

Smart State = Design State



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THIS REPORT HAS BEEN PREPARED BY

Smart State Council

A QUEENSLAND GOVERNMENT INITIATIVE





WHY IS DESIGN MORE SIGNIFICANT THAN PEOPLE REALISE?

- DESIGN IS SYNONOMOUS WITH CREATIVITY + INNOVATION WHICH UNDERPIN THE SMART STATE
- IT IS THE ACT THAT TRANSLATES INNOVATION INTO COMMERCIAL REALISATION
- IT IS THE ONE DISCIPLINE THAT CAN LINK CREATIVITY TO SCIENCE, TECHNOLOGY + ENGINEERING
- IT IS THE BIG 'MOVER' IN MANY INTERNATIONAL REGIONS ECONOMIC STRATEGIES, ESPECIALLY IN THE ASIA-PACIFIC REGIONS

WHY IS DESIGN NOW CRITICAL?

Design has gone well beyond objects for lifestyle to:

- **DIFFERENTIATE IN AN AGE OF GLOBAL HOMOGENEITY**

tourism, industry, technology, social identity

- **INNOVATE TO CONFRONT CLIMATE CHANGE + RESOURCES DEPLETION**

from cities to mobility

- **RESPOND TO UNPRECEDENTED URBANIZATION + POPULATION GROWTH**

health + wellness, environmental sustainability, accessibility + affordability



WHAT ARE THE BARRIERS TO A DESIGN ECONOMY?

- THE SHEER BREADTH OF ITS SECTORS
- PUBLIC PERCEPTION + MEDIA PROMOTION OF DESIGN AS BEING FOR LUXURY NICHE MARKETS
- BUSINESS + INDUSTRY LACK AWARENESS OF THE VALUE OF DESIGN
- ABSENCE OF SCHOOL DESIGN EDUCATION + TERTIARY DESIGN LINKED TO ARTS
- THE LACK OF INTEGRATION OF DESIGN ORGANISATIONS



THE BREADTH OF THE DESIGN SECTORS + A NEW DESCRIPTIVE STRUCTURE

- BUILT ENVIRONMENT DESIGN
- MOBILITY DESIGN
- PRODUCT DESIGN
- FASHION + TEXTILE DESIGN
- DIGITAL + MEDIA DESIGN

BUILT ENVIRONMENT DESIGN

URBAN DESIGN	New cities and towns, urban waterfronts, campuses and urban precincts.
ARCHITECTURE	Residential, office, mixed use, hotels and resorts, public buildings, community facilities, sports and recreation research, education, health and facilities, conservation and adaptive reuse
INTERIOR DESIGN	As above
INFRASTRUCTURE DESIGN	Transportation and civil works, transit corridors, transport interchanges and stations.
ENVIRONMENTAL DESIGN	Energy systems, water systems, waste systems, biodiversity, rehabilitation, conservation.

MOBILITY DESIGN

MASS	Aviation, public transport, cruise
INDIVIDUAL	Automobiles, bicycles, disability mobility equipment
GOODS + HANDLING	Train, ship, road & air freight equipment
RECREATION	Yachts, powerboats, leisure craft, hang gliders

PRODUCT DESIGN

CONSUMER	Homewares, craftware, furniture, fittings, lighting, sport and leisure equipment
MATERIAL	Building materials, finishes, hardware, industrial materials, materials in science and medicine
CAPITAL	Tools, machinery, equipment in mining, agriculture, fisheries and other industries, manufacturing and fabrication equipment
MEDICAL + HEALTH	Surgical tools, artificial organs and prosthetics, medical equipment and technologies, rehabilitation equipment, patient amenities and mobility equipment
BUILDING SERVICES	Mechanical, electrical, hydraulic and acoustic systems

FASHION + TEXTILE DESIGN

APPAREL	Work, leisure and formal wear, uniforms, shoes, belts and accessories
JEWELLRY	All types
TEXTILE	Fabrics

DIGITAL & MEDIA DESIGN

COMMUNICATIONS	IT systems, broadband systems
HARDWARE	Computers, mobile phones, cameras, television, recorders
SOFTWARE	Websites, programs
DIGITAL	Multimedia, digital arts
ENTERTAINMENT	Games, stage sets
GRAPHIC	Corporate, packaging, publications, creative advertising, wayfinding systems
SOUND	Sound technologies, acoustics

INTERNATIONAL DIRECTIONS

- EVIDENCE EXISTS THAT DESIGN CAN TARGET + ACHIEVE UP TO 7% IMPROVEMENT TO ECONOMIES.
- AUSTRALIA RANKS POORLY FOR DESIGN COMPETITIVENESS.
- TRADITIONAL 'DESIGN-BASED' COUNTRIES ARE SHIFTING FROM 'LIFESTYLE' FOCUS TO 'TECHNOLOGY + INDUSTRY' FOCUS.

