

Future Road Users' Needs

Lucia CRISTEA

EIP



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Migration and Urbanization



- Europe - largest population of international migrants in the world, approx. 76 million).
- Current trends in migration will reduce the population decline, without fully compensating the low fertility levels.



- Europe - one of the most urbanized regions - 73% of population is in urban areas.
- In Europe, population in urban areas is expected to surpass 80% by 2050.

Urban population



Rural population

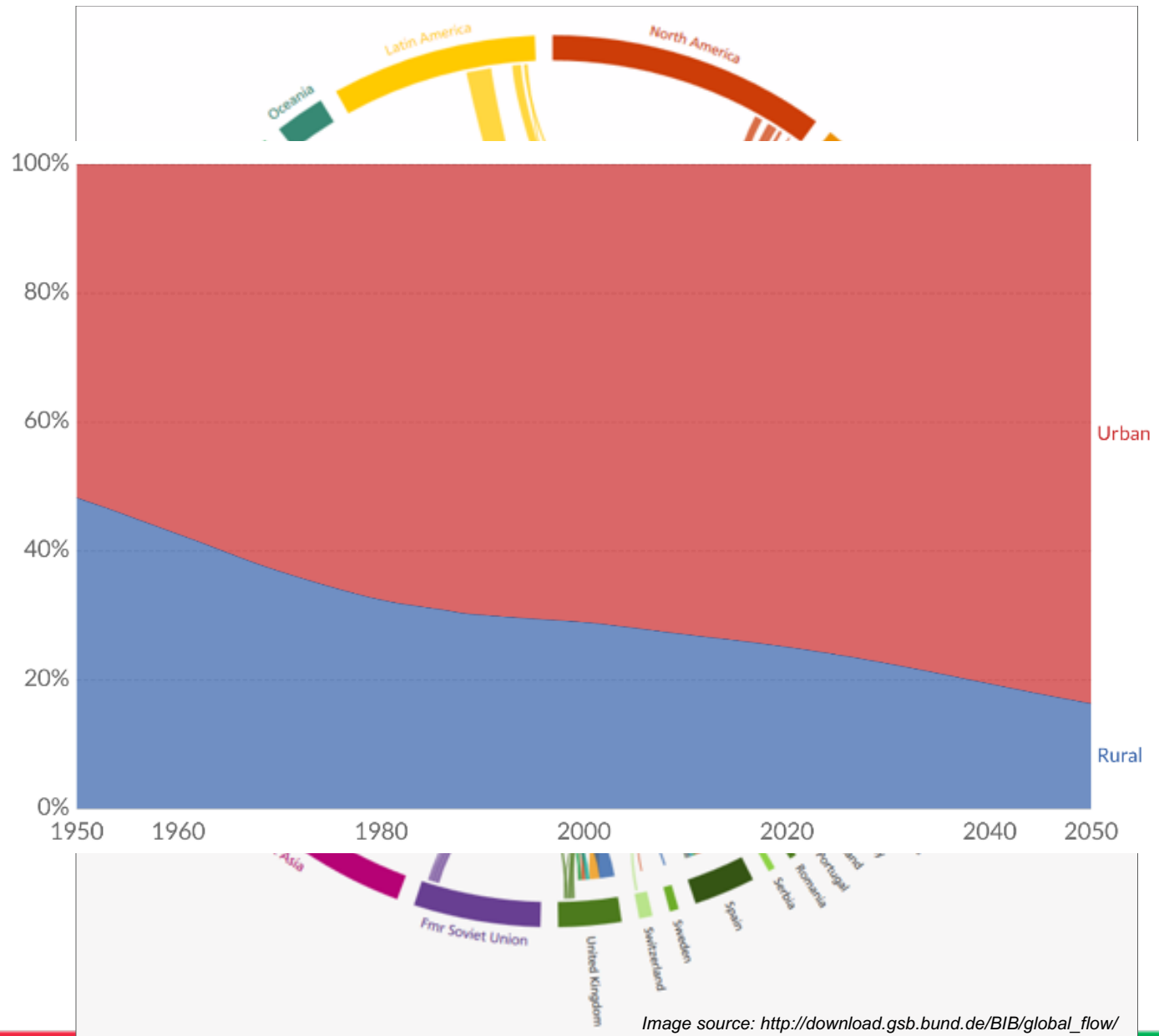


Image source: http://download.gsb.bund.de/BIB/global_flow/

Population – EU-28 - 2020

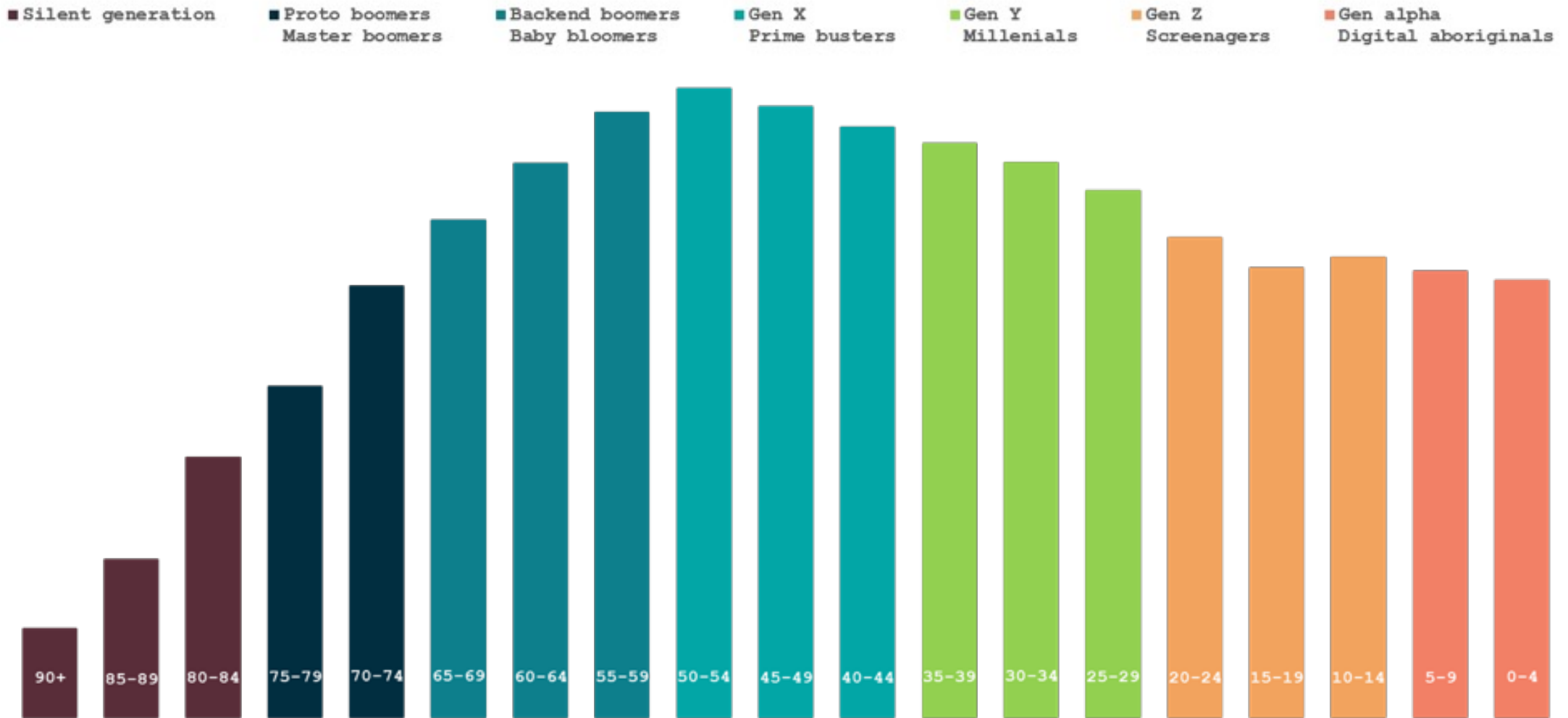


Image source: author's

Population – EU-28 - 2050

