

Long term planning with deep uncertainty – applying plausible divergent futures

Illawarra Shoalhaven Integrated Strategic
Assessment Pilot

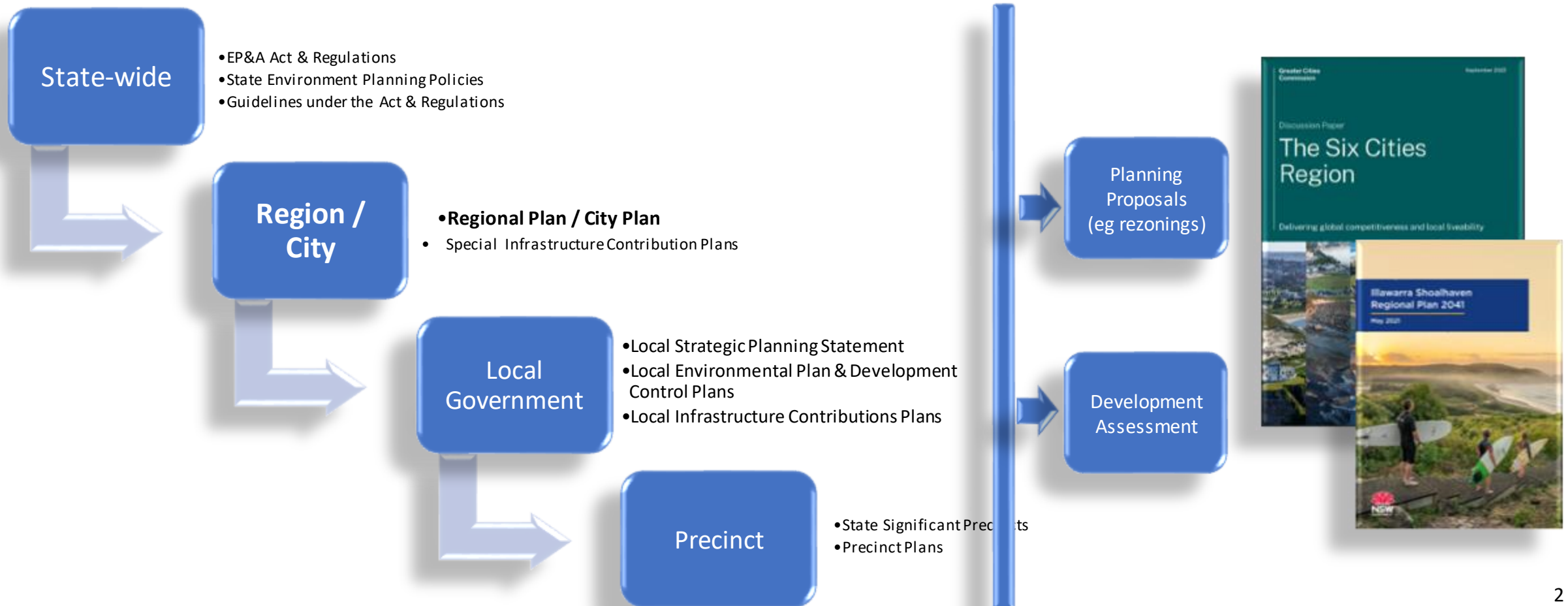
2 November 2022



Sarah Tasic
Technical Director – Integrated
Strategic Assessment & Scenario
Planning

Regional and City Plans

The NSW planning system



Case for change

Audits & inquires

- **Auditor General's 2021 Report** 'Managing climate risks to assets & services' - more needs to be done to leverage strategic land use planning, including regional plans
- **The NSW Bushfire Inquiry** - strategic land use planning needs to place greater emphasis on landscape scale management of bushfire risk
- **The NSW Flood Inquiry** – strategic plans must address disaster adaptation planning to reduce disaster risk, including reflecting new flood planning levels

Final Report of the NSW Bushfire Inquiry

31 July 2020

2022 Flood Inquiry
Volume Two:
Full report

29 July 2022



Managing climate
risks to assets
and services

Integrated Strategic Assessment

ISA is a systematic process for:

- *evaluating the environmental, social and economic implications of a proposed plan or programme*
- *addressing those implications at the earliest stage of decision making*
- *promoting sustainable development*

