

AN INTEGRATED DESIGN STRATEGY FOR SOUTH AUSTRALIA

BUILDING THE FUTURE

Professor Laura Lee, FAIA, Hon FRAIA
Adelaide Thinker in Residence 2009 - 2010



Adelaide Thinkers in Residence

**AN INTEGRATED
DESIGN STRATEGY
FOR SOUTH AUSTRALIA**

—

BUILDING THE FUTURE

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BUILDING THE FUTURE

Professor Laura Lee, FAIA, Hon FRAIA

A MESSAGE FROM MIKE RANN

Design lives at the heart of all that surrounds us.

It shapes the homes and streets we live in, the places in which we work and gather, and the items that we make and purchase. Good design also helps to deliver better communities, build for healthier lives, and create greater opportunities.

At the outset of the 21st Century, South Australia has reached a pivotal time in its development, with our biggest-ever investment in infrastructure. The 30-Year Plan for Greater Adelaide will guide our city's evolution, to ensure we find the right balance of growth, preservation, sustainability and innovation. Our unprecedented infrastructure investment, including the upgrade of our rail network as well as major building projects, also provides us with historic opportunities to transform our urban environment using innovative design along our major transport corridors.

The concept of integrated design does not only apply to better buildings. It also relates to the spaces between them, and the way that we go about engaging with communities to help design tomorrow's heritage. It's about developing a richer design culture in South Australia.

Professor Laura Lee has helped us better understand how we can improve the quality of life of our cities and communities through better integration of design thinking and problem solving. During her residency, Professor Lee worked closely with universities, State and local government, and the Australian Institute of Architects, to forge closer connections between design professionals, the building industry, planners and the public.

This report does not focus on individual South Australian projects. Nor is it a critique of our existing built environment. Rather, it describes how we can better organise our planning procedures to take more issues into account before we start building. Intelligent investment in design makes economic sense and delivers better results for communities.

Professor Lee leaves us with nine recommendations. In response to these, we have already established an Integrated Design Commission, appointed a Government Architect and a Commissioner for Integrated Design, and received a Federal Government investment of \$1 million to launch our Integrated Design Strategy for the City of Adelaide.

This report provides a vital starting point in our quest to ensure that South Australia is as renowned for its design excellence as we are for our food, wine, festivals and renewable energy.

I thank Professor Lee for her dedicated work and the significant contribution she is making to our State, and I commend this report to you.



The Honorable Mike Rann, MP / Premier of South Australia / February 2011



LAURA LEE

Laura Lee, FAIA, Hon FRAIA, is a registered architect and Professor of Architecture at Carnegie Mellon University in Pittsburgh, USA where she served as Head from 2004 to 2008. Laura has also taught at the Higher Institute of Architecture in Antwerp, Belgium; Royal Danish Academy in Copenhagen, Denmark; and Swiss Federal Institute of Technology in Zurich, Switzerland, and in 2009, she was the Cass Gilbert Visiting Professor at the University of Minnesota. Her areas of teaching include Professional Practice and Ethics, Architecture Design Studios, and Interdisciplinary Workshops relating architecture, art, design, drama and music.

Laura is an international leading voice for integrated design education, practice and research. Her work focuses on the development and implementation of integrated design strategies and collaborative programs between the academy, government, industry and the profession. She has lectured and served on panels for many years on issues concerning the relationship between architectural education, practice and research.

As a consultant to the American Institute of Architects, Laura created the *Emerging Professionals Companion: A Resource for Architecture Education and Experience*, a 16-chapter, 500+ page web-based / print resource serving interns, students, educators and practitioners. She has devoted years to the advancement of a knowledge base for architecture through the development of case studies. Laura's current research focus is research-based practices leading to building innovation.

Laura is the recipient of Carnegie Mellon's highest teaching honour, The Ryan Award, in 2002. Nationally, she earned the American Institute of Architecture Students National Educator Award and was elevated to Fellowship in the American Institute for Architects (FAIA) in 2004 for advancing the art and science of building through her contributions to architectural education, internship and practice. In 2005, Laura was presented with the Henry van de Velde Institute Award for Architecture Education in recognition of her development of intercultural programs. Laura was elected, in 2008, a Senior Fellow of the Design Futures Council, a global network of design community professionals who explore trends, changes and new opportunities in design, architecture, engineering and building technology. Most recently, she was awarded an Honorary Fellowship in the Australian Institute of Architects.

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BUILDING
THE
FUTURE

INTRODUCTION

The best way to predict the future is to design it.

Buckminster Fuller, Engineer, Designer, Futurist (1895-1983)

Built and natural environments are collectively and ultimately tangible records of history. Both are cultural assets that represent a long-term investment for generations to come. The quality of our environment — everything from products to the planet — profoundly affects the quality of our everyday lives. Our regard for nature and the design of the built environment is an expression of our aesthetic, cultural and social values, and a statement of the challenges and expectations we seek to address in shaping a sustainable world for the future.

Conceiving, designing and delivering a sustainable built environment represents a significant responsibility for all of us. In addressing the environmental challenges facing us globally and locally, there is a need — through education, practice and research on the built environment — to make informed choices about how we use our existing buildings, places and spaces as well as landscapes and natural resources. Our decisions about building today will define the 'heritage of the future'.

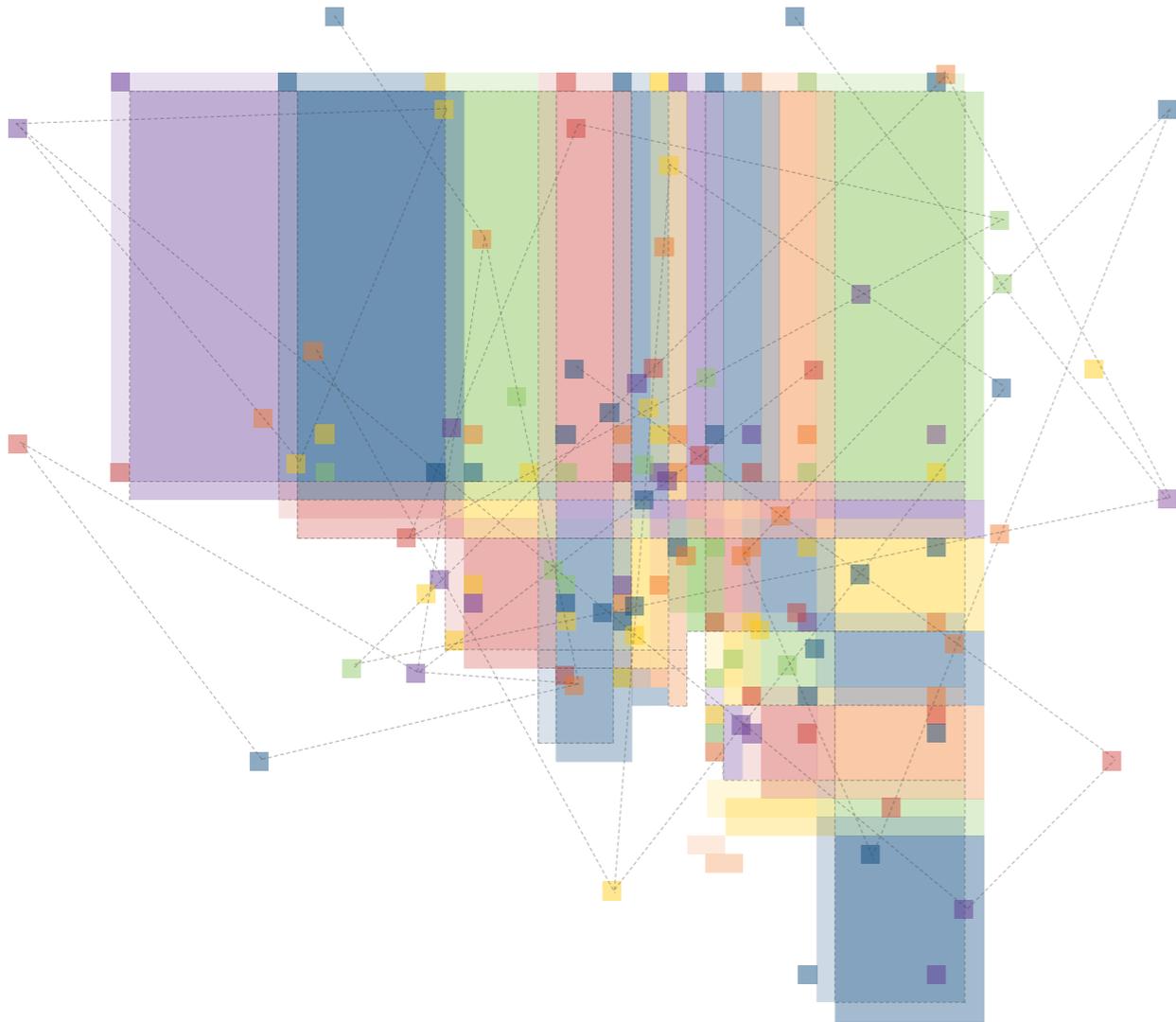
We stand at the threshold of an era, a time of great controversy. On the one hand, science has never achieved so many breakthroughs as in recent decades; on the other hand, we are confronted with uncertainty and the disappearance of a clear value system. Ours is a period of self-expression and individual style, where aesthetic evaluations are open-ended, and digital culture overshadows direct experiences. Frank Furedi (2004) argues that our sense of powerlessness regarding our ability to know the future has led to a relativist approach towards knowledge and replacement of the pursuit of knowledge with a pragmatic focus on specialised micro-knowledges. He pleads for the return of a human-centred attitude. This analysis confronts us with one of the major challenges for the coming generations: to build culture based on a consistent ethical value system.

Investing in design knowledge, processes and thinking will be absolutely necessary for a sustainable future. We must be active agents in the evolution towards a new society by providing the maximum opportunities to leverage design and to prepare future generations to face a changing world. We must aspire to make ourselves leaders through innovative and integrated design practices.