Backend boomers
Baby bloomers

Gen X
Prime busters

Gen Y
Millenials

Gen Z
Screenagers

Gen alpha
Digital aboriginals

New Generations
Higher level of technology

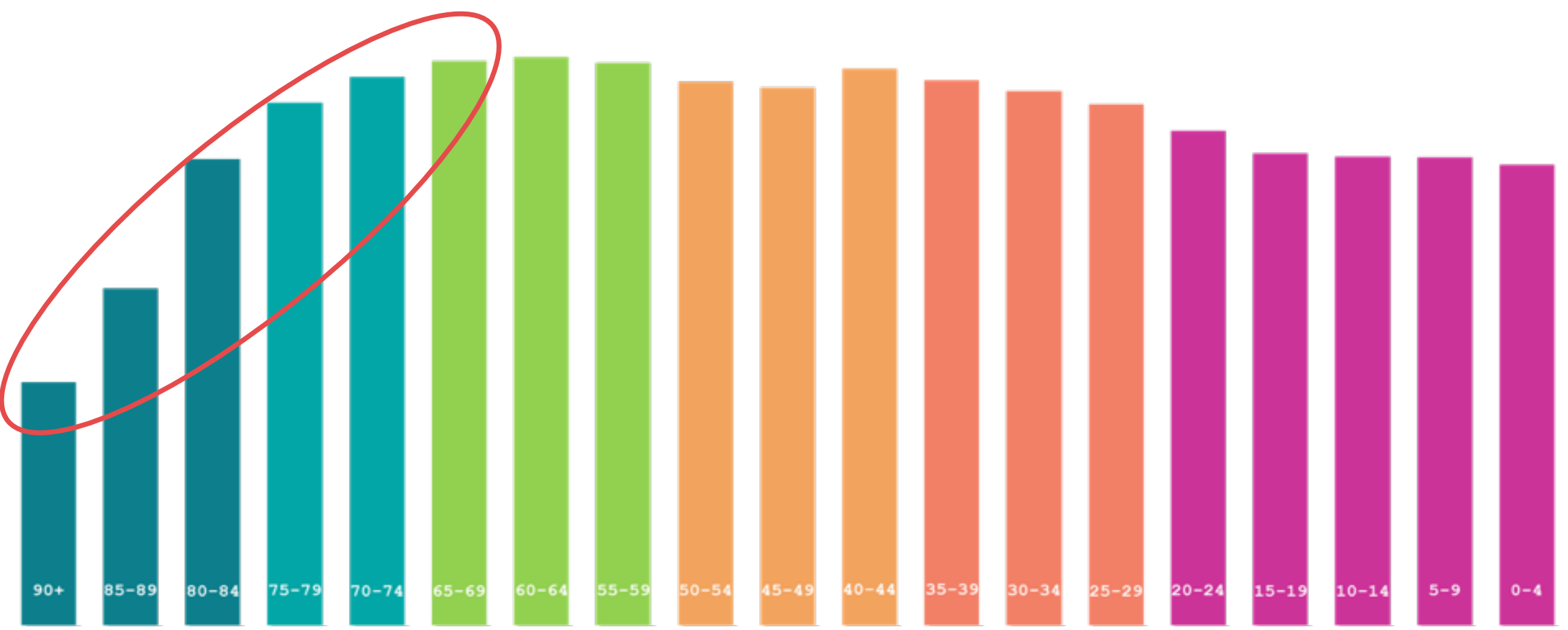
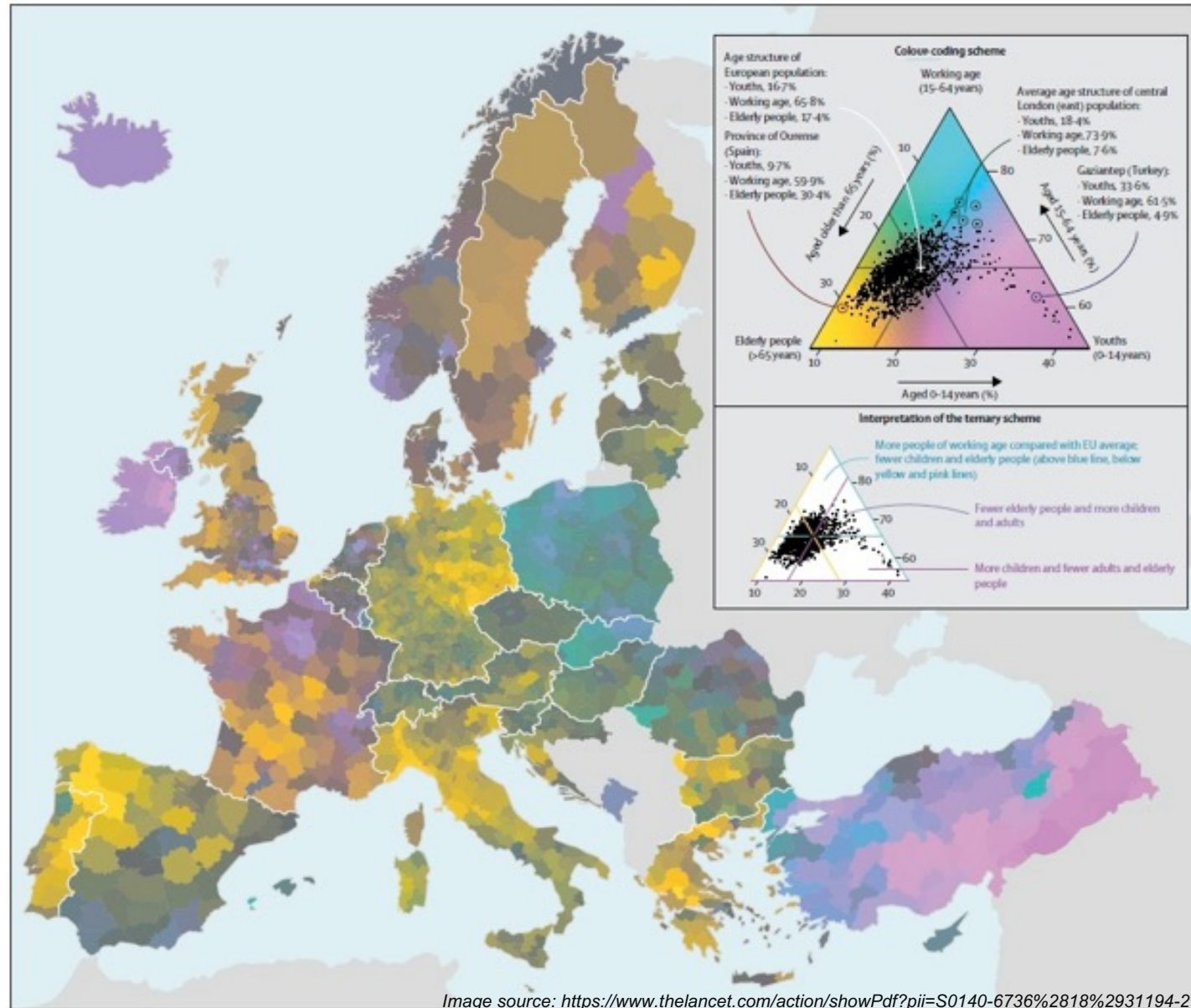


