



New Zealand
**Institute of Intelligence
Professionals**

Regulatory Intelligence: Enabling Modern Regulatory Practice

A Handbook for regulatory intelligence
practitioners and decision makers

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Foreword

An effective regulatory intelligence function is critical in supporting modern regulatory practice. Developing and integrating successful regulatory intelligence functions into the work of a regulatory agency is challenging. This Handbook provides a candid description of the things that need to be considered to make these efforts successful. The Handbook summarises neatly the challenges as follows:

For intelligence and other regulatory functions to work effectively, there must be a good understanding of the role of the regulator and that of the intelligence practice that supports it, and how they fit together. Intelligence practitioners need to grasp the realities of the regulatory world – the pressures, expectations, and legal boundaries regulators operate within. At the same time, regulators need to understand how intelligence is gathered, analysed, and applied (including their roles and responsibilities in the application) so intelligence can be used in the right way and deliver maximum benefit. (Page 10)

Drawing on the experience of the authors, the Handbook achieves this. While written for regulatory intelligence practitioners and decision makers, make no mistake, it is a valuable resource for everyone in regulatory organisations thinking about and leading the development of strategy, policy, operating models and capability, as well as those involved in the delivery of intelligence, insights, regulatory activities and decisions.

The authors note that the goal of the Handbook is to demystify the emerging field of regulatory intelligence and clarify its role within contemporary regulatory practice.

They have done a great job. The Handbook will be valuable in supporting the delivery of regulatory intelligence as a foundation for success, as regulators strive to ensure that their work is effective and efficient in delivering public benefit.

Keith Manch

REGULATORY LEADER AND ADVISOR



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Reading Note

This Handbook is written by practitioners and leaders working within the regulatory intelligence public service field. It serves as a companion resource to the NZIIP Handbook, and as such, does not provide in-depth coverage of intelligence tradecraft, theory, and practice. Readers of this Handbook will likely find increased value from its content, if they firstly understand the basics of intelligence analysis and/or its application to decision-making (refer NZIIP Handbook for a starting point).

While some common challenges to regulatory intelligence practice have been identified, this Handbook does not seek to provide a comprehensive evaluation of regulatory intelligence functions. Rather, the goal is to demystify the emerging field of regulatory intelligence and clarify its role within contemporary regulatory practice. Those newer to regulation are hoped to find value in the foundational content provided on regulatory theory, models, and practice.

The guidance presented draws from a wide range of unclassified sources, including doctrinal publications and real-world experience. No single country, organisation, or agency is treated as a definitive authority. This publication remains unclassified.

Version 1.0 – November 2025

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Preface

Regulation is everywhere. It shapes how societies function, how markets behave, and how risks are managed. Yet in today's fast-moving and complex world – where resources are tight and the pace of change is accelerating – regulators face mounting pressure to make smarter, faster, and more accountable decisions. In this environment, intelligence is no longer a luxury; it's a necessity.

Regulatory intelligence is the practice of using informed insights to support decision makers in regulatory systems. While this field is growing rapidly, it remains relatively nascent – especially when compared to its more established cousins in law enforcement and national security, and more recent developments in regulatory practice. That brings both opportunity and challenge.

As part of its commitment to growing a connected and skilled intelligence community, the New Zealand Institute of Intelligence Professionals (NZIIP) has supported and endorsed this Handbook to further support its members. It sits alongside NZIIP's existing Intelligence Handbook and Code of Ethics and reflects the institute's commitment to support its members in the many and varied applications of intelligence across New Zealand.

This Handbook aims to illuminate and demystify the discipline of regulatory intelligence: what it is, why it matters, and how it can be practically applied. It explores key concepts, models, and practices, and outlines how regulatory intelligence sits alongside regulatory theory, regulatory practice, and systems thinking. Whether you're an intelligence practitioner, a frontline regulator, a policy partner, a curious leader, or someone stepping into this space for the first time – the goal is to make this material useful, relevant, and thought-provoking.

While this Handbook doesn't claim to have all the answers, the hope is it sparks new thinking, fuels better decisions, and inspires the future of regulatory intelligence and its critical contribution to modern regulatory practice.



Introduction

“*Regulatory Intelligence: Enabling Modern Regulatory Practice*” is a comprehensive Handbook that explores the concept of regulatory intelligence and its application within regulatory systems. The purpose of this Handbook is to address the ambiguity and mystery that can frequently hamper regulatory intelligence functions. It does this by enhancing understanding of what regulatory intelligence is and demonstrating its practical application in everyday regulatory practice. The authors draw on our own experiences and a range of written resources.

It is divided into four main parts:

Part 1: The Context

Part One begins by defining regulation – its purpose in maintaining fairness, safety, and efficiency across industries – and explores the broader regulatory authorising environment, where government policy, laws, institutional structures, strategies and operational policies shape agencies’ regulatory activity. It then outlines Government expectations of regulatory agencies, emphasising accountability, transparency, and effectiveness in decision-making. This section then introduces the intersection of intelligence analysis and regulation, which lays the foundations for the remaining sections that tackle this important conversation in depth.