South Australia has pockets of excellence and world-class innovative practices and programs in many domains. However, such efforts are disconnected and isolated, and therefore, do not have wide spread influence nor achieve necessary impact. Now is the time to evolve and leverage SA's notable strengths through integrated design decision-making processes which enable individuals, communities, industry and government to engage in 'holistic approaches' for multiple long-term life-cycle benefits.

- An Integrated Design Strategy for South Australia is the opportunity to:
- support the aims and delivery of the 30-Year Plan for Greater Adelaide
 - contribute to the State Reform Agenda, in particular, Vibrant Adelaide and a Green SA
 - influence the value and long-term benefits of planned infrastructure investment
 - define high-quality and responsive place-making guidelines for communities and Adelaide.

South Australia is guided by a superbly robust State Strategic Plan, which has inspired the State Reform Agenda to focus on a 'Vibrant Adelaide' and The 30-Year Plan for Greater Adelaide to call for 'a new urban form'. Each has success in meeting the basic and independent economic, social and environment objectives. The value of design is to relate creativity and innovation, building communities and expanding opportunities to make authentic, people-focused places with a memorable spirit of place. South Australia is poised for change; integrated design is the driver of enduring change which will create a 'new heritage' and a profound legacy for future generations.



SOUTH AUSTRALIA

South Australia is known as 'the world's finest blend' with a distinguished multicultural society. Using the metaphor of a tapestry, South Australia's threads of culture are woven as stories to express a diverse yet cohesive fabric. The power of the tapestry to create harmony arises from its unique capacity to unite its different parts so that each preserves its own identity and yet blends into the pattern of a single whole.

Capturing the constellation of SA's creative and innovative strengths, an Integrated Design Strategy will build the future of South Australia as both a State of the Arts and a State of Being.

EXECUTIVE SUMMARY

My reflections are founded on optimism for our human capacity to change, a belief in the human spirit, a passion for the value of design thinking. And above all, for the collective wisdom we can develop as a society in the face of substantial and seemingly insurmountable challenges of our time.

en Maher, Architect and Chairman, Hassell, 2009 AIA Gold Medal Speech

CHALLENGE — CHOICE — CHANGE

The seemingly insurmountable **challenges** of our time can be overcome through an Integrated Design Strategy based on principles and processes that harness our collective wisdom toward the greatest good for the greatest number. Design processes and design thinking have proven, beyond other approaches, to manage increasing complexity and address our future condition. While design influences every aspect of our lives, we take it for granted until it fails. Design is fundamental to our survival but its value lies in its potential to improve the quality of life by an order of magnitude not possible with conventional methods.

As a **choice**, integrated design promotes holistic approaches and acknowledges that we need to think, and act, strategically for the long term. We need to inform decision making with research, education and collaborative practices embedded in a flexible and interactive structure that promotes innovative new policies and actions for a prosperous and sustainable future for South Australia.

South Australia's future must be based on an Integrated Design Strategy as the key engine for **change**, creating added value.

GLOBAL AND NATIONAL CHALLENGES	NATIONAL AND SOUTH AUSTRALIA CHALLENGES	SOUTH AUSTRALIA CHALLENGES
• Connectivity and mobility	• Climate change adaption, mitigation	• Ageing population
• Community health, safety, well-being	• Emissions reduction	• Attracting and engaging youth
• Economic growth and change	• Energy (efficiency)	• Car dependency
• Environment and biodiversity	• Housing affordability and diversity	• Communication and media
• Food	• Infrastructure and transportation	• Ecological footprint
• Poverty	• Population growth, demographic change	• Identity / confidence
• Social equity, inclusion, opportunity	• Resource depletion	• Isolation / location
• Sustainable development	• Waste and recycling	• State, city, local disconnect
• Urbanisation	• Water (supply)	• Urban sprawl

TOWARD AN INTEGRATED DESIGN STRATEGY

A frequently asked question during my residency in South Australia 'What do you think about Adelaide's architecture?' signifies an important aspect of culture in the state. Citizens genuinely want to know how they are perceived by outsiders. While an interesting and worthy question, my response was generally 'What do you think?' Such an approach defines the beginning of an Integrated Design Strategy: questioning as a way of understanding culture and human behaviour while provoking critical thinking and personal engagement as a foundation for change.

Vital questions I asked, followed: 'Do the experiences of South Australian cities, communities and public spaces reflect the unique identity of South Australia? Are the places where you live, learn, play and work accessible, attractive, inspiring and life affirming? Does the built environment promote social inclusion and productivity? How do infrastructure and transport seamlessly support the diversity of people's activities? Are current investments structured to be sustainable in the long term? And ultimately, does the environment as a whole contain the seeds of its own regeneration, cultivating civic responsibility?'

The answers to these questions are both positive and negative, but one rarely witnesses a place so rich in potential and as yet unspoiled as South Australia. Its assets are incomparable — extraordinarily diverse and natural beauty, a world-renowned gridded city-in-a-park plan as a profound manifestation of democracy, a vibrant arts community, and a multicultural population ready for change. At the same time, South Australia faces significant challenges, some globally and nationally in common, others specific to the conditions of the state. Car dependency, urban sprawl and lack of contemporary expressions of culture through the design of the built environment threaten to seriously compromise the future in South Australia. Current ways of decision making in the state, while highly laudable in many cases, are fragmented. They need to be much better coordinated to address increasingly complex challenges and grasp the potential so critical to the future of the state economically, environmentally and socially.

It will not be enough to design better, more ecologically sustainable architecture. Hence, the residency focused on design as a process of collaborative decision making for the entire spectrum of activities forming the built environment. Vital to improving quality of life, the residency also focused on design as a driver of the innovation necessary for progress.

The aim of an Integrated Design Strategy is to consider all aspects of human experience, at all scales, to advance culture. This can only be accomplished by establishing a bold and comprehensive vision for the state, supported by collaborative action across agencies and tiers of government, industry and the education sector.

An Integrated Design Strategy for South Australia defines an approach through nine very specific recommendations leading directly from an understanding of South Australia's context and the potential for the state to establish leading models of integrated design practices.

THIS REPORT

The residency brief '**the value of design and the impact of the built environment on the quality of life**' represents a daunting undertaking for a Thinker 14 weeks on site. Yet the complexity and scope of the work is crucial for the future of the state as argued above. An early observation of the residency was that design had very limited presence. Furthermore, design in general, architecture, landscape architecture and urban design have not been central to, nor leading, planning and development activities in the state.

My response to these conditions, the residency and this report covers much territory, beginning with an explanation of design value and then serving as a guide for integrated design decision making processes to be applied across government. The report concludes with detailed recommendations to be broadly embraced and to establish a central role for design professionals in delivering an Integrated Design Strategy for South Australia.

Integrated design practices are best understood through direct experience, so, to continue the conversation of the residency, this report presents many 'voices' in the form of quotes — global in blue, local in orange — offering a diversity of interpretations and perspectives of design and culture. The report, as a product, challenges conventions by introducing complex diagrams to express concepts and strategies as a way of building visual literacy.

SUMMARY OF THE RECOMMENDATIONS

The following nine recommendations that have resulted from this residency are covered in greater detail beginning on page 87. This 'snap shot' should be read in conjunction with the remainder of the report.

1. INTEGRATED DESIGN COMMISSION WITH A GOVERNMENT ARCHITECT

Create an Integrated Design Commission, attached to the Department of the Premier and Cabinet, with a Commissioner and Government Architect supported by a team of design professionals and a multidisciplinary advisory board of experts, responsible for independent advice, advocacy and review of built environment design, planning and development.

2. POLICIES AND PROCUREMENT VALUING PERFORMANCE-BASED OUTCOMES

Develop policies and procurement practices valuing design excellence, based on performance measures that seek mutually beneficial economic, social and environmental outcomes. Ensure the provision of a regulatory environment and legal framework to achieve the highest quality outcomes that maximise innovation.

3. INTEGRATED DESIGN STRATEGIES FOR COMMUNITIES, CITIES, REGIONS

Establish comprehensive design-led visions, based on guiding principles applied across multi-tiered and multi-agency government bodies, leading to the creation of Integrated Design Strategies for Adelaide city, regions and communities including coastal, indigenous, middle suburbs, mining, remote and rural.

4. INTEGRATED DESIGN FOR CLIMATE CHANGE AND SUSTAINABILITY

Through an integrated approach to design, policies and regulations, create opportunities to establish global environmental leadership. Leverage SA's leadership in climate change and sustainability, and the State's wealth of renewable energy resources, to develop adaptable, flexible and resilient environments for individuals, businesses, communities and industries.

5. COLLABORATIVE CONSTRUCTION CAPACITY USING INTEGRATED PRACTICES

Leverage South Australia's reputation as an ideas incubator to develop leading models of collaboration and delivery methods for the built environment industry. Support a knowledge exchange network, integrated processes, use of leading technology and research to ensure maximum value.

6. MANUFACTURED ASSEMBLIES FOR MASS CUSTOMISATION OF BUILDINGS

Establish expertise in the design and manufacturing of 'green' assemblies for mass customisation of buildings. Transform non-viable manufacturing industries into eco-innovation industries of 'kit of parts' buildings and structures for diverse locations, populations and purposes in local, national and global markets.

7. PRACTICE-BASED BUILT ENVIRONMENT RESEARCH ALLIANCE

Establish built environment research alliances as collaborative, practice-based and use-inspired models. These should develop case-based knowledge, evidence-based design and performance-based outcomes for the built environment. Establish a requirement in government design, planning and development projects to undertake collaborative research for all projects.

8. DESIGN EDUCATION AND LEARNING ENVIRONMENTS

Establish design as a core discipline of study at all levels, from early childhood development to tertiary level education. Develop design literacy programs for the public through direct experience learning models. Strengthen continuing professional development and up-skilling programs for industry. Develop expertise-based, integrated design practice-academy models.

9. CONSULTATION MODELS AND COMMUNICATION STRATEGIES

As part of any integrated design program, build a comprehensive engagement framework, consultation models and communications strategy using a wide variety of media aimed at informing and empowering individuals, communities, industry and the public sector.



GLOBAL NATIONAL LOCAL

As in all things, what is needed here is leadership – and there are only ever two ingredients in that: imagination and courage. Because it is imagination that sketches the broader perspective, providing patterns and frameworks to encompass myriad elements that would otherwise remain unwoven...

