

[IPAA ACT Video](#) of Dr Heather Smith PSM, Secretary of the Department of Communications and the Arts

INTRODUCTION

Good morning everyone

Thank you Gordon.

I too would like to begin by acknowledging the Ngunnawal people, traditional owners of the land on which we meet and pay my respect to elders both past and present. I extend this respect to all Aboriginal and Torres Strait Islander peoples in attendance today.

It's a pleasure to be here as part of the Institute of Public Administration Australia's Secretary Series. It's also rather intimidating to be bookended by Jane Halton, as the previous Secretary to address IPPA, and by Dennis Richardson, as the next Secretary to address IPPA – two highly respected Secretaries who have made such enormous contributions to public policy and organisational leadership.

And thank you to the National Portrait Gallery, a Communications and the Arts portfolio agency, for hosting us today.

A few weeks ago, Twitter announced it would stream the 2016 Melbourne Cup. For the average citizen the implications will barely register. It's just another way to watch 'The Race that Stops a Nation'.

For my Department, this development illustrates the digital disruptive environment in which we live. Immediately, we start thinking about:

- How will television broadcasters respond to this new competition?
- What impacts will this have on online gambling?
- How will people watch the race if they are in a location which has patchy telecommunications network connectivity?
- What are the cultural implications of this development given the nation no longer needs to gather physically in communal locations, nor indeed actually stop to watch the race?

One, seemingly, small development in watching a race which has been run every year for 155 years – and, yet, everything is different.

This is our world – the world of the Department of Communications and the Arts. It's also increasingly becoming the world for many other portfolios as the disruption of industries through the use of digital technologies permeates our society.

Today I want to talk about this dynamic public policy environment that is the Communications and the Arts portfolio in the digital age – the rapid changes taking place in these sectors, and the implications for how we advise Government, and how we as the APS need to work together in the digital era.

THE PORTFOLIO

I was appointed as Secretary of the Department nine months ago.

The first thing that struck me about the Department was that, despite our relatively small size, the breadth of our work is enormous, as is the potentially transformative role of the sector in terms of economic and social wellbeing. We work on arts, broadcasting, copyright, classification, digital, radio, spectrum, and telecommunications. We have 18 portfolio agencies covering two Government Business Enterprises: nbn and Australia Post; the national broadcasters: ABC and SBS; the regulator: Australian Communications Media Authority; the Office of the Children's eSafety Commissioner; and 12 portfolio arts institutions, including for example, the Australia Council, Screen Australia and the collecting institutions that are based here in Canberra.

In other words, our portfolio touches every household and business in Australia — a remarkable phenomenon but probably little recognised outside of my Department.

Even more important is that both the communications and arts sectors are exposed to the challenge of the digital economy, as well as being critical to the nation's long-term productivity and growth.

Taken together, the communications and the arts sector has a significant economic footprint. They account for around 3 per cent of GDP and, at the current rate of growth, could overtake the contribution manufacturing makes to the nation's GDP in the next

decade.ⁱ Deloitte Access Economics estimated the size of Australia's digital economy in 2013-14 as \$79 billion in nominal terms, which equates to around 5 per cent of the economy.ⁱⁱ

The two parts of our portfolio have strong synergies and complement each other well. And after five machinery of government changes in eight years we think arts is now back in its natural home!

In fact, Minister Fifield has described the two parts of our portfolio as 'the sinew and soul' of the nation.

The 'sinew' – the communications sector – is the essential infrastructure and connectivity that is critical to Australia's future, knowledge-based, innovative economy. It is the underlying driver and enabler of the digital economy and hence crucial to Australia's economic and social transformation.

The 'soul' refers to arts and culture. This sector has intrinsic value in itself – it helps us understand our past and divine our future. However, what many may not realise is that the creative sector holds enormous potential as a driver of economic growth.

THE SINEW

Let me talk first about the 'sinew' and disruption.

