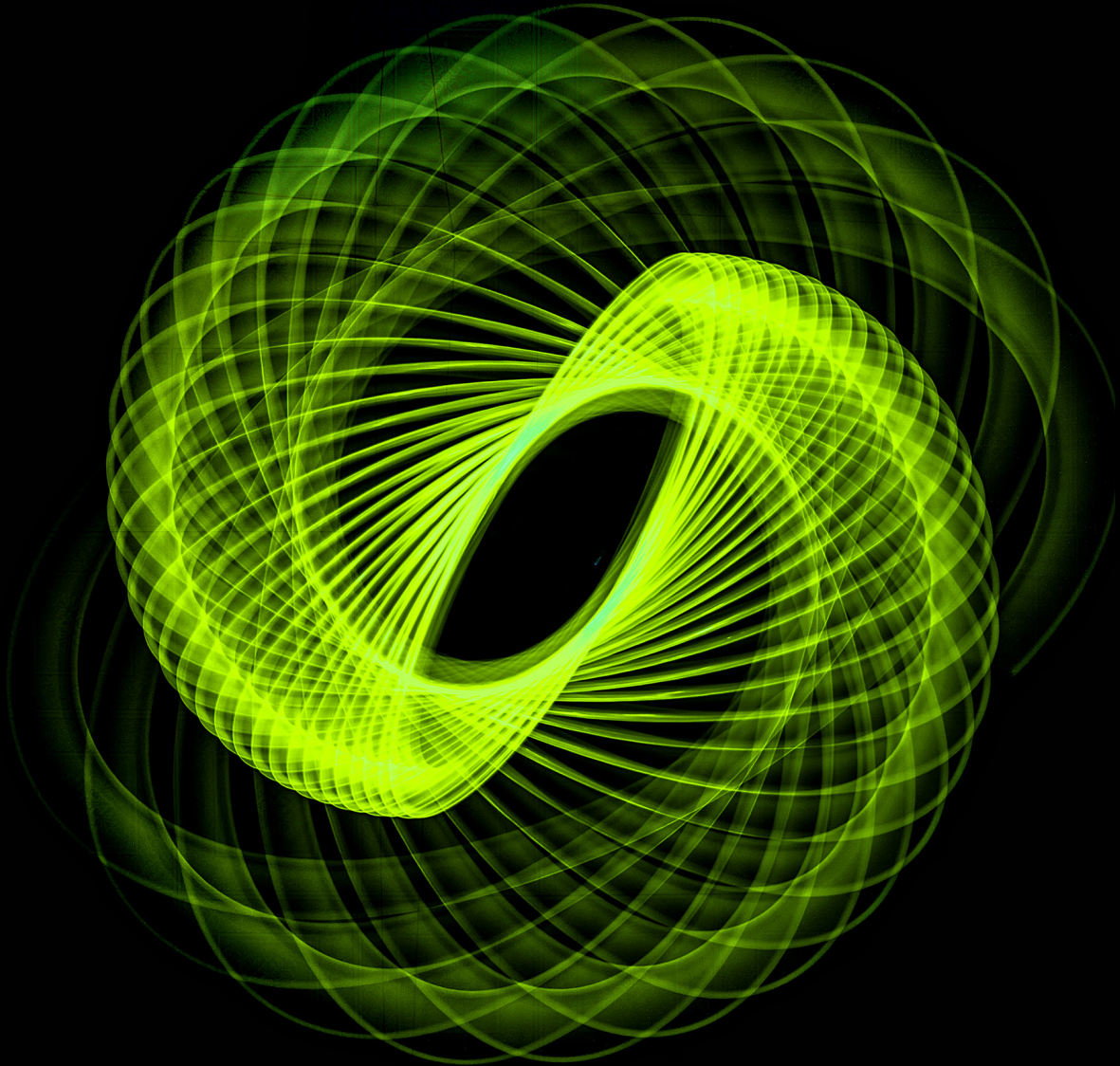# Deloitte.

Connected Nation
The Regulatory Ecosystem
Communications Alliance

2020

Deloitte
Access **Economics**

Contents

Executive summary

Getting the regulatory mix right for the telecommunications market is critical for Australia's future prosperity. Analysis by Deloitte Access Economics has found that the industry contributed $51.5 billion to the Australian economy in 2017-18. The telecommunications industry also supports productivity improvements in the Australian economy, with modelling showing the economy was 6.5%, or $126 billion, larger in 2019 than it would have been without the impact of telecommunications.[1] Achieving the right regulatory mix will enable the industry to continue to deliver these benefits.

Regulation is a feature of all industries in Australia. Designed to safeguard consumers and encourage a healthy market, well-crafted regulation can provide certainty for businesses and help facilitate the flow of investment.

In contrast, unnecessary or poorly designed regulation can increase business costs, stifle innovation and weigh on productivity growth across the economy while not providing the aforementioned benefits. That is why the *Australian Government's Best Practice Regulation Handbook* recommends minimal government intervention, limiting new direct regulation to severe problems with a history of non-compliance, with potential outcomes weighed against the cost of regulating.[2] The Government has also launched a Deregulation Taskforce to examine existing regulation to make "it easier for businesses to invest, create jobs and grow the economy.[3]

An ongoing challenge in many industries is to ensure that regulation is flexible or updated regularly enough to deal effectively with the transformation of commercial and industrial landscapes. Telecommunications is a case in point. The core of the Australian telecommunications regulatory framework dates back to 1997. Over the past two decades, the industry has changed structurally and from a product and service delivery perspective.

The International Telecommunications Union's (ITU) Information and Communication Technology (ICT) regulatory tracker shows that in terms of legal and institutional design, **Australia's telecommunications industry regulatory framework ranks 8th out of 190 countries in 2017.** With strong independent regulators and increasing levels of competition, this high ranking shows that Australia has many of the necessary regulatory elements in place.

Australia's telecommunications industry is highly regulated, partly reflecting its central role in the economy and society, but also because many legacy measures have remained in place while the industry environment has evolved. According to a survey of telecommunications businesses conducted for this report, **the burden of regulatory compliance is the second biggest challenge** (out of six potential challenges) currently facing the sector. **Two thousand people (2.4% of the industry's total workforce) are employed in roles directly designed to ensure that businesses comply with legislative and regulatory frameworks**. This proportion is the 15th highest out of 70 Australian private sector industry subdivisions examined.

This report provides a high-level assessment of both co-regulation (i.e. developed by industry, enforced by government/ regulators) and direct regulation (i.e. primary and subordinate legislation and regulations) as a way of analysing the health of the regulatory mix.

This assessment is informed by:
- an examination of public and industry data
- a series of case studies of regulatory approaches
- a survey of regulatory professionals at major telecommunications businesses
- consultation with the industry
- information provided by the Australian Communications and Media Authority (ACMA).

---

1 Deloitte Access Economics 2019, Connected Nation, https://www2.deloitte.com/au/en/pages/economics/articles/connected-nation.html.
2 Office of Best Practice Regulation 2007, Best Practice Regulation Handbook,
   http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/AustralianGovernment_Best_Practice_Regulation.pdf.
3 Commonwealth Treasury 2019, Deregulation Taskforce, https://treasury.gov.au/review/deregulation-taskforce

It is not possible to directly compare all regulations under both direct and co-regulatory models, nor to conclude one approach is always better. However, there is evidence that co-regulation should be considered more for the telecommunications industry, based on its current performance. Examples have been selected to provide insight into the performance of co-regulation and direct regulation in terms of efficiency, compliance, effectiveness and responsiveness. These factors are included in Organisation for Economic Co-operation and Development (OECD) reports about regulation.

The key findings from this comparison include:

- **Efficiency** – Business compliance costs are a key part of the *Best Practice Regulation Handbook* approach for designing fit-for-purpose rules. All telecommunications businesses surveyed are monitoring changes in co-regulation and direct regulation regularly (each month), 60% are monitoring changes every day. Most (90%) believe that if all co-regulation became direct regulation, they would need to increase the number of compliance staff they employ, and 80% believe they would need to spend more on IT systems to meet their regulatory requirements.

- **Compliance** – Meeting the requirements of regulation is a must. One might presume co-regulation and direct regulation will experience the same level of compliance, as they both rely on government enforcement. But this is not always the case. Compliance levels are driven by credible enforcement, but also the feasibility and simplicity of regulations. While both co-regulation and direct regulation are enforced by government and its agencies, they can differ greatly in terms of their practicality. Half of survey respondents believe more direct regulation would make the regulatory system more complex, and thus more difficult to comply with.

- **Effectiveness** – Whether or not regulation achieves its intended impact on business activities and the consumer experience is the ultimate test. One measure of effectiveness is whether regulation enables a well-functioning market. Previous research by Deloitte Access Economics found that Australia's ICT sector performed around the middle of the pack compared to other countries, but performed better in terms of consumer and business use of ICT.[4] A well-functioning market can also be assessed by customer satisfaction. By this measure, telecommunications performs similarly to other regulated industries, as measured through Net Promoter Scores (NPS). Complaints and their resolution provide another indication of efficient functioning of the regulatory system. We compared the telecommunications industry with a similar industry, energy. The telecommunications industry had a lower level of complaints to the external dispute resolution scheme - the Telecommunications Industry Ombudsman (TIO) - in 2018-19. These complaints also decreased by 21% between 2017-18 and 2018-19. However, energy performed better with complaint resolution through referral back to industry members in 2018-19.

- **Responsiveness** – The speed with which a regulatory scheme can be updated is particularly important, given the rapid change in technology consumer demand and expectations in the telecommunications industry. The pace of developing Standards and Determinations through the ACMA is often comparable to co-regulatory Codes (depending on relative complexity, consultation requirements and the time taken for regulators to deliberate). The time taken to make legislative changes, however, is harder to predict and is widely variable.

