APTA Sustainability & Multimodal Planning Workshop – Social and Economic Sustainability

Integrating Sustainability's Economic & Health Assessments on Transit-Oriented Projects

July 31, 2018

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Agenda

- Discuss the connections between economics, health, sustainability & transportation
- Economic Evaluations
- Health Evaluations (Health Impact Analysis – HIA)
- Identify industry trends and resources for implementation
- Panel and Audience experiences, thoughts / ideas

Active Transportation & Transit Reflecting Social & Economic Benefits in Decision Making

APTA – Social and Economic Sustainability Panel

July 31, 2018 Vancouver, B.C.

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HDR

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Transit & Active Transportation

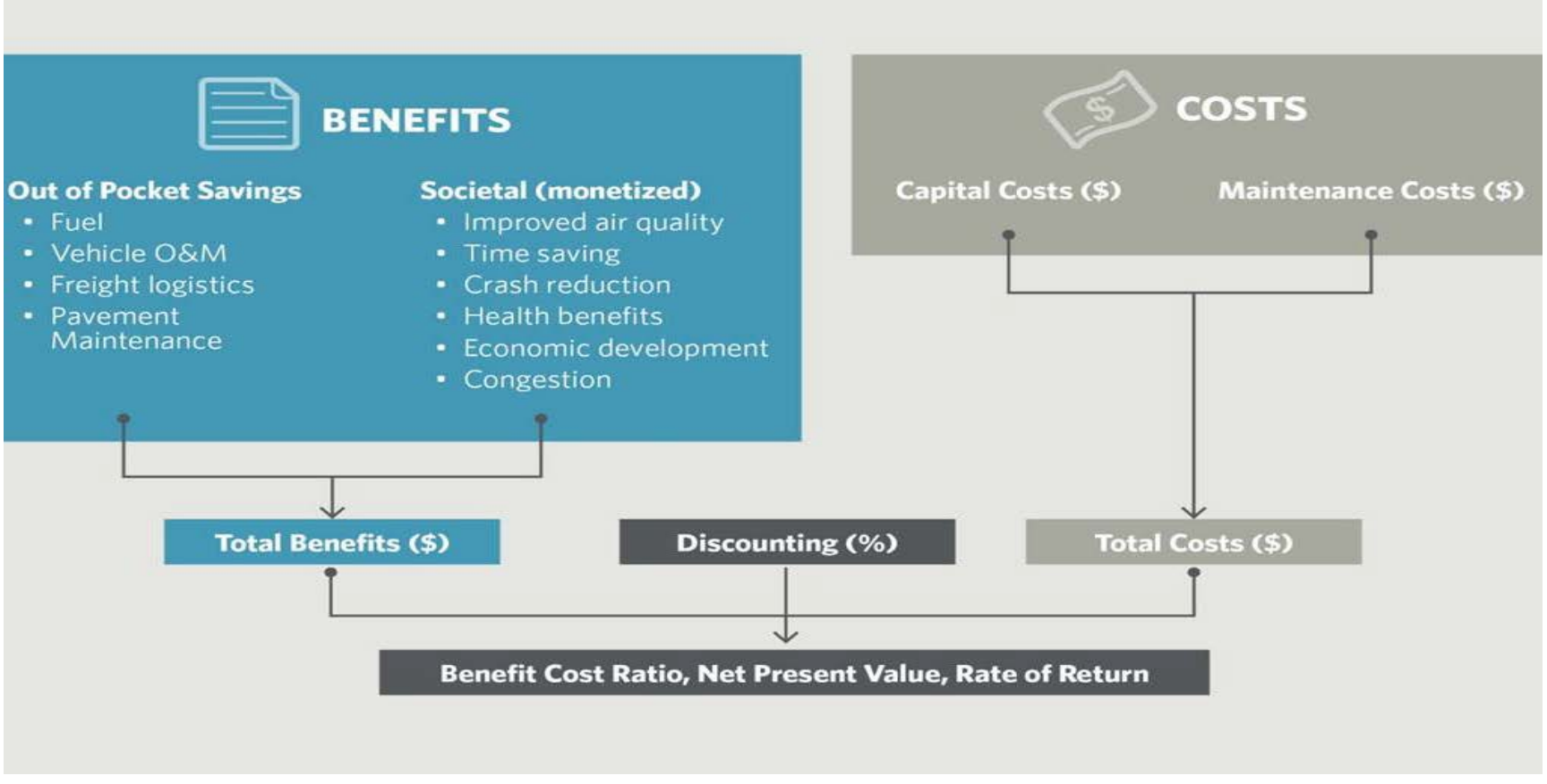
- Benefits generated
  - Mobility
  - Quality of Life – including health
- Approaches
  - Established process (USDOT) for transportation-oriented benefits
  - Continually determining new ways to measure other benefits

