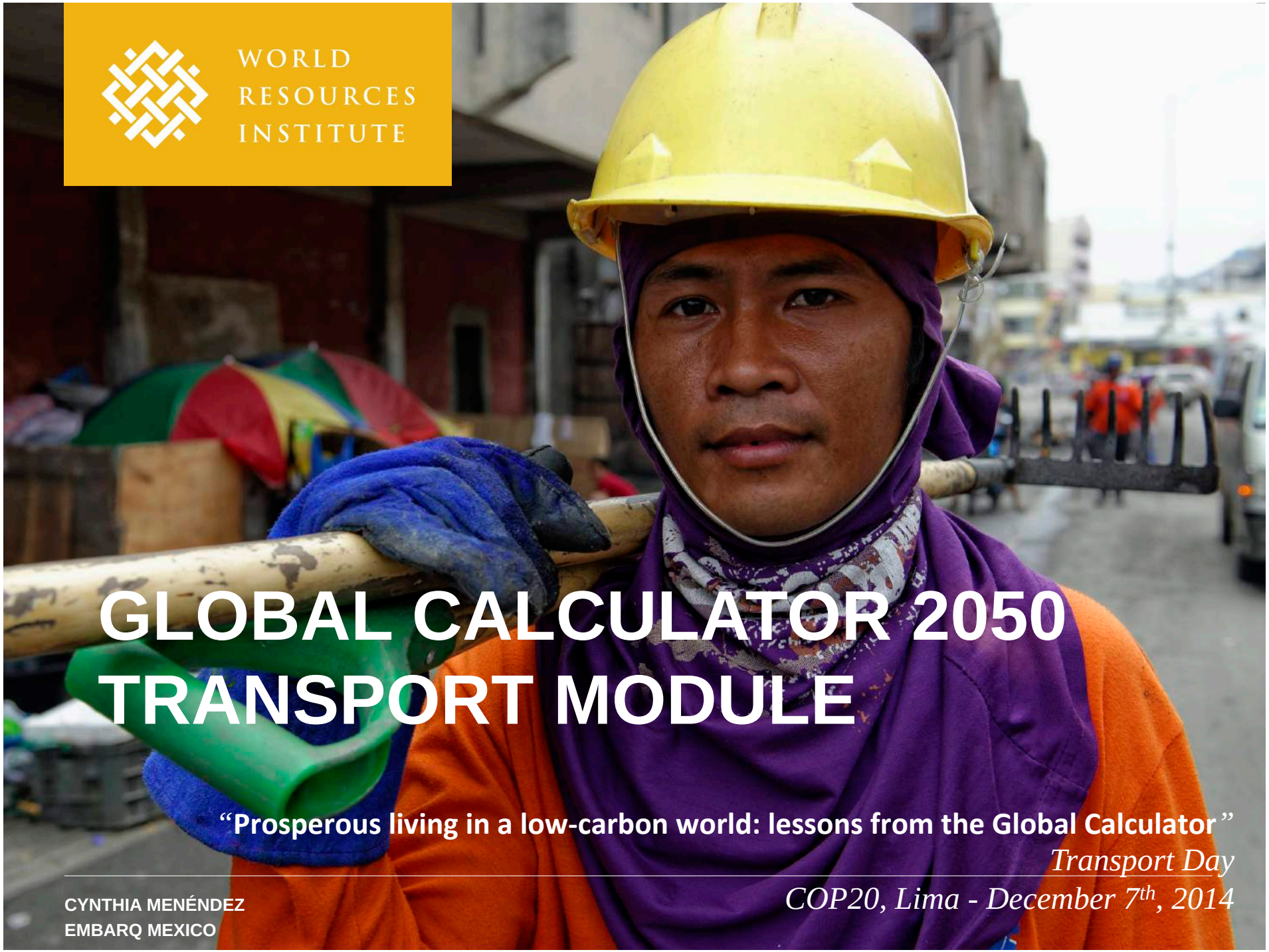

WORLD RESOURCES INSTITUTE

GLOBAL CALCULATOR 2050 TRANSPORT MODULE

"Prosperous living in a low-carbon world: lessons from the Global Calculator"