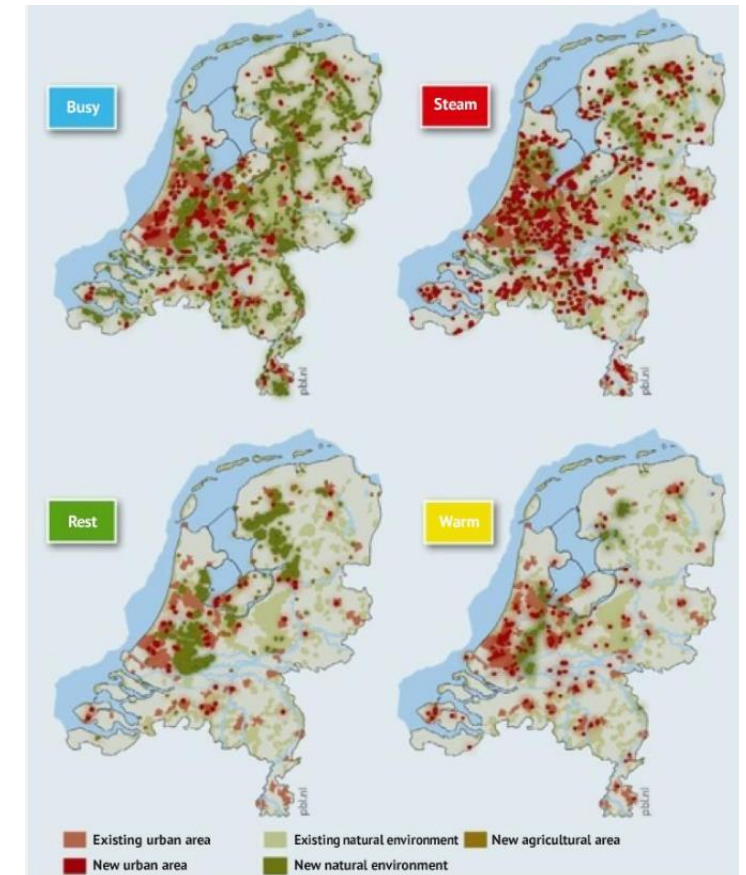
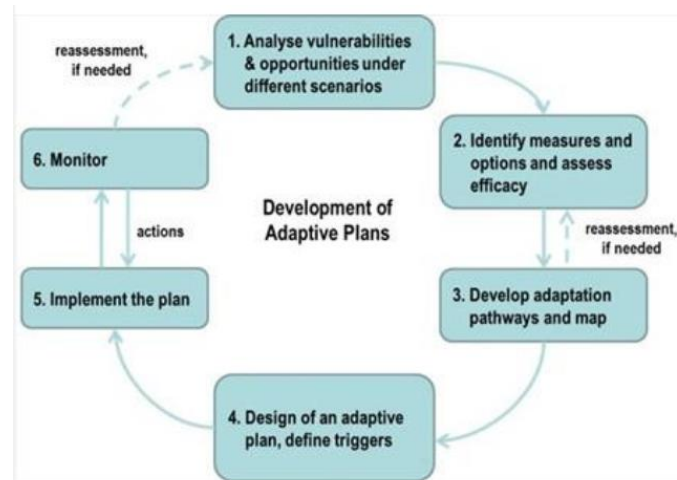
*When used in conjunction with **exploratory scenarios** ISA is a process for addressing deep uncertainty and risk and for promoting more resilient and adaptive approaches.*

Integrated Strategic Assessment (ISA) is called Strategic Environmental Assessment (SEA) in other jurisdictions