Photos Source: LA Metro

Consideration: Mobility & Accessibility

- Improve access for vulnerable populations
- Connect to special attractors (job centers, healthcare, quality food)
  - Health component related to food and healthcare
- Connect to other transportation (transit)

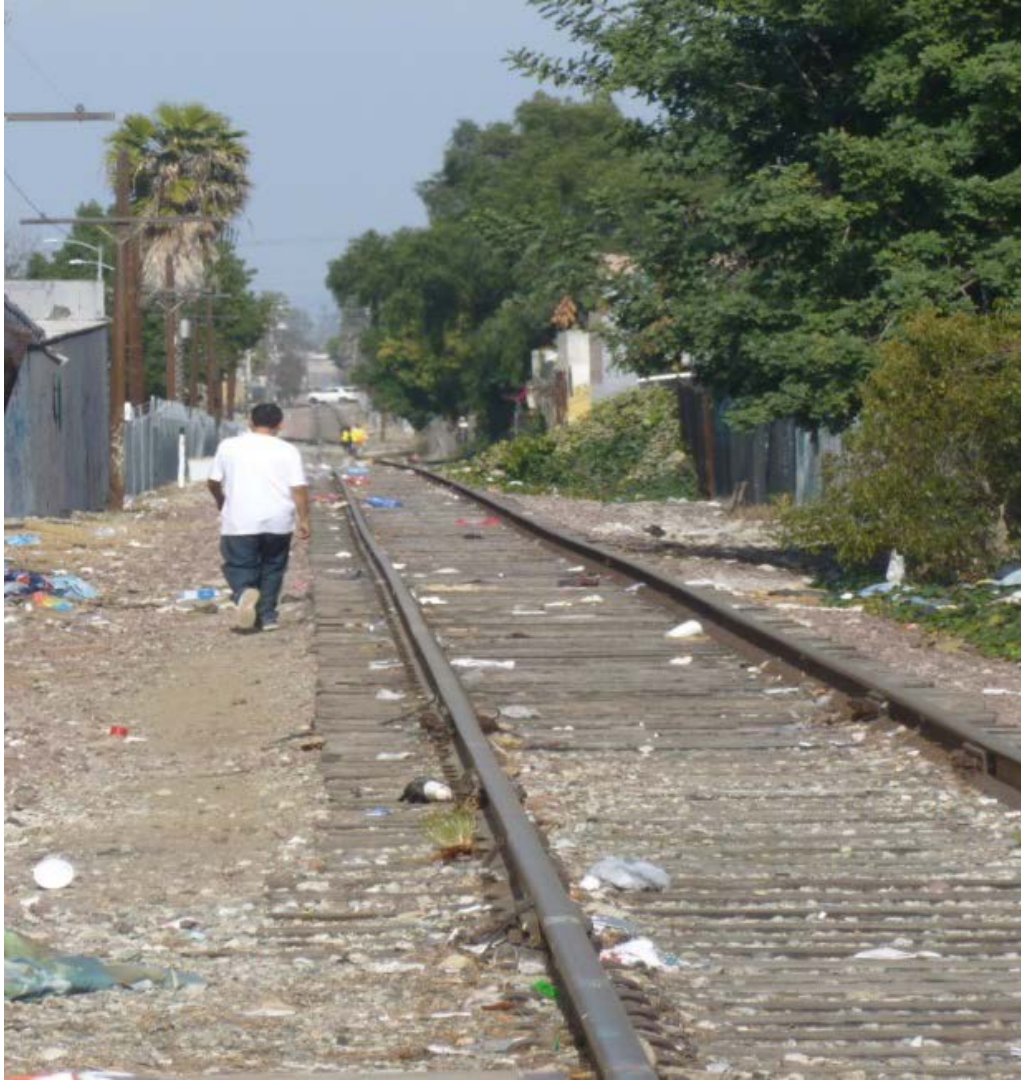
Benefit-Cost Analysis



LA Metro Bike/Ped TIGER BCAs

- Improves bike/public transportation linkages
  - 6.4-mile long corridor
  - Underutilized Metro-owned ROW
- Located in several disadvantaged communities in South Los Angeles.
- Benefit-Cost Analysis conducted to support TIGER application
  - Health benefits to new users
  - Accident reduction benefits
  - Qualitative focus on connectivity for disadvantaged communities
  - TIGER award of $15 million

