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**Workforce Development for the Spatial Information Industry – Outcomes  
from the National Summit held in Canberra 10 April 2008**

On behalf of the Spatial Education Advisory Committee (SEAC), I am writing to report on the outcomes from the national summit on workforce development for the spatial information industry held in Canberra on 10 April 2008. A full report is attached.

I want to emphasise that the summit focussed on achieving a strategic plan of action based on the Workforce Plan prepared by SEAC. At the summit, each stakeholder body was asked to consider their role in workforce development. The Workforce Plan highlights what we can do both individually and collectively in the short and long term, where we need more information and who should be tasked with implementing key components of the Plan.

Representatives from the education, commercial and government sectors involved in the spatial information industry attended the Summit. I would like to thank participants for their enthusiastic response and their commitment to moving forward.

I appreciate that a lot of good work has been done in this space to try and identify the reasons for a shortfall in skilled people in our industry and to develop initiatives to reverse the trend. The aim of the Workforce Plan is to overcome previous problems where each sector addressed the problem from their own perspective. We now have a strategic framework to help us identify 'end to end' issues and prioritise appropriate actions to tackle them. This is what SEAC has been doing.

Participants appeared satisfied with overall progress and outputs achieved by SEAC to date. More needs to be done and the Summit participants decided on some key initiatives that they now need to take on.

I commend these actions to you. The bodies that put their hands up to lead these initiatives now need to proceed with implementation. SEAC remains the body with oversight over progress. With this in mind, I would request that

bodies with implementation roles confirm their commitments made at the Summit and provide a status report on progress to SEAC by 1 June 2008.

The initiatives decided at the Summit are really only the headlines arising from the Workforce Plan. All participating bodies are urged to reread the Workforce Plan and undertake the whole gamut of complementary activities spelt out for them in the checklists at the end of the Plan. A matrix of detailed potential implementation activities can be found at the end of the report.

SEAC members look forward to working with you and continuing to set some clear workforce directions for our industry.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Noel Hamey', written in a cursive style.

Noel Hamey  
Chair

The Spatial Education Advisory Committee (SEAC) is a cooperative body set up by the peak public, private and academic/research organisations in the Australian Spatial Information Industry to focus effort on education and skill formation initiatives in the industry.

Attached: Summit Report of Outcomes

## **National Summit on Workforce Development in the Spatial Information Industry in Australia**

### **Report of Outcomes**

#### **Background**

A workshop attended by peak bodies in the Australian Spatial Information Industry was held in Canberra in April 2006. Participants developed a national education and skills formation (E&SF) strategy for the industry. The Spatial Education Advisory Committee (SEAC) comprising representatives of the peak bodies was given responsibility to coordinate implementation of the strategy and report progress. Subsequently, a number of bodies provided funds or services in kind to SEAC to underwrite a number of priority projects under the strategy.

These activities culminated in delivery of the Workforce Plan in October 2007. The development of the Workforce Plan is a first for the spatial information industry in Australia. It addresses both skills supply and demand issues. It is a comprehensive overview of the current situation and future skill levels needed by the industry to meet the requirements of its diverse user base for innovative services and products.

SEAC, with support from its participating bodies, convened a National Summit in Canberra on 10 April 2008, exactly two years after the strategy workshop. Attendees included the representatives of ANZLIC, ICSM, SSI, ASIBA, ASIARA, CRCSI, GITA, PSMA, OSDM, SEAC, CPSISC, AGTA and CRSBANZ; SEAC Committee members; DEEWR; and major employers such as Geoscience Australia, AHS and DIGO. A list of attendees and acronyms can be found at the end of the report.

#### **Summit Structure**

The objectives of the Summit were:

1. To review progress in implementing the national E&SF Strategy agreed in April 2006.
2. To assess the findings and recommendations contained in the SII Workforce Plan.
3. To reach agreement on coordinated action needed to address workforce needs.