Scandinavia, Italy, Spain, Netherlands

- MASS PRODUCTION-BASED COUNTRIES IN ASIA ARE DEPENDING UPON DESIGN TO COMPETE ON QUALITY + INDIVIDUALITY

India, Singapore, South Korea, Taiwan, China, New Zealand

	Country	Design Competitiveness Rankings 2005
1	Finland	7
2	USA	2
3	Sweden	8
4	Denmark	5
5	Taiwan	15
6	Singapore	16
7	Iceland	17
8	Switzerland	4
9	Norway	22
10	Australia	29
11	Netherlands	13
12	Japan	1
13	Great Britain	11
14	Canada	20
15	Germany	3
16	New Zealand	24
17	South Korea	14
18	UAE	36
19	Qatar	47
20	Estonia	32

NATIONAL POSITION

- VICTORIA IS AUSTRALIA'S LEADING DESIGN STATE WITH:
 - The National Design Centre
 - Melbourne Design Festival et al
 - Victoria 'Design State' Publication + Promotion
 - 'Australian Urban Systems' (AUS)
- QUEENSLAND HAS CHOICE EITHER TO ATTEMPT NATIONAL STRATEGIC POSITION OR COMPETITIVE DIFFERENTIATION.
- THERE ARE SIGNIFICANT OPPORTUNITIES WITH THE LATTER + SEVERAL COMPLEXITIES WITH THE FORMER.

WHAT SHOULD QUEENSLAND'S DESIGN PRIORITIES BE?

- THE ASIA-PACIFIC REGION

- Differentiates from Victoria + forms alliances with the world's most dynamic new creative economies.

- OUR COMPETITIVE ADVANTAGES:

- Design for (and as a result of) Scientific, Technological + Engineering advances
 - Biosciences, Food Science, Health Sciences, Materials Sciences and their technologies
 - Infrastructure + Transportation Systems
 - IT + Digital Technologies
- Design for Environmental systems + sustainability
 - Especially Subtropical / Tropical

- DEMAND-LED OVER SUPPLY-LED

- A dramatic shift of design strategy

RECOMMENDATION 1: LINK QUEENSLAND TO THE ASIA-PACIFIC

- AIMS

- Position Queensland as an Asia-Pacific 'design hub'
- Boost trade + strengthen economic alliances with these regions
- Gain from shared knowledge in innovation
- Increase tourism to Queensland

- METHODS

- Build Queensland Asia-Pacific Centre of Design (APCOD)
- Stage Asia-Pacific Design Triennial (APDT) leveraging off success of APT of Contemporary Art
- Form design alliances with selected Asia-Pacific countries

RECOMMENDATION 2: PRIORITISE DESIGN TO SCIENCE, TECHNOLOGIES + ENGINEERING

- AIMS

- Distinguish Queensland from other State's design focus on creative arts
- Use design to solve real problems and needs
- Make science, technology and engineering more 'alluring' to study

- METHODS

- Reposition design in tertiary education (see over)
- Reposition design in Government to focus on STE (see over)
- Create industry structure engaging designers in STE advancements

RECOMMENDATION 3: SHIFT DESIGN FROM 'SUPPLY-LED' TO 'DEMAND-LED' ETHOS

- AIMS

- Respond to industries where design will improve products and services
- Shift from 'one-off' product design to 'mass-production' design
- Bring design into realm of 'everyday' not 'niche' products

- METHODS

- Conduct program linking designers to major manufacturers
- Implement a 'design into business' program + promote industry champions

SUPPLY-LED



Alex Lotersztain - SIT



Paul Morris - Rombi Lit



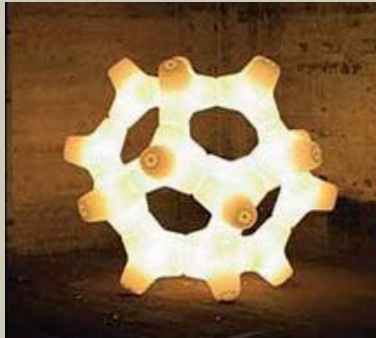
Ari Athans - Jewellery



Kent Gratton - Abbott Lamp



Marc Harrison - Husque Range



Alex Lotersztain - Coral Light

DEMAND-LED



Flaik - Snowsports Interactive
SPORTS: GPS speed, elevation + distance tracker links to cellphone + web



Cox Industries (Australia)
INDUSTRY: Ergonomically superior, injectionmoulded nanopac propylene tractor mower