Photos Source: LA Metro



Objectives beyond Mobility

- Enhance livability
- Improve community health
- Promote equity
- Generate jobs

Consideration: Generate Jobs

Construction	• Investments made in construction of active transportation facilities → short-term impacts
Facility maintenance	• Longer term maintenance of bike trails, paths, and other bike/ped facilities → longer-term impacts
User equipment	• Other impacts generated by expenditures on active transportation equipment (e.g., bikes, apparel, maintenance, etc.) generate
Tourism	• UT organizations support a variety of events and activities geared toward tourists who wish to cycle. Expenditures associated with these events (lodging, food, etc.) generate additional economic impacts.
Healthcare savings	• Levels of physical activity may increase leading to subsequent reduction in risk of illness
Reduced employee absenteeism	• From people who are healthier due to walking/riding patterns may result in higher business productivity

Consideration: Promote Health

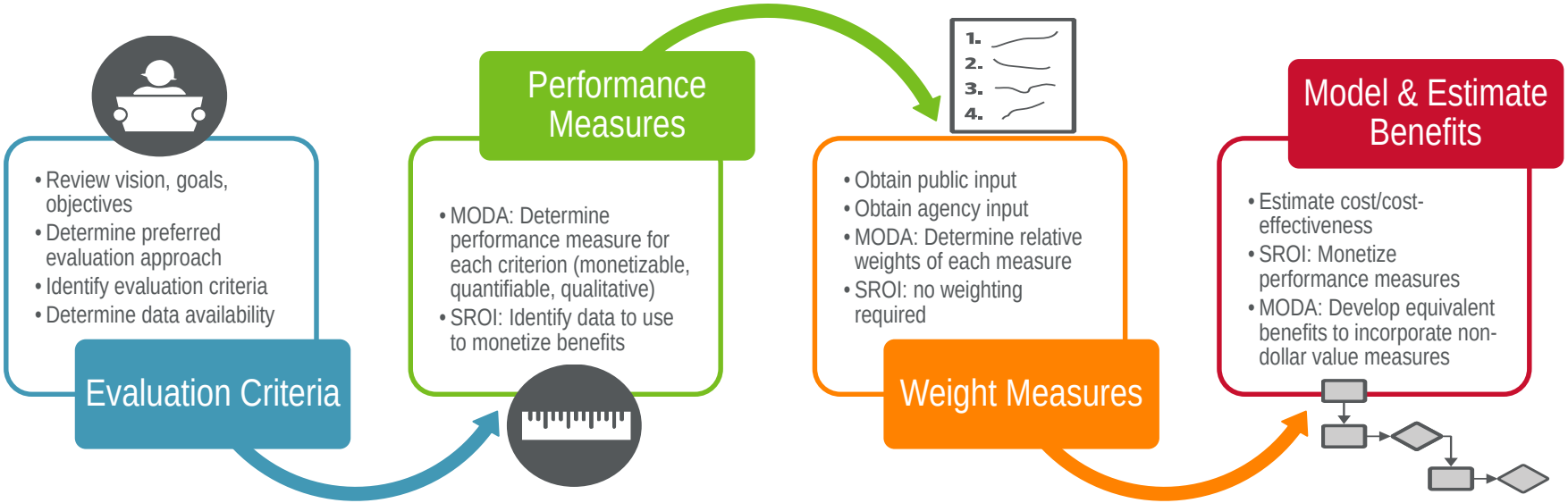
- Individuals who are not active at least 150 minutes each week:
  - Miss an average of 0.63 days of work each year [1]
  - Could save $3.07 in annual healthcare costs for every mile they walk or $0.75 for every mile they bike [2]

[1] Asay GRB, Roy K, Lang JE, Payne RL, Howard DH. Absenteeism and Employer Costs Associated with Chronic Diseases and Health Risk Factors in the US Workforce. Preventing Chronic Disease. 2016;13:E141

[2] UD4H, Fehr & Peers, HDR, Economic Impacts of Active Transportation, https://bikeutah.org/atbenefitsstudy

