

Future Proofing Cities

Creating Communities Fit for the Future

Nick Roberts, Atkins North America

ICMA Conference Presenter



“*Shakespeare wrote ‘What is the city, but the people?’ As engineers and designers the challenge is irresistible and immediate to work with cities around the world to support them in meeting the future needs of all of their people.*”

Uwe Krueger
Chief Executive Officer, Atkins

10%

lived in cities in 1900

50%

lived in cities in 2007

75%

will be living in cities in 2050



ATKINS



**FUTURE
PROOFING
CITIES**

ICMA

ATKINS GLOBAL

Atkins is one of the world's leading design, engineering and project management consultancies.

We have the depth and breadth of expertise to respond to the most technically challenging and time-critical infrastructure projects and the urgent transition to low carbon economies.

In 2013 Atkins is celebrating 75 years in business.



NORTH AMERICA

In North America we provide infrastructure planning, engineering, construction management, environmental consulting, urban planning, architecture and programme management services to state and local government clients, federal agencies and private businesses.



Hoover Dam, USA



Protecting coastal cities from hurricanes and tropical storms – Florida, USA

AFRICA



New water sources Lilongwe and Blantyre – Malawi



Gautrain Rapid Rail Link – South Africa

ENERGY

Our Energy business operates across multiple geographies with our main centres in the UK and North America. We provide engineering and project management services and are engaged in, and actively growing, our capability for all aspects of the developing energy market with the allied issues of climate change, sustainability and energy security.



Gallopier Wind Farm Offshore Substation Platform – UK



International Thermonuclear Experimental Reactor, ITER – France

UNITED KINGDOM

We deliver engineering and technically integrated design, together with project and cost management services, to a wide range of clients in the public, regulated and private sectors. Our areas of operation include water, environment, education, aerospace, defence and infrastructure design as well as significant activity in transportation.



Crossrail – London



London Olympics 2012

EUROPE

Our European business comprises operations in Denmark, Norway, Sweden, Poland, Portugal and Ireland.



Copenhagen Metro Denmark

ASIA PACIFIC

In our Asia Pacific business we provide engineering, planning, urban design, architectural and rail design services. In mainland China our focus is on urban planning, together with architectural and landscape architectural design.

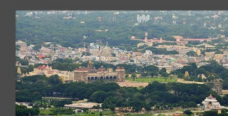


Livable CBD – Australia



Managing Urban Water Catchments – China

INDIA



Low Carbon City Development – India



East-West Corridor BRT – Delhi, India

MIDDLE EAST

In the Middle East we provide a full range of design, engineering and project management services for buildings, transportation and other infrastructure programmes from our eight centres across the region.



Dubai Metro – Dubai, UAE



ATKINS



FUTURE
PROOFING
CITIES

ICMA

THE URBAN CHALLENGE

80%

of the world's population already live in areas with high threat to water security

60%

of the world's ecosystems are already either degraded or used unsustainably



95%

of food production is highly dependent on oil

11%

of the world's remaining natural areas could be lost by 2050



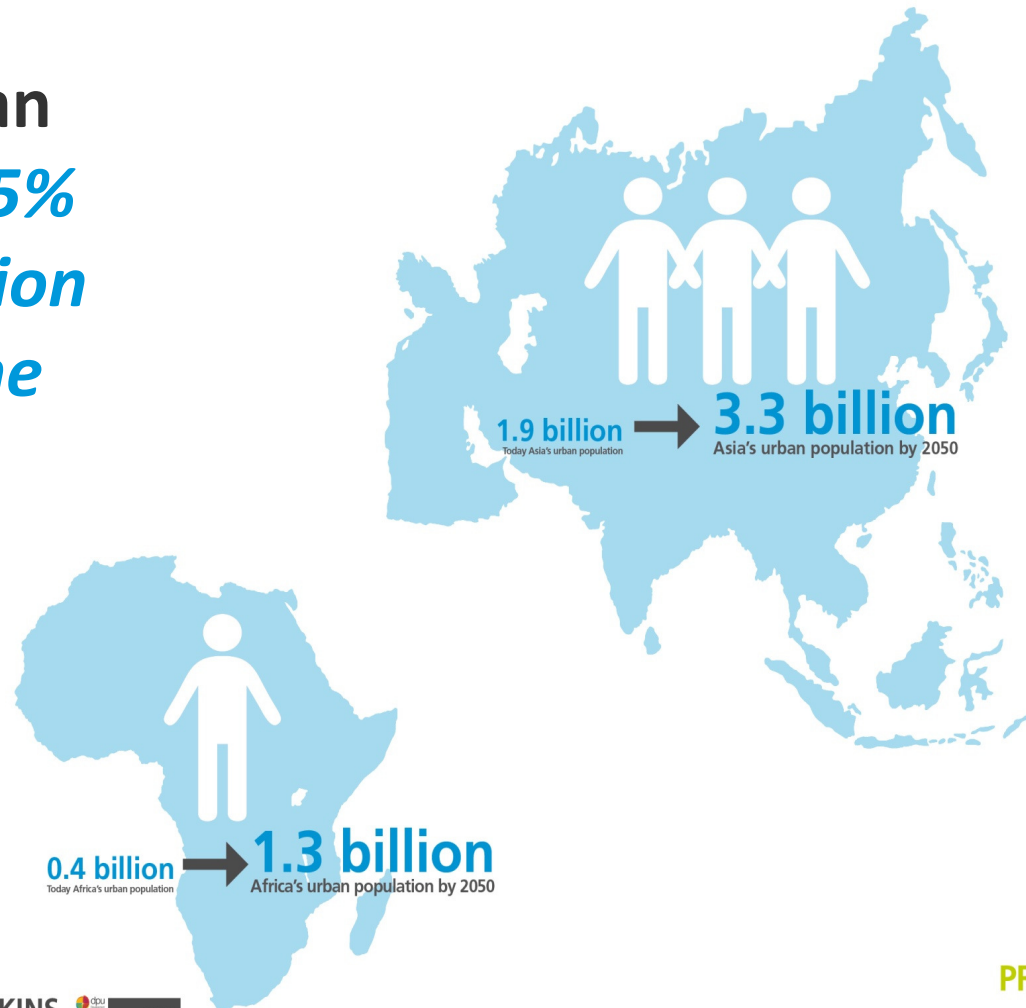
ATKINS



**FUTURE
PROOFING
CITIES**

RAPID URBANIZATION

We already live in an urban world, but **95% of future urbanisation will take place in the developing world**



