

The CCI narrative: research for a creative Australia

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Introduction

Essentially, the story of the CCI has been to give substance to the link between creative industries and innovation, to explore its implications for our core academic discipline fields and several policy domains and, working with industry and community, to assist in its application in practical circumstances. In short, it has sought to mainstream innovation in and through the creative industries for policy consideration, deepen it for academic engagement, and apply it for industry and community benefit.

The 'object of study' has been arguably more changeable over the period than fields of research intensity such as biotechnology, medical research or IT. Rapid developments, in particular in social media, have occasioned major social, economic and cultural impact. Significant theoretical work has been developed around economics and culture which attempts to feed into this volatile landscape. There is much further to be done.

The following narrative is organised around the impact or 'National Benefit' claims the centre has set itself from day one. These are outcomes-based and thus most appropriate.

Improved understanding and recognition of the nature and extent of the creative industries and creative economy.

International leadership in broadening and extending the innovation system and the place within it of digital content and creative industries.

The Centre has strongly aligned itself with a concept – the creative industries idea – which is both very recent and has achieved significant policy and industry buy-in and academic contestation both nationally and internationally during that short period. The term 'creative industries', though probably first used by strategy consultants Cutler & Company in Australia in 1994, was given policy and industry prominence through initiatives taken from 1997 by the new UK Labour government through the Culture, Media and Sport portfolio. A Creative Industries Taskforce was set up and was followed by the publication of the Creative Industries Mapping Document in 1998, which was updated and refined in 2001. A foundational definition was promulgated: the creative industries were 'those industries which have their origin in individual creativity, skill and talent which have a potential for job and wealth creation through the generation and exploitation of intellectual property'. The standard definition of the creative industries included 13 industry sectors: advertising, architecture, art and antiques, computer games/leisure software, crafts, design, designer fashion, film and video, music, performing arts, publishing, software, TV and radio.

By bringing together subsidised arts, mainstream commercial media and business services such as advertising and architecture, it reorganised relationships and posed new questions of the relationships amongst these elements of the cultural field. It also emphasised recognition and growth through enterprise and entrepreneurship (sometimes in contradistinction to, sometimes in concert with, public subsidy, public cultural agencies, and the community sector) which began to link discipline fields in the humanities and creative arts to those in the social sciences, especially geography, management, economics and business studies. While on the one hand it can be viewed as a contingent policy intervention at a given time and place, it can also be viewed as one clear indicator of a cumulative

historical process in recognition of the changing nature of modern capitalist economies – and the significant multidisciplinary challenges in understanding and supporting an emergent sector.

Initially, the dominant way of understanding the creative industries was as an *industry* sector, through the lens of industrial and cultural policy. In 2003 a key research report for the Australian government, [*Research and Innovation Systems in the Production of Digital Content and Applications*](#) co-authored by Terry Cutler, was a world first to link the high growth end of the creative industries (digital content and applications) to the innovation literature and policy debates. This report laid out the component evidence and arguments that formed the basis for the CCI.

Essentially, the role of the CCI has been to give substance to this link, explore its implications for our core academic discipline fields and several policy domains and, working with industry and community, assisting in its application in practical circumstances. In short, it has sought to mainstream innovation in and through the creative industries for policy consideration, deepen it for academic engagement, and apply it for industry and community benefit.

By identifying an industry sector which drew its core intellectual capital and human resource from the humanities and creative arts, and linking that industry cluster to the national innovation effort, (rather than the usual a purely science-technology-engineering-mathematics (STEM)-based investment in national innovation), CCI laid the basis for a new formulation of the contemporary relevance of the humanities-arts-social sciences (HASS) discipline cluster. This showed the centrality of our parts of the ‘new’ humanities – communications and media studies, new media and Internet studies – to that formulation.