Consideration: Provide Equitable, not just Equal Transportation

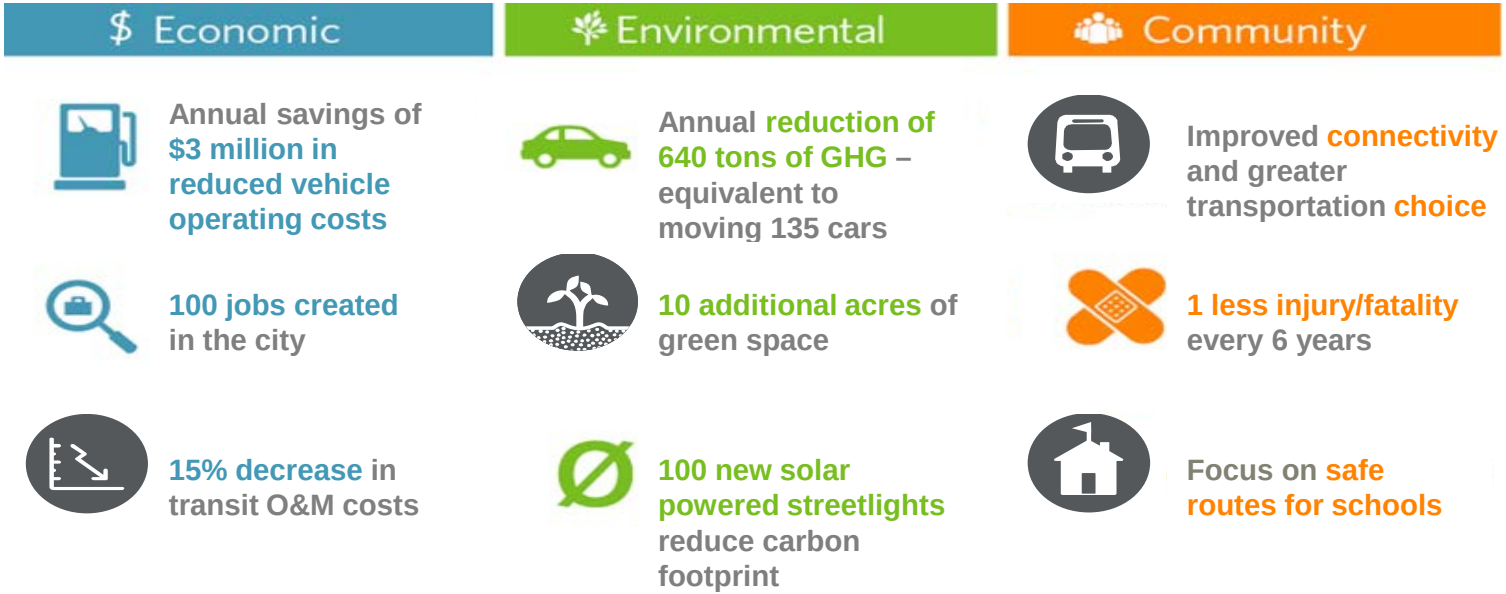
Prioritizing Projects through a Sustainability Lens



Societal Benefits Analyzed by SROI / BCA & MODA Approaches

- Equity
- Time savings
- Economic development opportunity
- Congestion reduction
- Journey quality
- Impact on businesses
- Impact on housing
- Health benefits
- Improved air and water quality
- Crash reduction