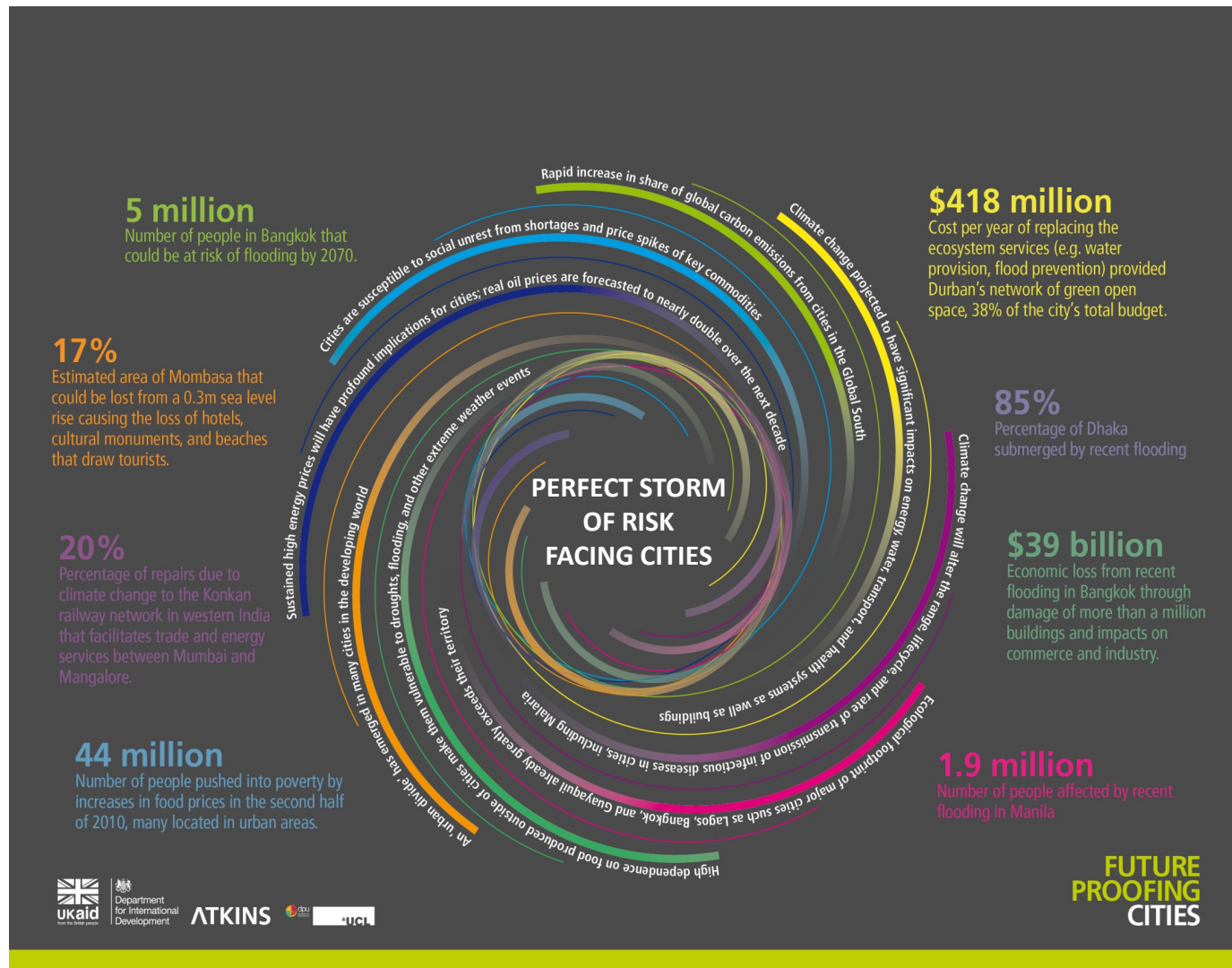
ATKINS



FUTURE
PROOFING
CITIES

ICMA

THE RISKS FACING URBAN AREAS



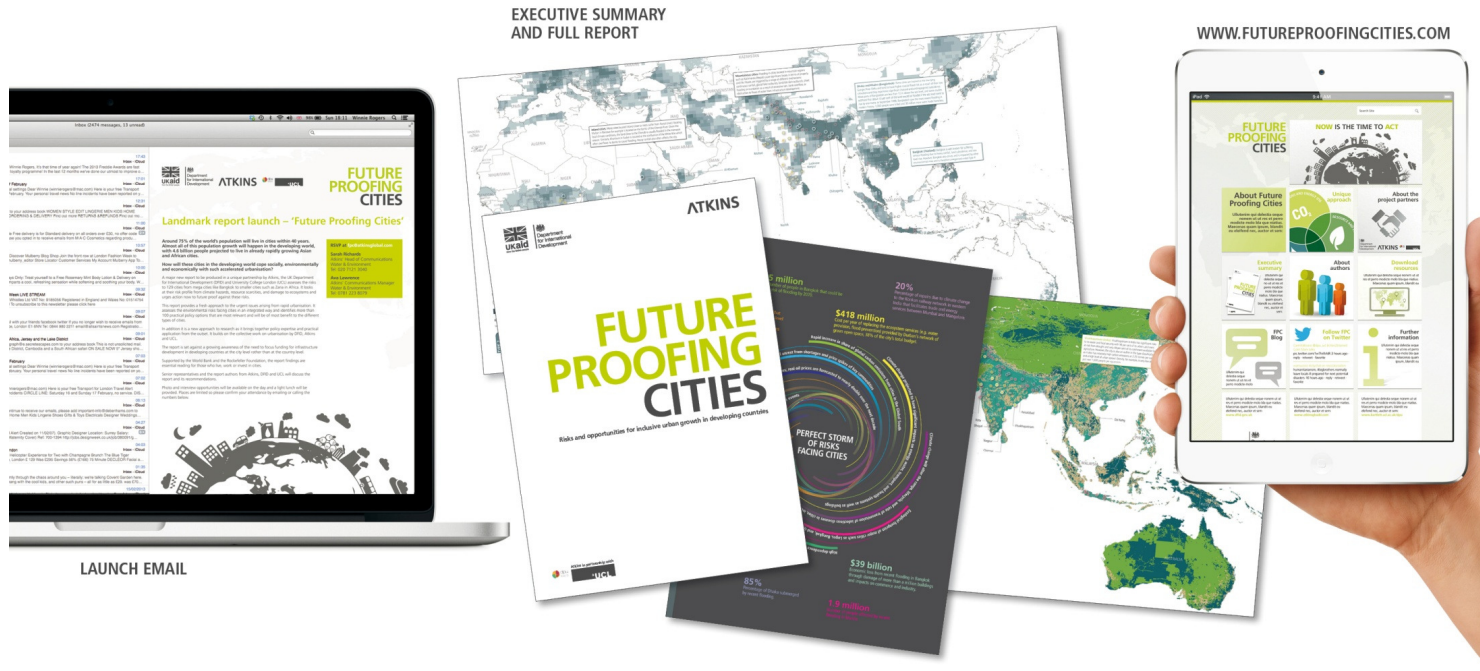






FUTURE PROOFING CITIES

THE FUTURE PROOFING CITIES REPORT



EXECUTIVE SUMMARY
AND FULL REPORT

WWW.FUTUREPROOFINGCITIES.COM

LAUNCH EMAIL



FUTURE
PROOFING
CITIES

ICMA

WHAT IS FUTURE PROOFING CITIES?

Future proofing cities is about utilising and developing the capabilities of cities to respond to environmental risks (e.g. climate hazards, resource scarcities, and damage to ecosystems) in a way that catalyses social and economic prosperity.