Based on this analysis, there is a case for more carefully considering the role of co-regulation in the telecommunications industry. From the evidence in this report, compliance levels are high and indicators suggest that effectiveness of the regulatory system is contributing to a well-functioning market. Co-regulation can be more flexible and responsive in an area of rapid technological change. Surveyed businesses believe that the effort and cost of co-regulatory requirements are lower than direct regulation, implying greater regulatory efficiency than direct regulation.

An efficient and fit-for-purpose regulatory environment will improve the chances that the economic benefits that have already been delivered by an innovative telecommunications sector can continue into the future.

Deloitte Access Economics

---

4   Deloitte Access Economics 2018, Australia's Digital Pulse: Driving Australia's international ICT competitiveness and digital growth, https://www2.deloitte.com/au/en/pages/economics/articles/australias-digital-pulse.html.

1 The Regulatory Ecosystem

An effective regulatory system begins with having clear objectives defined by policy makers, such as addressing market failure (i.e. when private markets do not reach the most socially efficient outcome) or protecting consumers, for example through addressing health and safety issues. An effective system aims to achieve these objectives with minimal regulatory compliance burden on industry and consumers. Well-crafted and fit-for-purpose regulation can minimise potential adverse side-effects of regulation, such as the discouragement of investment and innovation.

The effectiveness of regulation is not often easy to measure directly. Existing research does, however, provide evidence of a positive relationship between well-designed regulation and investment in the telecommunications industry. An analysis of 30 countries that are members of the Organisation for Economic Co-operation and Development (OECD) between 1988 and 2010 found that fostering competition through regulation can often lead to greater investment.[5] This is supported by a survey of 750 international business executives, which found a business-friendly regulatory environment was seen as the second most significant factor affecting foreign investment decisions.[6]
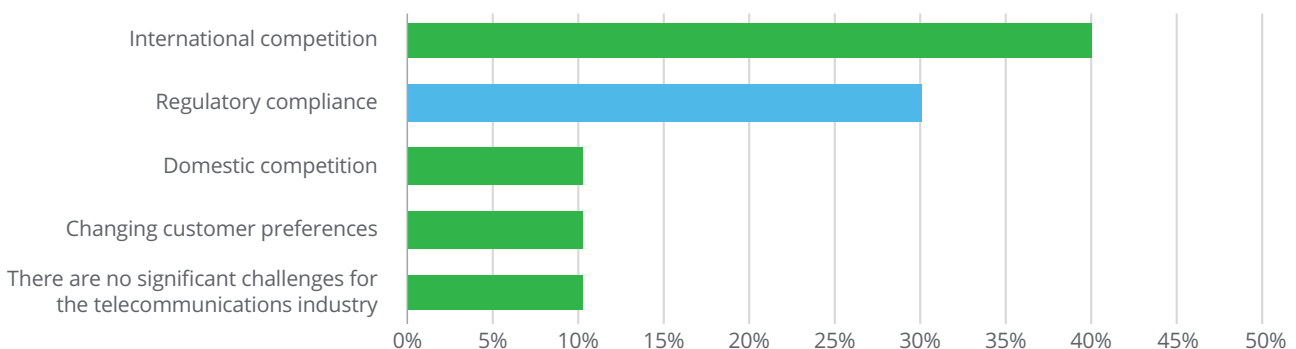
This can, in turn, impact industry growth. The International Telecommunications Union (ITU) analysed data from 75 countries and found that a stronger regulatory environment (measured through the ICT Regulatory Index Tracker) can contribute to industry growth. The main mechanisms for this are through encouraging investments in infrastructure and the adoption of digital technology by other industries.[7] The components of the ICT Regulatory Index Tracker and Australia's performance are explored later in this chapter.

On the other hand, poorly designed regulatory measures can impair the ability of businesses to invest in new technologies, resulting in over-investment in legacy technologies to meet compliance requirements.[8]

Getting the right regulatory mix is important. Deloitte estimates that, even six years ago, administering and complying with bureaucracy (public and private) throughout the economy cost Australia $249 billion in GDP. A saving of just 10% of these costs, without any change in the effectiveness of the regulation, would equal 1.6% of national income; an impact that would be one of the largest and most beneficial reforms Australia has ever seen.[9]

Indeed, a survey of industry participants found that regulatory compliance is a significant issue for the industry. Further details about the survey and respondents is available in Appendix A. Regulatory compliance was the second most commonly cited challenge facing the industry, only behind international competition (see Chart 1.1).

Chart 1.1: Survey results on challenges facing the telecommunications industry

Columns indicate the percentage of survey respondents that selected each option.
Source: Deloitte Access Economics survey of industry members

---

5   Paleologos, J.M. and Polemis, M.L., 2013. What drives investment in the telecommunications sector? Some lessons from the OECD countries. Economic Modelling, pp.49-57.

6   World Bank 2018, Global investment competitiveness report 2017-18, http://pubdocs.worldbank.org/en/651751510251223013/GIC-execsum.pdf.

7   ITU 2018, The economic contribution of broadband, digitization and ICT regulation, regulatory and institutional variable in driving digital growth, https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/FINAL_1d_18-00513_Broadband-and-Digital-Transformation-E.pdf.

8   Mayo 2016, Regulation and Investment: Sk(r)ewing the Future for 21st Century Telecommunications? https://msb.georgetown.edu/news-story/regulation-and-investment-skrewing-future-21st-century-telecommunications/.
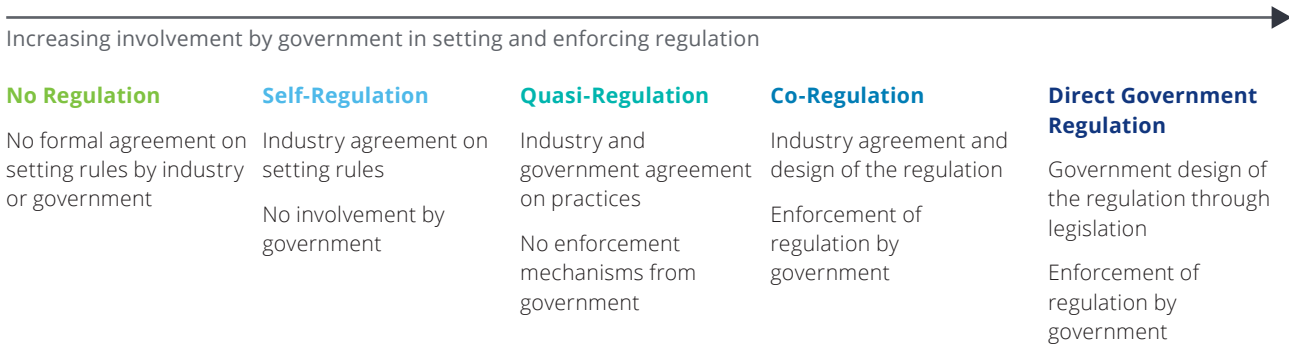
9   Deloitte 2014, Get out of your own way: Unleashing productivity, https://www2.deloitte.com/au/en/pages/building-lucky-country/articles/get-out-of-your-own-way.html.

1.1 Types of regulation in telecommunications

A range of regulatory approaches can be employed for an industry or for a specific regulatory issue. Figure 1.1 shows a stylised regulatory spectrum, ranging from no regulation to direct government regulation. The range of approaches differ, depending on the extent of industry development of agreed rules, government input into setting regulation and the use of official enforcement mechanisms.

The telecommunications industry is subject to all the regulatory approaches on the spectrum.

Figure 1.1: Different regulatory approaches

Increasing involvement by government in setting and enforcing regulation

No Regulation	Self-Regulation	Quasi-Regulation	Co-Regulation	Direct Government Regulation
No formal agreement on setting rules by industry or government	Industry agreement on setting rules No involvement by government	Industry and government agreement on practices No enforcement mechanisms from government	Industry agreement and design of the regulation Enforcement of regulation by government	Government design of the regulation through legislation Enforcement of regulation by government

Source: Deloitte Access Economics, Australian Law Reform Commission (2012).[10]

Under the **no regulation** approach, the market allocates goods and services and there are no official rules determined by government or agreed by industry. Competition and consumer choice act – to an extent – as inherent regulatory measures. Non-regulatory tools, such as education or awareness programs, may be implemented by industry, but there are usually no formal agreements by industry on practices.

Self-regulation occurs when the industry develops rules and/or codes of conduct without formal government oversight and intervention (other than existing broader legislation governing, for example, consumer rights). Here, the industry is solely responsible for the development and enforcement of these rules and codes. With no active involvement of government, an advantage of self-regulation is that the industry can quickly respond to an issue. An example is the External Telecommunication Cable Networks Code first published by Communications Alliance in 1999 and updated regularly since then, which is currently used by the industry. The Code, however, was never submitted to the ACMA for registration and compliance is therefore voluntary for industry participants. Self-regulation in telecommunications was promoted by the *Telecommunications Act 1997* (Cth) which states:[11]

"The Parliament intends that telecommunications be regulated in a manner that:

a. promotes the greatest practicable use of industry self-regulation

b. does not impose undue financial and administrative burdens on participants in the Australian telecommunications industry;

but does not compromise the effectiveness of regulation in achieving the objects mentioned in section 3."