Part 2: What is Regulatory Intelligence?

Part Two positions regulatory intelligence as a critical regulatory tool that supports decision makers across regulatory systems. Regulatory intelligence helps identify and understand changes in the external environment, emerging trends, risks, and non-compliance that could impact on desired regulatory outcomes, to support decision-making. It supports strategic stewardship of the regulatory system overall by informing decision makers of possible future developments that may require a change in regulatory settings or resource deployment.

Part 3: Intelligence and Regulatory Frameworks

Part Three illustrates how intelligence functions can support decision-making within regulatory agencies, using three well-known regulatory frameworks. The frameworks discussed in this section are Problem-centric Regulation, the Enforcement Triangle, and the Swiss Cheese Model of Accident Causation.

Part 4: Making it Work

Part Four, the final section, focuses on how to make regulatory intelligence “work” in regulatory agencies, particularly when intelligence concepts and tradecraft are new to established ways of working. This section also highlights the challenges and advantages of integrating intelligence into regulatory decision-making, emphasising the need for collaboration between intelligence staff and decision makers.

Throughout the Handbook, key terms are highlighted in bold text and described in accompanying text boxes. We also use Focus Boxes to highlight other key points. We haven’t explained general intelligence terms (such as Priority Intelligence Requirements, or Structured Analytic Techniques) because it’s expected that readers will be familiar with them or able to access definitions of them in the [NZIIP Intelligence Practitioner’s Handbook](#).

Out of scope of this Handbook is any guidance on the intersection of regulatory intelligence and te ao Māori. As with all public servants, intelligence practitioners are committed to upholding and giving effect to the principles of Te Tiriti o Waitangi. How intelligence does this in a genuine and effective manner is a topic worthy of its own detailed and focused examination – one we hope to be readers of in the future.

Part 1: The context

What is regulation?

Regulation is the process of establishing and enforcing rules to guide behaviour in society, industries, and organisations, to mitigate risks in the public interest. These rules are designed to ensure safety, fairness, and proper functioning in various aspects of daily life. **Regulators**, such as Government agencies or independent bodies, monitor **compliance** with these rules and adjust when necessary to adapt to changing circumstances or emerging risks in the **regulatory system**. **Regulatory practice** refers to the way in which regulators perform their roles.

Regulatory system

A set of formal and informal rules, norms and sanctions, given effect through the actions and practices of designated actors, that work together to shape people's behaviour or interactions in pursuit of a broad goal or outcome.¹

Regulator

An organisation with the authority, granted by Parliament, to carry out regulatory activities in a certain area.²

A regulatory agency is any agency (other than courts, tribunals and other independent appeal bodies) that has any of the following responsibilities for the whole or part of a regulatory system: policy advice; policy and operational design; legislative design; implementation; administration; information provision; standard setting; licensing and approvals; monitoring; evaluation; compliance and enforcement; or performance reporting.³

Regulatory practice

The activities and processes that regulators use to carry out their work. Good regulatory design and practice requires attention to detail, skill and collaboration. Poor regulatory design or practice can contribute to regulatory failure which is when harm occurs in the regulatory system. The Government of New Zealand uses regulation to protect the community from harm and improve the standard of living for its people.⁴

1 The Treasury (2017). *Government Expectations for Good Regulatory Practice*, page 1. Available at: <https://www.regulation.govt.nz/assets/Uploads/Government-Expectations-for-Good-Regulatory-Practice.pdf>

2 Ministry for Regulation. *Regulation in New Zealand Quick Guide: Regulatory Practice Essentials*, page 1. Available at: <https://www.regulation.govt.nz/assets/Uploads/Government-Expectations-for-Good-Regulatory-Practice.pdf>

3 The Treasury (2017). *Government Expectations for Good Regulatory Practice*, page 1.

4 Ministry for Regulation. *Regulation in New Zealand Quick Guide: Regulatory Practice Essentials*, page 2. Available at: <https://www.regulation.govt.nz/assets/Resource-Documents/Quick-Guide-Regulation-in-New-Zealand.pdf>.

Compliance/non-compliance

Adhering to the law, regulations and standards that apply to a particular industry. The Ministry for Regulation defines monitoring compliance as “monitoring and influencing regulated parties to ensure they are complying with [adhering to] the law.”⁵ Non-compliance simply means that regulated parties are not adhering to the law, regulations and/or standards.

Examples of regulation in everyday life include traffic laws that ensure orderly and safe driving, food safety standards that protect consumers from harmful ingredients, and environmental laws that reduce pollution and promote sustainability. Banking regulations help protect customers and ensure the financial system remains stable, while building codes ensure that structures are constructed safely. Regulations also extend to areas like workplace safety, privacy protections, and even the labelling of products we buy, ensuring transparency and allowing informed choices.