Transport Day

COP20, Lima - December 7th, 2014

CYNTHIA MENÉNDEZ
EMBARQ MEXICO

Transport Day 2014 • Lima

Global Calculator

Global Calculator 2050 Transport module

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CLIMACT

ctsEMBARQ México

LSE The London School of Economics and Political Science

Imperial College London

国家发展和改革委员会能源研究所 Energy Research Institute, National Development and Reform Commission

EY Building a better working world

Climate Media Factory

Presented by: Cynthia Menéndez

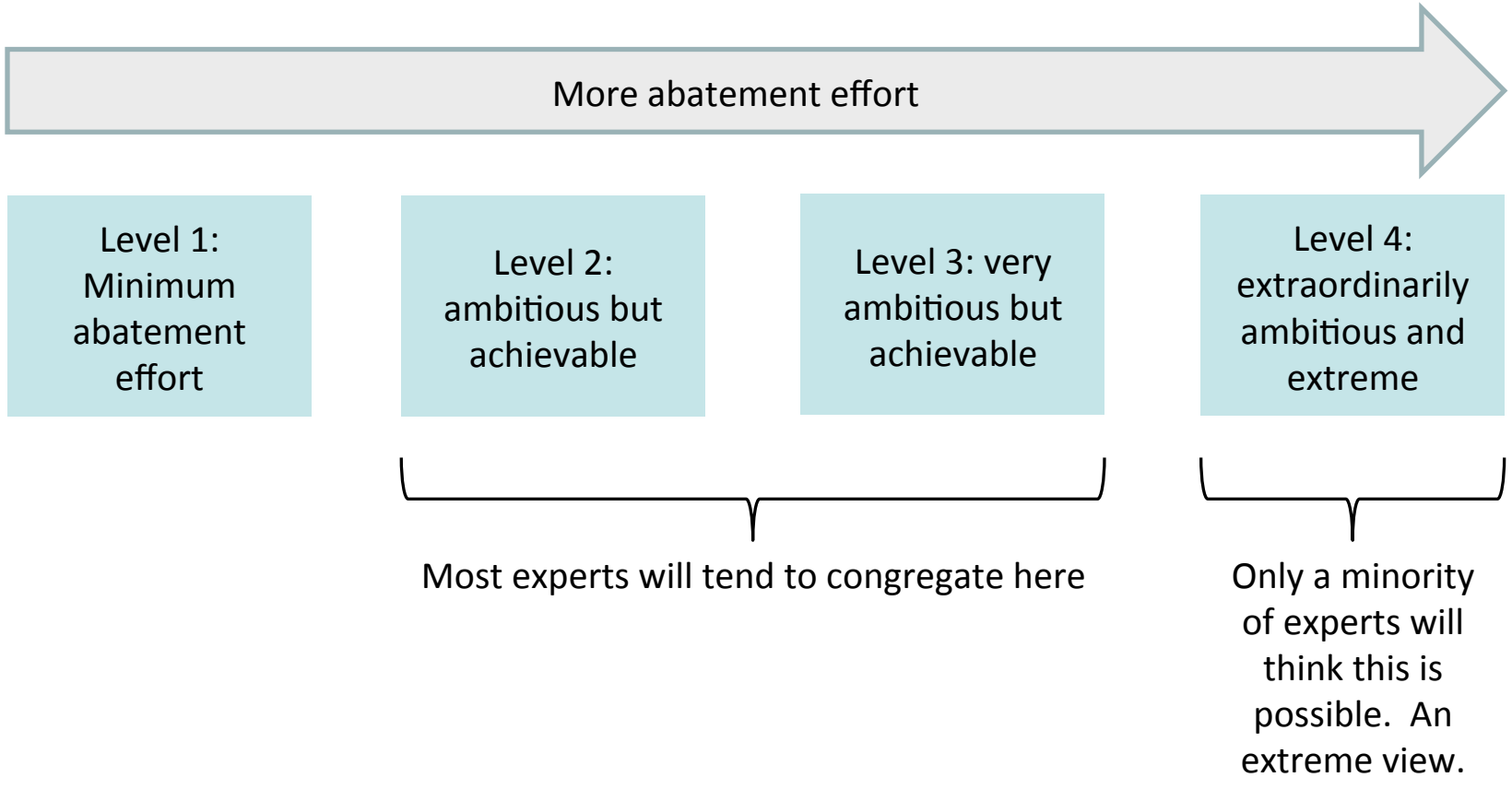
Global Calculator

Global
Calculator

Levels 1 to 4 represent the least/most abatement effort that experts believe possible