---

11 Australian Government 2017, Telecommunications Act 1997 (Cth), https://www.legislation.gov.au/Details/C2017C00179.

In the **quasi-regulation approach**, government is involved in the development of the regulation, however there is no explicit government enforcement. Instead, industry participants agree to adhere to the rules. For example, the Minister for Communications, Cyber Safety and the Arts has tasked the telecommunications industry with formulating a national protocol for resilience and continuity of telecommunications services in times of natural disasters. The Guideline is being developed by Communications Alliance in coordination with utilities, state emergency response agencies, government and other relevant stakeholders.[12]

The **co-regulation** approach involves government enabling industry to develop and update arrangements (typically in consultation with stakeholders such as consumer groups, regulators and relevant government departments), which are then enforced by government/regulators. This has the advantage of allowing government to set the regulatory agenda, while drawing on the experience of industry to find the most effective way to give effect to identified objectives. Co-regulation has been enabled in the telecommunications industry by the Commonwealth *Telecommunications Act 1997.*

A key example of co-regulation is the Telecommunications Consumer Protections (TCP) Code, which provides community safeguards in the areas of sales, service and contracts, billing, credit and debt management, and changing suppliers.[13] The Code is developed and maintained by Communications Alliance together with government and consumer organisations, and is registered by the ACMA. Compliance with the Code is monitored by an industry-created and funded body called Communications Compliance. Breaches of the Code are investigated by the ACMA, and specific consumer complaints are investigated and addressed by the Telecommunications Industry Ombudsman (TIO), in cooperation with relevant service providers.[14]

Direct government regulation involves a regulatory body that produces and enforces Standards and Determinations under primary and subordinate legislation, such as the ACMA's Telecommunications (NBN Continuity of Service) Industry Standard 2018, which covers the migration of customers to the NBN. Direct government regulation is the most common form of regulation across all Australian industries.[15]

It is important to identify and assess which of the regulatory types from the stylised regulatory spectrum in Figure 1.1 is the most effective for a specific issue at a given time. The approach needs to be fit-for-purpose and adaptable to the circumstances at hand, rather than static. As issues evolve and change, it is important to review whether the type of tool is still appropriate, efficient and effective.

When weighing different regulatory options, it is useful to first understand the principles that guide government decision-making. *The Best Practice Regulation Handbook* stipulates that minimal government intervention is preferable when it comes to regulation.[16] It lists four main factors that guide government when determining the most appropriate regulatory form.

- **Severity of the problem** – if the problem is high risk, or of high impact or importance, direct regulation may be needed.
- **History of the problem** – if there has been a systemic compliance problem with a history of intractable disputes and repeated breaches of fair-trading principles, more formal and enforceable regulatory approaches may be needed.
- **Cost of regulating** – self-regulation should be considered if the time, effort or cost of direct government regulation outweighs its benefits.
- **State of the industry** – if existing industry bodies have sufficient coverage of industry participants and are adequately resourced, there should be a reduced need for direct regulation as the industry bodies will be able to consult and consider perspectives of various industry participants and, other factors permitting, develop any required self or co-regulatory instruments.

---

12 Minister for Communications, Cyber Safety and the Arts, Paul Fletcher MP. Telecommunications Network Resilience. 22 Jan 2020, https://www.paulfletcher.com.au/media-releases/media-release-telecommunications-network-resilience

13 Communications Alliance 2019, C628:2015 Telecommunications consumer protections (TCP) Code, https://www.commsalliance.com.au/Documents/all/codes/c628.

14 ACMA 2019, Annual report 2017-18, https://www.acma.gov.au/theACMA/annual-report.

15 Ibid.

MobileMuster: Self-regulation in the mobile industry

MobileMuster, the Commonwealth Government-accredited mobile phone recycling program, provides one example of a voluntary industry-initiated program that has generated significant social and environmental benefits.

MobileMuster is funded by all of the major handset manufacturers and network carriers, providing a free mobile phone recycling program in Australia, managing the end of life processing of mobiles to the highest environmental standard.

Since 1998, the program has collected and recycled nearly 1,500 tonnes of mobile phones and accessories in Australia – equivalent to the weight of 250 African elephants.

Managed by the Australian Mobile Telecommunications Association (AMTA) on behalf of its members, MobileMuster has recycled more than 14 million handsets and batteries. The program has made significant progress in educating consumers on the importance of reusing, repairing and recycling mobile phones, with one in three Australians having recycled a mobile phone.

In 2014, MobileMuster gained voluntary accreditation under the Product Stewardship Act 2011 which provides a framework to effectively address the environmental, health and safety impacts of a product across its full life cycle, from manufacture to disposal.

The program accepts all brands of mobile phones, along with their batteries, chargers and accessories. It has established an extensive collection network of 3,500 public drop off points across Australia, along with a free post back option. This makes recycling easy and accessible to all.

MobileMuster's members include handset manufacturers (Alcatel, Apple, HMD Global, HTC, Huawei, Google, Motorola, Oppo, Samsung, vivo and ZTE) and Mobile Network carriers (Optus, Telstra and Vodafone). The industry has invested almost $50 million into the program to date.

The growing amount of e-waste is a worldwide challenge as valuable and scarce resources are going to waste. According to the United Nations all the countries in the world combined generated 44.7 million tonnes or an equivalent of 6.1 kilogram per inhabitant of e-waste annually.

CEO of AMTA, Chris Althaus said, "AMTA's vison is to promote an environmentally, socially, economically, responsible, successful and sustainable mobile telecommunications industry in Australia. As we approach 2021, we are proud to represent an industry that has set ambitious targets for reducing carbon emissions, recycling and for the use of recycled and renewable material."

Source: AMTA

---

16 Australian Government 2007, Best practice regulation handbook,
    http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/AustralianGovernment_Best_Practice_Regulation.pdf.

1.2 Actors in regulation

Many organisations (both government and private) are involved in developing, implementing and enforcing regulation in the Australian telecommunications industry. Table 1.1 outlines the major telecommunications regulatory bodies. While the list is not exhaustive, it demonstrates the intricate structure of telecommunications regulation.

Table 1.1: Regulatory organisations in the telecommunications industry

Organisation	Government or Private sector	Role
Australian Communications and Media Authority (ACMA)	Government	Regulates broadcasting, radio-communications, telecommunications and online content.
Australian Competition and Consumer Commission (ACCC)	Government	Enforces the *Competition and Consumer Act 2010* and other legislation to promote competition, fair trading and regulations of national infrastructure, including telecommunication specific elements of the *Competition and Consumer 2010* Act.
Department of Infrastructure, Transport, Regional Development and Communications	Government	Provides policy direction for the telecommunications sector.
eSafety Commissioner	Government	Organises and leads online safety efforts across the government, industry and the not-for-profit community, and administers complaints schemes about cyberbullying, image-based abuse and illegal and harmful content.
Department of Home Affairs/ Communications Access Co-ordinator	Government	Administers national security, cyber security, and telecommunications infrastructure resilience regulations, including data retention obligations and interception rules.
Telecommunications Industry Ombudsman (TIO)	Government (industry funded)	Provides independent dispute resolution for consumers and small businesses. Handles complaints about telephone, internet and other services.
Communications Alliance	Private (industry funded)	Represents the overall interest of the Australian communications industry. It works together with industry to develop industry Codes which can apply to those who agree to be bound, or if the Code is registered by the regulatory authority it can bind the whole industry.
Communications Compliance	Private (industry funded)	Monitors compliance with TCP Code through annual attestations of compliance with the Code by industry participants.
Australian Communications Consumer Action Network (ACCAN)	Private (industry funded)	An independent body to promote the accessibility and affordability of telecommunication services for consumers in Australia.
Australian Mobile Telecommunications Association (AMTA)	Private (industry funded)	Advocates the interests of the Australian mobile telecommunications industry.

1.3 The legislative requirements for the telecommunications industry

Businesses in the telecommunications industry must comply with a number of unique legislative requirements depending on the products and services they provide. Key legislation affecting the industry, by alphabetical order, includes:

- *Australian Communications and Media Authority Act 2005 (Cth)*
- *Broadcasting Services Act 1992 (Cth)*
- *Copyright Act 1968 (Cth)*
- *Criminal Code Amendment (Sharing of Abhorrent Violent Material) Act 2019*
- *Do Not Call Register Act 2006 (Cth)*
- *Enhancing Online Safety Act 2015 (Cth)*
- *Interactive Gambling Act 2001 (Cth)*
- *National Broadband Network Companies Act 2011 (Cth)*
- *Radiocommunications Act 1992 (Cth)*
- *Spam Act 2003 (Cth)*
- *Telecommunications Act 1997 (Cth)*
- *Telecommunications (Consumer Protection and Services Standards) Act 1999 (Cth)*
- *Telecommunications (Industry Levy) Act 2012 (Cth)*
- *Telecommunications (Interception and Access) Act 1979 (Cth)*
- *Telecommunications and Other Legislation Amendment (Assistance and Access) Act 2018.*

In addition, the industry is required to comply with the telecommunications-specific sections of the *Competition and Consumer Act 2010* (Cth).

There are also explicit requirements for the telecommunications industry to comply with privacy laws and national security regulations, due to telecommunications networks being critical infrastructure and transmitting information that may be considered sensitive or relevant for the protection of national security. Compliance with such requirements, including data retention and operational obligations, forms a significant part of the regulatory activity for carriers and carriage service providers.

A recent example of such requirements is the Telecommunications Sector Security Reforms (TSSR), which form a regulatory framework aimed at managing national security risks to telecommunications infrastructure. It commenced on 18 September 2018. The TSSR places notification obligations on carriers and other businesses bound by the TSSR. It requires them to protect networks and facilities from unauthorised access and interference – including a requirement to maintain 'competent supervision' and 'effective control' over telecommunications networks and facilities owned or operated by them.[17]

Such telecommunications-specific legislative requirements are in addition to general requirements for businesses operating in Australia such as the Australian Consumer Law, privacy legislation, fair trading laws, and workplace health and safety regulations.

The ACMA also makes and enforces Standards, Determinations and Record-Keeping Rules. In 2018, for example, it created three Standards, one Determination and one Record-Keeping Rule for telecommunications providers (under a Ministerial directive). The instruments created included the *Telecommunications (Consumer Complaints Handling) Industry Standard 2018* and *Telecommunications (NBN Continuity of Service) Industry Standard 2018*, which aim to improve customers' migration experience to the NBN.

