Rediscovering Walking and Cycling as Economic Activities

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CATALYST

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What Does Active Transport Offer?

- **Independent mobility** for those without cars
- **Options** for those who do have cars
- **Better health**
  - Individual and community well-being
  - Government and private financial costs
  - Improved productivity
- **Lower-cost transport**
  - Car operating costs
  - Congestion costs
- **Reduced environmental impact**
- **More livable towns and cities**
- **More robust towns and cities**
  - Transport energy – price and availability
  - Activity centres less dependent on motor vehicles
Walking and Cycling as Economic Activities
Economic Benefits Are Largest Component
Cost and health benefit of active transport in Queensland

Stage 2 Report
Evaluation Framework and Values
September 2011
The Economic Cycle

- Commissioned by the RAC WA
- Builds on 30 years bicycle planning experience and over 40 years transport evaluation experience (CATALYST)
- Professional and academic standards ensured by PATREC
  - Including peer review
Benefits of Cycling – per km

- Assumes 5km each-way commute and $10/day parking

- Year 1
- Year 5

- Car operating costs
- Bicycle operating costs
- Congestion (inter-peak)
- Congestion (peak)
- Car parking
- Travel time
- Road trauma
- Environment
- Health and fitness

Walking and Cycling as Economic Activities
Benefits of Cycling – per week

Assumes 5km each-way commute and $10/day parking

Walking and Cycling as Economic Activities
Benefits of Walking – per km

Assumes 2km each-way commute and $10/day parking

- Car operating costs
- Walk operating costs
- Congestion (inter-peak)
- Congestion (peak)
- Car parking
- Travel time
- Road trauma
- Environment
- Health and fitness

Cents per kilometre

Year 1
Year 5

Walking and Cycling as Economic Activities
Benefits of Walking – per week

Assumes 2km each-way commute and $10/day parking

- Car operating costs
- Walk operating costs
- Congestion (inter-peak)
- Congestion (peak)
- Car parking
- Travel time
- Road trauma
- Environment
- Health and fitness

$ per week

Year 1

Year 5

Walking and Cycling as Economic Activities
Walking and Cycling as Economic Activities

Source: Adapted from BITRE WP71
Congestion: Avoidable Cost As An Index

Year:

Total Avoidable Cost Index (2005 = 100)

Average Avoidable Cost Index (2005 = 100)
Congestion: Avoidable Cost in Real Money (2011 prices)

![Graph showing incremental cost per car-km (2011 prices) and average social cost per km (2011 prices).]
Congestion: Avoidable Cost by Time of Day
Walking and Cycling as Economic Activities

Congestion: Beyond 2021
Health Benefits of Cycling and Walking

- Five year accrual
- Even first year benefits exceed road trauma costs
- Walking twice the benefit of cycling
- Add 2.5 cents for health effects of air pollution
Financial Impacts

- **Car operating costs**
  - 12-16 cents/km for smallest cars
  - 18-19 cents/km for Falcon or Commodore
  - Car parking

- **Funding of health services**
  - Federal Government: 44%
  - State/Territory Gov’t: 24%
  - Private (inc. insurance): 32%

- **GST Revenues**
  - GST on fuel returned to States
  - Western Australia receives less than half the amount it contributes for other GST revenues.
Walking and Cycling as Economic Activities

Financial Benefits per km

Walking: 2km each way commute
Cycling: 5km each way commute

Walking and Cycling

- Transport operating costs
- Car parking
- Health - Private
- Health - State
- Health - Federal

Cents per km

0

250

200

150

100

50

0

Walking
Cycling
Financial Benefits per week – without car parking

Walking: 2km each way commute
Cycling: 5km each way commute

Transport operating costs
Health - Private
Health - State
Health - Federal
TOTAL

Walking:
- 2km each way commute

Cycling:
- 5km each way commute

$ per week

Walking
Cycling

10.08
17.2

Walking and Cycling as Economic Activities
The Bottom Line: What Active Travel Delivers

- Benefits for the community of between 2.8 and 3.5 times (over 10 years) the costs incurred.
  - Depending on discount rate (2.5%/7%)  
  - 5.2 to 8.4:1 over 25 years.

- Financial returns for the individuals who walk or cycle more and for government.
  - $2,000 to $2,400 for 1000km per year over 10 years  
  - Depending on discount rate.  
  - Two-thirds of these financial benefits accrue to individuals and households, providing the equivalent of a tax cut to those who change from car-driving to walking/cycling while also reducing traffic congestion for those who do not.
The Bottom Line: What A Cycle Network Delivers

- Benefits for the community of between 3.4 and 5.4 times (over 25 years) the costs incurred.
  - $1.0 - $1.6 billion (present value)
  - $1.15 - $1.8 billion, with population growth
  - These rates of return are higher than those achieved by most urban transport investments.

- Financial returns for the individuals who cycle more and for government that are nearly twice the costs incurred.
  - Two-thirds of these financial benefits accrue to individuals and households, providing the equivalent of a tax cut to those who change from car-driving to cycling while also reducing traffic congestion for those who do not.
Resources