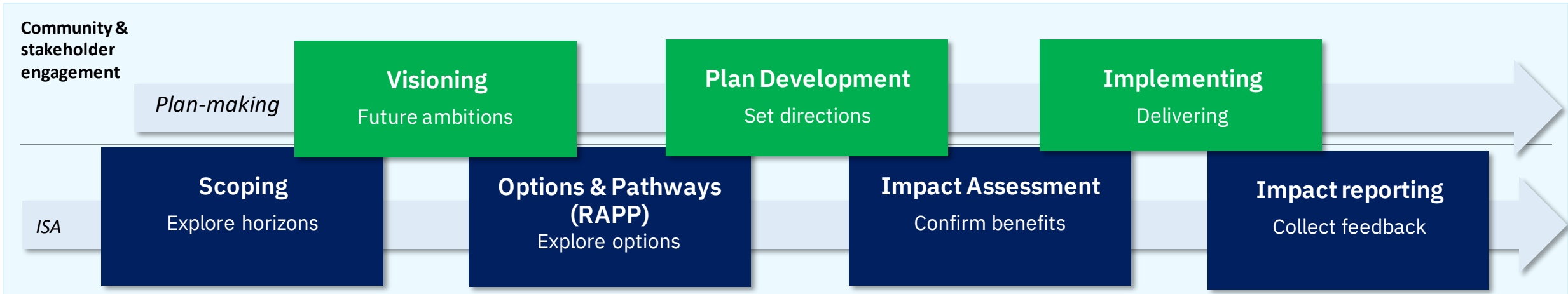


Global leading practice

- **Netherlands Delta Commission** is leading global practice in the application of plausible divergent futures in long term spatial and infrastructure planning
- **20 years of practice**
- Approach is supported by **sophisticated analytical tools**
- **Transparency** is foundational
- Informs **investment decision making**
- Netherlands practitioners also heavily engaged with IPCC



Regional planning incorporating ISA



Plausible divergent futures help to:



Spot opportunities and risks

Evidence based approach to strengths, vulnerabilities, opportunities and threats



Generate and prioritise options

What options and pathways might be available and what are their merits?



Assess and improve

Assess the plan and identify opportunities to deliver better outcomes



Enabling strategic investment

Establish the performance narrative for the plans to attract funding and investment.



Identify metrics & thresholds

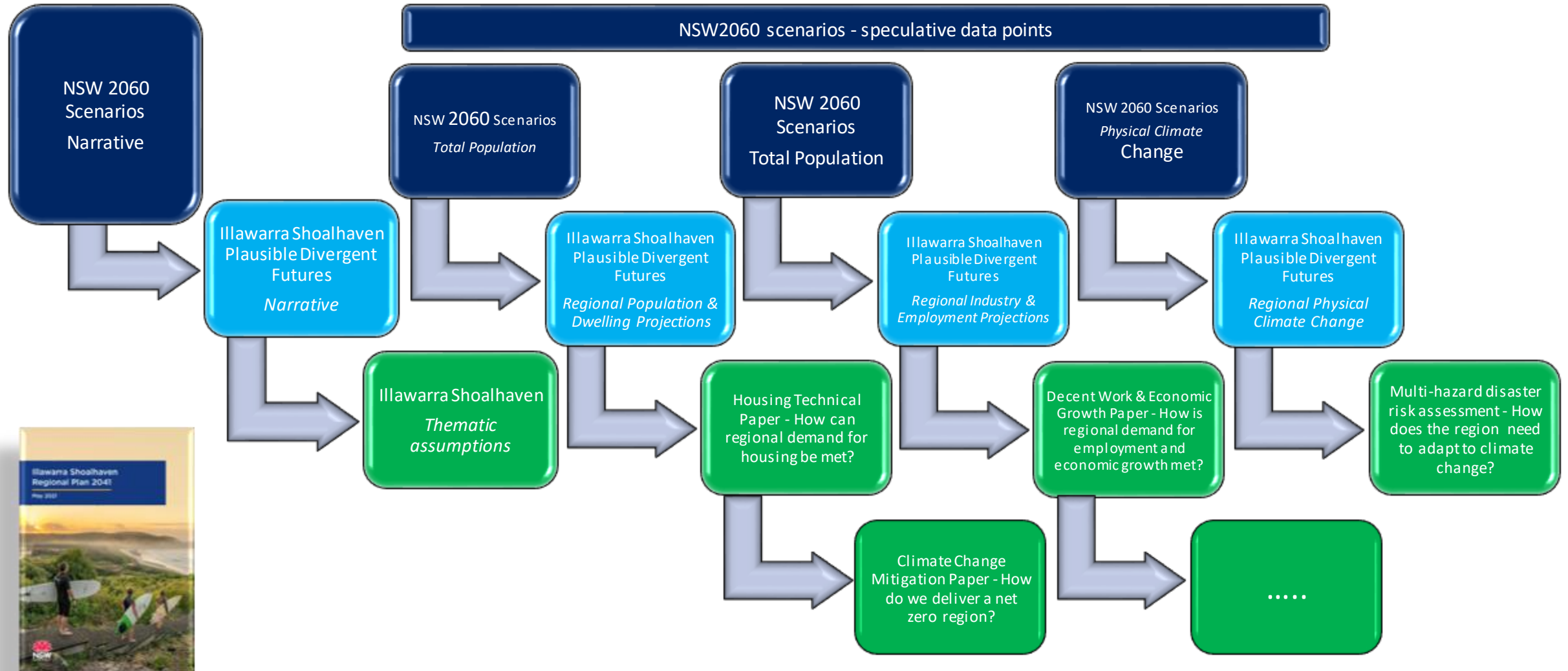
Identify indicators to monitor for changes, to support adaptive response.