ROLE OF SOFT AND HARD INFRASTRUCTURE



Department
for International
Development

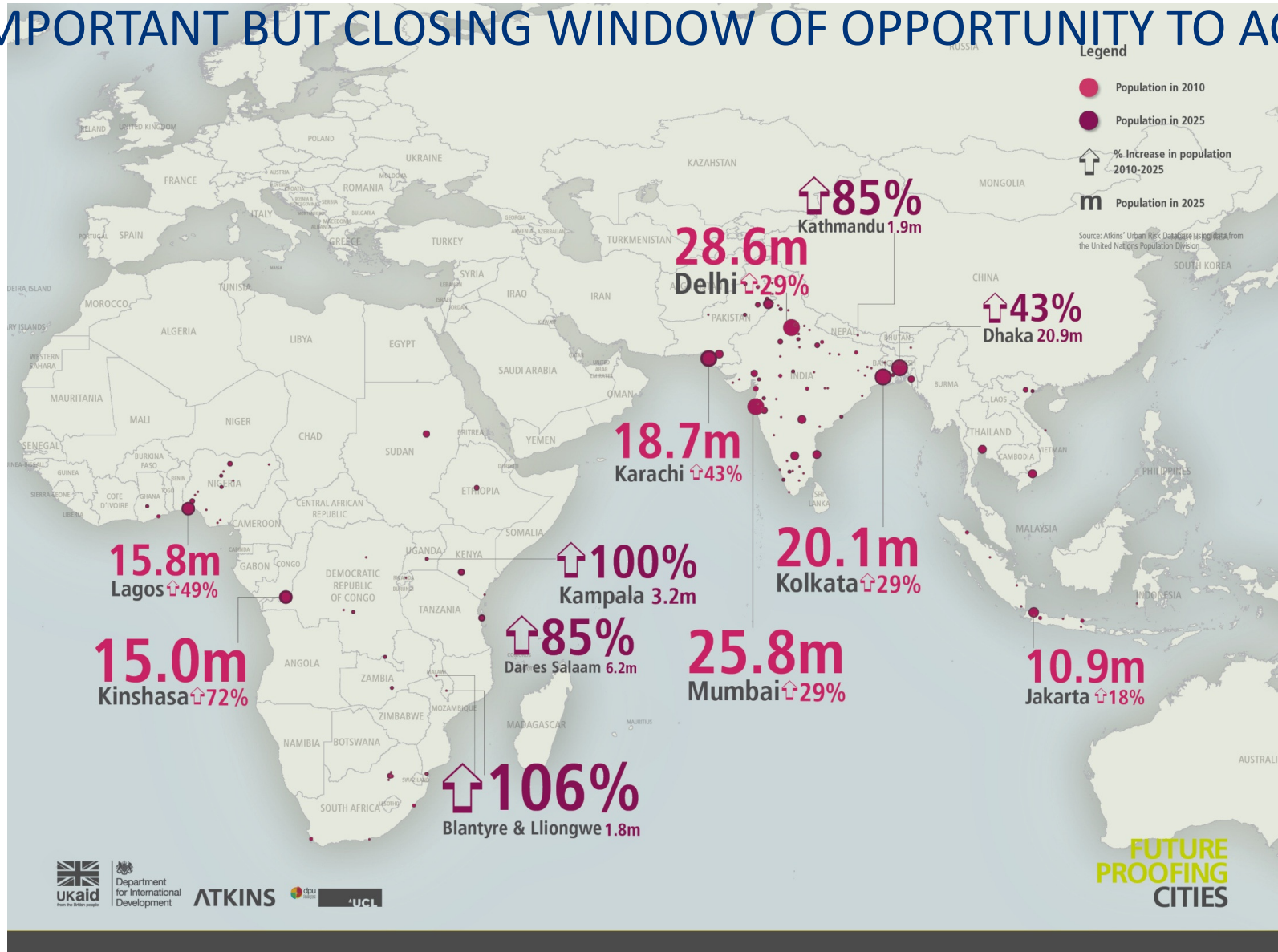
ATKINS



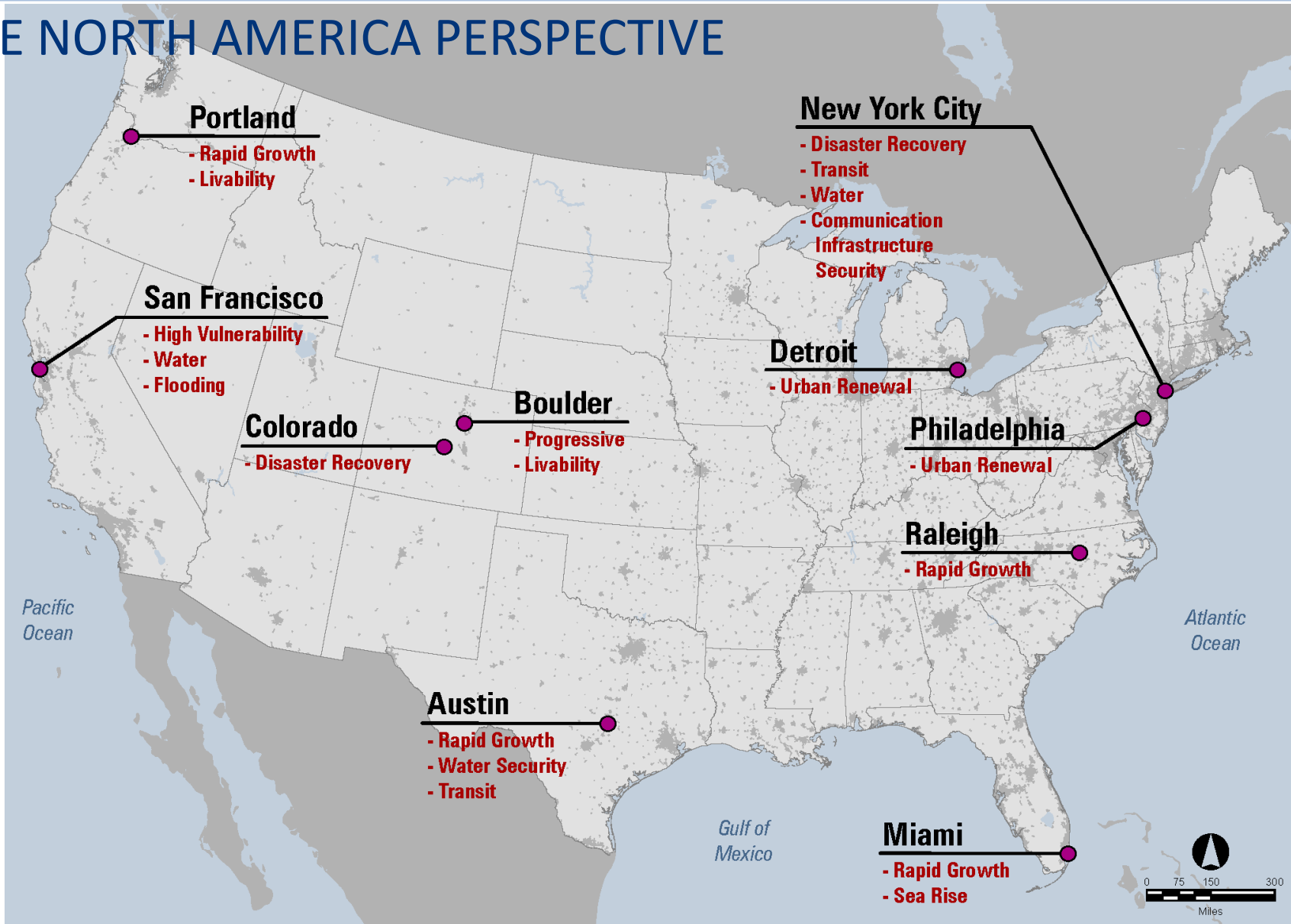
FUTURE
PROOFING
CITIES

ICMA

AN IMPORTANT BUT CLOSING WINDOW OF OPPORTUNITY TO ACT



THE NORTH AMERICA PERSPECTIVE

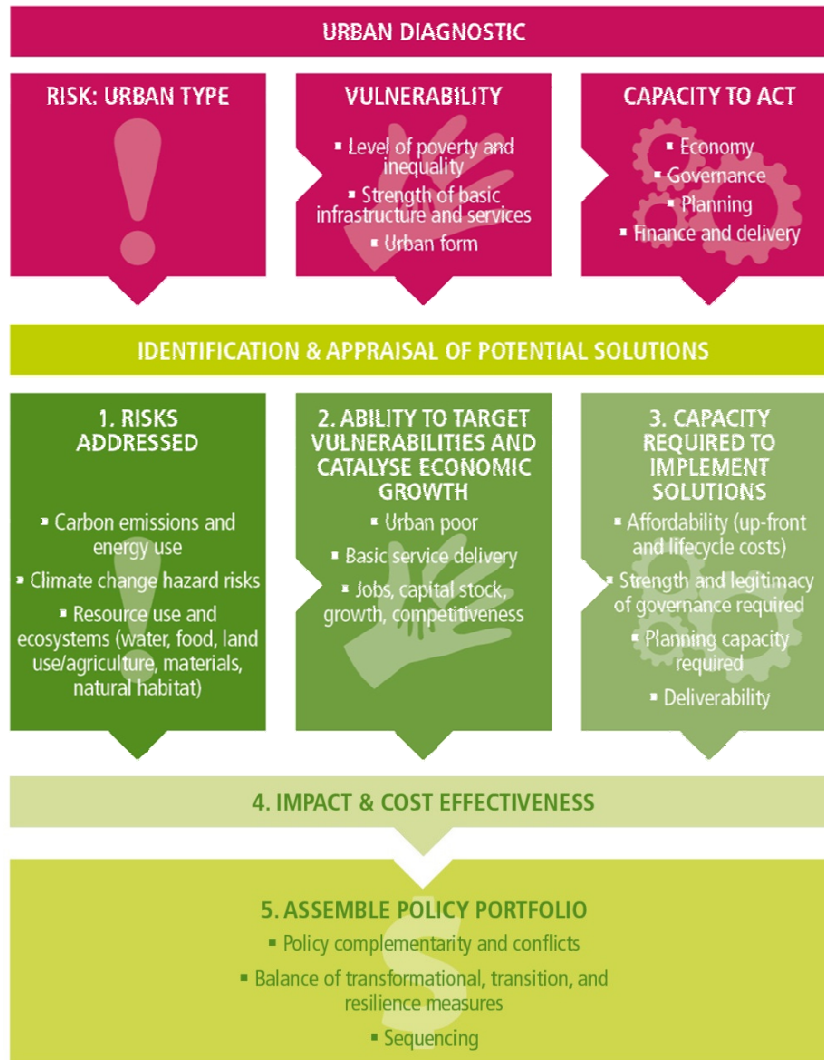


OUR APPROACH

Risks and Challenges



Opportunity



FIVE URBAN TYPES

Assessment of 129 cities:

Possible to group cities into 5 types based on most significant risks they face



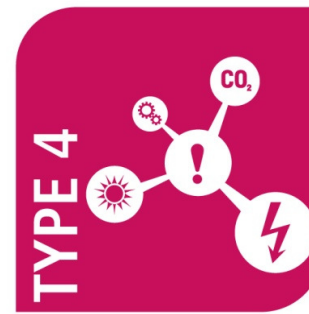
Energy intensive, sprawled cities with significant carbon footprints



Cities with major climate hazards



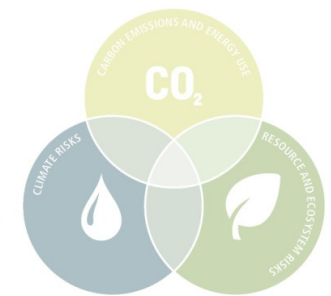
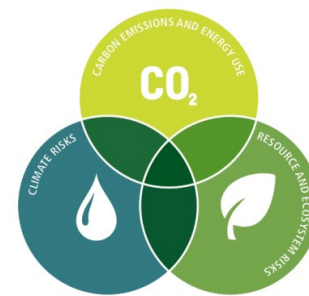
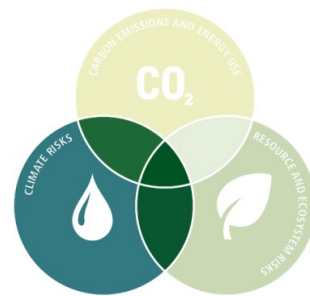
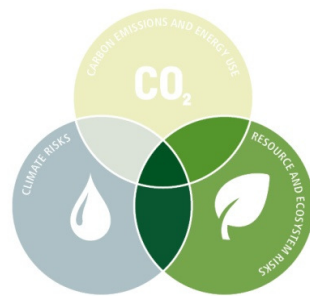
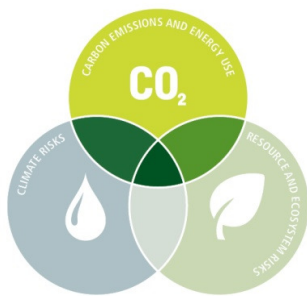
Cities with regional support system(s) at risk (water, food, biodiversity)