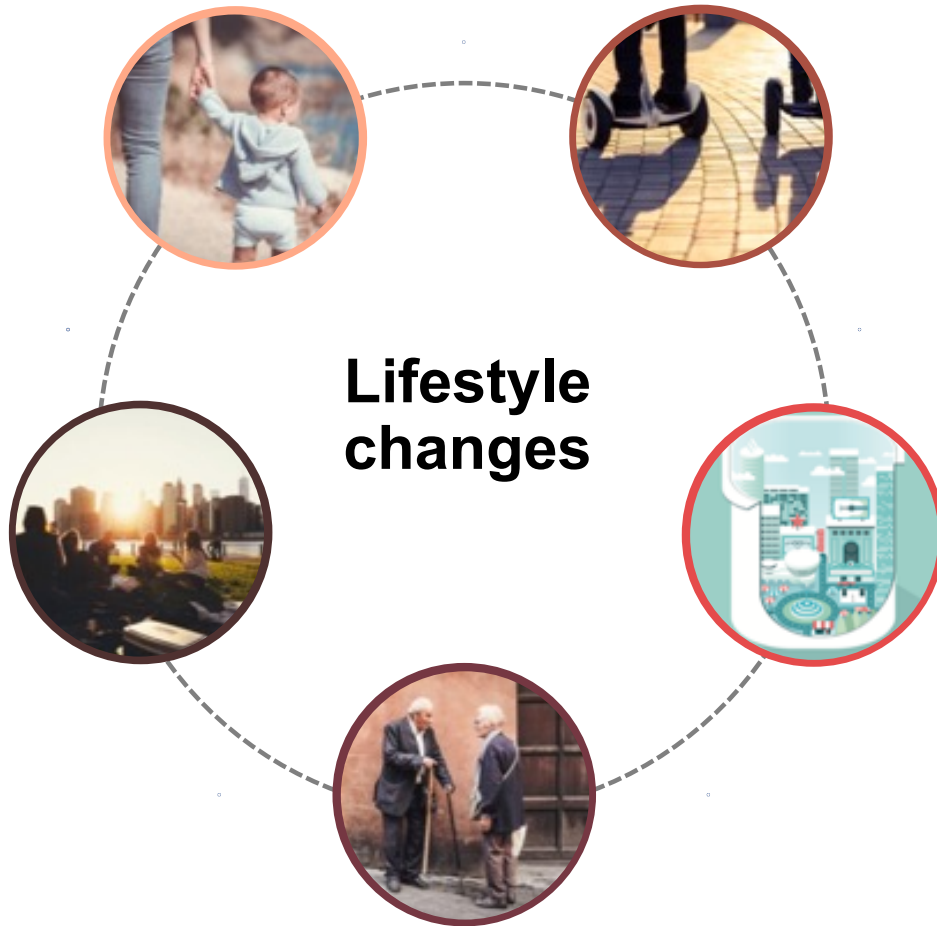
Image source: author's

Ageing population

- Ageing - core long-term structural development for EU-28.
- Population aged 60 or over is expected to increase from 25% in 2017 to 35% in 2050 and to 36% in 2100.
- Old-age dependency ratio is expected to reach 39% by 2030 and expected to stabilize around 50% after 2050.



Lifestyle changes



01 Somewheres vs. anywheres

02 Increased percentage of disabled population

03 Trading place and the rise of the “progressive province”

04 Micro-mobility

05 Uncoupled society

New technological developments

- Internet access and coverage
- Smartphone ownership
- Internet of Things
- 3D printing technology
- Augmented reality



Future phygital activity patterns → Work

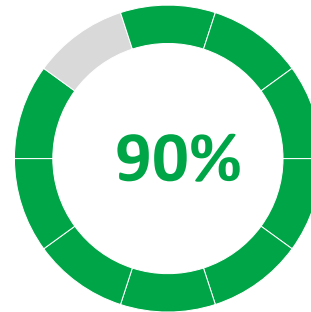
Flexible schedule leading to a better life-work blend is highly attractive

Lengthy commute and associated time and financial costs can be partially or completely eliminated

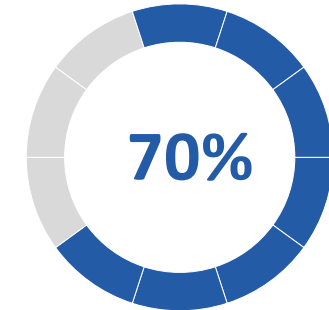
Teleworkers groups - often mobile people with high level of car use and wide radius of action

People partially working at home - more daily trips than other groups

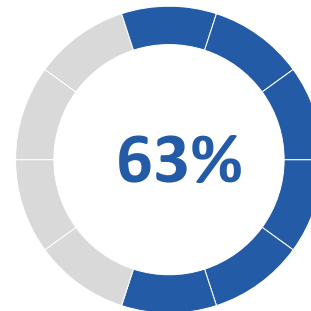
People have more business-related trips



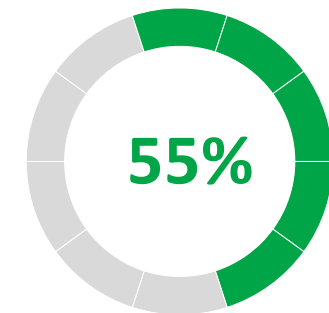
Remote workers
Plan to work remotely for the rest of their lives



Remote workers
- remotely full time



Companies
have remote workers



Hiring managers
agree remote work is becoming more common than 3 years ago

Future phygital activity patterns → Health

Virtual healthcare

Virtual medical visits

Remote health monitoring

Advantageous for remote and underserved communities, where people suffer from access to health care

48%

Consumers use health-related mobile or tablet apps

75%

Consumers believe technology is important for managing health

Image source: <https://www.vdo360.com/how-telemedicine-is-changing-healthcare/>

Future phygital activity patterns → Social



Substitution effect on physical mobility – leading to a decrease in travel (stronger)

Enhancement effect on physical mobility – leading to more travel due to telecommunications use (weaker)

Supplement travel – increasing levels of access and social participation without increasing levels of travel

Redistribute travel – changing either the time of day or locations for travel



Enrich travel – travel time being used fruitfully ('positive utility')

Overall **increases number of trips and trip distance** – substitutes non-motorized short trips with longer distance motorized ones

