TCDSE Implementation Pathways

TCDSE Deployment Modes

The Tomorrow's Cities Decision Support Environment can be flexibly deployed to match the data and capacity available to a city. We recommend four specific modes, though elements can be taken from across these approaches to best fit city needs. The four modes are described in Figure 1 and detailed in Figure 2. It is a good idea to talk with the Tomorrow's Cities team and with cities that have already deployed the TCDSE before making a final choice.

These modes start with the approach requiring least input data and existing city capacity up to Mode 4 which is open-ended in terms of resource capacity.

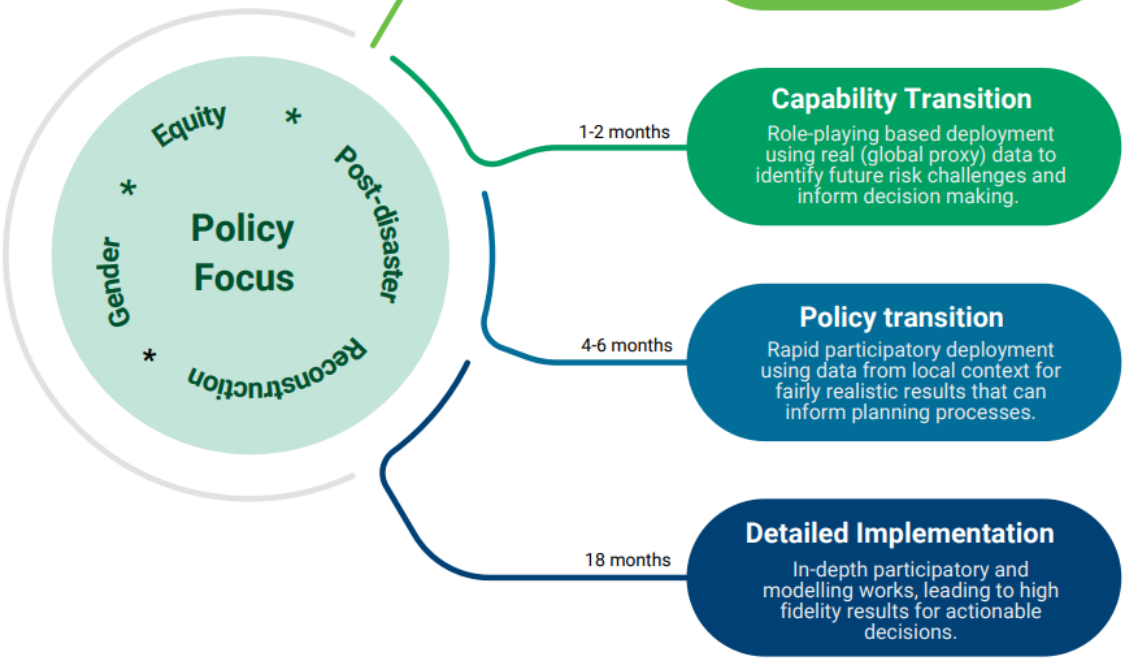
Mode 1: Sensitization. Used to raise community and policy maker awareness of the importance of considering natural hazard and climate change risk in urban planning. Needs only minimal capacity and data, it uses data from Tomorrow's Cities data archive. This mode is quick to deploy in only a few days. It can be useful as a preliminary exercise as a precursor to a fuller deployment of the TCDSE or as a stand alone tool where there is very limited local government capacity and popular risk awareness.

Model 2: Capability Transition. Used to diagnose the quality of data and policy that considers natural hazard and climate change risk in urban planning. Needs local spatial data to model land-use, to this we can apply globally accessible hazard data. This mode requires some local data collection and consideration of development trends taking around 2 months to complete. It can be useful as a preliminary exercise as a precursor to a fuller deployment of the TCDSE or as a stand alone tool where there is limited local government capacity and popular risk awareness.

Model 3: Policy Transition. Used to produce a first order analysis of land-use scenarios and the policy context. Needs local spatial and hazard data to model risk and land-use. This mode requires some local data collection and consideration of development trends taking around 4 months to complete. It can be useful as an exercise to feed into bids for government or donor funding for urban visioning or risk sensitive planning projects.

Mode 4: Detailed Implementation. Used for detailed and actionable planning decisions and policy work. Needs local hazard, engineering and social data with high spatial resolution, or budget to generate this data. Time and budget required depend on the complexity of the city and the specific policy question, 12 months is common. The output is a comprehensive state-of -the-art hazard model based on future urban design that can be used for concrete decisions.

Deployment Modes



City Needs	Sensitisation	Capability Transition	Policy Transition	Detailed Implementation
About	Rapid run-through the TCDSE using a synthetic testbed (Tomorrowville) that draws on data from real global south cities.	Role-playing based deployment of TCDSE components using a real-world, bespoke case study and global datasets.	Rapid modelling and participatory works for useful results that flag data, policy and capacity gaps. Data mixes local and global sources.	State-of-the-art impact modelling work with in-depth social engagements for direct inputs into decision making.
Timeframe	1-3 days	1-2 months	4-6 months	18 months
City Inputs & Capacity	No existing capacity needed. Requires ordinary PC's and basic support from Tomorrow's Cities.	No existing capacity needed. Requires local spatial data and global datasets for hazard analysis.	Needs capacity on participatory planning and hazard science/engineering .Local + global data.	Comprehensive local skillsets and robust datasets (or capacity to collect them) are needed.
Expected Outputs	1 Report that maps opportunities for future impact and capability or policy transition.	1 Report + 1 Policy Brief outlining specific policy challenges and opportunities for equitable impact.	1 Action Plan containing detailed datasets & pathways for transformative urban development.	1 Action Plan + ready-to-use datasets (land use plans, policies, risk assessments, etc).
Best used to...	*Communicate* the value and novelty of risk sensitive urban planning for reviewing enabling environments and fundraising.	Clearly *identify* the data, knowledge, finance and capacity needed to facilitate future-oriented risk-informed urban planning.	*Map* policy gaps, opportunities and specific datasets to implement risk-informed urban development strategies.	*Up-skill existing capacity and generate high fidelity data* for risk-informed urban planning and policy that can reduce future risk.