Government expectations of regulatory agencies

The New Zealand Government expects regulatory agencies to advise on and create systems that are effective, adaptable, and meet the needs of people over time. A key part of this responsibility is **regulatory stewardship**, which means taking care of these systems, so they stay useful and relevant. Stewardship involves actively managing and improving the rules, making sure they work well, and adjusting them to handle new challenges or risks.

Regulatory stewardship

According to the Ministry for Regulation, regulatory stewardship is “the governance, monitoring and care of our regulatory systems.” The Ministry goes on to say:

*Regulatory systems... need regular ongoing care and maintenance if they are to deliver best value to New Zealanders...Regulatory stewardship aims to ensure that all the different parts of a regulatory system work well together to achieve its goals and to keep the system fit for purpose over the long term. By adopting a big picture view, regulators can anticipate, and respond to, changes.*⁶

The Treasury has observed, in its expectations for good regulatory practice, that:

*A regulatory system will often impact on, or be impacted by, another regulatory system or wider legal system, and will sometimes share common or overlapping components. Also, there will usually be more than one government regulatory agency with responsibilities within a given regulatory system, and sometimes local government bodies as well. Therefore, all regulatory agencies need to pay close attention to their regulatory environment and be alert to the need to work with other agencies to properly discharge their stewardship responsibilities [emphasis added].*⁷

5 Ministry for Regulation. *Regulation in New Zealand Quick Guide: Regulatory Practice Essentials*, page 4. Available at: <https://www.regulation.govt.nz/assets/Uploads/Government-Expectations-for-Good-Regulatory-Practice.pdf>

6 *Ibid.*, page 1.

7 The Treasury (2017). *Government Expectations for Good Regulatory Practice*, page 1.

Regulatory agencies are responsible for keeping their systems in good shape. This involves advising Government where change is required, or making the changes themselves where regulators have the decision-making capability. It also involves assessing how well the rules are working, anticipating and preparing for future changes, and considering the impact of emerging technologies or economic shifts. Agencies are also encouraged to work together with industry, other groups, and the public to ensure the rules are fair and easy to follow.

When designing systems, the Government wants agencies to focus on making them efficient, simple, and flexible.⁸ Systems should be ready to deal with current issues but also able to adapt to unexpected challenges and changes in the operating environment. Agencies should use data, information and intelligence to understand and manage risk, make good decisions, streamline operations, and use resources wisely. A good system should protect public interests while avoiding unnecessary burdens for those who are required to follow the rules.

The regulatory authorising environment

Understanding the **authorising environment** is fundamental to understanding how intelligence can be most effective for regulatory decision making.

Authorising environment

The authorising environment provides legitimacy and support for a regulator to undertake its role and duties. This legitimacy and support are provided by a mix of formal authority (such as that granted through legislation and the allocation of funding), and informal authority (such as a social licence “granted” by the public).

The authorising environment not only confirms the role and purpose of the regulator, it also formally sets accountability requirements (such as in a Statement of Performance Expectations).

In New Zealand, formal authority for public sector regulators (departments or agencies) is usually vested in a Minister. Crown Entities (such as the New Zealand Transport Agency) are a step removed from Ministers and are accountable to a Board (which in turn is accountable to a Minister). Some also have statutorily independent roles, such as the respective Directors of Land Transport and Civil Aviation.

The authorising environment in New Zealand’s regulatory landscape is shaped by the interplay of policy, legislation, policy frameworks, functions, duties and powers set out in legislation.

Regulators operate within a clearly defined legal framework supported by guidance such as the Solicitor General’s Prosecution Guidelines and Crown Law’s Judge Over Your Shoulder,⁹ ensuring that compliance actions are lawful, consistent, proportional, and aligned with statutory obligations. This legal foundation not only establishes the boundaries of regulatory authority but also aims to safeguard the rights and interests of **regulated parties** and stakeholders, fostering trust and transparency in the system.

⁸ *Ibid.*, page 2.

⁹ Crown Law (2019). Te Pouārahi: The Judge Over Your Shoulder. Available at: <https://www.crownlaw.govt.nz/publications/judge-over-your-shoulder>

Focus box 1:**The two levels of legislation**

New Zealand has two levels of legislation. These are:

Acts of Parliament, also called Statutes (i.e. laws passed by Parliament). These are usually drafted by the Parliamentary Counsel Office (PCO). Proposed Acts are called Bills.

Secondary legislation. This is law that has been passed by someone other than Parliament, or under a power that has been formally delegated under an Act. Secondary legislation often has titles like “regulations”, “rules” or “Order in Council”.¹⁰

In addition to these, public agencies or self-regulatory bodies may issue standards and guidelines applicable to regulated parties.¹¹

Policy shapes legislation. Regulators’ mandates (functions, duties and powers) are established in legislation. Regulators establish strategies and operational policies to give effect to the legislation, as intended by the policy.