Although strongly associated with the concept of the creative industries, CCI has been flexible in understanding that it is a contestable idea that on its own could not carry forward progress in knowledge, policy and industry around the expanding cultural economy. The standard definition, for example, assumes a settled role for IP, but it has proved much more complicated and challenging than originally thought. The concept itself has also evolved, moving from a singular emphasis on particular sectors, to the contributions of creative activities and inputs to the economy more broadly and then to knowledge and policy domains wider than those originally proposed in the late 1990s. CCI has been both a leader in and a contributor to these shifts; leading in the interdisciplinary encounter between media and cultural studies and evolutionary economics; making the key link between creative industries and innovation policies; creating the conceptual, research and institutional momentum that certain national developments in public policy frameworks and programs have responded to. The recent major review of the national innovation system, resulting in the report *Venturous Australia* (Cutler, 2008), brings Australian policy into the 21st century, balancing the claims of breakthrough science with those of process innovation at the level of the firm, and laying a necessary basis for attention to small business innovation without prejudice as to its sectoral location. The Australian government now seeks to define science and research in an inclusive way and many of its programs now explicitly encourage the HASS sector rather than explicitly or implicitly excluding it. In addition to the awarding of the ARC Centre of Excellence for Creative Industries and Innovation (CCI), the creative industries as such have been recognised as an integral part of the knowledge-intensive small business sector with the establishment of the Creative Industries Innovation Centre within Enterprise Connect, a national emerging industries innovation support network.

The contribution to Australian policy development and the standing of CCI researchers can be in part gauged by the roles which CCI personnel have played. Here is a selection: John Hartley being awarded the AM; Terry Flew seconded to the Australian Law Reform Commission to chair the National Classification Scheme review; Brian Fitzgerald appointed to the federal Advisory Council on IP and the Queensland Law Reform Commission; Stuart Cunningham as president of the Council for Humanities, Arts and Social Sciences and appointed to the Library Board of Queensland; John Hartley appointed to MACER and a Federal Education panel; both Cunningham and Hartley appointed to ARC College of Experts, with Cunningham chair of the Humanities and Creative Arts panel of the College in 2007; Greg Hearn appointed to a working party of PMSEIC; David McKenzie a Commissioner of the National Youth Commission into Youth Homelessness; Catherine Lumby a member of the Advertising Standards Council and the Research Committee of the National Rugby League.

There is an ongoing agenda. The creative industries idea, without diminishing its sector-specific implications, needs to be articulated into a digital economy agenda, an internationalisation of

Australian research agenda, a social innovation agenda, and a government 2.0 agenda. In doing this, CCI's resources should also be focused on contributing to major debates in the humanities, arts and social sciences around the 'computational turn' and the future advances in the applied humanities and social sciences as they intersect with evolving innovation systems.

Improved understanding and recognition of the value of education and training for a 'creative workforce'

There is inevitable complexity and diversity of appropriations of notions of creativity. In the education and business fields, there will always be a hopefully productive tension between 'generic' and 'specific' notions of creativity. The theme the CCI team currently work under, Skills and Creative Capital, is a theme that focuses on human capital development in the creative economy, particularly the development of creative capacities across the workforce and in society more broadly, working with both 'generic' and 'specific' approaches to creativity. It works with humanistic and social science methodologies to understand the macro picture of shifts in the labour force in a culturising economy, seeks to engage with major debates in the critical humanities and social sciences around precarious labour, works for and with partners in the creative industries to better articulate their labour force needs, and on sustained research around creative capabilities both generically and specifically defined. It has conducted detailed longitudinal statistical analyses of jobs and qualifications in creative sectors, as well as helping to design education systems (Secondary, VET, Tertiary and Adult) seeking to produce creative workers.

The work is approached from a variety of methodological, disciplinary and domain perspectives: educational psychology and education policy (attributes and dispositions that assist in crafting sustainable creative careers e.g. Bridgstock on innovators and Ryan and Hearn on future film making), action research and enterprise development (Youthworx; ISIS), analytical work on statistical categories (creative workforce mapping and theory building e.g. Higgs and Cunningham; Hearn and Bridgstock), development of models to identify workforce and training needs (e.g. Haukka on the digital games industry, education to work transitions of graduates, and occupational mobility), and contribution to policymaking (e.g. Haukka on older people and digital technologies).