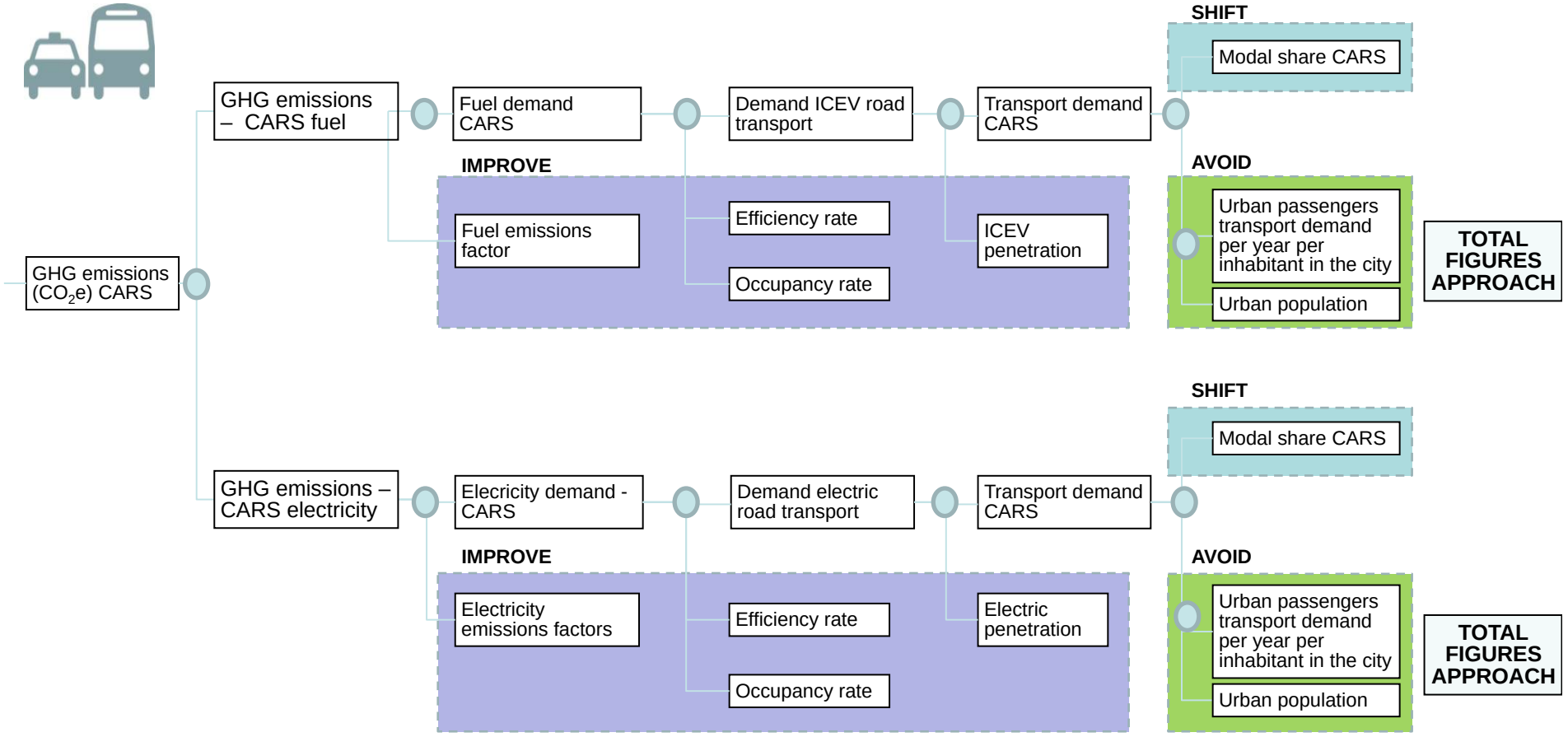
Global Calculator

The level 1-4 range is simply a synthesis of what a wide range of credible experts believe could be possible by 2050.



