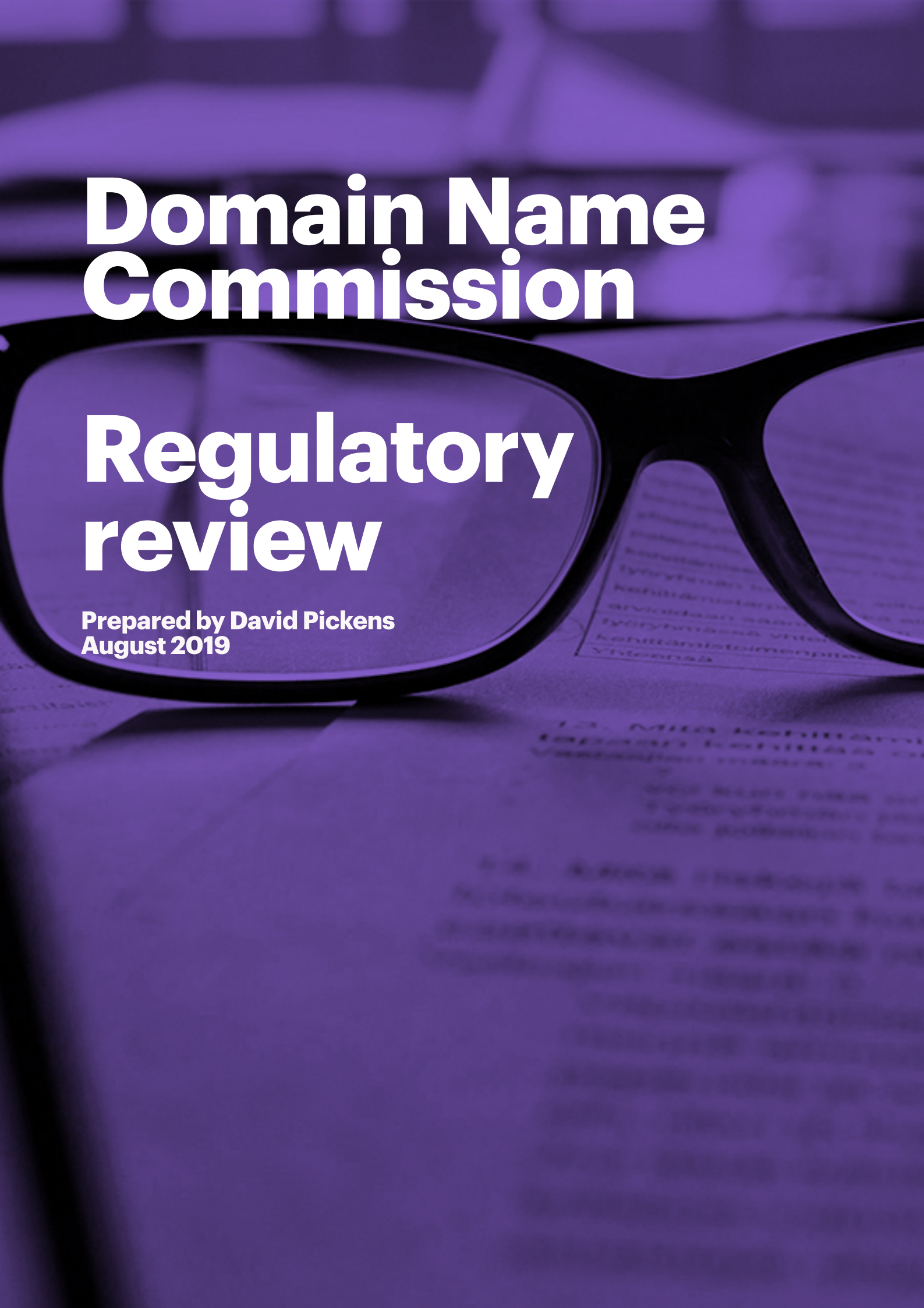

Domain Name Commission

Regulatory review

Prepared by David Pickens
August 2019

FINAL REPORT: DOMAIN NAME COMMISSION LIMITED (DNCL) REGULATORY REVIEW

Contents

Executive summary

The Domain Name Commission Limited (DNCL) has sought an independent regulatory review of its activities. This is that review. The purpose of the review is to:

- provide stakeholders (including DNCL) with a good basis for understanding and appreciating how well DNCL is performing
- provide DNCL senior management and Board with recommendations to consider on further improving DNCL's performance
- identify issues and areas for further review and consideration by DNCL and its stakeholders as appropriate.

The review is based on 23 interviews with key DNCL stakeholders, documents and feedback provided by the DNCL and desktop research. John Burton, Partner with Izard Weston with long experience with the DNCL, reviewed an early draft.

The review caveats are emphasised. Two key weaknesses underlie the review findings and recommendations. First, only a small sample of stakeholders and experts have had the opportunity to input into the review. Second, little empirical evidence was found upon which to assess the DNCL's performance either over time or compared to like entities. For these reasons, additional work is required before final decisions and conclusions are reached.

Also, as a regulatory review, the review is heavy on regulatory theory; when and how best to regulate markets. It is hoped this theory will challenge existing thinking in a way that adds value to future decision-making, even beyond the issues addressed in the report.

The scope of the review excludes the recent restructuring and is limited to the DNCL, that is, it excludes the role of InternetNZ, the Registry and other key stakeholders that impact performance of the .nz space. Strict observance of these boundaries was not entirely successful, however. More so perhaps than an organisational review, a regulatory review is best achieved by taking a systems approach. The DNCL has been understanding on this point, and it is hoped others will be equally so.

On the review findings, there is much for current and past DNCL staff to be proud of. They are well regarded for what has been achieved to date and, equally, there is much optimism with respect to where the DNCL is heading. Culture, integrity, capability and transparency all feature highly. Further, there appears little threat to the DNCL's strong public interest agenda; and the self-regulatory model, with some stakeholder and government oversight, appears the right one. Those with an international perspective of TLDs were particularly effusive in their praise.

However, there are challenges. With the opportunities for tremendous gain from the internet come also tremendous risks and costs. Many stakeholders felt the DNCL was not playing its part in helping to manage these risks. There were many calls for a more active DNCL. This, it was claimed, would be consistent with international trends and was necessary to retain confidence and safety in the .nz space. Others, however, disagreed; citing lack of evidence, they also worried about the associated costs and suggested others were better placed to take on such a role. The importance of natural justice and following due process were also emphasised. Both sides appeared credible and the author was unable to choose which to support. What was clear, however, was the potential for such a rift between important stakeholders to damage the .nz space. A process to resolve that rift is suggested in the report, one the DNCL appears already to be taking.

By definition, markets that work well produce better results than markets requiring strong regulatory intervention. At face value, the .nz space appears to work, okay. The key weakness is registrants are not strong drivers of either registrar or DNCL performance. The review suggests there may be significant gains to be had by strengthening registrants' hand. A soft mechanism to do this is information disclosure, to help registrants better chose the registrar and TLD most appropriate to their needs. The DNCL is ideally placed to consider, design and implement such a mechanism, building on current efforts by other stakeholders in the domain name market.

The review revisited the registrar concentration threshold deployed by the DNCL. The pro-competition objectives underlying the thresholds are strongly supported. However, the mechanism is not. For well-intentioned initiatives to be successful (in this case to promote competition), they need to be carefully directed at **the problem** preventing achievement of the objective. That problem was not found. Worse, there are risks of unintended adverse consequences attached to its use.

The review considered the DNCL's fee setting - who should pay, how they should pay, how much they should pay and how they should be involved in decision making. Against the theory, and comment from stakeholders, no problems were found. It might be interesting to revisit this topic once the growth in .nz domain names reduces.

Finally, many offered comment on the recent restructuring (DNCL, InternetNZ and the Registry). These comments are summarised in the last chapter. Putting the actual restructuring to one side, there are risks attached to the changes that need to be managed. There is no suggestion they will not be managed well. However, for completeness, modest comment is offered.

Introduction and background

Review purpose and approach

The Domain Name Commission Limited (DNCL) has sought an independent review to, primarily, assess how well it operationalises .nz policy and standards. DNCL intend that an independent performance review be undertaken semi-regularly.

The purpose of the review is to:

- provide stakeholders (including DNCL) with a good basis for understanding and appreciating how well DNCL is performing
- provide DNCL senior management and Board with recommendations to consider on further improving DNCL's performance
- identify issues and areas for further review and consideration by DNCL and its stakeholders as appropriate.

To achieve its purpose, the review will:

- review the literature on best practice for regulators such as recent reports by the Productivity Commission, OECD and Treasury, and assess DNCL against best practice
- identify quantitative and qualitative benchmarks for assessing DNCL performance, both over time and against similar regulators
- review how DNCL operationalises .nz policy including overseeing the Registry, and compliance of registrars and registrants against regulatory standards and rules
- assess any threats to market performance in the .nz domain market, in particular from excess market concentration, and identify any measures appropriate to managing those threats such as the Herfindahl-Hirschman concentration index[1]
- assess the effectiveness of key relationships, for example with the InternetNZ Group, and the interface between regulatory enforcement and standards setting in New Zealand and overseas.

Generic review topics

The review looked at, among other things, the following:

- culture/leadership
- performance management, including: transparency/governance/monitoring/reward and punishment
- role clarity
- workforce capability
- regulatory independence
- co-ordination with standards setters, in particular at InternetNZ, but also more widely (international fora, MBIE and other relevant government agencies)

[1] In addition to looking at how the DNCL has operationalised its policy, the reviewer has also been asked to consider and make recommendations with respect to standards impacting market competition between authorised .nz domain name registrars. This includes assessing the appropriateness of mergers and acquisitions and the use of tools such as the Herfindahl-Hirschaman index.

- stakeholder engagement/relationships, including with Maori
- contracting out functions versus undertaking those functions in house
- decision making processes
- information used to support decision making, for example, is DNCL appropriately forward looking and risk based?
- funding.

The above list is based on the topics reviewed by the Productivity Commission Report "Regulatory institutions and practices", June 2014, a Brookings Institute Seminar on regulatory excellence, the Treasury review principles used for their review of the main regulatory regimes on New Zealand, and the 2001 independent review of the Reserve Bank.

Review process

The following key steps were taken:

- A draft overview of the reviewer's understanding of the project requirements was prepared, including proposed steps for completing the review, and submitted to DNCL for review.
- Internal documents were reviewed as deemed appropriate by DNCL.
- Key DNCL staff and stakeholders selected by the DNCL were interviewed.
- A desk top study of regulatory excellence was undertaken, including seeking to identify performance measures used by similar organisations overseas.
- An early draft of the report was reviewed by John Burton of Izard Weston.
- The draft report was made available for DNCL to review. Prior to finalising the report, errors, failures of logic and other changes as necessary to best achieve the purpose of the review were made.

The Reviewer

David Pickens was selected as the reviewer for this project. He has over 30 years' experience learning about and working towards improving regulatory performance. He has worked across a wide range of regulatory bodies, from central control agencies (Treasury and Te Puni Kokiri), government agencies (the then Maritime Safety Authority), self-regulatory bodies (the then New Zealand Institute of Chartered Accountants and industry associations (the New Zealand Bankers Association). Relevant to this project, David has tackled significant projects in the areas of governance, competition, cost recovery, and comparative regulatory systems analysis (standards setting, enforcement and monitoring). He has developed material and taught on public policy development techniques. He has held a number of senior management positions, up to acting Chief Executive at the New Zealand Institute of Chartered Accountants. Last year he was fortunate to have access to a number of the leading public servants in New Zealand to discuss their experiences with and views on improving regulatory performance.

How to use this review: caveat emptor

The DNCL has deliberately sought an *independent regulatory* review. The input of someone from outside the entity has the advantage of introducing a fresh perspective by which to challenge existing thinking. And it is blind to political constraints and interests. However, compared to an insider, the independent reviewer begins ignorant of what is – why the entity does things the way it does and the relevant characteristics of the environment within which it operates. Also, the reviewer is not independent of their own experiences and accumulated biases. Inevitably, the combination of those biases with incomplete information and understanding will result in errors.

Further, this is a regulatory review. While there is significant overlap with an organisational review, it is different. A regulatory review will be strong on the underlying rationale for regulatory action, the different models available and matched to different systems, the tools available to achieve regulatory objectives and the management of regulatory risks. It will be less strong on other things including systems, financial, legal and HR management, for example.

20 days were budgeted for this review. This is appropriate. It does mean, however, that the process for developing the review findings and recommendations was not as robust as it needs to be for final decisions. In particular, it was not possible to provide input from the many people with an interest and expertise relevant to the findings and recommendations.

Also, there is much data on the domain name market here and overseas by which to gain an understanding of the key features and trends of that market. Regrettably, however, the more finely granulated empirical evidence needed for drawing strong conclusions on performance against other agencies and over time was not found. This is a major weakness sitting beneath the review findings and recommendations, which are instead strongly based on theory, anecdote (mainly the views of those interviewed for the review) and insights from a number of key documents.

Finally, the reviewer has chanced his arm. This has been an enjoyable assignment. In good faith the reviewer has sought to offer as much value as possible to the DNCL, but in doing so may have been more courageous in his analysis than warranted by his new found knowledge.

To conclude, this review document is an input. A robust process will ensure the review analysis, findings and recommendations are subject to additional scrutiny and debate as appropriate before final decisions are made.

Introducing the domain name market and the Domain Name Commission Ltd

The domain name market: purpose and governance

All devices attached to the internet have an Internet Protocol, or IP address. Each address is unique and identifies users and hosts, their location, and how to get to them. An example is "2001:dh8:0:1234:0:567:8:1(IPV6)". Internet Domain Names sit above IP addresses and are more visible, easier to identify with address owners and more user friendly. An example is "trademe.co.nz".

Domain names are owned by individuals and organisations (registrants) with a device or devices attached to the internet. Both registrants and users of domain names communicating across the internet, prefer the convenience and recognition available by using internet domain names.

For a domain name to be recognised it must first be registered with a registrar approved by the relevant regulator. Registrars are commonly internet or computer service companies offering registration as part of other services being provided to registrants.

Similarly, resellers may organise the registration on a registrant's behalf, either as a stand-alone service, or as part of a package of services provided to the registrant. Resellers are businesses or organisations that provide domain name registration services to the public but are not .nz Authorised Registrars. Resellers buy .nz domain names and ultimately manage domain name records for their registrants through an .nz Authorised Registrar. Resellers do not have direct access to the .nz registry. Where possible resellers should have an agreement with their .nz Authorised Registrar.

Individuals and entities have an interest in protecting their intellectual property rights, which may include challenging resellers and other registrants they believe to be infringing those rights. Domain names must comply with the rules and procedures of the Domain Name System (DNS).

The DNS began in the 1980s making it a comparatively young, albeit quickly evolving, market. An often used analogy is the DNS serves as a phone book for the internet by translating human friendly host names into IP addresses on searchable registries.

The Internet Corporation for Assigned Names and Numbers (ICANN) helps coordinate the Internet Assigned Numbers Authority (IANA) functions, which are key technical services critical to the continued operations of the Internet's underlying address book, the Domain Name System (DNS). The IANA functions include: (1) the coordination of the assignment of technical protocol parameters including the management of the address and routing parameter area (ARPA) top-level domain; (2) the administration of certain responsibilities associated with Internet DNS root zone management such as generic (gTLD) and country code (ccTLD) Top-Level Domains; (3) the allocation of Internet numbering resources; and (4) other services. [2]

The rules governing the operation of Top Level Domain (TLD) names are in the internet protocol document "Domain Name System Structure and Delegation" (RFC1591).[3]A Government Advisory Committee (GAC) of ICANN has produced "Principles and guidelines for the delegation and

[2] See https://www.icann.org/resources/pages/welcome-2012-02-25-en)
[3] https://www.ietf.org/standards/rfcs/

administration of country code top level domains" as a framework for the relationship between national governments, the Registry of the country code associated with that country and ICANN. New Zealand is represented on the GAC. The International Standards Organisation (ISO) has produced the "Codes for the representation of names of countries and their subdivisions (ISO 3166)" covering countries' TLDs.

New Zealand's Top Level Domain name is .nz. An important principle is that the ultimate say in the management of TLD .nz should sit with the local internet community, including the New Zealand Government. This was not considered a sustainable option as the market and related challenges grew rapidly, and the role did not fit easily with the Universities' other functions.

Today, InternetNZ holds the New Zealand delegation. It established two companies to administer and manage that delegation: Domain Name Commission Limited (DNCL); and NZRS (New Zealand Registry Services). However, as a consequence of the 2017 InternetNZ Group (InternetNZ, DNCL and NZRS) organisational review, NZRS ceased to exist as an entity and its functions were transferred to InternetNZ (effective 1 April 2018).

Within the context of the delegation to InternetNZ, InternetNZ is responsible for decision making on:

- the long term strategy for the .nz domain name space for example, opening the second level of domain names for direct registration
- the monthly registration fee
- the policy framework, principles and policy underlying the allocation and use of domain names in the .nz domain name space
- the .nz domain name space position on international issues.

InternetNZ now runs the Registry which allows registrars to register .nz names on behalf of registrants. As of 31 March 2016 there were 90 authorised .nz registrars. Since the market was established, there has been some consolidation. Market share has trended to a more even distribution across registrars, although this does not factor in common ownership of registrars.

In keeping with the TLD principles, the .nz space is operated as an open register on a first come first serve basis. Any name sought is provided unless that name is known to already exist

DNCL authorises entities to be .nz registrars, monitors the health and competitiveness of the registrar market, handles complaints about .nz and administers an independent disputes resolution scheme.

Until recently, DNCL, acting under an operating agreement with InternetNZ, consulted on and set policies for the .nz name space. However, as a consequence of the 2017 InternetNZ Group organisational review, this function has been transferred to InternetNZ, effective from 1 April 2018.

Finally, Government has a strong interest in the performance of the domain name market. General regulators with an interest might include, at any one time:

- the Commerce Commission
- the Ministry of Consumer Affairs

- the Ministry of Justice (with respect to anti-money laundering and terrorist financing activities)
- the Police
- the Serious Fraud Office
- The Companies Office
- Ministry of Business, Innovation and Employment (MBIE) with a direct interest that is covered by a Memorandum of Understanding with InternetNZ
- industry specific regulators with an interest in the .nz space for example, CERT NZ and Netsafe.

The many parties with a role in New Zealand's domain name market, as outlined above, opens up questions around (1) effective co-ordination, and (2) whether the correct functions sit with the correct party in light of their respective comparative strengths and weaknesses. (2) was a key focus of the 2017 InternetNZ organisational review and is not part of this review.

There are over one million domain names used in New Zealand. Of these, approximately two thirds (700,000) are registered under the TLD .nz Other TLD names available in New Zealand are international domain names such as .com and .kiwi. There are around 350 million domain names globally.

Registrations growth against .nz has slowed to approximately 3.85% in 2015/16, down from 15% in 2014/15. In comparison, international domain names grew at a rate of 6.8% over 2015/16, slowing to 3.5% in 2017/18[4].

The value of the domain name market is difficult to estimate. However, using an average retail price of NZ $25[5] would (as a lower bound) give:

- a stock value of $9 billion globally and a value of .nz registrants of about $18 million
- a flow per annum of approximately $0.2 billion a year globally in transactions and $500,000 within .nz (2015/16).

In many cases the retail price is virtually zero, with the cost to the reseller instead being recovered as part of the cost of other services provided to the registrant. Further, building in consumer surplus (the value to users minus the cost of buying the domain name) would give values, in many cases, considerably in excess of these figures. Insurance.com was recently sold for $US 36 million, for example.

The Domain Name Commission Limited

The DNCL is a charitable company owned by InternetNZ to manage, regulate and administer the .nz internet top level domain on behalf of the New Zealand internet community and users.

DNCL was established in 2002 as an Office of the Domain Name Commission part of InternetNZ. In 2006 it became a wholly administered subsidiary company.

[4] The Verisign Domain Name Industry Brief Q3 2018.
[5] More recent analysis by the DNCL suggests an average retail price closer to $40.

It has a board consisting the Chief Executive of InternetNZ and two non-executive directors appointed by the InternetNZ Council. Prior to this it had a number of independent directors up to a maximum of six. It has a total staff of five including the Head of the Commission the Domain Name Commissioner. DNCL has revenue and expenses of approximately $2 million per annum, and net assets of close to $1 million.

Among other things, DNCL:

- authorises and monitors registrars
- handles complaints that arise in the operation of the .nz market
- protects the rights and relationships of all the participants in the .nz market (registrars, registrants and Registry).

DNCL has a philosophy of protecting the rights of registrant and being pro-competitive. It is required to operate under the following top level domain principles:

- Domain name markets should be competitive.
- Choice for registrants should be maintained and expanded.
- Domain registrations should be first come, first served.
- Parties to domain registrations should be on a level playing field.
- Registrant data should be public.
- Registry/registrar operations within a TLD should be split.

DNCL has policies covering the following[6]:

- policy development
- principles and responsibilities
- operations and procedures
- dispute resolution service.
-

Except as provided for by judicial review, decisions made by DNCL are binding on registrants and registrars.

The DNCL operates a Disputes Resolution Service (DRS). The DRS is an inexpensive and expert/specialised alternative to the court system. Anyone with an interest or potential interest in a domain name is able to file a complaint. It is free to do so. Fees are charged from the point that the complaint is referred to an expert for determination. n the 2015/16 financial year, 31 qualifying complaints were received by DNCL. Disputes revolve principally around contested names (where more than one equivalent domain name exists). Most contested names can be resolved without recourse to the DRS.

There is a Memorandum of Understanding between the Ministry of Business, Innovation and Employment (MBIE) and InternetNZ. The MoU sets out the principles that govern the relationship between the parties in relation to the .nz TLD. The MoU provides that the .nz policies developed are for the benefit of the local internet community. By implication, they should also be *administered* to

[6] Policies on the development of .nz policy are now the responsibility of InternetNZ, effective 1 April 2018.

the benefit of the local internet community. A process is provided for resolving concerns over the management of .nz. In principle, the process is available to any "significantly interested parties."

As the government agency responsible for government telecommunications policy, MBIE is focussed on ensuring *"… an efficient, reliable and responsive infrastructure, productive and competitive businesses, and a world class business environment."* MBIE and InternetNZ commit to promoting the long term interests of all end-users of telecommunication services. Clause 23 provides that "InternetNZ's primary role in relation to the MoU is to manage .nz in the public interest as set out in the objects of the society."

The delegation and redelegation of a cctld is subject to a number of technical and public interest considerations. There is a documented process for this which is managed by PTI (see https://www.iana.org/help/cctld-delegation)

Introducing the theory[7]

Purpose

This section introduces the main theory around which the review's findings and recommendations are based. There are a number of reasons to do so.

It is clear from the interviews conducted that there are many views on how best to think about the issues in the .nz space. This is not surprising and is common to most activities of consequence. Even a key concept such as "best practice" can produce discussions at cross purposes if the term has not been properly defined. While it is too much to expect that all will agree with all that follows, it is hoped an understanding of the author's key assumptions, technical terms and approaches will benefit readers' understanding of the analysis that follows.

Also, the reviewer has modest experience with theory and its application to different real life situations. He has very little experience of the Domain Name market, the .nz space and the DNCL. It is hoped others in the reverse position might find at least some utility in the theory and apply it to good effect, in particular to issues this review is blind to.

Finally, where the DNCL should look for inspiration in its pursuit of best practice is key to this review. In particular it is tempting for people to think of the self-regulator as the poor cousin of the government regulator. This perspective might lead one to conclude what is done to promote better performance by government regulators would similarly benefit self-regulators. A more granular and deeper consideration of the theory, however, may suggest otherwise, especially in the specific case of the DNCL. This topic is covered separately below.

Best practice, the public interest, economic efficiency and comparative institutional analysis

The extent to which a regulatory *practice* can be described as *best* practice can only be judged in terms of the resulting impacts (costs and benefits impacting peoples' lives). This is equal to the extent to which that practice best promotes the public interest[8] (ALL benefits minus ALL costs to the community) compared to competing options. Put another way, for an entity, best practice is the combination of inputs and outputs that together achieve the best outcomes possible.

Public interest is known as a touchstone objective[9]. Where principles and arguments conflict, those conflicts are resolved by direct reference to the expected impact on the touchstone objective.

