



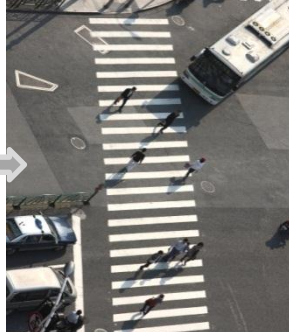
**The floor is yours:  
Innovative cities that are  
reclaiming the roads for  
all users**

Marisa Cruz  
**Livable Cities Symposium**  
Izmier 20.11.14

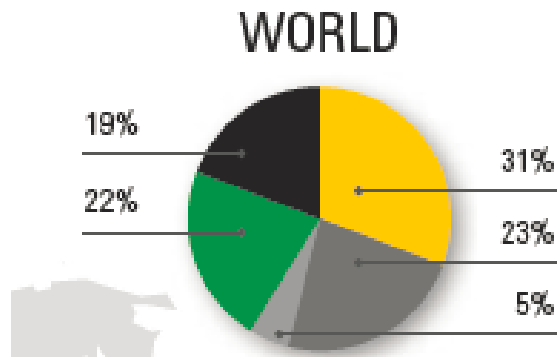


**EVONIK**  
INDUSTRIES

# How do you move around the town?



# Half of the world's road traffic deaths occur among vulnerable road users



- Motorcyclists: 23%
- Pedestrians: 22%
- Cyclists: 5%

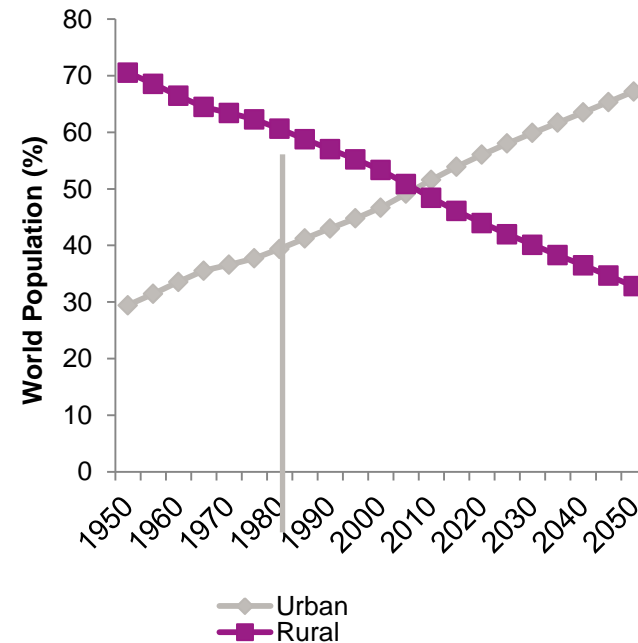
# By the end of 2008, half of the world's population was living in urban areas



## According to the UN Department of Economic and Social Affairs:

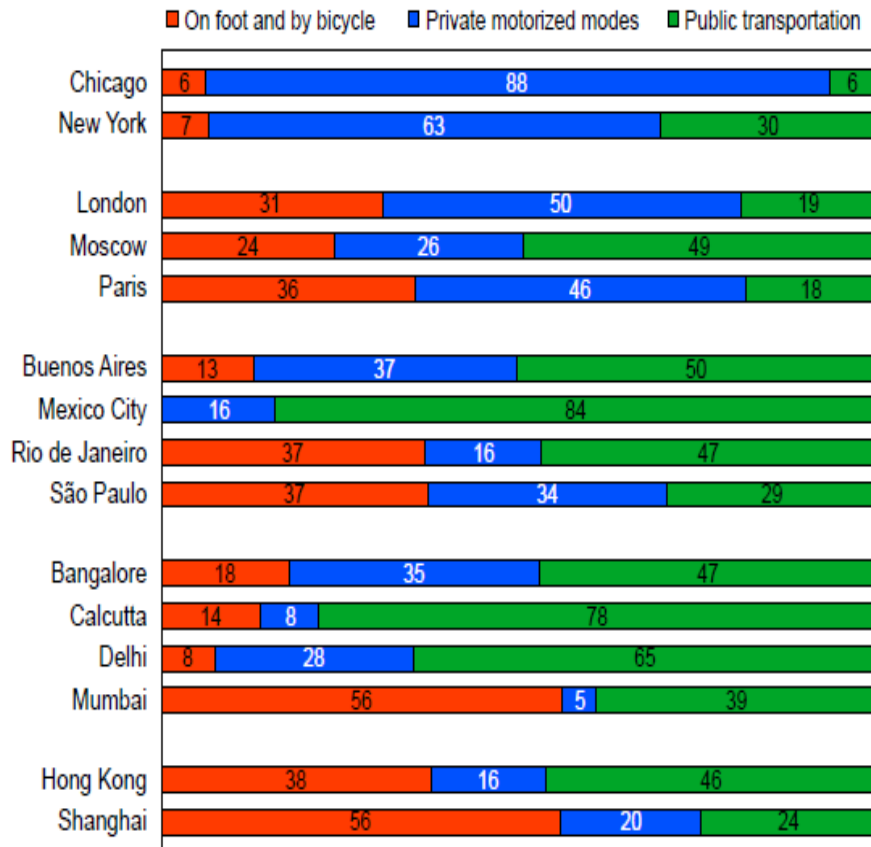
- By the end of 2008, half of the world's population lived in urban areas
- Urban areas are expected to absorb population growth
- Until 1970 Tokyo and New York were megacities
- In 2011 the world counted 23 megacities!
- By 2050 it should be between 60-100 megacities!