The sinew is the communications infrastructure: the networks, fixed and wireless that helped Australians download around 2.1 million Terabytes of data in the second quarter this yearⁱⁱⁱ – which, I am told, equates to around 450 million DVDs. And the NBN is the highest profile of these. But to understand the significance of communications infrastructure, and the policy challenges associated with it, one needs to understand some of the history.

Communications networks have connected Australians to each other and to the world since the 1870s when the telegraph was first rolled out in Australia. Until the early 1980s, when mobile phones first appeared, and limited competition was introduced, it was fixed telephone services delivered by a government-owned, vertically-integrated monopoly. In the 1990s, as part of the wave of micro-economic reform, the telecommunications market was liberalised, and the internet emerged from the research community and made its appearance as a consumer service.

The reforms of the 1990s eventually saw hundreds of companies enter the market. But the dominance of the former government owned monopoly, Telstra, remained. In fact, Telstra was arguably one of the most integrated (and dominant) telecommunications companies in the world. Telstra owned the copper telephone network, the largest pay TV network, the most extensive mobile network, had the largest market share of internet customers, mobile phone customers, fixed telephony customers, and it owned half of the largest pay TV company and HFC cable network.

This has now changed with the NBN, which is uniquely established as a wholesale only, open access national network. The full implications of this unprecedented structural change will emerge in the next few years as customers are migrated from Telstra's copper network onto the NBN.

The Department's focus for the last few years has been on the planning and construction of the NBN. But we are now entering a phase where our role and focus is shifting to:

- the consumer experience; and
- the enabling impact of high speed broadband in various sectors across the economy.

These two areas of focus are not NBN specific, they quickly lead to broader policy considerations for the Department that affect both the content or media part of the communications industry and also the creative industries.

Another critical enabling infrastructure is spectrum and wireless communications networks.

Australians are high users of mobile and wireless communications services. The average Australian now spends 24 hours per week online^{iv}, lives in a household that has between eight and nine internet connected devices, and uses the internet to access email, search, weather, news, banking and social media services on a weekly basis. This level of constant interconnection is resulting in growing citizen expectations that they can access the services they want, when they want, on the devices they already own, with ease and speed.

Mobile technology is a key driver of this trend. Over the past five years, Australia has witnessed a significant growth in the number of mobile services, including phones and other wireless internet devices. Mobile phone subscriptions (such as the iPhone, Windows phone and Android based devices), in particular, have risen by around 38 per cent, from 16 million in June 2012 to 22 million in June 2016.^v In 2015, Australia was ranked by Deloitte as the eighth highest market in the world for penetration and adoption of smartphones.^{vi}

Spectrum is everywhere. You can't see it, you can't feel it. But we use it and rely on it all the time. Spectrum is used for our mobile phone networks, to broadcast television and radio services, and by our home wi-fi routers. Spectrum is also used by your television remote control, to open your garage door, to unlock your car and even by your microwave oven. Less obviously, spectrum is used for things such as air services or for weather monitoring, and by our defence force.

So spectrum is a valuable natural resource, albeit not one that we can dig up and ship to other countries. And it is a resource in high demand from a competing range of users. Of course not all spectrum is created equal, so there are particularly high demands for spectrum which can carry large amounts of data and travel distances.

Pricing of spectrum is an obvious, and widely used tool to drive efficient use of this natural resource. But pricing alone does not address the public policy dilemmas and trade-offs that are required. The increasing value of spectrum to the economy and society, rapid

technological change, including the increasing demand for spectrum in response for 5G and the Internet of Things, will only put pressure on spectrum resources and how they are used.

DIGITAL DISRUPTION

While networks, fixed and wireless, are evolving, uses of the networks are also exploding – and it is this explosion in uses, this digital disruption, that is challenging some of the regulatory frameworks and forcing a rethink of how to deliver on consumer and society's expectations.

Netflix and Spotify are just two examples of 'over-the-top' on-demand content services. Channel 7's 36 online channels of live Olympics coverage, Optus' exclusive online distribution of the English Premier League, and Twitter going to show the Melbourne Cup are also examples of online distribution of content that, until recently, was only able to be made available to a mass audience on a broadcasting service.