Another example of an ACMA Determination is the *Telecommunications (Service Provider – Identity Checks for Prepaid Mobile Carriage Services) Determination 2017*, or the mobile pre-paid ID Determination, which requires telecommunication businesses to check identification for customers purchasing a prepaid mobile service.[18]

---

17 Department of Home Affairs 2018, Telecommunications Sector Security Reforms,
    https://www.homeaffairs.gov.au/nat-security/Pages/telecommunications-sector-security-reforms.aspx.

This regulation of the industry involves development and enforcement costs. The costs of developing and enforcing direct telecommunications regulation includes a proportion of spending by a range of regulators, including the ACCC, the ACMA and others. The costs of developing regulation for the telecommunications industry also includes the legislative costs of creating legislation through parliamentary acts. It should be noted that the cost of regulating the industry is mainly borne by the industry itself. The Telecommunications Industry Levy, Annual Carrier Licence Charge, Annual Numbering Charge, and Do Not Call Register Charges amounted to $347 million in revenue collected by the ACMA in 2018-19.[19]

These charges contribute to the functioning of the regulatory system. For instance, the Annual Carrier Licence Charge (ACLC) funds part of the ACMA and ACCC operations. The ACMA uses the ACLC for regulatory development, compliance costs and licensing and number allocation.[20] Charges to the industry also fund the operation of the TIO and ACCAN, which amounted to approximately $35 million in operational expenses collectively in 2018-19.[21]

18 ACMA 2018, ID checks for prepaid mobiles, https://www.acma.gov.au/id-checks-prepaid-mobiles.
19 ACMA 2019, ACMA annual report 2018-19,
     https://www.acma.gov.au/publications/2019-10/report/australian-communications-and-media-authority-and-office-esafety-commissioner-annual-
     reports-2018-19.
20 The ACMA 2019, Proposed Annual Carrier Licence Charge 2018-2019,
     https://vision2020.acma.gov.au/theACMA/proposed-annual-carrier-licence-charge-2018-19.
21 TIO 2019, Financial report 2018-19, https://www.tio.com.au/annual-reports-and-updates; and ACCAN 2019, Financial report 2018-19,
     http://accan.org.au/about/annual-reports.

1.4 Co-regulatory requirements for the telecommunications industry

The telecommunications industry has also developed self-regulatory and co-regulatory instruments, as shown in Table 1.2. While most of the Codes and Standards developed by Communications Alliance are registered with the ACMA and are therefore considered co-regulatory, other instruments such as guidelines and some specifications are voluntarily agreed by industry participants and fall under self-regulatory measures.

Table 1.2 Communications Alliance instruments and key examples

Communications Alliance instrument	Self-regulatory or co-regulatory	Selected key examples
Codes: define good industry practice and in many cases are enforceable by government regulators.	Co-regulatory	• Telecommunications Consumer Protections (TCP) Code • Local Number Portability (LNP) Code • Mobile Number Portability (MNP) Code • Mobile Premium Services (MPS) Code • Integrated Public Number Database (IPND) Code • Mobile Phone Base Station Deployment Code
Standards: cover a range of technical topics. Most standards define the technical parameters of customer equipment. Examples include phones, modems, and cable products. In addition to ACMA created Standards, the ACMA also registers Standards developed by Communication Alliance to make them legally binding for telecommunications businesses. This moves the classification of Standards from self-regulatory to co-regulatory.	Co-regulatory/Self regulatory	• Analogue interworking and non-interference requirements for Customer Equipment for connection to the Public Switched Telephone Network • Requirements for Customer Access Equipment for connection to a Telecommunications Network • Requirements for connection to an air interface of a Telecommunications Network • Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network • Installation requirements for customer cabling (Wiring Rules)
Guidelines: documents with which compliance is voluntary. However, they may be enforceable by being referenced in a contract or through adoption by a regulator.	Self-regulatory	• Participant Monitoring of Voice Communications • Location Information for Emergency Calls • Local Number Portability IT Specifications • Mobile Number Portability IT Specifications
Specifications: usually voluntary documents that are technical in nature. They are mainly used for connecting telecommunications networks.	Self-regulatory	• Signalling System No 7 – Interconnect ISUP • Interconnection Implementation
Industry Guidance Notes: Documents created by Communications Alliance (sometimes with involvement of other relevant stakeholders) to address a need for further guidance and/or clarification for a specific topic that has caused confusion among industry participants in the past or has the potential to do so.	Self-regulatory	• Migration of Legacy Services • Issues to Consider for Insolvency Practitioners and Telecommunications Carriage Service Providers in relation to Carriage Service Providers in Financial Difficulty • Calling Line Identification management

1.5 The regulatory landscape is getting more complicated

Achieving an optimal regulatory balance is difficult in a fast-changing sector such as telecommunications. Developments such as successive generations of mobile networks and the roll-out of the NBN have meant that new regulations have been introduced and existing regulations revised. With relatively few exceptions, however, outdated regulation has remained, rather than been removed. Future technology will likely lead to greater complexity in regulation.

For example, advances in automated vehicles will require telecommunications technology to ensure a certain level of security and performance in the wireless transmission of the vehicle-to-vehicle signals. This will create additional complexity for businesses that will need to consider the respective impact of telecommunications regulation, vehicle design and transport regulation and their intersection.

The explosive growth of the Internet of Things (IoT) and the increasingly pervasive use of Artificial Intelligence will be major disruptors that will require regulatory solutions of some type, to foster their benefits and manage their risks. It is worth noting that the rapid pace of change in the telecommunications sector also poses daunting challenges for regulators. The process of allocating spectrum among an ever more diverse and voracious set of competing technology players, for example, has become enormously more complex in recent decades. The need for a regulator to understand the workings of intertwined new technologies and their implications for the regulatory framework should not be underestimated.

This complexity and the inter-connectedness of industry players plays to the strengths of co-regulation in many instances. Where service providers need to cooperate in the interests of connectivity and the consumer experience – for example to facilitate the portability of mobile numbers – an operator-designed co-regulatory mechanism may be the most efficient option. Similarly, where different players in a supply chain need to coordinate their actions, co-regulatory designs have benefits.

The growing complexity of telecommunications regulation can affect certain industry segments in different ways. While the telecommunications sector has a number of large carriers, it also has many small and medium sized businesses that do not have access to the same resources for compliance. As a result, regulatory settings can have an outsized large impact on these businesses as reported by Eric Erickson, Regulatory Affairs Advisor at Aussie Broadband.

Meeting regulatory requirements at Aussie Broadband

Aussie Broadband provides internet, mobile and other telecommunication services. The business has won numerous awards such as the "Best Broadband Provider" award at the 2018 CommsDay Edison Awards, and is known for its quality products and services. However, according to Eric Erickson, Regulatory Affairs Advisor at Aussie Broadband, one of the biggest challenges Aussie Broadband faces as a smaller provider is meeting an increasing regulatory requirement burden.

He firmly believes the volume of regulatory requirements is now disproportionately affecting smaller players in the industry, which do not have the resources of larger telcos to implement new regulation. Part of the challenge, says Erickson, is even just knowing what regulations have to be complied with. "The major telecommunication companies have IT systems and teams of regulatory and legal experts. Meanwhile smaller businesses might have only one regulatory expert or no one at all. Some new businesses or small businesses cannot afford the expense of having an in-house regulatory expert, and rely on existing staff to implement training and systems," he said.

He pointed out that it can even be difficult for smaller providers to have a voice at the table during regulation development. "We're now the fifth largest provider of new NBN services in Australia, and we don't have the resources to be able to put our view on all the regulation we want to."

As an agile business in an industry that shifts every day, Aussie Broadband says, "we'd much prefer to work collaboratively with regulators and other stakeholders to focus on the right outcome for customers and try to break through some of the 'it's always been done this way' thinking".

1.6 How does Australia compare in telecommunications regulation?

Comparing Australia's legal and regulatory regime for telecommunications with other countries provides a useful starting point to assess the current regulatory system. However, with a wide variety of institutional environments across countries, this comparison is also difficult. To facilitate a comparison, the ITU has developed an ICT Regulatory Tracker which provides an overall assessment of a country's legal and regulatory environment. The tracker comprises 50 indicators grouped into four categories:

• Regulatory authority, which contains indicators relating to the independence of the regulator from political influences and checks for decision-making. This includes the need for public consultation before regulatory decisions are made.

• Regulatory mandate, which explores whether responsibility has been allocated to regulatory institutions for issues such as licensing or spectrum management.

• Regulatory regime, which relates to whether infrastructure and relevant resources are shared i.e. whether infrastructure sharing for MVNOs is permitted or if secondary spectrum is allowed.

• Competition framework, which examines the level of competition in various elements of the telecommunications industry such as broadband services and mobile networks.

Australia performs strongly across all four components of the ICT Regulatory Tracker, achieving an overall score of 94.5 – ranking 8th out of 190 countries. Some comparisons are presented in Table 1.3 below, showing that Australia performs well compared to the global leader, Italy, in each component of the tracker and performs better than other economies such as the United Kingdom or the United States.

Table 1.3 ICT regulatory tracker scores for selected countries, 2017

	Regulatory authority	Regulatory mandate	Regulatory regime	Competition framework	Overall score	International rank (190 countries)
Italy	18	22	30	27	97	1st
Ireland	20	19	30	28	97	2nd
Australia	18	22	28	27	95	8th
United Kingdom	20	19	26	24	89	35th
United States	19	18	28	24	88	41st
New Zealand	20	9	17	25	71	111th

As mentioned in Section 1.1, ITU research has established that a well-designed and effective legal and regulatory environment can contribute to the development of a country's telecommunications industry.[22] The ICT Regulatory Tracker scores suggest Australia has many, if not most, of the necessary regulatory elements in place to promote continued growth of its telecommunications industry. The next chapter moves beyond the design of the regulatory environment to explore how the system works in practice.