The CCI's approach to the creative workforce seeks to navigate between the critical humanities and social sciences with their focus on critique of precarious labour, and the pragmatics of meeting workforce needs through skills audits. In doing so, the creative workforce program has used CCI theory in building its analytical and empirical agenda (e.g. Potts and Cunningham, 2008; and Potts, Cunningham, Hartley, and Ormerod 2008).

Potts and Cunningham (2008, 239) argue that the creative industries may be a driver of innovation in a number of ways, for example by introducing novel ideas that then percolate through to other sectors—design-led innovation is a case in point. They also suggest that creative industries may facilitate the adoption and retention of new ideas and technologies—the creative digital sector is an example of this. They propose that the creative industries may be thought of as part of the innovation system of the economy as a whole. In particular, the creative industries originate and coordinate change in the knowledge base of the economy and can be understood “as a kind of industrial entrepreneurship operating on the consumer side of the economy”. Paralleling this theory building is the key CCI empirical finding of “the embedded creative”.

The team has sought to marry these insights with those being generated in education debates. This was captured summatively in one of the major outputs of this work, Erica McWilliam's [*The Creative Workforce: How to launch young people into high-flying futures*](#) (2008). McWilliam considered the 'mode 2' form of knowledge production in science, characterised by complexity, hybridity, non-linearity, reflexivity, heterogeneity, and transdisciplinarity. In mode 2 production, configurations of knowledge are being generated in an ongoing way, with multiple and diverse stakeholders involved in formulating a problem from the beginning, contributing heterogeneous skills and expertise.

In addition to its important role in science and technology, it is also becoming clear that transdisciplinarity and mode 2 thinking are essential in at least two ways to the creative sectors of advanced economies: as an underpinning to innovation in creative content creation, and as a driver for effective delivery and distribution of creative products and services (Bridgstock & Hearn, 2011). In

the former instance, expertise and knowledge from multiple sectors (e.g., health science and performing arts) or multiple disciplines within sectors (e.g., circus and chamber music) is combined and integrated in novel ways to produce truly innovative creative work. In the latter, disciplinary expertise is combined with expertise in different forms for optimal delivery of creative content (e.g., transmedia and novel staging), and/or with business, marketing and entrepreneurship expertise to identify and exploit market opportunities (Hearn & Bridgstock, 2010). To whatever end, transdisciplinarity demands more than possession of multiple skill sets. It requires epistemological and cultural agility. That is to say, it requires the invention of new dialects and capacities for translating across bounded systems of knowledge production (McWilliam, Hearn, & Haseman, 2008). Further, while individual transdisciplinarity is important in the performing arts and entertainment sectors (where there are a large number of micro-businesses and SMEs, and thus individuals must adopt multiple roles in the value chain), transdisciplinary innovation will often occur collaboratively, through the actions of a multi-disciplinary team (Hearn & Bridgstock, 2010).

Next-generation screen producers for example, creating innovative content for multi-platform markets, not only develop and produce a title, but are responsible for its distribution, marketing, and franchising, as well as website maintenance, dealing with t-shirt suppliers, maintaining a web community, administration, and financial matters, among others. Creative individuals or collectives thus require a challenging range of skills across creative craftsmanship, technical production expertise, salesmanship, and business management acumen (Ryan and Hearn 2010).

The future for creative workforce research will be concerned with:

- What are the emerging, as yet inchoate, work roles in the creative economy?
- What is the future shape of creative industries professions?
- What is the state of play of our education systems in producing these (e.g. significant deep-seated obstacles to transdisciplinary education)?
- What are the curriculum, course and institutional structures, policies and pedagogic practices, and how will we identify best practice in these areas?

Demonstrations of the social, economic and cultural value of digital literacy, digital content innovation, and user-led innovation in diverse settings

The CCI has undertaken significant fundamental research in the domain of digital media, creating conceptual advances in the interdisciplinary space between economics and culture, as well as very strongly grounded theoretical and applied research into the wellsprings of vernacular creativity, with large cultural institutions, and with at risk young people.

