Active Transport: Building Healthy Communities

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TM

Children’s Games, Bruegel Pieter the Elder, 1560

Current situation

THE LANCET

Physical Activity · July, 2012 www.thelancet.com

"In view of the prevalence, global reach, and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far-reaching health, economic, environmental, and social consequences."

Lee I-M, et al. *Lancet* 2012;380: 219-229.

Potential Deaths Averted

- **>5.3 M deaths/y worldwide (based on 2008 deaths) may be avoided by eliminating inactivity**

Countries, by Region	Potential Deaths Averted / Year
Africa	638 000
E Mediterranean	525 000
S E Asia	739 000

Countries, by Income	Potential Deaths Averted / Year
Low	409 000
Lower-middle	2 .5 M
Upper-middle	811 000
Upper	1.0 M

- **If physical inactivity were decreased by 25%, >1.3 M deaths/y worldwide may be avoided**
- **If physical inactivity were decreased by 10%, >533,000 deaths/y worldwide may be avoided**

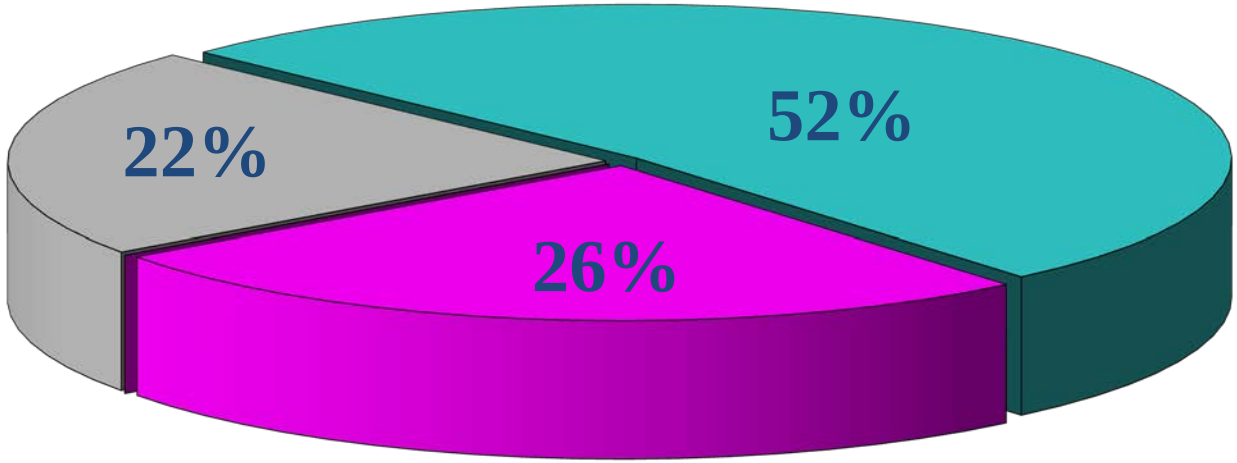
Some Perspective

	Inactivity	Smoking	Obesity
PAF	9%	9% [a]	5% [a]
Deaths attributed to risk factor (per y)	5M	5M [a b]	3M [a]
Potential gain in LE with removal of factor	0·68 y from birth	1·1–2·2 y [c] from age 50 (9 high-income countries)	0.7–1.1 y [d] from birth (USA)

[a] 2009 WHO Global Health Risks; [b] Ezzati 2003; [c] Crimmins 2011; [d] Olshansky 2005