The Summit was chaired by John Meyer, ACT ANZLIC member and facilitated by Paul Kelly on behalf of SEAC. SSI National Office provided organisational support. The morning session comprised briefings from Noel Hamey, chair of SEAC and Paul Kelly as author of the Workforce Plan. Representatives of national bodies were asked to respond to the findings of the Workforce Plan. The afternoon session comprised discussion of key initiatives to implement the Plan and conclusions on lead roles and resourcing of agreed initiatives.

#### **Outcomes**

Participants appeared satisfied on overall progress with implementation of the E&SF strategy and there was support for SEAC to continue with coordinating implementation.

Peak body representatives supported implementation of the Workforce Plan. All agreed that action is needed and that collaboration amongst all players in the industry is necessary if success is to be achieved.

Bodies described some current activities relevant to implementation of the Plan. These initiatives included:

<b>Body</b>	<b>Initiative</b>	<b>Status</b>
ANZLIC	Support for Spatial Technology in Schools (STIS)	Letters going to State/Territory Departments of Education advocating need for jurisdictional STIS
CRCSI	Support for Spatial Technology in Schools (STIS)	Working with ANZLIC to support a national schools support system
CRCSI	Survey of training needs of existing workforce	Under development
CRCSI/SSI	Continuing Professional Development	Funding provided for development of short courses online for existing workforce
GA/OSDM	Support for workforce development needs	Support through innovation agenda, identification of relevant programs
ICSM	Support for workforce development needs	Promotional materials aimed at schools and community including existing CD on geographical names, developing a topographical mapping website
ASIBA	Support for workforce development needs	Polling members to estimate unfilled vacancies in private sector of the industry (200 vacancies found to date)
AGTA	Geography in Schools	Submission in 2007 supporting a national geography curriculum prepared in collaboration with SEAC; decision by Commonwealth that the National Curriculum Board will implement; need to lobby Board
SSI	Support for SEAC	Will now provide secretariat and project management resources to SEAC
SSI	Migrant skills assessment	Ongoing role to provide national assessment of individual qualifications in surveying, needs to be expanded to cover other skills
ASIERA	Student numbers	Individual universities have programs to recruit and retain students in spatial courses
PSMA	Career pathways	Studying employment conditions that help recruit and retain employees; funded SEAC project to map career pathways
GITA	Targeting the “best people”	Offering bursary scheme to prospective students to support continuation of spatial courses

Skills Council (CPSISC)	Spatial Industry Pathfinders Project	Obtained funding to implement apprenticeship training scheme; pursuing further opportunities for VET sector in new Skilling Australia Program
CPSISC	Training needs analysis and delivery	Employing five people to work in States
DEEWR	Development of maths/science take-up in schools	Evolving program could help increase number of students with maths/science qualifications

The following action list of priority initiatives was agreed by participants in order to begin implementation of the Workforce Plan.

<b>Initiative</b>	<b>Lead role</b>	<b>Action/Resources</b>
E&SF Resources Clearinghouse/Portal (as described in the Workforce Plan)	CRCSI	CRCSI to provide portal and manage overall content; other bodies to provide specific content or links to existing materials
Student Funding Register	CRCSI	SEAC to facilitate initial content; CRCSI to manage in the clearinghouse; other bodies to provide data about funding schemes; ASIERA will analyse gaps, problems in utilisation and take-up
Workplaces	ASIBA	ASIBA to assess employer needs for workplace practice assistance and education and obtain necessary resources for comprehensive response; SSI to support through CPD program
People Networks	SSI	SSI to look at Young Professionals as an exemplar, support national Women in Spatial program, network STIS practitioners; CPSISC to assist with building teacher support network
Schools	ANZLIC	ANZLIC/ to fund national STIS Coordinator; lobby for paid jurisdictional coordinators
Partnerships	SEAC	Investigate need for formal collaborative arrangements to implement E&SF programs

The Summit chairman identified the need for a coalition of industry bodies to chase further investment funding for agreed E&SF and workforce development actions.

Participants debated the need for a National Tertiary Education Accreditation Committee, but a consensus was not reached. There was a general consensus that a national market for spatial skills should be left to market forces. Focus should be on industry communicating its workforce needs to E&SF providers and for all players to assist getting more students into relevant skill development courses.