Rt Hon Paul Keating, Former Prime Minister of Australia, 8 March 2010

DEFINITIONS

Throughout this report you will encounter specific words with specific meanings or a meaning that may differ from a more conventional use. To assist your understanding of key concepts the following definitions are offered:

Design is multi-faceted, multi-layered and conveys many meanings. Importantly, it is both a verb and a noun, referring to a process and to a product, to an activity and to the result of that activity. Design is simultaneously a problem seeking and problem solving activity, a means to achieve desired goals not only the goal in itself. It is a creative process referring to every course of action aimed at changing existing situations into preferred ones, driving innovation to deliver value.

Integrated Design is about collaboration, consultation and communication across broad stakeholders and, early in the design process, acknowledges challenges and perceived restrictions. It enables the integration of research into all aspects of industry and professional practice with an emphasis on processes for achieving outcomes as well as the outcomes themselves. Based on a human-centred approach, integrated design fosters coordinated, long term decision making leading to improved quality of life outcomes.

Integrated Design Practice reflects a holistic approach, through which multiple disciplines and aspects of design including architecture, engineering, interior design, landscape architecture and urban design (to name a few) are considered together in the planning of a new environment or renovation. It assists the client with any facility-related or service-delivery need providing a total approach to a project's life cycle to achieve a cost effective, resource efficient, and performance-based result that enhances the experience of the users.

Planning, in general, refers to the organisational process of creating a plan and/or strategy to realise certain goals in time and space. It is a process with long range, intermediate and short-term perspectives for accomplishing a certain purpose with realistic expectations. As a discipline, planning proposes physical, social and strategic solutions often related to public policy.

Development refers to the totality of actions and measurements needed to improve the socio-economical situation of a region, city, town, or neighborhood. It covers a broad spectrum of aspects, from ecology, heritage, land management, transport systems and real estate to aspects of education, public health and safety.

Keating proceeds to say 'from here on out, there can be only one approach that can make a real difference: Commonwealth-State cooperation, but it has to happen earnestly and quickly'.

In October 2009, Prime Minister Kevin Rudd proposed the introduction of National City Planning Criteria for the future of Australia's major cities. Attention and direction was given to a coordinated approach to strategic planning and urban design criteria in the Council of Australian Governments meeting in December 2009. The content and recommendations of the residency suggest that South Australia has the greatest potential to establish a leading national model of 'intelligent investment' through the integration of design, planning and development. Integrated design represents a necessary approach to not only address present and future economic, environmental and social challenges for the nation and the state but also to establish a framework for decision making that will ensure sustainable buildings, public places, communities and cities that are adaptive, resilient and transformational.

Concurrent to the exigency for building industry advancements and innovations, the Hon Anthony Albanese MP, Australian Minister for Infrastructure, Transport, Regional Development and Local Government declared the need for future-oriented urban policies that will transform our cities and communities into responsive environments, significantly improving the quality of life for all Australians. Such change demands the need for design, planning and development activities to be complementary, interdependent and synergistic — and buildings, infrastructure and public space to be co-conceived for enduring value. An Integrated Design Strategy for Adelaide city represents a structure that could be adopted nationally, emulated by other cities, and adapted for regions and significant locations in metropolitan areas.

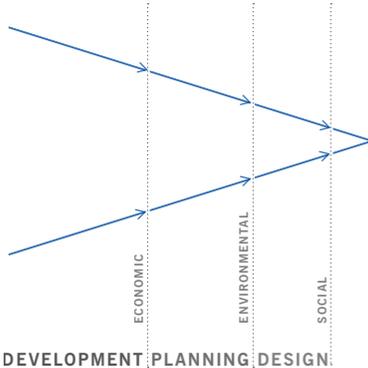
Senator Kim Carr, Australian Minister for Innovation, Industry, Science and Research established the Built Environment Industry Innovation Council, announcing \$20 million in new funding for built environment research. With existing, thriving research partnerships between academia, government, industry and practice that are having a significant impact on the state's economy and record of innovation of international significance, SA is positioned to attract federal funding through the creation of a leading model of 'practice-based and use-inspired' built environment research alliances to improve the livability, prosperity and sustainability of communities.

Significant planning and development activities in South Australia, and the release of the Property Council of SA's report *Adelaide 2036: Building on Light's Vision*, define an unprecedented opportunity for the state to establish 'intelligent investment' practices through integrated design decision-making processes which will result in mutually beneficial economic, social, and environmental outcomes to improve the quality of life for all South Australians.

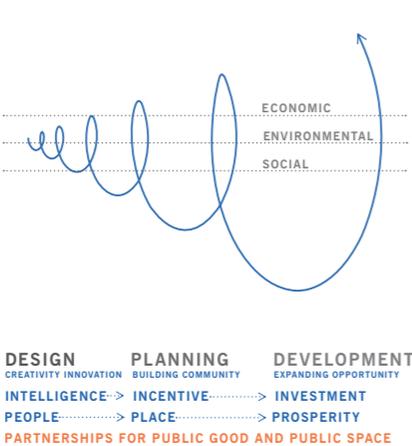
A commitment to integrated design excellence promises to transform the built environment, as evidence of, and testimony to, a prosperous, responsive, sustainable and vibrant South Australia.

INTELLIGENT INVESTMENT

CURRENT PARADIGM



INTEGRATED DESIGN PROCESS



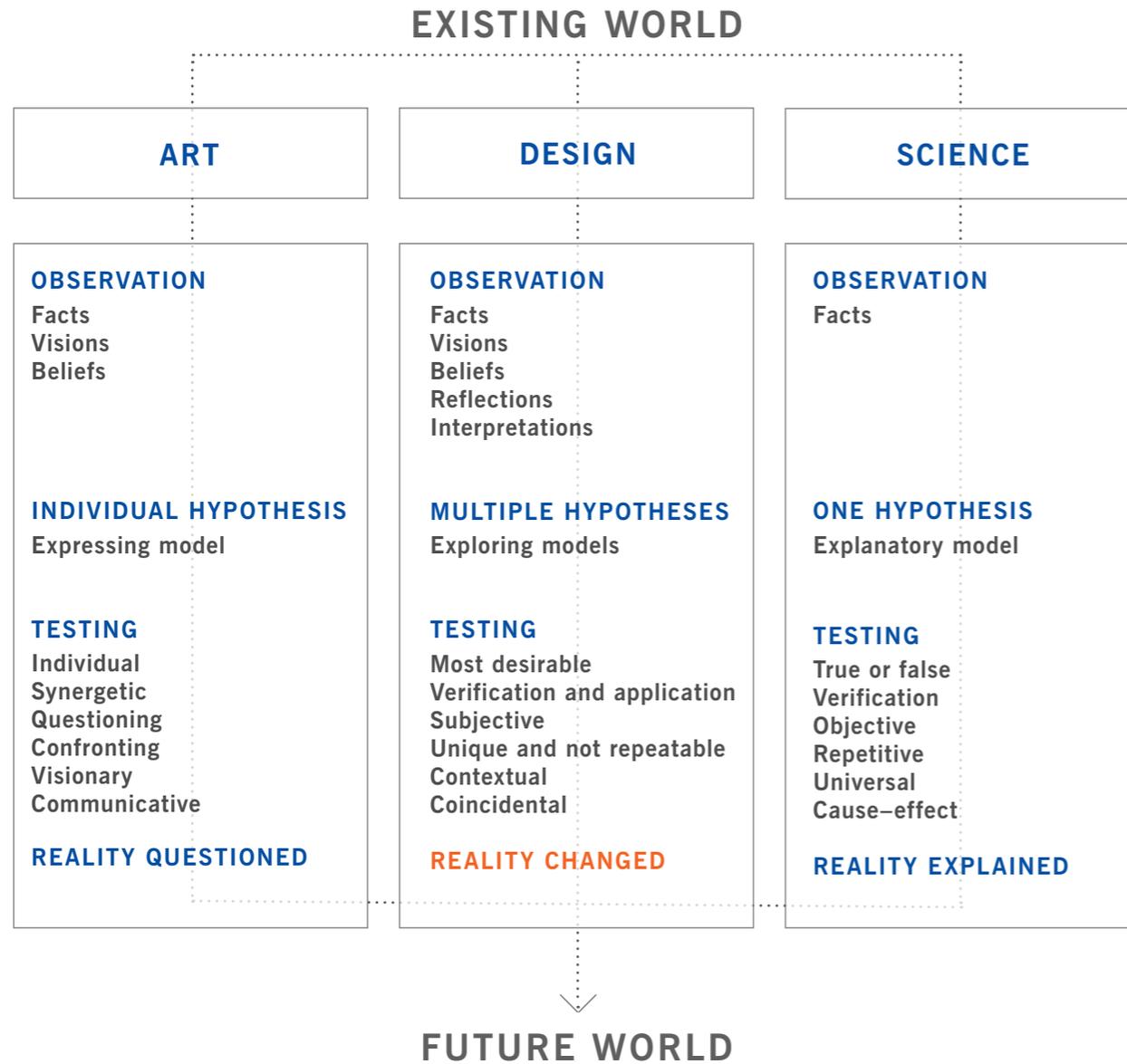
DESIGN EXPLAINED



THE CASE FOR DESIGN

One can envisage a future in which our main interest in both science and design will lie in what they teach us about the world and not in what they allow us to do to the world. Design like science is a tool for understanding as well as for acting.

Dr Herbert Simon, Nobel Prize Winner, *The Sciences of the Artificial*, 1996



Design is a means by which we bring the world into culture. As a discipline, design is concerned with identity, quality and value as an expression and evolution of society. In a contemporary world needing human encounters, design enables us to translate human values into the spirit of place and time. Founded on humanistic tradition, architecture, in particular, honours the principles of democracy and equity.

Through a conscious consideration of cultural conditions, design aims to address all factors in a given situation to achieve desired outcomes. Design provides a balanced, inclusive and structured way of approaching the development of innovative products and human environments for the present and for the future. To achieve success, design must reconcile human and technical requirements for economic, environmental and social viability.