**Urbanization Projection**



# Sustainable transportation in megacities is a big challenge

## Different transport modes tend to be part of urbanization



- High population density:
  - Density: 4,900 per Km<sup>2</sup> on average
  - Amsterdam: 493 per Km<sup>2</sup>
- Increase in vehicles ownership
- Reduced travel speed, increase in congestion and pollution

# Global megatrends demand innovation in road delineation



**Growing population  
& accidents increase**



**Urbanization &  
accessibility**



**Life cycle costs &  
climate  
protection**



**Mobility & smart  
cars**

## MEGATRENDS

**Need of innovation and creativity!**

# DEGAROUTE® around the world – Future trends of today

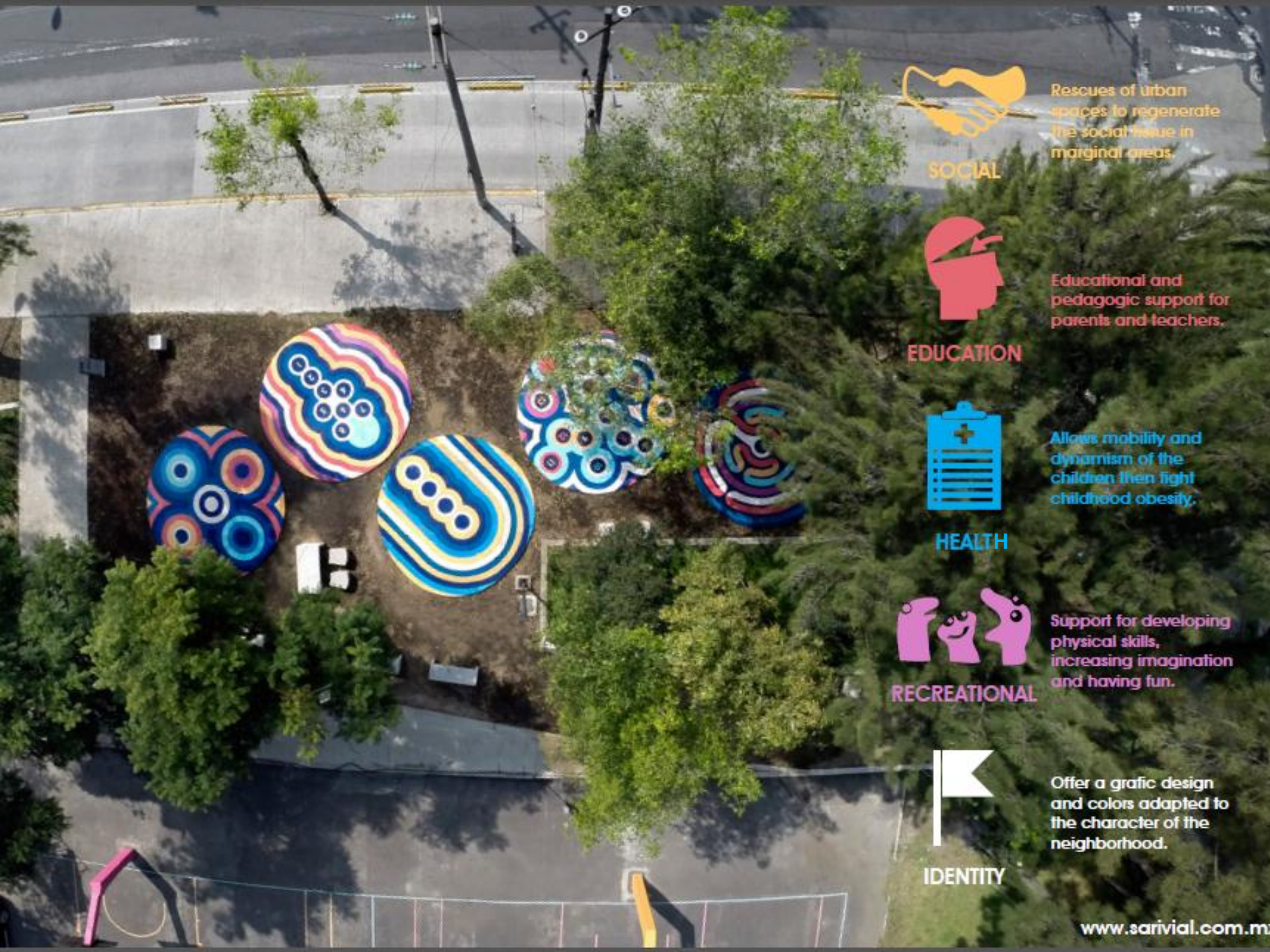


# Mexico City, Mexico

- **Growth of urban centers**
- **Expansive use of cars as a predominant means of transportation**
- **Poor quality of public spaces resulting in an unsafe and unpleasant urban environment**

**Example of a commendable initiative...**





### SOCIAL

Rescues of urban spaces to regenerate the social tissue in marginal areas.



### EDUCATION

Educational and pedagogic support for parents and teachers.



### HEALTH

Allows mobility and dynamism of the children then fight childhood obesity.



### RECREATIONAL

Support for developing physical skills, increasing imagination and having fun.