At the time CCI commenced operations, the industry and popular excitement around 'Web 2.0' and 'user-generated content' was just beginning; YouTube was barely launched and Twitter did not yet exist. Most academic discussion of these new developments in the humanities and social sciences took the form of a struggle between the opposing forces of utopian celebration and dystopian critique; but fundamental empirical and conceptual research was extremely scarce.

CCI researchers were among the first in the world to take seriously the need to understand how digital media affordances were actually being used by ordinary citizens; and to investigate the ways in which resultant forms of amateur or 'vernacular' creativity might be connected with professional expertise in the generation of new forms of public communication and new business models for the creative industries. The CCI's groundbreaking research in this area included the world's first comprehensive analysis of YouTube's uses and social impacts; in-depth ethnographic analyses of the disruptive and transformative roles of users in the games and interactive media industries; and extensive experimental applications of co-creative media such as digital storytelling in community and cultural organisations.

Much of this work was undertaken within John Hartley's Federation Fellowship (FF) on 'the uses of multimedia' which was associated with the CCI through 2005-10. The overall impact of this program of work was (a) to put digital literacy, user-created content and consumer co-creative media on the policy agenda, not only in Australia, where it is now a major focus of corporate strategy and public

policy in the context of convergence, innovation, productivity and NBN initiatives, but also in the region, where Hartley has provided expert advice at up to ministerial level to China, Hong Kong, Indonesia, Thailand, Brazil and the UK; and (b) to pursue a bold new conceptual program of fundamental research to rethink the field of cultural-media-communication studies in terms of recent developments in evolutionary and complexity sciences, in particular evolutionary economics, leading to cutting-edge international research collaborations with scholars, consultants and think-tanks in Germany, the UK, USA, China and elsewhere.

The importance of digital media and online social networks to innovation is now widely recognised (as it was not in 2005), forcing a re-think of standard models of innovation based on firm-based expertise, so as to take more systematic account of the productivity of ordinary users, often not based in firms at all. The aim has been to reconceptualise existing economic models to bring large-scale mediated and socially networked user-agency to account, extending the domain of the creative 'industries' beyond the economy to community, cultural and creative practices that are increasingly the drivers of innovation, diversity (experimentation), growth and productivity in globally connected, culturally and locally situated networks.

Building on this fundamental research, the CCI has achieved a significant track record in applied research that investigates and applies principles of digital literacy, user-led innovation and content co-creation in industry, community organisations and cultural institutions, leading to concrete transformations and improvements in those settings, including:

- The role of user co-creation in the business practices of the Australian games and interactive entertainment industry;
- The use of co-creative and social media for public engagement in Australian cultural institutions and public sector organisations as they seek to reconfigure their role in the digital media age; and
- The embedding of participatory content creation in community-based arts, media and social enterprises, particularly through the Youthworx program, which assists homeless or 'at risk' young people to become media trainees, producers and broadcasters with an aim to reconnect them with learning and employment opportunities; and via digital storytelling and co-creative media initiatives in Australian community media arts. The Youthworx project is outstanding in generating spin-offs, attracting substantial additional buy-in from government and the community sector and building a formal qualifications framework around the training work.

The CCI is now extending the breadth and depth of digital media research through:

- The scaling up of applied research into the changing identities and roles of professionals in the interactive entertainment industries: undertaken at a national scale and actively facilitating connections among the commercial entertainment and arts sectors and their co-creative audiences.
- Methodological innovation in social media analysis—combining computer-aided data-driven or ("born digital") methods with qualitative methods; and establishing the capability to execute 'rapid response' research in relation to the use of social media during natural disasters like the Queensland Floods.

Improved understanding and demonstrations of models for sustainable enterprises in the creative sector

The creative industries can be seen as an identifiable subset of the domain of small and medium-sized enterprises (SMEs) which share a number of the fundamental characteristics of this sector while also being distinctive. While in principle it can be asserted that innovation comes from the margins, it can also be argued that as an empirical level SMEs lack the resources, time and industry position to innovate in a planned, consistent way. It is a sector subject to high volatility, high failure rates, and extremely and consistently problematic relations with government support mechanisms. Even in this generally problematic scenario, the creative industries SMEs sector is even more radically disengaged from programs designed to support SMEs.