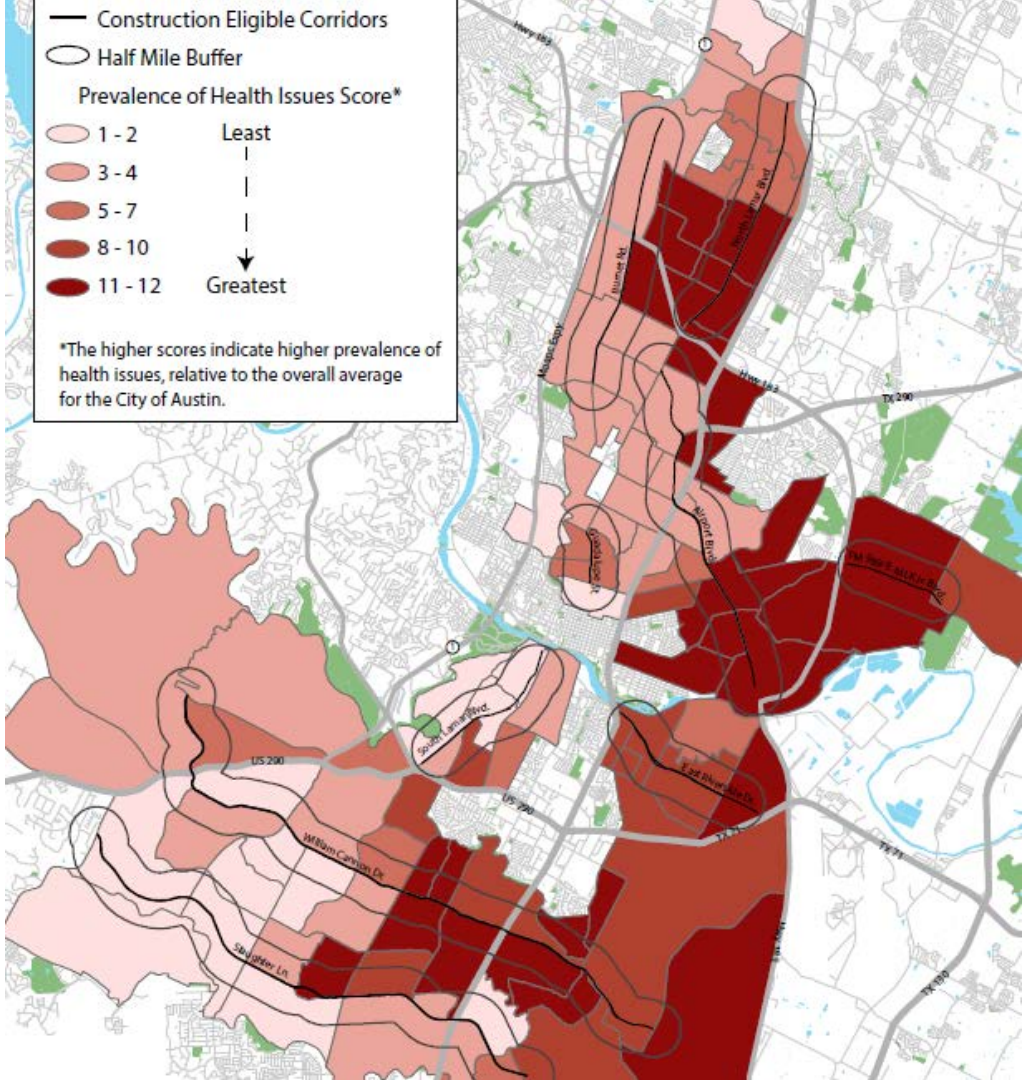
Potential Outputs



- Generated by SROI/BCA and MODA
- Monetary and other values appropriate for use in federal discretionary grant applications (TIGER, FASTLANE, INFRA, BUILD)
- All values useful for project prioritization or alternatives analyses

Mapping

- Visual depiction of other-than-transportation factors of interest
  - Population
  - Employment
  - Affordable housing
  - Health – Prevalence of certain conditions



City of Austin Corridor Project Prioritization

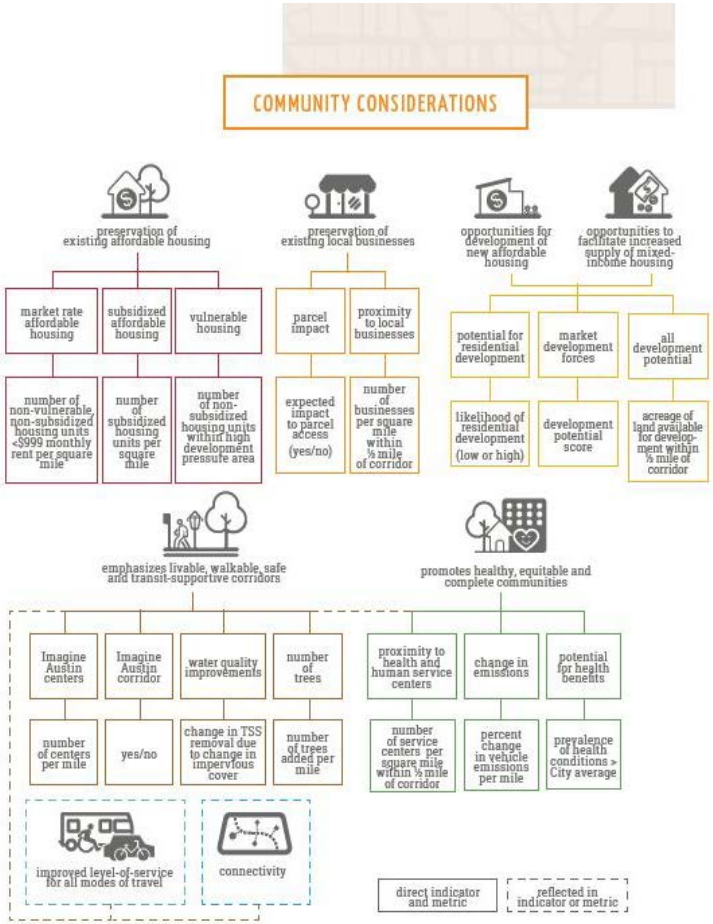
- $482 million available through 2016 Mobility Bond
- Multi-criteria analysis conducted to determine which Corridor Plan recommendations will be funded first

