

**What drives technological innovation in planning systems: Simplified development control or enhanced community engagement?**

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**Abstract:** In recent years, a growing use of computer applications has significantly changed how planning tasks are approached. Technologies are now available that can enhance the capacity of routine planning tasks, and plan-making, and that can be used for connecting together various players/ stakeholders via convenient access and communication.

To ensure that the ends set up by the planning profession remain independent of the available technological means of delivery, however, we must understand the purpose of adopting technology. Is it to facilitate the implementation of planning regulation and controls or, is it to facilitate planners' engagement with the community?

This paper will assess the situation in Australia with regard to the adoption of computer / ICT in public planning. It will explore the way technology, such as 'ePlanning', is being incorporated by looking at the nature of the techniques promoted/adopted.

Focusing on the situation prevalent in NSW and WA, the paper argues that the type of technologies that are promoted over and above others reflect the aim of the proponents. NSW is selected because of its on-going reforms of past several years, against widespread criticism that planning in that state is being reduced to a development-facilitating activity. WA is selected for this study as a state where a fresh planning approach was heralded in with a large-scale 'Dialogue with the City' exercise that relied on state-of the-art ICT a few years ago. The two cases should, in theory, provide a contrast in approaches towards the adoption of technology in planning.

The paper carries out a brief review of recent planning system reforms in NSW and WA by scrutinizing some key planning policy documents, It then focuses on the types of computer/ ICT technology promoted in each state against the approach towards planning in each of the two states as reflected in their recent reforms. The paper concludes with recommendations for a balanced adoption of technology, reflecting both development facilitation and participatory strategic Planning.

## 1. INTRODUCTION

Computer methods and tools have been used in urban planning for nearly half a century. The nature, type, purpose and the degree of ubiquity of their use has changed over time. The changes are attributable, in part, to developments within the technology itself that brought about dramatic increases in computing power and sophistication of software. Equally, though, these changes may be seen to be driven by changes occurring in the areas of planning theory and practice. Currently, we are at a stage where a vast array of computing applications, both planning specific and generic, are routinely used by planning authorities all over the world.

Planning methods and related computer applications can be placed in two broad categories: “generic” and “(strategic) planning specific”. The examples of generic tools are mapping, databases, spreadsheets, scheduling software and in more recent times internet-based data collection or delivery of services. The generic tools are widely (but not necessarily exclusively) used for day to day planning including development assessment. The planning (process) specific tools are closely associated with collaborative strategic planning. They often involve participatory dialogue and visioning, preparation of alternative courses of action, visualization and evaluation of alternatives, finding common ground among stakeholders, and generating consensus on local development.

The use of generic computer tools to increase general efficiency and to facilitate development assessment is strongly supported by the state planning authorities in Australia. Planning reforms being pursued in Australia are very actively promoting eDA/ePlanning (electronic lodgement, tracking and assessment of development applications) (DoP 2007; DAF 2005; DPGLSR 2007). Use of other generic computer applications to facilitate, expedite and standardize routine day to day planning is also actively being pursued.

However, planning reforms in Australia have not, to any large extent, advocated the incorporation of planning-specific tools to engage stakeholders in collaborative strategic policy making. Computer aided policy-making used for visioning, visualizing and assessing alternatives (Wyatt, 1999) is not part of the planning reform agenda in Australia in general and in NSW specifically.

Planning reforms in NSW have been highly controversial and perhaps also divisive and polarizing. There is a parliamentary inquiry (NSW Parliament, 2008) currently underway to assess the reforms. These reforms are strongly supported by the development sector and vehemently opposed by many local communities and environmental groups (Piracha, 2008). The packaging together of the computing up-take alongside other reforms raises the possibility of reducing the acceptance of computer-support applications by groups opposed to the reform agenda. A deeper concern is that the proposed technological improvements in the form of computer-aids to the planning system are narrowly aimed at merely facilitating and speeding up development assessment process and the standardizing and centralizing of various elements of the planning system. If nothing else, it points to a potential loss of opportunity to develop and adopt tools that could contribute towards setting up planning practices that are robust and effective

Technology can be used to both advance the causes of development proponents and better engage with the community. However, particular technologies do exclude groups either through lack of technical knowledge or affordability; a point that is not the focus of this paper but still is very important to emphasize. That said, there is

some possibility for the community groups to use technology to their advantage. Castells (2000) points out that ICT dispersal has allowed for greater community accessibility to decisions. Local government business such as agenda items are routinely placed on websites prior to Council meetings allowing community to track and respond to planning decisions. The internet allows community based groups to be formed and organized in the first place. There is a need to comprehensively study planning related technology take up in the community organizations: a task beyond the scope of this research. All this paper does is to highlight that the Australian states are selectively adopting technologies to favour development.