The CCI has engaged in major, ongoing demonstrator, pilot and full-scale projects designed to improve the sustainability of business enterprises in the creative sector. Again, it has done this in a multi-disciplinary way, bringing together management scholarship (including high-quality research in top-rated journal publications into how Australian businesses in the digital effects and postproduction niches operate in a rapidly innovating and completely global sector) and business applications of information technology (demonstrator experimental projects applying Business Process Management analytical methodologies usually applied to large multinational firms to the creative SMEs screen sector).

The 'Benchmarker' project, undertaken in partnership with the Creative Industries unit in the Queensland Department of Employment, Economic Development and Innovation (DEEDI), has provided near to real-time business intelligence into the Queensland creative industries sector and grounded, up-to-the-minute data usable by officials in the vast industry development portfolio to profile the sector consistently neglected in such environments. It has been recognised as breaking the mould of 'survey fatigue'—where the usual mode of government data collection is one way and burdensome for micro-businesses and SMEs.

As with many projects undertaken by the CCI, some of these would have been very difficult to mount through a mechanism other than a centre of excellence. The capacity for a centre of excellence to sustain these kinds of projects longitudinally, to engage in experimental design, and to draw cross-disciplinary connections, were essential for the majority of these projects.

Influence and impact on understanding and policy around digital content and the legal and regulatory impediments to growth

As indicated earlier, the standard definition of the creative industries assumed a settled role for IP ('those industries ... which have a potential for job and wealth creation through the generation and exploitation of intellectual property'), but it has proved much more complicated and challenging than originally thought. There has been a significant evolution of attitudes to IP over the decade, given the continuing pressures posed by the epochal movements of content online and the consequent challenges that that poses for current IP regimes. This has been instanced recently in the [Hargreaves report](#) to the UK Cameron government, which declared the current situation to be unsustainable, and the frank admission of the Director General of WIPO, Francis Gurry, that the copyright system had to adapt or die. But the creative industries include all the major core copyright industries, and their position on IP reform has been, largely, implacable opposition to reform.

In this increasingly volatile environment, the CCI has been a significant player in the global Creative Commons movement and in Australian advocacy of law reform. CCI has investigated ways in which law, particularly copyright law, can accommodate and work with the opportunities that the internet allows. Our goal has been to investigate how copyright law can better facilitate information flow as a driver of innovation—social, economic and cultural.

This project has argued for reform of copyright law and called for industries to collaborate and meet the demands of the broader public through new business models. As part of a worldwide project known as Creative Commons it has also introduced a voluntary tool or licensing mechanism to Australia that copyright owners can use—where they see it is strategic to do so—to provide “a permission in advance” thereby switching copyright material from a “do not use” position to a “use it how you wish” but subject to the following conditions position. In other words switching copyright from the “always off” unless permission is granted default position to the “always on” position, thereby removing the use of permission as a way of controlling distribution and in turn allowing the network to distribute the material to the furthest ends of the world without any legal (or permission) barrier. Some do this for show and some do it for money while others are required to do it by their charter, employers or funders. We have worked with creators, authors, educators, researchers, government officers, public broadcasters and many others to fine tune and implement this model. By far our greatest success has been the institutional adoption of this licensing tool by the Australian public sector. We were able to explain and advocate for the uptake of these licences in the public sector and then work with committees, reviews and departments to achieve what is now regarded as a world leading outcome.

Knowledge construction and innovation is no longer seen as a linear activity. Rather we use the network to iterate and interact with knowledge outputs in order to provide new pathways. In this world “access” becomes a key driver of change rather than controlled distribution. The permission in advance functionality of CC licences promotes and complements the technological capacity for information flow. Wikipedia (millions of articles – mandatory use) and Flickr (over 100 million photos – optional use) are key institutional adopters of CC licences. YouTube has recently introduced a CC option into their platform.