A useful way to break down public interest is in terms of *economic efficiency*. There are three interrelated parts to economic efficiency:

[7] A good introduction to much of what follows is Todorova, Tamara (2016) : Transaction Costs, Market Failure and Economic Development, Journal of Advanced Research in Law and Economics, ISSN 2068-696X, ASERS Publishing, s.l., Vol. 7, Iss. 3(17), Summer

[8] Maximising the public interest is consistent with Treasury's regulatory impact assessment regime, Treasury's periodic review of the government's main regulatory regimes and the MoU between MBIE and InternetNZ, for example.

[9] For company shareholders the touchstone objective is commonly profits over time (discounted revenue minus costs, or producer surplus); for consumers it is their consumer surplus; and for a social service provider, the net benefit to the target group (for example, the homeless, over time).

- **Productive efficiency:** is about producing goods and services at least cost. Reducing costs frees up limited resources to achieve other benefits elsewhere. For example, lower regulatory fees and charges frees up resources for payees to spend elsewhere.

- **Allocative efficiency:** is about allocating resources to where they will achieve the greatest benefit (net of costs). If enforcement can be better achieved through more education and less inspections, for example, then reallocating resources in this way would produce a gain in allocative efficiency.

- **Dynamic efficiency:** is about innovation. It is about finding new methods and technologies to better achieve low cost supply, and modifying inputs and outputs to supply goods and services of greatest value. Innovation can mean original research, learning from others and learning from the entities own successes and failures.

Economic efficiency does not relate only to the *economy*. Also, economic efficiency is about much more than reducing costs. For example, taxing rich people to fund programmes benefitting poor people promotes allocative efficiency, although this may come at the expense of productive and dynamic efficiency.

Best practice is situation specific. What might be best practice in one market may not be best practice in another (and likely will not). It is a function of, for example: the size and nature of the market; how motivated, concentrated and resourced customers are; the legal system; the performance of other institutions; and the level of trust that exists between parties. Similarly, best practice is not fixed. Instead it changes over time as circumstances and knowledge change.

In this sense, getting best practice about right is an art, not a science. It is about carefully blending a number of key principles appropriate to the circumstances and characteristics of each market, activity and stakeholder group. It is not about following a formulaic tick box prescription. Best practice is aspirational more than it is achievable; a journey more than a destination. At its heart is constant learning, about what works and what does not, and a culture that allows and appropriately values mistakes.

Best practice is not the practice supported by the most people, the practice most commonly used, or the practice which deploys the toughest standards; although in each case it can be.

But best practice is not just about the performance of a single entity. It is also about how entities fit together and work as a system. This requires looking at which stakeholders are best placed to do what, and that they do so in a way that fits well with what other stakeholders are doing, that is, they work with, rather than against, the efforts of others for common cause.

Who then is best to do what? A simple yet powerful framework for answering this question is *comparative institutional analysis*. The form used here is that each function should be undertaken by that stakeholder group or entity that has the best combined:

- **incentive** to promote the public interest (achieve best practice)
- **capability** to perform the task (in particular a function of information, but also mandate, credibility and the range of tools they have available to achieve the task)

- **capacity** (amount of time and other resources) to apply to the task.[10]

To illustrate, one might ask if the current President of the United States is, by this framework, the best person to be leading his country. For example:

- Does he want to make America great again or is he focussed more on self-interest, for example satisfying his ego and retaining power (incentive)?
- Does he have the experience needed to make the best decisions, and where he does not, does he seek out the views of people who do (capability)?
- Is he hard working and focused on the right things, or is he easily distracted by those things that don't really matter (capacity)?

It logically follows from the definition of best practice that the way stakeholders work together should be decided by judgements on how best to promote the public interest. At a slightly more helpful level, it requires, understanding the relative strengths and weaknesses of other stakeholders and their interests, and having in place open, effective and ongoing communication. In some cases, it is useful to formalise these processes, for example, through a Memorandum of Understanding. The open and honest contest of views between stakeholders is important and valuable. But where views are too disparate, the relationship and effectiveness of the system will break down.

While necessary for thinking about best practice, a systems based focus does have its problems. It is complicated. Best practice is about fixing problems – removing barriers to better promoting the public interest. But identifying and understanding underlying systems problems can be notoriously difficult.

To illustrate, one view has it that the Global Financial Crisis has, at its core, the unbridled greed and failure of free markets. The answer, they say, is more and tougher rules and stronger government institutions. Others, however, point instead to government failure as the culprit. Not only did regulators, resourced and empowered to prevent such cataclysmic outcomes occurring, prove they could not do so, but that government regulators contributed directly to those outcomes.

And if system problems are difficult to pin point and assess (magnitude and nature), then economically efficient solutions will be even more difficult to distil.

As always, however, the simple but appropriate response when faced with a complicated task is – to do the best we can. And it is in this spirit that we move on to a comparative discussion of the main institutional arrangements available for driving best practice in the .nz space.

Market performance: the basic market architecture explained

Market performance should not be thought of in binary terms – good versus bad. Rather, markets exist on a performance continuum. The performance is, firstly, determined by the relative *architecture* making up each market. This architecture is discussed briefly below.

[10] These characteristics are not fixed, they change over time and comparatively between stakeholders.

Where markets do it well

The demand side: In good markets (there are no perfect markets, not even in the minds of serious free market advocates) consumers are motivated to choose carefully between providers. Differences between good and bad purchasing decisions matter to them. They are knowledgeable about product quality. Ideally, they can assess quality prior to purchasing. It is easy for them to switch from one provider to another.

The supply side: In good markets, providers are motivated to work hard to best meet the needs and wants of customers and potential customers. Producers have good information on what consumers want, and on what their competitors are providing. They have systems and resources in place to constantly root out opportunities to add value. Different needs and wants across customer groups are recognised and accommodated. If producers do their job well, they are rewarded with riches, poorly, and they are looking for work elsewhere. Their interests are in most situations mutually and significantly aligned with those of their consumers (put another way, opportunities for opportunism are minimal). New providers can easily enter and exit the market.

In these markets, something like best practice, the achievement of the public interest against what is possible, is achieved. Prices allocate resources to where they are valued the most. At a systems level this happens automatically. This is Adam Smith's *invisible hand* at work.

Where markets do it not so well

There are types of goods and services that competing producers, left to their own devices, struggle to provide in a way that best contributes to the public interest. Basic economics texts offer up a number of barriers or *failures*[11] that prevent the achievement of best practice.

The position taken here is that at the heart of poor performing markets are transaction costs. Transaction costs are the "friction" that work against the efficiency of market transactions. For example, it is transaction costs that can prevent consumers from effectively monitoring the performance of producers, creating opportunities for them to act against the interests of their consumers. While pervasive, transaction costs are relatively more damaging in some contexts than others, as will be discussed below.

It is critical to understand the different types of failures as different tools need to be properly matched to each failure if that failure is to be properly addressed. The failures most relevant to the chapters that follow are described briefly below.

Information asymmetries: this refers in particular to the problem consumers might have in distinguishing good from bad providers, and good from bad products.

For consumers, transaction costs include the time, emotion and financial cost needed to make sure a provider and their products are the best available (at a given price point) for that consumer. Examples include:

- shopping around (some highly evolved consumers have converted this cost to a *benefit*)

[11] Failures are defined here as where an alternative course of action is available that will result in superior outcomes – a net gain in public welfare. It is suggested this is a more useful definition than that offered in a typical stage one economics text which will define failure against what would have occurred in a perfect market – against something that does not exist in the real world. The term "*market* failure" is deliberately avoided as it is misleading. The failures described are wide spread in market, self-regulatory, government and informal arrangements, for example.

- accessing third party product research
- taking the time to comment back to producers on the quality of their products or challenging them in court
- paying for an expert third party to vet the transaction – lawyers typically do this for significant and complicated transactions.

For the chapters that follow, it is important to appreciate information problems also exist on the producer side. Transaction costs include the cost of finding out what consumers want and what is currently being offered by competitors. It includes the cost of keeping up with new technology and practices, the cost of providing non-standard products and anticipating where markets are heading and how best to position supply in response.

In summary then, information asymmetries provide the opportunity for a wedge to be driven between the interests of consumers and producers, at the expense of the public interest. As transaction costs become more significant, so too do the opportunities for some providers to take advantage of gaps through misleading and deceptive practices. And at its worst, it is not just the interests of consumers that suffer, but also those providers who have sought to put consumers first – the bad apples drive out or convert the good in a race to the bottom. In extreme cases this can cause the market to completely fail. Contagion in the banking industry, where the failure of one careless bank causes customers to withdraw their savings from all banks, causing them to also fail, is a strong example.

Externalities: On both the supply and the demand sides there can be significant impacts (positive or negative values) on people separate from the producers and consumers, impacts not included in the price of the good or service. These impacts are known as externalities.

For third parties affected by negative externalities, transaction costs get in the way of *internalising* those externalities. In particular, the cost and risk of proving damage and causation in court are, in many markets, prohibitive, in particular against the risk that court action will fail. Note: Uncertainty, which is a product of imperfect information and our ability to process that information, compound the impact of transaction costs.

Network supply: Networks present a number of challenges to the stylised model of competing producers. In particular, the potential of networks to expand will be severely constrained in the absence of standards across the network. For example, if there were not uniform width between the rails it might not be possible for the same train to travel from one country to the next. Similarly, economies with respect to producing trains might also be lost. Further, absent uniform safety standards (air travel is a good example here) poor performance by some airlines might impede demand across the whole network.

Again, transaction costs, in this case getting agreement between suppliers on the standards to apply and where standardisation is and will be important, might retard the public welfare supporting growth of networks.

Monopoly supply: This occurs in markets where production is subject to a declining marginal cost curve. This simply means where it is cheaper (more productively efficient) for there to be only one producer in the market. These producers are called natural monopolies.

Types of monopolies and their management are discussed more fully in later sections.

Public goods: These are goods that are non-rival (one person's consumption of the good does not take anything away from anyone else) and non-excludable (it is not possible to exclude anyone from consuming the good, and therefore it is not possible to charge anyone directly for the benefit they derive in consuming it). This results in a free rider problem whereby people prefer to benefit without contributing to the cost of the service, meaning the good is under provided or not provided at all.

The number of true public goods is relatively small and exist where transaction costs prevent, for example, their being tied to normal goods, or where other methods to make it possible to charge beneficiaries are impracticable. National defence is one of the best examples of a public good. To be clear, the services provided by the DNCL are not public goods.

So markets are subject to transaction costs and failure, and the ramifications can be profound. All is not lost, however.

The market fights back: Co-opetition

Co-opetition recognises that there are circumstances where best practice will come from providers competing aggressively with each other, and different circumstances where it will be better if instead those same providers co-operate – to reduce transaction costs to the benefit of producers and consumers. For the purpose of this review, self-regulation is a subset of private entities co-operating for common cause. Self-regulation includes (but is not limited to) controlling who may undertake an activity, how that activity is undertaken and removing providers where standards are not met[12]. Self-regulation is described in more detail in the next section.

The classic New Zealand example of co-opetition is the banks. With the advent of electronic banking and ATMs the four main banks combined to create data bank, a jointly owned company (subsequently sold) responsible for settling transactions between bank customers and other functions. Similarly, in the 1990s the banks co-ordinated to establish the Banking Ombudsman Scheme, a low cost and accessible alternative to the court system. At the same time the banks competed for market share though the quality and cost of banking services offered to best meet the different needs of the wide range of bank customers.

Examples of co-opetition are common. Membership bodies today are the product of a range of circumstances where it has been determined consumer, provider and public interest objectives are better served through co-operating. Generic examples include:

- developing joint infrastructure/networks. A good example here are financial reporting standards. There is currently an international process underway, driven significantly by non-government organisations, to achieve international convergence of financial reporting standards. If successful, this will significantly reduce transaction costs and increase competition between accountants around the world and make it much easier for users to compare entities' financial performances.
- promulgating better performance by member, for example:
    - providing for entry and ongoing performance standards, and *exit* where those standards are not met
    - providing or facilitating specialised training/education to promote achievement of minimum standards
    - offering a specialised disputes resolution mechanism as a better alternative to the court system

[12] This narrow definition puts to one side that a major corporate is also a self-regulator – both in terms of the standards it requires of its own staff, for example, but also of suppliers providing it with goods and services.

    - providing information to make it easier for consumers to choose providers most appropriate to their needs, and encourage ongoing improvement by all providers
    - engaging with consumers to ensure they know their rights and have reasonable expectations of performance
- levy funding for industry good[13] research and generic promotion, thereby overcoming the free rider problem
- internalising externalities, for example, Fonterra encouraging and facilitating riparian plantings by its suppliers
- a forum for identifying and debating key industry issues. Where appropriate, these issues could involve representation to government where government offers the best tools for resolving those issues.

And of course it is not just producers that co-ordinate to achieve better results. Consumers are increasingly found banding together to promote common cause, in particular in the ethical, health related and environmental spaces, or simply to increase purchasing power and leverage over producers. Consumer opposition to palm oil and advocates to facilitate informal access to health services are such groups.

Markets fail, and so does self-regulation

Markets co-operating to deliver the functions listed above are justified - where likely to lead to better performance. There are, however, risks. Just as markets can fail, so too can self-regulation. As commented earlier, transaction costs are pervasive. Many of the failures (including a few new ones) that plague markets, also arise in various guises amongst the self-regulators. For example, self-regulators:

- make bad decisions. Self-regulators lack perfect foresight, have incomplete information, limited capacity and will have varying degrees of imperfect processes for collecting and processing the information needed to make good decisions. The results can be catastrophic.
- may ignore or undervalue externalities. Certainly environmental groups may feel self-regulators in the dairy industry underweight the environmental impact of their member activities on waterways and the atmosphere.
- seek to promote the interests of their members at the expense of customers and the broader public interest. Adam Smith wrote of the need to outlaw trade associations. These, he argued with some cause, were imposing standards that had more to do with protecting incumbents from competition and raising prices than about protecting the public.
- can introduce moral hazard. To the extent efforts of self-regulators to reduce consumer risk fail, yet consumers believe those efforts have been successful, a gap opens between how safe customers think the market is, and how safe it really is. The audit expectations gap is a strong example. It has been found that users of financial information believe audits give them a great deal more assurance than the reality. The risk of this misinformation is that people let down their guard, making failure more likely (market risk increases rather than decreases as was intended).

Some of the problems listed above lend themselves to being managed in-house – by the regulator and its key stakeholders. For example, improving processes to support better decision making and

[13] Research that benefits the industry but is non-excludable and non-rival (is a local public good), that is, it is not possible to exclude members from consuming the research or individually charge industry participants, who are incentivized to free ride on funding offered by others. The Commodity Levies Act is a legislative mechanism directed to overcoming the free rider problem. Another option is taxpayer funding.

providing accurate information to consumers on market risk. However, this may not be possible if, for example, the industry's views are too divided. Also, some problems may be more intractable, requiring input from outside to manage the problem and nudge the system closer to best practice, for example, putting the interests of members above all else. This opens up a possible role for Government.

Introducing the government regulator

The Government is a special player with special powers and responsibilities. It oversees everything. If there is a major problem anywhere in New Zealand, public expectation follows, demanding the Government correct it. On the supply side, the Government will respond either; this is what is being done to manage the problem; or this is what we are going to do; or this is the process we have put in place to arrive at the best solution. Today, with very few exceptions, it is not politically acceptable for the government to respond it is not responsible for managing either the cause or the impacts of a significant issue.

Next, the Government's special powers. In particular it has the power to coerce people against their will – to tax and to spend on other's behalf, to legislate for behaviours and to punish where those laws are broken, up to and including the taking of liberty. It is these powers that allow it to regulate behaviours where the market and self-regulators are incapable or unwilling; to internalise or regulate for externalities, to fund public goods and to impose universal standards, for example.

But recognising its special powers is not to suggest the Government is well placed to do everything. It isn't. Continuing the theme, as transaction costs hamstring co-opetition, including self-regulation, so too they constrain and cause failure within government. All the old favourites are present, information problems and poor decision making, the existence of externalities (often relabelled in government as *unintended consequences),* moral hazard, objectives that run counter to the public interest and monopoly provision.

It is the last two of these that are commented on in more detail below. The reason for this is, in the reviewer's opinion, too often self-regulators and their stakeholders look to government regulators for examples of best practice, without understanding the reasons for those practices in the first place and therefore why they may be inappropriate for a self-regulator to ape.

Monopoly risks

Almost all government regulators, and a number of self-regulators[14], are statutory monopolies. Many self-regulators, however, are not. At this point it is worth pausing to consider the differences between statutory and natural monopolies.

Natural vs statutory monopolies

Natural monopolies exist because they are the lowest cost producers (most productively efficient) for a given good or service. They commonly exist in network industries – water and electricity networks are good examples. To achieve competition for water providers, it would be necessary to build parallel water supply pipes to every home. However, the cost of doing so makes this option prohibitively expensive – overall customers would end up paying far more for their water under competition than were there only one, monopoly provider.

[14] This occurs where the government decides that for someone to provide a defined good or service they must first belong to a self-regulatory body with responsibility for regulating that supply.

However, natural monopoly providers present risks that need to be managed. In particular, the natural monopoly might:

- reduce supply to push up prices, thereby causing resources to go to other goods and services less valued by consumers (a loss of allocative efficiency)
- 'gold plate' its costs, for example, paying staff or shareholders too much, overinvesting in capital, or wasting resources. This also pushes up prices (a loss of productive efficiency)
- lack the willingness to innovate to better meet consumer needs over time, for example, to produce better products or differentiating between different consumers (a loss of dynamic efficiency).

In contrast, *statutory* monopolies are creatures of statute. They are monopolies not necessarily because monopoly form is the lowest cost means of providing the regulatory service (although in some cases it might be) but because a combination of factors make a single government regulator the option most likely to promote the public interest. These factors might include:

- There is a high risk that regulatory competition would result in a harmful race to the bottom.
- Significant agency problems exist, for example, where payer and beneficiary of the regulatory regime are different parties.
- The powers granted by statute are of such significance oversight by and accountability of the Executive (Ministers and their ministries) for the performance of those standards is desirable.
- Regulatory consistency is highly valued.

Nearly every government regulator is a statutory monopoly. This presents key challenges that need to be carefully managed if those regulators are to best serve the public interest. These challenges (and solutions) include, but are not limited to:

Problem 1: There is a risk government regulators will inflate their budgets and fees knowing consumers have no option but to both consume the regulatory services and pay the resulting fees, backed by significant penalties if they fail to do so.

Solution: Treasury and other agencies oversee the budgets of regulators and provide independent advice to Ministers. Ministers and then Parliament must approve each statutory regulator's budget.

Problem 2: Many regulators have considerable scope to influence the standards they enforce. In this way they can decide what the demand for their regulatory services will be, for example, frequency and extent of building inspections. The main risk is they will overprescribe the standards, thereby increasing their power and the size of their organisations.[15]

Solution: Separating policy setting from policy enforcement; oversight by Ministers and Select Committees (in particular the Regulations Review Committee); and independent regulatory quality oversight, for example the Regulatory Impact Statement regime overseen by Treasury.

Problem 3: There is a risk that those being regulated will 'capture' the regulator and in this way promote policies that further their interests rather than the wider public interest. Where there is

[15] The equivalent commercial example would be allowing the fishing industry to dictate how many times a week people must eat fish.

more than one provider this risk is less, as consumers would leave those providers not putting their interests first.

Solution: Same as for problem 2. Also, the joining together of multiple regulators responsible for managing multiple stakeholder groups and interests.

In conclusion, by virtue of their being statutory monopolies, government regulators present significant risks requiring careful management if those regulators are to best serve the public interest. 'Best practice' solutions to those risks entail significant intervention on the part of the executive arm of government, which in themselves introduce new risks and costs to manage.[16]

Political versus public interest objectives

Government regulators are responsible and accountable to Ministers. Ministers are driven to achieve both public interest and political objectives. Political objectives are objectives that secure the government of the day popular support and increase the likelihood of re-election, a pre-requisite to putting in place the policy package they believe will better serve the interest of the country than the package offered by competing political parties. These objectives might be described approvingly as more democratic, or less favourably as populist.

Often political and public interest objectives will coincide, but not always. A good argument, then, can be made that government regulators are at greater risk, on occasion, of pursuing political rather than public interest objectives. In these cases, using the definition of 'best practice' provided earlier, the performance of the regulator will deviate from best practice and the public interest.

There are many options to manage these risks. For example, in the 1990s it was common to define the purpose of regulatory regimes in public interest terms, thereby making regulators legally responsible for pursuing public interest objectives. And increasingly, government agencies have been given greater independence from political influence – the Reserve Bank is a good example. Further, greater transparency around officials' advice, administrative guidance, standards and oversight have all been instigated to encourage a stronger public interest focus by government regulators. More specifically, Regulatory Impact Statement requirements, Treasury Guidance, Cabinet Office Requirements etc), are directed towards the setting and enforcement of standards that promote the public interest over political, industry, or regulatory self-interests.

Many of these measures are high cost. The extent to which they are successful at promoting best practice continues to be debated. Early last year the reviewer was fortunate enough to be invited to interview many of New Zealand's leading public servants with experience gained over many decades. A recurring theme was the questioning of the utility of the many requirements imposed on government agencies by the centre of government; 'control' agencies and Ministers. A common complaint was many of the requirements are high cost and ineffectual, and in some cases counter-productive.

This is typified, perhaps, by the splitting of policy from delivery which, in some cases it might be argued, have contributed to poorer systems performance because Ministry policy advisors have less knowledge (capability) of the workings of those standards than officials employed by the regulator, resulting in poorer quality standards; and because the two tiers of advice means it takes longer and is more costly to effect change (transaction costs have increased).

[16] For a full discussion of these problems, see Productivity Commission reports "State Sector Productivity", August 2018 and "Regulatory Institutions and Practices", July 2014.

Importantly, however, many self-regulators (but not all) operate absent some of the key failures endemic of government regulators, and so do not need the same plethora of interventions to achieve best practice. Most importantly, many self-regulators are not monopolies. In the event they raise their standards too high, (or set them too low), they risk losing their customers to other providers. This exists in the accounting profession, for example. Losing relevance with employers, students and users of financial information will result in losing market share, income and relevance. In this sense accounting bodies have more in common with competing market providers than most government regulators.

Also, self-regulators are not accountable to Ministers and so are not to the same extent at risk of being diverted from best practice by political objectives, although nor are they completely immune. If issues of sufficient magnitude arise, politicians can and will intervene in the affairs of the self-regulator, including deciding government needs to take over their responsibilities. This can be for political or public interest reasons. Also, self-regulators can be driven to pursue objectives other than the public interest. Key examples here are the self-interest of their members, and the interests of the regulator itself.

Concluding comments

To conclude, ALL markets in New Zealand are a mix of voluntary exchange, self-regulation and government-regulation.[17] Markets are not binary, they exist on a continuum – from being dominated by voluntary exchange between individual agents; to a heavy presence of co-operation between producers usually, but also consumers; through to being dominated by government regulators.

None of the markets are perfect. The extent to which they can be described as operating at close to best practice is a function of how well the institutional forms have been matched to the specific transaction costs and the blend of failures unique to each market.

Failures can occur at any level, and between levels, that is, in the way the institutional forms work together for common cause.

The theory and basic conclusions outlined above are now taken and applied to the domain name market, .nz space and to the DNCL.

[17] For completeness, the laws of tort (to reduce transaction costs through principle based treatment of damages) and contract (to customise supply and manage agency costs, but costly to implement); and social capital (informal conventions and values – trust is very important - that bind a community and reduce barriers to effective collective action) are also important components of any market system and should also be covered. However, as these components have only minor relevance for the analysis that follows, and to benefit patient readers already overburdened with the theory, further discussion of these components has been omitted.

Applying the theory

The domain name market is the full package

It is an understatement to describe the impact of the internet as profound. Its impact on our lives over the last 30 years has been transformational, in the way we learn, do business, interact with each other, shop and get our entertainment. Its impact is simply uncalculatable, and in the context of what is coming, it is somewhat pointless to try.

For its part, the domain name market is not an important part of the internet's infrastructure; it is a critical part. Without it the internet network would not function. Further, if the domain name market fails to deliver for consumers and the community more widely, so too will the internet.

Against the comparative system's theory outlined in the previous section, the domain name market is the full package. It has:

- different layers of willing buyers and willing sellers
- competing service providers
- co-operation at a national and international level
- self-regulators
- government regulators and oversight
- input from private standards setting bodies.

Between countries, there are many different models for the administration and regulation of the respective ccTLDs. How well these parts of the system perform both individually and work together for common cause determine how close to best practice the domain name market is operating.