Awareness of functions, duties and powers underpins the regulator’s ability to operate in accordance with the requirements and constraints of the authorising environment. Clear strategies and operational policies enable the efficient execution of functions, duties and powers, supporting agencies and regulatory practitioners to act within specified limits in a timely manner, while maintaining accountability.

Careful consideration of the way the functions, duties and powers are used is crucial to prevent overreach, ensuring that all interventions are proportionate and justified in the context of their policy and legal mandates.

As indicated later in this Handbook, the authorising environment comes to light strongly, in many aspects of intelligence production, particularly those relating to collection, analysis, and the forming of recommendations and actions.

Regulated parties

A regulated party is a person or organisation that must comply with the laws and societal expectations of behaviour. This may be in their personal, social, recreational, or work lives. Usually, people want to comply and act in the best interests of others, so regulation needs to give clear guidance on how to do that.¹²

Some agencies refer to regulated parties as ‘participants’, and this can be reflected in legislation (for example, the Civil Aviation Act 2023 uses the term ‘aviation participants’ rather than ‘regulated parties’).

10 See: <https://www.pco.govt.nz/about-us/about-new-zealand-legislation>, accessed 3 October 2025.

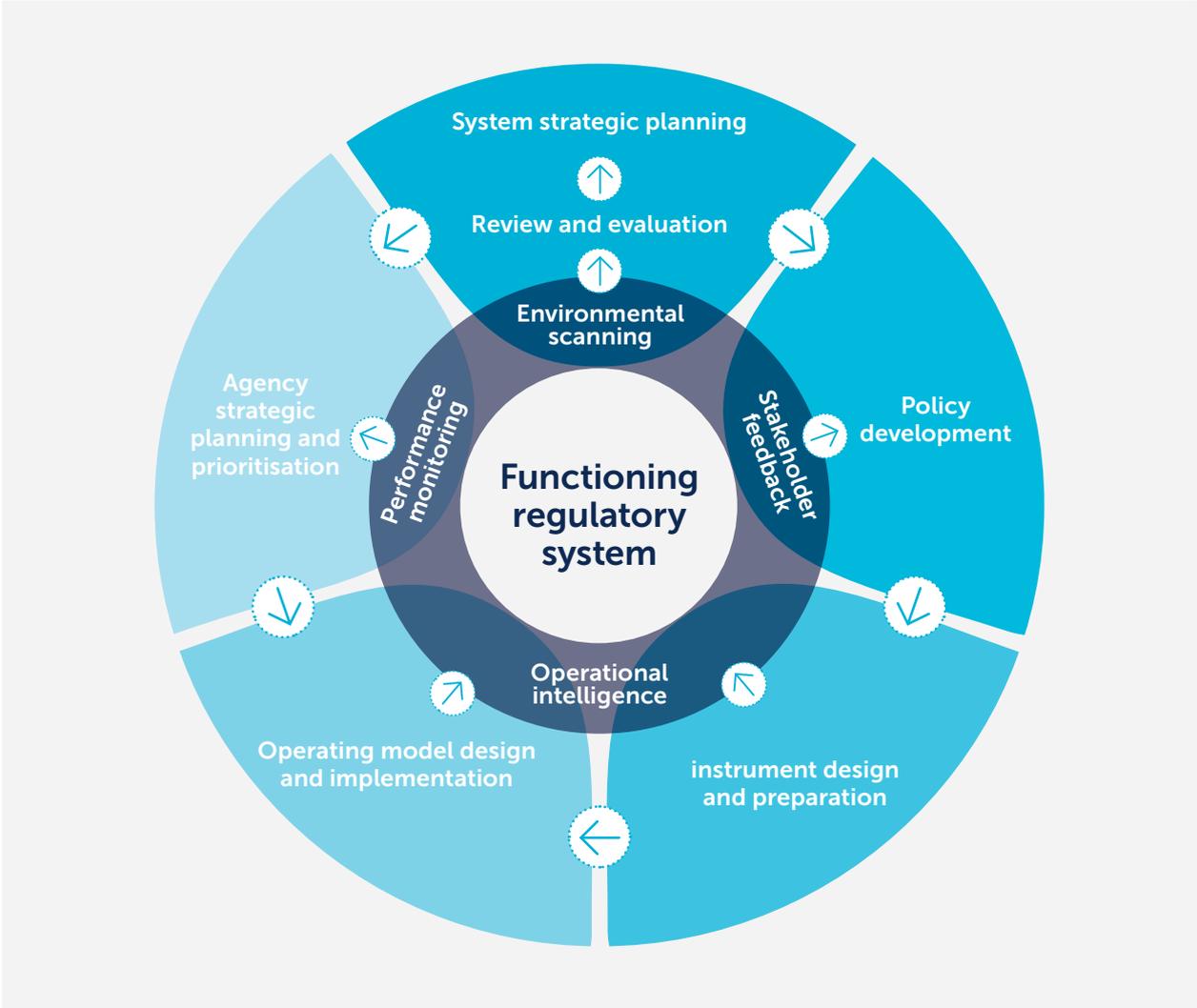
11 Derek Gill, “Regulatory Management in New Zealand: What, How and Why?” In Frankel, S (ed.), *Learning from the Past, Adapting for the Future: Regulatory Reform in New Zealand*. New Zealand Law Foundation Regulatory Reform Project. Wellington: LexusNexus New Zealand.