What defines these 'over the top' services? They all use the internet. They can be accessed through any internet service provider over any network. They can be accessed through any device – you can watch Netflix on your phone, on a tablet, on your laptop or on your television. They are disrupting traditional broadcasting and media businesses. Eight months after Netflix launched in March 2015, it had 1 million subscribers. By May 2016, this figure had risen to more than 1.8 million.^{vii} More broadly, the number of subscription video on demand subscribers in Australia is expected to reach 4.7 million by 2019.^{viii} By contrast,

audiences for television broadcasters are on the decline. Prime time evening audiences in the mainland capital cities fell by almost 8 per cent over the four years to 2015, and there have been further declines so far in 2016.^{ix} The advertising revenue for commercial free-to-air broadcasters also shrunk by over 7 per cent nationally, and over 10 per cent for regional commercial television broadcasters, between 2010 and 2016.^x

WhatsApp, Facebook messenger, Viber – are also ‘over-the-top’ communications services. They have completely disrupted the traditional integrated telecommunications company hold on short messaging service. Not only have they taken market share, they have driven the price down to free. And they are now edging into the voice communications business further disrupting the traditional telecommunications companies.

Of course digital disruption is not confined to the communications sector. The examples have become clichés but Uber and the taxi industry, Airbnb and the hotel industry, or, some older examples, eBay and retail or Paypal and payments. These are global businesses, platform business, and businesses selling a service – thus Uber does not need to own cars, eBay doesn’t need any inventory, and Airbnb needs no hotel rooms.

So to the public policy challenges. The delivery of content and services is redefining business models, consumer expectations, the regulatory environment, and the role of Government. And in a few years from now consumers will have even more choice of content, devices and services. The NBN will have been rolled out, the deployment of 5G

mobile services will be underway, and the highly anticipated Internet of things age will have arrived.

But as I've already outlined, the media sector is operating in a disrupted environment now: the revenue models of incumbents are under significant pressure; unregulated players are gaining market share; and public expectations are high that the domestic broadcasters will continue to deliver long-held economic and cultural objectives by investing in underlying digital infrastructure and local content.

Yet much of our media and telecommunications regulatory frameworks are out of date, being by-passed by some sectors, while continuing to impose costs on regulated entities. We have regulatory regimes and policy frameworks that never envisaged voice telephony services being delivered by companies with no networks. And our content regulatory arrangements are largely premised on traditional broadcasting.

This is a genuine and fundamental policy challenge. On the one hand there are arguments for a comprehensive rewrite of communications law and regulation — bringing together into a single framework the telecommunications, broadcasting and content regulation. On the other hand, such a task would be overwhelmingly complex. Our current approach of black letter law arrangements have led to a number of review processes that are already underway covering spectrum, media and consumer safeguards frameworks.

However, the Government has made it clear that in responding to disruption in the communications sector, we must start looking at the sector in a new way and view it as consisting of horizontal layers of activity, rather than vertical silos of industry or devices. We need to see services as platform and technology agnostic. And we need to understand that the sector operates in a dynamic global market.

Yet in advising government our toolkit has not changed over the past two decades — regulation, taxation, funding, education and awareness raising. So our reliance on one tool over another may need to change; as will how we approach reform — instead of incremental, sectoral-based approaches we need to think of reform in the context of an ecosystem.

That in essence is what Minister Fifield has asked us to begin work on — to think about a communications policy roadmap centred on a principles-based framework for communications policy. This roadmap will be the first look at the overall policy framework in nearly 20 years, since the introduction of competition into telecommunications in the late 1990s.

The roadmap will set out enduring policy objectives in the communications sectors centred on ensuring all Australians have access to reliable and resilient communications services and also to diverse Australian content while, at the same time, protecting citizens from harms associated with using these services.

One particular challenge that this framework might need to grapple with comes from the nature of the internet itself. When is it practical, efficient or effective to try and regulate the global over-the-top platform businesses? Businesses like Google, YouTube, Facebook or Twitter.