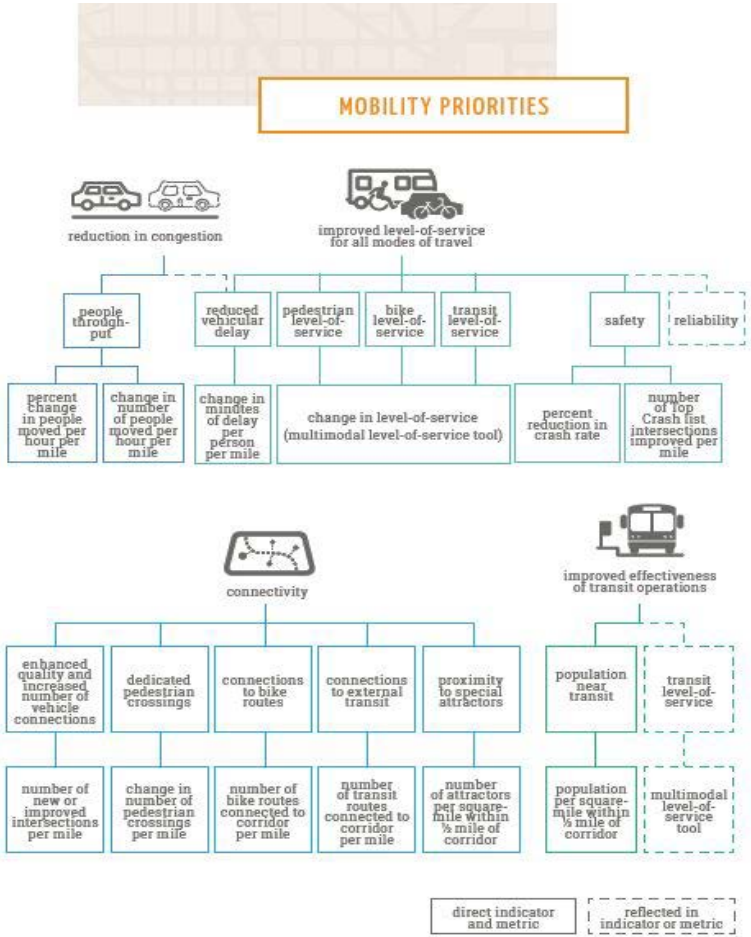
The Contract with the Voters states: Before any construction funding is appropriated or construction initiated for these projects, the City Manager is directed to bring forth recommendations supported by identifiable metrics for implementation of a "Corridor Construction Program".

THE CORRIDORS

The Mobility Corridor Program is prioritizing improvments for the **Corridor Construction Program.**

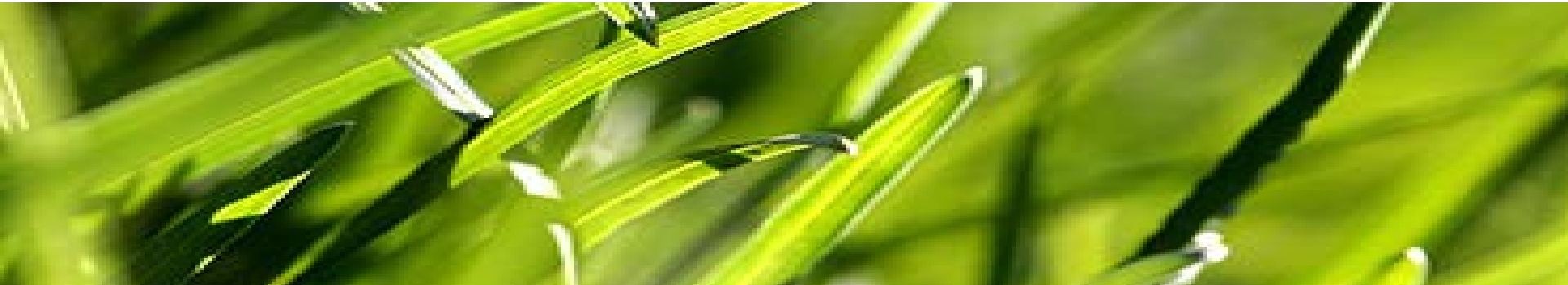
MOBILITY PRIORITIES & COMMUNITY CONSIDERATIONS





Conclusion

- Approaches exist for considering wider benefits of transit and active transportation
- Health benefits estimation continues to be refined
- Helpful to agencies to have approaches that incorporate consideration of wider-than-mobility benefits when identifying investment options
- Economic analysis used for decision making may also be helpful in obtaining discretionary federal funding



Definition and Applications of Health Impact Assessment (HIA)

APTA – Social and Economic Sustainability

July 31, 2018 Vancouver, B.C.

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What is HIA ?

- Health Impact Assessment (HIA) is a process used to identify how a project, policy or program might influence health.
- HIA uses a combination of procedures, methods and tools to systematically judge the potential--and sometimes unintended--effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population.
- The HIA also produces recommendations to enhance the health benefits of the project/policy/program and to mitigate potential harms.

