

MANAGING RISK IN THE URBAN FABRIC

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"Currently risk is still being estimated by using the past to estimate the probability and utility of events and then using these to estimate the risk associated with this event in the future. This principle is applied in urban design when planning water supply, energy needs, natural disasters, sustainability of developments, transportation: indeed every facet of the urban planning process. The problem with this methodology is that it assumes that processes are stationary, that the history of experience is long enough to have sampled the population adequately and that events have no feedback to the statistical population. As human reach has grown these assumptions are no longer valid; human actions are changing the climate, the economy, the human as a species and technology is even changing itself through gains in productivity and artificial intelligence. So what is the way forward? I will describe a new adaptive, real time risk management system and illustrate this with a proposal for the Swan Canning River Basin.