Physical Activity Levels for U.S. Adults

- **Inactive**
- **Insufficient Activity**

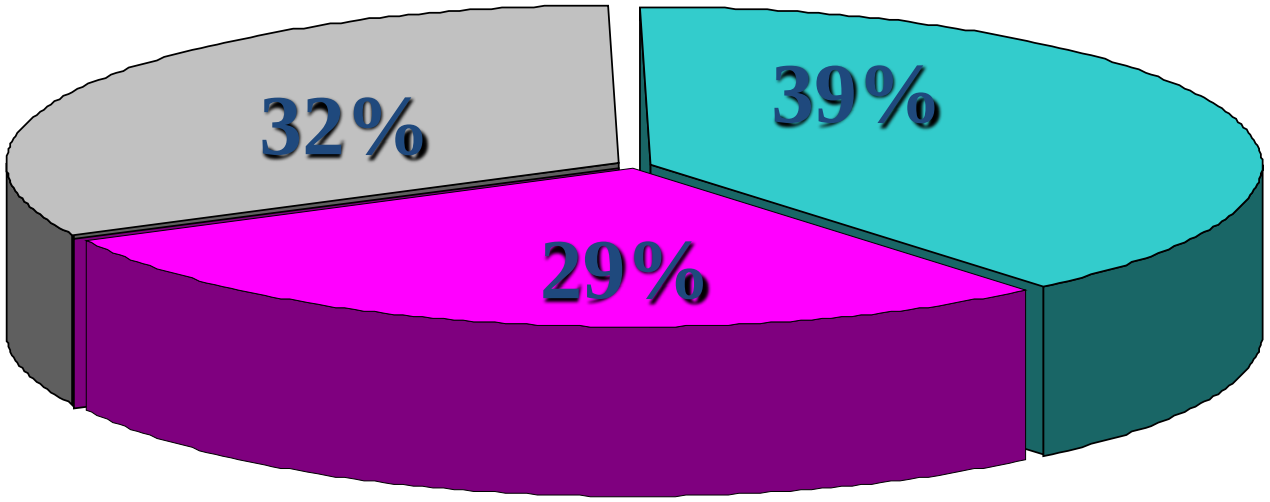


- **Recommended (Moderate Aerobic Physical Activity ≥150 min/wk or Vigorous Aerobic Physical Activity ≥ 75 min/wk)**

BRFSS, 2011

Physical Activity Levels for Tennessee Adults

- Inactive
- Insufficient Activity



- US PA Guidelines (Moderate Aerobic Physical Activity ≥ 150 min/wk or Vigorous Aerobic Activity ≥ 75 min/wk)

BRFSS, 2011

Physical Activity Levels for Chattanooga Adults

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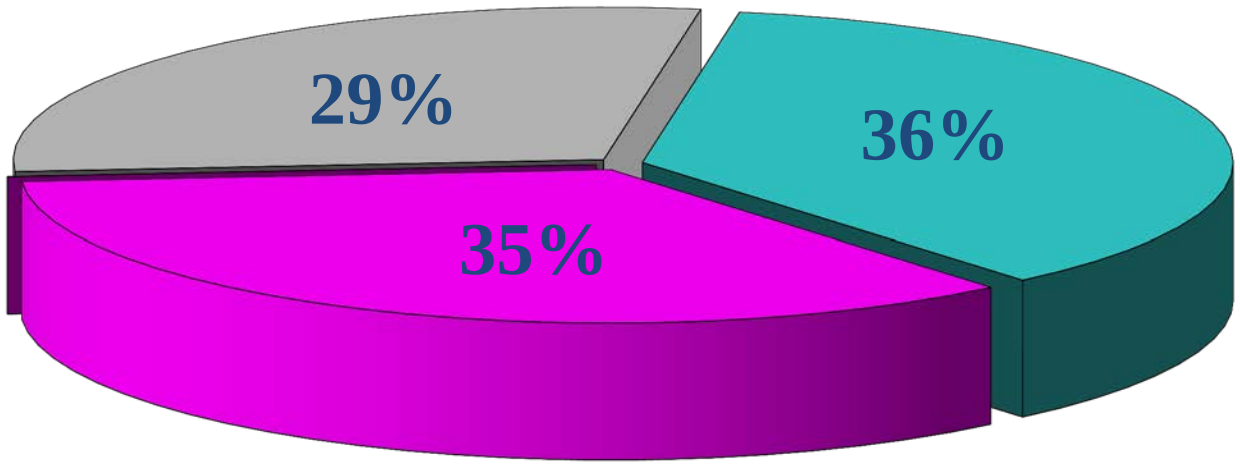

- **Recommended (Moderate Aerobic Physical Activity ≥150 min/wk or Vigorous Aerobic Physical Activity ≥ 75 min/wk)**