The image of these internet companies is interesting. They are talked about as if they were innovative startups. Innovative they may be, but startups they are definitely not. In the digital, communications, technology world, Google could be seen as a diversified multinational incumbent.

What is remarkable about these companies is the speed with which they have grown to dominate their particular market or markets; the way they have changed markets and market structures; and, in some cases the speed with which they can decline – think of Yahoo in recent times, or Myspace in an earlier digital era.

THE ARTS – THE SOUL

On the other side of the portfolio, the soul, we have the cultural and creative sectors.

Cultural and creative activity (through the communications and arts sectors) contributes around \$46 billion a year to the national economy.^{xi}

Far from resisting digital disruption, this sector has embraced it – perhaps more than any other sector of the economy. The arts and cultural sectors have innovation and creativity at their core — originating ideas, wrestling with risk and failure, constantly experimenting and collaborating, creating new intellectual property, and embracing and responding to the new.

For example, our national collecting institutions are estimated to hold more than 9 million objects in their collections. Yet previously these works could only be viewed in Canberra. Using innovative technologies, institutions can now reach more people through virtual tours and online collections. Take the National Portrait Gallery – more than 74 per cent of its collection can now be viewed online. There’s also the National Museum of Australia, which has two robots that allow students across the country to take virtual tours from their classrooms and experience their collection in an interactive way.

New technologies are also helping us to tell our uniquely Australian stories and preserve our heritage. For example, the Yugambeh Museum in Queensland has developed an Aboriginal Language App, which features approximately 1000 words, phrases and images in seven Aboriginal languages.

Many professional artists are also producing disruptive works that crossover into other sectors and perform multiple functions. For instance, the Melbourne-based artist and designer Leah Heiss has created a ‘diabetes neckpiece’ which is both aesthetically pleasing and doubles as a syringe that can painlessly and discreetly administer insulin using nanotechnology.

In an age when innovation is one of the strongest currencies there is, creativity is an essential skill and it's one we must embrace if we want to take full advantage of the opportunities of the digital age.

The creative and cultural sectors are, and will, increasingly make an important contribution to the transition of the Australian economy. Digital technologies have not only increased the demand for creative workers, they have also enabled the creation of new arts and cultural businesses and new ways for reaching audiences. For example, the Australian games development and screen production sectors have contributed to the development of new technologies which are exported globally and which have application beyond the games and film industries in areas such as health, education, building, manufacturing and mining.

DISRUPTING OURSELVES

Of course, we in the APS know we need to be innovative and also embrace disruption.

To help drive innovation within our organisation, my Department has launched an internal Innovation Strategy that outlines our vision for the Department and explains how we will measure our success against these goals. In developing the Strategy, we consulted extensively with the public and private sector. A strong message was that building and maintaining a culture of innovation relies on strong leadership and a supportive

environment. That's why we now ask our SES to demonstrate in their performance and development agreements how they've supported and shared innovation.

Earlier this year, we also launched our Ideas Incubator, which gives every staff member a leading role when it comes to driving innovation internally.

In the digital age, government agencies must also embrace programs, tools and platforms that encourage greater flexibility and agility in the workforce. Within the Department, staff now have access to the latest technology and can seamlessly and securely interact with anyone, anywhere, at any time. All staff are provided with a mobile device that can connect and provide the same user experience, whether they move around the building or are working externally, as they would if they were working at their desktop. We have also launched a Digital Literacy Training Program designed to enhance our staff's understanding and use of digital technology.

We think it's also essential that we keep abreast of new markets, technologies and trends. The former Secretary, Drew Clarke established the Bureau of Communications Research which is now nearly two years old. It provides us with economic and data analysis, and research on communications and arts portfolio issues, as well as collaborates across government and outside of government.