Formwerx
SCIENCE: Thermal cycling machine to amplify DNA sequences for ThermalHybrid in the UK



Formwerx
ANALYSIS: Logic Analyser for analysing and debugging electronic circuitry



Formwerx
MEDICAL: Alive Monitor logs ECG Heart trace enabling remote monitoring



QLicksmart
MEDICAL: World's first scalpel blade removal and containment system

RECOMMENDATION 4: FOCUS QUEENSLAND DESIGN ON ENVIRONMENTAL SUSTAINABILITY

- AIMS

- Capitalise on Queensland's reputation for subtropical / tropical design encompassing tourism and lifestyle
- Be a / the world leader in designing solutions to climate change
- Make Queensland synonymous with environmental science, industry and development sustainability

- METHODS

- Stimulate research and design processes for:
 - recycled and recyclable materials and products
 - sophisticated and alternative ESD systems - energy, water, waste, building technologies
- Create 'Queensland Asia-Pacific Urban Solutions' (QAPUS) collaborative (see over)
- Capitalise on international architecture + design program 'HEAT - Queensland's New Wave of Environmental Architects'

RECOMMENDATION 5: INTEGRATE DESIGN WITH ARCHITECTURE + ENGINEERING IN TERTIARY EDUCATION

- AIMS

- Innovate using interdisciplinary collaborative solutions
- Capitalise on architecture's and engineering's export services strength

- METHODS: CONSIDER

- QUT to link BEE with Creative Industries
- UQ to form School of Architecture + Design (RMIT Model)
- Griffith to link Qld College of Arts to a 'new' architecture school
- South Bank Institute to link Creative Industries to architecture and engineering

RECOMMENDATION 6: REPOSITION 'ART' TO 'ART + DESIGN' IN PRIMARY + SECONDARY EDUCATION

- AIMS

- Note that while this proposal seems contrary to previous recommendations, it is the least invasive way to incorporate design
- Meets essential need to instil value of design early
- Educate in design and inform about its multiple career paths

- METHODS

- Change 'art' to 'art + design'
- Undertake sufficient art teacher training to create design assignments and teach design history

RECOMMENDATION 7: CREATE 'QUEENSLAND / ASIA-PACIFIC URBAN SOLUTIONS' (QAPUS)

- AIMS

- Export collaborative urban design services to Asia-Pacific countries
- Capitalise on HEAT travelling exhibition

- METHODS

- Form collaborative of architects, engineers, environmental scientists, health scientists et al to offer solutions to urbanizing cities
- Focus on tropical and subtropical cities with specialized services in:
 - environmental sustainability
 - social and cultural wellbeing
 - post-disaster rehabilitation