BRFSS, 2011

Physical Activity Levels for U.S. Youth

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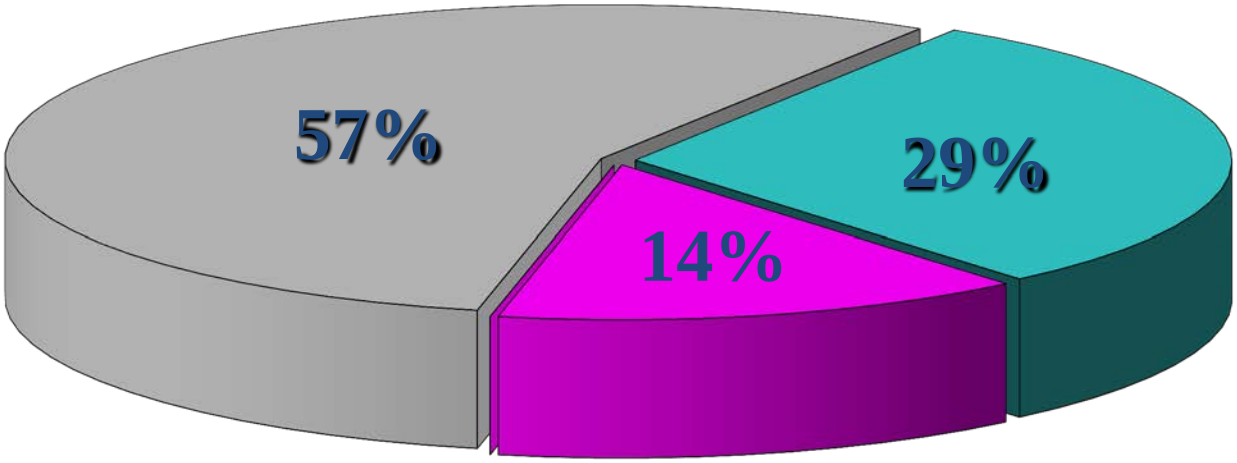
- **Insufficient Activity**

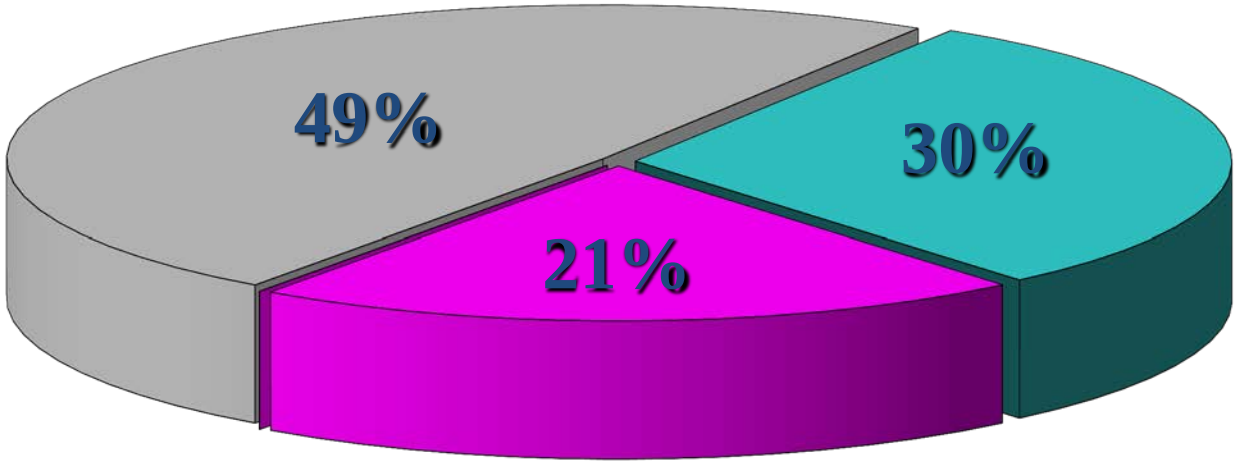


- **Recommended** (Moderate/Vigorous Activity, 60 minutes per day/ 7 days)

