Andrew M Wheeldon
Bicycle Cities
“bicycle journeys connect us all”

The creating of bicycle cities

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andrew@bicyclecities.info
Increasing # cyclists

- Paradigm shift by Policy makers
- Behavioural change workshops
- Increased education
- Improved infrastructure
- Reduced speed
- Greater tolerance
- More *commuter* cyclist trips
- Fewer motorist trips
- Greater enforcement of traffic rules
- More bicycle events
To ride, or not to ride?

- **Strong and Fearless**
- **Enthused and Confident**
- **Interested but Concerned**
- **No Way No How**

(City of Portland, US)
WHY BICYCLES for mobility?

Since c.1865 a powerful innovation in MOVEMENT – that is Mobility and Access - for all people, regardless of situation or income level
Bicycles and poverty alleviation

• Economic
  • lower cost of mobility, jobs created

• Environmental and health
  • cleaner air, exercise, fewer wars

• Social
  • we ‘ll get to know each other, as bicycle journeys connect us all
the street killers

• London 17 August 1896 was the first, since then **110m+ deaths and one billion injuries globally**

• **all the deaths in all the wars of the 20th century = 160 to 200 million**

• Over 1 billion cars and over 1 billion bicycles on the planet today
“The motor car’s war against communal life and culture is perhaps the most subtle and pervasive theatre of the war. Cars have changed our perception of place, space and time, as well as our relationships with others.”

Louis Reynolds (UCT)
Planning for Who?

There is a lack of planning providing for cyclists and that the traffic system is designed predominantly with car-users in mind (European Transport Safety Council, 1999).
Access and safety

• in numbers

• more education for cyclists and motorists

• increased bicycle lanes, parking and facilities

• greater enforcement of traffic rules

• more bicycle events
More=safe

• it is possible to both increase cycling and also improve cyclists’ safety (Krag, 2002).

• the safety of cyclists improves as the number of cyclists increases (Krag, 2002).

• Copenhagen and Odense: increase in cycling has been brought about with a corresponding decrease in the number of accidents involving cyclists (Krag, 2002).
Relation between accidents and bicycle usage
## SA Cities: % walking and cycling to work and school

<table>
<thead>
<tr>
<th>City</th>
<th>On foot</th>
<th>By bicycle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>City of Cape Town</td>
<td>550,561</td>
<td>19.0%</td>
</tr>
<tr>
<td>City of Johannesburg</td>
<td>558,856</td>
<td>17.3%</td>
</tr>
<tr>
<td>Durban: Ethekwini</td>
<td>595,542</td>
<td>19.3%</td>
</tr>
<tr>
<td>East rand: Ekurhuleni</td>
<td>425,210</td>
<td>17.1%</td>
</tr>
<tr>
<td>Port Elizabeth: Nelson Mandela</td>
<td>228,187</td>
<td>22.7%</td>
</tr>
<tr>
<td>Pretoria: City of Tshwane</td>
<td>386,965</td>
<td>19.5%</td>
</tr>
</tbody>
</table>

**Table 1: Walking and cycling to work or school in selected metros - Census 2001**
2001 Census – use of bicycles per age group (#) by province
2001 Census – # cyclists / % of total in each income group
1998-2007 Accidents?

# of traffic accidents involving cyclists in Cape Town – CoCT

TOO MANY UNKNOWN ‘VEHICLES’
TOO MANY UNREPORTED CASES
The European Transport Safety Council (1999) identifies 7 key problems for cyclists in the urban traffic system:

- **Vulnerability**: If collision speed exceeds 45km/hour, there is a less than 50% chance that the cyclist will survive.
- **Flexibility**: Motorists unsure when or where to expect cyclists
- **Instability**: Cycle mistakes or failures are dangerous
- **Invisibility**: Cyclists are difficult to see, especially at night.
- **Differing abilities**: all abilities and experience
- **Consciousness of effort**: Cyclists seek easy direct routes
- **Estrangement**: Cyclists are often treated as nuisances on the roads
UK National Cycling Forum (1999) recommends four key actions which will increase cyclist safety whilst simultaneously increasing cycling levels.

1. Reducing motor traffic
2. Reducing motor traffic speed
3. Implementing physical measures
4. Influencing behaviour and attitudes
Brazil

Chapter 15 - infractions
Art. #201 fail to keep the lateral distance of 1.5 meters to pass bicycles, carrying a penalty fine of about U$ 100

Netherlands

In Dutch law motorists are liable in case of accidents with non motorised road users regardless the question whether the non motorised road user might have been at fault. The reason for this is that motorised road users by their chosen mode of transport create a larger risk for fellow road users, and therefore have to behave more cautious.