As a consequence, good design leads to better business. A designed response to a problem has a much higher probability of success mainly because solutions are derived from the consumer or end-user needs. Enterprises using design thinking and / or design professionals in the development of their environments, products and services are more competitive and productive, and they are more likely to attract and retain talent.

SOUTH AUSTRALIA: INTELLIGENT BY DESIGN

Globally applicable design processes and design thinking represents a significant change for South Australia. Yet, there has rarely been a place so poised for change through the power of design. South Australia, with the most stunning natural beauty, unspoiled heritage and world renowned Adelaide city plan, to name only a few, has the extraordinary potential to transform and unify these assets through design. Such an approach promises, at the very least, to address the urgent environmental challenges of the state; design-led decision making will ensure the integrity of South Australia's unique identity AND define the future of the state with an authenticity that must not be compromised. Understanding the values of design in South Australia will imbue its past with presence.

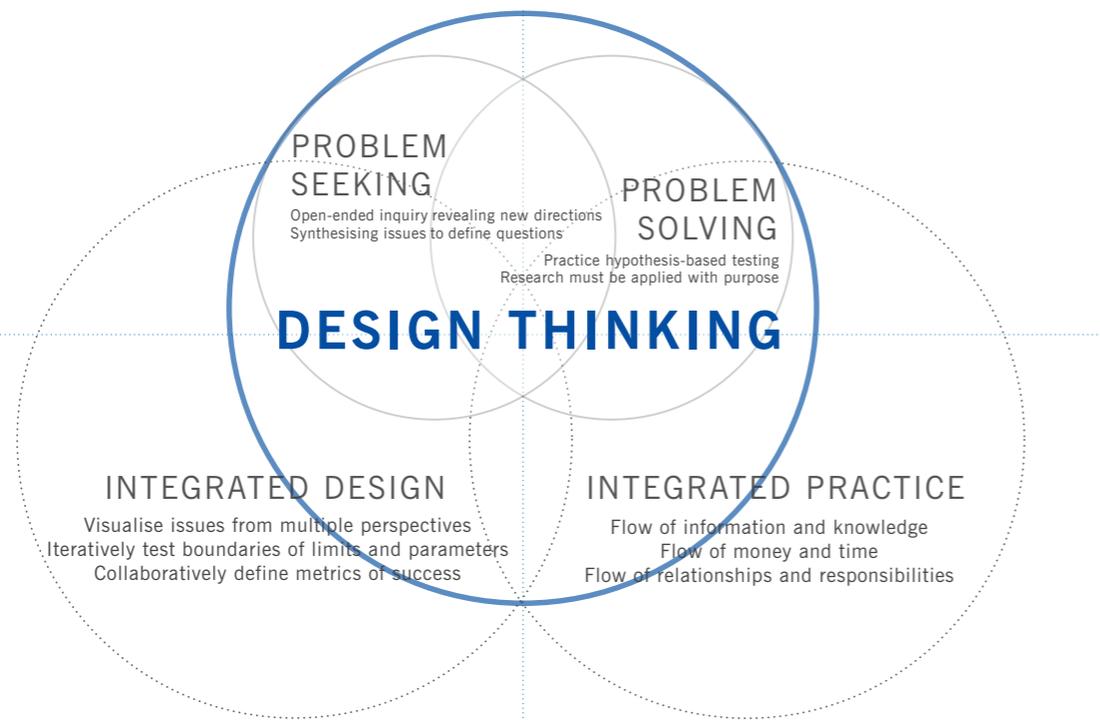
WHY DESIGN

We live in an increasingly complex world and have reached a point in history where the manmade world and the natural world have come into conflict. We have discovered that a pure scientific approach based on a highly specialised but mono-disciplinary approach is no longer sufficient to solve problems of growing complexity and global scale. We have become aware that pure scientific thinking in combination with a problem solving strategy based on the traditional 'cause-effect approach' is inadequate to obtain satisfying solutions, and becomes more and more counter-productive. It results in long, tedious and often frustrating decision-making processes, which are 'too little, too late' to effectively address the significant challenges at stake.

How can we escape this vicious cycle to cope with increased complexity, while managing to advance an evolutionary process for the benefit of humanity? The answer can only be found in a collaborative, global and transdisciplinary strategy, involving all stakeholders and based on critical, innovative and lateral thinking — an integrative design approach based on clear, comprehensive and consistent principles.

DESIGN AND THE FUTURE

In a knowledge-based market, design is the critical knowledge of the future. Moreover, design as 'a process' and tool can be applied toward solving any problem. Design has the potential to deliver services for any facility or client need through a total life cycle approach. From this understanding, leading, dynamic and innovative models emerge. As an art, a science and a business, design aims to structure and transform information into knowledge. Similarly, design thinking requires the ability to negotiate between the ideal and the real, to maximise consideration of often competing agendas.



Clearly a case can be made for the value of design in all aspects of society. Businesses and business schools have adopted design processes as a matter of innovation. Engineering schools have recognised the power of ‘studio education’ as a collaborative and complex problem-solving environment for learning. Non-government organisations, intent on solving the world’s most pressing issues, now rely on the unique approaches offered by design teams. Within the design domain, service design is one of the fastest rising higher education degrees. Governments, and the South Australian Government, are well justified in recognising the certainty of a massive return on investment in design knowledge, practices and processes.

DESIGN AS AN AGENT OF CHANGE

Daniel Pink in *A Whole New Mind* (2005) identifies a clear movement ‘from an economy and a society built on the logical, linear, computer-like capabilities of the Information Age to an economy and a society built on the inventive, empathic, big picture capabilities of what’s rising in its place, the Conceptual Age’. Applying creative processes, advancing the built environment through research and stimulating design thinking is essential for providing a decision-making framework that ensures a sustainable future.

Integrated design thinking requires problem-seeking and problem-solving abilities in response to diverse, speculative and highly detailed information. Integrative thinking evolves from holistic, organic and synergistic models of practice.

Design as an agent of change is based on critical thinking and collaboration. Designers foster sensitivity to the diversity of people’s ideas, beliefs and values. Design activity has the ability to heighten multi-cultural awareness and makes us better able to: freely explore ideas and envision ourselves as multidisciplinary thinkers and designers; express ideas clearly in a variety of media and circumstances; develop, attract and ultimately affect diverse audiences; and explore various cultural, professional and personal contexts as they relate to society.

The key to economic growth lies not just in the ability to activate and attract the creative class, as Richard Florida (2002) argues, but to translate this underlying advantage into creative economic outcomes in the form of new ideas, new high-tech businesses and regional growth. This new class includes scientists and engineers, university professors, poets and novelists, artists, entertainers, actors, designers and architects, as well as the ‘thought leadership’ of modern society: nonfiction writers, editors, cultural figures, think-tank researchers, analysts and other opinion-makers.

DESIGN DEFINED

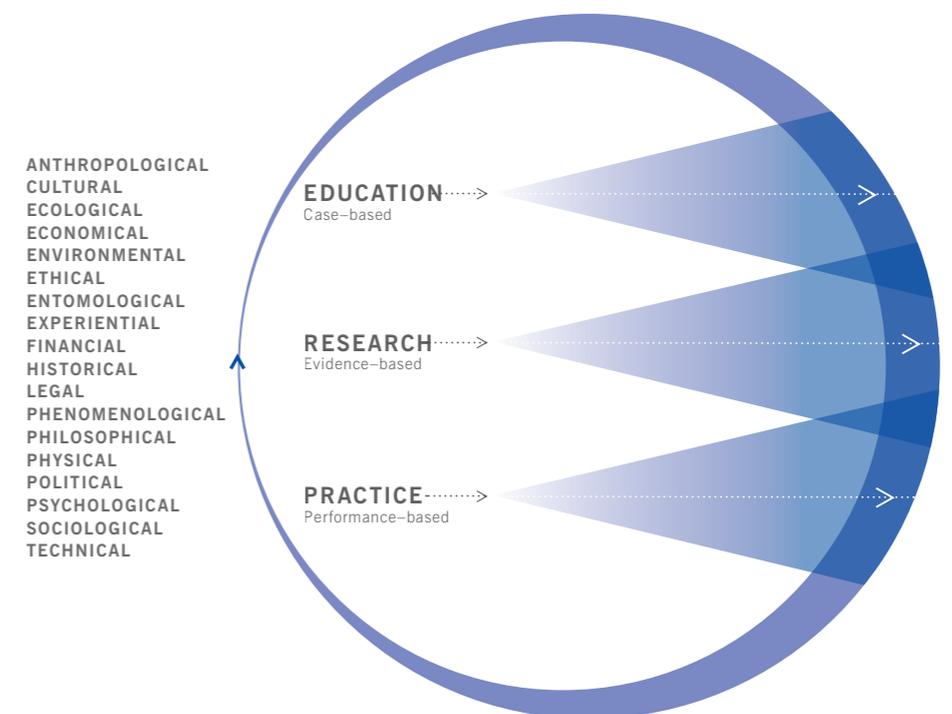
Design is one of the most forceful influences on behaviour and is a part of everything we experience.