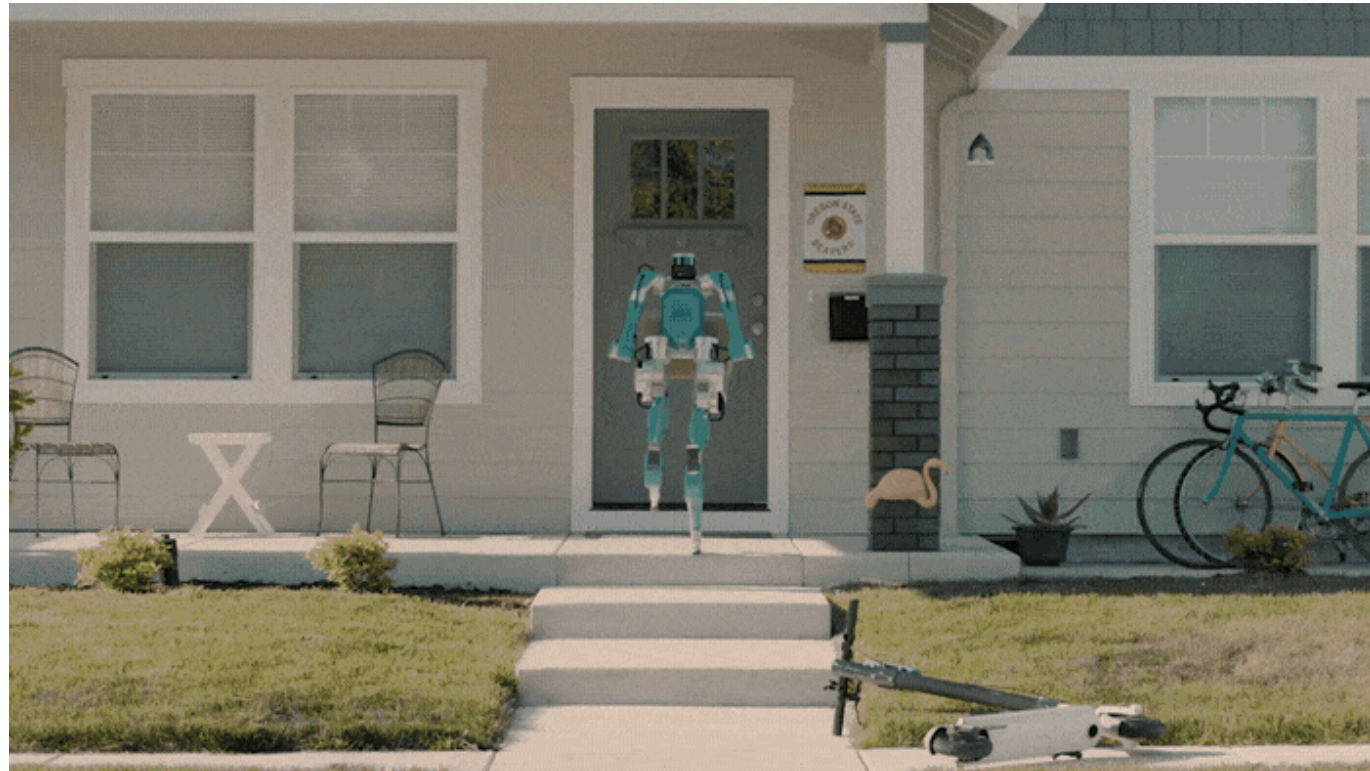
Image source: author's

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Future logistics

- Logistics demand for road space is likely to grow;
- Demand will be concentrated, especially, to cities and towns;
- 3D printing is considered a breakthrough technology, but not close to replacing mass production
- Shift to electrical logistic vehicles
- Demand for additional charging capacity at the road-side
- New, highly autonomous technologies for urban deliveries are being developed.



Future stakeholder engagement practices

Augmented and virtual reality have the potential to bring new stakeholder engagement practices:

- **VR platforms** which allow users to meet and interact (under research at Facebook)
- **AR boardroom and office tools** enable a more interactive virtual working space reducing need to travel to public consultations
- **AR** can be used for **visualisation of urban and building design**, by walking through the future development.