The Spatial Information Industry Workforce Plan can be found at <http://www.crcsi.ecampus.com.au/course/view.php?id=88>).

### List of Attendees

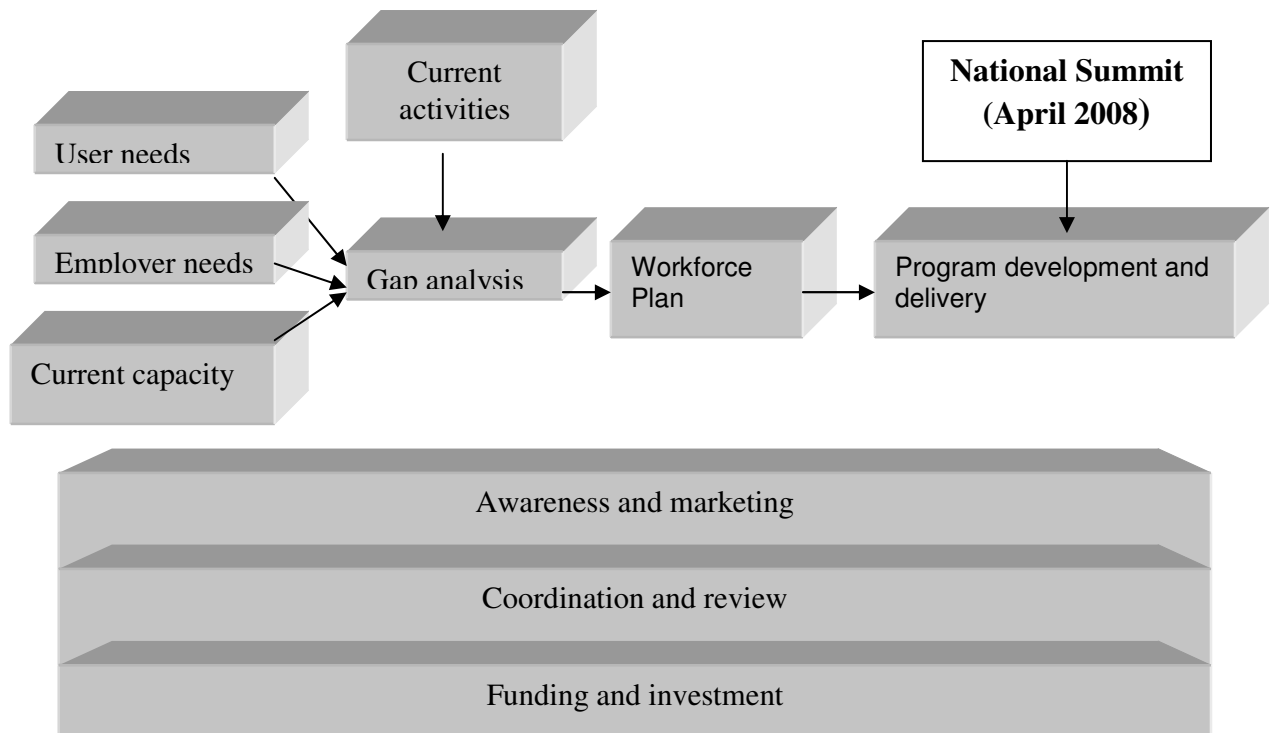
Bellman, Chris	SEAC/ASIERA	
Blanchfield, Frank	SEAC/SSI	blanchfi@webone.com.au
Bone, Jenny	OSDM	
Hamey, Noel	SEAC/ASIERA	
Harman, Robert	DIGO	
Hinksman, Geoff	Australian Hydrographic Service, RAN	
Hirst, Bill	SEAC/CRSBANZ/ICSM	
Hocking, David	ASIBA	
Holland, Jeanette	Geoscience Australia	
Kelly, Paul	SEAC/ASIBA	
Lewis, Adam	Geoscience Australia	
Littlewood, Nick	SEAC/PSMA	
McInerney, Malcolm	SEAC/AGTA	malcolm.mcinerney@bigpond.com
Meyer, John	SEAC/ANZLIC	
Nairn, Rod	Australian Hydrographic Service, RAN	
North, Diane	ASIBA/Consulting Surveyors NSW	
Oaten, Greg	Energy Australia/GITA	
Preskett, Scott	Australian Hydrographic Service, RAN	
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Ross, Alan	SEAC/CPSISC	
Searle, Ben	OSDM	
Smith, Jane	DEEWR - Strategic Analysis & Evaluation Group	
Walsh, Mary	ANZLIC	
Weaver, John	OSDM	