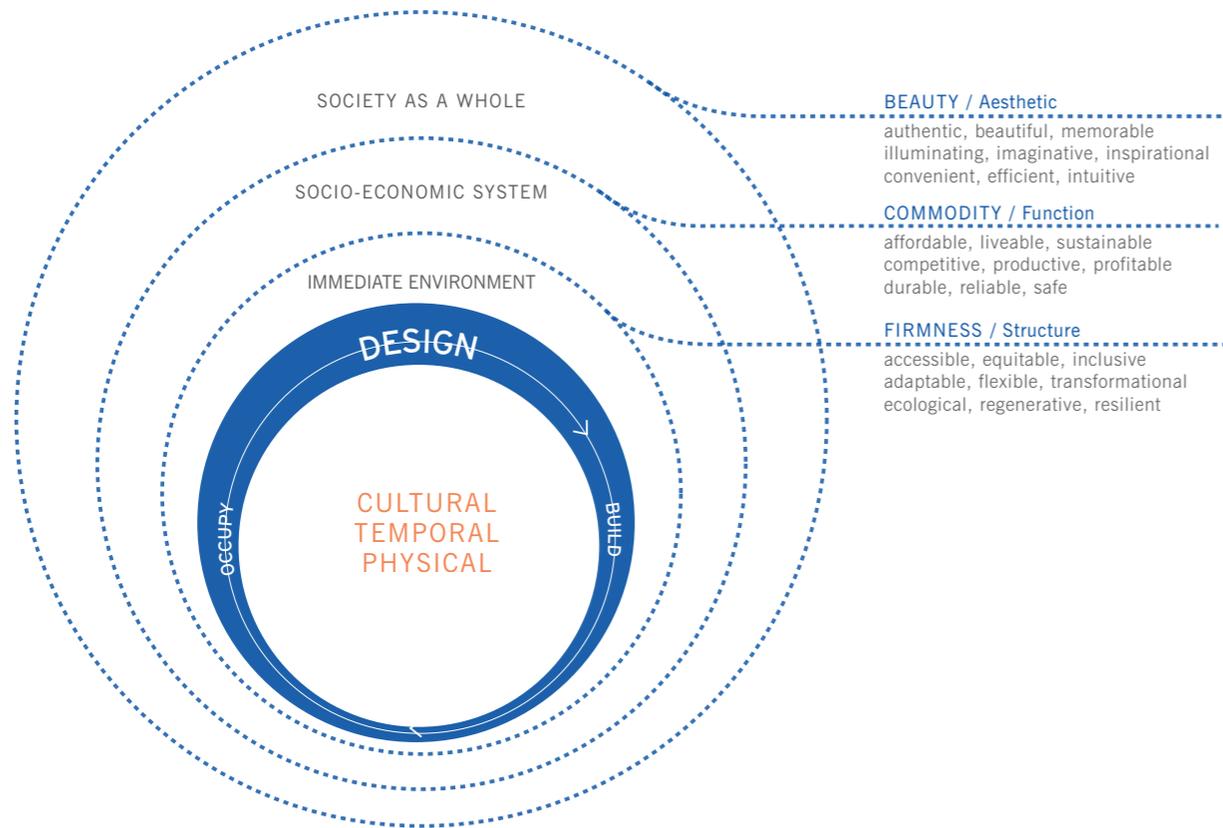
Penny Bonda, Interior Designer, Ecoimpact Consulting

THE NATURE OF DESIGN

Design is multifaceted, is multi-layered and conveys many meanings. It is both a verb and a noun, referring to process and to product, to an activity and to the result of that activity. It is a creative process driving innovation to deliver value. Herbert Simon (1996) in his remarkable book *The Sciences of the Artificial* declares the true essence of design: ‘Design is concerned with how things ought to be, with devising artifacts to attain goals. It refers to every course of action aimed at changing existing situations into preferred ones and conceiving artifacts to enable such changes’. Design is a means to achieve desired goals and not the goal in itself. Design is a unique human activity that inherently connects and relates individual elements, actions and activities — adding value to a whole which is greater than the sum of its parts. With design knowledge as the most valued ‘commodity’ of our age, our actions demand the interplay between the arts, humanities and science, and between education, practice and research.

Design is simultaneously a problem-seeking and problem-solving activity. Foqué (2010) defines design as a ‘per se innovative, heuristic and experimental process, driven by empathy and focused on problem defining and problem solving. It essentially deals with problems with stakeholders and fuzzy boundaries, and where the solution is found between disciplines’. As such, designers bring a broad, multi-disciplinary spectrum of ideas from which to draw inspiration. Design relies on the methodologies of both art and science, but unites them into a unique approach driven by lateral thinking. It frames decision-making into a long-term, future-oriented context. With an essentially human-centred focus, design aims to improve quality of life.





THE CONTEXT OF DESIGN

Design thinking is all embracing and approaches the world in a comprehensive way. Design seeks not only to answer the question of how things look (aesthetic qualities alone), but more importantly how they perform, how they work and how they will impact and influence individuals and society.

Integrated design approaches problems as a dynamic of cycles and systems. It embraces its context, making a positive contribution to the environment in return while making the smallest possible impact on the planet. It creates symbiotic relationships within an overall ecosystem, leading to multiple and mutually beneficial outcomes.

The value of design lies precisely in this integrated and holistic approach based on people's values and on bold vision. It enables us to enhance and sustain the character and natural attributes of the environment; it supports positive living experiences for communities, contributes to a sustainable physical and social climate, and by doing so creates a healthier environment, accessible to and for enjoyment by everyone. Good design thinking reflects and responds to community needs while embracing diversity and cultural values.

In the built environment, an integrated design approach creates places and spaces where people feel a sense of belonging and connection, within which they can identify themselves. Inclusive design creates environments that delight, inspire, form memories, and invoke a sense of care, personal investment and ownership, offering highest quality experiences, and fit for purpose, responsive outcomes.



THE IMPACT OF DESIGN

The impact of an integrated design approach is relevant at all scales and levels:

With respect to good **governance**, it influences effective policies by offering models for global decision making, drives creativity and innovation across the system, fosters collaboration and communication, and above all, makes processes comprehensive and transparent.

With respect to the **environment**, an integrated design approach creates more liveable and safe communities, and effectively controls ecological parameters of environments from micro to macro levels such as carbon emissions, energy consumption and pollution. It leverages natural resources effectively and responsibly.

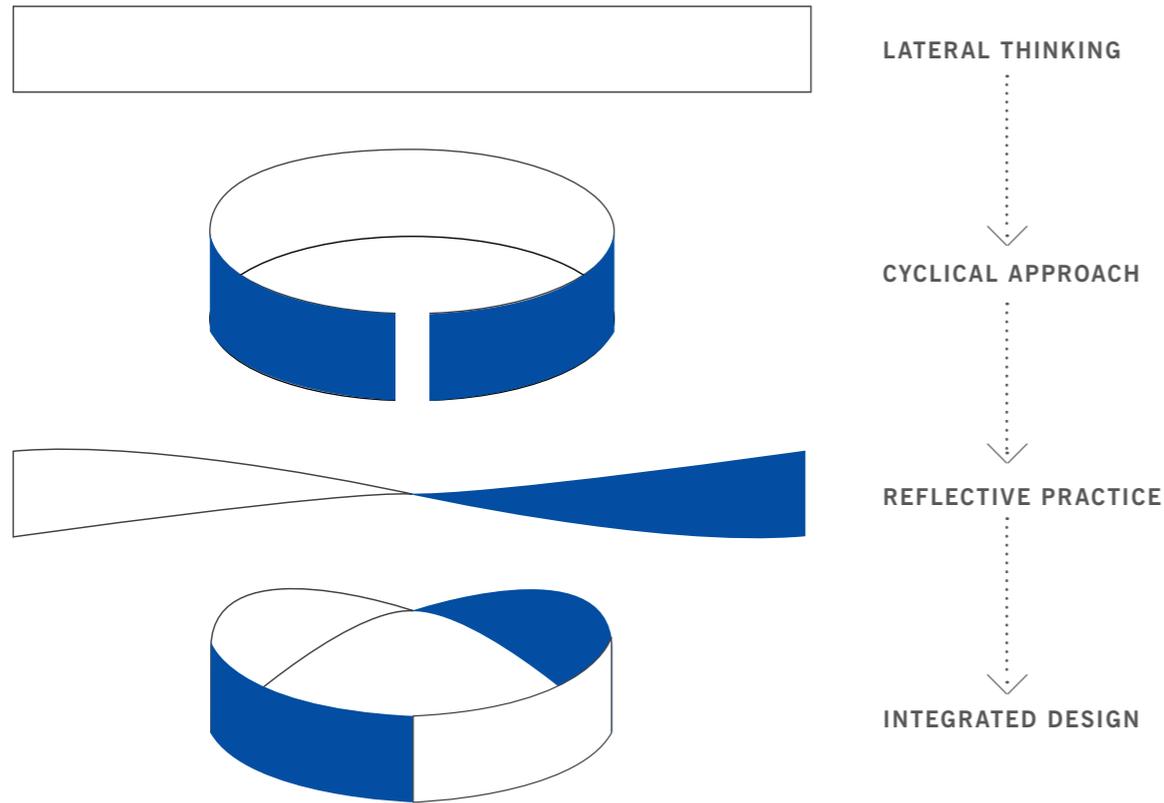
With respect to the **economy**, integrated design thinking drives innovation by, in part, identifying new opportunities. It integrates production processes, and reduces errors and waste, and overhead costs. Design is at the cradle of creating new products and new businesses, increasing productivity and economic growth, thus providing greater prosperity. In the domains of the building industry, recreation and tourism, waste management, and the food and wine industry, the impact can be direct, immediate and substantial. An integrated design approach is a quantifiable benefit rather than a cost.

With respect to **society**, architecture defines cultural identity and its legacy for future generations. It improves the quality of life, enhances security, and promotes diversity and social inclusion. As integrated design involves all stakeholders in the process, it allows for an increased awareness of common responsibility for an ecologically, economically, environmentally and socially sustainable world. It strengthens community engagement, connectedness and investment in one's environment and contributes to community pride and a sense of ownership of that environment. It enhances our respect for history, the necessity for understanding the past to function in the present and prepares us for a more prosperous future.

DESIGN PROCESSES AND MEASURES

We shape our buildings, and afterward
our buildings shape us.