As noted above, one of our areas of special interest has been the application of CC licences to the public sector. There is an enormous amount of public sector information (PSI) that is paid for by the taxpayer and is covered by copyright. Our goal has been to implement a framework where this material can be lawfully reused which in turn provides a legally compliant innovation environment.

Key adopters of CC licensing in the public sector include the ABS, Australian Parliamentary Library, Australian Treasury in the form of the 2010 and 2011 Budget papers, ABC in the project “Pool” and CSIRO through the Atlas of Living Australia. In late 2010 the Commonwealth Statement of IP Principles was amended to say: “11.(b) Consistent with the need for free and open re-use and adaptation, public sector information should be licensed by agencies under the Creative Commons BY standard as the default.”

In law, conferences and seminars are an important dialogic research and policy making tool. We have run leading conferences on copyright and the digital age in Canada over several years internationally, bringing together key players and strategically influencing policy. CCI law and regulatory program leader Brian Fitzgerald has been widely recognised as an effective policy contributor, with appointments to the federal Advisory Council on IP, the Queensland Law Reform Commission, and the federal Gov 2.0 taskforce.

The CCI team working in this field has been particularly active in community outreach including: engagement with collecting societies such as APRA; industry training; publication of books, articles, and papers; online communication through blogs, Facebook and Twitter; and PhD supervision. A great many community and industry groups including Australia's major cultural institution the ABC have benefited from CCI expertise in this field.

CCI has also continued to produce major area-based research and regional engagement which focuses on how legal and regulatory frameworks contribute to, or inhibit, the growth of a creative industries sphere, protect cultural heritage or promote public communication. This includes detailed research on IP reform in Southeast Asia and the evolution of China's informal media economies towards greater formality. There is ongoing work on the challenges of online media for innovation in Australian communications and cultural policy.

These are all ongoing tasks. With regard to copyright reform, what we need to do next is to map out a copyright law that can accommodate the post command and control era of copyright ownership. What will it look like and what role will it play? Francis Gurry captures the essence of what lies ahead recognising that digital technology and the internet created “the most powerful instrument for the democratization of knowledge since the invention of moveable type for printing” and emphasising that the technological advantage granted to some cannot be reversed. “Rather than resist it, we need to accept the inevitability of technological change and to seek an intelligent engagement with it. There is, in any case, no other choice—either the copyright system adapts to the natural advantage that has evolved or it will perish”.

Internationalisation of Australian research

Since the formative UK work on creative industries in the 1990s, the research field has developed internationally in promising directions. CCI has played a substantial role in the rapid expansion and evolution of research into creative industries across national boundaries. We have become well known for our work on the emergence of the creative sector in China and our influence on the development of Chinese creative industries and creative clusters policies is acknowledged. CCI researchers have been invited to high-level international policy forums in places such as Indonesia, Thailand, New Zealand, South Africa, Taiwan, and Brazil and at UNESCO, UNCTAD, WIPO. We

participate in major international collaborative research networks. Our work is characterised not only by an engagement with international partners but also by our contributions to understanding the global and transnational dynamics driving change in creative industries, from social network markets to the informal media economy. We have contributed in many ways to raising the international profile and standing of Australian research in the field.

We can gauge the international impact and quality of CCI research in two ways. The first important thing is the international recognition of our work, which demonstrates its relevance and value to academic, industry and policy debates beyond Australia. The second is our participation in the key international networks, which play a role in setting the agenda for work on the creative economy around the world.

One simple indicator of international recognition is where the results of CCI research are published. A feature of the Centre's work has been the volume and frequency of articles communicating our research in the leading international journals in the humanities, social sciences, law, business and economics, including the *Journal of Cultural Economy*, *The Information Society*, the *International Journal of Cultural Policy*, *International Journal of Cultural Studies*, *Television and New Media*, the *European Intellectual Property Review*, and the *International Journal of Communication*.