### List of Acronyms

AGTA	Aust. Geography Teachers Assoc.	DIGO	Defence Intelligence and Geospatial Organisation
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AHS	Aust. Hydrographic Service	GA	Geoscience Aust.
ANZLIC	Spatial Information Council	GITA	Geospatial Information and Technology Assoc.
ASIBA	Aust. Spatial Info. Business Assoc.	ICSM	Intergovernmental Committee on Surveying and Mapping
ASIERA	Aust. Spatial Information Education and Research Assoc.	OSDM	Office of Spatial Data Management
CPSISC	Skills Council	PSMA	PSMA Australia Ltd
CRSBANZ	Surveyors Boards of Aust and NZ	SEAC	Spatial Education Advisory Committee
DEEWR	Dept of Education, Employment and Workplace Relations	SSI	Spatial Sciences Institute

**Diagram showing elements of the national E&SF strategy for the spatial industry**



## Extract from Workforce Plan: Action Matrix

Goal	National Targets	Action		
		Policy Makers/ Associations	Workplaces	E&SF Providers
Growth in school leavers entering the industry in medium term	<ul style="list-style-type: none"> <li>• Paid STIS coordinators in all jurisdictions</li> <li>• All tertiary students are funded</li> <li>• Increased national intake of school leavers of 300 in period 2008/11</li> <li>• Most workplaces have a mentoring and work experience program</li> <li>• Structured training for 300 school teachers per annum</li> </ul>	<ul style="list-style-type: none"> <li>• Fund programs to pursue spatial literacy in schools, through a balanced program including career materials, competitions, curriculum change and teacher awareness</li> <li>• Promotional activities focussed on school leavers</li> <li>• Register of funded places in tertiary institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Offer funded scholarships, internships, cadetships, bursaries, etc</li> <li>• Internal mentoring and stimulating structured work experience program for local students</li> </ul>	<ul style="list-style-type: none"> <li>• Provide short courses for school teachers and students</li> <li>• 300 extra places for school leavers over next three years</li> </ul>
Maintain current graduation rates in short term, increase graduate rate over medium term	<ul style="list-style-type: none"> <li>• Increased capacity for teaching and research in spatial skills in universities and technical colleges.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote retraining programs</li> <li>• Remove barriers to movement between spatial disciplines</li> <li>• Create national market for spatial education and skill formation</li> </ul>	<ul style="list-style-type: none"> <li>• Offer attractive employment and workplace conditions to new graduates</li> </ul>	<ul style="list-style-type: none"> <li>• More focus on skills upgrade and retraining of existing workforce</li> <li>• Rationalise resource allocation nationally based on existing strengths in individual institutions</li> </ul>
Increase retention percentage of new graduates entering industry at point of graduation	<ul style="list-style-type: none"> <li>• 100 extra new graduates enter industry in period 2008/13</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly define career pathways showing broad range of options and opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Partner with E&amp;SF providers to provide seamless transition from study to employment</li> </ul>	<ul style="list-style-type: none"> <li>• Partner with industry to offer further employment opportunities for new graduates</li> </ul>