YRBSS, 2012

Physical Activity Levels for Tennessee Youth

- **Inactive**
- **Insufficient Activity**



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YRBSS, 2011

Physical Activity Levels for Chattanooga Youth

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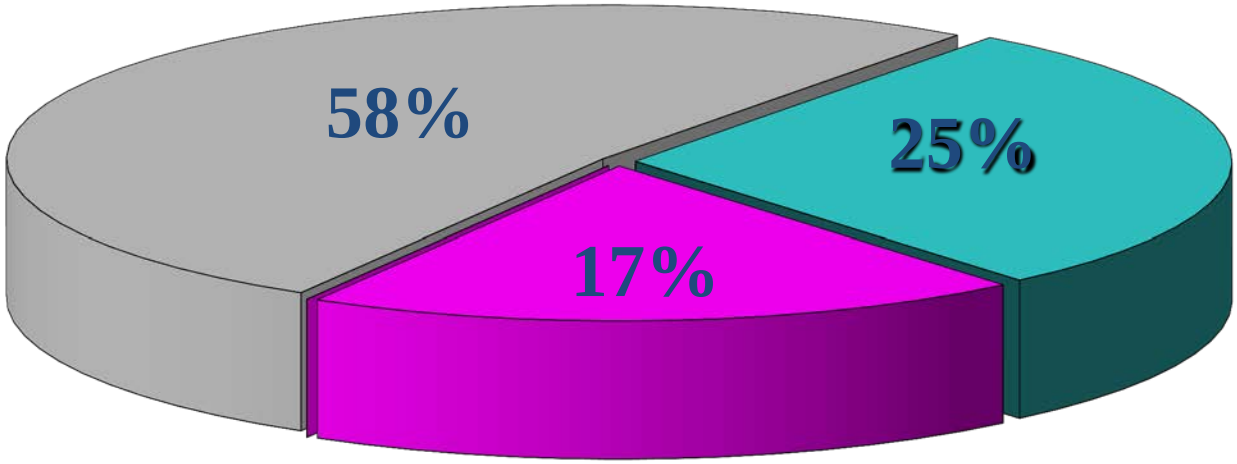

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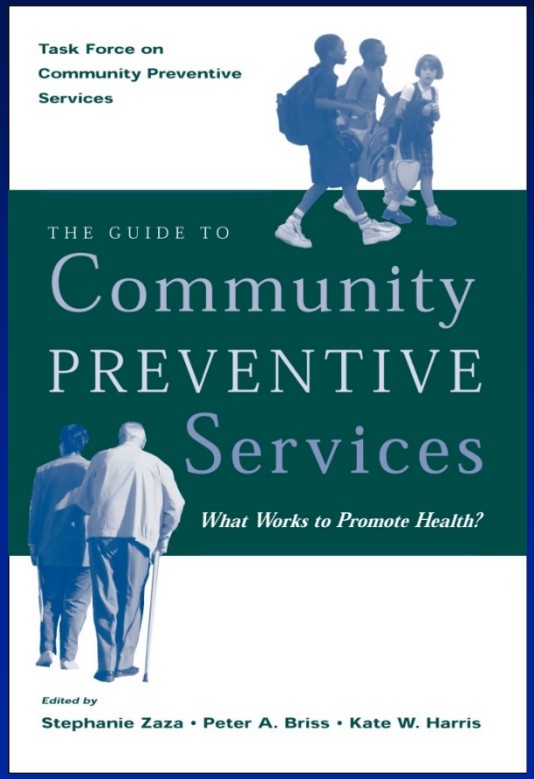
YRBSS, 2011

Consider the Possibility That...