Performance measures = health status outcomes

- HIA evaluates Negative AND Positive Impacts
- Direct and Indirect Health Impacts

Health Determinants / Outcomes Evaluated in HIA

How might the proposed Project or Policy affect:

- Air Quality
- Noise
- Safety
- Social Networks
- Nutrition
- Housing
- Parks and Natural Spaces
- Private Goods and Services
- Public Services
- Transportation
- Livelihood
- Water and Ecological Quality
- Education
- Inequities

What is the Value of HIA ?

- HIA is a tool that can:
  - Provide a structured process to determine a policy or project's impact on health (Objectivity).
  - Ensure that policy and project dollars are used efficiently to provide the greatest benefit.

the process (concept, scoping, planning of a project or initiative).

HIA – Drivers in Policies and Regulations

- States' authority to protect health and welfare.
- The National Environmental Policy Act (NEPA) requires federal actions to consider potentially significant direct, indirect and cumulative effects on the human environment. However, no Federal regulations 'require' an HIA.
- Environmental Justice mandates.
- Regulatory Impact Assessment (not just built projects, but also laws and programs).
- Requirements for Cost Benefit Analysis.

HIA – Drivers in Policies and Regulations (Relationship to NEPA/EIA)

- HIA can add value to Environmental Impact Assessment (EIA). HIA can be developed independently of an EIA or can be integrated within an EIA process.

- From *CDC, Health Places; Health Impact Assessment fact sheet:*
  - HIA is procedurally similar and complementary to the EIA conducted under NEPA and equivalent state statutes. NEPA requires that Environmental Impact Statements (EIS) include consideration and analysis of health effects of specified federal agency actions.
  - NEPA does not refer by name to "HIA" as a separate requirement per se, and the current practice of health analysis in the EIS has been limited. Given the legal mandate to consider health in the EIA, however, the HIA is a tool that can be used to meet statutory requirements for health effects analysis, when conducted within the context of an inter-disciplinary EIA.

Who is Doing HIA and Where ?

HIAs Conducted by:

- Government Agencies (50%)
- Non-Profit Organizations (25%)
- Educational Institutions (20%)
- Other (5%)

Sectors Addressed by HIAs:

- Built Environment (36%)
- Transportation (19%)
- Natural Resources and Energy (12%)
- Agriculture, Food, and Drug (8%)
- Housing (7%)
- Economic Policy, Labor, Employment (6%)
- Education (5%)
- Other (7%)

SOURCE: Health Impact Project (Pew Charitable Trusts)

HIA Process – 6 Steps

1. Screening –Determines the need and value of a HIA. Consider Timeline and Resources available. Will HIA Findings be received well by decision-makers, stakeholders ?
2. Scoping – Determines which health impacts to evaluate, the methods for analysis, and the work plan for completing the assessment. Description of impacted population (including vulnerable populations) and Project Boundaries. Research. Health Pathways diagrams. Stakeholder engagement.
3. Assessment – Provides a profile of existing health conditions (Baseline) and an evaluation of anticipated or projected health impacts. Research / literature; community surveys and stakeholder work sessions; Master Plans; field measurement of env conditions; modeling and mapping; expert opinion.
4. Recommendations – provides strategies to manage identified adverse health impacts (common recommendations include Mitigation, Enhancement, Adoption).
5. Reporting – includes development of the HIA report and communication of findings and recommendations. Formal Report, letter to decision-makers, comment on Draft EIAs, public testimony, fact sheet / newsletter, website / social media.
6. Monitoring – Tracks impacts on decision-making processes and the decision as well as impacts of the decision on health determinants.

HIA Process – Scoping (Health Pathways Diagram)