Winston Churchill, former Prime Minister of the United Kingdom, October 1943



DESIGN PROCESSES IN THREE STAGES

1 Discover	Inspiration	Analysis
inquire deeply embrace diversity think long into the future learn from direct experience recognise patterns of perception observe culture, habits, lifestyles, rituals analyse needs based on behaviours, beliefs, values consider social, economic, environmental ecologies and systems challenge assumptions, conventional methods, mainstream ways of working		
2 Design	Ideas	Synthesis
construct ideas with emotional meanings envision futures through insight and inspiration create possibilities, define directions, frame opportunities translate aspirations, desires, dreams, hopes, values, visions respond to local and global contexts as cultural, physical, temporal imagine alternatives from the inside / bottom up and outside / top down anticipate consequences, life cycles and the influence of one thing upon another choreograph human movement through cycles of time and light — day, week, month, season collaborate, consult and engage to write narratives for diverse lifestyles and user experiences communicate through the language of forms, colours, light, materials, textures, human senses		
3 Deliver	Implementation	Evaluation
atmospheres experiences services environments spaces places outcomes policies processes	comfort, enrich, heal, infuse the senses, nurture, seduce multi: -cultural, -dimensional, -generational, -sensorial, -use enabling, dignified, empathetic, humane, respectful, supportive with a sense of belonging, connection, identity, memory, vitality, well-being diverse, human-centred, responsive, rewarding, stimulating, safe, vibrant with a sense of care, community, investment, ownership, responsibility future-oriented, long-term life cycle, mutually beneficial, value-added creative, holistic, integrated, innovative, strategic, visionary	clear, concise, effective, open, shared, transparent, trusting

DESIGN CULTURAL SHIFT

ATTITUDES AND ROLES

from fear of change, fear of failure	to hope and opportunities for the future
from individual control and power	to collaborative influence for public good
from accountability for quantity	to responsibility for quality
from supporting and sustaining	to empowering and innovating
from exclusive, tactical and reactionary	to inclusive, strategic and visionary

AGREEMENTS AND MEASURES

from first cost-based decisions	to long-term life-cycle value
from market-driven supply (push)	to human-centred needs (pull)
from box ticking / check-list reporting	to four-dimensional parametric modelling and simulation
from isolated, short-term arrangements	to consultative non-partisan decisions transcending electoral cycles
from averted, mitigated, transferred risk	to collectively managed agreements, appropriately shared and rewarded

APPROACHES AND PROCESSES

from homogeneous hierarchical structures	to diverse, lateral thinking models
from linear, distinct methods	to cyclical, iterative processes
from demand-based product-focused	to knowledge-based process-focused
from communication in words	to expression in multi-media through demonstration
from destination with milestones	to journey through concurrent and overlapping spaces

DESIGN MEASURES

BEAUTY / aesthetic	authentic, beautiful, memorable illuminating, imaginative, inspirational convenient, efficient, intuitive
COMMODITY / function	affordable, liveable, sustainable competitive, productive, profitable durable, reliable, safe
FIRMNESS / structure	accessible, equitable, inclusive adaptable, flexible, transformational ecological, regenerative, resilient

The image features a halftone pattern of a building facade, likely a residential structure, with the text "THE RESIDENCY" overlaid in white. The text is positioned on the right side of the image, with "THE" on the top line and "RESIDENCY" on the bottom line. Both lines of text are underlined. The background is a dense grid of small dots, creating a textured effect. The overall color scheme is monochromatic, using shades of orange and white.

THE
RESIDENCY

The Adelaide Thinkers in Residence program is a radical social innovation. The first of its kind in the world, born in South Australia, it has delivered massive results over its seven year life.

It uses three simple levers. The first is the Thinker, a world leader, an exemplar in their field who comes to live and work in Adelaide, to really inhabit our lives and our spaces. The second is the relevance of the issue of the residency. What challenges are we facing? Where are the opportunities? The third is the group of partner investors from the public and private sector who lead the major recommendations and conclusions into action.

The program sets out to generate new thinking, provoke change, ignite action and achieve lasting, tangible results for South Australia. In particular, it sets out to ensure South Australia thrives by promoting positive change in the systems of organisation across our society. If South Australia is to thrive as a contemporary place of work and life, and if Adelaide is to become a vibrant, attractive city, we need to become adept at working collaboratively to get smart answers to hard problems.

Gabrielle Kelly, Director, Adelaide Thinkers in Residence, 14 October 2009

OBJECTIVES

An Integrated Design Strategy for South Australia: Building the Future focused on the value of design and the impact of the built environment on the quality of life for South Australians.

The residency simulated an integrated design process and practices through collaborative weekly workshops, involving 15 residency partners and invited key stakeholders. The diversity and active engagement of individuals and their respective partner organisations provided ideal conditions for analysing cultural conditions, evaluating current processes and systems of government and practice, and providing direction for the recommendations.

OBJECTIVES

- to increase awareness and understanding of design as integral to a sustainable future for South Australia, identifying South Australia's current and potential strengths and key design 'influencers'
- to analyse the knowledge gaps (demand) and the educational providers (supply) to determine new leverage points where design education, practice and research can enable transformational change
- to assist in the development of an Integrated Design Strategy for South Australia leading to new decision-making processes and new models of trans-disciplinary collaboration
- to establish networks through international relationships to expand business opportunities in South Australia
- to initiate innovative projects and provide advice about state-of-the-art and visionary approaches to the built environment that will position South Australia as a national and international leader in integrated and sustainable design

THE BUILT ENVIRONMENT

The scope of the built environment includes the disciplines and domains of:

- architecture, landscape architecture, interior architecture / design
- community development, urban design, urban planning
- heritage conservation / preservation / restoration, adaptive re-use
- regional planning and development, rural and suburban communities
- industrial design / product design
- communication design / graphic design / interaction design
- exhibition and experience design / way finding / public art

The elements of the built environment in a range of diminishing scales include:

- regions
- landscapes / ecologies
- cities / towns
- communities / neighbourhoods
- precincts
- corridors / streetscapes
- buildings / infrastructure / public space
- interiors
- products

FOUNDATION: RECALLING ALL THINKERS

The residency valued the content and collective wisdom of 15 previous and three concurrent Thinkers in Residence. Thinkers' recommendations were mapped onto the residency objectives and South Australia's Strategic Plan.

The study of findings and recommendations of Thinkers represents an integrated design thinking approach — to build a knowledge base from global expertise applied to local problems. In developing an understanding of cultural dimensions in SA, patterns of findings were evident across reports. Such discoveries provided a comparative starting point for discussion.

In particular, the following thinkers' reports were consulted and highly valued for the related content of their residencies to design thinking and the built environment.

Professor Peter Cullen	Water and Sustainable Landscapes
Professor Andrew Fearn	Sustainable Food and Wine Value Chains
Herbert Girardet	Sustainable Adelaide
Fred Hansen	Urban Places: Growing Communities Through Transport
Professor Ilona Kickbusch	Health Societies: Addressing 21st Century Health Challenges
Charles Landry	Rethinking Adelaide: Capturing Imagination
Dr Geoff Mulgan	Innovation in 360 Degrees: Promoting Social Innovation in SA
Professor Stephen Schneider	Climate Change: Risks and Opportunities