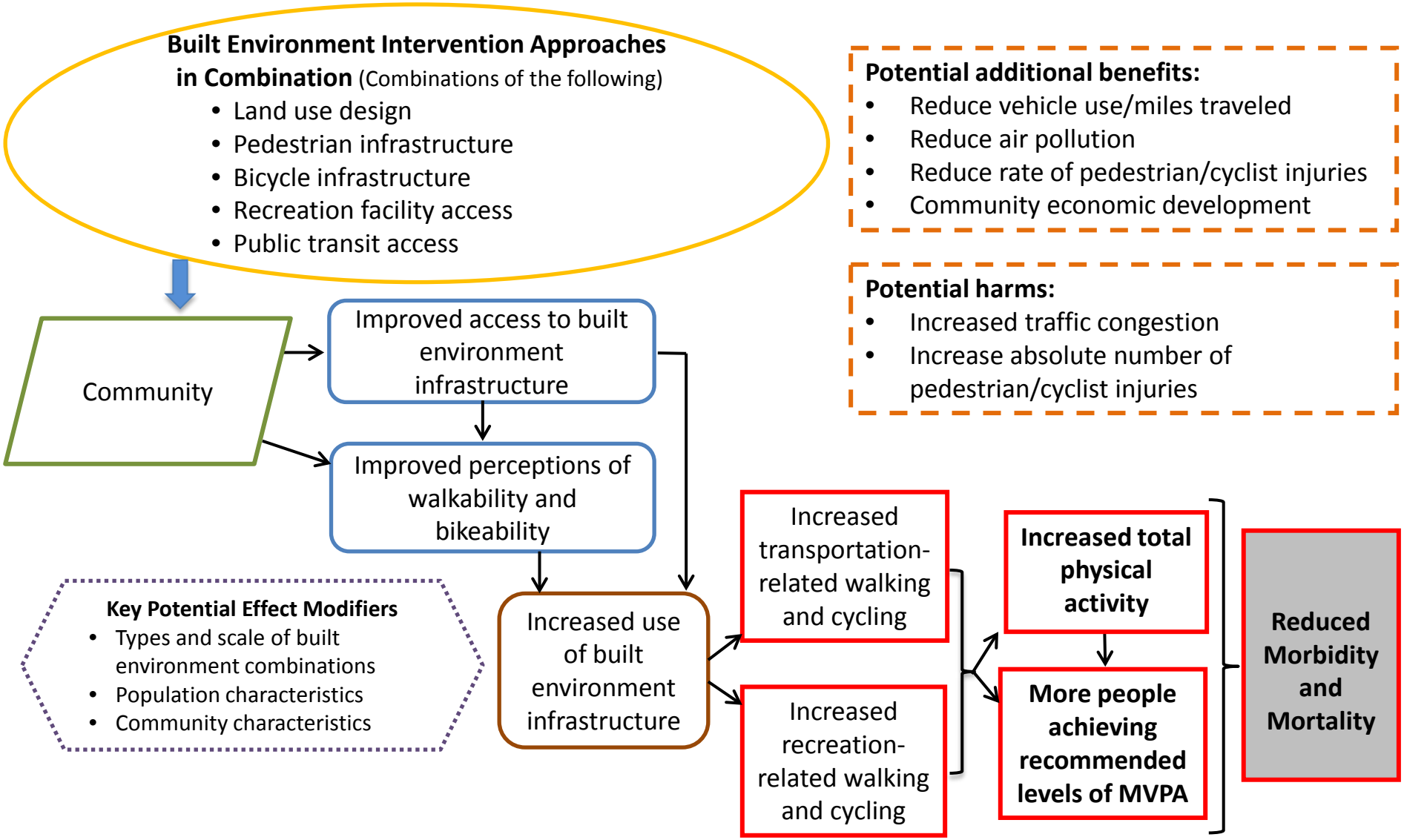
- the pattern of growth has upset the balance of human behavior “we were created to move”
- the social costs of development may be far more reaching than traffic congestion
- the new suburban communities we have developed may not be “safe” and “healthy”

Evidence-based Interventions to Promote Physical Activity

- Informational
  - Community-wide education
  - Point of decision prompts
- Behavioral and social
  - School-based PE
  - Social support in community settings
  - Individually adapted behavior change
- Environmental and policy
  - Enhanced access with outreach
  - Community-scale urban design
  - Street-scale urban design/ land use



Draft analytic framework: Built environment intervention approaches in combination to increase physical activity