Competition and choice is strong, but there are some risks

Competition, open access and choice have been important principles underpinning the development of the domain name market. Today, competition and choice appear to operate strongly at nearly all levels of the domain name market:

- Buyers compete for domain names.
- Registrars compete with other registrars (and resellers) to provide names and related services (covered more fully below).
- Regulators and the registries for each TLD compete with the regulators and registries of other TLDs to provide the infrastructure to best support their own TLD.

In addition, ICANN is working hard to provide for many more g(global)TLDs. The programme will see the number of gTLDs increase from 22 to over 1,000.[18] ICANN's current assessment is that approximately three fifths of all new registrations in gTLDs are in new gTLDs, a sign of a competitive market.[19]

There are, however, risks. As more TLDs and sub TLDs become available, the risk of abuse of market power increases. For example, if registered engineers are required to belong to a .eng or equivalent space, the managers and regulators of that space will have little pressure from registrants to manage costs or to provide the services most wanted by registrants – they will possess significant market power.

[18] New gTLD Fast Facts, ICANN, 2018.
[19] Competition, Consumer Trust, and Consumer Choice Review, Final Report, ICANN, 8 September 2018, pg. 7.

Also, there are barriers to customers leaving one TLD in favour of another. This can include the cost of ensuring that customers and others are made aware of the change[20] and might include the costs of repainting trucks, issuing new business cards and stationary, for example.

But this risk can be overstated. For the domain name market to work well it is not necessary that all customers can easily switch from one TLD provider, only that enough can. There is good reason to believe this is the case. Personal registrants (as opposed to business registrants) should find few barriers to switching, and many businesses, for reasons of protecting their intellectual property, already hold domain names across multiple providers. Further, the market is dynamic with many new registrants each year for the operators of the different TLDs to compete for (11.7 million in 2017/18[21]). Also, as pointed out by one interviewee, domain names are not as valuable as they once were, with search engines increasingly using criteria other than domain names.

Finally, international bodies, in particular the ICANN, are monopolies. They sit above what is a global, networked market. That they are monopolies is not a criticism. But it does point to where the key market power risk in the domain name market sits. Among other things, the ICANN:

- promotes the standardisation needed for the world-wide domain name network to function
- oversees the performance of the domain name market by, for example, collecting relevant data and liaising closely with key stakeholders
- promotes the attainment of minimum performance standards by the administrators and regulators of TLDs, registrars, resellers and holders of domain names (the regulators and administrators of TLDs have considerable discretion on how these are put into effect)
- promotes competition and consumer choice by, for example, providing for new TLDs and encouraging other parts of the system to value highly lower market concentration
- provides a forum for identifying, debating and dealing with issues that impact the performance of the domain name market.

All are important functions for the proper performance of the domain name market.

Importantly, the ICANN is working to increase competition by rolling out more TLDs. Currently the ICANN is reviewing how well the existing market is operating following the most recent introduction of new TLDs as, among other things, an input into decisions to introduce more. This is not a sign of an industry captured by vested interests, attempting to reduce supply to the benefit of existing providers.

Whether it is acting like a monopoly in other respects, for example, gold plating, is of course beyond the scope of this review. It is noted, however, that New Zealand stakeholders, through InternetNZ, the DNCL, and a number of government representatives, are active participants in the ccNSO (County Code Name Supporting Organisation) and ICANN and it is to be expected they would see it as one of their roles to ensure costs are reasonable and proportionate to expected benefits.

The domain name market, then, is for the most part competitive. Throughout the different levels of the domain name market, there appears little risk of providers being able to exercise market power to the detriment of consumer interests.

[20] Competition, Consumer Trust, and Consumer Choice Review, Final Report, ICANN, 8 September 2018, pg. 38.

[21] The Verisign Domain Name Industry Brief, Q3 2018.

Voice is weak and exit muted

While competition risks appear minimal and easily managed, there appears a significant weakness in the domain name market. As a group, registrants do not have the incentive, capability or capacity to engage in a way that drives better performance (best practice) from registrars or the operators of TLDs.

Writers such as Michael Porter and Albert Hirschman (exit voice and loyalty) have emphasised the importance of consumers driving producers towards best practice. *Exit*, a consumer leaving one producer in favour of another, provides the incentive for producers to continually strive to be the best they can be. Their survival depends on how well they meet consumer preferences at least cost.

In New Zealand, Michael Porter's team identified suppliers of agricultural equipment having a comparative advantage over overseas suppliers by virtue of their customers being both very knowledgeable, and highly motivated to get the best inputs for their farms possible - their productivity and lifestyles depended on it. As a consequence farmers regularly told (*voice*) producers what they wanted, and producers listened.

Exit and voice are also important for regulators, if perhaps undervalued. One good example is that of a moderate sized government registrar who sought the views of clients on the appropriate trade-off between cost, accuracy and timeliness – the three main determinants of net value for its clients. Their feedback improved how the regulator made those trade-offs, pushing its behaviour closer to best practice.

Where regulatory clients are knowledgeable, and incur the costs and receive the benefits of the regulatory services, such an arrangement works well. Where clients are not able to exit (the regulator is a monopoly) in favour of competing providers, voice is even more important.

A number of interviewees pointed out registrants are poorly placed to impact on best practice. Registrants have a poor understanding of who is responsible for different levels of service quality. For example, whether a 'failure' might best be attributed to their registrar, the Registry of the system policies or implementation of those policies, or even sit outside the system, for example, an electricity outage.

There are reasons understanding is so poor:

- There is perhaps not much to be gained for the average registrant in going to the expense of understanding how the system works and seeking to influence its performance:
    - Domain names are inexpensive and are perhaps not highly valued in part for this reason.
    - The incidences and significance of failures that might be attributed to registrars and TLD operators appear quite low, reducing the expected benefit of searching out the best registrar or TLD.
- For the most part it is difficult and costly for registrants to distinguish between performance over time and between registrars; and between and over time between TLD operators. There are few metrics available to help them determine relative performance.
- Registrants are numerous and dispersed. There is no mechanism to overcome what is a significant free rider problem.

In conclusion, the relationship between registrants and providers of domain names does not appear a healthy one. Registrants lack the incentives, capability and capacity to drive improvements. Outside high level surveys, not a great deal has been done to facilitate their input as a group into

systems design of the domain name market. That said, with respect to registrars there are platforms such as "Hosting Review" that provide rankings to encourage informed choice, and articles have been produced to help registrants think about and choose a registrar appropriate to their needs. It is unclear, however, how well used and effective these mechanisms are at driving better performance.

Externalities?

A second possible failure in the domain name market is externalities. It is possible there are negative impacts occurring outside each TLD that are not captured in the price charged to registrants for providing and administering the domain names against those TLDs. However, this is a difficult problem definition to sustain:

- There are many participants and components to the internet 'system' upon whom it might be possible to attribute any externality. It is unclear how much of the externality should be attributed to the respective components of the domain name market.
- It is unknown if it is a significant externality. Many of the negative impacts will fall upon each TLD's own registrants, and it seems likely registrants will feel very unhappy at the thought of their domain name being used to cause harm elsewhere. Businesses can be expected to feel keenly any abuse relating to their domain names.

The extent to which a significant externality is present can only be answered empirically. The review has failed to find either the question being asked, or the information needed to answer it. For this reason, a different way in to this issue is attempted here.

A simpler but less precise question is, having regard to the management of transaction costs, are there opportunities to reduce harm across the internet that sit with the operators of TLDs that are likely to lead to an improvement in the performance of the domain name market (benefits minus costs)? This question needs to be asked at two levels:

- The options that sit with the operators of TLDs *collectively*. Success of these options will depend on the collective and co-ordinated actions of TLD operators, for example. This is an issue for the ICANN and is out of scope of this review, although it is noted the ICANN has been and continues to make steps in this direction.[22]
- The options that sit with *each* TLD operator individually. The success or otherwise of these options do not depend on the actions of other TLD operators (or the ICANN). These options are in scope and are discussed in more detail later in this report.

Two remaining topics are touched on in this sub-section.

Government influence is growing

National and international government regulators are increasingly interested in the performance of the domain name market. Government regulators are encouraging and, in some cases, demanding greater efforts to reduce opportunities for illegal activity perpetrated via the internet such as the European General Data Protection Regulation (GDPR). This trend is consistent with the general move of governments around the world to increase the breadth and depth of their reach and reflects growing concern of the harm some internet users are causing. The involvement of Russian

[22] Many examples of current and proposed practices are offered in the Competition, Consumer Trust, and Consumer Choice Review, Final Report, ICANN, 8 September 2018.

operatives in the United States elections is one example and has seen social media providers moving to pre-empt what might still be a heavy response from regulators.

Many models

There are varying degrees of government oversight and direction (co-regulation). In some jurisdictions, it is government agencies that take primary responsibility for the regulation and administration of the respective TLD space. Further, some ccTLDs are closed (Australia) in that they do not allow registrants who do not have a domestic presence, or specialised (.edu for educational entities) while others are open, like .nz. It is unclear either the extent to which different jurisdictions are learning from what is being done elsewhere in the domain name market, or the extent to which those lessons might be transferrable. Nor is it clear the extent to which the different models are converging to one approach, versus diverging.

Informed by the interviews undertaken, the different approaches do not appear driven by what registrants say they want, certainly not directly, but instead by the different philosophical underpinnings of the different operators of the TLDs, influenced to varying degrees by the principles in the founding documents for the Domain Name market.[23]

At first blush, the domain name market, of which .nz is a part, appears to have the ingredients to be operating, not without problems and failures, but within a system that overall is encouraging ongoing improvement and best practice. There is little to suggest major failure or cause for concern, but opportunities for further improvement likely exist, and for putting in place strategies for managing emerging risks.

The .nz space

Systems comment

If the .nz space is to attain best practice, it is necessary that many stakeholders impacting that space are also operating at best practice. Broadly, how close the .nz space gets to best practice is a function of the performance of:

- the registrants (customers)
- registrars and resellers of domain names
- the Registry (now part of InternetNZ)
- InternetNZ itself
- New Zealand based regulators (self and government)
- international regulators (both self and government).

Not only do these groups need to be operating at best practice as individual entities, but they also need a shared understanding of how they might best work together for common cause. This is not to say they need agree on all points. Disagreement and debate is inevitable in the face of change and robust debate is a necessary driver of improved performance. But where disagreement is excessive, it will work to defeat systems best practice. Debate needs to be encouraged, open, honest and conducted in good faith – people need to be open to changing their minds, and personality politics kept on the side-line.

Regulation of the .nz space is perhaps best described as a form of light handed co-regulation. One interviewee described the .nz space as, comparatively, down the self-regulatory end of the

[23] See in particular ICANN's "Domain Name System Structure and Delegation" (RFC1591) document.

spectrum. While that assessment is accepted, besides the DNCL, many regulators have an interest in the .nz space. These regulators are not able to dictate decisions to the DNCL. However, the DNCL is increasingly entering into MoUs with other regulatory bodies, the impact of which is, among other things, a form of power sharing. The most recent, with the Department of Internal Affairs, was signed in November 2018.

In interviews with stakeholders, one issue dominated all others. Many stakeholders believe the DNCL has not done enough to prevent the internet being used for illegal and harmful purposes (refer section "Externalities?" above). The DNCL, they believe, is uniquely placed to manage certain types of internet related harm. These harms, they argue, are significant and growing. These people spoke with passion, credibility and were strongly motivated by wanting to do what is best for New Zealand. The DNCL, they say, has to date resisted their urging to take on a more active role. Some stakeholders, on the other hand, spoke in favour of the DNCL's current policies and approach. They too came across as passionate, credible and motivated by the public interest. The respective positions are discussed in more detail later in this paper.

The review does not offer a view on who is right and what might best be done. This is a specialised area requiring careful deliberation by a range of stakeholders, in New Zealand and from overseas. Instead, the review concludes the level of disagreement between key stakeholders on this issue is itself indicative of a type of systems failure and is a growing threat to best practice in the .nz space. It must be dealt with. A way forward is suggested in this paper.

Finding 1: The level of disagreement between stakeholders on the appropriate role of the DNCL in reducing internet related harm is in itself a threat to performance, confidence and reputation in the .nz space. It must be dealt with.

Competition

The .nz space is part of a much bigger market, the domain name market. For competition purposes, it is not a market in its own right. In most circumstances providers of .nz domain names are competing with the many providers of other TLDs. For this reason, the .nz TLD is referred to here as a "space".

Registrants of the .nz TLD can choose from one of 90 registrars. These are only the registrars offering the .nz TLD. Should registrants choose a different TLD, many other registrars and resellers are available for them to use. If registrants are unhappy with the performance of their registrar or reseller, the cost of swapping provider is minimal for most.

Importantly and as noted above, there are many new gTLDs available to .nz registrants and the list is growing rapidly. And for registrants wanting to retain a strong "kiwi" identity, there is now the gTLD, .kiwi. This TLD is administered as a global rather than a country TLD, and so is independent of the DNCL and InternetNZ (and the Registry).

At face value, there do not appear to be any significant competition risks to manage in the .nz space.

Finding 2: Competition risks for registrants in the .nz space are minimal and are likely to decline further as new TLDs are introduced.

Registrant voice is muted and the impact of exit is weak

As is the case in the domain name market, performance in the .nz space is only weakly driven by the actions (exit and voice) of registrants. Registrants are not engaging strongly with registrars and, while the DNCL has open and transparent processes for engagement with stakeholders, these processes are not well used by registrants.

While this is a comparative weakness of the domain name market, the extent to which it represents a true failure (that is, it cannot be corrected at reasonable cost) has yet to be determined. Some spoken to for this review felt it could not be improved upon, or at least only across a thin margin, with better performance instead needing to be administratively driven from the centre. Others, however, felt it was worth at least trying to strengthen exit and voice. Unfortunately, little was found internationally to suggest serious effort was being taken to strengthen the hand of registrants.

If registrant voice can be made effective it will provide a powerful and ongoing driver towards best practice in the .nz space.

Finding 3: Registrants struggle to be heard and exit is causatively ambiguous. If effective mechanisms can be found to elevate registrant exit and voice, registrants will become powerful drivers of best practice for registrars and the DNCL.

Recent restructuring

The administrators/regulators of the .nz space have recently been restructured. The merit of these changes is out of scope of this review. However, a number of interviewees wished to offer their opinions.

This review offers only generic views on this point. It is the reviewer's view that organisational restructuring is relevant to entity and systems performance. But not usually inordinately so. Provided culture, systems and resourcing are appropriate, a structure that does not quite fit will not be a significant barrier to achieving best practice. Or putting it another way, good culture and systems will *usually* trump poor structure, but the reverse is *rarely* true.

Of more relevance, however, it is noted here that restructuring will always be accompanied by new risks to manage.

Finding 4: Change is inevitably accompanied by new challenges and risks to manage. Recent restructuring of the administrators/regulators of the .nz space presents challenges that need to be managed.

Best practice and the DNCL

Best practice is where the DNCL is, subject to the constraints it is unable to influence, best promoting the public interest. The public interest is simply the summation of all positive impacts minus the summation of all negative impacts attributable to the DNCL's actions (and inactions). The impacts are a function of the DNCL's outputs – inspections, approvals, external reports, awareness building and claimant disputes processed, for example. The DNCL's outputs are, in turn, a function of

the DNCL's inputs, staff time, internal processes, research, engagement meetings and its legal powers and responsibilities.

Across its inputs and outputs, the most important ingredient is the quality of the DNCL's decision-making; on what outputs to produce, in what quantity and to what quality to best promote the public interest; and the best combination of inputs needed to produce those outputs. The quantity of inputs, its resourcing, is decided by InternetNZ. InternetNZ's decisions are in turn informed by the advice of the DNCL.

The chapters that follow explore the key issues relevant to the DNCL achieving best practice in regulating the .nz space, as suggested by material provided to the review. These issues are:

- overall performance of the DNCL – what stakeholders had to say
- putting the public interest first
- .nz policies and their enforcement
- registrar concentration thresholds
- empowering registrant voice and exit
- cost recovery
- the recent restructure - managing the risks.

DNCL performance: what the interviewees had to say

Over the course of 2018, 23 interviews were conducted with stakeholders of the DNCL. Interviewed were current and past staff, Board members, staff of the other two main players in the .nz space (InternetNZ and the Registry), Government and self-regulators, and registrars. Specialists from overseas and those delivering the Disputes Resolution Service were also interviewed. No registrants or their representatives were specifically interviewed, although many of those interviewed were registrants as well as belonging to one of the stakeholder groups identified above.

The DNCL invited the reviewer to select the groups to be interviewed, to which they added additional groups. Within those groups, the DNCL selected those it felt most likely to contribute to the review. At no point was it felt by the author those chosen had been selected because they were biased in favour of the DNCL.

Overwhelmingly, the response from the DNCL's stakeholders was positive, with one exception as commented on below. The majority offered no or minor criticism only. Favourably commented upon were the people, culture, systems and comparative international performance.

Typical comments included:

> *"They are big picture thinkers, taking into account market developments and issues that impact the performance of the .nz market."*
>
> *"The people and culture are very good. They have built up a high level of trust, transparency and relationship management are both good. Just their cybersecurity work is not so good."*
>
> *"They are tracking well and I have no concerns about their future performance."*
>
> *"The DNCL have a good open culture, the information they provide is excellent and the opportunities for shared learnings are valuable."*
>
> *"New Zealand is regarded as the model of how the Domain Name space should be regulated – there is a high degree of transparency and trust, consultation is real, their approach is fair and balanced (non-partisan) and they are very focussed on promoting the public interest."*

There was one significant exception to the positive feedback. All regulators and a number of other stakeholders felt the DNCL needed to more actively reduce opportunities for domain name abuse. Harm was being perpetrated that the DNCL was uniquely positioned to stop, New Zealand was now out of step with international developments, there was a growing risk to integrity and confidence in the .nz space and legal and political risks to the DNCL was growing. Nearly all, however, acknowledged the DNCL appeared more open to debating and moving towards a more proactive role, and its recent efforts were supported.

There was, however, a significant number of people who supported the status quo, arguing policing this activity was not the DNCL's responsibility and that comparatively New Zealand performed well. It was also argued greater policing efforts would be costly and generate little benefit. No one argued the DNCL should take a lessor role in reducing internet related harm, although some commented more information was needed to inform decisions in this space.

General comments suggesting the DNCL could do better included:

"They are too risk averse – legally conservative. They need to be more proactive with respect to enforcement."

While acknowledging their being innovative, the DNCL was described by one as more of "… a laggard rather than a leader when it came to best practice, being a little behind the curve."

"They can be too confident and unwilling to debate the best ways to promote the public interest, although this is improving."

"There can be confusion over whether they are supposed to be making money or promoting the public interest."

Finally, a key weakness identified in the interviews was the absence of well-developed indicators allowing comparison of the DNCL's performances with comparable entities overseas. From interviews it became clear a barrier was that arrangements varied widely between jurisdictions and over time, as illustrated by the recent restructuring, making comparative DNCL performance difficult to derive. A more feasible approach might be to begin by looking for indicators relating to TLD spaces rather than specific entities within those spaces. It was commented changes in market share and registrant renewals might provide some useful insight but would need to be supplemented by additional information.

As well as open ended questions relating to the DNCL's performance and where improvements might be found, specific questions were also asked. Key areas explored are commented on below.

Fees and charges

No one complained fees were set too high, were being levied against the wrong people or more information was needed to be made available to payees. One person asked about the dividend paid to InternetNZ, whether there was sufficient transparency around this decision and whether it was being used appropriately. Most spoken to about fees, however, were not interested in greater participation in or information on fee setting. Most felt the DNCL culture was to keep costs (and therefore fees) low.

The Disputes Resolution Service

Again, there were no complaints directed towards the DRS. The development of the DRS, the model chosen, and its high standard compared to overseas DRSs were favourably commented upon. The reviewer asked questions around access to the scheme, opportunities for improvement and transparency. No issues came back, and the description of how the DRS operated appeared robust.

Competition

The .nz space was regarded as competitive by most who commented. That said, on balance most favoured retention of the existing concentration thresholds for registrars, including for reasons unrelated to competition, such as diversifying risk. But there were also forceful arguments against the thresholds, citing the threat posed to the quality of registrar services and that there were not competition issues to deal with in the .nz space.

Further, many emphasised the importance of the DNCL being focused on the public interest rather than competitive or commercial objectives. The importance of being a custodian rather than a competitor/promoter was mentioned a number of times. However, when asked for examples where commercial and public interest objectives might conflict, little came back.

Registrars/resellers

For the most part, entry and ongoing requirements for registrars operating in the .nz space were described as appropriate. Suggestions for improvement included better training and guidance, making it easier to transfer registrants from one registrar to another, revisiting the experience requirements for registrars entering the .nz space and better enforcement of the standards on resellers.

Recent restructuring

Restructuring was explained to be outside the scope of the review. However, a number of people were keen to offer their views.

Views were mixed, although overall supportive. Some commented on the loss of talent and expertise, while others evidenced the opportunity to revisit approaches and relationships. Organisational efficiencies and greater cohesion were acknowledged by all, but some were concerned at threats to independence and a loss of robust debate. Some also felt the quality of the .nz policies would suffer.

A number of transitional restructuring issues were identified, including role clarity, new working relationships and systems, and the split between operational and substantive policies. Most felt these would be appropriately managed and warned against haste, although some felt the restructuring had resulted in new, ongoing risks. Enforcement of .nz policies was commented upon in this context.

One person explained the Registry services could be contestable ("competition for the market") if New Zealand adopted the new Transfer Authorisation Code. Registries, it was explained, tended to be contestable overseas. It was further suggested that a contestable/contracted market for the Registry services would generate good market information around the Registry's performance.

Motivation: is the DNCL firmly fixed on the public interest?

The DNCL does many of the generic functions undertaken by Government regulators. It administers, oversees and regulates participants in that part of the market for which it is responsible. However, the DNCL is different from most government regulators, and significantly so.

In undertaking these roles, it is essential that any conflict of interest risks are identified and appropriately managed. In reviewing a self-regulator, the two key conflict risks to consider are, is the self-regulator putting the public interest to one side by instead pursuing:

- its own interests (seeking more power and resources than needed, gold plating services)
- the interests of its members or those who it is regulating (regulatory capture), for example, by reducing competition.[24]

The extent to which a self-regulator is free of these risks largely determines the extent to which it should be empowered to find its own way. Where its interests and the public interest coincide, the regulator should have greater discretion to find and implement those strategies most likely to promote the public interest. There are perhaps three key reasons for this:

- it allows for fewer administrative controls thereby lowering the regulatory cost and risk of unintended consequences from those controls
- the regulator will likely have superior relevant knowledge to those wielding the administrative controls. Where the regulator's decisions sit elsewhere, there is a risk those decisions will be inferior
- it better promotes accountability of the regulator for its successes and failures. Where many parties impact decision making, many parties must also take responsibility for the results.

Where conflict of interest risks are regarded as significant, however, other parts of the system may need to explicitly build in appropriate safeguards. The government, might build in strong oversight or veto rights[25], for example.

Self-interest and regulatory capture risks to DNCL performance are discussed below.

Own interests

Self-regulators can cause harm if they place their own interests above that of the public. This might be seen in it charging excessively, seeking more powers than necessary, gold plating its services or resting on its laurels.

The DNCL is subject to significant administrative safeguards. Its budget is approved by InternetNZ (as the shareholder), and so too are the *substantive* policies the DNCL administers and enforces. In the event of significant underperformance, the DNCL functions are able to be transferred to another entity, that is, the sanctions available for non-performance are severe.

How effective these mechanisms are depends on the willingness, capability and capacity of InternetNZ to use them effectively. Or put another way, how significant is the agency problem and

[24] As discussed earlier, a government regulator has a third risk to manage – that it might pursue political rather than public interest objectives.

[25] The government's Regulations Review Committee, for example, oversees and can veto the standards developed by some self-regulatory bodies.

how well positioned is InternetNZ, as the principal, to overcome that problem? The key agency problem is information – often the agent, in this case DNCL, has information the principal does not, providing opportunities for the agent to act opportunistically.

While agency risks are present, in this case InternetNZ is well placed to manage any DNCL agency risks. InternetNZ is physically located next to the DNCL, they share resources and InternetNZ has good access to many of the stakeholders important to the DNCL, that is, InternetNZ has very strong capability to ensure the DNCL is performing as it needs to. Further, from the interviews, there appeared no willingness on the part of InternetNZ to give DNCL a free ride, in fact some spoken to came across as both very capable and demanding taskmasters. Finally, in the new governance structure this risk is mitigated by the Chair of the DNCL Board being the Chief Executive of InternetNZ.