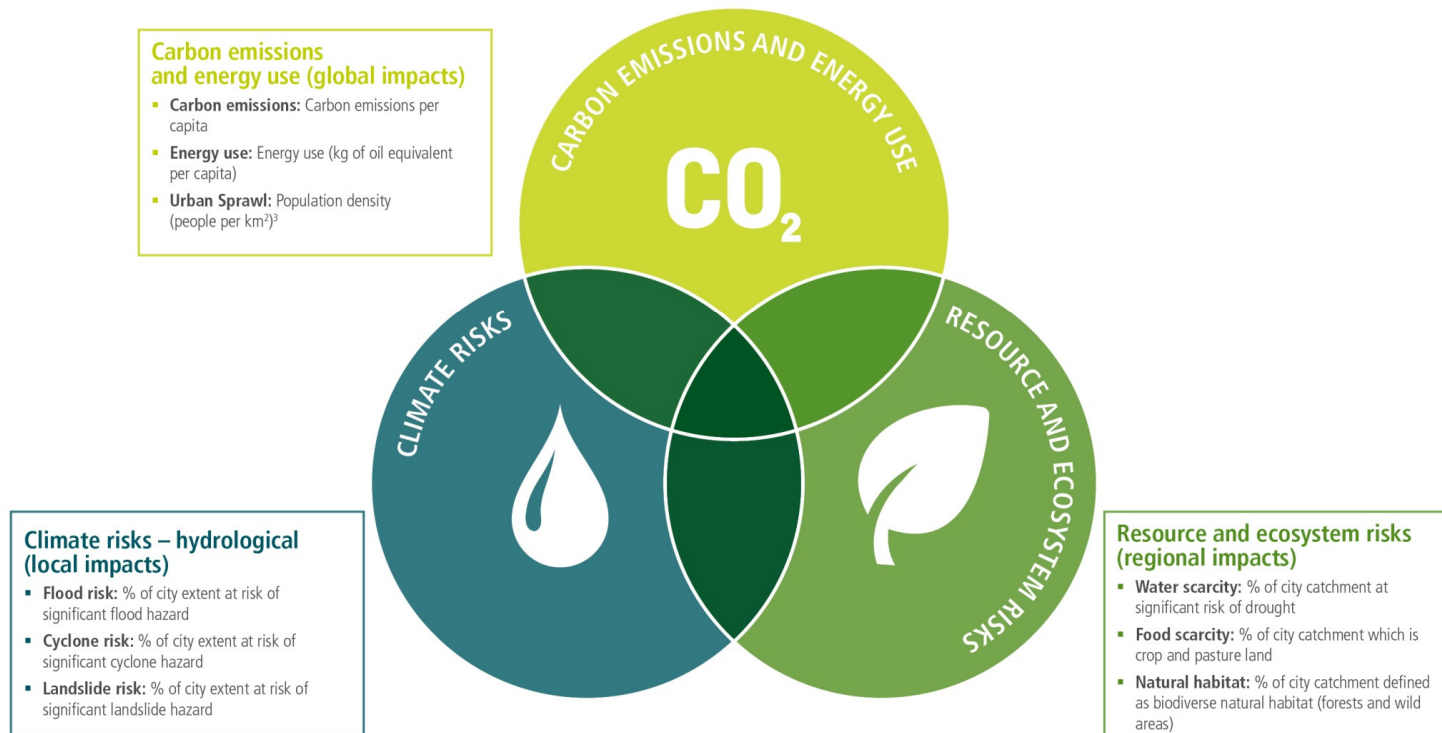
Cities with multiple risks: energy, carbon, climate hazards, and regional support systems