A practical example of developing a culture of innovation is the Department's development of a 12-month pilot of a tool that allows game developers to submit their

own games for classification online. So far, the tool has allowed more than 450,000 games to be classified. This has resulted in classification information being available to consumers where it previously was not, and provided storefronts with a simple and low-cost way to comply with Australia's classification requirements. The tool is being evaluated, and recommendations will be provided to the Minister in the coming months.

My Department is not unique in this innovation journey. But we are uniquely at the interface of digital disruption: some of our portfolio agencies are in constant disruption; some are the disruptor; and some are thriving on disruption.

So, as a Department, we can't just be commentators. We have to be agile in our thinking, curious in understanding the environment we work in, be forward looking in our advice, and entrepreneurial and collaborative in seeking solutions. And it means keeping in mind the bigger policy picture.

And finally this brings me to one of the most important policy questions we collectively across government should be focused on — the so-called 'digital paradox'. This 'paradox' has been well documented: multifactor productivity growth has been flat since the mid-2000s as the reforms of the 1990s, along with the marriage of computing and the internet are thought to have run its course.

Even so, micro studies suggest substantial benefits from digitisation at the enterprise level. So the key question may not be whether digitisation has the capacity to impact productivity growth, but what are the blockers to this occurring soon, and on a widespread basis; and what is the role of government in addressing the blockers. This becomes particularly important given the likely productivity potency of the next interaction of elements of digitisation such as 5G, the IoTs, big data analytics, artificial intelligence and robotics.

To capture the productivity potential the whole ecosystem must work. Remembering that there is no central point of control or influence over the digital ecosystem, means there is work for many of us in getting it right.

In the communications and arts portfolio we are looking at things like reforming the management of spectrum into a single, flexible, licensing framework. But there is much beyond our portfolio. The policy and regulatory settings around privacy and the rights of use of data will be important. Making sure that frameworks for managing liability can facilitate the use of artificial intelligence or the wide scale adoption of driverless cars will matter. Ensuring that digital services are secure and resilient will also be critical. And as we grapple with these things across the public service, we will have to balance our advice between establishing rules and regulations to give confidence and ensuring innovation and opportunity are not stifled.

So, to conclude, not only do we in the public service need to embrace disruption in service delivery and in our citizen engagement, we also need to embrace disruption in how we work together to provide policy advice to government. And to do this we have to continue to foster a culture of collaboration and curiosity, and challenge ourselves whether our policy frameworks and approaches are fit for purpose in a digital era.

Thank you.

-
- ⁱ ABS (2016) Australian System of National Accounts, 2014–15; Australian National Accounts: Input-Output Tables, 2013-14; BCR calculations
- ⁱⁱ Deloitte Access Economics (2015), Connected Continent II: How digital economy is transforming the Australian economy
- ⁱⁱⁱ Australian Bureau of Statistics (2016), Volume of data downloaded, 8153.0, June
- ^{iv} Nielsen (2016), Australian Connected Consumer Report 2016, March
- ^v Department of Communications and the Arts, Bureau of Communications Research (2016) The communications sector: recent trends and developments, October
- ^{vi} Deloitte, Mobile Consumer Survey 2015 – the Australian Cut: Life’s smarter than you think
- ^{vii} Roy Morgan Research (2015), 2.677 million Australians have Netflix as subscriptions surpass one million homes: Press release, 12 November; Roy Morgan (2016), Subscription video on demand statistics, June
- ^{viii} Ovum (2015), Australian OTT video—creating a new TV market, November
- ^{ix} OzTAM, Primetime Audience for the Free to Air channels Wks 1-52 (2011-2015), Wks 1-40 (2016), Sun-Sat 1800-2400, 5 City Metro, Total People, Consolidated 7, Commissioned research. May not be reproduced, published or communicated (electronically or in hard copy) without the prior written consent of OzTAM
- ^x Free TV Australia, Ad Revenue for Commercial Television Networks, 2010-11 to 2015-16, media releases (various)
- ^{xi} Creative Business in Australia, Learnings from the Creative Industries Innovation Centre, Creative Industries Innovation Centre, 2009-2015