The following sections analyse the assertions made above in more depth. Section two presents a short account of the planning reforms in NSW and WA. It discusses the general trend, motivations, responses of various stakeholders and examples of planning system reforms of recent years. Section three is a brief discussion of the evolution of computer use in planning in general. It points to various categories of computer-aid available to planners and describes the relative merits of using the various types of computer methods and tools. Section four outlines computer use in planning as practiced in Australia, commenting on what has been proposed and is being implemented as part of the recent reforms to planning systems. The last section presents recommendations in view of forecasts of the future direction of computer use in planning in Australia.

## **2. THE AUSTRALIAN PLANNING REFORMS**

Planning systems in many parts of the world including various states in Australia are going through a process of reform for increased efficiency. These reforms can be seen as an inevitable outcome of the ascendance of neo-liberal political economic ideology (Gleeson & Low, 2000; Hall and Hubbard, 1989; McGuirk et. al., 1996). The thrust of these reforms is on improving the efficiency of the planning system – devising technically sound strategic plans, streamlining development control and simplifying regulation, rather than a concern for the effectiveness of planning - either in terms of community satisfaction or effecting the achievement of sustainability targets. The over-riding concern for efficiency is largely driven by economic objectives and hence the reforms focus on speeding up the strategic land use planning and the development assessment processes, quite narrowly focussed on cutting out costs in terms of delays. The mechanisms employed to achieve these ends are simplification, fast tracking (or short-tracking), uniformity of plans and processes across jurisdictions, exempting development from assessment, private certification, voluntary development contribution and speedy reviews of assessment outcomes by a myriad of means. From this perspective, a greater role of ePlanning within the system may also be pushed for similar objectives,

The representative organizations of the businesses in general and of developers in particular have strongly endorsed these reforms for their economic efficiency objectives (UDIA, 2008; PCA, 2008). Organizations representing the interests of the community and the environment have on the other hand been somewhat dismayed by these changes (Local Government Association of NSW, 2008; Natural Conservation Council of NSW, 2008). Their concerns relate to the availability of less than adequate amount of time required to carefully consider environmental consequences and reduced opportunities for inputs from the local community. Reforms driven by the quest for greater economic efficiency could be diametrically opposite to what adapting to climate change may dictate (Guardian, 2007). It should be a cause of consternation if the reforms weaken the opportunity to address a crucial issue like climate change.

### ***New South Wales***

The current NSW planning system was created nearly 30 years ago with the introduction of its Environmental and Planning Act 1979.. It has gone through a number of changes since. The first significant set of neo-liberal leaning reforms were introduced in 1997 with the introduction of 'complying' development and private certifiers (Blue Mountain Conservation Society, 2008). Some of the more recent changes include BASIX – a web-based development assessment tool, standardization of planning instruments and changes to Part 3A (major projects), changes to development contribution scheme etc. The latest round of reforms was presaged by the Planning Department of NSW in a Discussion Paper in late 2007 (DoP, 2007).

Some of the recent planning reforms of NSW are listed in Table 1. The reforms concentrate powers at the state level in the hands of the planning minister and the Department of Planning, fast track both plan making and development assessment, make local planning across the jurisdictions standard and uniform, and provide simple and multiple channels for the review of assessment decisions (taking power away from the local councils and handing it to independent professional panels).

Insert table 1 here.

### ***Western Australia***

The situation in Western Australia (WA) has been quite different from that in NSW till recently. Major reforms to the planning system came about in the early 2000s which were introduced through a series of community consultation workshops that peaked in the form of a mega community consultation forum in September 2003 referred to as "Dialogue with the City". This community forum took the form of a massive deliberative planning exercise involving a total of over 1100 participants in the one forum. The result of the massive community engagement exercise was the selection of 'Network City' described as "the endorsed metropolitan strategy" (WAPC 2007).