Cities with a low current risk profile



UNIQUE INTEGRATED ASSESSMENT FRAMEWORK



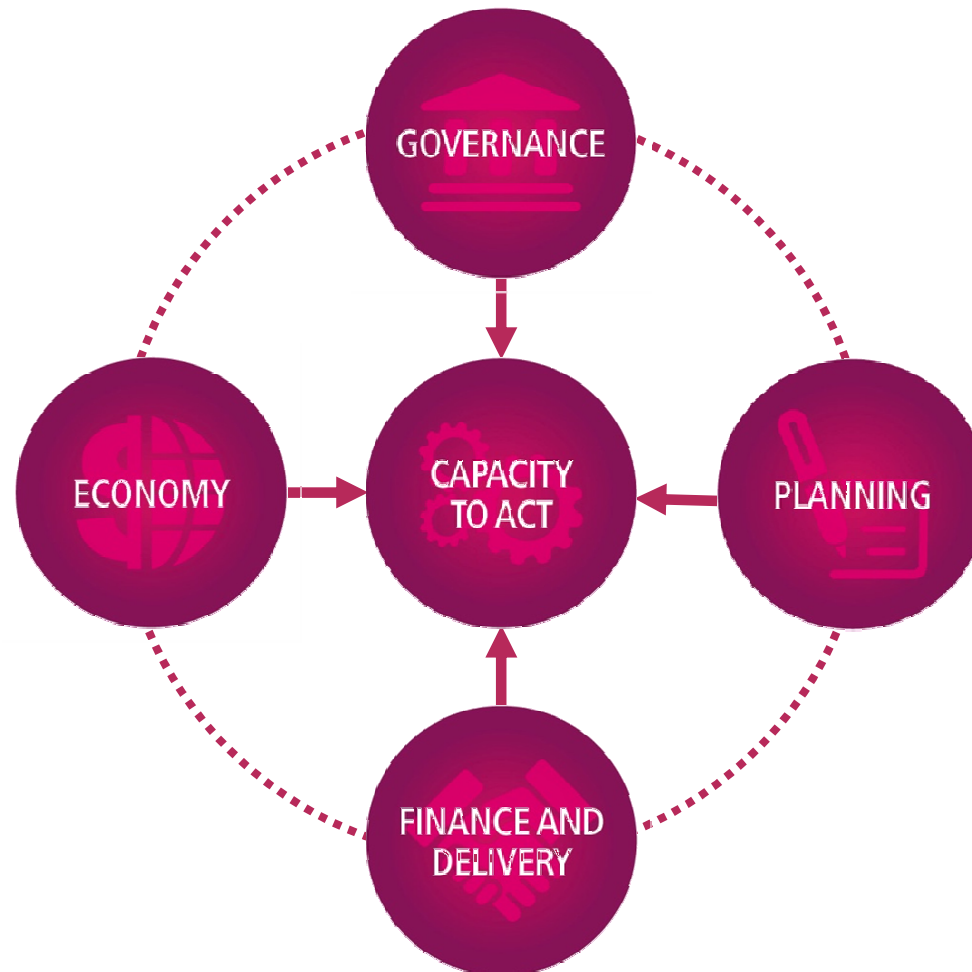
ATKINS



FUTURE
PROOFING
CITIES

ICMA

CAPACITY TO RESPOND TO RISKS



PRACTICAL STEPS TO FUTURE PROOFING

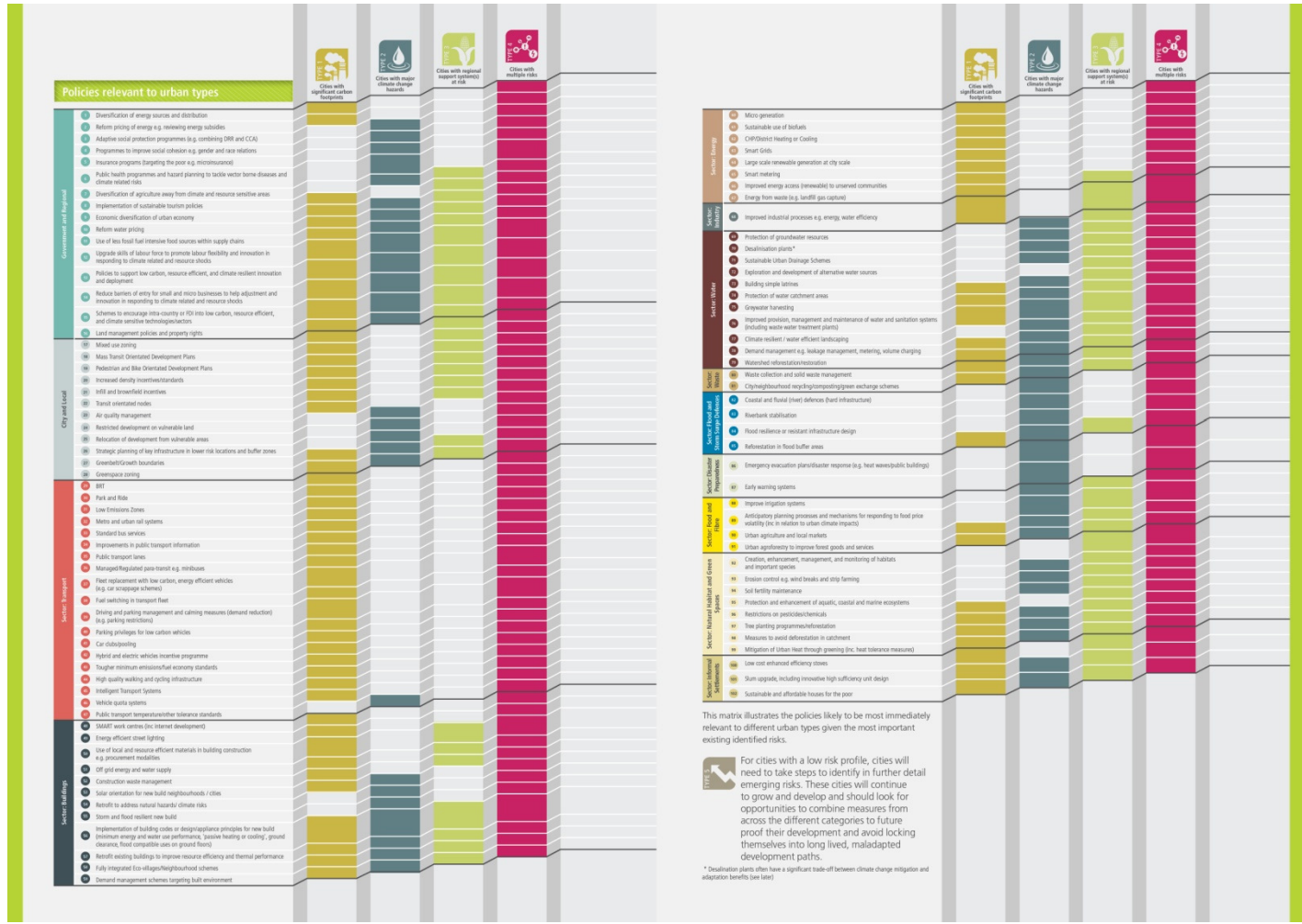
Over 100 policies for future proofing

Government and Regional