12 Ministry for Regulation. *Regulation in New Zealand Quick Guide: Regulatory Practice Essentials*, page 1. Available at: <https://www.regulation.govt.nz/assets/Resource-Documents/Quick-Guide-Regulation-In-New-Zealand.pdf>.

So how does intelligence fit with regulation?

In a well-functioning regulatory system, intelligence is an essential input to knowledge development and decision-making. As noted earlier, a regulatory system is a set of rules, norms and sanctions, supported by the actions and practices of designated agencies, to shape people’s behaviour in pursuit of a broad policy goal or outcome. The regulatory cycle (Figure 1) depicts how that system changes and evolves.

Figure 1: The Functioning Regulatory System (source: Allen & Clarke)¹³



Through its application to the regulatory cycle, intelligence is central to enhancing the effectiveness and adaptability of regulatory systems. It provides a foundation for understanding complex compliance environments, enabling regulators to make well-informed decisions that align with organisational priorities. By leveraging intelligence, agencies can proactively understand and address risks, identify how vulnerabilities are being (or could be) exploited, and respond to emerging challenges or unintended consequences. This insight supports better decisions about where and how to intervene to achieve policy outcomes and compliance, while helping ensure regulatory frameworks remain robust and relevant amidst evolving circumstances. As stated prior, this is a fundamental component of good regulatory stewardship.

13 Allen & Clarke (2021). *A guide to regulatory stewardship*. Wellington, New Zealand.

For intelligence and other regulatory functions to work effectively, there must be a good understanding of the role of the regulator and that of the intelligence practice that supports it, and how they fit together. Intelligence practitioners need to grasp the realities of the regulatory world – the pressures, expectations, and legal boundaries regulators operate within. At the same time, regulators need to understand how intelligence is gathered, analysed, and applied (including their roles and responsibilities in the application) so intelligence can be used in the right way and deliver maximum benefit.

Without this mutual understanding, miscommunication and misapplication become real risks, leading to flawed decisions and missed opportunities. When both groups align, intelligence strengthens regulatory efforts by helping agencies anticipate risks and make informed decisions about appropriate regulatory actions to achieve desired outcomes. A shared perspective ensures intelligence does not just exist in isolation – it can deliver meaningful impact where it matters most.

Focus box 2:

The power of regulatory intelligence in action

Non-compliance-related patterns and trends reported by intelligence functions can illustrate system-level vulnerabilities that need to be addressed. Indeed, the Government Expectations for Good Regulatory Practice lists “operational intelligence and available monitoring or review information” as one of the key inputs required **before an agency can propose changes to regulatory systems** [emphasis added].¹⁴

Although the expectations refer to “operational” intelligence, this also presents a key opportunity for all levels of intelligence to inform policy papers and Regulatory Impact Statements (or similar), legislation design, and regulatory strategies. See “levels of intelligence” on page 15.

While high level descriptors of regulatory intelligence sound appealing and straightforward (likely a reason behind their widespread adoption in many regulatory strategies), uncertainty around what regulatory intelligence actually “is”, and how to use it effectively, persists. This next section explores this disconnect further.

¹⁴ The Treasury (2017). *Government Expectations for Good Regulatory Practice*, page 4.

Key points from Part 1

- Intelligence practitioners working in regulatory agencies need to understand a range of regulatory concepts, including regulatory stewardship, the authorising environment, and delegated authority.
- At the same time, regulators need to understand how intelligence functions work and recognise their own responsibility to use intelligence products appropriately for best effect.
- In addition to focusing on specific compliance issues, intelligence products can help regulatory agencies fulfil their obligations as system stewards, in addition to addressing strategic, operational and tactical compliance issues.
- The integration of intelligence with other regulatory functions (and related decision making) enables the regulator to manage risks in the regulatory operating environment and enhance public trust and confidence.

Want to know more?