Network City "promotes the development of activity centres, activity corridors and transit-oriented development" (WAPC, 2009a, p.31). In line with the Network City, the Planning and Development Act 2005 became the principle town planning legislation by bringing together three former separate Acts. This Act "extends consultation requirements and rights of review for greater transparency, fairness and equity." (WAPC, 2007, p.4)

Another significant initiative was the declaration of "Bushland Forever" sites that represented a major State initiative towards nature conservation environmental protection. Yet another example worth mentioning is the City of Wanneroo's Smart Growth Assessment Tool (Johnson, 2008). It is somewhat similar to BASIXs. It forces the development industry to think about and quantify the costs and benefits of projects. However, it has to be pointed out that reliability of input data under a self assessment model would something worth investigation in its own right.

Not surprisingly, the stated focus of these reforms that came out of community consultation at unprecedented scale is about encouraging community engagement and creating partnerships among various actors and the strengthening of environmental protection.

More recently, however, there is another set of reforms currently under consideration. The recent “economic downswing has led to a focus on the timeliness and efficiency of the planning system to support measures to stimulate economic growth through infrastructure investment and residential development.” (WAPC 2009a, Foreword, p.iii) It is suggested that the planning system “should be invisible but accommodating and stimulating. Instead there have been complaints about delays in obtaining approvals ...” (ibid). The WAPC discussion paper refers to the government’s decision to “focus on reducing the complexity and time taken to obtain development approvals ...” (ibid). The Network City seems to be de-emphasized and referred to as “an aspirational development plan” (ibid, p.31) which is “not a State Planning Policy and has no statutory authority” (ibid, p.3).

More recently Network City (WA) has been superseded by Directions 2031: Draft Spatial Framework for Perth and the Peel (WAPC, 2009b). The concept of a better planning system is presented as that of an ‘efficient’ planning system; efficiency being promoted in terms of speeding up the development approvals process. Two concepts promoted to realise the desired efficiency appear to be “short-tracking” and “risk-based’ development assessment. The former stresses the need to simplify processes by introducing “self assessable” development categories (read as “private certifiers” in NSW). Similarly, “risk based” approach is meant to “streamline low risk development applications. The discussion paper mentions planning and infrastructure reforms in other state governments, including NSW, as inspiration for reforms in WA and holds them as benchmark for reform in WA (WAPC, 2009, p.7).

### ***Viewing Planning Reforms from a Theoretical Perspective***

In order to understand the direction of the current reform process in Australia, terms and concepts such as neo-liberalism, corporate managerialism, fast-tracking/ slow-tracking of development assessment need to be discussed. Gleeson and Low (2000) argue that, in line with the broader political economic direction in Australia, planning is being gradually abolished. They maintain that there is no room for comprehensive planning that encompasses socioeconomic and environmental aspects in the overall climate of neo-liberalism and corporate managerialism (Stilwell, 2002). Owen (2001) points to the emergence of entrepreneurial urban governance. Managerial approaches to urban governance focus on the provision of welfare and municipal services, and this has been replaced by urban entrepreneurialism that fosters and encourages local growth and economic development (see explanation in Owen, 2001).

Forster (1999) notes that globalization is being used as a steamroller in urban policy. It is argued that globalization has left urban policy makers with little choice but to reduce the role of public sector provisions and to loosen planning restrictions on development. Stilwell (1997) refers to this situation in terms of TINA (“there is no alternative”) syndrome. In Forster’s (1999) view, in a TINA scenario, cities compete against one another to have reduced spending on public services as an inevitable result of globalization. Furthermore, TINA leads to social and environmental considerations being regarded as unaffordable luxuries.

According to Forster, critics of the TINA syndrome point out that the retreat of public sector intervention and provisions will lead to increased inequity resulting in

reductions in livability and stability which have been the biggest assets of Australian cities. Those critics, notably Stilwell (1997), also point out that proponents of TINA often forget to incorporate a very important aspect of globalization i.e. promoting and upholding international standards in the areas of environmental protection, human rights, and labour conditions.

The common approach by governments to reduce delays in development approval, especially for major projects, is through “fast tracking” which often mean “circumventing the impact assessment and approval procedures already in place, to reduce costs of obtaining approval for a project.” Fast tracking is difficult to justify as it can amount to “effectively bypassing the relevant local government bodies and minimizing the opportunities for public involvement” (Cocks, 1992, p.167).