22 ITU 2018, the economic contribution of broadband, digitization and ICT regulation, regulatory and institutional variable in driving digital growth, https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/FINAL_1d_18-00513_Broadband-and-Digital- Transformation-E.pdf.

2 Assessing the regulatory ecosystem

It is important to continuously assess regulation to ensure it is fit-for-purpose, as regulatory settings can impact how a sector operates and performs, and this ultimately affects outcomes for consumers and the economy. To analyse the performance of the telecommunications industry's regulatory ecosystem, we consider the four following criteria:[23]

- **Efficiency** – the costs for businesses associated with compliance
- **Compliance** – the extent of compliance with the regulation
- **Effectiveness** – the alignment of actual outcomes with the objectives of the regulation
- **Responsiveness** – the speed with which the regulatory instrument is updated.

There is a lot of evidence to analyse the strengths and weaknesses of regulation and co-regulation across the criteria. We present some of the impacts of each regulatory approach as well as high-level illustrative examples, focusing specifically on areas where both co-regulation and direct regulation play a role, to provide an overall assessment. The following analysis is informed by:

- an examination of public and industry data on efficiency, compliance, effectiveness and responsiveness outcomes
- a series of case studies of regulatory approaches
- a survey of regulatory representatives at major telecommunications businesses
- consultations with the industry
- information provided by the Australian Communications and Media Authority.

---

23 The OECD refers to these criteria in OECD 2012, Measuring regulatory performance: evaluating the impact of regulation and regulatory policy, https://www.oecd.org/gov/regulatory-policy/1_coglianese%20web.pdf.

2.1 Efficiency

Efficiency measures the business resource costs associated with achieving a desired objective – in this case, regulatory compliance. These costs can include both systems costs (such as software required for monitoring or reporting compliance) and labour costs (regulatory staff). Increasing compliance costs without an offsetting increase in the effectiveness of the regulation should be avoided. This is why a Regulation Impact Statement (RIS), including a cost-benefit analysis, must be completed for any new or altered regulation, unless the proposed change is minor.[24]

The telecommunications industry expends significant resources in order to comply with regulation. As of the 2016 Census, more than 2,000 people employed in the telecommunications industry were in roles directly related to 'regulatory compliance' or that involved engagement with regulatory actors (see Table 2.1). This is equivalent to 2.4% of the total telecommunications workforce. The cost to employ this number of people is estimated at $155.5 million per year based on available data on salaries for these occupations.

Table 2.1: Number of regulatory compliance staff in the telecommunications industry

Occupation	Number of people employed
Policy and planning managers	233
Public relations professionals (including government relations)	175
Legal professionals (including barristers and solicitors)	349
Inspectors and regulatory Officers	69
Clerks	1,253
Total	**2,079**

Source: Australian Bureau of Statistics (2016)

This is a significantly higher regulatory burden, compared with most other private sector industries. The telecommunications sector carries the 15th highest regulatory burden out of 70 private sector industry sub-divisions examined.[25] The sector has more regulatory staff than other industries that could be expected to be as heavily regulated, such as heavy and civil engineering (2.2% of the total sectoral workforce) or gambling activities (2.0%).

The occupations identified in this analysis have tasks relating to regulatory compliance. For instance, public relations professionals are defined by the ABS as workers who "implement and evaluate information and communications strategies, including the implications of policies, programs and practices". In addition, clerks are workers who "organise, store or retrieve information including contracts, programs, projects and services". While not all tasks for employees in these roles would be related to regulation, a proportion of tasks would be.

On the other hand, other roles also involve compliance activities, such as sales staff who may spend time ensuring a sale complies with regulation (for example, appropriate identification verification and pre-sales information provision) and technical staff and project managers overseeing systems changes that flow from regulatory changes. These are not included in our analysis. Management and executive staff would also spend some time signing-off on compliance reports. So overall, the estimate of compliance costs for the industry is conservative. Moreover, the consistent definition of roles related to regulatory compliance allows for comparisons across industries.

Not just the day-to-day tasks associated with compliance are resource-intensive. Given the frequency with which regulation changes, businesses must also spend time reviewing and understanding their obligations and, where necessary, re-training staff.
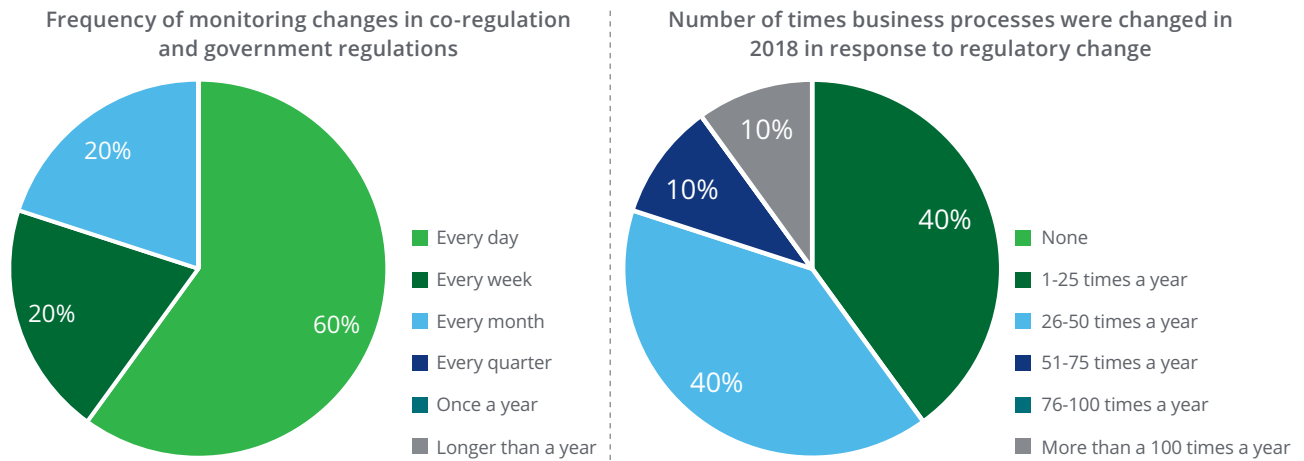
---

24 Prime Minister and Cabinet 2017, Australian Government RIS Preliminary Assessment Form: Is a RIS required?
    https://www.pmc.gov.au/resource-centre/regulation/australian-government-ris-preliminary-assessment-form-ris-required.
25 The industries are taken at a four digit ANZSIC level. Government and administrative industries were excluded from the analysis in addition to any industry with less than 20,000 people employed in total.

Chart 2.1 shows that 60% of survey respondents are monitoring changes in co-regulation and direct regulation every day. This level of monitoring requires significant resourcing, and every business surveyed said it had changed its processes in the previous 12 months to respond to regulatory change. In fact, 60% have changed them more than 25 times, and 20% have made changes more than 50 times.
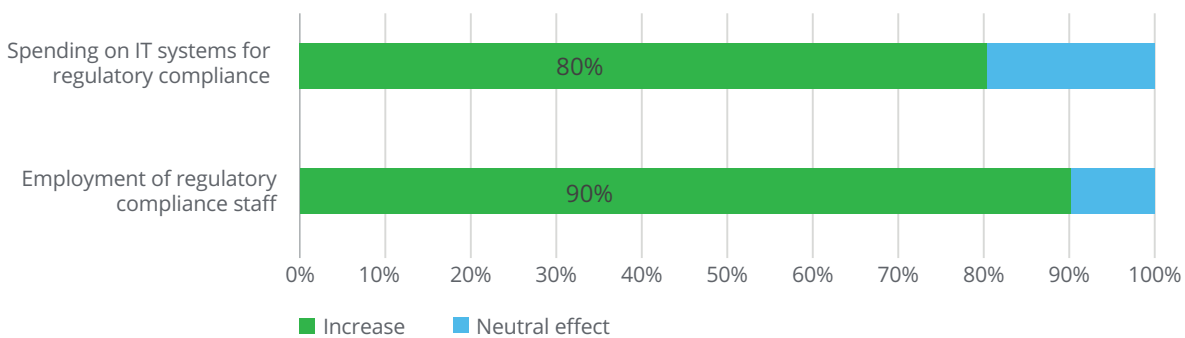
Chart 2.1: Survey results about the efficiency of co-regulation and government regulations

Segments reflect proportion of survey respondents that selected each option
Source: Deloitte Access Economics

The industry believes that direct regulation is less efficient than co-regulation. Chart 2.2 shows the majority of survey respondents believe that if all co-regulatory instruments became government regulation, they would need to increase the number of compliance staff they employ, and raise their IT systems spend to meet regulatory requirements for the same outcomes.

Chart 2.2: Survey results about the impact on business areas if all co-regulation became government regulation

The segment reflects the percentage of survey respondents that selected each option.
Decrease was an option – it was not selected by any respondents.
Source: Deloitte Access Economics

Efficiency and the Integrated Public Number Database

Changing regulatory reporting requirements can also impact the efficiency of regulation. This has been the case for carriage service providers (data providers) reporting data for the Integrated Public Number Database 2018 (IPND), due to the use of legacy systems designed for a different technology environment.

The IPND was created in 1997 and designed as a source of customer service-related data. At the time, there were only two major data providers and fewer mobile services than there are today. Number portability was only in early development for local numbers, and mobile number portability did not exist.

The purpose of the IPND is to provide data to critical agencies (i.e. emergency services and enforcement) and non-critical data users (i.e. directory producers and researchers). Critical data users need immediate real-time access to service-related data. Today, other frameworks have evolved to meet this need by allowing direct access to such data from service providers (e.g. subscriber checks via Secure Electronic Delivery Node - SEDNode).