Gill, Derek, "Regulatory Management in New Zealand: What, How and Why?" In Frankel, S (ed.), *Learning from the Past, Adapting for the Future: Regulatory Reform in New Zealand*. New Zealand Law Foundation Regulatory Reform Project. Wellington: LexusNexus New Zealand

Ministry for Regulation. *Regulation in New Zealand Quick Guide: Regulatory Practice Essentials*. Available at: <https://www.regulation.govt.nz/assets/Uploads/Government-Expectations-for-Good-Regulatory-Practice.pdf>

New Zealand Productivity Commission (2014). *Regulatory Institutions and Practices*. Available at: [Regulatory institutions and practices – Productivity Commission inquiry material 2013 – 2014 | The Treasury New Zealand](#) (a summary document is also available here)

Pawson, M., Clarke, P. (June 2011). *Achieving Compliance – a guide for compliance agencies in New Zealand*. Sponsored by the Dept of Internal Affairs. Available at <https://apo.org.au/node/303500>

The Treasury (2017). *Government Expectations for Good Regulatory Practice*. Available at: <https://www.regulation.govt.nz/assets/Uploads/Government-Expectations-for-Good-Regulatory-Practice.pdf>

Yeabsley, J., Nixon, C. "Quality Regulation – why and how?", *Policy Quarterly*, Vol. 13, Issue 3 – August 2017. <https://ojs.victoria.ac.nz/pq/article/view/4666/4150>



Part 2: What is regulatory intelligence?

The opportunity

Regulatory intelligence uses the same principles, techniques, and methodologies as other intelligence domains – it is only the regulatory context and application that differs. The practice of intelligence, irrespective of context, provides impartial insight and foresight to enhance understanding of the **operating environment** and inform policy and operational decision making.

Operating environment

The operating environment in a regulatory context refers to the ecosystem external to the regulator, in which regulated parties undertake their activities. Regulatory systems are affected by changes in this environment.

An intelligence-led regulator will not only monitor compliance by regulated parties but will also consider how developments in the operating environment may influence regulated parties' behaviour, or the regulatory system itself.

For example, intelligence analysts might use an environmental scanning model like PESTLE (or its variants) to identify and assess how specific environmental factors could affect current or future behaviour (and thus compliance) and/or demand on the regulator's resources.

Focus box 3:

"Risk-based and intelligence-led"

A number of New Zealand regulatory agencies have added intelligence-led and risk-based terminology to their strategic documents (including operating models), signalling an intention to make regulatory decisions based on risk as identified through the analysis of quantitative and qualitative information. Some current examples are noted below.

- **Civil Aviation Authority (CAA)** – The *CAA Strategy (2025)* notes that an intelligence-led, risk-based approach enables CAA "to determine what, and where, risk is occurring in the system" and to tailor its regulatory approach accordingly.
- **Financial Markets Authority (FMA)** – The FMA states that it uses intelligence-driven insights to assess risks in financial markets, ensuring regulatory interventions are targeted and effective. By analysing trends, emerging threats, and compliance behaviours, the FMA shapes enforcement strategies and policy decisions to protect investors and maintain market integrity.
- **Maritime NZ** – Maritime NZ emphasises an intelligence-led approach in its compliance strategy, focusing on reducing harm, addressing the biggest risks, and using data-driven insights to guide regulatory actions. Its approach combines audits, inspections, investigations, and external intelligence sources to build a comprehensive picture of compliance behaviour.
- **New Zealand Transport Agency (NZTA)** – The *Tū ake, Tū māia* strategy commits NZTA to an intelligence-led approach, using data and insights to proactively address transport risks. By integrating evidence into decision-making, NZTA intends to deliver targeted, effective regulatory actions that enhance safety and compliance.

The 'what' and 'how' of regulatory intelligence

Regulatory intelligence is crucial for effective decision-making in regulatory systems, supporting strategic planning through to operational decision making. At a strategic level, it monitors external trends to anticipate emerging threats and identify opportunities to enhance compliance, helping the regulatory system prepare for future changes. At operational and tactical levels, it identifies regulatory parties at higher risk of non-compliance, provides insights into emerging trends of non-compliance or risk, and builds knowledge about regulated parties. This is all targeted at ensuring the regulatory system uses the most effective regulatory tool(s) to achieve the desired outcome.

The application of intelligence in regulatory practice extends beyond enforcing rules; it involves a strategic approach to identifying vulnerabilities, forecasting trends and informing the tailoring of interventions to specific contexts. This targeted focus helps regulators to allocate resources efficiently, prioritise areas of high impact, and maintain public trust in regulatory systems.

Regulatory intelligence focuses on the behaviour of regulated parties individually and collectively, primarily that which is non-compliant or otherwise jeopardises a desired regulatory outcome. This also includes how macro drivers may impact the regulatory system in the future, such as technological advancements or economic conditions that may increase non-compliance, or demand for other regulatory services (such as licensing).

For intelligence to be most effective in regulatory settings, analysis must focus on providing insight into the most likely reason(s) for non-compliance or other trends as relevant. This informs which regulatory lever is best to achieve the desired outcome, ensuring a proportionate regulatory response (see the Enforcement Triangle in Part 3). For example, if non-compliance in a system is assessed as being unintentional or due to a misunderstanding, regulatory resources can be prioritised towards broad education and engagement, or a targeted educative approach to a particular regulated party. This approach is consistent with just culture principles which are particularly relevant in complex high-risk industries where regulators rely on regulated parties to report incidents and accidents (thus supporting regulatory information collection, intelligence analysis and ongoing system improvement).