The opposite philosophy to fast tracking is “slow tracking” which means “being prepared to take whatever time is required to ensure that the social and environmental impacts of development are reduced to minimal or acceptable levels” (Cocks, 1992, p.167). There may be situations where this approach may be more valid, especially where new technologies are involved or where the environmental, economic or social effects of development are not clearly understood. “Slow tracking’ as an alternative to ‘fast tracking’ should, therefore, not be ruled out as an alternative, despite the obvious time delays involved. As Cocks suggests, “for the domestic economy, this does not constitute a commercial disadvantage provided that all companies are in the same boat”. (ibid)

It can be concluded from the discussion in this section that NSW planning reforms have neo-liberal underpinnings. Clearly, there is a trend towards the fast-tracking of development applications by avoiding proper community consultation and evaluation of environmental considerations. The reforms are divisive and have polarized stakeholders – between developers who are strongly in favour and sections of the public and non-Government Organisations who are strongly opposed.

### **3. COMPUTER USE IN PLANNING**

In the 1950s, population and transportation data were routinely processed by computers. What quickly followed was various simulation modelling initiatives (Batty, 1996). It was evident that those grand-scale operations, run on mainframe computers, had very limited utility (Piracha, 2002). Starting from 1970s both the profession of planning as well as computer hardware and software went through a fundamental change. Slowing economies of the West forced planning to be more humble, bottom-up and small-scale and more appropriate for dealing structural adjustments. At around this time there was also a major shift occurring in the debates around planning theory. The dominance of the rational planning mindset was crumbling and so the fascination with systems planning and powerful models for city-wide planning that had become popular concepts in the days of high modernism.

With the decline of rational planning, post-modernist thinking began to prevail which paved the way for more communicative and deliberative styles of planning. Around this time, in the 1980s and 1990s, computers became smaller, inexpensive and more powerful. In the 1990s the PC computers were being extensively used for routine tasks in planning (Batty, 1995). At this time there was discussion about using computers at the strategic level, in the form of a Planning-Support System (PSS). Wegner (1994) argued that modelling in planning was a serious consideration. Batty (1995) provided a famous sketch of how a PSS would look in the future. Kammeier (1999) discussed the tools that could be used to build an incremental PSS. A broad

consensus evolved that the future for computer applications in strategic planning was bright.

Bishop (1997) hinted that that a PSS was not going to be a single program that could be applied to all planning problems. Batty (1995 and 1996) envisioned a PSS for strategic planning purposes that involved use of a combination of different computer tools. Klosterman (2001) moved the discussion forward through his work on integration of GIS, models and visualization tools. He asserted that most planners use computers for general office work such as document processing, budgeting, record-keeping, and not for planning functions such as forecasting, analysis and evaluation. Klosterman also observed that even GIS was used for routine mapping tasks such as permit processing and not for planning analysis or evaluation. The GIS functionality, and the capability of other tools for strategic planning, has since improved (Maantay, 2006; Pamuk, 2006).

Wyatt (1999) listed and analysed computer-aided policy making tools being used for strategic planning. He considered such tools to be very useful for visioning, community participation and collaborative planning leading to better human-oriented policy-making and social cohesion. Wyatt analysed *CyberQuest*, *STRAD*, *ExpertChoice*, and *Strategizer* as strategic planning tools. Short extracts of his analyses of these programs are provided below:

*CyberQuest* is brainstorming software that is useful in the “think” phase of the policy-making. It is advanced exploratory software with multimedia attributes. It comes with two associated programs which allow the users to hop between spreadsheets, painting and drawing software, the internet and other aids to analysis. It is highly exploratory software and has been widely used for triggering in the users’ minds a plethora of potential policy suggestions (Wyatt, 1999 p92).

*STRAD* (Strategic Adviser) is close to the “choose” part of the policy making process. This approach involves gathering a group of people in workshops and conducting discussions about the policy making problem. The workshop is helped by a facilitator and usual workshop brainstorming material. The software alerts users to the consequences of implementing various policies and examines the nature, extent of uncertainty surrounding the problem. It keeps record of the relative importance and urgency of policymaking issues and evaluates a number of possible, sequential chain of actions. It investigates how different policies impact each other. This software has been widely used to address strategic planning issues (Wyatt, 1999 p114).