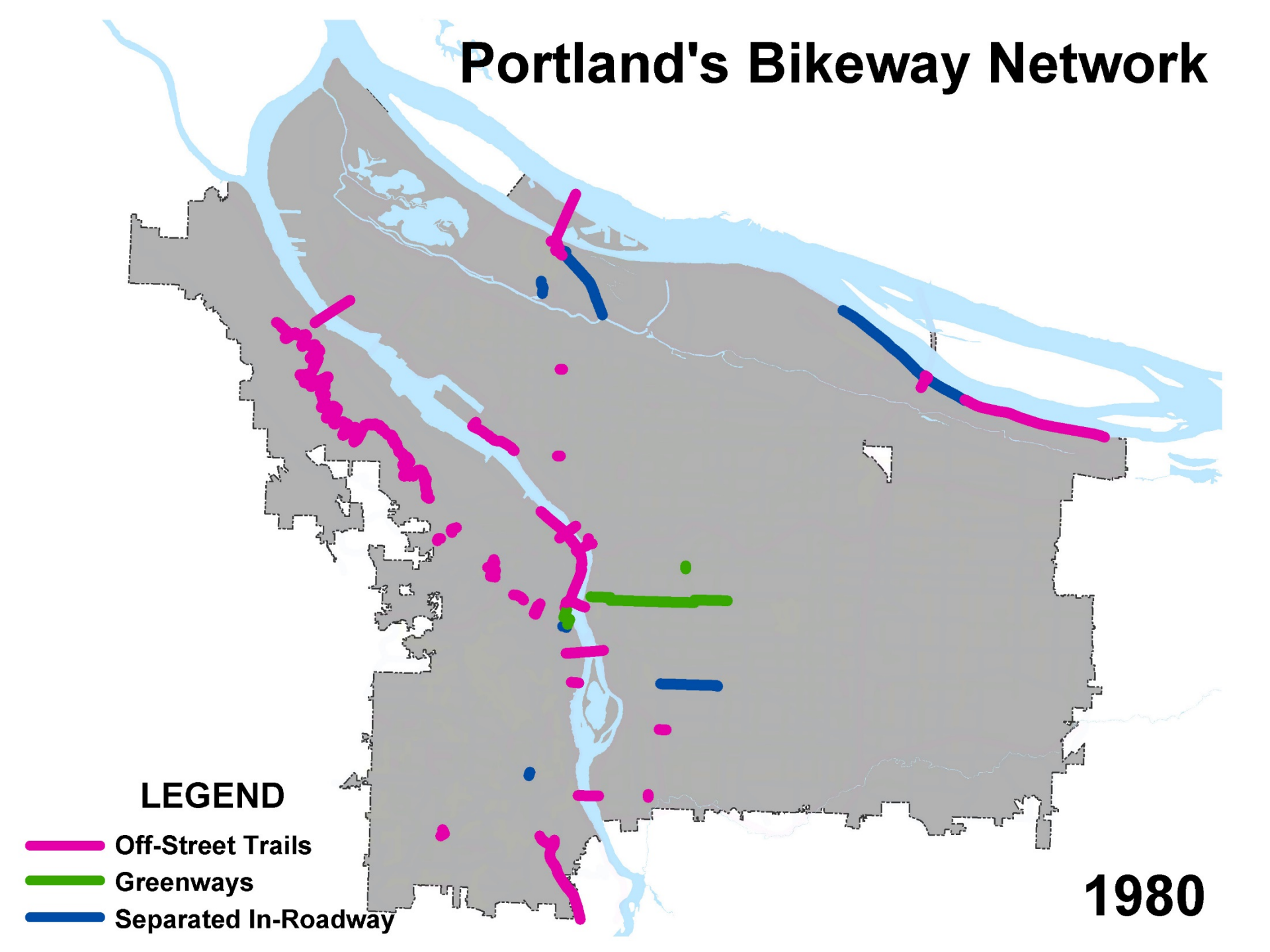
(MVPA: moderate to vigorous physical activity)

Crucial lesson from Portland, Oregon:

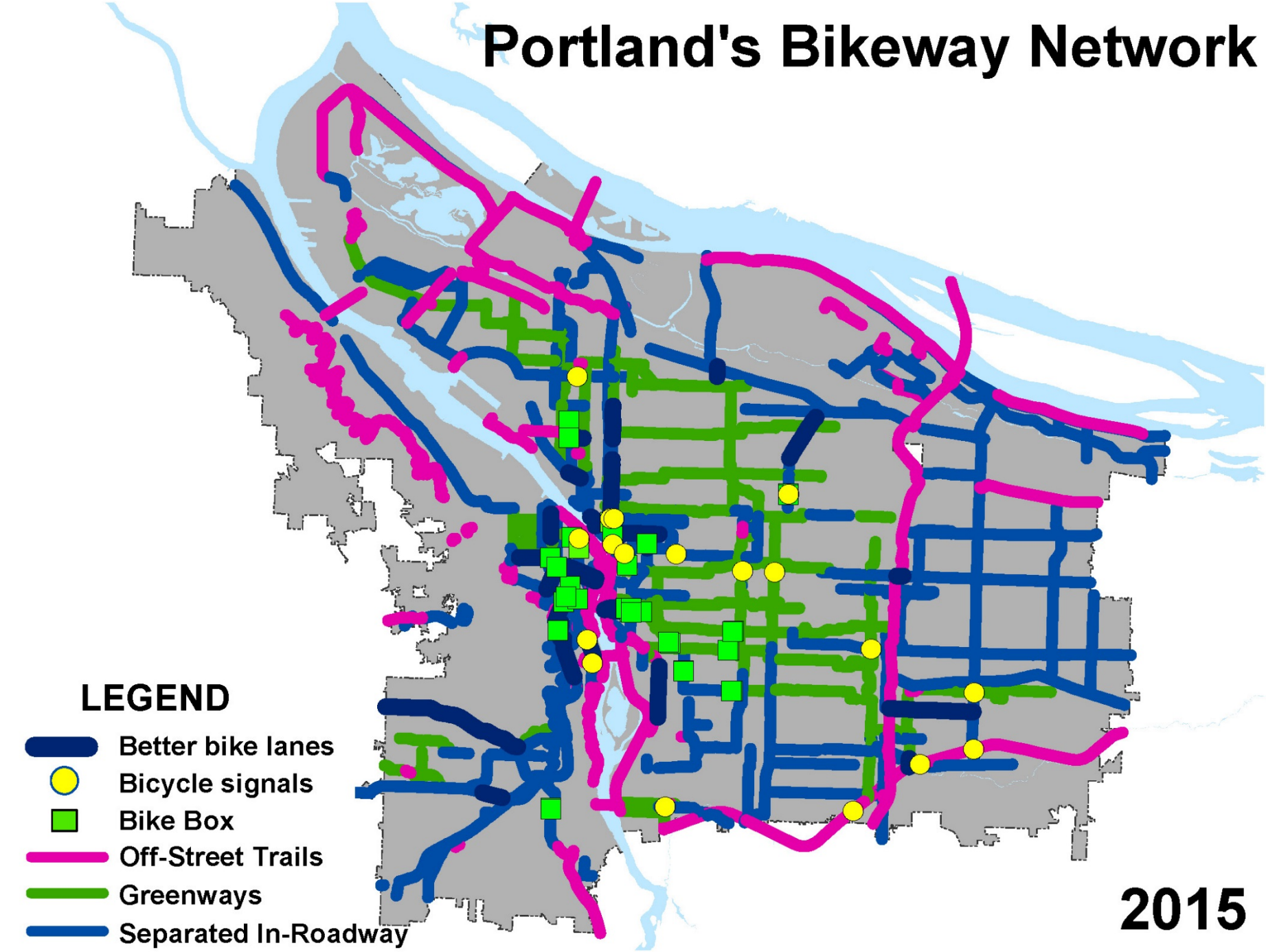
IT TAKES TIME TO CREATE A COMPLETE BICYCLING NETWORK

It took Portland 35 years (1980 to 2015):

- **To expand its bikeway network from 32 miles to 420 miles**
- **To raise bike mode share from 0.4% to 6.9%**
- **To reduce fatality rate (per bike trip) by 70%**
- **To create a city famous for its cycling culture**


Portland's Bikeway Network
LEGEND
Off-Street Trails
Greenways
Separated In-Roadway
1980