The ACMA registered the revised Industry Code (Integrated Public Number Database 2018) which came into effect in May 2018. During the same year, the ACMA conducted an investigation into IPND errors and found that all data providers were in violation of the Code. The ACMA found most data providers had processes that did not meet the requirements of the IPND Code and associated technical requirements. Consequently, many suppliers were given a notice of direction to comply and were asked to undertake quarterly audits of their IPND data to eliminate errors in the database.

Yet, businesses found the regulation extremely difficult, if not impossible, to comply with. The time taken to update the IPND (several days for some data providers) and the fact the IPND can also be affected by other data providers makes it very challenging for businesses to achieve compliance.

The regular quarterly audits of the IPND have created additional work that is resulting in additional errors. Data providers need to extract their entire customer database and then compare this with the IPND database.

As the IPND has file size and transaction processing limitations, data providers are unable to send a file with more than 100,000 records at a time, and only three files of such size can be processed per day. This makes it especially difficult for larger operators to have a process that does not create additional errors. Undertaking a comparison of IPND data against a data provider's own records requires data to be extracted from IPND data. This may require many days of processing to compare, compile and create updated records. As IPND data is not static, early file comparisons and subsequent records created to update IPND data do not account for activity that may have occurred between the date of the extract, the date of the comparison of data and the date that a file record was sent to the IPND to 'correct' an error.

This demonstrates that regulation and systems designed in another time, in a different market with different technologies cannot necessarily be kept current and relevant by adding additional regulatory compliance requirements over the top of the underlying regulation and systems. Such an approach risks creating unintended inefficiencies that undermine the original intended purpose.

Source: Consultation with Communications Alliance and industry members

2.2 Compliance

Compliance refers to the extent to which businesses meet the requirements of regulation. High levels of compliance are vital for a well-functioning regulatory system. Regardless of how well it is designed, regulation is irrelevant unless businesses comply with it. Compliance levels will be influenced by the level and enforcement of penalties, but also by the cost and ease of compliance. If regulations are confusing or infeasible to follow, compliance levels will be lower.

Compliance with the telecommunications regulatory system is high overall. For example, the ACMA undertook only nine formal actions against telecommunications businesses for allowing unsolicited communications to consumers during 2017-18.[26] During the same period, the ACMA investigated 33 instances of non-compliance with the TCP Code, down from 36 in the previous financial year.[27] This high rate of compliance has been maintained over time, with the ACMA noting even with changes in regulatory requirements for the TCP code in 2012, "non-compliance has generally been minor and quickly rectified once identified".[28]

In theory, both direct regulation and co-regulation should generate broadly equivalent levels of compliance, as both systems are enforced by government and so have similar penalties for non-compliance. There have been instances of regulators using direct regulation in place of co-regulatory instruments with the aim of increased compliance. The ACMA made a series of enforceable rules with the objective to improve consumer experience in moving to the National Broadband Network. This was in response to an increasing number of complaints from consumers about connection delays, responsibility shifting between telecommunications providers and inadequate complaints handling practices.[29]

It is important to recognise that compliance is not wholly determined by enforcement mechanisms, which is evident from the existence of successful self-regulation. For example, the *External Telecommunication Cable Networks Code* was published in 1999, revised multiple times in the interim years, and has been complied with by the industry. The Code was never submitted to the ACMA for registration and is therefore voluntary for industry. However, according to Communications Alliance, service providers are complying with it for operational and commercial reasons. More generally, ease of compliance, operational imperatives, financial considerations, potential loss of reputation with customers, or industry peer pressure can be sufficient to secure compliance with less interventionist regulatory frameworks.

While almost all businesses might aspire to be compliant with regulation, there are instances where ambiguity or lack of early industry consultation on direct regulation can make regulatory compliance difficult or not feasible. One example of this is the *Telecommunications (NBN Continuity of Service) Industry Standard 2018*, in which regulatory compliance with the draft Standard was technically impossible for a portion of the proposed requirements. While subsequent consultation resulted in a more practical Standard, compliance remains difficult, as requirements are highly prescriptive in areas where such prescription is not practical and hinders efficient business processes and operations.[30]

This highlights that compliance rates may also be affected by the practicality of the regulatory instrument. Co-regulatory instruments, which are developed by the industry, are far more likely to reflect technical and operational practicalities and as a result have the potential for increased compliance rates.

---

26 Formal actions include formal warnings, enforceable undertakings and infringement notices. See ACMA 2018, Annual report 2017-18, https://www.acma.gov.au/publications/2018-10/report/ACMA-annual-report-2017-18.

27 Ibid.

28 ACMA 2013, Annual report 2012-13, https://www.acma.gov.au/-media/mediacomms/Report/pdf/ACM_AnnualReport1213_WEB-FApdf.pdf?la=en.

29 ACMA 2019, New complaints handling rules, https://www.acma.gov.au/Industry/Telco/Infrastructure/The-NBN-and-industry/newcomplaints-handling-rules-1.

30 Communications Alliance 2018, Communications Alliance submission to the ACMA consultation paper: New rules to protect consumers migrating to the national broadband network Part 2: Improving consumer information and ensuring service continuity and quality, https://www.commsalliance.com.au/__data/assets/pdf_file/0017/60209/180511_CA-Submission_ACMA-Paper-Part-2-Line-Testing-Service-Continuity_submitted.pdf.

NBN Continuity of Service Standard

To move to NBN-based networks, household and business connections must be transitioned from existing to new networks. In a small number of instances, when transitions have not occurred successfully, customers have been left, for a period, with no service or slow speeds.

Due to an increased number of complaints, in December 2017 the then Minister for Communications and the Arts directed the ACMA to make a number of regulatory instruments, including an industry Standard to manage these transitions and ensure continuity of service. In June 2018, the ACMA made the Telecommunications (NBN Continuity of Service) Industry Standard. Among other things, the draft Standard released for consultation with industry required service providers to re-connect users to the old legacy network and, subsequently, fix any connection issues in instances where a user had migrated from a legacy network to the NBN but experienced a non-working connection or unreasonably slow speeds.

However, for a large number of migrations, this approach was not technically feasible. Consequently, service providers advised that compliance with the requirements as drafted would be impossible.

While subsequent consultation led to a more practical and technically feasible Standard, the condensed timeframes and less than complete knowledge about the technical solution to a problem led to a regulatory instrument with which compliance remains difficult. Service providers attribute this issue to the complexities of the subject matter, lack of clarity in parts of the Standard and a high degree of prescription in other parts of the instrument. The overall effectiveness of the Standard – irrespective of the technical and compliance difficulties associated with it – continues to be questioned by industry.

Source: Consultation with Communications Alliance and industry members

This practical challenge of compliance could be exacerbated if more of the current co-regulatory instruments are replaced with direct government regulation. Half of industry survey respondents believe that more government regulation would make the regulatory system more complex (see Chart 2.3). This complexity may reflect difficulty in the practicality of complying with requirements as in the case of the *Telecommunications (NBN Continuity of Service) Industry Standard 2018*.

Chart 2.3: Complexity of regulation if all co-regulatory Codes became government regulation

- Increase
- Neutral effect
- Decrease
- Not sure

Segments represent the proportion of all survey respondents that selected each option
Source: Deloitte Access Economics

2.3 Effectiveness

The objective of any regulation is minimising harms in a well-functioning market. A well-functioning market can be measured through the performance of the industry, customer satisfaction and customer complaints.
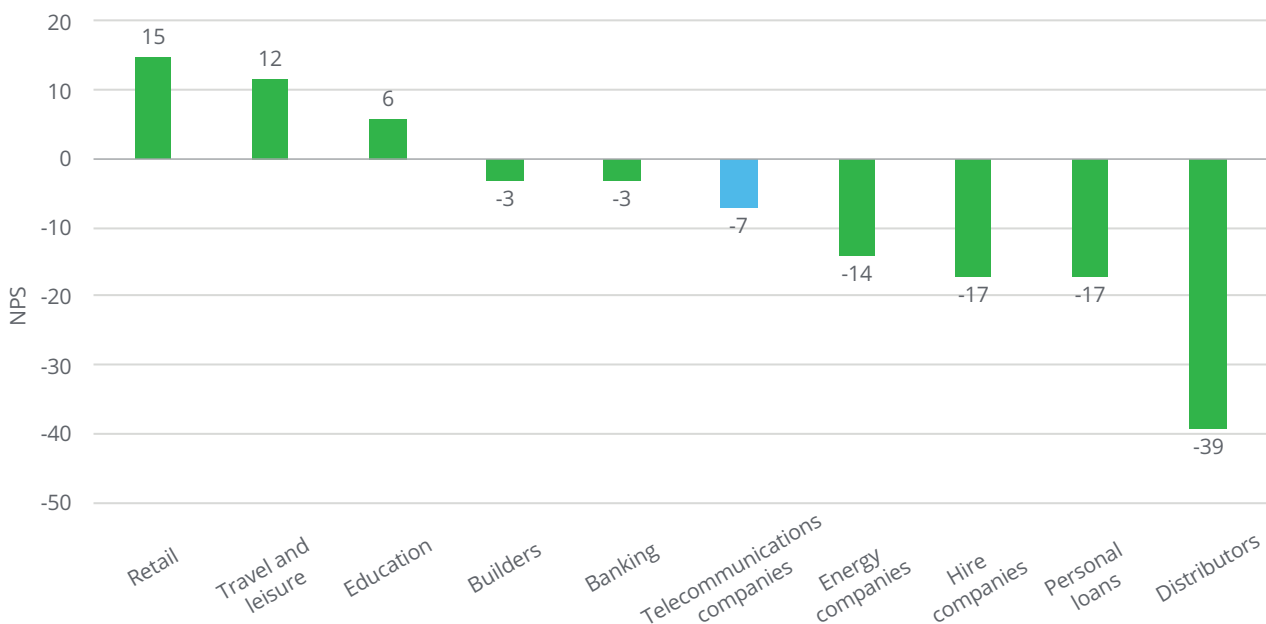
The Australian telecommunications market is performing moderately well when compared to other countries. Deloitte Access Economics previously compared Australia's relative performance across 16 ICT indicators.[31] These indicators largely related to telecommunications or telecommunications-enabled technologies, such as internet access and broadband access, or factors such as consumer trust in technology.

