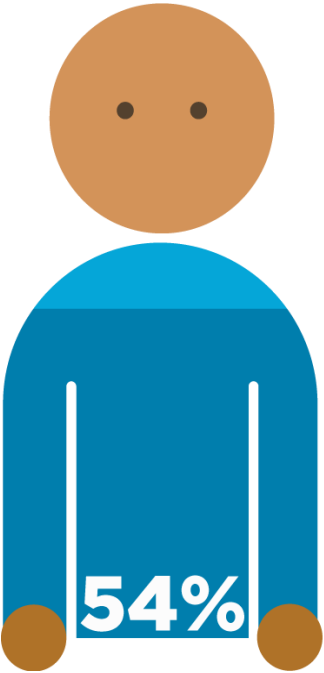
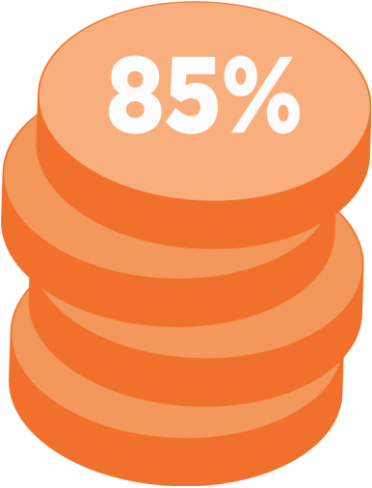


CITIES: A UNIQUE CONTEXT



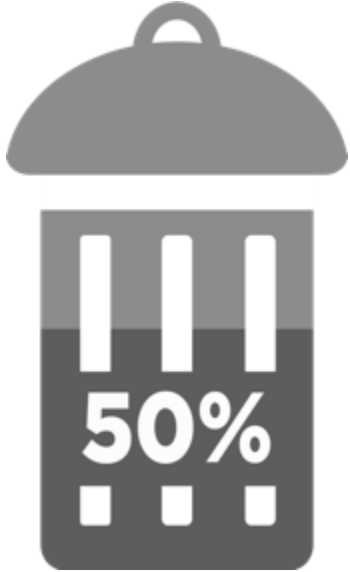
World's population



Global GDP



Natural resource consumption



Global waste generation



GHG emissions

Source: Ellen MacArthur Foundation - Cities in the circular economy: An initial exploration

STRUCTURAL WASTE IN THE BUILT ENVIRONMENT

CONSTRUCTION



- **10-15%** of building material wasted during construction
- **0-0.5%** productivity increase per year in most European countries 1990-2015, whereas 2% per year achieved in some countries

UTILISATION



- **60%** of European offices are not used even in working hours
- **50%** of residential dwellers report living in too much space

USAGE



- **20-40%** of energy in existing buildings can be profitably conserved
- Passive building standards at or near profitability for most new-build segments, but still only constitute a minority of buildings

END OF LIFE



- **54%** of demolition materials landfilled, while some countries only landfill 6%
- Most materials unsuitable for reuse as they contain toxic elements

URBAN PLANNING

- 50% of most city land dedicated to infrastructure
- 11 million households experience severe housing deprivation
- Congestion cost 2% of GDP in many cities

THE MOBIUS PROJECT



Image credit: Exploration Architecture