And in terms of the DNCL behaviours, there was no evidence of the DNCL wanting to heavily regulate the market that might be found within the walls of a statutory monopoly, or to grow its size by seeking additional revenue through higher fees on the existing client base. The DNCL budget has for the most part over ten years remained unchanged, increasing to handle domain name registrations at the second level, then dropping significantly after the organisational review to 1.3 million. The DNCL gives the impression of being a very well run and lean regulator, focussed firmly on the public interest. This view was reinforced by the interviews.

Regulatory capture

There was no suggestion from those interviewed that the DNCL had been captured by those it regulates. This is a common risk to manage for many self-regulators where a membership body is incentivised to regulate its members, not for the benefit of the public, but for the benefit of its own members. This is an ever-present risk for occupational regulation, for example. However, the DNCL is not a membership body, so this risk, which often manifests itself in attempts to reduce competition, is already of less concern. Further, as noted already, registrants are poorly positioned (incentive, capability, capacity) to capture the DNCL. And registrars lack the infrastructure and incentive to seek to influence the DNCL for non-public interest purposes, which in any-event would be difficult to put into effect given the oversight of InternetNZ as discussed above.

So there is little likelihood the DNCL is captured. But the important question here is, should it be?

For some regulators, to be captured by those being regulated will conflict strongly with the public interest. For example, the Environmental Protection Authority (EPA) manages the externality risks that arise from “client” activity, such as mining the seabed. Were the EPA to only serve client interests (those paying its bills), this would underweight the management of environmental externalities, to the detriment of the public interest.

In contrast, the Patent Office issues exclusive licenses for intellectual property largely free of any externality consideration (the Patent Office does not set Patent policy), the regulatory benefits and the costs are largely private to the parties being regulated. In turn this allows the Office to focus almost exclusively on the interests of its clients, as these interests will coincide closely with the public interest.

The DNCL, then, is not like the EPA. It is like the Patents Office, only better. It is not a statutory monopoly. A statutory monopoly has significant self-interest risks to manage (refer earlier chapter on the theory). Instead, the DNCL competes with other regulators of TLDs to best deliver what registrants want. To the extent that it does this well, it is rewarded with a growing market share,

revenue (and opportunity to reduce average costs) and prestige. The reverse is true if it performs poorly. The DNCL is much like a producer in a competitive market. A competitive producer works hard to be "captured" by its customers – it is in its interests to be. And it is in the public interest.

In this sense, the potential failure here is not that the DNCL might be captured by registrants, but that it might not be. To be successful, the DNCL needs an intimate and ongoing knowledge of the different characteristics of registrant groups, and their preferences – it needs to be captured by what they want, and to aid the .nz space in delivering efficiently against those wants. To this end, it is not just empowering registrants to drive ongoing improvement to its own performance that is important, but also the performance of the other providers in the .nz space, that is, the registrars and resellers, and InternetNZ (including the Registry).

Several stakeholders were asked to comment on whether the regulation of the .nz space was subject to any conflicts between the interests of registrants, and the public interest. No conflicts were identified. However, many felt the DNCL needed to be focussed on public interest rather than commercial objectives. Its role as a custodian was often commented upon. But when asked how commercial and public interest objectives might conflict, examples were not provided. One interviewee, in commenting on the importance of a public interest focus rather than commercial, subsequently offered a number of public interest measures that were also at the heart of achieving commercial success (repeat custom and market share).

Interestingly, and counter to common stereotype, a number of regulators commented that Trade Me, as a commercial entity, had a stronger focus on market integrity and public interest than the DNCL. This was in the context of discussing the single issue of managing domain name abuse.

The impression given is that there is a strong ideological position that commercial and public interest objectives in the .nz space diverge, a position that has not often been challenged. It needs to be. To the extent these conflicts exist, their effective management demands a more granulated assessment of the types and significance of these risks.

Finding 5: The risk the DNCL might pursue interests counter to the public interest appear comparatively minor, with narrow self-interest perhaps being the most significant. Existing safeguards appear more than adequate for managing this risk.

Finding 6: The DNCL operates absent a number of significant risks posed to the performance of Government regulators; in particular it is not a statutory monopoly, and it is not subject to the same political objective risks. This suggests a reduced need for the types of safeguards used to promote Government regulator performance. Self-regulation is an appropriate system for delivering the DNCL services.

Recommendation 1: The DNCL should view itself more as a competitor against other TLD administrators and regulators. A useful objective would be to better meet the needs and preferences of registrants than other TLDs.

Recommendation 2: To the extent commercial and public interest objectives are believed to conflict with respect to management of the .nz space, these conflicts need to be identified and assessed with a view to their effective management.

Helping the market work better: making exit easier and voice louder

Addressing the key market weakness

The key weakness in the domain name market and the .nz space is that, compared to highly performing markets, client (registrant) voice is weak and exit lacks precision and influence. In these circumstances there is more likely to be a role for a regulator to set and enforce minimum standards. This is the traditional role of a market regulator. However, the traditional approach offers many failings of its own, including:

- Regulatory standards are minimum standards only. If effective, regulators can reduce the likelihood of producer performance falling below those standards (avoiding *worst* practice). But this does nothing to encourage producers moving to best practice.
- Too often standards (even principle based standards) are a one-size-fits-all approach. If done well, the standards will be appropriate for consumers occupying the middle of the *consumer preference* bell curve. However, it will not suit consumers occupying either ends of the bell curve.
- Regulators have imperfect information. In particular, they will have poor information on the willingness of consumers to trade quality off against price, and the different circumstances and needs of different groups of consumers.
- Consumers tend to treat a heavy handed regulatory approach as a signal that they need not be so vigilant in their choice and monitoring of producers. In extreme examples this can reduce market integrity and increase risk (moral hazard). In any event, moral hazard risk impedes the positive operation of voice and exit.

Because of the problems inherent in the traditional regulatory approach, information disclosure requirements are increasingly being deployed by regulators to do the heavy lifting in driving better market performance, for example, for retailers in the electricity industry.

However, information disclosure will not work everywhere. To be useful to consumers, the information disseminated needs to perform well against a number of characteristics, including:

- timely – performance can change quickly
- reliable and accurate – what is being purported to be measured is in fact what is being measured
- relevant and complete – all the main things that matter to customers need to be measured
- comparable – allow for comparisons over time, and between producers

- understandable – registrants need to be able to readily understand the information if they are to use it
- easy to access – consumers need to know where to find the information and be able to access it easily
- low cost – to collect, process and provide.

Success is not guaranteed. And considerable care must be taken to ensure the information is fit for purpose. Poor quality information is not neutral. It will make the market perform worse. Not only will it add to compliance costs, but it can promote perverse outcomes. For example, a simple ranking system based on the wrong metric will encourage poor and punish good performance.

Driving better registrar performance

A number of interviewees felt information disclosure would not work for registrants/registrars. Useful information would be too difficult to come by, and many registrants would still not use it even if it was provided. Market improvements, they felt, were best driven from the centre by the regulator and others with the depth of experience and expertise to contribute to market developments.

Others, however, felt information disclosure was worth a go. And this is the view taken here. To work properly information does not require everyone understand and use the information provided, only that enough do. And there are two other reasons for putting greater effort into collecting and disclosing relevant information, even if it proves to be of low value to registrants.

Irrespective of whether registrants use the information, registrars are likely to. For example, they can be expected to comb through the information and index their performance against industry averages over time, seeking to learn from both leaders and laggards to improve their performance. This was one of the rationales behind the "islands of excellence" work undertaken by the then Ministry of Commerce in the 1990s, subsequently taken up and developed further by a number of industry bodies.

The DNCL and InternetNZ should also find the information collected a valuable input into their decision making. Too often there is a strong disconnect between the regulator and the parties in whose interests they are regulating. One of the purposes of collecting good quality market information from registrants is to reduce that disconnect.

Even then, however, it is acknowledged that it might not be worth the effort to collect and disseminate the information. Simply, it is too early to make that call with confidence, but the potential gain if it can be done well makes it worth giving it a go. If the information collected cannot reach a high enough quality, or isn't used, the DNCL would need the courage to discontinue the approach.

Finding 7: As a tool, information disclosure will not successfully lift performance in all markets. It is unclear whether it can be made to work in the .nz space. However, success would see it as a powerful, ongoing driver of best practice. For this reason, it is worth exploring. In doing so, however, the risk that it will not be successful should be acknowledged.

Another reason for not dismissing information disclosure too early is, to an extent it is already being done. "Hosting-Review," for example, holds itself out as an independent provider of web hosting reviews. It is not uncommon in markets such as this for an intermediary to supply a type of

brokerage service to customers who would otherwise lack the infrastructure (for example, ability to co-ordinate), incentive and capacity to arrange valuable information disclosures.

However, in some cases the regulator will have significant advantages over private intermediaries. In this case the DNCL, by controlling access to the Register, has the power to compel provision of the information. Through its fees it is able to overcome the free rider problem. Its ability to oversee and co-ordinate the process allows it to manage down transaction costs and apply strong quality control. It has a strong mandate for improving performance in the .nz space, and is accountable for doing so. As the market regulator, it also has the credibility to attach to the information so disseminated.

The DNCL, then, has the capacity, capability and incentive to put in place a process to overcome the barriers to an effective information disclosure regime. The purpose of that process would be to determine what information should be collected, how often, how best to disseminate it, how to ensure it is of a high quality including necessary standardisation, and to monitor its use for the purpose of changing what information is collected over time.

Finding 8: The DNCL is ideally placed to explore, develop, implement and monitor an effective information disclosure regime on registrars to the benefit of registrants.

The first step would be to have a free and frank discussion with the providers of web hosting reviews to get a good understanding of what they do, its value and how if at all a regulator might improve the breadth, quality and use of information provided.

The next step might be to put in place an electronic 'exit questionnaire' for all registrants who leave a registrar. The questionnaire would ask why they decided to leave, and what they were looking for in a new registrar. This would provide a useful guide on the criteria that registrants find most important, for example:

- price
- value/convenience of other services offered by registrar
- reliability, including security of systems
- availability and value of help service
- reputation of alternative TLD
- size (number of registrants)
- years in operation
- solvency
- country of domicile
- complaints resolution
- other.

The questionnaire would also need to place registrants into groups, as it is unlikely they will all have the same needs and preferences. For example, someone operating a business and financial transactions through their domain name will likely have different needs to someone using it mainly for social media and gaming.

To work, it is also important there be buy-in from registrars. To this end they should be involved early in the process in a way that neither over taxes their capacity nor undervalues their expertise.

There may also be merit in convening a representative group of registrants to engage in more depth on specific issues. In some cases, payment for their time might be warranted.

Ideally, what the process would work towards are *league* tables which accurately match the characteristics registrants value in a registrar, against each registrar, and measured by appropriate metrics. If it can be done, these tables would greatly reduce the costs registrants would otherwise need to incur to judge relative registrar performance and aid matching their preferences to those registrars best able to deliver against those preferences.

Finally, an important difficulty that would need to be worked through is separating what the registrars can reasonably be held responsible for, and what other parties, in particular the DNCL, Registry and InternetNZ are responsible for. Registrars should not, for example, be accountable for outages that stem from the Registry.

Recommendation 3: The DNCL commence a process to explore the utility of a comprehensive information disclosure regime to drive better performance across registrars in the .nz space.

Driving better DNCL performance

Of course, it is not only the comparative performance of registrars that should be put under the spot light. In fact, it would be egregious to limit information disclosures to their performance alone. The DNCL should also be looking for appropriate metrics against which registrars and registrants can assess its performance, both over time and, ideally, compared to equivalent bodies overseas. One of the key comments picked up in the interviews of leading public servants conducted by the Productivity Commission in 2017 was that good regulators both want to do the right thing – make a positive difference to the public interest, and they want to be held accountable for their performance.

Performance over time is the easier dimension to capture. It would perhaps start with considering what a high performing DNCL would look like against a poorly performing DNCL. Characteristics identified in interviews included:

- empowering, encouraging innovation
- impartial
- a strong public interest focus
- robust decision making
- strong protector of IP rights
- non-punitive
- innovative.

In terms of outcome measures, market share is an obvious indicator, and repeat registration rates over time.

There should be a survey of registrars on what they see as the most important things for the DNCL to get right. It would likely involve round table discussions with a representative selection of registrars, exploring for example, constraints to the DNCL delivering on those things, and key trade-offs, in particular cost and quality. Formal discussions with other stakeholders such as regulators and network providers would also be undertaken. Also, an automatic electronic questionnaire would be generated when a registrant leaves a registrar. Where that registrant also leaves the .nz space, additional questions would also be asked.

The above should provide a useful information set against which the feasibility of building up a complete picture of DNCL performance over time could be considered.

Recommendation 4. The DNCL should commence a process to identify, collect and publicly disseminate information on its performance over time.

Performance comparisons with other TLDs is more difficult. Many different models are applied overseas making standardisation difficult. Some are: specialised, others general; some open, others closed; some have joined functions under the one entity while others have split functions across a number of entities; and some are government controlled while others are industry/stakeholder controlled.

The most comparable to the .nz space would be other country TLD operators. However, while useful, this would be perhaps less useful for registrants. Country TLDs are not close substitutes, that is, in most circumstances they do not compete against each other.

To allow comparability, amalgamation would probably be necessary, that is, the DNCL, Registry and InternetNZ, as joint custodians of the .nz space should be considered as one. What is important is how the .nz space is administered, regulated and managed, more so than each constituent part.

At its most basic level, and consistent with making registrant exit more important, changes in market share and repeat registration should be central measures. Cost, reliability and security would also feature highly. Input measures should not be overlooked, and might be welcomed by TLD "laggards" where performance is a consequence of insufficient resources or a lack of independence, for example.

Lifting performance of TLDs, in particular of the laggards, is a central focus of ICANN. And to make progress on comparisons between TLDs would require buy-in from international bodies such as the ccNSO, the Asia Pacific Top Level Domain Association and ICANN. They would need to develop, operate and monitor disclosures. Like the DNCL for the .nz space, international domain name bodies are best placed to put a robust disclosure based system in place. While discussions with international representatives confirmed this work had not been done, those spoken to did not say that it could not be. The author has seen first-hand international regulatory bodies such as the International Organisation of Security Commissions (IOSCO) and the Financial Action Task-Force (FATF) use public disclosures to lift the performance of its members (national regulators), although their approaches have been somewhat crude in comparison to what the ICANN should aspire to.

Repeating the warnings of the previous sections, it is possible to put in place a disclosure based system that makes things worse. In particular, excessive prescription and not taking into account national differences would be a key risk. Also, going down this path does not predetermine the outcome. If an effective scheme is not feasible, a half-baked scheme should not be adopted in its stead.

Recommendation 5: The DNCL seek international co-operation through the APTLD, ICANN, the ccNSO, for example, to promote a robust information disclosure regime that provides information on the relative performance of TLDs, thereby lifting overall performance in the domain name market.

Promotion

As a side bar, comment has been sought on the appropriateness of the DNCL undertaking promotional activities with respect to the .nz space. Modest comment is offered below.

Promotion is an important function. It helps inform consumer choice, thereby strengthening both exit and voice. In this way it drives better performance. Also, promotion is legally enforceable, that is, it is an offence under the Fair Trading Act to issue false or misleading statements – producers need to deliver against what they say.

It is important that promotion of the .nz space be done and done well. It is perhaps less important who does it. It could be done by the DNCL or by InternetNZ. Ideally, it should be being done by registrars promoting it as the appropriate TLD of choice for New Zealand registrants!

As the key regulator in the .nz space, promotion activities originating from the DNCL would perhaps have additional credibility. However, this is a double edged sword. If the DNCL were to make a mistake, for example run afoul of the Fair Trading Act, it could do damage to the credibility of the .nz space.

Further, there is perhaps not so much difference between the DNCL and InternetNZ. InternetNZ operates the Register, sets policies and oversees the performance of the DNCL. Market perceptions of the differences between the two entities may not be as great as insiders might understand it to be.

It could be argued the DNCL, by virtue of its role, would have the advantage of knowing the .nz space better than InternetNZ but provided communication between the two entities was good this could be easily managed.

It is noted the then New Zealand Institute of Chartered Accountants undertook all the regulatory functions of the DNCL and more, while also undertaking aggressive promotion of the CA brand and while managing more challenging conflicts of interest.

What is key here is that whoever is responsible for promotion have in place a culture and systems that actively identify and manages any risks arising from the one entity undertaking both regulatory and promotional roles. By way of example, the Institute actively invited reporters to disciplinary tribunal hearings to report on justice being done. Some entities instead have a culture of hiding what they might see as the failure of their systems (the history of the Catholic Church and sex offences might be an extreme example). Such a culture would be incompatible with the same entity undertaking both functions.

Another example might be Trade Me. Trade Me is a commercial entity that regulates its many users, offers dispute resolution services and works in closely with Government regulators to promote the integrity and security of its systems. It also promotes its brand widely and aggressively. At face value the roles do not appear to be causing problems.

Finally, from discussions with the DNCL staff, nothing gave concern that the correct culture was not in place to allow the DNCL to undertake both its regulatory functions and promotional activity.

Finding 9: The review is strongly supportive of promotional activities relating to the .nz space being undertaken. It is, however, agnostic with respect to who is best placed to do it but can find no significant reason why it should not continue to be the DNCL.

Market concentration policy: Is this a solution looking for a problem?

Context

Openness, competition and choice have been important design principles for the domain name market since its inception. This is appropriate. Open and competitive markets have proven a powerful recipe for driving ongoing improvements to market performance, and an important mechanism for protecting consumer interests.

How these principles have been implemented in practice has largely been at the discretion of the operators of each TLD. In New Zealand application of the principles can be seen in a number of areas, for example, the openness of the Registry, the low cost dispute resolution system and low entry barriers for registrars. These are all appropriate mechanisms and are supported by this review. The most explicit mechanism, however, is the DNCL's market concentration policy for registrars.

DNCL's market concentration policy and implementation

Briefly, the DNCL does not allow mergers or acquisitions of registrars where, post-merger:

- the three largest registrars in the market have a combined market share of less than 70%, and the merger registrar's combined market share is less than 40%
- the three largest registrars in the market have a combined market share of 70% or more, and the registrar's combined market share is less than 20%.

Some interviewees were unsure on the way the DNCL was implementing the concentration policy. A number complained that the DNCL was applying the concentration threshold without regard to the ownership that sits behind the registrars. Market concentration, they argued, would be far higher across registrars if this was considered.

This is correct. In fact, the point is somewhat larger. The Commerce Commission goes beyond ownership to look at associated parties (for example, family members and business partners) and even shared interests in pursuing anti-competitive practices when assessing possible abuses of market power. And papers were reviewed which suggested the DNCL was focussing on market share of individual registrars rather than market share by ownership.

However, no evidence was sighted which showed this was how the concentration threshold was being applied. When questioned on this point, the DNCL commented ownership would be taken into account. To date, however, the policy has not been applied, although it is said by the DNCL to be well known to registrars[26] and, as a bright line test, the thresholds may never need to be applied to a specific case.

In favour of the concentration threshold

The rationale for the market concentration policy comes from standard competition theory. This has it that imperfect competition, in particular monopoly providers of goods or services, or equivalently, collusion between groups of providers, can cause significant harm.[27]

Formally, by a monopoly provider or multiple providers colluding to push up prices, profits will increase, but this comes at the expense of consumer welfare through less of their incomes being

[26] One registrar spoken to was unaware of the policy.

[27] "Harm" is compared to the counterfactual of producers behaving as if they were operating in a competitive market.

available to spend on other things, AND their being unable to afford the same amount of the monopoly good or service. Critically, the result is not simply a transfer of wealth from consumers to producers. The gain to producers is **exceeded** by the loss to consumers. This net loss is known as a "deadweight loss" and is a loss in allocative efficiency. Further, an absence of competition reduces incentives on providers to innovate and improve the goods and services provided (dynamic efficiency), or to keep their costs down (productive efficiency).

Imperfect competition is one of several market failures that can justify the Government intervening. Typical responses to monopoly behaviour might include investigating and prosecuting collusion, controlling acquisitions and mergers, breaking up the monopoly into producers, price controls (typically CPI – x), regulation, and ultimately, taking ownership of the monopoly provider.

The option taken by the DNCL is to control for acquisitions and mergers of registrars, and it mimics, almost, the policy of the Commerce Commission. Where it departs is the DNCL applies the thresholds as bright line tests, whereas the Commerce Commission uses the thresholds to guide its decision on whether to conduct an inquiry to inform its decision on whether to allow the merger/acquisition to proceed. This difference is critical and is discussed below.

In the course of this review, another rational for the concentration threshold was suggested. Excessive market concentration would expose .nz registrants to too much market risk from the technical failure of a single registrar. Technical failure might include a catastrophic mechanical failure or hacking of a provider's systems leaving those systems inoperable, for example.

This may be a valid concern. However, it is not a competition problem. It is a security of supply problem. This is not semantics. The options for dealing with supply issues are different to those options for dealing with competition issues. This is important if the best option is to be matched to each problem.

To illustrate, the Commerce Commission is the government agency responsible for oversight of the banking industry with respect to competition. The types of options available to the Commission for managing competition problems are listed above (excluding ownership).

In contrast, the Reserve Bank is the key agency responsible for ensuring continuity of supply in the face of a bank failure. Typical tools available to the Bank include disclosures, ratings, prudential oversight, limiting counter party exposure, legally recognising netting by novation, inspections, technical standards, directives and statutory management.

Similarly, options that might be more appropriate than a concentration threshold for managing supply risk in the .nz space might include tighter technical standards, inspections/system testing, fines and other penalties for outages and disclosed ratings for systems integrity. It is far from clear that a market concentration threshold is the best, or even an appropriate tool. For example, one interviewee felt the risk went in the opposite direction – smaller operators (registrars) are more likely to be of lower quality, they would have less robust systems and pose a higher risk of failure. A concentration threshold, therefore, risked exacerbating rather than reducing supply risk.

Against the concentration threshold

What's the problem?

There are a number of reasons to think there are few opportunities for registrars to both secure, and then abuse their market power in the .nz space.

First, for competition purposes, the relevant market is bigger than simply those registrars operating in the ".nz" market. The relevant market is not defined through the eyes of the producer, in this case the .nz TLD space the DNCL and InternetNZ are responsible for. Rather, the market is defined by customer demand.

Precisely defining the market is a specialised and difficult function. What can be said is that for most New Zealand based registrants the relevant market includes many other TLDs (.com and .kiwi quickly come to mind) and therefore will include registrars offering the .nz TLD, PLUS registrars who do not offer .nz but who do offer other TLDs popular in New Zealand. The relevant market does not include all registrars in the domain name market, however. Some registrars will be closed, and other country TLDs will not be appropriate for New Zealand registrants in most cases, for example.

Further, while some registrants might have a strong preference to secure a .nz domain name to support their New Zealand brand, many are likely to be ambivalent. And any loyalty to the .nz TLD is likely to quickly erode for many in the face of a growing perception that super normal profits are being taken at their expense. Also, with the recent launch of the .kiwi TLD, there are now additional options for registrants wanting a strong New Zealand identity. In addition, as one interviewee noted, the value of and loyalty to TLDs is diminishing as search engines are increasingly using more sophisticated and targeted search criteria (the difference between .nz and .com is not as large as it once was). This, together with new TLDs being offered over time suggest a reducing risk of registrars being able to gain and abuse their market power.

Next, some markets can sustain high levels of concentration yet not be at risk of producers abusing their market power. High performing markets can lack competition, but contestability (the *threat* of competition) may be high. Where barriers to entry and exit are low, for example, dominant incumbents may keep prices low, work hard to provide what customers most want and invest profits in innovation for fear that new producers might otherwise enter the market and take market share.

This is likely to be the case in the .nz space. Interviewees commented that barriers to entry for registrars are, for the most part, low.[28] Further, there are many capable registrars who do not offer .nz registration who easily could, for example, if they felt they could undercut and offer a better service than incumbents. Most registrars offer multiple registration options. It is a relatively small outlay and risk to expand into another TLD, and in the event of supernormal profits in the .nz space, they would be incentivised to do so.