Australia was 'middle of the pack' compared to other developed countries, with an average ranking of 7th out of 16 countries.[32] Australia performed relatively well for certain indicators with high levels of ICT consumption and business use of digital technologies. However, there is room for improvement: Australia allocates only 0.138% of GDP to ICT research and development, the second lowest level among comparable countries.

A second indicator of the functioning of an industry is customer satisfaction with the industry, which can be measured by Net Promoter Scores (NPS). NPS measures the likelihood that a customer would recommend a particular good or service, therefore providing an indication of customer satisfaction. NPS is a measure of customer perceptions rather than technical performance, but is a partial indicator of how well a market is functioning. Chart 2.4 shows that customer-facing industries such as retail and travel and leisure have higher NPS scores than regulated industries. Telecommunications is close to the middle of the scores of regulated industries such as banking and energy companies.[33]

Of course, the performance of the industry cannot be wholly attributed to a particular regulation, or either co-regulation or direct government regulation. There are also a number of factors beyond regulation that could influence these indicators or measurements.

Chart 2.4: Net Promoter Scores across selected Australian industries, 2018

Source: Perceptive (2018)

---

31 Deloitte Access Economics 2018, Australia's Digital Pulse: Driving Australia's international ICT competitiveness and digital growth, https://www2.deloitte.com/au/en/pages/economics/articles/australias-digital-pulse.html.

32 Ibid.

33 Perceptive 2018, Australia NPS Industry Benchmarks, https://www.customermonitor.com/net-promoter-score-benchmarks-australia.

Another potential indicator of a market functioning well is efficient resolution of customer complaints. The number of complaints and how satisfactorily they are resolved provides an indication of the overall effectiveness of the regulatory system. The telecommunications industry's complaints handling framework was developed through the co-regulatory framework under the TCP Code. The ACMA recently created a Complaints-handling Standard that, on 1 July 2018, uplifted the relevant chapter of the code into direct regulation.[34]

The number of complaints to the Telecommunications Industry Ombudsman per 1,000 customers has declined from 2012-13 levels. Between 2015-16 to 2017-18, there was an increase in the rate of complaints, driven partly as a result of the NBN rollout. However, it appears that complaints have peaked. In 2018-19 there was a 21% decrease in the number of complaints compared to the previous year.[35]

This can be compared to the energy sector, which is also a highly regulated essential service. Complaints handling frameworks for energy providers are mandated by direct regulation, with consumers able to make complaints through state and territory-based ombudsmen. While both industries use ombudsmen, energy complaints handling standards are set through a direct government regulation, whereas telecommunications complaints were set and - until recently - governed by co-regulatory instruments.

A comparison of the industries shows there were almost double the number of complaints to external dispute resolution schemes for the energy industry than for the telecommunications industry in 2017-18 – with around six per thousand, compared to three per thousand for telecommunications customers.[36]

In terms of resolving complaints to external dispute resolution schemes through initial re-referrals, the telecommunications industry has a slightly lower rate compared to the energy market. Industry members resolved 85% of complaints received through referrals from the TIO in 2018-19, with the remainder resolved through conciliation or investigations undertaken by the TIO. State and territory energy ombudsmen resolve a high proportion of customer complaints by referring them back to the relevant company.[37]

Pulling these measures together – ICT indicators on performance, customer satisfaction and complaints and their resolution – suggests that while there are opportunities for Australia to do better, overall the regulatory system is effective in achieving a functioning market.

2.4 Responsiveness

The telecommunications industry is constantly adopting new technologies and creating new product offerings. For instance, 5G mobile network technology is being rolled out in Australia, enabling faster and more reliable telecommunications as well as additional applications and better support for emerging technologies such as autonomous vehicles and remote surgery.

New technologies mean that regulation needs to evolve and be updated to reflect the changing nature of the industry. Direct regulation, which at times requires legislative changes, can struggle to remain relevant when it comes to a high degree of technological change. This has been recognised by regulators, with the ACMA noting:[38]

"Regulation that cannot keep pace with developments will be ineffective. Such regulation may have unintended and perverse effects, become irrelevant and thus ignored by those intended to be regulated, or become an inappropriate mechanism to address its original purpose in a changed environment."

---

34 ACMA, 2019, New complaints-handling rules, https://www.acma.gov.au/articles/2018-03/acma-moves-new-telco-complaints-handling-rules.

35 TIO 2020, Telecommunications Industry Ombudsman Annual Report 2018-19, https://www.tio.com.au/reports-updates/annual-report-2018-19 .

36 ABS 2019, 8153 – Internet Activity, Australia, https://www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0/ and Australian Energy Regulator 2019, Key facts 2018-19, https://www.aer.gov.au/system/files/AER%20Retail%20Report%20Key%20Facts%202018-19.pdf.

37 Many ombudsmen have complaint resolution levels at or near 100% - see for example: Energy & Water Ombudsman NSW 2019 Annual report 2018-19, https://www.ewon.com.au/page/publications-and-submissions/annual-reports , Energy and Water Ombudsman Queensland 2019, Annual report 2018-19, https://www.ewoq.com.au/annual-reports/ , and Energy and Water Ombudsman 2019, Annual report 2018-19, http://www.ombudsman.wa.gov.au/ewowa/publications/news.htm#AR1819.

38 ACMA 2015, Optimal conditions for effective self- and co-regulatory arrangements, https://www.acma.gov.au/.Library/researchacma/Occasional-papers/optimal-conditions-for-effective-self--and-co-regulatory-arrangements-2015-edition.

This is particularly true for the issue of e-safety, for which the lack of updates to legislation is inhibiting the ability of co-regulatory Codes to respond to increasing online content accessed through mobile phones by young Australians.

Updates to the *Broadcasting Services Act 1992* (Cth) are required to allow changes to be made to the Internet and Mobile Content Code. The Code was developed in 2001 when internet access required a fixed internet connection and before mobile data services were available. The separate treatment of mobile and fixed internet connections in the Act has produced duplication and discrepancies between how the same piece of content could be treated.

The *Broadcasting Services Act 1992 (Cth)* has been identified for review for several years. Meanwhile, Communications Alliance has signalled its intent to revise the Code to make it platform and technology neutral once allowed by the Act.[39] Producing uniform requirements across mediums requires Schedules 5 and 7 of the *Broadcasting Services Act 1992* be updated to be technology neutral.[40] A 2015 review of Codes and legislation found:[41]

"The overly prescriptive nature of Schedules 5 and 7 has prevented a meaningful overhaul by industry of the industry codes—because the codes cannot be changed unless associated parts of these Schedules, are changed first. As a result, the industry codes are either out of date or redundant, and reliant on changes to legislation to enable code review and rewriting."

When not reliant on legislative updates, revisions to Codes are generally responsive and enable industry, regulators and other relevant stakeholders including consumers to contribute to the design of the regulation.

Formal incorporation of industry and technical experts into the design of co-regulatory Codes means they can be updated in a timely fashion, as industry is often the most informed about trends and technological developments. Communications Alliance regularly engages in consultation for revisions to co-regulatory Codes. The TCP Code has recently undergone its fourth major revision since it was created in 2007. Meanwhile, the Mobile Premium Services Code was registered with the ACMA in 2009, with revisions completed in 2011, 2014 and 2019.[42]

In contrast, the responsiveness of direct regulation for the telecommunications industry has varied considerably over the past decade. Standards and Determinations from the ACMA can be developed at a pace similar to co-regulatory codes or even faster. The pace of legislative change can range from short periods (such as the case of encryption laws explored below) to prolonged timeframes. One example of the latter is the potential legislative updates for the *Radiocommunications Act 1992* (Cth). In 2002, the Productivity Commission said:[43]

"Although the Radiocommunications Act has been in place for a relatively short period (major amendments were made as recently as 1997), radio communications is a rapidly evolving, high technology sector. The costs of an inappropriate regulatory structure could accumulate quickly."

---

39 Communications Alliance and Australian Mobile Telecommunications Association 2018, join submission to the Department of Communications and the Arts: Reviews of the Enhancing Online Safety Act 2015 and the Online Content Scheme – discussion paper, https://www.commsalliance.com.au/__data/assets/pdf_file/0007/60955/180725_CA-AMTA-submission_Review-Online-Safety-Online-Content-Scheme_Submitted.pdf.

40 Briggs, Lynelle 2018, Report of the Statutory Review of the Enhancing Online Safety Act 2015 and the Review of Schedules 5 and 7 to the Broadcasting Services Act 1992 (Online Content Scheme), https://www.communications.gov.au/publications/report-statutory-review-enhancing-online-safety-act-2015-and-review-schedules-5-and-7-broadcasting.

41 Ibid.

42 Communications Alliance 2014, Industry Code C637:1011 Mobile Premium Services, https://www.commsalliance.com.au/__data/assets/pdf_file/0007/45844/C637_2011-Variation-No.1-2014.pdf.

43 Department of Communications 2015, Spectrum Review, https://www.communications.gov.au/what-we-do/spectrum/spectrum-review.