Stakeholder satisfaction

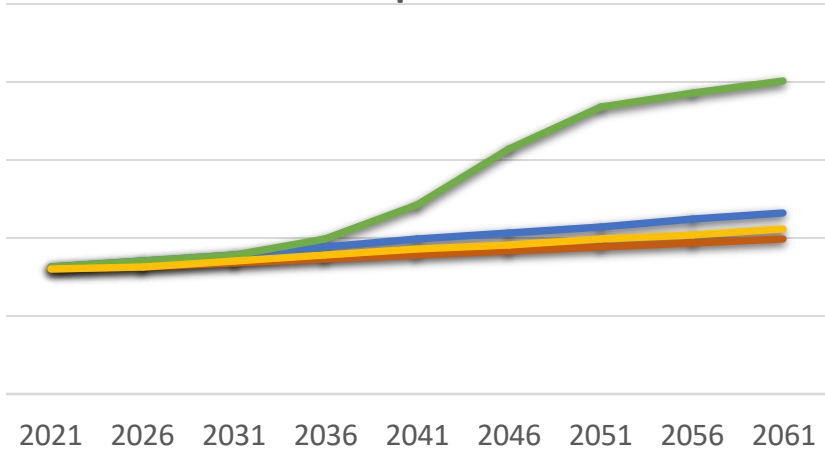
Increased transparency and consistency helps stakeholders engage more effectively.

