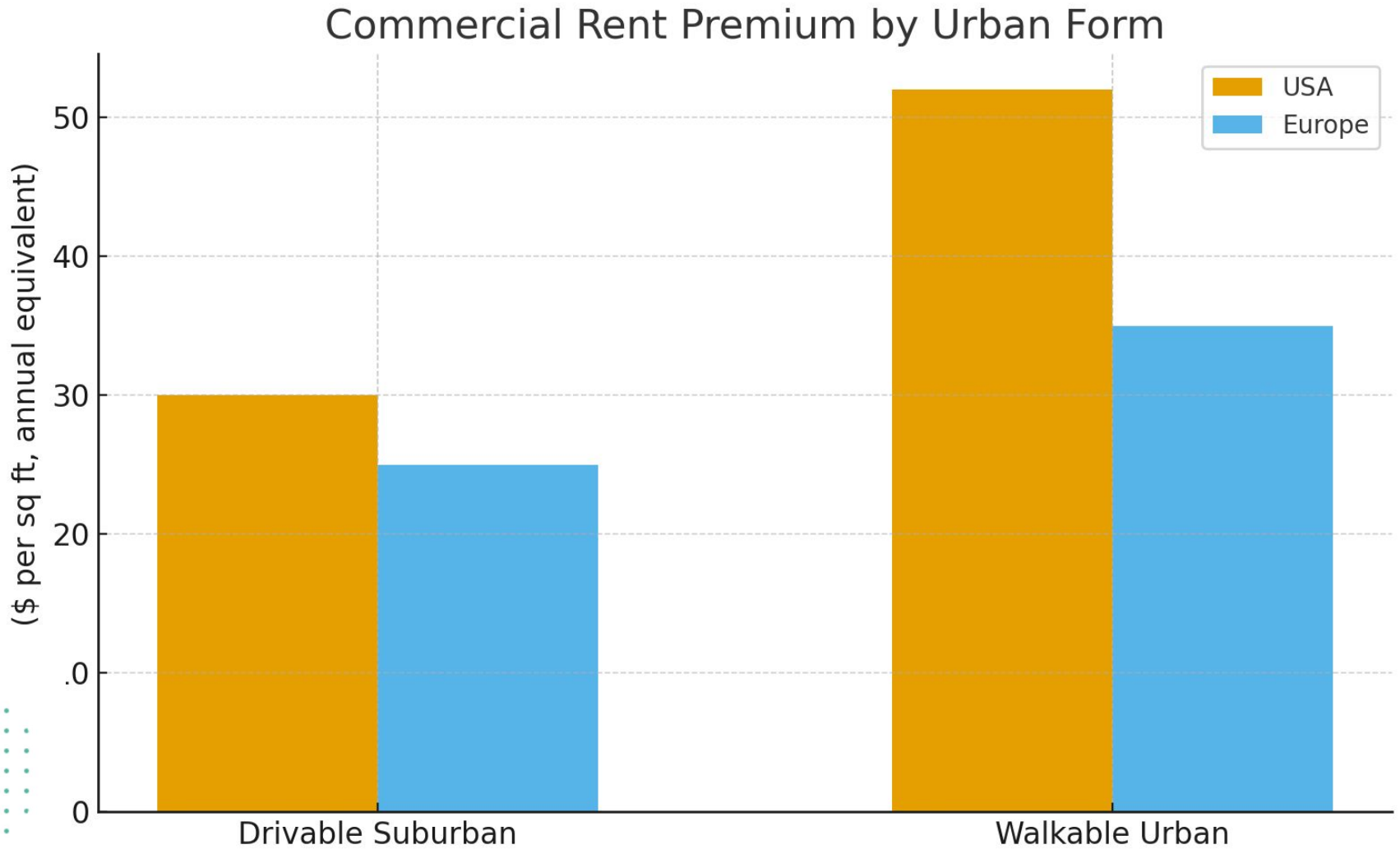
Walkability Evidence Task Example



"Foot Traffic Ahead 2019" (by Cushman & Wakefield / Smart Growth America) found that:
office, retail, and multi-family rental space in walkable urban places earn a weighted rent premium of ~75% over drivable suburban areas. Cushman & Wakefield+1

"The WalkUP Wake-Up Call" (George Washington University School of Business) found:
in the DC region that average annual office rent in regionally significant WalkUPs was US $36.78 / sq ft vs US $20.98 for drivable suburban — about a 75% premium.
wordpress.smartgrowthamerica.org

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