Structure of the URBAN Passengers transport modelling

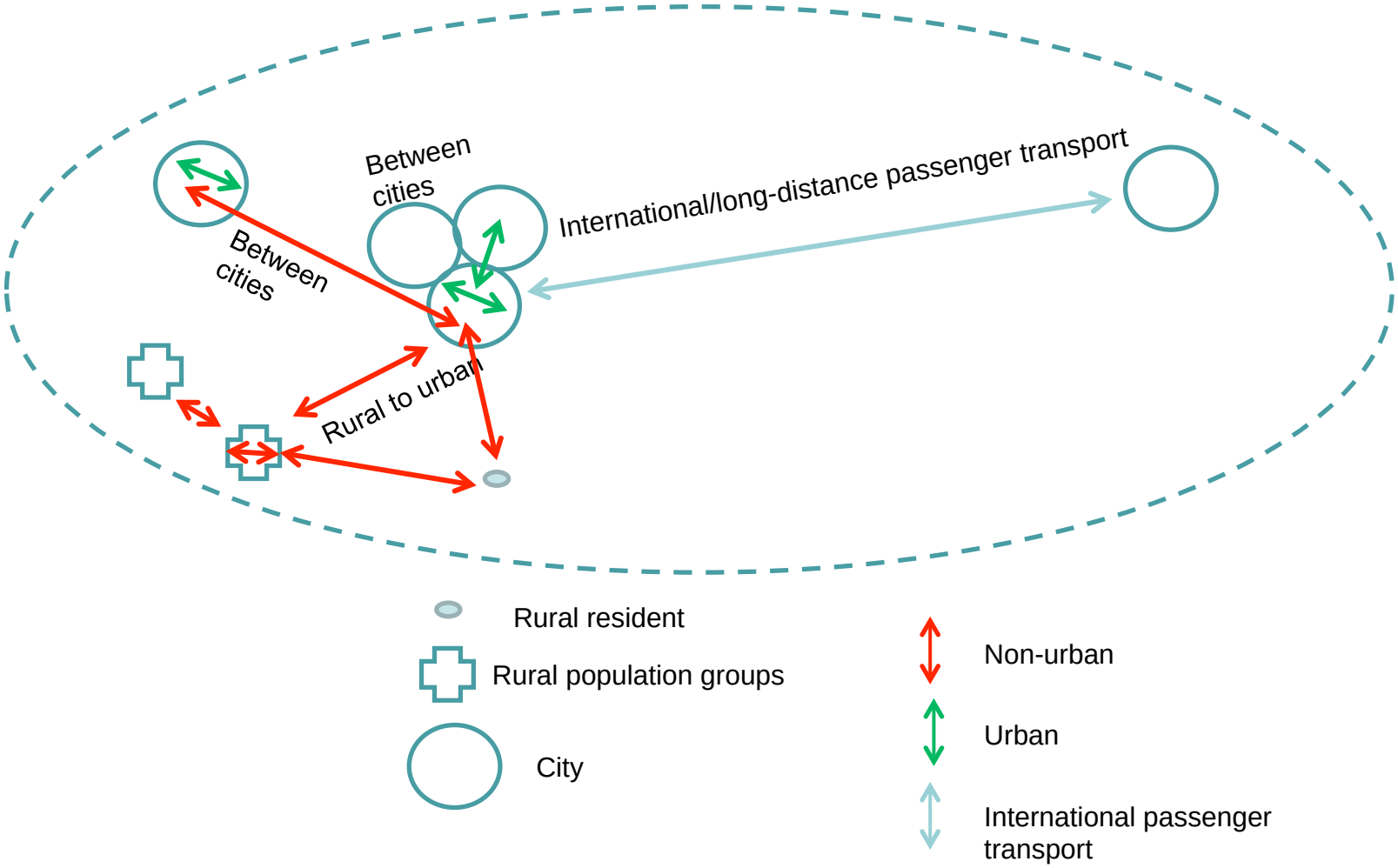
Global Calculator



SOURCE: Global Calculator team

Transport sub-sectors illustrated

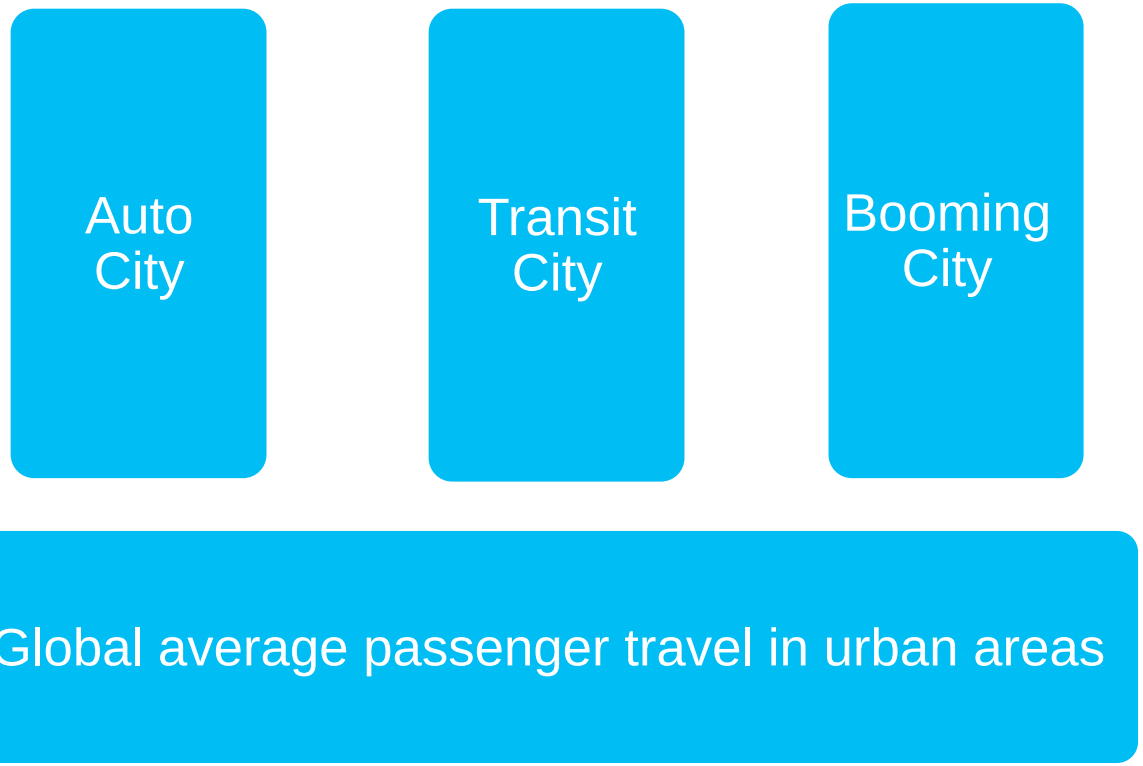