Next, opportunities for registrars to collude, for example, price fixing, appear minimal. There are simply too many registrars and no evidence of infrastructure by which to facilitate it. Co-opetition in the .nz space is limited. In comparison, the banking industry has a high level of co-opetition. The Bankers Association co-ordinates submissions to government, operates the joint payments system, co-ordinates discussions with the Reserve Bank and funds a disputes resolution scheme, for example. As a consequence, senior executives across the banks meet regularly. There is no comparable infrastructure for .nz registrars. The review did not find any co-operation risks that needed to be managed. Outside a small working group who meet to support the DNCL, there was little evidence of co-operation between registrars.

[28] One interviewee, while acknowledging barriers were low overall, suggested some requirements were too prescriptive and excessive, for example, the experience requirements for new registrars.

Finally, no evidence was presented to the review suggesting excessive profit taking or waste by registrars. And while a number of interviewees supported the concentration threshold on the grounds it would reduce future risks, no one identified this as a current issue of concern.

Finding 10: Competition risks in the .nz space appear minimal and likely to decline further over time. The size of the market is bigger than implied by the market concentration thresholds, market contestability is likely to be high, there appears little opportunity for collusion and no evidence was found to suggest anti-competitive practices. If anything, these risks are likely to diminish over time as new TLDs enter the domain name market and search engines continue to grow in importance and capability.

The review failed to identify significant competition risks with respect to registrars offering .nz registration. However, what harm is there in keeping the concentration policy anyway?

Greater market concentration can be a good thing

When markets are working well, growing market share and increased market concentration is a good thing. The public interest is promoted where those providers best able to exceed consumer expectations expand at the expense of providers who fail to do so. This process will tend towards greater market concentration. Supermarkets and mega stores are examples of greater concentration collectively benefiting consumers. There are many other examples.

Similarly, mergers, acquisitions and co-operation can and do provide opportunities for significant gains to consumers by increasing expertise available to the amalgamated organisations, and offering economies of scale and scope benefits which can reduce costs and improve the range and value of options available to consumers.

It is acknowledged that lower market concentration can also be better for consumers. For example, where new producers are able to identify gaps in a market the incumbents have overlooked. Deregulation of the banking industry in the 1980s is a good example of this effect, which resulted in many new entrants and a reduction in market share for the big four banks.

Increasing market share, then, can be a good thing for the performance of a market, and in some circumstances, it can also be a bad thing. This is why the Commerce Commission does not apply a bright line test for market concentration, but instead uses it as a screening device to identify those markets and circumstances most worthy of investigation. The Commerce Commission judges each situation on a case-by-case basis to determine whether the merger/acquisition is likely to be in the public interest. This approach is superior to a bright line test.

The first risk of the bright line concentration policy then is that it will prevent mergers and acquisitions that, were they allowed to proceed, would be of net benefit to registrants.

Makes existing failure worse

The main problem uncovered by the review in the .nz space is that voice is weak. Registrants have little incentive, capability or capacity to drive better performance by registrars. Might lower market concentration for registrars be a valid option for reducing this failure?

The answer is, probably not. It is important to distinguish weak voice from a competition issue – they are different problems. To illustrate, for most people it is difficult to determine both the need for a mechanic and the merit and value of an applied fix. This provides opportunities for the mechanic to

over-provide, overcharge or execute a poor quality fix. This problem of weak voice and exit is not dealt with by breaking up large mechanic work-shops into a number of smaller workshop, in fact it can make the problem worse. For example, the resulting workshops would be less able to diversify their market risk across market segments, services and customers, making each workshop more vulnerable to market change. As insolvency practitioners see all too often, it is when entities are in difficulty that they are most likely to engage in bad practices; cutting corners, overcharging and inventing fictitious problems, for example. In these circumstances and where customers lack the incentive, capability and capacity to judge good from poor quality, market risk goes up, and market performance goes down.

The solution for this problem is not to be found in concentration thresholds, but in making it easier for consumers to judge quality for themselves or, failing that, for a regulator to impose and enforce standards, the topic of the previous chapter.

Two agencies regulating the same thing

Finally, an important principal of regulatory design is to have only one regulator responsible for regulating any one entity engaging in a specified activity. This is to avoid:

- entities having to meet the compliance costs of two rather than one regulator
- confusion, for example, where each regulator issues different guidance
- the regulated entity being given the opportunity to play one regulator off against the other
- both regulators seeking to rule on the same case
- gaps arising because the regulators assume the other is monitoring or dealing with an issue, when neither is.

As is clear from the analysis presented above that making the correct decision on market concentration is difficult for a regulator to do, yet can be very important for the performance of a market and the interests of consumers. The Commerce Commission is New Zealand's competition watch dog. It has responsibility for monitoring and managing any market power issues with respect to New Zealand domain name registrars. Its powers come from the Commerce Act. It is accountable to Ministers and Parliament for discharging those powers appropriately. It has considerable and specialised resources to undertake this function efficiently.

The review failed to find a strong rationale why the Commerce Commission alone should not be responsible for managing any competition risks with respect to registrars. Nor did it find comparable examples to learn from of industries deploying concentration thresholds *in competition* with the thresholds deployed by the Commerce Commission.

Finding 11: The DNCL's bright line market concentration threshold for registrars operating in the .nz space, counter to its intent, presents a danger to the efficient delivery of registrar services. It potentially blocks efficient market arrangements, makes worse existing failure in the .nz space and creates performance risks where two regulators are responsible for regulating the same entities for the same things.

Recommendation 6: It is recommended that the DNCL consider the merit of rescinding the current market concentration policies.

Recommendation 7: In the event the DNCL does not consider competition risks to be adequately managed by the Commerce Commission alone, it is further recommended market concentration information continue to be collected, together with other information that might be useful to indicate whether there might be an evolving issue with respect to the abuse of market power by registrars. The information collected should be made publicly available.

In the event evidence emerges of growing risks, the relevant information should be made available by the DNCL to the Commerce Commission for them to respond to as appropriate.

.nz policies and their enforcement

The theory

For the purpose of this section, enforcement is the strategies deployed by a regulator to promote compliance with requirements imposed on regulated parties. Of relevance are both the standards, and how those standards are enforced. While the development of .nz policies now sits with InternetNZ, the type of standards put in place impact significantly on the type of regulator needed to enforce those standards, as discussed below.

The regulatory standards

Broadly, there are four main types of regulatory standards:

Prescriptive/input standards: these standards tell parties being regulated in detail what they need to do to comply. For example, these standards might specify the equipment, processes and materials that must be used to construct a product. Little discretion is allowed either the regulator or the regulated parties. The enforcement lends itself to a "tick-box" compliance approach. There is a great deal of certainty with respect to how the standards will be applied. These standards are more suitable where the environment is:

- relatively stable
- there is little trust between the regulator and regulated parties (for example, litigation risk is high)
- the regulator lacks the capacity and capability for more nuanced enforcement
- the party being regulated lacks the ability to come up with lower cost/more effective compliance strategies than the regulator.
- compliance costs can be low compared to principle based standards.

Performance based standards: these standards specify the level of outputs or outcomes the regulated party must meet but leaves it to the regulated party how they meet those standards. These standards are common in environmental regulation, for example, in specifying maximum discharge limits for contaminants from farm run-off, vehicle emissions or industrial processes. The parties being regulated have strong incentives to find lower cost/more effective ways to comply with the standards. However, it must be practicable to measure with reasonable accuracy the factor being regulated, for example, contaminants; and the relationship between the factor being regulated and the outcome sought - in this case public health - must be strong. Performance based standards have many advantages over the other forms of standards. Unfortunately, the range of circumstances where they can practicably be applied are relatively few.

Principle based standards: these standards specify only in general terms what must be achieved, and to what level. An example is 3.3 of the "Principles and Responsibilities" .nz policies which requires that:

> *"The .nz domain name space must be fair and competitive, offering real choice for Registrants. The barriers of entry must be as low as practicable for Registrars and the regulatory environment must be operated and enforced in a fair and transparent manner."*

These standards can be very demanding for regulators and regulated parties. To apply well, the parties must be knowledgeable and have broad agreement of what the principles mean in practice, over time and across different situations. There needs to be trust between the parties, good communication, open and transparent processes, a flexible approach from the regulator and minimal litigation risk. When working well, a principles based regime can produce far superior

results to a prescriptive based regime. The standards encourage innovation from regulated parties, creating a "virtuous cycle" of encouraging better performance. Large differences in the circumstances of entities and ways of doing things, and rapid change over time are accommodated in comparison to the "one size fits all" approach of prescriptive standards. The downside, however, can be significant. A sector where the regulator has a punitive/combative culture, lacks resources and good knowledge of the sector being regulated, applies the standards in a way that makes them prescriptive standards; and where regulated parties lack the capability or incentive to innovate or to understand how best to apply principle based standards, the sector is likely to be better off using prescriptive standards.

Deemed to comply standards: These standards are an attempt to get the best out of principle based (pro innovation, matching different standards to different situations) and prescriptive (certainty, low transaction costs) standards. Under this approach, a regulated party has the choice of complying with prescriptive input standards (often contained in secondary regulation or codes of practice), and thereby being "deemed to comply" with the Act; or coming up with their own approach which they can demonstrate to the regulator produces superior compliance, or the same compliance but at less cost. Deemed to comply standards are particularly useful where the entities being regulated differ significantly, for example, in size and ability to innovate with respect to regulatory compliance. There is a tendency for smaller entities to simply want to be told what they need to do to comply, whereas larger entities are more likely to want to come up with their own, superior ways of meeting regulatory objectives. Also, in the event of catastrophic regulatory failure, for example, the "leaky buildings failure," the prescriptive standards can offer a safe haven for parties while the problems are being fixed. Deemed to comply standards can be found in the building and competition regimes, for example.

The enforcement

Best practice enforcement is achieved where there are no changes possible to the regulator's approach that would better promote the public interest (benefits minus costs). In this sense, best practice is more than just ensuring parties do not fall below fixed minimum standards, it is about promoting better performance against the standards, up to the point that the increasing marginal cost of promoting better performance equals the marginal benefit from the resulting better performance.[29] This is particularly the case when promoting compliance with principle based standards.[30]

John Braithwaite is perhaps the most celebrated writer on regulatory compliance and is widely used to guide the efforts of regulators around the world and across many sectors.[31] Central to his approach is the idea that the role of the regulator is not simply to stand as the gate keeper, preventing all from passing who don't have the correct documentation. Rather, it is to look to the different reasons people may not have the correct documents, and devising strategies appropriate to addressing those reasons. In Braithwaite's compliance triangle, he matches different strategies to

[29] This is predicated on an increasing marginal cost curve for successive units of enforcement effort (the supply curve) and a diminishing marginal benefit curve (demand). Where the two curves meet (the equilibrium point) is where public welfare will be maximised.

[30] This concept also applies to prescriptive standards. However, unlike for principle based standards, the concept applies at the standards setting phase rather than the enforcement phase.

[31] New Zealand examples include the Department of Internal Affairs, Department of Social Welfare, Department of Conservation and Inland Revenue.

different types of non-compliance to achieve better compliance results. This approach is particularly useful when considering how best to enforce principle based standards, which better allow for changing standards and different circumstances.

What makes up each compliance pyramid will be shaped by the characteristics of the market being regulated, and the nature of the regulatory regime. Typically, however, at the bottom of the pyramid are the 'softer' strategies to encourage compliance, and might include promoting awareness of the standards and the reasons for those standards, and promoting ease of compliance (reducing compliance transactions costs). This would target people happy to comply but who either do not know what is required, or lack the motivation to go through the steps needed for compliance.

For those who are careless, restoration costs for harm caused to others might be imposed, or publicising non-compliance. In some circumstances, negative publicity might prove a very valuable deterrent. Going further up the pyramid, penalties might include a punitive component to deter deliberate non-compliance. Also at the extreme end is loss of the right to practice or provide goods and services.

To achieve enforcement benefits effectively and at lowest cost requires, among other things, co-ordination and co-operation between enforcement agencies, and engagement with relevant stakeholders including the wider community. For example, the community also needs to be engaged in educating, encouraging and promoting compliance with the law, taking steps to protect themselves from becoming victims, and monitoring and reporting criminal activity as appropriate.

The practice

Overview

InternetNZ has the ultimate responsibility as designated manager within New Zealand for the .nz domain name space and maintains a shared Registry system for the management of .nz domain name registrations. InternetNZ is responsible for the stewardship/policy development framework. They are the custodian of the policy development process for the .nz domain name space.

There is a Memorandum of Understanding between InternetNZ and the Ministry of Business Innovation and Enterprise (MBIE). It sets out the principles that govern the relationship between the parties in relation to the .nz TLD. Among other things, the MoU provides that the .nz policies developed are for the benefit of the local internet community.

Through an Operating Agreement[32], InternetNZ has appointed DNCL to manage, administer and regulate the .nz domain name space on behalf of InternetNZ (Principles and responsibilities, 2.1).

Of particular importance to this review is the DNCL's enforcement of the .nz policies. The policies are in part a function of the international principles promulgated for the regulation of TLDs. The international principles allow regulators around the world considerable discretion in how they interpret and apply those principles, and as a consequence there is a wide range of models. The .nz policies are also a function of input from the internet community (including other regulators), the .nz policy framework and guidance and experience from around the world.

The .nz policies are a mix of principle based and input based standards. It is important, however, not to mistake the .nz policies set of standards as a "deemed to comply" regime. It is not. Simply, in

[32] See https://dnc.org.nz/the-commission/governance-documents for Agreement and other key governance documents.

some areas there is discretion as to how the policies are met, in other areas what is required is prescribed, but there is no overlap as required by a deemed to comply regime.

The DNCL is responsible for ensuring the .nz policies are complied with. The .nz policies cover:

- .nz policy development (now the responsibility of InternetNZ)
- principles and responsibilities
- operations and procedures
- Dispute Resolution Service

As well as promoting compliance by other, the DNCL itself must comply with the .nz policies. It must also comply with and ensure compliance by others with the provisions of MoUs, operating agreements and legal contracts it has entered into, government statutes and regulations and common law, for example. Together these instruments provide both:

- the positive obligations on the DNCL with respect to what it must do
- the limits outside which the DNCL is not able to operate, that is, beyond which it would be operating ultra vires.

DNCL compliance

To ensure the DNCL itself is complying appropriately with these standards, it deploys the following strategies:

- Where practicable; collects, processes and promulgates key information on key legal and performance risks.
- Has implemented a regular risk management process where, among other things, it monitors legal and performance risks, and strategies for managing those risks.
- As appropriate, seeks legal advice on issues as and when they arise. The DNCL has an ongoing relationship with Izard Weston for this purpose.
- Educates and liaises with staff on key risks and the management of those risks and builds these into employment contracts and performance assessments.
- Consults with parties to which it owes legal duties to ensure it is appropriately meeting its obligations.
- Publishes relevant compliance related activities via the annual report, this is a transparent resource that allows the public an insight into the approaches taken.
- Feedback from the .nz Authorised Registrar Survey.

DNCL enforcement

DNCL enforcement with respect to other parties needs to be considered at three interrelated levels[33]:

- registrars
- resellers
- registrants
    - dispute resolution scheme
    - other.

[33] Previously four with the Registry. However, since April 2018 InternetNZ has taken responsibility for the Registry.

Registrars

To become a registrar, the entity must first gain the authorisation of the DNCL (essentially committing to complying with the .nz rules). The applicant is questioned about key .nz policies and its current activities to ensure they do not run counter to .nz policy. A $3000 application fee (exclusive of GST) is paid to the DNCL.

Clause 3.7 of the principles and responsibilities policy provides that the DNCL has the power to conduct checks and audits to ensure compliance with .nz policies. Among other things, the DNCL may check:

- online for any issues raised about the applicant
- for associations with respect to parties who have been denied authorisation
- with other registrars
- with other registries they may already be accredited to.

The registrar will enter into a separate authorisation with the Registry (ensuring they are able to connect to and manage engagement with the Registry to an appropriate level of performance).

A Registrar portal is made available for the use of registrars to help them manage their business. Among other things, the portal:

- identifies problems with registrant data
- provides threat intelligence data that identifies domains that are phishing domains or are hosting malware
- gives full details of every EPP/SRS error, easily searchable and with clear charts of the history of all errors.

In their agreements with registrants, registrars are required to include a number of key clauses relating to, among other things; providing accurate personal information to the registrar (clause 3.2), services provided must only be used for lawful purposes (clause 2.5) and that any domain name used does not infringe anybody's intellectual property rights (clause 2.4).

The Registry, and increasingly the DNCL, actively engage with Registrars. Resources are made available for the registrars (for example, the registrar portal) to help improve performance and ensure they do not fall below acceptable levels of performance. Where a registrar is shown to have a problem with data integrity, the problem is raised with the registrar and corrective action is expected. De-authorisation can and has occurred, as well as the issuing of public notices.

Resellers

It is primarily the responsibility of the relevant registrar to monitor, ensure their compliance and take appropriate steps where non-compliance is found, as provided for in the contract with each reseller. But there is also a role for the DNCL and Registry where problems come to their attention. For the most part, DNCL monitoring of resellers is passive, with issues mainly coming to the DNCL's attention only where raised by a third party, in particular registrars and registrants. The DNCL is able to sanction registrars for the actions/inactions of their resellers. The experience to-date has been that where problems with a reseller have been brought to the attention of the relevant .nz registrar, the registrar has ended their relationship with that particular reseller. The DNCL is looking to give

this more attention and recognises the reseller is likely to pose higher risks than the .nz authorised registrars.

Registrants: Dispute Resolution Service

The DNCL administers a Disputes Resolution scheme. The scheme is available for resolving disputes between registrants with respect to domain name intellectual property claims, that is, who the registrant of a domain name should be. The scheme offers a lower cost and more specialised alternative to the court system.

Registrants are encouraged to check the register to see whether the name they wish to register is available. Matches with existing registered names are unable to be registered. For example, if cat.co.nz is already registered, it cannot be registered.

It is the responsibility of registrants to ensure the domain name they register does not violate the rights of others. In turn it is the responsibility of a complainant to take action where they feel their rights have been impinged, that is, it is not the responsibility of the DNCL or the Registry.

A complainant is encouraged to resolve any dispute directly with the registrant (respondent). Where unsuccessful, the DNCL facilitates mediation. Where this is unsuccessful, an expert is appointed to arrive at a decision. The complainant must pay a $2,000 (GST exclusive) fee to access this part of the process. The expert decision may be appealed to the Appeal Panel by either party, on payment of $7,200 (GST exclusive). At any stage the complainant or respondent may take the case to a New Zealand court.

Every year the DRS experts meet in Auckland to discuss cases and to offer comment to the DNCL on how the system might be improved. This is an important part of the process, promoting high quality consistent decisions, and continual improvement to the DRS. A survey was previously used to get the views of users of the DRS, but it was discontinued due to poor response rates.

How well is the .nz space doing?

The success of the DNCL's[34] enforcement strategies are evidenced by:

- There is absence of relevant court action against the DNCL.
- There has never been action taken by the internet community or government to remove responsibility for the .nz space from either the DNCL (as agent) or InternetNZ (as principal).
- The DNCL is held in very high regard internationally (confirmed by a number of interviewees).
- The .nz space is held in very high regard by registrants (evidenced by the latest Colmar Bunton review - 2017).
- There has been comparative growth in the number of .nz registrants, and high renewal rates.

[34] The DNCL cannot be credited with these outcomes alone. Other parties, including the Registry and InternetNZ, in particular, also impact on these results.

What the interviewees had to say: the good

Overall, interviewees were very supportive of the performance of the DNCL as the main regulator in the .nz space. The DNCL scored well on generic issues of openness, competence, integrity, efficiency and trust. Compliance was, overall, regarded in favourable terms.

The DNCL is very well regarded internationally. A number of interviewees with international experience outside the DNCL spoke highly of its performance, commenting that it is often offered as the example for other jurisdictions to follow. Characteristics highlighted included transparency, unbiased, consultative, open to debate, consistent, accountable to the internet community and clearly focussed on the public good.

Staff appeared motivated and were recognised as being highly capable. Only one stakeholder suggested they did not have the resources needed to best promote the public interest, although as commented below, a number of stakeholders sought a more active role for the DNCL and a wider mandate, which would require additional resources. It was pleasing the Braithwaite approach was known and supported by DNCL staff. People spoken to commented on a range of different compliance mechanisms applied in different circumstances.

The complaints resolution service was highly regarded internationally and locally. No criticisms were offered. One interviewee described it as the right option for New Zealand, developed and implemented through a robust process. In response to questioning, it was described as well calibrated, unencumbered by frivolous and vexatious complaints while dealing well with legitimate complainants. It was described as accessible, with fees appropriate to the service provided. In response to questioning, there were no suggestions offered on how the number of complaints reaching the disputes resolution service might be reduced in a way consistent with promoting the public interest.

What the interviewees had to say: the not so good

A number of minor issues were raised, for example, the appropriateness of experience standards for new registrars, making it easier to transfer registrants from one registrar to another, reseller compliance (being addressed by the DNCL) and concentration thresholds (already commented upon) were identified.

As already signalled, however, a substantive number of interviewees also called for a stronger role for the DNCL with respect to reducing opportunities for domain name abuse and community harm. This was a significant issue for many interviewees and is the subject of the next chapter.

Finding 12: Against the theory of regulatory standards and enforcement theory, the evidence available to the review and from the interviews, the DNCL is a sound and competent regulator of the .nz space. It is highly regarded internationally and operates absent many of the handicaps other TLDs contend with. With small exceptions, the .nz policies and the enforcement of those standards were viewed as appropriate.

There was one exception. A significant number of stakeholders felt much more needed to be done by the DNCL to curb domain name abuse.

Domain name abuse

The problem

As much as the internet has been transformational on our lives, it also presents opportunities for significant harm and risks to manage.

The CCT Review Team recognised *"… the infrastructure role played by domain names in enabling abusive activities that impact the security, stability, and resiliency of the DNS, undermine consumer trust, and, ultimately, impact end-users around the globe."* They identified this as a priority issue going forward.[35]

On page 88 they go on to note:

> *"The widespread availability and relative accessibility of domain names as unique global identifiers have created opportunities for innovative technologies as well as for a multitude of malicious activities. Bad actors have misused these universal identifiers for cybercrime infrastructure and directed users to websites that enable other forms of crime, such as child exploitation, intellectual property infringement, and fraud.[286] Each of these activities may constitute a form of DNS abuse."*

New offences have been created and strategies deployed for enforcing minimum standards and promoting education and individual responsibility in its use. As a critical part of the infrastructure, TLD operators are universally acknowledged as having an important role to play. How far that role extends, however, was hotly debated by interviewees. Critics identified two areas they wanted to see more action from the DNCL on:

- initiatives to improve the integrity of the information held by the Registry
- timely and lower cost intervention to shut down harmful activity.

With respect to the first, better quality information controls would ensure recourse was available against offending parties where illegal activities were detected. This would in turn deter such activity from the .nz space in the first place.

With respect to the second, the current practice of requiring a court order was, in many cases, proving ineffective. By then the harm had been done, and the perpetrators simply moved on once they were finally removed.

Some felt the .nz policies needed to be amended, while others felt most of the problem could be dealt with through better enforcement of existing standards, in particular relating to ensuring registrant personal information is correct.

On the other side, some felt the .nz space was already better regulated than most TLDs, and that further measures would have limited impact while presenting significant risks. These issues are discussed further below.

[35] Competition, Consumer Trust, and Consumer Choice Review, Final Report, ICANN, 8 September 2018, pg. 9.

The current approach

The DNCL's overall position in relation to domain name abuse is to follow the rule of law and natural justice principles and leave these matters to the court.

The .nz policies require registrants to supply accurate information to the registrars and to use domain names only for legal purposes. 9.1.5 of the .nz Principles and Responsibilities policy (version 1.3) states that the registrant, through their agreement with their registrar, has an obligation to:

> *"Ensure the Registrar's services, and the domain name, are not used for an unlawful purpose."*

The .nz Operations and Procedures policy (version 2.3) introduces a number of limits with respect to the DNCL enforcing this obligation, that is:

> *"11.6 Subject to clause 11.7, DNCL does not have jurisdiction to consider complaints relating to the following:*
>
> - *11.6.1 illegal or malicious use of a domain name, for example spam or phishing*
> - *11.6.2 objectionable or offensive website content*
> - *11.6.3 possible breaches of legislation.*
>
> *11.7 DNCL may cancel, transfer or suspend a domain name registration where maintaining the registration would put DNCL in conflict with any law, including the terms of an Order of a Court or Tribunal of competent jurisdiction."*

Expanding its enforcement activity will require expanding the DNCL's jurisdiction and will require public consultation.