Portland's Bikeway Network



Outlook for the South

Research Summary: John Pucher, PhD

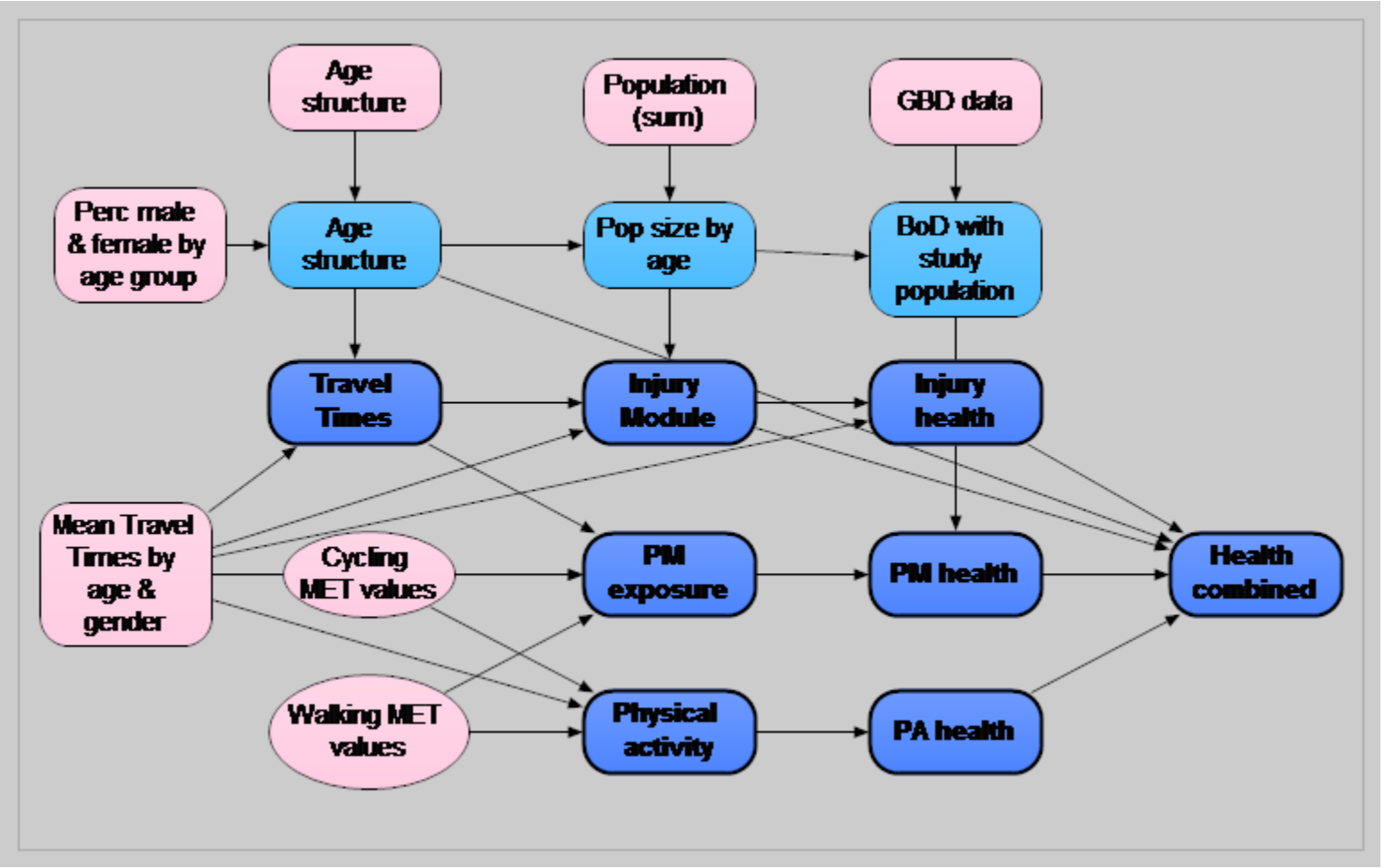
Bad news:

- Cycling will continue to be dominated by recreation, sports, and exercise
- Sprawled polycentric land use will continue to make cycling to work, school, shopping, and services difficult or impossible due to long trip distances
- Summers will remain hot and humid
- Lack of an integrated network of safe, well-designed cycling (but rapid growth in recent and coming years toward that goal!)
- Limited but growing public and political support to allocate street space and financing for good, connected on-street cycling facilities

Good news:

- Widespread public and political support for off-road greenways, with significant expansion planned in many Southern cities
- Mixed-use recreational facilities are heavily used by a wide range of social groups (all ages and abilities) encouraging valuable physical activity
- Densification and mixed-use development in a few downtown areas and subcenters, but not well connected to each by transit and bike facilities

Integrated Transport and Health Impact Modelling Tool (ITHIM)



World Health Organization (WHO)
Health Economic Assessment Tool (HEAT)

EUROPE

ECONOMIC ASSESSMENT OF TRANSPORT INFRASTRUCTURE AND POLICIES

METHODOLOGICAL GUIDANCE ON THE ECONOMIC APPRAISAL OF HEALTH EFFECTS RELATED TO WALKING AND CYCLING