### IDENTITY

Offer a graphic design and colors adapted to the character of the neighborhood.



# Graz, Austria

- **Regeneration** of the Jakomini district via **Urban Development Program**
- **Attract** residents and tourists once again, and to get **craftspeople** and **artists** to settle there

**New visual frame developed through a „Call for Ideas“ competition among architects!**





[www.janser-castorina.at](http://www.janser-castorina.at)



# Zurich, Switzerland

- How to creatively become the center of the attention during a public event crowded with information and competition?

**The „floor is ours“ can be literally lived in special occasions...**



# Bali, Indonesia

- Have you ever been surrounded by a swarm of bees?
- Indonesia has the largest number of motorcycles in the world: 77 million units.
- How to “organize“ them better on the roads?









- An average conflict improvement of of 40%!!

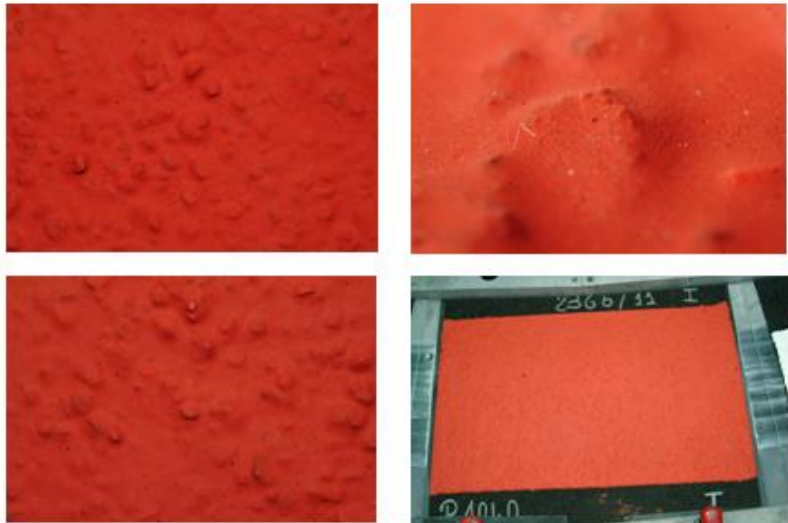
**The material used has to be durable, skid resistant and colour stable!**

# AETEC Turntable Test Visual Consistency

- Outstanding performance after 8,000,000 wheel passages,
  - ✓ **which corresponds to simulating 8 years life cycle at 40.000ADT.**

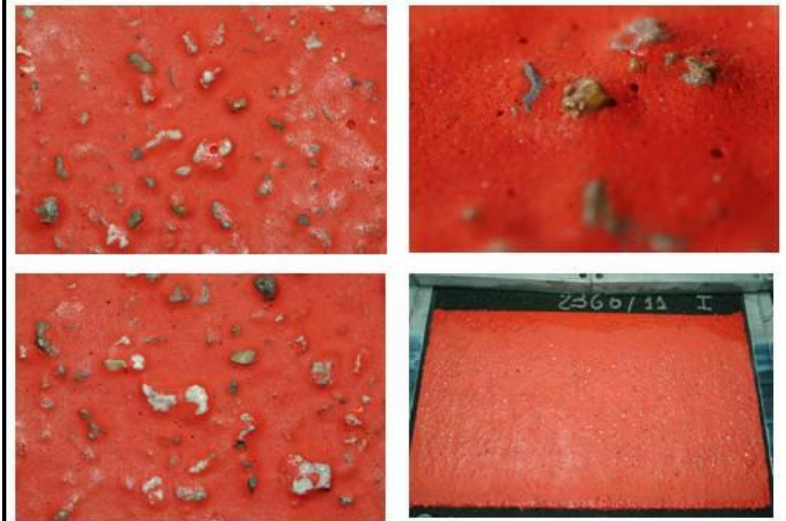
## Visual consistency:

Pictures taken at the beginning  
(prior to test run)



## After 8,000,000 wheel passages

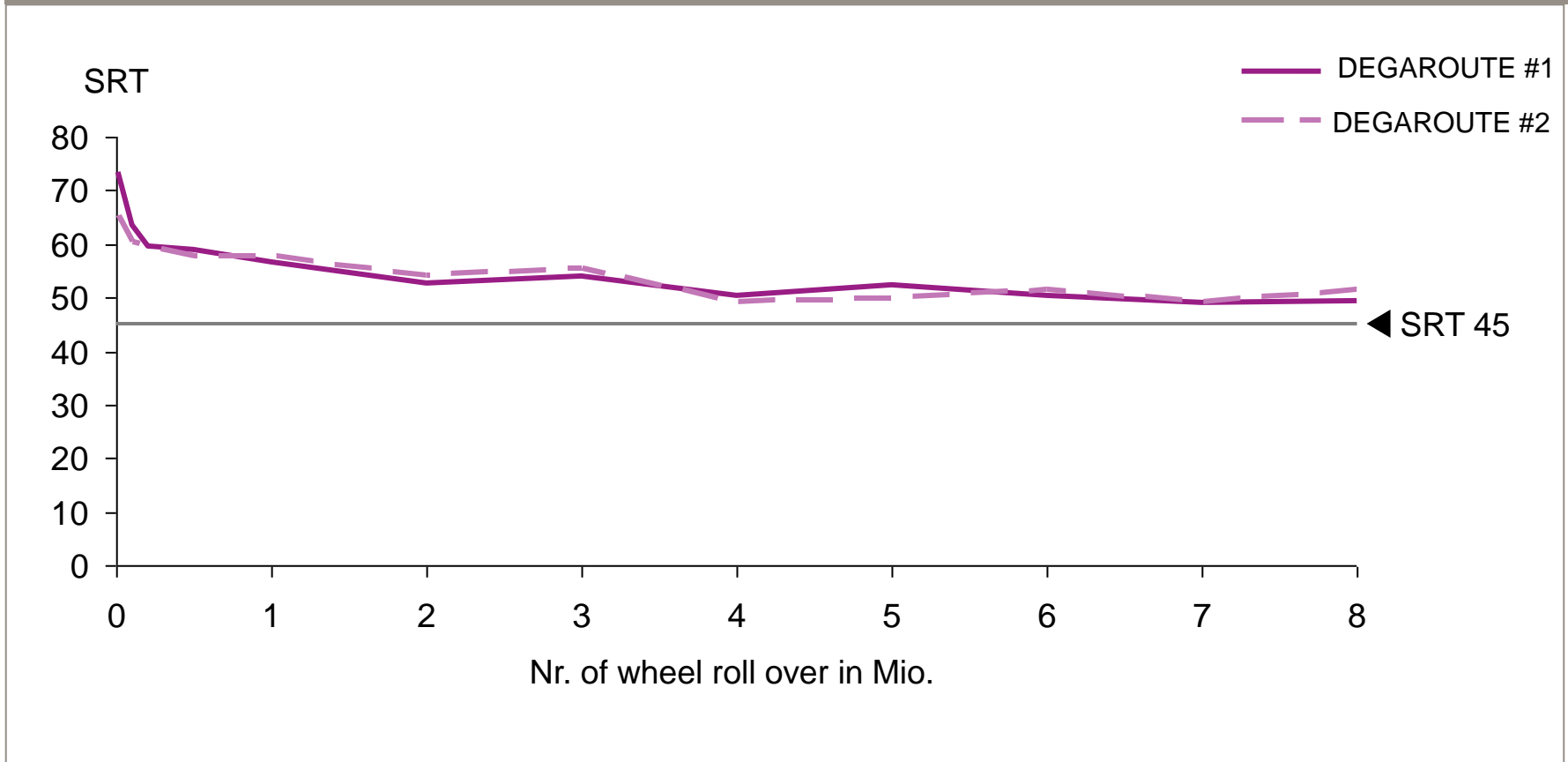
Corresponds to the “double” of the  
traffic load of “Approval Class P7”!



# AETEC Turntable Test Skid Resistance



Comparison of SRT value of DEGAROUTE® based RTU Area Marking



**Even after 8 Million wheel passages, minimum SRT requirements of 45 have been met**

# The floor is ours! Let us be creative and reclaim the streets for all users...



~ 40% CO<sub>2</sub> reduction



> 2x higher durability



Infinity of applications

> 50

Experience and innovation

Thank you!

[marisa.cruz@evonik.com](mailto:marisa.cruz@evonik.com)



**EVONIK**  
**INDUSTRIES**