*Expert Choice* is mostly concerned with evaluating alternatives. It helps policymakers choose by converting their ratings for alternative policies into ratio scale scores. The package also monitors inconsistencies in the users’ ratings. It has the ability to incorporate the impacts on policy choice of different scenarios and their likelihoods into the goals. It can consider impact of players’ attitudes. The software has sensitivity testing capabilities showing impact of small changes in ratings on policy conclusions (Wyatt, 1999 p137).

*Strategizer* rates alternative policies using a simulated neural network. The program trains itself to replicate the way in which past users make policy. The program has the capability to anticipate how different groups of people make

policy. This capability is very useful for determining how various community groups might rate different policies (Wyatt, 1999 p165).

Wyatt (1999) implies that the above listed tools are valuable for anyone seeking to make better human-oriented policy. Such tools are not used for NSW planning.

Klosterman's (1999) "What if?" is a widely used collaborative planning support system. It uses GIS data to support community based processes and collective decision-making. The software carries out land use suitability analysis, projection of land-use demands and allocates the demand to the most suitable locations. It helps users to prepare alternative development scenarios. It then determines the likely impacts of those scenarios on land use, population and employment. The outputs from this tool are easily understandable maps and reports.

Neither the collaborative policy-making and strategic planning computer tools listed above have been advocated by Government in planning reforms for NSW. The recent drive to promote ePlanning as part of the reforms makes no reference to them. The state government has paid little interest to computer-aided collaborative planning.

At this stage it is important to acknowledge that above mentioned tools have their shortcomings. Piracha (2002) and Greetman (2003) it is hard to find a single tool that would fit the whole range of planning problems. They highlight that custom tailoring of one or a combination of tools is a more likely future for Planning Support System (PSS). Batty (2008) also points out "how the idea of planning support is changing as both the problems to which PSS are applied and the technologies enabling us to generate such support change, both simultaneously and in parallel."

#### **4. COMPUTER USE IN AUSTRALIA**

##### ***New South Wales***

According to reform documents in NSW (DoP, 2007) electronic planning is used around the world and Australia to improve customer service, deliver simple experience for users (developers) and to make it easier for business to find out where to invest. Table 2 summarizes the objectives, applications and recommendations for electronic planning in the planning reforms in NSW. Electronic planning for NSW is about facilitating development assessment, improving general office efficiency and use of prescribed standardizing tools. Participatory or collaborative planning practices are not anticipated within the NSW ePlanning drive.

Insert table 2 here

Contents of other planning reform related documents from NSW (DoP, 2008) and the rest of the country can be cited to prove that computers-use is for routine planning only. The NSW Cities Taskforce (2008) has guided Penrith City Council in preparing the Development Control Plan (DCP) for Penrith City Centre. According to the plan, the developers wishing to construct new buildings along High Street must demonstrate using 3D modelling that views to the Blue Mountains are maintained. Another example from NSW is the online delivery of the housing codes for complying development (DoP, 2008). Both Penrith DCP and housing code are example of non-strategic use of computer applications.

The Commonwealth/Federal level Development Assessment Forum's (DAF) eDA project is promoting electronic submission, tracking and assessment of development applications. It also aims at facilitating the use of standard computer tools to ensure the smooth flow of information and interoperability across local jurisdictions and states (DAF, 2005). Yigitcanlar (2005) concluded that a large number of councils in Australia have the background infrastructure to establish online planning services.

### ***Western Australia***

Significant initiatives within WA planning system that took place from around the early 2000s were focused on involving the community in the planning process and promoting partnerships. In order to facilitate these objectives, the WA government adopted ICT technology to effectively engage the community in planning and decision-making on policy issues through the internet. The Premier's Department prepared Best Practice guidelines for "e-Engagement", i.e., engaging the community in planning and decision-making processes, emphasizing the convenience of access to information it provide and its ability to reach out to a wider audience. The guidelines focus on issues pertaining to the handling of participant input, its management and documentation and providing feedback. In line with this policy "In the period to February 2005, 246 individuals, groups and organisations made submissions to the WAPC. All of the submissions have been captured in electronic format and then summarized as 2350 discrete comments, which have been placed into an electronic database" (WAPC 2005).