There are a number of formal arrangements between DNCL and other regulatory bodies to combat improper use of the .nz space. For example, there are two MoUs between CERT NZ and the DNCL, the first on shared information and the second on access to the DNCL's "withheld information." The latter MoU was signed in April 2018. Another MoU, with the Department of Internal Affairs, was signed in November 2018.

In effect, the DNCL will remove a domain namefrom the Registry only if:

- it is found they supplied incorrect details
- a court order has been presented to the DNCL stating that a registrant is using their domain name to further an illegal activity and directs the DNCL to cancel that name.

The DNCL considers the current system works reasonably. However, this is being tested in greater depth with the wider local internet community, in particular whether the current approach appropriately balances trust, security, openness and privacy. For example, an open domain name abuse forum was held in Wellington in November 2018. The increasing willingness of the DNCL to address this issue was commented upon by stakeholders.

The DNCL has suggested a useful way to think about illegal activity is:

- registration abuse which is invalid or fake details to get a domain

- infrastructure abuse that could impact New Zealanders and infrastructure providers, such as phishing and malware
- collaborating with others around content abuse where there are legislative mandates like objectionable material and harmful digital communication etc.

The third type of activity is the most difficult to deal with.

The DNCL supports and has initiated moves to improve the quality of data held by the Registry. To this end a data quality section has been added to identify invalid contact details and compromised names. Two feeds from overseas security organisations that identify suspicious sites have been added over the last two years. However, the number of names identified by these feeds is less than 100. It may be New Zealand names do not come to the attention of these sites and a feed from CERT NZ may identify a higher number of names.

This initiative has only been passive, and no incentives or requests have been given to registrars to give them responsibility to action (to improve data quality). The results to date suggest the number of compromised domain names is low, although it is acknowledged this may understate the problem. Further research is needed to

- develop classifiers or criteria to highlight certain risks associated with particular domains
- gather what additional approaches are necessary to improve data quality.

International developments

International engagement on managing harm in the TLD space is important for two main reasons:

- local decisions are likely to be better if informed by international experience (problems and options for dealing with those problems)
- internet harm is a global problem, likewise, solutions are more effective and achieve results at less cost through international co-operation.

There are a number of initiatives internationally to reduce opportunities for harm in the TLD space. For example, the Security and Stability Advisory Committee within ICANN issued an advisory in 2015 “Registrant Protection. Best Practices for Preserving Security and Stability in the Credential Management Lifecycle.” The advisory notes that attacks continue to be a significant problem for registries, registrars, registrants and their users, around the world. Risks identified include:

- **Spear phishing:** malicious actors gaining access to the Registry or a registrar through legitimate looking email, resulting in compromise of the entire Registry/registrar.
- **Domain shadowing:** malicious actors using stolen or phished credentials to create multiple sub domains below existing legitimate domains. The sub domains are then used to promote malicious content, for example, malware, ransom ware.

The advisory noted the risks cannot be completely prevented. For this reason, the advisory recommends an incident response plan.

The advisory seeks the collection of information on the nature and magnitude of cyber-attacks. It also promotes training, education and the adoption of additional safeguards across the credential management lifecycle, such as multi-factor authentication, monitoring and filtering software and Registry locks.

Changes to the way the internet is configured, the development of new products and uses present new opportunities for malicious use of the internet, requiring ongoing vigilance and the assessment of new strategies and practices to manage emerging risks. Consequently, it is important that techniques to promote security are constantly reviewed and updated and assessed for ongoing effectiveness. To this end, a number of Registries and registrars around the world are ISO accredited to, in particular, the ISO 27000 series of standards relating to Information Security Management Systems. The ISO standards are regularly updated to ensure ongoing relevance and effectiveness.

Further, the international WHOIS data initiative, which allows people to look up accurate information on the holders of domain names, is regarded as having had some success in identifying and preventing criminal activity.

Finally, ICANN are pursuing a number of initiatives. ICANN recently established (2015) the Public Safety Working Group, sitting beneath and reporting to the Government Advisory Committee. This forum could be a useful forum to, for example, consider the merit of regulators and Registries working closer together, and greater international co-ordination/co-operation to reduce opportunities for malicious entities. As part of rolling out new gTLDs, ICANN have also looked to strengthen security and reduce opportunities for abuse. They are also seeking additional information on the nature and magnitude of the problem, and assessments of existing and proposed measures.

Information on nature and magnitude of problem in the .nz space is lacking

Evidence was presented to the reviewer of harm being caused to .nz registrants and to users of .nz registered domain names. Activity included but was not limited to:

- invoice scams
- phishing
- defamation/harassment
- money laundering
- hosting malware
- drugs (including illegal drug sales)
- fraud.

Some interviewees felt the problem of internet domain name abuse was no worse in New Zealand or within .nz than overseas, or in comparison to other TLDs. Some even felt New Zealand was better than most. Also, the DNCL, evidencing recent initiatives to improve data quality at the Registry, noted that systemic problems had not been found and that queries with respect to data quality remained low.

In contrast, a number of interviewees offered the view that the problem is continuing to get worse in the .nz space, and that too much information held on the Register is inaccurate and processes to ensure accuracy are inadequate.

No interviewee suggested there were not significant or real problems in New Zealand, or for the .nz space. Unfortunately, information on the magnitude and nature of the problem (underlying causes) is sparse. Different regulators are responsible for mitigating different aspects of harm caused by the internet. At this point, there is no joined up picture of the harms being caused over time or across different sectors/aspects of the internet. Further, internationally information does not exist to show

whether the problem is getting worse, or how the .nz space compares with other TLDs, for example, although there are calls that this information be collected.[36]

Finding 13: There are serious information deficiencies on the magnitude and nature of internet related harm in New Zealand. Only with good information (relevant, timely, complete, accurate) will it be possible to effectively target real problems with the best tools available and can the effectiveness of strategies deployed be assessed.

This is not a challenge for the DNCL alone. Rather, it is a key challenge that all regulators with a responsibility for promoting the proper use of the internet must meet. Such a joined up and evidence based approach is consistent with the *social investment approach* increasingly adopted by government regulators and agencies to improve policy effectiveness where the issues are complex, wide ranging, intergenerational and interrelated; and where multiple regulators and stakeholder groups are responsible for the outcomes being sought (including international agencies). It is also consistent with ICANN's direction. On page 12 of their report, the CCT Review Team recommends that data gathering become a priority inside ICANN, with an emphasis on data-driven analysis and programmatic success measurement.

The debate

Effectiveness

Some interviewees questioned the effectiveness of measures available to the DNCL to reduce public harm. One described the margin for improvement to public safety as "thin," with the risk of significant downside risks and costs. These included the time and cost to become registered and ongoing fees, reduced privacy, the costs to registrants from being incorrectly removed from the Register and reduced choice of registrar for registrants.

Some overseas Registries, it was noted, differentiate between technical abuse (malware, phishing) and content abuse (fake goods) and act proactively and quickly on the former while requiring court orders for the latter. To be effective against technical abuse, action by the regulator needs to be proactive and taken quickly, in particular where the harm is caused by malware or phishing, for example. It was noted that often most of the harm was done in the first few hours of a harmful site being activated. Further, there was a concern that by simply taking offending parties off the Register would merely see them transfer their activity quickly and with minimal effort elsewhere; to other platforms or within the same platform where the offender has multiple accounts and aliases, for example.

Judgements around content could be more difficult. Without specialised expertise, policing and acting on content was regarded as problematic by some. Further, the same problems with respect to reducing technical abuse apply equally with respect to reducing harmful content.

In contrast, other interviewees suggested there was considerable low hanging fruit that could easily be dealt with – where web addresses were clearly fraudulent for example. Temporarily quarantining suspect addresses was identified as an option that could reduce harm while basic checks are made. Further, some felt too much was required of entities and individuals having to complain and prove

[36] See for example Competition, Consumer Trust, and Consumer Choice Review, Final Report, ICANN, 8 September 2018.

harm. The DNCL, it was noted, is better placed to detect and prevent harm in the first place, and where it does occur, to take action to stop it from continuing.

Some interviewees felt TLDs were successfully implementing strategies to reduce harm related to their registries, for example, Estonia, and perhaps some of the Scandinavian countries.

Precisely what those measure should be, however, is not easy to pin down and more information is needed. ICANN's CCT team, for example, struggled to find evidence that the additional safeguards required on new gTLD's were paying dividends. Instead they found factors such as registration restrictions, price, and registrar-specific practices seem more likely to affect abuse rates (pg. 94).

Judge jury executioner

One interviewee suggested the DNCL did not want to be "judge, jury and executioner." This, they believed, was a barrier to their taking a more pro-active approach to dealing with cybersecurity and related harms. Similarly, other interviewees noted other regulators who sought to reduce internet related harm (for example, the police) tended to operate from the belief that a crime has been committed, collect evidence in support of that belief, and present that evidence to an independent judiciary who made the final judgement.

The judiciary is a vital part of this process, and could not be replicated by the DNCL. Some of the decisions, it was pointed out, were complicated (in particular relating to content) requiring specialist and independent experience, and it was inappropriate for the DNCL to be making these judgements. Further, the consequences of removing a registrant could be significant for that registrant and others. Another interviewee noted the opportunity for competitors to make frivolous and vexatious complaints against a legitimate registrant.

Another interviewee suggested the consequences of inaction on the part of the DNCL was too important to allow the current approach to continue. The DNCL simply needed to "harden up" as others had done around the world, even if it was uncomfortable.

Culture: Decision making principles and the public interest touchstone

A number of interviewees pointed to values or principles they believed supported a culture at DNCL not taking a more aggressive and proactive policing role. These included:

- the importance of having an open register, i.e. "anyone should be able to register anything" and access to the internet should be as open as possible
- that the registrant's interests come first, and this means keeping compliance costs as low as possible
- the DNCL's appropriate role is as custodian of the Registry and the information contained therein, not as a policeman of how that information might be used.

Principles are important. They are useful guides or heuristics that show how a regulator views the world and what the regulator believes are important with respect guiding its decisions. They aid communication and understanding with stakeholders. They help to make its decisions more predictable and aid in consistency – both attributes of a good regulator. The principles chosen and how they are applied must, however, support and reinforce the regulators' touchstone objective – promoting the public interest. To do this, they will change over time as the environment and knowledge change.

No evidence was found that the DNC's principles were not appropriate, nor appropriately applied in regulating the .nz space. What is important, however, is that regulators regularly revisit their culture

and guiding principles to ensure they remain fit for purpose against changes to the environment they are responsible for regulating, and knowledge.

On the trade-off, the CCT team comment (pg. 97):

> *"Price and registration restrictions appear to affect which registrars and registries cybercriminals will choose for DNS Security abuse, making low-priced domain names with low barriers to registration attractive attack vectors.[368] However, these same qualities may be appealing for registrants with legitimate interests and further the overarching goal of a free and open Internet. High prices and/or onerous registration restrictions would not be compatible with many business models focused on open registration and low prices."*

One interviewee, however, commented that in a recent survey of global registries carried out by CENTR, the European Registry trade association, the .nz Registry ranked second for registrar satisfaction. The registries that came first (.eu) and third (.be) are notable for their proactive work in maintaining a 'clean' namespace. Albeit with large caveats, this suggests initiatives to manage domain name abuse are not necessarily key drivers of registrant satisfaction.

In any event, there is an increasing body of literature favouring an incremental and frequent approach to reform in preference to an infrequent "big bang" approach[37]. This allows a more evidence based approach to decisions, with subsequent enforcement iterations building on learnings from earlier change and was commented on by two interviewees. Also, one interviewee commented that internationally the .nz space is very well regulated. It was critical that any reform be cautious so as not to jeopardise what is already considered to be working well.

Other issues

Other issues raised by interviewees included:

- Domestic regulators are becoming increasingly anxious at missed opportunities to reduce community harm through the quick removal of offending registrants from the Register. This anxiety is expected to increase.
- Registrants feel they are more secure and protected than the reality, and this "expectations gap" is getting wider. In turn there is an escalating risk to the .nz brand that expectations will align with the reality, resulting in a collapse in confidence.[38]
- Around the world operators of TLDs are taking a more proactive stance with respect to removing offending registrants, and New Zealand risks being left behind. Operators of TLDs overseas will increasingly place pressure on .nz to become more proactive.
- Similarly, New Zealand could come under greater pressure from overseas regulators for not doing more where the impacts were being felt in those overseas jurisdictions – the absence of reciprocal arrangements/efforts with overseas jurisdictions was noted.

[37] In some situations, the opposite holds true. For example, some might argue efforts to combat money laundering have failed (high costs, little benefit) because many sectors and countries are not covered by strong counter money laundering measures. To date enforcement efforts have simply impacted where and how money laundering occurs, not how much occurs. Success is only possible if all sectors and countries are covered (big bang reform). It is possible a similar problem exists with respect to enforcement to prevent at least some internet harm.

[38] There was some international evidence to support the contention of a growing moral hazard risk. See for example page 82 of the CCT report together with their conclusion these measures by themselves may not be effective.

To this list should be added the risk that, in the event of significant perceived failure in the .nz space, the government will step in to take over its management.

A number of interviewees, however, rejected these views. Some felt New Zealand was closer to being a leader than a laggard compared to their international peers. Others questioned whether other New Zealand regulators were themselves doing enough to protect internet users, and that perhaps the DNCL was a useful scapegoat. The importance of following good due process was also mentioned[39].

Options

A number of options were identified for managing domain name and content abuse that would impact on the compliance activities. These included:

- requiring registrars take greater care to ensure the accuracy of registrant data
- improving the integrity of the Register's data through greater screening to help identify inaccurate registrant information
- adopting "trusted notifiers" upon who's recommendations the DNCL would act to remove an address
- a police officer writing an affidavit with a statement of facts relating to suspected illegal use of the domain name
- in response to complaints, suspending registrants from the Register until their addresses can be confirmed
- establishing a co-ordinated process and specialised resource for regulators to utilise to support their enforcement efforts
- establishing a dedicated and specialist judicial body to rule quickly on activity suspected to be illegal.

It was also felt there should be more effort to educate people on how to protect themselves, for example, how to recognise a registered domain name that might be being used for illegitimate purposes. Further, it was suggested the DNCL could more actively promote DNSSEC. The Netherlands was suggested as an example to look to where greater uptake of DNSSEC was successfully encouraged.

The way forward

Key stakeholders were divided on whether there should be a stronger role for the DNCL with respect to reducing internet related harm in the .nz space. This poses a credibility and possibly an efficiency risk for the DNCL to manage going forward.

This review does not offer a view on whether the public interest is best served by the DNCL taking a more proactive approach. Indeed, it would be inappropriate to do so. Good regulatory practice requires this decision be informed by the views of the DNCL's many stakeholders and expert advice through a robust and transparent process. That said, the review has found:

1. There are strong views favouring change to the way the DNCL views and manages registrant and related party risk in the .nz space.
2. Measures are increasingly being taken internationally to reduce these risks with respect to other TLDs.

[39] See for example https://internetnz.nz/blog/takedown-domain-names-rule-law-and-due-process

3. Whether real or imagined, there are significant, possibly escalating credibility risks to the .nz space that need to be managed as a consequence of the current approach.

On November 27 2018, InternetNZ and the DNCL jointly held the Domain Name Abuse Forum in Wellington. The forum was attended by one or more representatives from 34 different stakeholder organisations with an interest in identifying and managing risks to safety and confidence in the .nz space. Work arising from the forum is ongoing and is expected to lead to better and more effective management of domain name abuse, and a better understanding of key risks and how to best manage those risks.

This is an excellent initiative. It is suggested the forum be the starting point for a more substantive review into domain name abuse in the .nz space as follows.

Recommendation 8:

That the DNCL:

- *facilitate the collection of key data across agencies so that the nature and magnitude of any issues relating to the .nz space might be better known, over time and against other TLDs where similar information is known, and so that the effectiveness of current and future enforcement efforts might be determined*
- *draw on international experience to date, in particular the effectiveness of measures so far deployed and new measures being developed*
- *Explore the importance of co-ordination and co-operation between countries and TLD operators for new measures to be effective - this could involve engagement with ICANNs Public Safety Working Group, for example*
- *work with other agencies to develop an enforcement option that might better promote the public interest compared to the current strategy, that option to include:*
    - *identifying measures to improve the integrity of the information contained on the register, allowing access to that information for law enforcement purposes, and the process for removing domain names from the Register to prevent harm*
    - *the expected effectiveness of any additional measures for both protecting the integrity of and confidence in the .nz space, and reducing internet related harm in New Zealand*
    - *the expected cost of any enforcement measures, including but not limited to; privacy, reduced access to the internet for registrants (delays, higher costs), legal and financial risks of removing registrants from the Register when they should not be, and reduced choice of registrar*[40]
    - *the process to be used by regulators when seeking the removal of a registrant from the Register*
    - *the burden of proof required before making that approach so that there is a high level of confidence that the decision is the right one*
    - *whether compensation should be available for registrants in the event they are incorrectly suspended from the Register*
    - *who should have responsibility and bear the legal risk for any additional enforcement functions, in particular taking responsibility for making the call to remove a domain*

[40] Regulatory compliance costs tend to fall disproportionately on small providers. These are often specialist providers. If compliance costs increase significantly there is a risk they will exit the .nz space.

name from the register. Who should be responsible for additional functions should be guided by considering which party would have the best incentives, capacity and capability to be effective in delivering on the enforcement objectives having regard to managing the related risks and cost

- *the pros and cons of an incremental versus comprehensive (big bang) approach to reform*
- *who should meet any additional financial enforcement costs and how, having regard to what parties are the beneficiaries and "risk exacerbators", informed by the Treasury guidelines on recovering costs in the public sector [https://treasury.govt.nz/publications/search?search_api_views_fulltext=fees+and+charges&field_issue_date=&field_issue_date_1=&sort_by=field_issue_date&sort_order=DESC&=Search]*

In the event it is found the status quo is to be preferred, the reasons for this decision should be well publicised so that registrants and others might develop a good understanding of the reasons for that decision. Public comment should be invited on those reasons. Further, the opportunity should be taken to inform participants in the .nz space how they themselves might better manage internet related risks and harms.

In the event a new approach is favoured or significant disagreement remains between stakeholders, a process of public consultation should be initiated centred on the new approach and the status quo. Ideally that process should be taken forward by a working group of key stakeholders who would hear and consider submissions and oversee the preparation of the discussion document and final decisions.

DNCL fee setting

The theory

Fees and charges are used by entities to meet the costs they incur in providing goods and services to consumers. There is no one best way to levy fees and charges. The appropriate approach is a function of a number of interrelated things, including:

- the type of entity
- the nature of the good or service
- the nature of the market
- the ability of consumers/users to engage in fee setting decisions.

All entities go through a budget process. The budget process involves assessing competing funding bids across the organisation against how well they are expected to contribute to an organisation's objectives. The summation of the successful bids will set the budget for the coming year. This is in turn will impact the entities fees and charges. Entities vary in the extent to which they seek the views of their stakeholders in setting that budget, and in approving the final budget.

Commercial entities in competitive markets are, for the most part, left to set their own fees and charges[41] as they see fit. They are responsible for making decisions on the cost/quality trade-off of the goods and services they provide, and from whom and how they recover their costs and achieve an appropriate return to shareholders. They deploy a number of different strategies to do this. At its heart, the strategies are a function of what they believe will best meet the preferences of their customers, compared to their competitors. This is critical to their securing market share and ongoing viability. If they do not do this well, they will fail. For this reason, good commercial entities will work closely with customers and potential customers to ensure their fees and charges, and the quality of the goods and services they provide, are consistent with best meeting customer interests. Working with customers might include surveys, consumer panels, closely monitored trials and market research, for example.

In short, entities in competitive markets have strong incentives to put in place robust processes to ensure they provide goods and services at the price/quality point most wanted by customers, and to charge customers for the costs they cause to be incurred, plus a return for the owners/risk takers.

Monopoly providers, whether commercial, not for profit or government, on the other hand, are often regulated to stop them from charging too much. They might otherwise earn supernormal profits and or waste resources by increasing activity beyond what is socially optimal[42] or "gold plating" their activities. There are a number of ways to regulate these activities, including direct price control (for example, gas prices until 1993), ownership (for example, government ownership of transpower, co-operative ownership of Fonterra), disclosure of costs incurred to allow comparison (for example, lines companies), and requiring consultation with customers on the setting of fees (for example, airports).

In its simplest form, the budgets of government regulators are a function of the government's total budget, and the value of the services they provide relative to the value of claims by other

[41] One exception is where customers find it too difficult to compare products from different providers because of the way those products are packaged for sale. For example, the government legislated for banks to calculate and display the cost of credit for their products in a standard way so that customers might more readily compare products.

[42] Formally, beyond the point marginal cost (the supply curve) equals marginal benefit (the demand curve).

government agencies. In most cases, where they cost recover from third parties it is easier for them to increase their budgets than where they are funded by the taxpayer. The exception is where payees are a powerful group well placed to push back on fee increases. Government regulators are not permitted to cost recover more than the costs they incur in providing regulatory services without explicit provision in statute (no taxation without representation). Where the service provided is a genuine public good (non-rival, non-excludable), it will be funded by taxpayers.

There are a number of principles on how costs should be recovered. Sitting at the top as the touchstone principle is the idea that it be done in such a way that the public interest is best promoted. For a commercial entity the touchstone objective is (usually), in a way that maximises profits. If the market is working well, this will broadly equate with the public interest touchstone. Beneath this, the following principles will be relevant:

- costs are levied on those who cause those costs to be incurred, or on whose behalf the service is provided (they can be different)
- what they are paying for is clear to payees
- the method of collecting revenue should be low cost (the choice for a regulator is usually between a levy (like a localised tax), fixed fee or recovery of the actual cost incurred)
- pricing should not be used as a tool to deny other producers access to the market.

Broadly, there are four forms of engagement with stakeholders on fees:

- **Notification:** This might be as simple as notification in the mail, for example, when electricity prices increase, or more simply, changing the price on a can of baked beans.
- **Informal consultation:** There are many mechanisms for getting the views of stakeholders such as surveys, stakeholder meetings, presentations, a culture of welcoming feedback (ongoing 'suggestion box' on the web site), and the focussed review of existing or the development of new programmes. For informal consultation, the entity need not take any notice of what stakeholders tell it.
- **Formal consultation:** Formal consultation has legal meaning and can see the fee setting entity taken to court if it does not meet any of a number of now well established consultation principles (see for example Wellington Airport versus Air New Zealand 1989). In particular, the consulting entity must:
    - provide sufficient information to those being consulted so that they might form reasoned views on the proposals
    - provide sufficient time for those consulted to form their views
    - consider the information provided in good faith, that is, submissions cannot be simply ignored - there must be a valid reason for not accepting recommendations.

  Formal consultation is a very useful mechanism where the entity is a dominant provider and the payees are highly capable and motivated to engage effectively. Consultation is a legal requirement of airports in their fee setting. Airlines as the beneficiaries and payees of airport services have an intimate knowledge of the services provided, have resources to take court action and are motivated to keep the price of airport services low.
- **Agreement:** This is where a third party must agree to the budget. Government Ministers and Parliament must sign off (agree) on the budgets of government departments, for example.

The practice

The main fee charged by and source of revenue for the Domain Name Commission is the domain name wholesale fee. Importantly, the fee is approved by InternetNZ, in consultation with the DNCL

(S. 5.3, Principles and Responsibilities of the .nz Policies). This arrangement is not too dissimilar from government agencies which advise on their fees but are unable to set them, this usually being done by Cabinet and with advice from Treasury and other control agencies as appropriate.

The wholesale fee is charged monthly and is currently $1.25 per month (GST exclusive). Registrars are free to charge what they like. A competitive registrar market is intended, among other things, to manage the risk of excessive pricing by registrars.

A brief history of the .nz domain name wholesale fee is as follows:

As of June 2004	$2.00
1 July 2004 - 30 June 2007	$1.75
1 July 2007 - 30 June 2010	$1.50
1 July 2010 - present day	$1.25

The wholesale fee covers the costs incurred by the DNCL and the Registry, and a dividend paid to InternetNZ. The DNCL and the Registry jointly recommend the fee to InternetNZ, who make the decision on its appropriateness[43]. With fee setting decided by a third party, the arrangement is more akin to that of a government regulator than a competitive entity. The intent is InternetNZ offers an independent and broad based stakeholder overview of the fee.