Global Calculator



Urban passenger travel modelling

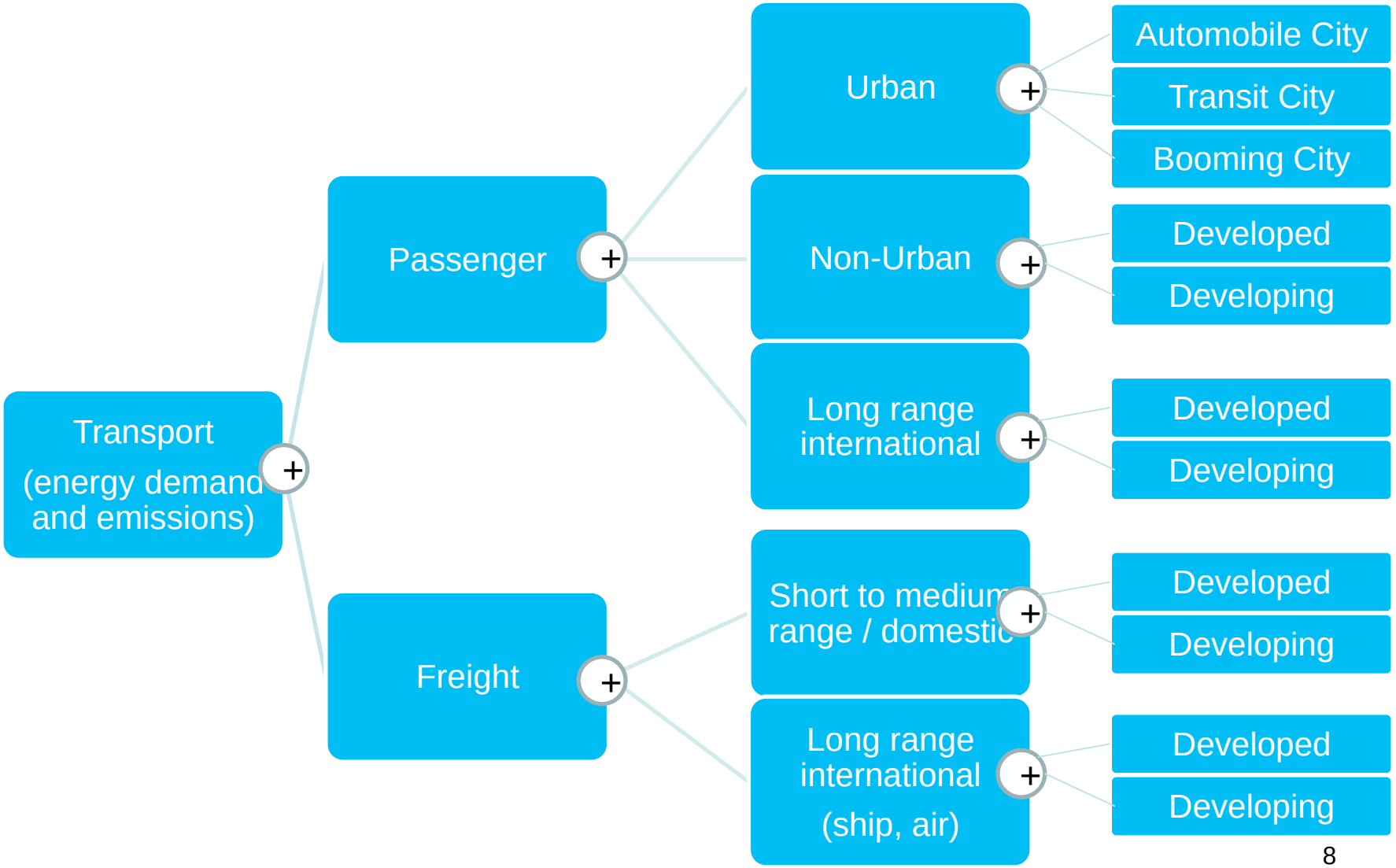
Global Calculator

City types and levels are based on: City form and projected future growth, existing mode shares within each city type, trip distances within each city type, countries/population of each category



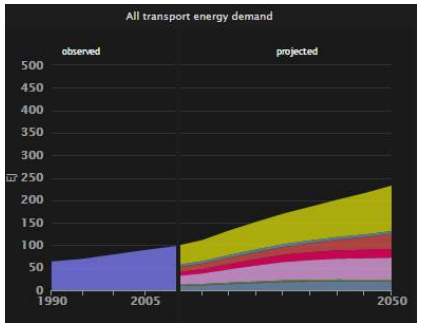
High level structure of the Transport modelling