South Africa

Western Cape, then National: 1 metre and 1.5 metre passing distance laws
Supportive Institutional coalition

**Roles and responsibilities?**
- Broad involvement of all stakeholders
  - Health
  - Mobility
  - Environment
  - Social development

*A Shared vision, early partnership and cooperation*
Velo Mondial Cape Town 2006
Towards Prosperity
350 delegates from 41 countries

City of Cape Town Declaration, the aim of which was to facilitate the following tasks:

- Reclaiming public space so as to improve quality of life
- Improving the integration of cycling with other sectors
- Facilitating greater access to high-quality technical expertise on cycling
- Ensuring political commitment for increased role for NMT in development
- Planning to retain and encourage the small scale and mixed function of community districts and make these as accessible as possible to the bicycle
- Building the capacity of community-based organisations
- Engaging the business community in providing healthy workplaces
Bicycle Master Plans for every SA city

- most popular routes
- prioritised routes
- Links to public transport
- programs with bikes
- demonstration pilot projects
Let's change this, do something.....

- The power of critical mass
  - More cycling daily
  - Increased bicycle supply

- A National Cycling Policy
  - Then - Provincial, Municipal Policy
  - NL, UK, DK examples

- Community awareness
  - Events such as the Freedom Rides, Bike to work days, Critical Mass, Moonlight Mass, Open Streets
  - Campaigns to address behavioural change
Let’s develop Cycling Cities

- Birth and Growth of a Cycling Vision
  - High-level Political commitment
  - Long-term investments
  - Integration is better than isolation
  - empowered delivery team
  - engagement of local stakeholders
  - supportive institutional coalition

- Inclusive design of the City
  - No solution fits all environments or needs
  - Understanding / valuing the local audience
  - Must-haves take priority over nice-to-haves
  - Success demands new mobility paradigm shifts

Source: Enabling Cycling Cities – Civitas 2013
Political Will

- **Target values** for cycling as a share of all (mobility) journeys
  - e.g. Vienna - 2010 to 2015: shift from 5 to 10% target of cycling trips
  - Political figureheads to clearly state cycling vision and benefits thereof
  - carrot and stick approach – less cars, more alternatives
bicycle journeys connect us all
Social mobilisation around cycling in Johannesburg

Cycle Jozi Forum presentation to NMT Conference
Crispian Olver
31st October 2014
What is Cycle Jozi Forum?

- It’s a multi-stakeholder open forum that anyone interested in cycling can join.
- We aim to make cycling safe, accessible and affordable – so that everyone can ride a bike if they wish.
- We share ideas and initiatives, and try to coordinate planning activities so that stakeholder input into the process is maximised.
- We organise social activation events such as Freedom Rides and conferences.

You can’t build infrastructure without the people – creating a network of bike lanes won’t work without an equivalent effort to educate motorists and mobilise cyclists to use the lanes.
Cycling infrastructure – what about the people?

• In response to public pressure and thanks to Mayor’s leadership, JHB is now making a considerable investment in bike lanes
  • Orlando
  • University Corridor
  • William Nicol
  • Rosebank – Sandton – Alex

• JUCA has also prepared a bike map of safe commuter cycling routes which is being piloted by the city as a way finding system

• We need to have an equivalent investment in social mobilisation in order to make sure lanes are used
The Freedom Rides

• It’s a social ride that aims to:
  • Promote JHB as a cycling friendly city
  • Get more people cycling as a way of life

• Partnership between cycling activists and government led by JHB Metro

• Raises funds to set up bicycle empowerment centres in poorer communities

• Over 5000 people turned out for our first ride linking Mandela Bridge and Soweto on 9th Feb

• Over 6000 people rode the second ride on 20th July 2014 to celebrate the opening of JHB’s first bike lanes in Orlando

• Other cities (Cape Town, Tshwane) have held their own Freedom Rides, and we are keen for this to become a SA wide movement
Setting up Bicycle Empowerment Centres

- Participants on the Freedom Ride have contributed funds towards setting up a bicycle empowerment centre in Orlando.
- The training, infrastructure and bikes for the BEC have been arranged, and the BEC is now operational at Orlando High School.
- Our aim is to create a network of BECs around the city over time.
An agenda for promoting cycling in Johannesburg

1. Information
   • Conduct audit of cycling in Johannesburg, and collate statistics on cycling accidents, fatalities and causes
   • Keep register of cycling accidents

2. Policy
   • Increase priority given to cycling in Johannesburg Transport Policy
   • Set clear targets for increasing % of journeys taken by bicycle