Next to our work in leading journals, the Centre's research has also made an international impact through important book publications. The world's leading academic presses publish CCI authors: Polity, Blackwell, Duke UP, Routledge, Sage, Cambridge UP. Our work has also found its way into new international reference books and textbooks, including Sage's comprehensive *Culture and Globalization series*.

CCI participates in, and in some cases has developed, many new international research networks and collaborations. Some of these are substantial long-term ventures; some are partnerships for a dedicated purpose. Our international networks play an enabling role in many ways, including:

- **Generating new ideas, and developing new fields of knowledge:** CCI has used international research networks to help generate new ideas at the boundaries of cultural and media studies and evolutionary economics, working with colleagues at Durham, the Frankfurt School of Finance and Management, Queen Mary, University of London, the University of Missouri, the University of Rotterdam and the UK AHRC funding agency.
- **Understanding the creative transformations occurring in Australia's region:** CCI researchers have played a major role in the new scholarship of the creative industries in China, producing the first detailed studies of the subject in English. CCI researchers have also generated detailed studies of intellectual property law and policy in South East Asia. They have also worked to improve evaluation processes and practices across the UN through the development of the Resource Pack for research, monitoring and evaluation for communication for development.
- **Bringing new perspectives to bear on national policy and industry debates:** CCI shares personnel and collaborates with the leading UK policy think tank NESTA (the National Endowment for Science, Technology and the Arts), developing new strategies for creative industry policy, and new models for government intervention into the dynamic, volatile and highly fragmented creative sector. CCI has published extensive reports and papers available as open access on its website and via the [Creative & Digital](#) section on Australian Policy Online and the centre's weekly newsletter *Creative Economy*. It has also developed and supported these online archives and dissemination tools to ensure the latest open access research on creative industries from Australia and around the world is available to policy makers, practitioners and researchers alike.
- **Adapting and extending international solutions to local problems:** The development of the Australian Creative Commons licensing toolkit is a prime example of the Centre's capacity to address failures in Australia's innovation system, through our involvement in an international initiative. CCI continues to develop creative Commons for Australia, and other jurisdictions. We promote the adoption of Creative Commons licensing by creative industries, the education sector and the public sector more generally through publications, conferences and training programs.

- **Contributing new Australian research to local and international knowledge:** A great deal of Australian academic, government and industry debate relies heavily on US and European sources to shed light on developments in Australia, because of the paucity of substantive Australian work on topics such as children's uses of the Internet, or the implications of broadband for Australian internet users. CCI addresses this problem in two ways: it does the research here, producing relevant and usable local knowledge, and then connects that research to highly respected and well-established international studies, where it can be usefully compared with developments elsewhere and across time. This is the strategy behind two of CCI's major survey based projects, the Australian components of EU Kids Online and the World Internet Project. The results of these projects are already widely used and cited, both in Australia and internationally.

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Appendix 1

ARC Centres of Excellence

http://www.arc.gov.au/ncgp/ce/ce_default.htm

ARC Centres of Excellence are prestigious hubs of expertise through which high-quality researchers maintain and develop Australia's international standing in research areas of national priority.

Through *ARC Centres of Excellence*, a high level of collaboration occurs between universities and other organisations in Australia and overseas.

Objectives – ARC Centres of Excellence with funding commencing in 2011 are funded to:

- undertake highly innovative and potentially transformational research that aims to achieve international standing in the fields of research envisaged and leads to a significant advancement of capabilities and knowledge;
- link existing Australian research strengths and build critical mass with new capacity for interdisciplinary, collaborative approaches to address the most challenging and significant research problems;
- develop relationships and build new networks with major national and international centres and research programs to help strengthen research, achieve global competitiveness and gain recognition for Australian research;
- build Australia's human capacity in a range of research areas by attracting and retaining, from within Australia and abroad, researchers of high international standing as well as the most promising research students;
- provide high-quality postgraduate and postdoctoral training environments for the next generation of researchers;
- offer Australian researchers opportunities to work on large-scale problems over longer periods of time; and
- establish Centres of such repute in the wider community that they will serve as points of interaction among higher education institutions, governments, industry and the private sector generally.