		<ul style="list-style-type: none"> <li>Facilitate workplace/E&amp;SF providers partnerships</li> </ul>		
Short term priorities for recruitment are aimed at areas of greatest need	<ul style="list-style-type: none"> <li>National spatial skills market able to help direct E&amp;SF effort and skilled people to areas of greatest need</li> </ul>	<ul style="list-style-type: none"> <li>Form national market for spatial skills</li> <li>Monitor and advertise areas of skill shortages</li> <li>Remove barriers to recognition of qualifications and skills nationally and internationally</li> </ul>	<ul style="list-style-type: none"> <li>Broaden search to fill vacancies using national marketplace</li> <li>Clear job specifications based on actual requirements</li> <li>Offer employment conditions that reflect workplace location and conditions</li> </ul>	<ul style="list-style-type: none"> <li>Flexible course delivery, including external and online study</li> <li>Increase student mobility through articulation and mutual recognition of academic attainment</li> </ul>
Increase participation rate of under-represented groups, especially those with job ready skills	<ul style="list-style-type: none"> <li>Current profile of women in the industry is 22% across Tier 1 occupations; target is 30% in three years and 45% by 2013.</li> <li>Recruitment of 50 women with existing spatial skills by 2013</li> <li>Recruitment of 50 qualified overseas workers by 2013.</li> </ul>	<ul style="list-style-type: none"> <li>Structured program to attract under-represented groups and provide guidance on employment conditions.</li> <li>Support structures are set up for under-represented groups in jurisdictions and nationally</li> </ul>	<ul style="list-style-type: none"> <li>Develop job descriptions and employment conditions to tap under-represented groups</li> <li>Offer retraining and up-skilling for people in under-represented groups</li> </ul>	<ul style="list-style-type: none"> <li>Short courses aimed at getting people in under-represented groups job ready</li> </ul>
Increased retention/re-recruitment rate of older people in the industry	<ul style="list-style-type: none"> <li>Retention of an extra 100 older workers in period 2008-13</li> </ul>	<ul style="list-style-type: none"> <li>Promote employment conditions suitable for older workers</li> </ul>	<ul style="list-style-type: none"> <li>Offer employment conditions that suit lifestyle aspirations of older workers</li> <li>Utilise older workers in mentoring and succession planning programs</li> </ul>	<ul style="list-style-type: none"> <li>Short courses aimed at up-skilling older workers</li> </ul>
Increased inflow of skilled people from allied occupations	<ul style="list-style-type: none"> <li>Attract and retrain 100 people from allied occupations in period 2008-13</li> </ul>	<ul style="list-style-type: none"> <li>Minimise barriers to skills mobility so market forces can operate better</li> </ul>	<ul style="list-style-type: none"> <li>Flexible job specifications to attract people from allied occupations</li> </ul>	<ul style="list-style-type: none"> <li>Offer "top-up" spatial skills training courses to allied occupational areas</li> </ul>

			<ul style="list-style-type: none"> <li>• Offer retraining to top-up skills to people from allied occupations</li> </ul>	
Improved rates of retraining within existing workforce	<ul style="list-style-type: none"> <li>• On the job training offered by over 90% of enterprises</li> <li>• CPD program participation is over 80% of workforce</li> </ul>	<ul style="list-style-type: none"> <li>• Provide CPD programs</li> <li>• Promote best practice in continual learning at enterprise level</li> <li>• Minimise barriers to flexible training methods from both public and private sector E&amp;SF providers</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage participation in CPD within workplace</li> <li>• Offer both structured and unstructured learning programs in the workplace</li> </ul>	<ul style="list-style-type: none"> <li>• Provide courses for existing workers</li> <li>• Flexible delivery methods to suit on the job training</li> </ul>
Reduced turnover of employees	<ul style="list-style-type: none"> <li>• Individual workplace issue</li> <li>• Industry employment and workplace condition benchmarks are available</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and maintain benchmarks for use in individual workplaces</li> </ul>	<ul style="list-style-type: none"> <li>• Employment and workplace conditions in individual workplaces meet or exceed benchmarks</li> <li>• Provide up-skilling and career succession programs</li> </ul>	<ul style="list-style-type: none"> <li>• Provide up-skilling and succession planning courses to suit workplace needs</li> </ul>
Better retention rates of people within the industry	<ul style="list-style-type: none"> <li>• Flexible career pathways are defined and enabled</li> <li>• All people with spatial skills have access to national accreditation programs</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information about career pathways within the industry</li> <li>• Develop national accreditation program/s to elevate status of people with spatial skills</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage participation in accreditation programs</li> <li>• Recognise accreditation in employment conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Provide courses based on national accreditation program/s</li> </ul>