City and Local

Sector: Transport

Sector: Buildings



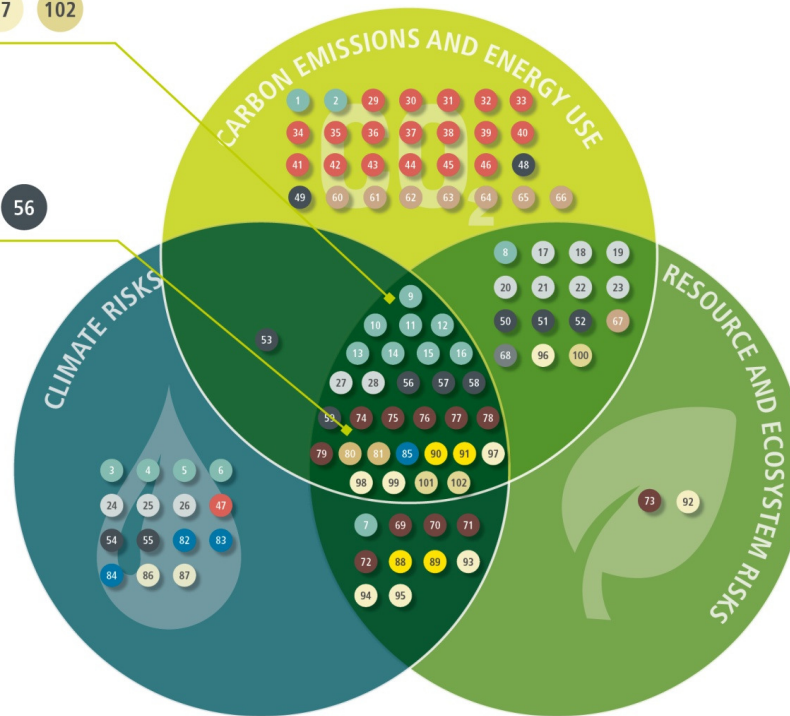
- Sector: Energy
- Sector: Industry
- Sector: Water
- Sector: Waste
- Sector: Flood and Storm Surge Defences
- Sector: Disaster Preparedness
- Sector: Food and Fibre
- Sector: Natural Habitat and Green Spaces
- Sector: Informal Settlements