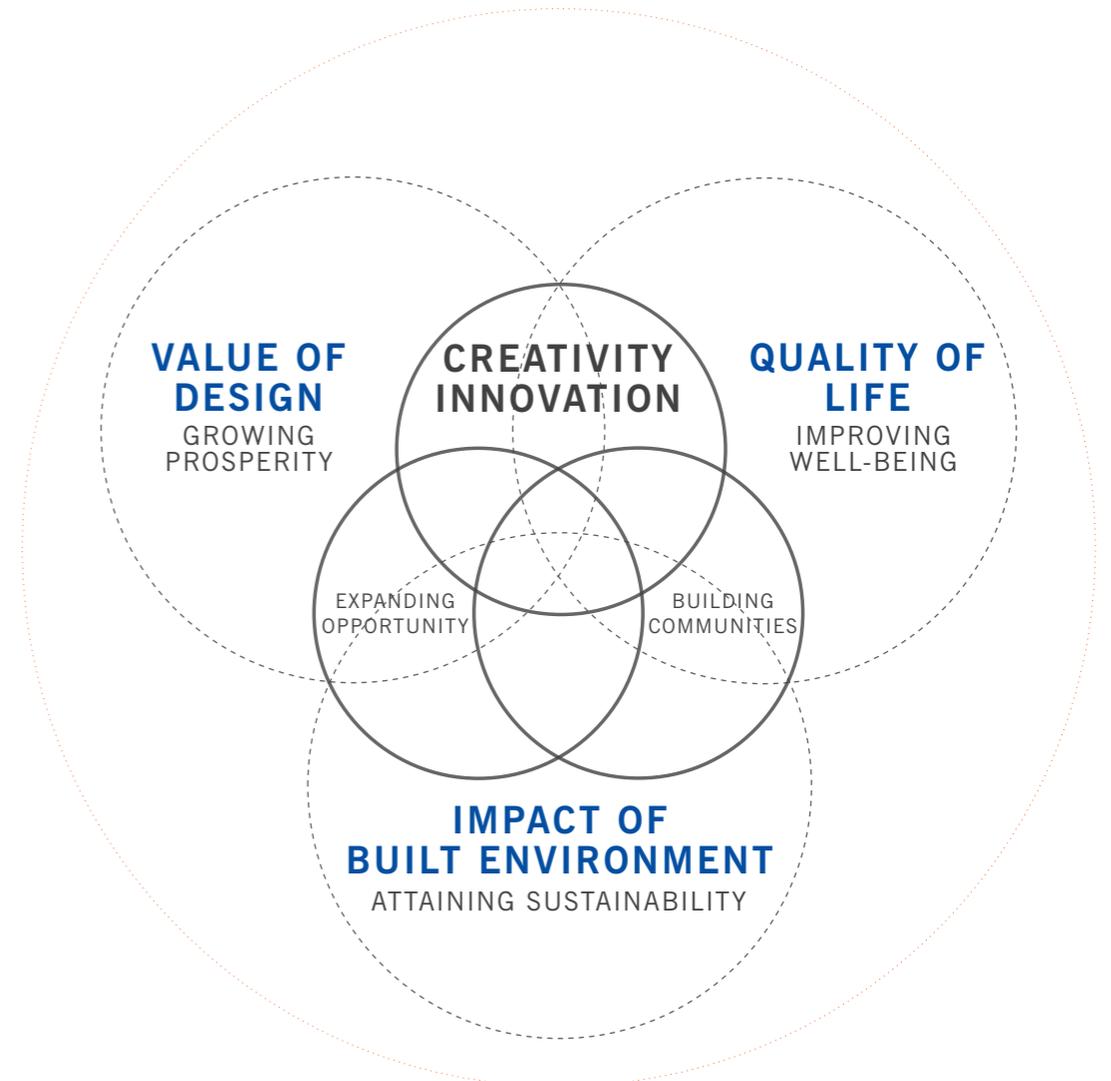
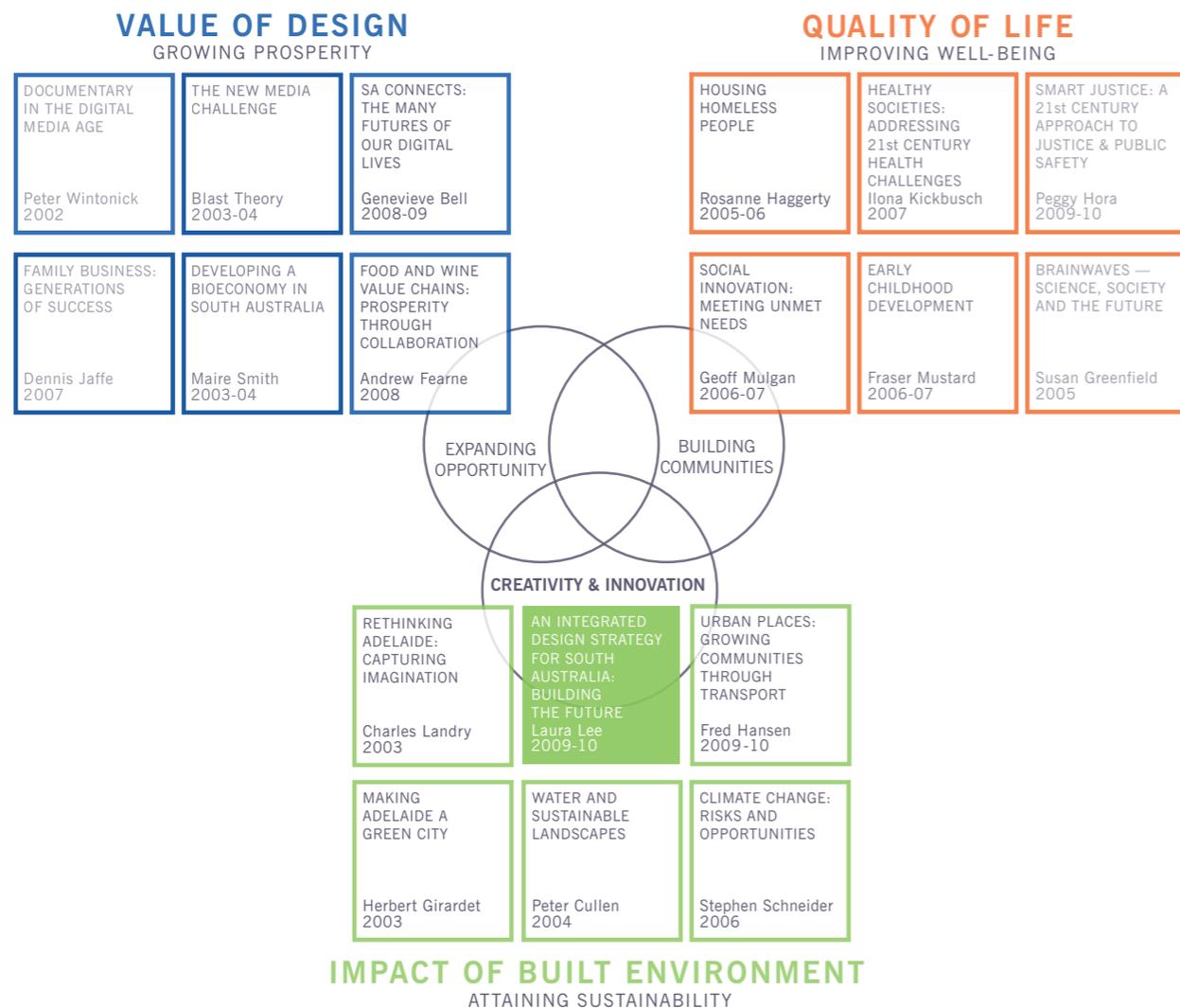
FRAMEWORK: SOUTH AUSTRALIA'S STRATEGIC PLAN

South Australia's Strategic Plan (SASP) was adopted as the framework for the residency mission, and offered a robust structure for advancing an Integrated Design Strategy. Three SASP objectives were translated through the residency objectives:

VALUE OF DESIGN	Growing Prosperity	= Economic	= Prosperity
IMPACT OF BUILT ENVIRONMENT	Attaining Sustainability	= Environmental	= Place
QUALITY OF LIFE	Improving Well-being	= Social	= People

Unique emphasis was given to the relationship between the SASP targets and the potential for integrated design to impact each and all targets. The residency objectives placed greatest emphasis on three — **creativity and innovation, building communities** and **expanding opportunity** — as areas related to integrated design and the built environment. These targets most naturally considered economic, environmental and social considerations simultaneously.

SASP served as the reference for the residency theme and objective in so far as it guides tens of thousands of public servants, the state and elected officials in their actions, policies and programs. However, using an integrated design approach, SASP was translated into a series of dynamic relationships concerned with quality of life. Deeper meanings and reconception of all terms — especially community, creativity and innovation — offered opportunities to view SASP as a living breathing model of possibilities.



Residencies point to the need for better quality, big picture collaborative thinking – with the future in mind. This residency not only focused on physical infrastructure, bridges, buildings, streets, etc. Rather, it focused upon the intellectual infrastructure, the quality of our thinking, and the methods we can develop to collaborate more intelligently as we deal with our complex, interconnected lives and make vital decisions about environment, health, employment, transport, higher density living, wealth generation, green space, beauty and liveability in our much loved state.

Nowhere has the building of the mind of this residency been more apparent than in the collaborative work of the partnership. They committed many hours of workshops and partner meetings which became a working example of an integrated design team. Their passion is an unstoppable force.

Gabrielle Kelly, Director, Adelaide Thinkers in Residence, 14 October 2009

METHOD

The Adelaide Thinkers in Residence program, as a demonstration of integrated design, offered an operational space and program conducive to collaboration and the exchange of knowledge locally and globally.

Extensive consultation and stakeholder engagement with government, industry, academic institutions, professional associations, design professionals and the public complemented the core work for and with the residency partners.

In the three separate months of the residency period, the first month was dedicated to an awareness of context, culture and the value of design. The second month examined nine scenarios (as case studies) to understand the impact of the built environment through an evaluation of current ways of working in the state. The final month synthesised issues to collectively agree upon applicable and effective recommendations.

LAND MANAGEMENT CORPORATION

Phil Donaldson
Senior Manager, Sustainability
Policy & Programs

DEPARTMENT FOR TRANSPORT, ENERGY & INFRASTRUCTURE

Peter Swift
Director, Project Services

DEPARTMENT OF PLANNING & LOCAL GOVERNMENT

Lois Boswell
Director, Sustainability

Melissa Bailey
Health in all Planning Officer

HOUSING SA DEPARTMENT FOR FAMILIES & COMMUNITIES

Robyn Evans
Manager, Strategic Projects,
Affordable Housing Innovations Unit

DEPARTMENT OF EDUCATION AND CHILDRENS SERVICE

Kathyn Jordan
Manager, Children's Centre Project

Nadia Carruzzo
Senior Project Officer,
Education Works

Loris Glass
Manager, Neuroscience and
Learning Partnerships

AUSTRALIAN INSTITUTE OF ARCHITECTS

Richard Hosking
Chapter Manager

Mario Dreosti
Vice President, SA Chapter
Principal, Brown Falconer Group

REGIONAL DEVELOPMENT AUSTRALIA BAROSSA INC

Anne Moroney
Chief Executive Officer

ADELAIDE CITY COUNCIL

Jason Pruszinski
Manager, City Design



DEPARTMENT OF THE PREMIER & CABINET

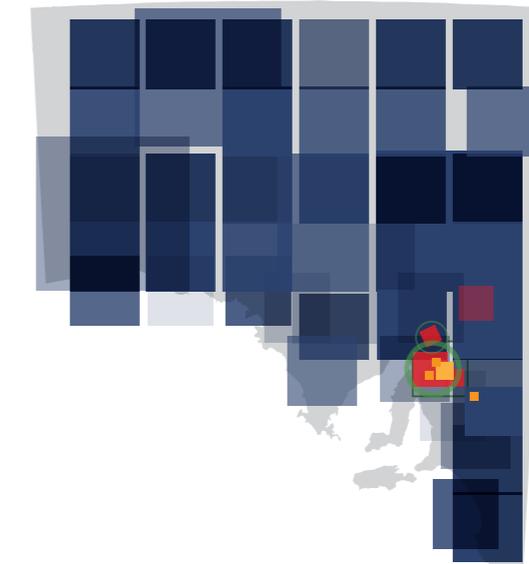
Greg Mackie OAM
Deputy Chief Executive, Cultural
Development

Tim O'Loughlin
Deputy Chief Executive, Sustainability
and Workforce Development

ARTS SA DEPARTMENT OF THE PREMIER & CABINET

Eva Les
Director, Thinking Adelaide

Jennifer Layther
Manager, Public Art and Design



DEPARTMENT OF FURTHER EDUCATION, EMPLOYMENT, SCIENCE AND TECHNOLOGY

Dr Deborah Keighley-James
Principal Policy Adviser,
Science and Innovation

HEALTH SA DEPARTMENT OF HEALTH

Dr David Panter
Executive Director, Statewide
Service Strategy

Damien Walker
Director, Major Projects

FLINDERS UNIVERSITY

Dr Andrew Beer
Professor and Deputy Vice-Chancellor
School of Geography, Population
and Environmental Management

UNIVERSITY OF SOUTH AUSTRALIA

Mads Gaardboe
Professor and Head of
School of Architecture and Design

CARNEGIE MELLON UNIVERSITY

Tim Zak
Executive Director and Co-Director
Institute for Social Innovation
H. John Heinz III College

ADELAIDE THINKERS IN RESIDENCE

Gabrielle Kelly
Director

Emily Glass
Senior Project Manager

Samantha Haedrich
Designer

Stevie Summers
Project Catalyst

Louise Wormald
Project Catalyst



A



PROCESSES

The very mechanism of the Thinkers in Residence Program is an integrated design demonstration. It is a forum where key players are at one table. It is a forum without predetermined deliverables and without outcome related budget or program restrictions. It provides a very rare opportunity for cross government and private sector interaction.