Two offices were created within the State Premier's Department to deal with "e-Engagement", namely, the Office of e-Government and Office of Citizens and Civics (<http://www.citizenscape.wa.gov.au/documents/EngagingCommunities.swf>). The establishment of the latter in 2001 is explained as a response to the concern for "genuine communication" within and between diverse communities and governments. (Gillgren 2005). This is the office which was responsible for organising/ coordinating the "Dialogue with the City" initiative which was outsourced to the NGO 'AmericaSpeaks' for execution. The forum was conducted in the format of virtual "town hall" meetings conducted simultaneously at a number of locations across the city using cutting edge ICT technology. Small groups of a handful of people sitting around small tables with facilitators took part in a planning workshop simultaneously. Decisions made at the level of each table were fed into a central system and the information processed and displayed in real time using ICT.

While there is no section in the discussion paper on the use of computer tools as such, there is one mention of a suggestion for web-based publication of WAPC decisions (p.25). It may be safely presumed, however, that in the new wave of reform in WA, the NSW model will be closely followed and so the emphasis on computer technology in planning should not be different.

### ***Discussion***

The emphasis on the use of technology primarily for development assessment (and not for participatory strategic planning) is a common malice across the Australian states. In its recent report on planning reform agenda (DLGPSR, 2007), the Queensland state government explains that the "Smart eDA Project" forms the core of its ePlanning drive. The following quote highlights their emphasis on computer use in routine planning:

*Smart eDA is to deliver a single electronic process for lodging and tracking development applications across the state. Applicants will use the internet to check progress and receive decision documents (GLGSR, 2007 p5).*

The concept of electronic development application is primarily related to improving efficiency of the planning system that is measurable in terms of the output generated against resources spent such as time and effort. It serves as a tool that creates an expert system and is relevant for carrying out of routine processes. This is a valuable tool especially in areas receiving high volumes of development applications, by freeing up planning staff for more complex issues. In short, it allows planning authorities to do more (of the same) with fewer resources. In addition to increasing the delivery it also enhances the maintenance of the system by tracking progress of development applications. The utility of the tool simply lies in ensuring that Planners can do well what they do.

Yigitcanlar (2005) looked into the level of readiness of local governments for internet-assisted public participatory planning in Australia. He highlights the importance of reaching “common-consensus” by going beyond the traditional methods of community participation. He quotes from The Royal Town Planning Institute (2001),

*Local councils have a task to prepare community strategies which will engage the commitment and participation of the public as partners in decision making. This is a strategic partnership for the process of preparing local government plans collaboratively*

The capacity for online planning services in Australia has not been utilized for public participatory planning to any great extent. Indeed, online participatory planning mechanisms are inconsistent with the centralizing of planning and the reduction of community participation which are being pursued in planning reforms (Piracha, 2008). Nowhere do we see any mention of collaborative community planning helped by computer-aided policy making tools such as CyberQuest, STRAD, ExpertChoice, Strategizer etc.

The Western Australia government had adopted ICT in order to involve the community and ensure improved community engagement with its planning system that it sought to reform. Computer technology through internet was also employed to encourage meaningful communication with the community, capitalising on Australia's very high rates of computer ownership among households and taking into account the geographically dispersed and isolated communities in Western Australia.

## **5. CONCLUSIONS**

Over the past decade, state governments across Australia have enacted reforms expressly aimed at streamlining and simplifying planning frameworks criticised as uncompetitive and overly-regulatory. Reforms have, broadly, targeted the ‘cutting of red tape’ in order to make the system more developer-friendly and to stimulate investment. The steps to achieve efficiency gains have included: reducing the number of local government planning authorities; introducing key performance indicators to drive competitiveness through planning agencies; narrowing time limits for determining development assessment; expanding private certification; and adding to the list of developments that do not require formal approvals.

Due to their economic efficiency focus, the New South Wales reforms that epitomise Australian planning reforms, have been broadly supported by housing industry

lobbyists. Voices of dissent against reforms have been strongly raised by the local communities and environmental organizations, who point to a lack of proper consideration of public participation and sustainability issues.

Western Australia planning reforms had provided a contrast to the approach till recently by moving towards an increased engagement with the community. It set up offices to promote eEngagement and ventured to organise a deliberative planning exercise on a very large scale. The fact that it had to outsource the 'Dialogue with the City' to a US based entity speaks volumes about the state of electronic planning expertise within Australia.