Global Calculator

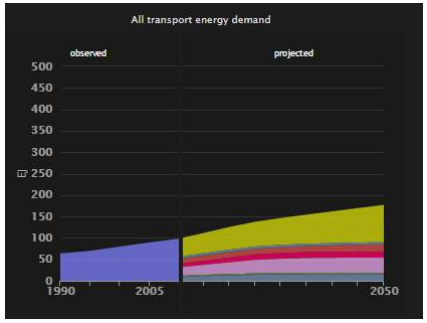


Transport energy demand levels based on LIFESTYLE levers

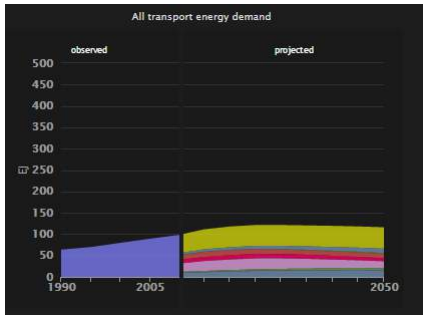
Global Calculator



All lifestyle levers at level 1
Energy demand ~x2.5



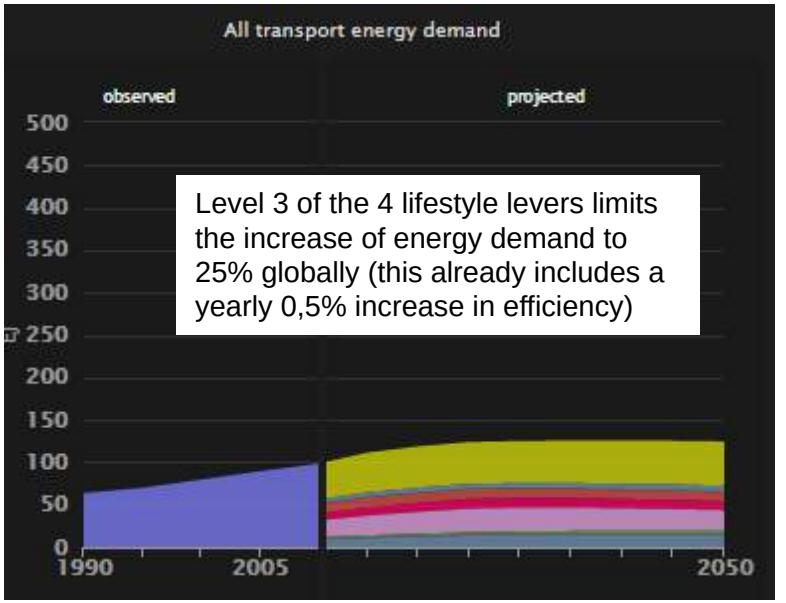
Passenger and freight distance levers to level 3 both contribute similarly to less than double energy demand



Adding the impact of mode share to level 4 stabilizes energy demand

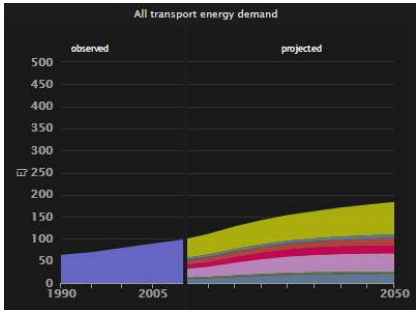
Occupancy lever does not add much more

Passenger Transport demand levels are massively affected by more “lifestyle” related levers.

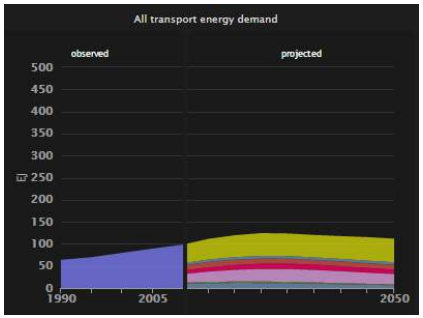


Transport energy demand levels based on TECHNICAL levers

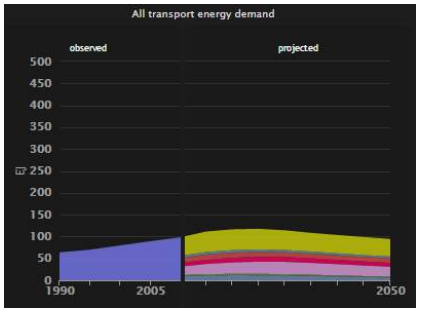
Global Calculator



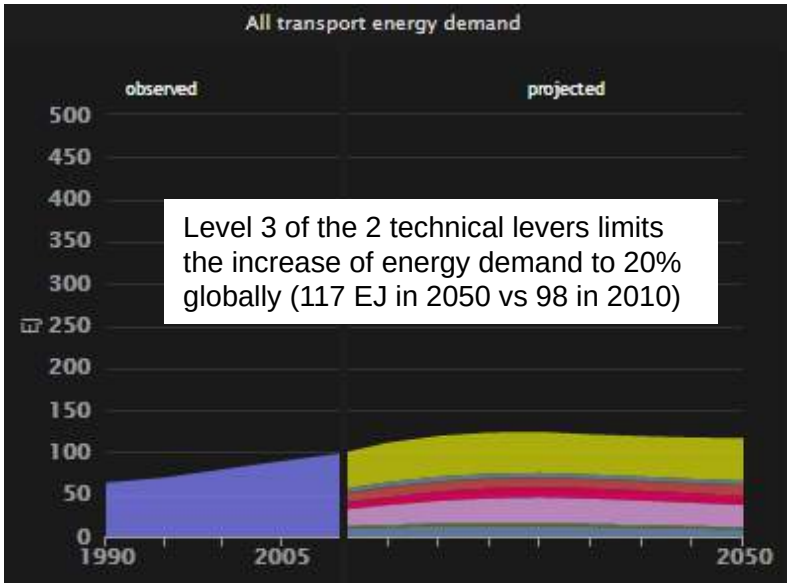
All technical levers at levels 1
Energy demand ~x1.75