Mario Dreosti, Australian Institute of Architects, Residency Partner; Principal, Falconer Brown Architects, AIA Place, December 2009



B



WORKSHOP PROCESS

Collaborative workshops, involving the 15 partners and invited guests, were conducted weekly throughout the residency. Scenarios were structured around creating better briefs (program), defining comprehensive decision making (process) and developing performance based outcomes (product).

APPROACH

Residency partners were asked to adopt 'design thinking as a process of enlightened experimentation wherein one observes the world, identifies patterns of behaviour, generates ideas, gets feedback, repeats the process, and keeps on refining'. (Niti Bhan)



C



DESIGN TOOLS

Using the software 'mind map' each workshop encouraged participation by all partners to openly express opinions and spontaneously contribute thoughts. The power of this tool lies in the creation of a 'risk free' environment for participants, encouraging critical thinking and reflection. The ability to see ideas taking shape in real time is an engagement strategy that values each and every person's perspective while encouraging the healthy debate so needed in South Australia. The dynamic of the medium offers the time and means to relate and prioritise issues, and most importantly, to constantly change and refine. The instant visualisation of ideas generated by the collective contributes to a sense of ownership as well as motivation and responsibility for follow through.



D



A: Forum at Seppeltsfield Winery
B: Partner workshop in torrens building
C: Workshop at Adelaide Botanic Gardens
D: Housing SA charrette at Onkaparinga

NINE SCENARIOS EXAMINED

The residency was guided by broad aims and objectives; however, the emphasis was foremost on the processes for achieving outcomes. This may seem a minor focus, but in practice it is invaluable in highlighting the central role research plays and the need for effective mechanisms and structures that can build and foster multi-sectoral collaborations that will enable the integration of research into all aspects of industry and professional practice.

Dr Deborah Keighly-James, Residency Partner, Department of Further Education, Employment, Science and Technology

Procurement Practices: Valuing Design	practice
Urban Regeneration Project Victoria Square Tarndanyangga	public space
New Royal Adelaide Hospital	health-care institution
Noarlunga Regional Activity Centre Structure Plan	connected communities
Medium Density Affordable Living Prototype	housing innovation
Children's Centres For Early Childhood Development	education
Constellation SA: Built Environment Research Alliance	research
Vision for the Barossa Region with Four Local Councils	landscape region
Bowden Urban Village Master Plan	sustainable development

PROGRAMMING FOR PERFORMANCE

Nine scenarios, exploring a range of scales and issues, were explored with respect to advancing integrated design thinking in SA. Partner representatives for each scenario were asked to write a project 'brief' based on highest aspiration economic, environmental and social performance outcomes with a human-centred focus. Essentially defined as a model of decision making directed at multiple and mutual benefits with the long-term future in mind, the exercise required the partners to define the program with respect to the expertise, knowledge and processes needed to achieve success. The unfamiliar scenario process revealed connections, strengths and weaknesses in current practices that would have otherwise remained unexplored. Furthermore, findings from the scenarios directly defined the domains of action and recommendations specific to the context of South Australia.

Scenarios were structured by:

- **defining the program as a functional and goal-oriented brief**
- **developing processes for effective, collaborative decision-making**
- **measuring performance against economic, environmental, social parameters.**

The following example (scenario #1, procurement practices to value design), typifies the format developed for all scenarios, later elaborated in greater detail. The importance of 'programming for performance' is the most vital aspect of determining quality of life outcomes in an integrated design process.

PROGRAM

PLAYERS

PARTNERS

- Australian Institute of Architects
- Department for Transport, Energy and Infrastructure
- Land Management Corporation
- Adelaide City Council
- Regional Development Australia Barossa

STAKEHOLDERS

- architectural, engineering and construction industry
- government: Australian, state, local; administration, department, elected, portfolio
- clients, communities, occupants, owners, public, users

THINKERS

- Charles Landry: Imagining Adelaide
- Andrew Fearn: Food and Wine Value Chains
- Fred Hansen: Building Communities through Transport

PURPOSE

OBJECTIVES

- methodology for valuation of design and fostering innovation in the procurement process
- creative design culture supporting innovation and integrated solutions
- address economic, social, environmental considerations in procurement process

SA ISSUES

- lack of value for design
- limited opportunity for emerging practices, small-medium enterprises
- culture of risk aversion over opportunity

GLOBAL ISSUES

- focus on first cost, not long-term value
- focus on single not triple bottom line solutions
- lack of knowledge sharing to achieve excellence

INPUT

REFERENCES

- South Australia's Strategic Plan
- South Australia's Infrastructure Plan
- 30-Year Plan For Greater Adelaide

RESOURCES

- Quality of life and quality of place indicator project with Land Management Corporation (LMC)
- LMC Sustainability and Innovation Strategy
- Built Environment Industry Innovation Council report: Procurement Innovations and Impediments to Change

RESEARCH

- research into effective procurement process
- measuring triple bottom line cost benefits of building space / precinct development including return on investment
- valuing / measuring aspirational design elements

PROCESS

OPPORTUNITY

PROFESSIONAL COMMUNITY

- communicate the value of design through demonstration
- advocate for multi-disciplinary integrated design teams
- SA size advantage: collaboration, experimentation, ideas incubator

CULTURAL SHIFTS

- shared risk, responsibility, reward models of procurement
- integrated project delivery
- embedding research into practice

DEMONSTRATION

- awards programs reflecting holistic approaches
- debate and public discussion (aspiration and performance)
- designers participating in community / professional service

TYPES

TRADITIONAL

- cost reimbursement
- design and construct
- lump sum

EMERGING (PRACTICE BASED)

- alliancing
- public-private partnership
- management

SA TO ADVANCE

- LMC / developer relationships
- Property Council Vision 2036
- investment incentives

CASES OR MODELS

SA / NATIONAL

- Queensland: Queensland Design Strategy 2020
- South Australia: Intelligent by Design
- Victoria: Design Victoria / Office of the State Architect

NATIONAL / INTERNATIONAL

- Australia: Built Environment Industry Innovation Council
- Denmark: INDEX Awards: Design to Improve Life
- Wales: Design Commission for Wales

INTERNATIONAL

- Ireland: Government Policy on Architecture
- Scotland: Architecture and Design Scotland
- UK: Commission on Architecture and the Built Environment

PERFORMANCE

ECONOMIC

PERFORMANCE

- best value for money
- most efficient outcome and use of resources
- most equitable solutions

INNOVATION

- elevates levels of efficiency
- reduces construction errors and waste
- new business / new products

IMPACT

- influences effective policies
- generates economic prosperity
- future generations: cultural identity and legacy

ENVIRONMENTAL

PERFORMANCE

- best multi-criteria sustainable life-cycle performance
- address global and local environmental challenges
- define appropriate measuring tools

INNOVATION

- revise rating systems to holistic building approaches
- balance a building with its overall ecosystem: create symbiotic relationships
- contextual solutions/develop a framework and dynamic process

IMPACT

- influence effective policies
- consistency of performance measures
- alliancing based on quality of life parameters

SOCIAL

PERFORMANCE

- fit for purpose
- meet or exceed community / user needs
- promotes social engagement

INNOVATION

- integrate education, research, practice for benefit of users
- challenging brief in wider context to extend experience
- educate public and change perceptions

IMPACT

- value of experience, 'human spirit' and emotional response
- community contribution and investment in building
- people's behaviour changes towards new buildings and products



THE
CONTEXT
OF
SOUTH
AUSTRALIA

Nature as a source, symbolised most by the earth and our solar system – its structure and composition, its genesis, its organisms, its processes and dynamism, its cyclical energy, its diversity, complexity and interconnectedness, its nourishment for life, its wonder and terror, its surprises amid its rhythmic periodicity, its vastness, its invisible forces – is inexhaustible. Nature gives us our bearings, our reference points, our sensory apparatus to apprehend its phenomena, and the intelligence to respond to it and use it.

Kenneth Hiebert , *Graphic Design Sources*, 1996

NATURAL HERITAGE AND LANDSCAPE DIVERSITY

Natural sciences



World Heritage

Natural beauty



Wilpena Pound



Botanic Gardens



Kangaroo Island



Wine regions

Whale species



Coorong

Lily Pavillion



Murray River



Coober Pedy



Lake Eyre

SA DISTINCTIONS: THE SPIRIT OF PLACE

- Natural heritage and landscape diversity
- Environmental sustainability
- Agriculture, food and wine
- Early childhood development
- Social innovation
- Primary health care
- Festivals and events
- Defence and mining industries
- Liveability

Through an exhaustive and extensive consultation process, the residency aimed to identify the unique assets and distinctions of South Australia. The nine listed above clearly emerged.

Without exception, the most vital aspect in realising a successful Integrated Design Strategy and ensuring a sustainable future derives from a complete understanding of the immediate local context — cultural, physical and temporal. The existing ecology of a place must be fully examined historically, contemporaneously and predictively to render solutions that honour the authenticity of any environment. Finding and advancing the spirit of place leads to more meaningful and memorable experiences, a sense of belonging and identity.

Each of the following arrays of images for each distinction deliberately represents a diversity of scales and covers environmental, economic and social dimensions of place. Decision making for the built environment must seriously consider these nine assets and make every attempt to construct narratives around these themes to advance South Australia's enduring qualities, vital for cultural identity and fundamental for economic growth.

ENVIRONMENTAL SUSTAINABILITY



Solar generation

Eco-Tourism

Integrated technologies

Sustainable transport

Sustainable water use

Green buildings

Zero waste

Environmental art installation

Renewable energy

Recycling

Environmental regeneration

AGRICULTURE, FOOD AND WINE



Sustainable food supply

Culinary tourism

Community food bowls

Wine industry leadership

Eco-efficient wine industry

Wine growing regions

Culinary leadership