3. Planning
   • Integrate cycling into town planning and new developments
   • Johannesburg Cycling Master Plan to set framework for city cycling initiatives

4. Infrastructure
   • Create network of bicycle lanes across Johannesburg
   • Put up ‘safe cycling’ signage
   • Integrate cycling into urban transport infrastructure
An agenda for promoting cycling in Johannesburg

5. Legislation
   • Provincial transport regulations to balance interests of cyclists with pedestrians and motorists, and place obligations on different users
   • Establish safe passing distance
   • Enforce regulations and prosecute offenders

6. Education
   • Public awareness campaigns targeting cyclists and motorists
   • Integrate cycling safety into schools
   • Integrate cycling awareness into Learner’s and Driving Licenses

7. Funding
   • Establish revenue stream from fuel taxes or license fees to community cycling initiatives and support city investments in transport infrastructure
SAME ROADS
SAME RULES
SAME RIGHTS
Our plans for 2015

• Cycle Week from 16\textsuperscript{th} to 22\textsuperscript{nd} March 2015 during which we will have a number of social activation events to popularise different bike lanes
• Cycling Cities conference will bring together the various stakeholders behind the cycling movement to develop a cycling cities agenda
  • Build up to Eco-mobility Summit being held in Sandton in October 2015, during which a precinct will be closed to traffic for the month
• Cycle Week will culminate in a Freedom Ride on Sun 22\textsuperscript{nd} March that links Sandton and Alexandra and uses cycling as a bridge to unite our communities
CREATING SAFER ROADS AND STREETS

BD Paul
(RTMC - Road Traffic Law Enforcement Coordination Senior Manager)
31 October 2014
INTRODUCTION

Road Traffic Management Corporation – RTMC was established in 1999 through Section 3 of the Road Traffic Management Corporation Act, No20 of 1999. It commenced its operation in April 2005.

Aligned with Chapter 3 section 41(h) of the constitution: “Pooling of powers and resources and the elimination of the fragmentation of responsibilities on the road traffic management across the three levels of government done in a cooperative way with public interest as an underlying principle”.

Coordinate and Regulate Road Traffic Safety matters within the nine provincial Traffic authorities, eight Metro Police authorities and more than 200 local traffic authorities.

Manage a manpower of between 14 000 and 24 000 traffic officers excluding road traffic safety and NaTIS operators throughout the country.
NON MOTORISED TRANSPORT

- The poor section of the society use mostly walking and cycling for mobility hence the proliferation of informal settlements near places of work or along major corridors.
- Vulnerable Road Users
- Unsafe
- NRTA 93, No 93 of 1996 quite about non motorised transport.
- Stay animal problems
- Introduction of innovation and technology
## VEHICLE AND DRIVER POPULATION

<table>
<thead>
<tr>
<th>NO</th>
<th>Population</th>
<th>March 2012</th>
<th>March 2013</th>
<th>March 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Year-end vehicle population</td>
<td>10 332 696</td>
<td>10 741 892</td>
<td>11 127 925</td>
</tr>
<tr>
<td>2</td>
<td>Total no of drivers’ licenses issued as at:</td>
<td>9 794 810</td>
<td>10 271 066</td>
<td>10 766 228</td>
</tr>
<tr>
<td>3</td>
<td>Total no of PrDP’s issued at:</td>
<td>894 231</td>
<td>946 880</td>
<td>974 298</td>
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### STATUS OF SA ROAD SAFETY

<table>
<thead>
<tr>
<th>NO</th>
<th>VARIABLES</th>
<th>MARCH 2010</th>
<th>MARCH 2011</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Number of fatal crashes per year</td>
<td>10 948</td>
<td>10 845</td>
</tr>
<tr>
<td>2</td>
<td>Number of fatalities</td>
<td>13 923</td>
<td>13 802</td>
</tr>
<tr>
<td>3</td>
<td>% Fatalities per user group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drivers</td>
<td>30.1%</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Pedestrians</td>
<td>34%</td>
<td>33.4%</td>
</tr>
<tr>
<td></td>
<td>Passengers</td>
<td>36.1%</td>
<td>38%</td>
</tr>
<tr>
<td>4</td>
<td>% of all Contributory factors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human</td>
<td>83%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>Vehicle</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Road Environment</td>
<td>8%</td>
<td>9%</td>
</tr>
</tbody>
</table>
## Status of SA Road Safety

### No 5: Major Human Factor Contributions
- Excessive speed
- Pedestrian jay walking
- Dangerous overtaking
- Intoxicated driver