SOURCE: Human Impact Partners

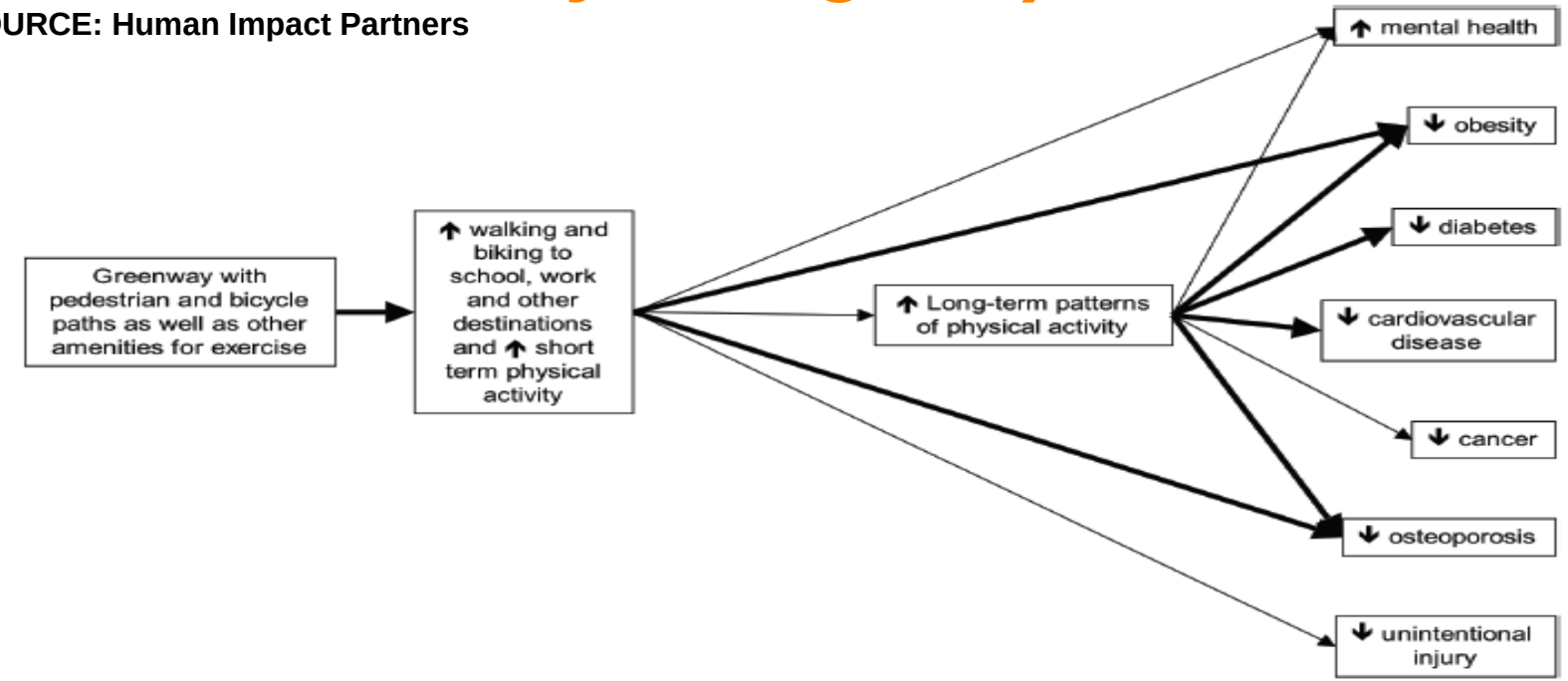

Figure 1: The health pathways connecting the proposed East Bay Greenway with improved health that are associated with increased physical activity. Connections in bold are those best documented.

HIA Process – 6 Steps (cont.)

Assessment – Characterizing Potential Affects:

Table 1: HIA Analysis Summary of Findings

Health Determinant	Direction	Magnitude	Impact	Significance Likelihood	Distribution
Traffic Safety	↑	High	High	Very Likely	Affects whole community relatively equally
Physical Activity	↑	Medium	Medium/High	Very Likely	Impacts neighboring vulnerable community and whole community via expanded access
Access to Goods and Services	↑	Medium	Medium/High	Very Likely	Disproportional effect on low income, transit-dependent communities around DMA
Air Quality	↑	Low	Low	Possible	Affects whole community relatively equally

Complete Streets – Connecting Design and Policies with Health, Equity, and Economics

- "Complete Streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations." (Smart Growth America)
- A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and other design features.
- Over 1400 Complete Streets policies have been passed in the United States.

  (Smart Growth America)

- Ties into Smart Cities, Smart Growth, Climate Smart community initiatives.
- Concepts can be assessed in terms impacts on economics, sustainability, health, and equity.

References and Resources (Health and HIA)

- National Research Council (NRC). *Improving Health in the United States: The Role of Health Impact Assessment*. Committee on Health Impact Assessment. 2011.
- SOPHIA (Society of Practitioners of Health Impact Assessment).
  - Stakeholder Engagement Tools
  - Regional Capacity Building Maps
  - Equity Metrics
  - Papers and Research
  - Sample HIAs
- Centers for Disease Control and Prevention (CDC).
- American Public Health Association (APHA).
- Human Impact Partners. www.humanimpact.org
- Smart Growth America.
- Health Impact Project at Pew Charitable Trusts. http://www.pewtrusts.org/en/projects/health-impact-project/health-impact-assessment
- New Jersey Health Impact Collaborative (NJHIC). Rutgers University collaborative.