In addition to the wholesale fee, the Domain Name Commission has the following fees (all fees are GST exclusive):

- processing applications to become a registrar - $3,000
- ongoing registrar fees - $48/month.

And for the Disputes Resolution Service, the following apply:

- dispute resolution fee $2,000 for complainant to access expert decision-making (applies after mediation has failed)
- appeal fee $7,200.

Consultation on the two most recent fee increases were reviewed. In 2008 the fee for applying to become a registrar; and in 2011 on the fees relating to the Dispute Resolution Service; were increased. In total, six submissions were received. Of these, only two touched on the fees themselves while the bulk of submission commentary engaged on the policies being consulted on contemporaneously. One submitter complained insufficient information had been provided to allow interested parties to engage in a meaningful way on the fees.

The key questions that need to be answered with respect to the cost recovery of regulatory services are:

- Who should pay?
- How should they pay?
- What should they pay?
- What process should be used to set fees?

[43] See Clauses 5.2 and 5.3 of *Principles and Responsibilities* Policy https://dnc.org.nz/resource-library/policies/67

Who should pay?

Firstly, the regulatory services provided by the DNCL confer private benefits. There are no "public good" services. Nor is it apparent that there are significant positive or negative externalities that need to be considered in pricing. Therefore, it is appropriate that no charge be levied on taxpayers. Registrars and registrants, as both the beneficiaries and those that cause the regulatory costs to be incurred, should meet the costs of the DNCL.

With the exception of the Disputes Resolution Service, the fees are levied on the registrars. This appears appropriate. The registrar application and ongoing fees are to grant the registrars an exclusive right for which they directly benefit. With respect to the wholesale registrant fee, it is cheaper to put this cost on the registrar than to put in place a separate charging system between the DNCL and registrants, although some transparency is lost with it being bundled together with the other costs levied by registrars on registrants. The solution for this, however, would be to require the wholesale fee be separately itemised on invoices, not to put in place a separate charging system.

With respect to the Disputes Resolution Service, the complainant pays the fee. A charging system intended to deter "wrong doing" in the first place might seek to place costs on the party at fault. However, it is often not possible to charge the defendant, who can be operating from overseas, for example. Yet it is their action or inaction that is often the main driver of cost, and it would be inequitable to charge the complainant for costs beyond their control.

Finding 14: The people paying DNCL fees are the people who should be paying the DNCL's fees.

How should they pay?

The three main options are a levy, fixed fee and actual fee for costs incurred.

A levy is appropriate for "local" public goods, often called industry goods (such as generic research or promotion on behalf of a whole industry), or where direct charging is too costly. These conditions do not apply to DNCL services.

Charging actual costs is appropriate where this can be done accurately, at low cost relative to the costs being charged, and charging actual costs encourages efficient behaviour on the part of the payee and the DNCL.

All DNCL fees are fixed, that is, they don't change as a consequence of the amount of work required of the DNCL.

At most, the DNCL might like to consider whether efficiencies might be possible by making a portion of the registrar application fee variable. If, for example, the cost of processing an application can be significantly impacted by the quality of the application and therefore the actions of the applicant, a fee based on time taken could encourage the applicant to ensure their application is of a high quality rather than free riding on the DNCL's efforts. It also places added pressure on the DNCL to process applications efficiently. However, these benefits may be outweighed by the cost of the DNCL putting in place and operating a costing system.

Finding 15: The mechanisms for recovering costs appear appropriate. There may be merit in making at least a portion of the registrar application fee variable to encourage the filing of high quality applications and to better reflect actual costs incurred in processing complex applications. It might also

place additional pressure on the DNCL to be efficient in its processing of applications.

What should they pay?

The amount paid to the DNCL is directly related to what the DNCL spends, including a dividend to InternetNZ. What the DNCL spends is in turn a direct function of the activities it undertakes times the quantity provided of those activities. Finally, the nature and quantity of activity undertaken by the DNCL should be determined by the extent to which these activities are expected to contribute to the performance of the .nz space and the public interest.

No one interviewed complained that fees were too high or accused the DNCL of being wasteful, lazy or wanting to overregulate. Some even wondered whether the Commission had access to enough resources, and as commented elsewhere, many asked that the DNCL do more which implicitly means higher costs and fees. One person did, however, ask whether as much needed to be spent on international representation as, they felt, most of the significant issues had been dealt with. Notably, another felt the DNCL needed to put more effort into justifying this spend to their stakeholders.

With respect to the Disputes Resolution Service, comment was received that the fees were appropriately set. They were considered to be effective at deterring frivolous and vexatious complaints, while at the same time allowing good access to those needing to access the service.

The costs to registrars were not considered excessive and did not pose a significant barrier to registrars participating in the .nz space.

The DNCL is in a very fortunate position. Demand for its services has far outpaced its need for resources. This has allowed it to drop its wholesale registrant fee significantly. This might in part help to explain why such little concern was picked up from interviewees. But the absence of criticism that it is overzealous or imposing unnecessary compliance costs – a very common criticism of government regulators, suggest it is not the full story. In any event, the market appears to be maturing. Growth in the number of new registrants has slowed. For example, .nz registration increased at 15% in 2014/15, but only 3.85% in 2015/16. This will reduce revenue growth and with it the ability of the DNCL to deliver lower fees in the future, and hopefully increase pressure for it to manage its costs carefully.

Finding 16: There was no evidence found of excessive charging. As a regulator, the Commission is of modest size and did not give the impression of extravagance or wanting to aggressively or inappropriately expand its domain. Its culture came across as tightly focussed on performance in the .nz space. The DNCL might like to consider providing more information to justify its international engagement to stakeholders, including what it has achieved and hopes to achieve going forward against the cost of this engagement.

How should fees be set?

As commented already, the quantum of DNCL fees depend on decisions made with respect to what and how much activity the DNCL undertakes. These decisions are informed by market information, experience from overseas, intervention logic and understanding of likely impacts, for example. Key here is the extent to which stakeholders should be involved in contributing to decisions that impact the DNCL budget and its fees. The quick, truthful but ultimately unsatisfying answer is, it depends.

When contemplating new or discontinuing existing services, with few exceptions those impacted need to be consulted on the expected consequences, including financial, and including the fees they pay. The DNCL is fortunate in that for the most part those paying its fees are also the people benefiting from their services making them well placed to comment on the cost/benefit trade-off. Existing services should be under constant review, including the DNCL being open to and, as circumstances dictate, proactively seeking the input of stakeholders. Consultation should be robust, but informal. A need for legal obligations (and risks) around consultation was not found.

In contrast, there is less need to consult on decisions relating to how services are delivered. For example, the computer systems, internal processes and staff skill mix are decisions which, while impacting on costs and fees, are most efficiently made by the DNCL with input from specialised providers and with broad oversight by the Board.

What then of changes to fees? On the spectrum from "notification" to "agreement" outlined above, notification should, in most cases, be sufficient. At most there might be provision for feedback on the fees, but without expectation that the fees might change as a consequence of that feedback. This is predicated on the assumption the process for new, discontinuing existing and reviewing ongoing services are robust, including consultation with payees.

As part of this review, a discussion document on wholesale fee increases by the African ZA Domain Name Authority (14 September 2018) was reviewed. This is not an example the DNCL should follow. While beautifully written, the document was deeply flawed. It provided none of the information needed to judge the appropriateness of the proposed fee increases. In particular, the value of existing services and the consequences of holding fees to their existing level was not outlined, or the presentation of other key scenarios that might suggest consultation in good faith. Outside the depth of feeling on the fee increases, no useful information would be possible. It was a consultation exercise of some cost and risk (for example, inflating expectations), but little likely benefit. It is important consultation not be undertaken as a box ticking exercise. It must have real purpose, and the key purpose is to contribute to the quality of DNCL decisions and promote accountability for those decisions.

That said, there are reasons beyond improving decision making for transparency in fee setting. For example, it promotes a culture within the DNCL of accountability, welcoming challenge, being focussed on the needs of payers and having confidence in the quality of its decisions. Further, transparency should also promote confidence and trust in the work of the DNCL. Finally, notification of fee changes needs to be in sufficient time to allow payees time to adjust their systems and to make provision for the new fees.

Finding 17: that in most circumstances notification should be sufficient with respect to fee changes being put in place by the DNCL. This is predicated on the assumption consultation on the individual services provided by the DNCL has been robust.

Managing change

Some context

Management of the .nz space has been the subject of significant, recent structural change. Up until April 2018 there were separate Chief Executives for the DNCL, the Registry and InternetNZ. Of the three, InternetNZ was the dominant partner (by virtue of being the shareholder). This dominance has been significantly reinforced by restructuring. Today there is a Chief Executive of InternetNZ who is also responsible for the Registry. The DNCL "Commissioner" role continues with the Commissioner being the Head of DNCL. The Commissioner is responsible to the DNCL Board, of whom the InternetNZ Chief Executive is chair. The Registry is now part of InternetNZ, although the DNCL remains a separate entity. There has been a move towards greater shared services between the DNCL and InternetNZ.

Previously, the DNCL had responsibility for developing the .nz policies while InternetNZ had responsibility for policy oversight, setting strategic direction and a power of veto over the policies. Developing .nz policies has now transferred to InternetNZ. The .nz policies are "big P" policies[46]. The DNCL continues to have responsibility for "small p" policies, that is, the policies on implementing the .nz policies.

Appropriately, the review does not comment on the merit of the changes, although a number of interviewees offered their views and as appropriate these are summarised below. Rather, the purpose of this chapter is to explore risks that arise consequential of the changes, and offer comment on the management of those risks. The following, then, is offered in the spirit of wanting to make sure senior management are aware of the selection of restructuring risks raised by interviewees. Perhaps too ambitiously, a number of key principles and mainly generic options are also offered.

The journey and the destination

The universal purpose of a change process is to realise opportunities for better performance. It is almost impossible, however, for change not to be accompanied by new costs and new risks. Failure to appropriately manage those risks and costs will detract from performance.

Overall, those interviewed were supportive of the changes. In favour, reference was made to organisational efficiency, better communication, shared objectives and reduced conflict. Some, however, commented on reduced operational capability, conflicts of interest, less debate with respect to key decisions and threats to independence. On the issue of changes to senior management brought about by the changes, some were disappointed to be losing the passion and experience of previous incumbents, citing their significant contributions. Others commented positively on the new thinking being brought to the DNCL, including opportunities to revisit the way things are done, priorities and stakeholder engagement.

Most spoken to looked forward with some optimism. While there was some uncertainty and minor anxiety with respect to the journey, almost all felt the destination would be an improvement. Nothing was found over the course of the review to suggest this confidence was not well placed.

Compared to some restructures experienced by the author, this appeared to have been done well (albeit the process is not yet complete), transparency had been high and communication, including consultation with staff, good. No-one questioned the motivation for the changes.

[46] As characterised by one of the interviewees.

Inevitably, however, there was some anxiety and risks identified by interviewees, risks they felt needed to be managed well if the changes were to be successful.

Problem: Uncertainty

Firstly, restructuring brings about uncertainty – how will changes conceived in an abstract/theoretical world play out in real life? Foresight can only ever be partial. The possible permutations are many and unintended consequences ever present in the background of any significant reform. Counter to its purpose, too often change makes things worse, or at least worse in some aspect. Some uncertainty and anxiety is inevitable.

There are no complete solutions. Implementing change is a process. That process should be expedited quickly. But not so quickly that haste puts at risk the quality of implementing the changes. A number of interviewees, while acknowledging issues needed to be worked through quickly, cautioned against excessive haste.

Resources available to implement change are limited. Adequate resource priority needs to be given to bedding in those changes. Now is not, for example, the time to pursue major discretionary initiatives if to do so detracts from effective implementation. Ideally, the new systems, processes and capabilities bedded in from the restructuring need to provide the foundation to successfully launch new initiatives.

In times of uncertainty, effective communication is vital, with staff and external stakeholders. There should be a process to ensure staff have the information they need. They should also have an opportunity to contribute to implementation decisions and to raise any concerns. Openness and transparency are important principles for managing uncertainty. Information vacuums are too often filled with the wrong information.

Problem: Co-ordination risks

Boundaries between the different organisations (InternetNZ, DNCL and the Registry) and their respective responsibilities and functions have changed. In particular, the development of .nz policies were commented upon by interviewees.

Some felt no change had been necessary and important capability from the DNCL could be lost in future policy development. The quality of the policies would be worse as a consequence.

This is a common generic problem in the regulatory space. The challenge, however, is both much wider and deeper. The objective of the regulatory standards setter is to secure the information needed to make regulatory decisions that better achieve best practice than the status quo. This necessitates effective engagement with stakeholders able to contribute the information needed. Amongst stakeholders, agencies that implement the standards are not just important, they are critical.

In the specific case of the DNCL, as InternetNZ's agent, there is no excuse for this not working well. The relationship between the two organisations appears strong. They share many of the same stakeholders. Objectives, for the most part, appear well aligned, reinforced by shared founding documents (arising in particular from the ICANN). Located physically next to each other, formal channels should be complimented strongly by informal but effective arrangements and relationships.

However, to the extent a significant risk is perceived, the operational agreement between the two organisations could be amended to formalise DNCL's input into the development of .nz policies.

A related issue that arose was that of the boundary between "large P" and "small p" policies. The boundary is never clear cut – policies occupy a continuum, not a binary operational versus strategic construct. One interviewee commented the boundary between the two might usefully be revisited in the light of the restructuring. This appears sensible. Some of the operational .nz policies in particular seem to lend themselves to being controlled by DNCL rather than InternetNZ. And from the other side, in the event this review's recommendations on removing the concentration threshold for registrars is declined, this policy might usefully be placed with InternetNZ instead due to its significance and the difficulty of applying such a threshold well. In particular, a wider and deeper competition policy perspective might come up with an alternative option with less risk of adverse unintended consequences.

Another issue related to shared services between the DNCL and InternetNZ. The value of organisational efficiencies was appreciated by interviewees. However, as the junior partner, it was commented DNCL might not be given the priority it needed, and its independence could be at risk from InternetNZ's culture, a culture that fitted less well with the semi-judicial functions of the DNCL. Shared communications and independent legal advice (were the latter to occur) were held up as examples where these risks might crystallise.

Again, these are risks InternetNZ and the DNCL should be well placed to manage, for the reasons given two paragraphs above. That said, conversations on shared services appeared based on an unstated assumption the existing arrangements would continue unaltered. This is not a healthy assumption. It is easy for an organisation to become complacent with respect to its purchase of professional services, with perceived transaction costs meaning the one provider continues to be favoured. In turn this can breed complacency in the provider, at the expense of value for money. If providers are treated as monopolies, eventually they will behave as such.

Rather, InternetNZ and DNCL need to keep existing providers under constant review, and ideally go to market periodically to see if their services might in part or in whole be better provided by alternative suppliers, or even supplied in house. It is unhealthy to rule out the possibility that InternetNZ and the DNCL might at some future point have different professional providers.

Problem: Harmful interference in DNCL investigations and enforcement

Another problem raised was that of it being unclear who ultimately is responsible for the conduct of, in particular, DNCL investigations and enforcement; the Commissioner, the DNCL Board or the Chief Executive of InternetNZ (InternetNZ is responsible for the .nz policies and DNCL funding). Previously it was clear; the Commissioner.

Uncertainty over respective responsibilities presents a number of performance risks and needs to be resolved.

The performance risks include some or all three parties seeking to be involved in what can be challenging decisions. Yet the DNC is best placed to make these decisions, having the best combination of incentive, capability and capacity to perform these functions. For the board to be involved is to commit the age old sin of confusing governance with management.[47] Similar is the case with the Chief Executive of InternetNZ (also chair of the DNCL Board), with the added risk that their wider area of responsibility might see the Chief Executive introducing some political risk,

[47] Governance is about providing the right direction and leadership. The governing entity oversees the functioning of the management but has no role in management.

although this is unlikely to be on a level of magnitude that matches Ministerial oversight of crown entities, for example.

Further, with the involvement of multiple parties, accountability becomes dispersed, confusing and less effective. If all three parties are involved in decisions, who is ultimately accountable when things go wrong, and to whom are they accountable? Clear answers are needed.

Also, with decisions being the result of a type of negotiation between parties, regulatory consistency and predictability can be compromised. In turn this impacts regulatory effectiveness, increases costs on regulated parties and reduces DNCL credibility.

None of this is to suggest the Commissioner should not be held responsible for how well the DNCL's functions are undertaken. It is important good performance is able to be rewarded and poor performance sanctioned. Currently, the Commissioner is appointed by and accountable to the DNCL Board. However, with respect to each investigation and each prosecution, for example, the Commissioner should be free from external interference.

Finally, the "Commissioner" title tends to imply both statutory backing and a high level of independence and objectivity. It is a failure to give this impression but not to deliver it in reality. As commented earlier, the review does not find in favour of greater government involvement. To also not have strong safeguards to protect the Commissioner's independence is to risk the question being asked as to whether "Commissioner" accurately represents the reality of the role.

Again, one option is to explicitly provide for protections in the operating agreement between the DNCL and InternetNZ. A useful example to consider is that of the protections afforded the Director of Maritime New Zealand by the Maritime Transport Act 1994. Section 439(4), among other things, provides that:

> *"in respect of any particular case, the Director shall act independently and shall not be responsible to the Minister or the Authority for the performance or exercise of such functions or powers."*

Another model to consider is that of the Banking Ombudsman Scheme which provides for limited statutory backing, and an independent chair presiding over banking and consumer representatives.

Policy making and implementation: the Maori dimension

Introduction

Due to an oversight on the part of the reviewer, this chapter was prepared after the rest of the review had been drafted. The oversight was exposed by a submitter in their submission on an earlier draft of the review which had been exposed for public comment.

While the DNCL has clearly sought to incorporate Maori perspectives into its work, this submitter expressed the view that there is much to do to achieve best practice. Because the review oversight was brought to light at the end of the review, it has not been possible to explore with other stakeholders how well the DNCL has incorporated Maori perspectives into its work. The position of this chapter, then, is to offer advice on what best practice looks like, and how it might be achieved. For context, the chapter begins with a brief overview of the government's recent performance, efforts to improve that performance, and the results. The observations and views expressed are personal to the reviewer.

Context: a legacy of Maori policy failure and recent attempts to turn it around

On page 15, policy best practice is described as "The extent to which a regulatory practice can be described as best practice can only be judged in terms of the resulting impacts (costs and benefits impacting peoples' lives). This is equal to the extent to which that practice best promotes the public interest8 (ALL benefits minus ALL costs to the community) compared to competing options. Put another way, for an entity, best practice is the combination of inputs and outputs that together achieve the best outcomes possible." As will be argued below, Maori policy making easily fits within this paradigm.

In few areas has policy making *failed* so consistently and egregiously as it has failed Maori. New Zealand policy makers (whether government or private) have a poor record of adequately weighting Maori interests, or taking into account Maori ways of achieving objectives[48]. This failure has had dreadful consequences for Maori specifically and for New Zealand more generally. One speculating on possible reasons for this failure might comment on:

- The natural tendency of bureaucracies towards a one size fits all approach, with Maori approaches rarely being accommodated
- The lack of understanding and awareness by advisors and decision makers of Maori issues and perspectives
- A political system that is biased towards the perspectives of the majority (Western world views) over the minority (in this case Maori world views)
- Paternalism by advisors and decision makers, that is, that they believe they know better than Maori what is in their best interests, for example, based on stereotypes on what Maori are good at (Maori schools used to encourage Maori into technical vocations, for example)
- Decision makers who have negatively stereotyped Maori potential, for example, that Maori education and health outcomes are largely inviable
- A view that Maori interests/welfare matter less than the welfare of others.

The beginning of a positive step change occurred with the Passing of the Treaty of Waitangi Act 1975 and the establishment of the Waitangi Tribunal. The Tribunal's role is to consider alleged breaches

[48]This is not confined to Maori alone. Chinese, for example, were treated appallingly by early governments, and Pacifica peoples more recently have also fared poorly in government decision making.

against the Treaty by the Crown, and make recommendations for redress where a breach is confirmed. Originally the Tribunal was only able to consider events post 1975, but subsequent amendment to the Act extended the review period to the signing of the Treaty in 1840. These changes introduced a substantive political and legal risk on the Crown for Maori policy failure.

The good

In response to real consequences for Treaty breaches, the Crown built capability, established and strengthened processes (in particular engagement) with Maori, legislated for Treaty compliance (Treaty clauses) and gave Te Puni Kokiri 'control agency' responsibility for monitoring and reporting on state sector performance with respect to Maori. The courts developed specialized capability and case law for managing Treaty grievances. Further, the Tribunal produced authoritative and accessible work on Maori issues, and in this way contributed to raising the level of awareness of and quality of debate on Maori interests and issues.

Explicit recognition of the Crown's Treaty obligations has been the catalyst for much positive change over the last 40 years. Comparatively, Maori interests are weighted more highly and are explicitly built into decision making across many areas of government. Statistics on Maori outcomes are built into performance agreements and agencies are held to account for performance. While capability across government remains patchy, it is trending in the right direction. There is growing 'good will' and 'good faith' attempts to put in place government services better targeted to promoting Maori wellbeing. While limited, greater devolution of resources and powers to Maori for achieving outcomes for Maori has occurred. Today, less time is wasted on whether Maori perspectives are valid, and instead the discussion quickly shifts to identifying what those interests are and how they are best accommodated.

The not so good

But significant policy failure remains. Tokenism (for example, compulsory karakeia before meetings) too easily substitutes for substance (for example, giving Maori real service delivery choices and resource devolution), in particular where a Crown agency's Maori policy capability is limited and policy vacuums exist. The Maori issues are often multi-faceted and complicated, silver bullets do not exist, and progress is slow. Policy solutions are often naïve or politically motivated rather than being grounded in real evidence based policy making. Expectations of what government can achieve are often unrealistic, short term measures are favoured over long term options; and government agencies act in a siloed and piece-meal way rather than taking a joined up, strategic approach.

But these problems are neither new nor unique to Maori policy development, existing to a greater or lesser extent across all areas of government policy making and delivery.

There is, however, one systemic policy failure that applies to Maori issues more so than other areas of policy making. With legal Treaty risks being attached to policy failure, the approach to policy making has, unsurprisingly, become legalistic. Too often Maori policy making has become about ensuring minimum standards (compliance with the Treaty) are not breached rather than the aspirational approach to policy making discussed in the chapter on "Introducing the theory". Too often it is lawyers, seeking to manage legal risk to the Crown, rather than policy advisors seeking to maximize service outcomes for Maori clients (relative to costs) who are making the key decisions. In this sense, the approach is one of seeking to avoid worst practice (a Treaty Breach) rather than seeking to achieve best practice. Further, the New Zealand legal system is by design adversarial. Similarly, an adversarial culture is too prominent in Maori policy making and implementation.

This difficulty is compounded by the confusion in the minds of policy makers on how to apply the Treaty. While most government policy makers today can talk of "Kawanatanga", "Tino Rangitiratanga" and the protection of Maori "Taonga", most struggle to apply these concepts in practice against competing policy objectives. Too often the Treaty framework works in opposition to rather than complementing public policy frameworks. To further illustrate the problem, there is no single set of "Treaty principles", with the Executive, Court of Appeal and the Waitangi Tribunal all applying different Treaty frameworks[49]. The position taken here is that while the Treaty has been profound at effecting change over the last 40 years, the Treaty too often fails to provide a strong and consistent foundation for Maori policy making.

The DNCL and the Treaty of Waitangi

The Treaty of Waitangi applies between Maori and the Crown. The DNCL is not part of the Crown. The only way the Treaty could apply to the DNCL, and then only indirectly, is if the Crown had delegated functions to the DNCL.[50] Interestingly, however, were the crown to take over the DNCL's functions, the discharge of those functions would likely become subject to the Treaty.

"No Treaty" is no barrier to seeking best practice

That the DNCL's functions are not subject to the Treaty is not a barrier to achieving best practice. In fact, as alluded to above, it could be an advantage as the weaknesses with a Treaty based approach are avoided. This depends critically, however, on DNCL committing to engaging effectively with Maori stakeholders on issues of interest to Maori.

And it is far from without precedent for private bodies to seek meaningful engagement with Maori on issues of mutual interest. Nearly 25 years ago the reviewer recalls meeting bank staff at Tapu Te Ranga Marae as they embarked on learnings on Maori world views. Today most banks would likely have a strong relationships with Maori groups and a good understanding of the workings of Te Ture Whenua Maori Act 1993, the Maori Land Court, the challenges or lending to Maori trusts (Maori land fragmentation, statutory protections against land alienation); and the parameters of the Treaty Settlement process, for example. Such knowledge is necessary for the banks' interests, and for furthering the interests of their Maori stakeholders.

