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**BUILDING CONSTRUCTION
TECHNOLOGY ROADMAP**

Part 3:

Management and Methodology

Introduction

A steering committee was formed at the outset of this project to provide guidance for its strategy and planning. The steering committee (*see page 42 for full list*) consisted of high profile leaders and people of influence in peak industry organisations, corporations and academia, as well as technical specialists. Hal Stillman, Director of Technology, International Copper Association Ltd, New York, and a specialist in R & D, was the Visiting Fellow and a key member of the steering committee.

Methodology

In order to obtain a picture of the dwellings in which we will be living in 2025, the project team set out to establish, firstly, a futurist or generalist view of the trends during the next 20 years. Secondly, it asked key specialists for their view of the trends likely to prevail in that period in supplying the last kilometre of infrastructure to and within the dwelling. Thirdly, it obtained a picture of the enabling technology necessary to address these trends, as identified by planners, designers, builders and materials suppliers. A total of 130 industry experts participated in the roundtables and provided the information upon which this report is based.

The following steps were undertaken to achieve this result:

1. A desktop study to determine whether similar roadmaps had been undertaken. This 10-day study yielded a degree of useful information but no similar technology roadmaps for dwelling construction. The research did however reveal a number of different methods for drawing up technology roadmaps, which proved useful in preparing this one. (*see Appendix B*)
2. Professor Ron Johnston from the Australian Centre for Innovation at the University of Sydney was engaged to act as facilitator for a series of three roundtables in Sydney and two briefing sessions in Brisbane and Melbourne.
3. Professor Johnston held a focus group of Year 10 students to collect their views of working life and the dwellings in which they wished to live in 20 years' time. (*see Appendix C*)

4. The first roundtable, (*see Appendix D*), held with 40 futurists and strategic planners from industry, academia, government instrumentalities and professional societies divided into four groups, examined the likely major trends and key characteristics of dwellings during the next 20 years in four different scenarios, namely:

- **An emerging China**

Parameters – the emergence of China as the dominant global power, with implications for the Australian economy, labour markets and housing affordability; in addition, there will have been regular major epidemics, such as SARS.

- **A climate for better housing**

Parameters – significant climate change, with impacts on the Australian economy and food security, complicated by the emergence of a major disruptive technology.


- **Housing for a lean, mean world**

Parameters – high levels of geo-political instability, continuing patterns of terrorism and security concerns, dramatic decline in availability of water and petroleum.

- **Housing for all**

Parameters – a significant shift in culture towards anti-materialism and anti-globalisation, a strong inward focus on community, and a national vision to provide equitable access to essential goods and services for all.

5. The second roundtable (*see Appendix D*), explored the future 'last kilometre' of infrastructure services to and within the property, including electricity, gas, water and cabling for the delivery of information, communication and entertainment. Four key infrastructure strategists and practitioners listed key issues in terms of supply, sustainability and government regulatory trends, and the roundtable then followed the format of the first roundtable, with the 40 attendees divided into four groups to examine these future trends in terms of the same four scenarios.

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6. The third roundtable, *(see Appendix D)*, examined the enabling technologies that would address **Ten Characteristics** of dwellings arising from the first two roundtables. It is interesting to note that in the first two roundtables, the convergence of trends under the four different scenarios was so close as to make virtually no difference to the outcomes of the **Ten Characteristics**. The 'four scenarios' examination of the first two roundtables therefore became one for the purpose of the last roundtable. The 42 attendees were split into five groups, each of which looked at enabling technologies for two of the **Ten Characteristics**.
 7. Following the three roundtables, which were held in Sydney, the project team presented the resulting enabling technology outcomes to industry practitioners in Brisbane and Melbourne. This provided an opportunity for feedback from Victoria and Queensland and a reality check on these outcomes and regulatory trends to date. The information gathered was then put into a common format for each of the **Ten Characteristics**, namely listing the **trends**, the **issues** associated with each trend, and the **enabling technology** required for each trend. *(see Appendix E)*
 8. The **trends** and **enabling technologies** of the **Ten Characteristics** were then ranked and plotted in a matrix format.

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Part 3

END

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