PRODUCE MULTIPLE ENVIRONMENTAL BENEFITS

Win-Wins and Triple Win's—
Solutions simultaneously
addressing mitigation
and adaptation: Bangkok



Triple Wins: Future Proofing in the
Built Environment: Bangalore

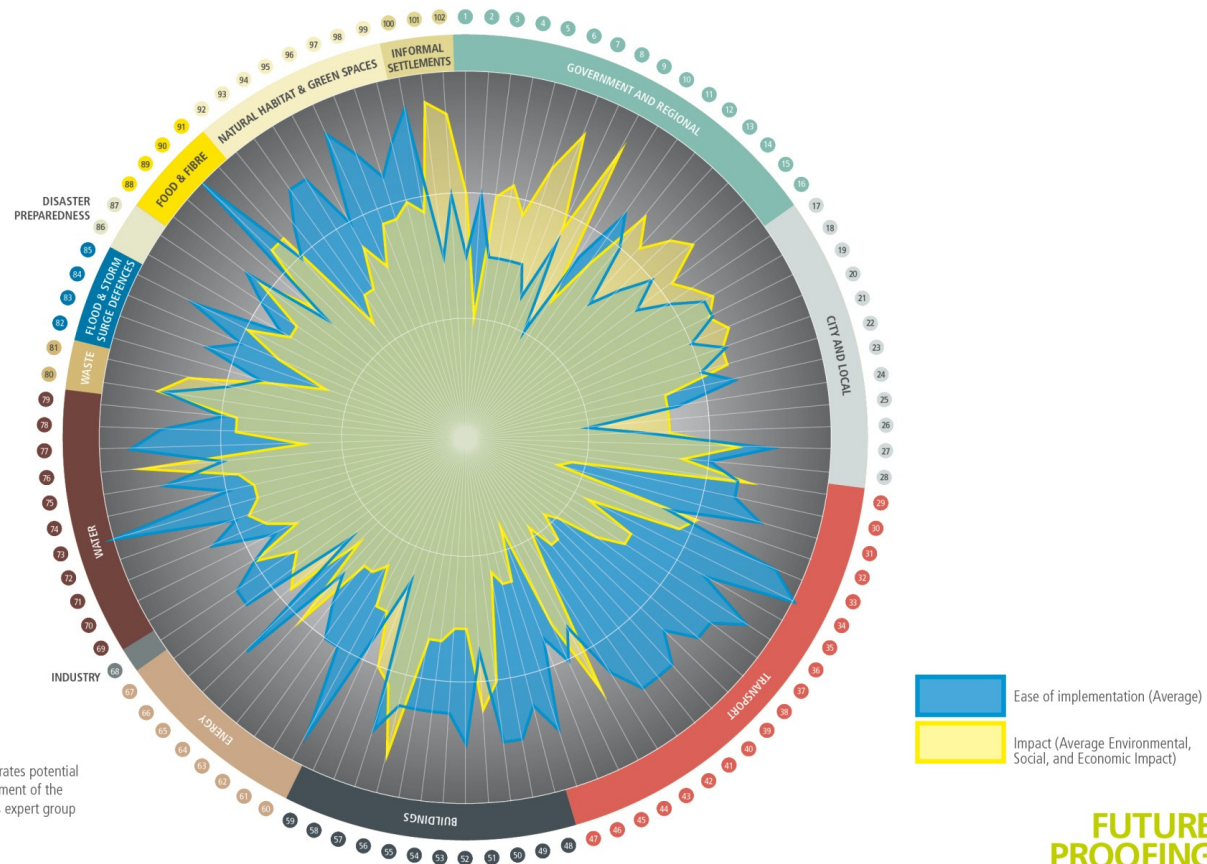


ATKINS



FUTURE
PROOFING
CITIES

MAXIMIZING IMPACT AND ENSURING DELIVERABILITY



Source: Atkins: The radial diagram demonstrates potential policy impact based on a qualitative assessment of the policies drawing on input from the project's expert group



**FUTURE
PROOFING
CITIES**

KEY MESSAGES

- Communities need to **act now** to consider their response to long term vulnerabilities to prevent long term harm to their economies and infrastructure security
- There are a wide range of practical actions for future proofing which can be considered in a **long term planning framework**
- This is ultimately about **investing** in the right kind of soft and hard infrastructure and governance framework
- Maximizing returns on investment will require an **holistic approach** to assessing the environmental, social, and economic benefits of policies

KEY RECOMMENDATIONS

- Future proofed urban strategies
- Unlocking finance for communities
- Evaluating risks to private sector investment portfolios
- Other
 - Supporting urban diagnostics
 - Strengthening capacity
 - Data for communities
 - Research and guidance

THANK YOU

Join the conversation

www.FutureProofingCities.com

Twitter [@fpcities](https://twitter.com/fpcities), [#futureproofingcities](https://twitter.com/futureproofingcities) 

Questions/Comments?

Additional Information...



ICMA
99TH ANNUAL CONFERENCE
BOSTON
NEW ENGLAND 
September 22-25, 2013