Similarly, 15 years ago the author helped to facilitate the then Institute of Chartered Accountants of New Zealand (a non-Crown entity) to engage with Maori as a special interest group of the Institute. The author was motivated to strengthen the membership of the Institute, and to see the Institute (and its members) take a more active role in facilitating Maori economic development. Unknown to the Institute, there was already a Maori group facilitating access to and supporting Maori into commerce subjects including accounting. The Institute was able to provide this group with resources and linkages to help build awareness across the Institute's membership of Maori issues relating to economic development, accountability and governance and Maori values. This was to the benefit of the Institute, its members and Maori commercial development goals.

[49] New Zealand Productivity Commission, "Regulatory institutions and practices", pg. 166, June 2014.

[50] The Crown cannot circumvent its Treaty obligations by delegating its powers and responsibilities to non-crown entities. Where powers and responsibilities are delegated, Treaty obligations are also transferred, and it remains the Crown's responsibility to ensure those obligations are appropriately discharged. However, as the DNCL's powers and responsibilities have never sat with the Crown, similarly there have never been Treaty obligations. See New Zealand Productivity Commission, "Regulatory institutions and practices", pg. 160, June 2014.

Promoting best practice: A suggested way forward

The key purpose of the DNCL building Maori perspectives into its work is to improve decision making relating to issues impacting Maori – to further the overall net utility of those decisions. However, the benefits can extend beyond better decision making. For example, the Environmental Protection Authority (EPA) found:

- Rather than being critics of the system, Maori became staunch defenders of the EPA
- Non-Maori stakeholders, even those with opposing interests, could see the value being brought to the performance of the EPA consequential on strong Maori engagement[51]
- Because Maori had trust in the EPA and its processes, they no longer felt the need to devote their limited resources to trying to 'catch out' the EPA
- Litigation risk reduced (and with it the cost of managing it) as stakeholder trust in the system strengthened.

There are a number of key prerequisites to realising these benefits. What follows is based to a great extent on work the reviewer did for the Productivity Commission in looking at the impact of the Treaty on Maori policy making, and what made the EPA a Maori policy exemplar, that is, why it was regarded as one of the best when it came to appropriately incorporating the views and interests of Maori into its work (policy development and implementation). [52] Briefly, the EPA:

- operated to a strong public interest (net benefit) touchstone
- showed strong commitment to excellence in Maori policy development, led by the Chief Executive and his Board
- had strong internal capability in the form of a dedicated Maori policy team
- facilitated the establishment of a network of Maori stakeholders to channel Maori views into its decision making
- invested in capability building for those networks and in some cases funded participation
- worked hard to be even handed, for example, helping those with applications, and those likely to be impacted by those applications
- regularly reviewed its performance.

It is important to emphasise that there is no template for best practice – best practice is situation specific and will continue to evolve over time. For this reasons, the EPA is offered as an example only. However, it does point to a number of key things policy agencies need to get right as they move towards best practice.

First and foremost there needs to be commitment from the DNCL's leadership group. The DNCL needs to believe it is important to recognise and cater to Maori interests and perspectives. They need to want to pursue best practice for Maori interests (along with the interests of its other stakeholders). And they need to want to measure progress and be accountable for how well they do. By getting this right, the rest follows. "The rest" includes resources, process and capability linked to decision making on issues impacting Maori.

One of the first tasks is information gathering. A useful document for the DNCL to familiarize itself with is the Waitangi Tribunal report on Maori cultural and intellectual property (WAI 262). While the report predates much of the evolution of the internet, its principles remain strongly applicable in the

[51] Examples were provided of Maori being the only submitters on some EPA decisions, making their input even more important

[52] See New Zealand Productivity Commission, "Regulatory institutions and practices", pg. 176-183, June 2014

digital age. The DNCL needs to know what issues it is responsible for that impact on and are of interest to Maori. To in turn achieve this it is necessary to identify Maori groups willing and able to contribute to this discussion. In some cases this might include explaining to key groups what it is that the DNCL does.

The author has twice taken on the responsibility for facilitating this process; for the then Maritime Safety Authority in the early 1990s, and again for the Institute of Chartered Accountants of New Zealand in the mid 2000s). A key input for both exercises was specialist Maori expertise, in these instances in the form of Maori leader, Amster Reedy, who in turn facilitated engagement with a number of relevant Maori stakeholders, as well as providing staff with an introduction to Maori world views.

Once key Maori groups (likely non-inclusive) have been identified, work can begin on putting in place a process appropriate to these and other Maori stakeholders and interests. These groups may be iwi and hapu, industry, or issue based. The Maori Womens' Welfare League, for example, have an impressive record of quality engagement across a wide range of issues.

Long gone are the days when Crown agencies used to send wheel barrows full of technical documents to marae up and down the country in supposed satisfaction of their Treaty obligations. Engagement needs to be stakeholder and issue driven. It can take some effort to get the process about right, but once in place it should look after itself.

It is unrealistic to expect a "Maori view" in response to consultation, and it isn't necessary. The DNCL does not discharge its responsibilities by negotiating with its stakeholders, but by consulting, in good faith, with many stakeholders with many views. In this respect Maori stakeholders need not be treated differently. Maori have many objectives, cultural, commercial, social and environmental, for example. Different Maori groups will weigh those objectives differently, and have different views on how they are best achieved.

Entities do not always have the capability to make full value of the information they receive from Maori. By building stronger relationships with agencies that do have this expertise, or contracting it in, this weakness can be managed.

Again, the theory here is straight forward and applies to all information gathering, not just with Maori stakeholders. For example, following the Christchurch earthquake, the government (MBIE) reviewed seismic standards for buildings. Much technical engineering information was submitted to the review. To get the full utility from that information, MBIE needed strong engineering expertise. Similarly, to understand, appropriately value and use Maori specific information, it is necessary to have Maori expertise available.

Finally, at its heart, the EPA's success came from investing in its relationships with Maori. And those relationships were demonstrated to be healthy. Stakeholders spoken to used terms such as openness, respect, even-handedness, understanding and, above all, trust to describe their relationships with the EPA. This is not to say there was always agreement or that there were not calls for improvement. Had this been the case it would have suggested regulatory capture and policy failure. Instead, where disagreement occurred, it could be accepted without compromising the ability of the parties to continue working together.

Recommendation: The DNCL, together with relevant Maori stakeholders, review its performance in incorporating Maori values, perspectives and ways of doing things into its decision-making and,

having regard to the discussion in this chapter, take steps as necessary to ensure it is working towards achieving best practice.

Appendix 1: Findings and recommendations

Promoting the public interest

Findings:

- The risk the DNCL might pursue interests counter to the public interest appear comparatively minor, with narrow self-interest perhaps being the most significant. Existing safeguards appear more than adequate for managing this risk.
- The DNCL operates absent a number of significant risks posed to the performance of government regulators; in particular it is not a statutory monopoly, and it is not subject to the same political objective risks. This suggests a reduced need for the types of safeguards used to promote government regulator performance. Self-regulation is an appropriate system for delivering the DNCL services.

Recommendations:

- The DNCL should view itself more as a competitor against other TLD administrators and regulators. A useful objective would be to better meet the needs and preferences of registrants than other TLDs.
- To the extent commercial and public interest objectives are believed to conflict with respect to management of the .nz space, these conflicts need to be identified and assessed with a view to their effective management.

Exit and voice

Findings:

- Registrants struggle to be heard and exit is causatively ambiguous. If effective mechanisms can be found to elevate registrant exit and voice, registrants will become powerful drivers of best practice for registrars and the DNCL.
- As a tool, information disclosure will not successfully lift performance in all markets. It is unclear whether it can be made to work in the .nz space. However, success would see it as a powerful, ongoing driver of best practice. For this reason, it is worth exploring. In doing so, however, the risk that it will not be successful should be acknowledged.
- The DNCL is ideally placed to explore, develop, implement and monitor an effective information disclosure regime on registrars to the benefit of registrants.
- The review is strongly supportive of promotional activities relating to the .nz space being undertaken. It is, however, agnostic with respect to who is best placed to do it but can find no significant reason why it should not continue to be the DNCL.

Recommendations:

- The DNCL commence a process to explore the utility of a comprehensive information disclosure regime to drive better performance across registrars in the .nz space.
- The DNCL commence a process to identify, collect and publicly disseminate information on its performance over time.

- The DNCL seek international co-operation through the APTLD, ICANN, the ccNSO, for example, to promote a robust information disclosure regime that provides information on the relative performance of TLDs, thereby lifting overall performance in the domain name market

Concentration thresholds

Findings:

- Competition risks for registrants in the .nz space are minimal and are likely to decline further as new TLDs are introduced.
- Competition risks in the .nz space appear minimal and likely to decline further over time. The size of the market is bigger than implied by the market concentration thresholds, market contestability is likely to be high, there appears little opportunity for collusion and no evidence was found to suggest anti-competitive practices. If anything, these risks are likely to diminish over time as new TLDs enter the domain name market and search engines continue to grow in importance and capability.
- The DNCL's bright line market concentration threshold for registrars operating in the .nz space, counter to its intent, presents a danger to the efficient delivery of registrar services. It potentially blocks efficient market arrangements, makes worse existing failure in the .nz space and creates performance risks where two regulators are responsible for regulating the same entities for the same things.

Recommendations:

- That the DNCL consider the merit of rescinding the current market concentration policies.
- In the event the DNCL does not consider competition risks to be adequately managed by the Commerce Commission alone, it is further recommended market concentration information continue to be collected, together with other information that might be useful to indicate whether there might be an evolving issue with respect to the abuse of market power by registrars. The information collected should be made publicly available.
  In the event evidence emerges of growing risks, the relevant information should be made available by the DNCL to the Commerce Commission for them to respond to as appropriate.

Enforcement

Findings:

- Against the theory of regulatory standards and enforcement theory, the evidence available to the review and from the interviews, the DNCL is a sound and competent regulator of the .nz space. It is highly regarded internationally and operates absent many of the handicaps other TLDs contend with. With small exceptions, the .nz policies and the enforcement of those standards were viewed as appropriate.
- However, the level of disagreement between stakeholders on the appropriate role of the DNCL in reducing internet related harm is in itself a threat to performance, confidence and reputation in the .nz space. It must be dealt with.
- There are serious information deficiencies on the magnitude and nature of internet related harm in New Zealand. Only with good information (relevant, timely, complete, accurate) will

it be possible to effectively target real problems with the best tools available and can the effectiveness of strategies deployed be assessed.

Recommendations:

That the DNCL:

- Facilitate the collection of key data across agencies so that the nature and magnitude of any issues relating to the .nz space might be better known, over time and against other TLDs where similar information is known, and so that the effectiveness of current and future enforcement efforts might be determined
- Draw on international experience to date, in particular the effectiveness of measures so far deployed and new measures being developed
- Explore the importance of co-ordination and co-operation between countries and TLD operators for new measures to be effective - this could involve engagement with ICANNs Public Safety Working Group, for example
- Work with other agencies to develop an enforcement option that might better promote the public interest compared to the current strategy, that option to include:
    - Identifying measures to improve the integrity of the information contained on the register, allowing access to that information for law enforcement purposes, and the process for removing registrants from the Register to prevent harm
    - The expected effectiveness of any additional measures for both protecting the integrity of and confidence in the .nz space, and reducing internet related harm in New Zealand
    - The expected cost of any enforcement measures, including but not limited to privacy, reduced access to the internet for registrants (delays, higher costs), legal and financial risks of removing registrants from the Register when they should not be, and reduced choice of registrar
    - The process to be used by regulators when seeking the removal of a registrant from the Register
    - The burden of proof required before making that approach so that there is a high level of confidence that the decision is the right one
    - Whether compensation should be available for registrants in the event they are incorrectly suspended from the Register
    - Who should have responsibility and bear the legal risk for any additional enforcement functions, in particular taking responsibility for making the call to remove a registrant from the register; who should be responsible for additional cxfunctions should be guided by considering which party would have the best incentives, capacity and capability to be effective in delivering on the enforcement objectives having regard to managing the related risks and cost
    - The pros and cons of an incremental versus comprehensive (big bang) approach to reform
    - Who should meet any additional financial enforcement costs and how, having regard to what parties are the beneficiaries and “risk exacerbators,” informed by the Treasury guidelines on recovering costs in the public sector.

In the event it is found the status quo is to be preferred, the reasons for this decision should be well publicised so that registrants and others might develop a good understanding of the reasons for that decision. Public comment should be invited on those reasons. Further, the opportunity should be

taken to inform participants in the .nz space how they themselves might better manage internet related risks and harms.

In the event a new approach is favoured or significant disagreement remains between stakeholders, a process of public consultation should be initiated centred on the new approach and the status quo. Ideally that process should be taken forward by a working group of key stakeholders who would hear and consider submissions and oversee the preparation of the discussion document and final decisions.

Fees and charges

Findings:

- The people paying DNCL fees are the people who should be paying the DNCL's fees.
- The mechanisms for recovering costs appear appropriate. There may be merit in making at least a portion of the registrar application fee variable to encourage the filing of high quality applications and to better reflect actual costs incurred in processing complex applications. It might also place additional pressure on the DNCL to be efficient in its processing of applications.
- There was no evidence found of excessive charging. As a regulator, the Commission is of modest size and did not give the impression of extravagance or wanting to aggressively or inappropriately expand its domain. Its culture came across as tightly focussed on performance in the .nz space. The DNCL might like to consider providing more information to justify its international engagement to stakeholders, including what it has achieved and hopes to achieve going forward against the cost of this engagement.
- In most circumstances 'notification' of its customers should be sufficient with respect to fee changes being put in place by the DNCL. This is predicated on the assumption consultation on the individual services provided by the DNCL has been robust.

The restructuring

Findings:

- Change is inevitably accompanied by new challenges and risks to manage. Recent restructuring of the administrators/regulators of the .nz space presents challenges that need to be managed.

Appendix 2: List of Interviewees

Adam Hunt, Director, Domain Name Commission,

Andrew Brown QC Chair Experts, Domain Name Commission

Andrew Cushen, Outreach and Engagement Director, InternetNZ

Andy Linton, Former Director Domain Name Commission and InternetNZ Fellow

Barry Braily, former employee Domain Name Commission,

Ben Creet, Manager Policy, InternetNZ

Chris LaHatte, FAMINZ Med/Arb FCIArb, Former ICANN Ombudsman

Dave Baker, Technology Services Director, InternetNZ

Debbie Monahan, Former Domain Name Commissioner

Deborah Clapshaw, BA (HONS) LLB (HONS) LLM FAMINZ, member of the Domain Name Commission's Mediators panel

Glen Eustace, Director, Godzone Internet Services, elected representative of the Registrar Advisory Group

Harry Chapman, New Zealand Government Advisory Committee representative and Osmond Borthwick, Manager Communications Policy both from the Ministry of Business, Innovation and Employment

Hilary Souter, Chief Executive Officer, Advertising Standards Authority

Jamison Johnson, Principal Advisor, CERTNZ

Jay Daley, former Chief Executive Officer, New Zealand Registry Services and former Acting Chief Executive Officer, the Public Interest Registry

John Burton, Partner, Izard Weston

Jordan Carter, Chair Domain Name Commission and Chief Executive Officer, InternetNZ

Keith Davidson, InternetNZ Councillor, Fellow of InternetNZ, past President/Chair InternetNZ Council

Leonid Todorov, General Manager, Asia Pacific Top-Level Domain Association

Martin Cocker, Chief Executive Officer, NetSafe

Mike Gray, Systems and Security Architect, InternetNZ

Mike Lee, Xtreme Networks Ltd, registrar

Rex Cottingham, Cybercrime Unit, High Tech Crime Group, New Zealand Police

Ritchie Hutton, Head of Strategy Intelligence and Advocacy, Competition and Consumer Branch

Commerce Commission

Appendix 3

Summary of submissions and the review response

Background

In early 2018 the Domain Name Commission initiated an independent review of its performance against regulatory best practice. That review was built on a number of key documents and interviews with a wide range of stakeholders. In late 2018 a draft report was provided to the DNCL. At that point it was decided it would be useful to extend the review through a public consultation process.

The DNCL publicised consultation on the review on its web site and through its network of contacts. Two months were allowed for submissions (finishing 6 June). Four submissions were received. While disappointing, this is not totally inconsistent with the response to other consultations undertaken by the DNCL. It does, however, present a number of problems for the review. In particular it provides a poor foundation from which to amend the draft report; and it makes it impossible to use the submissions received as a gauge on the level of popular support for any of the recommendations. But it is what it is.

The four submissions have been warmly received. All submissions have, in the view of the reviewer, raised important, in some cases, profound issues. The submitters are publically thanked here for their contributions.

Consistent with best practice and transparency, a summary of each submission is provided, followed by the reviewer's response.

Leela Hendrix

In a clear response to the terrible events in Christchurch, Leela implored the Commission to increase its efforts to reduce opportunities for people to promote "right wing hate/violence". This, she observed, would be done by more controls over registration and removal of domains.

She went on to advocate for similar controls on the dissemination of "anti science/anti climate change emergency" material.

Response

The problem pointed to by Leela is of profound importance, not just in New Zealand but around the world.

To Leela's first point, it is noted that in promoting hate and violence, laws have been broken and people prosecuted. This review has proposed a way forward for making decisions on how the DNCL responds to legal abuse on the internet caused by its registrants (the chapter "Domain Name Abuse" starting on page 59 of the review). The purpose of the chapter is to promote the right solutions being implemented in the right way by the right groups to the overall benefit of the community.

The Christchurch events have forced many other stakeholders to also consider what part they might play in the future to manage adverse impacts and risks from these types of behaviours. The DNCL is part of that review. This wider focus is to be welcomed. There will be a wider and deeper debate than the DNCL could achieve alone, with an expectation options will be wider and solutions ultimately more effective.

To Leela's second point, it is noted no law has been broken by people who use the internet to challenge the now dominant view on anthropogenic climate change. What Leela is proposing is that the DNCL make decisions on what constitutes acceptable content on the internet, quite independent of law makers. This is a profound change and is not supported here.

A central principal underlying liberal democracies (compared to totalitarian regimes) is the belief that open and robust debate makes our communities stronger rather than weaker. To restrict the application of this principal in any way must be taken only after considerable thought and debate across all of society, with final decisions made at the highest level (Parliament). Within this context, the DNCL is not resourced or mandated to make decisions on content. Further, to act alone would be ineffective. For example, for the DNCL to block content allowed by other TLDs would simply result in that content being promulgated via other TLDs.

Climate change itself is a good example of what might go wrong if debate is limited. The reviewer is old enough to remember the growing scientific consensus of the late 1970s that we were entering another ice age. The implications for our civilisations would, of course, be devastating. Had this consensus been locked in with counter views refused air time, it would have taken much longer to arrive at the opposite conclusion and today we would be even more handicapped in our response to global warming.

Jay Daley

As well as submitting on the review, Jay Daley was also interviewed as part of preparing the draft report.

Jay notes the absence of a framework for reviewing how well the DNCL is doing, and recommends that it work with industry to establish such a framework.

Rather than explore the utility of information disclosure regimes to drive better performance across registrars, Jay recommends just doing it.

Jay identifies a barrier to putting in place a more comprehensive information disclosure regime being the argument that the information is private.

Response

A framework for assessing the DNCL's performance is addressed in the chapter "Helping the market work better: making exit easier and voice louder" on page 40 of the draft report. The draft report recommended the DNCL commence development of a regime by which the DNCL's performance could be measured, AND that the DNCL work with international bodies such as the ICAAN to develop the framework. The reason for the second recommendation is that a key objective of any framework should be to promote comparison between TLD performances. This can only be achieved by international agreement on what information needs to be collected and disseminated.

Jay is correct, however. To engage effectively New Zealand (whether through the DNCL or InternetNZ) needs to engage with industry first to see what information is of value to stakeholders, and what information can reasonably be provided. Further, in the event progress at the international level is too problematic, New Zealand should go it alone and seek to "just do it". Good accountability processes and information help to drive better performance. Putting this in place, even if limited to the DNCL only, should give the DNCL a comparative advantage over its competitors.

It is similarly pleasing to see Jay's strong support for putting in place an information disclosure regime to drive better registrar performance. In the course of the review, a number of people were

skeptical that it could be made to work well in practice. In light of Jay's considerable experience in the industry, his strong support is welcome.

In supporting information disclosure, Jay points out a barrier in the past has been the view that the information needed to make it work is private. He does not specify whether this relates to commercial information held by registrars on their own activities, or the personal information of registrants. In-any-event, this issue does not appear, at face value, unsurmountable. There are many precedents for regulators requiring the disclosure of commercial information to achieve a better functioning market, for example, in the electricity and banking industries. Further, sitting above the privacy principles applied by the Privacy Commissioner is a public interest touchstone. If, as is proposed in this review, the DNCL applies a similar explicit touchstone to its own decisions, common ground should be reasonably easy to arrive at. Certainly, the reviewer's past experiences working with the Privacy Commissioner to achieve public interest objectives have been positive.

Karaitiana Taiuru

Karaitiana criticises the inquiry as having overlooked the Maori dimension with respect to the performance of the DNCL. His submission makes the following recommendations:

- that the DNCL put in place a dispute process for Maori knowledge
- the offensive names list include names offensive to Maori
- the DNCL consider a co-governance and co-design (with Maori) operating model
- the DNCL take steps to ensure effective engagement with Maori on a review of the .iwi.nz space policies
- that all .nz policies be reviewed against a kaupapa Maori focus
- that the Treaty (of Waitangi), relevant tribunal findings and UN Declaration of Indigenous Rights be used to review all .nz policies
- that digital colonialism and data sovereignty rights be considered within the .nz system.

Response

Kariatiana's criticism of the inquiry, while serious, is both welcome and accepted. While care was taken to ensure Maori issues were part of the terms of reference, Karaitiana's comments confirm the reviewer was not sufficiently active in ensuring the engagement necessary for uncovering Maori issues. The reviewer apologises to Karaitiana and the DNCL for that omission.

At face value Karaitiana's recommendations appear reasonable. For the most part, they are not prescriptive in that they invite further consideration rather than dictating what outputs should be provided.

At the heart of his recommendations is the need for the DNCL to have in place mechanisms and processes that promote effective engagement with Maori for the purpose of promoting better DNCL decision making going forward. This recommendation is strongly supported.

On the specific recommendations, a number fall outside the terms of reference, being decisions relating to InternetNZ rather than the DNCL; for example, except for a small number of exceptions identified early in the review; .nz policies (now the responsibility of InternewtNZ), and the structure of the DNCL (recently settled through a separate process) are excluded from the review. Further, Karaitiana cannot and does not purport to be offering the Maori view on the issues raised. A more inclusive and tailored process is needed to access Maori views on the work of the DNCL.

In the context of the issues raised by Karaitiana and the review's limitations with respect to engaging on some of those issues, an additional chapter "Policy making and implementation: the Maori dimension" has been drafted and included in the final report. The chapter seeks to both describe best practice with respect to Maori policy and implementation, and proposes a process for the DNCL achieving it.

Metaname

Metaname were very positive about their experiences with the DNCL. "Its (DNCL) staff are professional, courteous, patient and have the best interests of DNCL at heart."

The central position of the Metaname submission is that the police and courts should retain their responsibilities with respect to criminal matters but that some changes could usefully be made to allow action to be taken more quickly. They also:

- submit that both the registry and the registrars should be indemnified against action ordered by the courts
- comment that when action is to be taken, it should be by the Registry rather than by one of 90 registrars, noting that only the registry is able to lock out names
- express the view that the resellers market is fine and caution against measures that might drive registrants away through adding unnecessary costs.

Finally, with respect to information disclosure driving better performance in the /nz space, Metaname note how difficult it is to engage with registrant 'voice'. They question the practicality and utility of measures to improve the quality of registrant information.

Response

The views raised by Metaname are supportive of the positions advanced by some people interviewed, but run counter to others. Chapter "Domain name abuse" on page 60 of the review proposes a process for taking the different views on enforcement forward for resolution. Metaname's views should be considered within that process.

The difficulties that exist with respect to mobilizing registrant voice to drive performance are acknowledged in the review chapter "Helping the market to work better: making exit easier and voice louder".