In 2014, the Australian Government announced a review of spectrum policy to be conducted by the Department of Communications. The Department released the review and three recommendations in 2015. Two years later, the Australian Government released and consulted on an exposure draft of a Radiocommunications Bill, designed to act on the recommendations raised in the Department's review. In October 2019, the Department introduced a change in approach, and that the Act would be amended.[44] However, as at March 2020, none of the relevant amendments had been introduced into Parliament.[45] The delay in reform in spectrum policy has imposed significant, albeit unquantified, costs on the industry. Both Communications Alliance and AMTA have stated that appropriate changes to the Radiocommunications Act would provide simplicity and flexibility to foster continued investment in spectrum resources.[46]

Encryption legislation

In contrast to the usually long periods taken to amend legislation, there are instances when government legislation can be passed relatively quickly. While this can be seen as desirable, it can also lead to unintended consequences. An example of a rapid regulatory response with problematic outcomes is the *Telecommunications and Other Legislation Amendment (Assistance and Access) Bill 2018*, otherwise known as the 'Encryption Law', which passed through both Houses of Federal Parliament on the final sitting day of 2018.

The new law ultimately gave wide-ranging powers to police and enforcement agencies, including the ability to require service providers to help them access the encrypted communications of customers, without the user's knowledge.

There has been significant criticism of the truncated consultation process and the speed with which this legislation was passed. The draft Bill was made public in mid-August and, following a three-week consultation process, many thousands of submissions from concerned businesses, technical experts, citizens, organisations and industry associations from Australia and around the world were received by the Department of Home Affairs. Yet only a matter of days later, the legislation was introduced to Parliament with almost no amendments in response to the submissions received.

The limited industry consultation may well have unintended consequences for the industry. Stephen Nagle, Executive Director at the Holmes Institute, believes that cybersecurity education in Australia may be impacted due to perceived ability of the government to view what students are working on. The Australian Information Industry Association (AIIA), the peak member body for the ICT industry and major Australian businesses, said "The Act is likely to negatively impact the competitiveness of Australian software and hardware manufacturers in international markets. We believe this could result in declining employment and export revenue, and consequently a significant reduction in local R&D and manufacturing."

Sources: InnovationAus 2019, Encryption bill hits cyber skills, https://www.innovationaus.com/2019/06/Encryption-bill-hits-cyber-skills. AIIA 2019, Encryption Act has potential to undermine the international reputation of Australian tech companies, says AIIA https://www.aiia.com.au/documents/aiia-news/2019/encryption-act-has-potential-to-undermine-the-international-reputation-of-australian-tech-companies,-says-aiia.

Direct regulation may also be less responsive to changing circumstances where there are faults in regulatory design process that delays its ultimate implementation. An example of this is 1800 and 13/1300 numbers, which is explored in the case study on the next page.

---

44 Pearce, Rohan 2019, Government abandons rewrite of RadComms Act,
   https://www.computerworld.com/article/3467512/government-abandons-rewrite-of-radcomms-act.html
45 Department of Infrastructure, Transport, Regional Development and Communications 2019, Modernising the management of spectrum,
   https://www.communications.gov.au/departmental-news/modernising-management-spectrum
46 AMTA and Communications Alliance 2017, Submission to the Department of Communications and the Arts: Radiocommunications Bill 2017 and
   Spectrum Reform, https://www.commsalliance.com.au/__data/assets/pdf_file/0020/58610/AMTACA-Submission-Radcomms-Bill-2017.pdf.

Cost of mobile calls to 1800 and 13/1300 Numbers

One instance of prolonged industry involvement in regulatory development is an issue that arose in relation to charges for mobile phone calls to 1800 and 13/1300 numbers.

That process extended from 2010 to 2014. These numbers have been widely used by businesses, government agencies and community organisations to provide a single access number for callers across Australia. Examples include Centrelink, Medicare, banks, insurance companies, electricity providers, telecommunications providers and charities. Fixed network calls to 1800 numbers allow the receiver to pay for incoming calls as opposed to callers paying any fee, while fixed calls to 13/1300 numbers allow callers to make national calls at local rates.

The system was outlined in the *Telecommunications Numbering Plan 1997* and confined to 'standard telephone services', despite the rising use of mobiles.

Pressure for adapting the system began in July 2010, after the then Prime Minister, Julia Gillard, announced that a re-elected Labor Government would make mobile calls to the Lifeline 13 11 14 number free of charge. Three months later, a complaint was lodged with ACMA by ACCAN, Australian Financial Counselling and Credit Reform Association (AFCCRA) and the Australian Council of Social Service (ACOSS) raising concerns that some mobile calling plans treated calls to 1800/13/1300 numbers as normal timed mobile calls. While almost all Australian mobile plans in 2019 offer unlimited monthly domestic calls, this was not the case in 2010.

The ACMA released a report "Numbering: Calls to Freephone and Local Rate Numbers – The Way Forward." The report recommended that mobile calls to these 1800 numbers be free of charge to the calling party and that mobile calls costs to 13/1300 numbers be limited to the amount that a consumer would expect to pay for a local call made from a fixed phone. Communications Alliance and AMTA responded saying low cost alternatives already existed and pointed to potential unintended consequences of the ACMA's proposals.

This led to ongoing interactions between the ACMA and Communications Alliance from 2011 to 2013, which involved a large number of meetings, significant correspondence, six formal publications or media releases from ACMA and six responses from Communications Alliance and AMTA. While this ongoing and lengthy dialogue between industry associations and the ACMA was designed to determine the need for intervention and form it would take, the industry was, meanwhile, increasingly offering calling plans which had 13/1300 numbers as part of the included value in the customers' monthly mobile calling 'allowance.' These were called '13-friendly' plans. During this time, the ACMA commissioned research which found that nearly 60% of consumers were already on a '13-friendly' plan.

In June 2013, the ACMA requested Communications Alliance to develop an industry Guideline with a implementation plan to address the issue. The implementation plan noted there were 170 13-friendly plans in market by that time, offering plenty of choice to customers seeking such a plan. A 13/1300 Industry Guideline was provided to ACMA five months after the project commenced. This led to ACMA press release "New Arrangements for Mobile calls to 1800 and 13/1300 Numbers – Consumers Set to Benefit." In this instance, the development of the Industry Guideline was relatively quick, compared to the ongoing industry consultation.

2.5 Principles for regulating the telecommunications industry

Excessive or poorly-designed regulation can increase business costs, stifle innovation and weigh on productivity growth across the economy. For this reason, the *Best Practice Regulation Handbook* recommends minimal government intervention, limiting direct regulation to severe problems with a history of non-compliance in highly concentrated sectors, with outcomes weighed against the cost of regulating.

Carefully considering regulation in the telecommunications industry is important. Already, the majority of surveyed telecommunications businesses are monitoring changes to regulatory requirements every day. In addition, the industry has a significantly higher regulatory burden compared to most other private sector industries, with 2.4% of its workforce in occupations involving regulatory compliance. This represents the 15th highest regulatory burden out of 70 private sector industry sub-divisions.

Based on our analysis, there is a case for more strongly considering the role of co-regulation in telecommunications. Levels of compliance of co-regulation are high in the industry and co-regulation can be responsive in an area of rapid technological change. Industry co-regulation proactively engages industry members, ensuring requirements are effective and relevant. By comparison, direct regulation has its limitations, including issues with compliance, efficiency, and responsiveness such as with the *IPND Code*, the *Telecommunications (NBN Continuity of Service) Industry standard 2018* and the draft legislative changes to *Radiocommunications Act 1992 (Cth)*. While co-regulation won't always be the best option, it deserves careful consideration. Well-designed regulation is required to maximise the economic benefits of an innovative telecommunications sector.

Appendix A
Survey methodology

A bespoke survey was developed by Deloitte Access Economics to provide insights for this report. The survey was sent to Communications Alliance members in early March 2019 and closed at the end of April 2019. There were ten responses received to the survey. These businesses represented by the respondents accounted for approximately 80% of the market, as measured by industry revenue in 2017-18. When asked to describe their business offering, half of respondents responded that they were both a network carrier and a carriage service provider, as shown in the figure below.

Figure A.1: Business service offering, by survey respondent

Segments represent the proportion of all survey respondents that selected each option
Source: Deloitte Access Economics

The survey was used to receive views on the impact of the current regulatory system. For example, how is compliance a challenge for the industry? Respondents were also asked about the impact if current co-regulatory instruments were replaced by direct regulation. A selection of the key survey questions is below.

Survey questions
What do you think are the most significant challenges for the telecommunications industry? Please rank the options with 1 being the most significant.

- New technologies
- Regulatory compliance
- Domestic competition
- International competition
- Cost of business in Australia (cost of inputs/labour)
- Changing customer preferences
- There are no significant challenges for the telecommunications industry
- Other, please specify

How often does your business monitor updates in regulatory or co-regulatory requirements or standards?
· Every day
· Every week
· Every month
· Every quarter
· Once a year
· Longer than a year

During 2018 calendar year, how many times did your business have to change business processes in order to comply with new or changed regulatory requirements?
· None
· 1-25 times a year
· 26-50 times a year
· 51-75 times a year
· 76-100 times a year
· More than 100 times a year

The following two questions relate to the 130 co-regulatory instruments developed by Communications Alliance. The question involves a hypothetical situation in which a government regulator (like the Australian Communications and Media Authority) were to take responsibility for future changes to the instruments and their enforcement.

What do you think would happen in the following areas of your business if ALL current co-regulatory instruments were to move to statutory or government regulation?

Employment of regulatory compliance staff
· Increase
· Neutral effect
· Decrease
· Not sure

Spending on IT systems for regulatory compliance
· Increase
· Neutral effect
· Decrease
· Not sure

What do you think will be the impact on the telecommunication regulatory system if ALL current areas of co-regulation were to move to statutory or government regulation?

The complexity of regulatory requirements for industry to comply with
· Increase
· Neutral effect
· Decrease
· Not sure

Limitation of our work

Deloitte.