Finally, in many regulatory systems, intelligence is often seeking to detect the *absence of activity within a system* (such as when rules or regulations were not followed). This is a core distinction of regulatory intelligence from more traditional intelligence domains, the latter often being focused on intentional actions (such as threatening behaviour).

Focus box 4:**A “lift and shift” approach to intelligence?**

Intelligence practitioners in regulatory agencies apply very much the same information evaluation, analytical tradecraft, and production methods as counterparts in national security or law enforcement agencies.

However, it is not always a simple ‘lift and shift’ of the entire Intelligence Cycle. For example, there can be significant differences in regulatory priority setting and decision-making frameworks, the nature of the regulatory intelligence “target”, information collection sources and methods, and how information can legally be used.

Experienced intelligence practitioners from other sectors who join a regulatory agency proclaiming itself to be “intelligence-led and risk based” may therefore find their assumptions are tested very quickly!

These and related issues are noted in Tables 1 – 4 from page 18 onwards.

Regulatory intelligence provides:

- Insight into compliance trends and system vulnerabilities (such as loopholes and unintended consequences of government policy and legislation),
- Foresight into emerging trends or system shifts that may impact regulatory settings or strategic direction,
- Identification of high-risk regulatory parties for targeted intervention,
- Detection of potential new non-compliance trends and methods (and drivers of related behaviour),
- Support for regulatory assessments (such as certification or licensing) and investigations into suspected non-compliance.



Levels of regulatory intelligence

Like intelligence in other domains (national security, law enforcement, etc.), regulatory intelligence products tend to have a strategic, operational, or tactical focus.¹⁵ The following text boxes explain how these levels typically apply in a regulatory setting.

Strategic regulatory intelligence

Offers insights into non-compliance trends and patterns, drivers of behaviour, strategic risks, and forecasts for planning and resource targeting. Typical examples are baseline assessments, environmental and/or horizon scans, or strategic assessments about particular issues or risks. Strategic regulatory intelligence products are usually (though not exclusively) developed for senior leaders, to help them shape policy and strategy, and to make decisions about medium-long term planning and resource allocation.

Operational regulatory intelligence

Tends to focus on sectors or sub-sectors of the operating environment. Typical operational intelligence products include profiles or deep-dive assessments about a particular issue, such as a method of non-compliance, a vulnerability in the sector, or the impact of a new development on part of a sector or group of regulated parties. These are usually produced to help agency functional leads plan work programmes (such as an intervention targeting high-risk behaviour by a group of regulated parties).

Tactical regulatory intelligence

Supports investigations, audits, or specific cases with detailed assessments of parties involved and their activities. Pre-investigation support highlights where to find evidence, while post-investigation analysis identifies breaches (and how these occurred). This intelligence follows strict protocols for information management and potential prosecution considerations. Examples can include profiles, network/link analysis, timelines, and intelligence reports about relevant matters (such as methods used by a non-compliant regulated party to conceal their behaviour).