Efficiency lever to level 4 almost stabilizes demand on its own, but requires ~3% annual improvements (70% in 40 years)



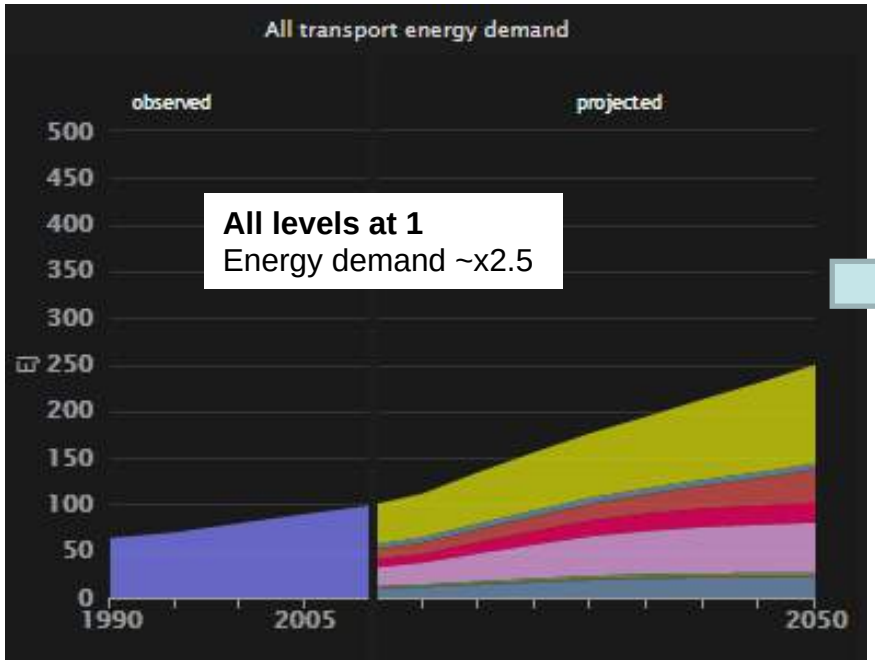
Adding the impact of electrification to level 4 does not have a massive impact on energy demand, but of course changes the energy vector

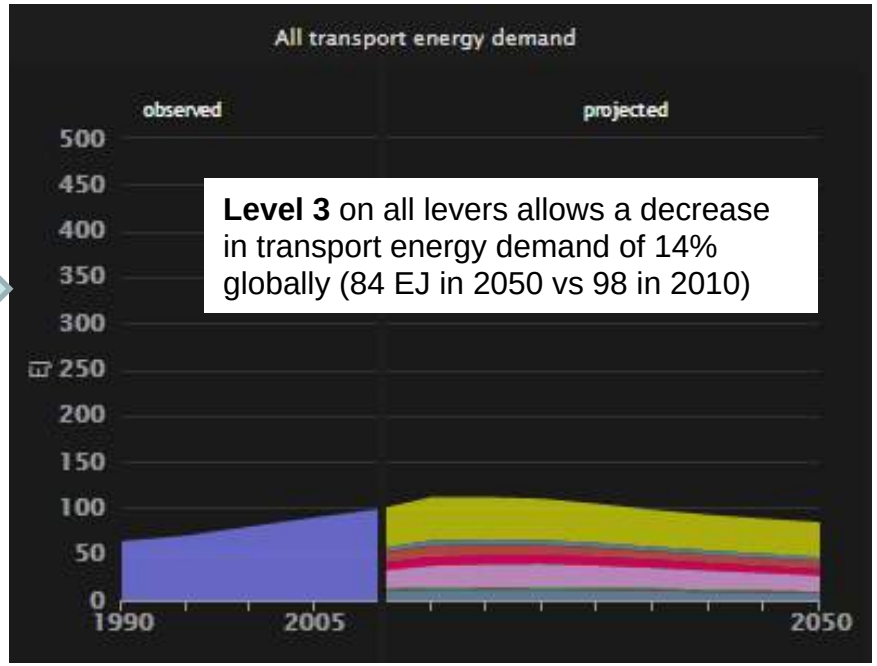


Transport energy demand levels based on all levers

Global Calculator

Massive impact of Transport levers, even at level 3
Passenger/freight distance, mode and efficiency are the main drivers of energy demand





¡GRACIAS!

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