### No 6: Major Vehicle Factor Contributions
- Tyre burst
- Defective brakes
- Defective steering

### No 7: Top Three Road Factors
- Sharp bend
- Poor road surface
- Poor visibility

### No 8: Major Fatal Crashes per Crash Type
- Pedestrian
- Overturned vehicle
- Head-on-collisions
- Approach at an angle
- Multiple vehicle crashes
- Head-rear end
<table>
<thead>
<tr>
<th>NO</th>
<th>VARIABLES</th>
<th>MARCH 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Major Fatalities per Crash Type</td>
<td>Pedestrian</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overturned vehicle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head on collisions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hit and run</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head rear-end</td>
</tr>
<tr>
<td>10</td>
<td>Most fatal crashes per time of the day:</td>
<td>From 18h00 – 24h00</td>
</tr>
<tr>
<td>11</td>
<td>Most fatal crashes per day of the week:</td>
<td>Friday, Saturday and Sunday</td>
</tr>
<tr>
<td>12</td>
<td>Most fatal crashes per month of the year:</td>
<td>April, May, July, Aug, Sept, Oct and Dec</td>
</tr>
<tr>
<td>13</td>
<td>Most vulnerable age groups</td>
<td>25 –29 years</td>
</tr>
<tr>
<td>14</td>
<td>Most vulnerable gender</td>
<td>Mostly male</td>
</tr>
</tbody>
</table>
2014: % Fatalities per User Group

- Drivers: 29%
- Pedestrians: 33%
- Passengers: 38%
SNAPSHOT OF SA ROAD SAFETY STATUS

- In South Africa an average of more than 14 000 people (14 920 [2007]); (13 875 [2008]) and (13 768 [2009]) were killed in road traffic crashes between 2007 and 2009.

- With South Africa’s human population estimated at 47 850 700 (2007); 48 300 000 (2008) and 49 991 300 (2009) it means that the number of people killed per hundred thousand population has been 31.18 (2007); 28.73 (2008) and 27.54 (2009).
SNAPSHOT OF SA ROAD SAFETY STATUS

• The world population datasheet 2008 estimated the world human population at 6.7 Billion, and a road traffic fatality figure of 1.2 Million people per year, it therefore means that the average fatalities per hundred thousand humans in the world is 17.91.

• Therefore South Africa’s road traffic fatality rate of approximately 28 per 100 000 is way above the world average.
FINANCIAL BURDEN TO THE ECONOMY

Total cost of crashes for fatalities and injuries is R 306 billion per annum nationally.

- Cost to Road Accident Fund: R 12 billion + per year.
- Insurance cost: R 11 billion on parts only
- Hospitalization cost: 25% of trauma admission are road traffic crash casualties
Challenges

- Bluntly put, the roads in South Africa are not safe;
- The cars on South African roads are not safe and
- The road users do not comply with the rules of the road.

- It is therefore required of South Africa to make roads safe by creating safer roads infrastructure as well as produce through various methods safer road users and regulate the road traffic environment for safer road usage.
STRATEGIC APPROACH

• Develop strategic interventions targeting the to different segments of society (Poor and Rich).

• Address attitude and behaviour of all road users especially the young to instill voluntary compliance.

• Together with the Department of Basic Education we seek to instill safer road conduct by teaching road safety as part of the Life Skills / Orientation subject.

• Promote cyclist safety by advocating the use of cyclist helmets; bicycle lights and reflective gear for cyclists.
• Develop a vigorous, hard-hitting integrated and harmonized national traffic enforcement strategy.

• Incorporate non-formal road safety education programmes in schools through the Road Safety Schools Debates and Participatory Educational Techniques programmes.

• Adopt Cluster approach

• Reduction of the number of traffic fatalities of vulnerable non-motorised road users

• Enhancement of traffic legislation that recognize NMT an alternative transport mode.
WHAT IS THE RTMC DOING?

- Shareholder Committee supportive and sitting regularly
- New Board Chaired by Adv. Majavu
- New CEO Adv. Makhosini Salomon Msibi
- Provincial and Stakeholders consultation
- New Strategy
- 21st Century Cadre Curriculum from NQF4 to NQF 6
- Up-skilling of the National Intervention Unit
- Traffic Officers posts advertised
- Funding made available to Provinces for road safety
- Establishment of Road Safety Councils
- Partnership with Stats SA
- National Road Safety Strategy
- 365 Road Safety Plan
CONCLUSION

• On-going monitoring and evaluation by Shareholders’ Committee, the Department of Transport and the Parliamentary Portfolio Committee on Transport.

• Strengthening relations with provinces and ensuring synergy amongst all role players.

• Coordinated effort with the provinces on programmes that seek to halt and reverse the road traffic carnage on South African roads led by the same shareholders.
KE A LEBOHA