Downscaling scenarios

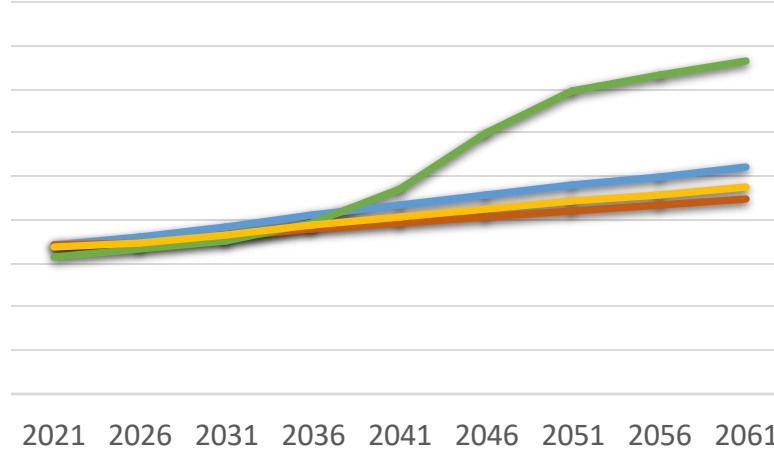


Downscaling scenarios

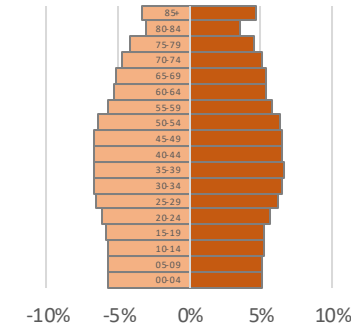
Total Population



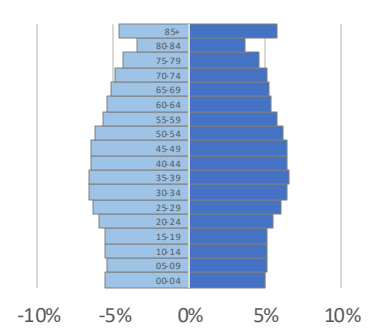
Total Implied Dwellings



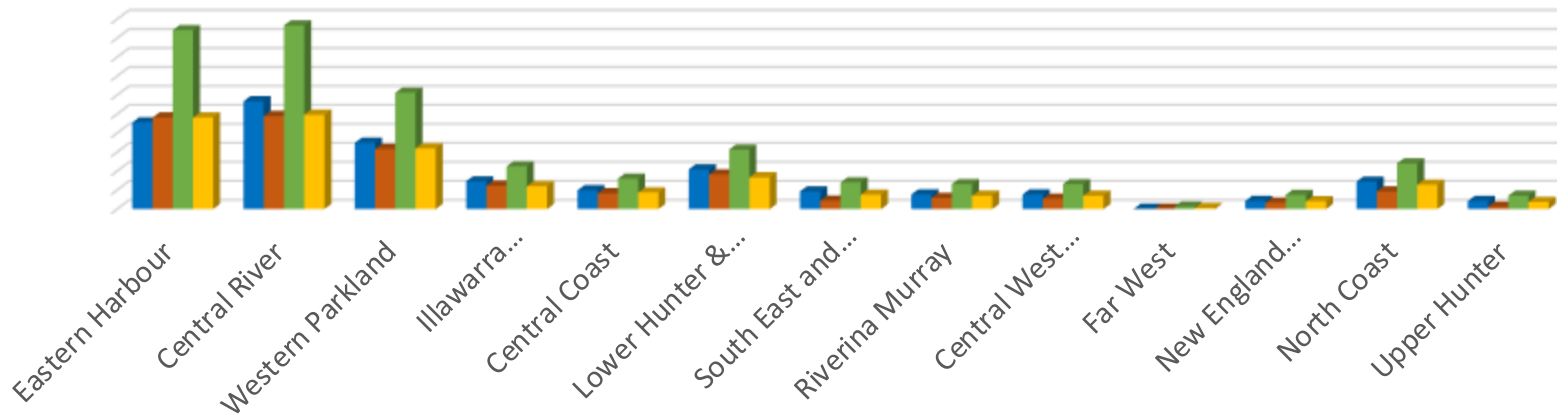
2061 Tales of the City



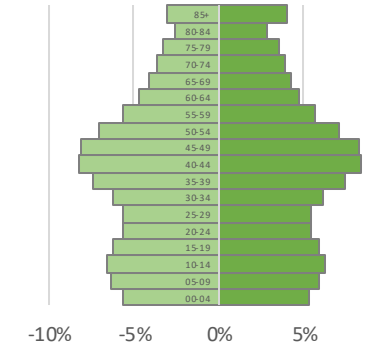
2061 Seachange



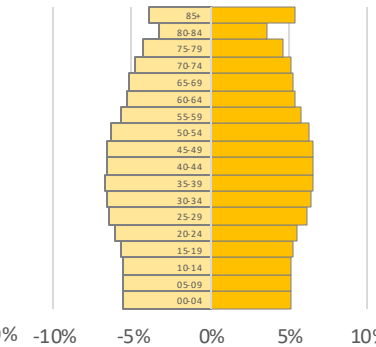
Total Population by City/Region in 2061



2061 Better Homes & Gardens



2061 Survivor



Downscaling scenarios



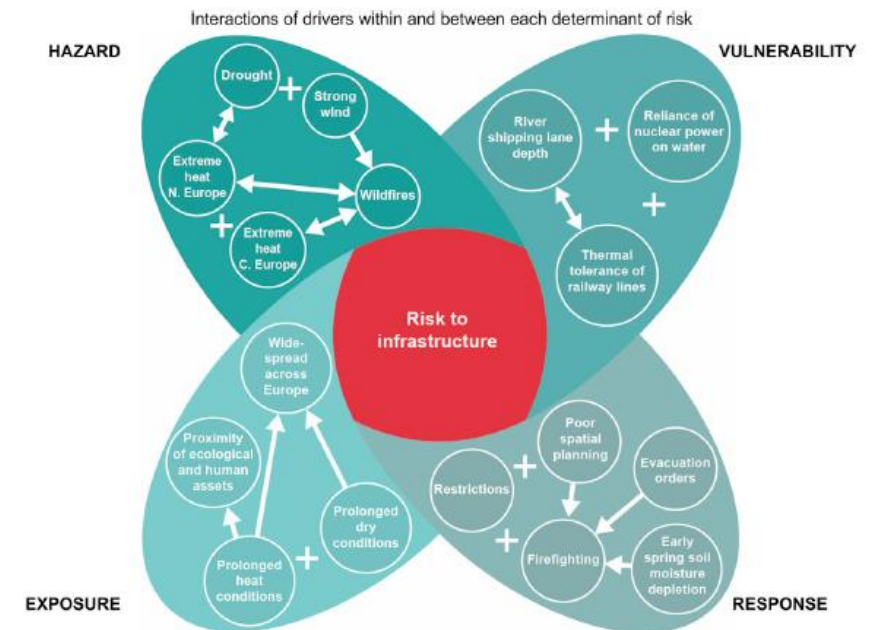
	Total population in 2060	Total jobs in 2060	Spatial reorganisation	Physical climate change	Demand for coal ceases
Tales of the City	Lower than Low projection	Very low	Higher density in the north, lower in the south	RCP4.5	Declines to 44% beyond 2060
Seachange	Higher than Main projection	High	Low density (similar to 2021)	RCP4.5	Declines to 44% beyond 2060
Survivor	Midpoint between the Low and Main projection	Low	Slightly higher density	RCP7.0	Declines to 50% beyond 2060
Better Homes and Gardens	Very high	Very high growth	Higher density	RCP2.6	Ceases 2045