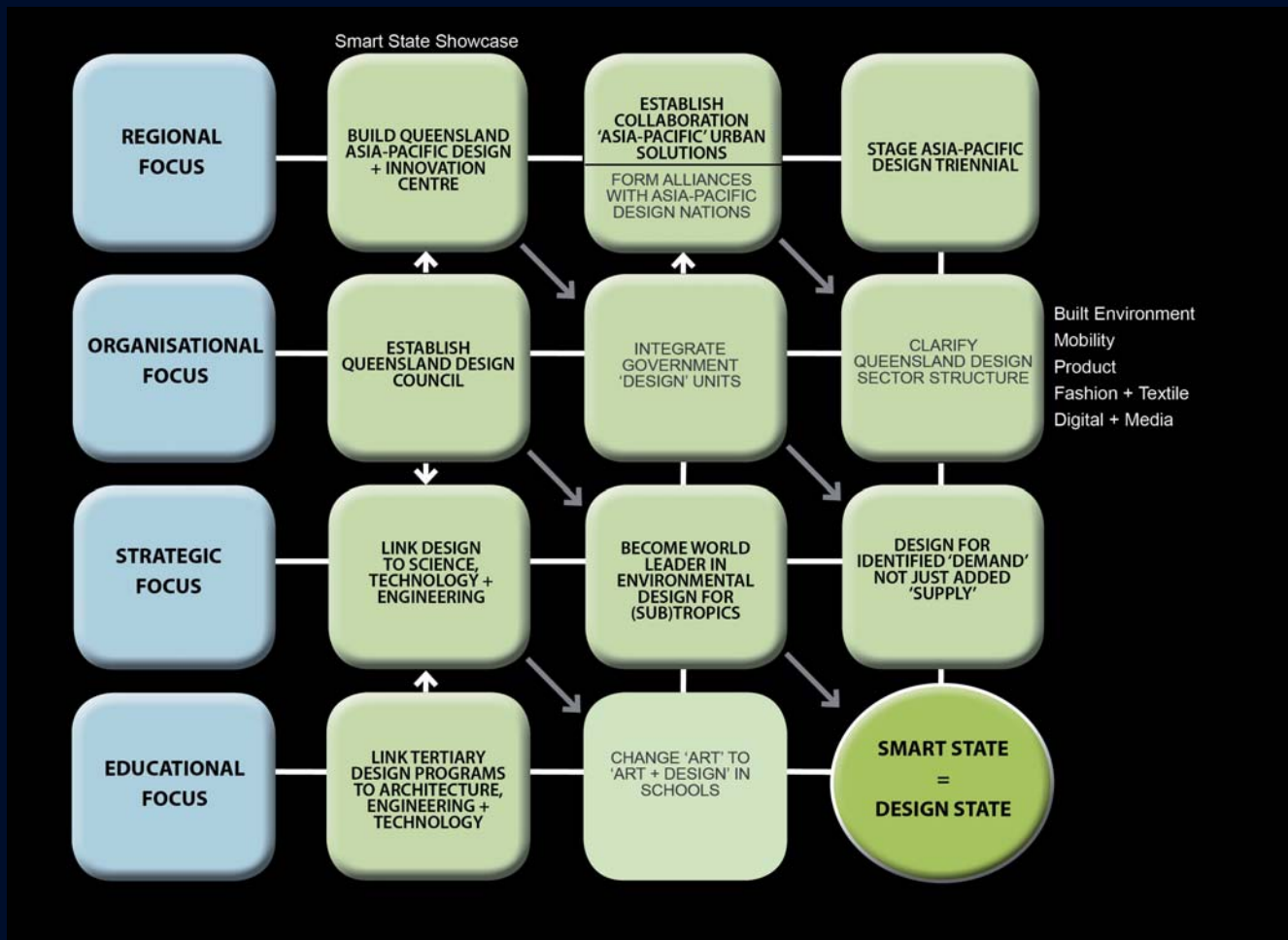
SUPPORTING RECOMMENDATIONS

- Consider integrating Creative Industries in DTRDI with Creative Industries in Arts Queensland
- Form a **QUEENSLAND DESIGN COUNCIL** comprising:
 - design industry + academic professionals
 - manufacturing and other industry representatives
 - scientific and environmental researchers
 - key design organisations
 - Government Creative Industry representatives
- Research Queensland's design sectors to create reliable and updatable economic data
- Investigate a Queensland design branding identity (cf. success of Pure New Zealand and Better By Design campaigns) e.g. **SMART BY DESIGN**

TARGET POTENTIALS

- Improve the Queensland economy by % by 2015
- Increase the value of consultancy services to Asia-Pacific by \$/ % by 2015
- Increase the value of design services in Queensland by \$/ % by 2015

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WORKING GROUP

Chair

Mr Michael Rayner, Principal, Cox Rayner

Professor Suzi Vaughan, Portfolio Director,
Creative Industries Faculty, Queensland University
of Technology

Members

Professor Peter Andrews, Queensland Chief
Scientist

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Mr Peter Caswell, Export Manager, Stoddart
Manufacturing

Mr David Gray, Member, Smart State Council

Professor Lesley Johnson, Deputy Vice
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Lotersztain Studio

Professor Arun Sharma, Deputy Vice Chancellor
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Mr Phil Graham, Creative Industries Faculty,
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Ms Cathy Hunt, Director, Positive Solutions –
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Professor Stuart Cunningham, ARC Centre of
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Mr Paul Greenfield, Vice-Chancellor UQ

Mr Michael Keniger, Deputy Vice-Chancellor UQ

Ms Kathy Demos, Director, National Design
Centre, Victoria

Mr Jim Walker, Chief Executive Officer, QMI Solutions

GOVERNMENT RESPONSES

- Queensland Asia-Pacific Centres of Design
 - Accepted in principle
- Queensland Design Council
 - Accepted
- Integrate Government Departments
 - Not accepted, but inter departmental Design Forum Forming
- Integrate Design with Science, Technology, Engineering
 - Accepted

GOVERNMENT RESPONSES

- Design in Tertiary Science + Other
 - Accepted to promote
- Queensland Asia-Pacific Sustainable Solutions (QAPSS)
 - Accepted in principle
- International Architecture + Design Exhibition 'HEAT'
 - Accepted
- Design Manufacturers Programs
 - Accepted

GOVERNMENT RESPONSES

- Stage Asia-Pacific Design Triennial 2010
 - Accepted
- Alliances with Asia-Pacific design hubs
 - Accepted
- Design in Primary Education
 - Accepted
- Tertiary design link with architecture + other built environment schools
 - Accepted to put to HEF