Image source: author's license Canva

Future governance

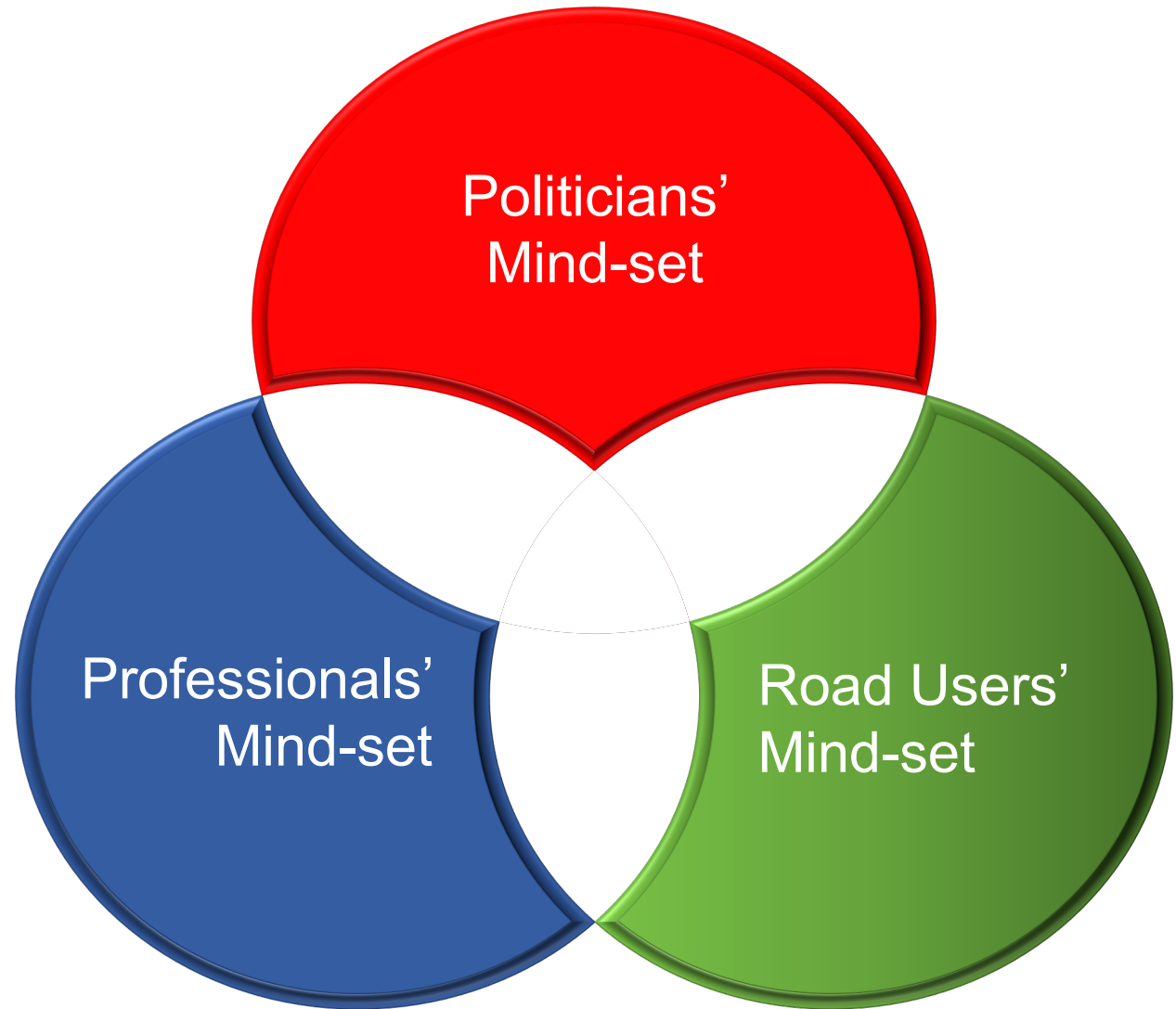
Public administrations need to be **pro-active** and **manage change**

Future professionals mind-sets:

- More transparency
- Cooperative mind-sets
- Sharing not owning
- High digital literacy – intuitive technology
- Phygital experiences



3 MIND-sets



FUTURE ROAD USER NEEDS































































							
More attractive public spaces							
Seamless mobility integration							
Regulations for new transport modes							
Safe streets for all							
Cyber security for mobility							
Personalised mobility							
Adapted parking policy to future mobility							
Alternative fuels provision							
Increased capacity for public administration							
Embracing new operating/business models and new modes of governance							
Environmental quality							
Vision and validate							

Image source: author's own design



Lucia Cristea

lucia.cristea@eiproject.eu



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