Downscaling scenarios

- **Hazard scenarios** – narrative and probabilistic | slow on-set through to catastrophic events
- **Exposure assessment** – existing, emerging, plausible future (socio-economic futures)
- **Vulnerability assessment** – existing, emerging, plausible future (socio-economic futures)
- **Assessing compounding, cascading and complex interactions**

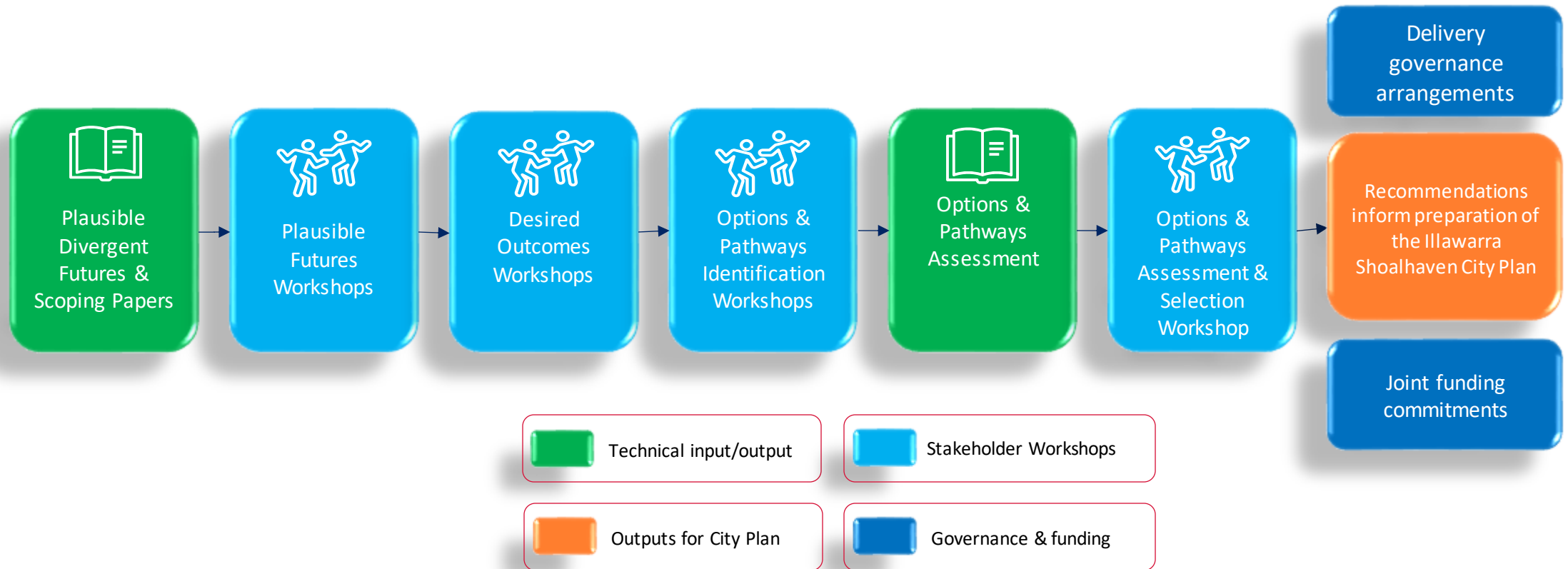


Figure 3: UN Sustainable Development Goals



Options and pathways

Deliberative democracy and adaptive pathways planning



A photograph of a forest. On the left, a large, weathered tree trunk with peeling bark stands vertically. To its right, a smaller tree with vibrant blue leaves is visible. The background is filled with dense green foliage and other trees, creating a lush, natural setting. The lighting is soft, suggesting a shaded forest environment.

**“There is no power for
change greater than a
community discovering
what it cares about.”**
Margaret Wheatley

Questions?