More recently however, the WA planning system is also being reformed in line with the rest of Australia. Network City that evolved from the deliberative planning exercise is being pushed into the background as more neo-liberal policies are being touted. This time the reforms are not expected to come out of deliberative planning exercises as before and there is no talk of developing such technology.

The NSW reforms, in line with most of Australia, lay a strong emphasis on use of electronic planning. However, the entire focus is on narrowly focused to promoting the use of technology to facilitate routine planning. Electronic lodgement and tracking of assessment of development application seems to be at the heart of planning reform efforts. With the exception of WA, one does not find any mention of computer tools that can be used for collaborative strategic planning and/or policy-making in the state's vision for planning systems. Even the routine planning related computer-tools adopted by the authorities are less than acceptable for some stakeholders for their packaging in the controversial reforms.

Another point of concern is that the WA experiment with using ICT for deliberative planning was probably short-lived. The current reforms being undertaken have de-emphasized Network City and are pushing for a whole-scale adoption of the NSW model. It is interesting to note that the 'Dialogue with the City' held in September 2003 in Perth did not catch on the fancy of other states for replication.

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Table 1. Summary of recent planning reforms in New South Wales

<b>Planning Issue</b>	<b>Reform</b>	<b>Details</b>
<b>ESD</b>	BASIX-building sustainability index	Internet based assessment for sustainability policy compliance
<b>Major Development</b>	Major projects assessment system	Centralization of powers in the hands of the state Planning Minister (and the Planning Department)
	Independent panels	Transfer of review and approval authority from local governments to independent panels
<b>Land Use Planning</b>	Standard Local Environmental Plan (LEP)	Prescription of standard template for strategic planning at local level
	LEP Review Panel	Withdrawal of all delegated powers from local councils.
	Gateway review	Fast tracking and increased certainty in rezoning
<b>Development Assessment</b>	Development Control Plans	Minister empowered to direct councils
	Development Contributions	More flexibility and introduction of voluntary mechanisms
	Standard Codes (2007-08)	Dramatic expansion in exempt and complying development
	Private Certification	Privatization of development assessment planning function
	Dispute Resolution	Reduced role of Land and Environment Court.
<b>DA Technology</b>	ePlanning	Online submission and tracking of development assessment.

Source: Extracted from Piracha 2008

Table 2: Electronic Planning in NSW

Objectives	Applications	Recommendations
<p><i>Improve customer service by helping users find information that is relevant to them, help them prepare an application and speed up processing times</i></p> <p><i>Deliver a simple experience for users – yet maintain community expectations that development will be sensitive to the location and environment;</i></p> <p><i>Provide useful information on development activity and performance back to decision makers; and</i></p> <p><i>Make it easier for business to find out where to invest and create jobs.</i></p>	<p><i>Understanding the status of an application – tracking a DA through the assessment process</i></p> <p><i>Providing information to users e.g. Section 149 planning certificates, intended to provide a useful summary of the opportunities and hazards for a site.</i></p> <p><i>Preparing, lodging and tracking a development application</i></p> <p><i>Referral of information from state departments and agencies (in assessment process)</i></p> <p><i>Tools for electronic preparation, submission, tracking and assessment to improve the way that LEPs are processed.</i></p> <p><i>Use of standard computer tools to facilitate information exchange between the levels of government and between local governments and private certifiers.</i></p>	<p><i>The SIX Viewer should be implemented as the platform for e-planning to collate, integrate, manage and display planning information from councils and relevant NSW Government agencies to facilitate and accelerate the adoption of ePlanning initiatives.</i></p> <p><i>Protocols should be developed to ensure standard approaches to the exchange and the organisation of planning information.</i></p> <p><i>More effective delivery of the planning system using ePlanning should be explored in:</i></p> <ul style="list-style-type: none"> <li><i>e-DAs.</i></li> <li><i>Exempt and complying codes.</i></li> <li><i>Access to Section 149 certificates.</i></li> <li><i>The tracking of LEPs.</i></li> </ul>

Source: Extracted from (DoP, 2007)

Note: The Spatial Information eXchange (SIX) is the official source of NSW's geospatial information: <https://six.maps.nsw.gov.au/wps/portal/>