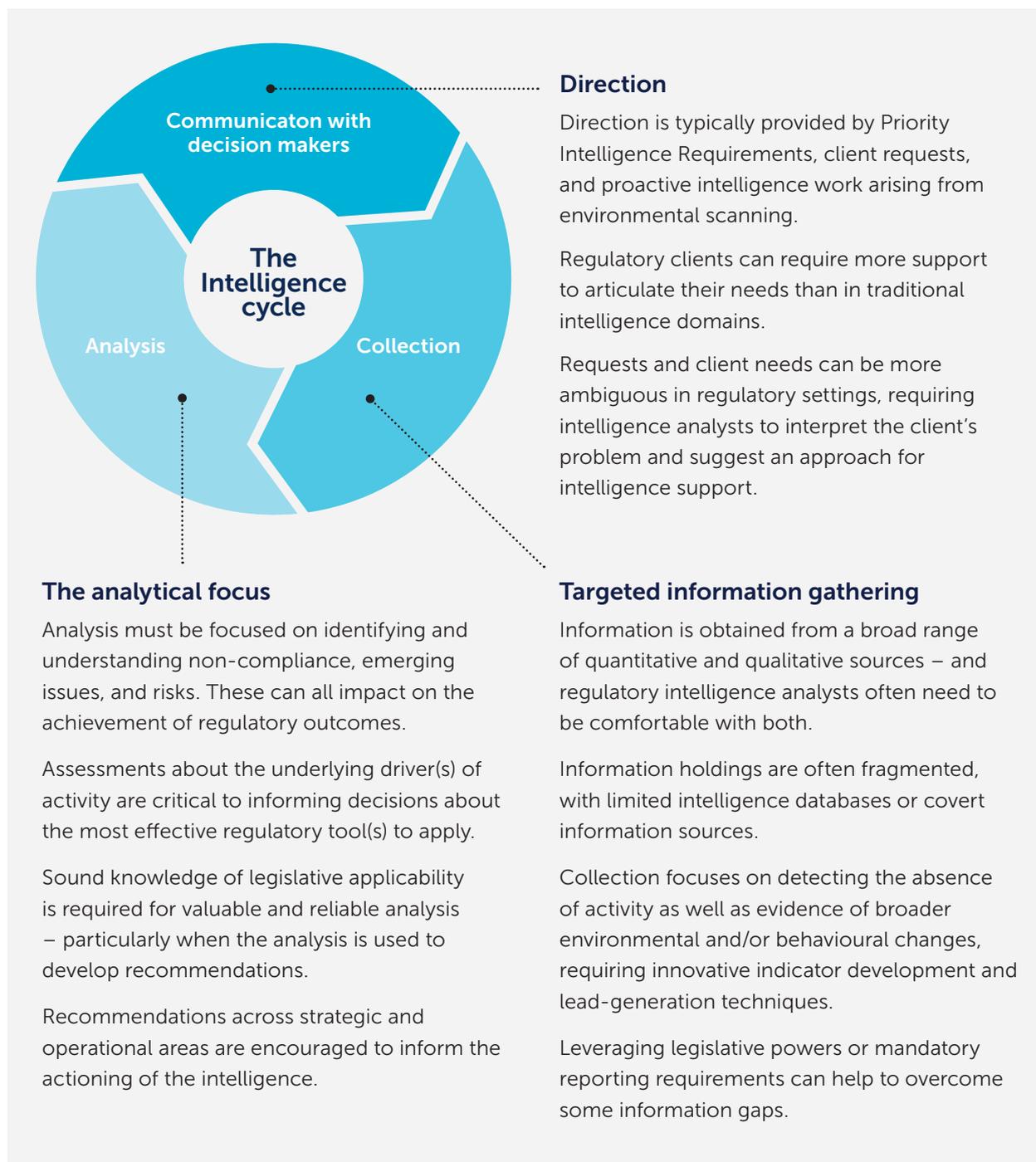
To ensure effectiveness, intelligence products must be aligned with the corresponding level and timing of decision-making within the regulatory agency. For instance, strategic products should be designed to inform senior leaders at the appropriate stage in the agency's strategic planning, budgetary, and policy cycles, rather than being provided post-decision. Likewise, operational-level products should be delivered to align with operational decision-making cycles. For example, if the agency's planning function reviews or sets its key regulatory intervention or operational planning priorities quarterly, it is essential that operational intelligence products are prepared in time for consideration. The alignment of products with decision-making processes is further elaborated on in Part 4.

¹⁵ We don't define "strategic", "operational" and "tactical", because we assume the reader is already familiar with these terms. Definitions can be found in the NZIIP Intelligence Practitioner's handbook.

Regulatory intelligence and the Intelligence Cycle

The Intelligence Cycle¹⁶ largely works the same way in a regulatory context as in traditional intelligence domains. While intelligence tradecraft and practice remain broadly consistent, there are unique factors of the regulatory environment that are prominent at different stages of the Intelligence Cycle. This section highlights considerations of applying the Intelligence Cycle in regulatory settings and the implication of these for intelligence practitioners and clients.

Figure 2: How the Intelligence Cycle applies in a regulatory setting (source: the authors)



16 Again, the authors assume the familiarity of readers with the Intelligence Cycle.

Direction

As with intelligence functions in more traditional contexts, regulatory intelligence is guided by three primary sources of direction, requiring varying degrees of communication with decision makers. These are described in the following text boxes.

Priority Intelligence Requirements (PIRs)

Strategic direction provided by PIRs ensures that intelligence efforts align with the regulatory agency's organisational priorities. These may reflect the broader regulatory strategy, legislative purposes or principles, organisational objectives, or specific system-level concerns. In most cases, monitoring compliance trends and external developments is central to meeting PIRs. As with other contexts, regular review of PIRs is essential to keep intelligence efforts aligned with the dynamic regulatory environment and evolving decision maker needs. However, the creation of PIRs depends on the regulatory agency having a clear strategic direction and organisational priorities in the first place.

Client requests

Intelligence requests can originate at any level in the agency – frontline regulators, investigation teams, policy advisors, or senior leaders. Translating these requests into clear, actionable intelligence requirements is a key skill and often requires in-depth engagement to clarify the purpose, scope, and desired outcomes.

Proactive intelligence

Regulatory intelligence functions also produce proactive assessments – typically derived from ongoing environmental scanning and/or good relationships with agency personnel – that identify emerging risks or shifts in the operating environment. This approach ensures early detection of potential issues and allows decision makers to stay ahead of change. Proactive intelligence efforts should be guided by PIRs to remain focused on priority risks for the system.

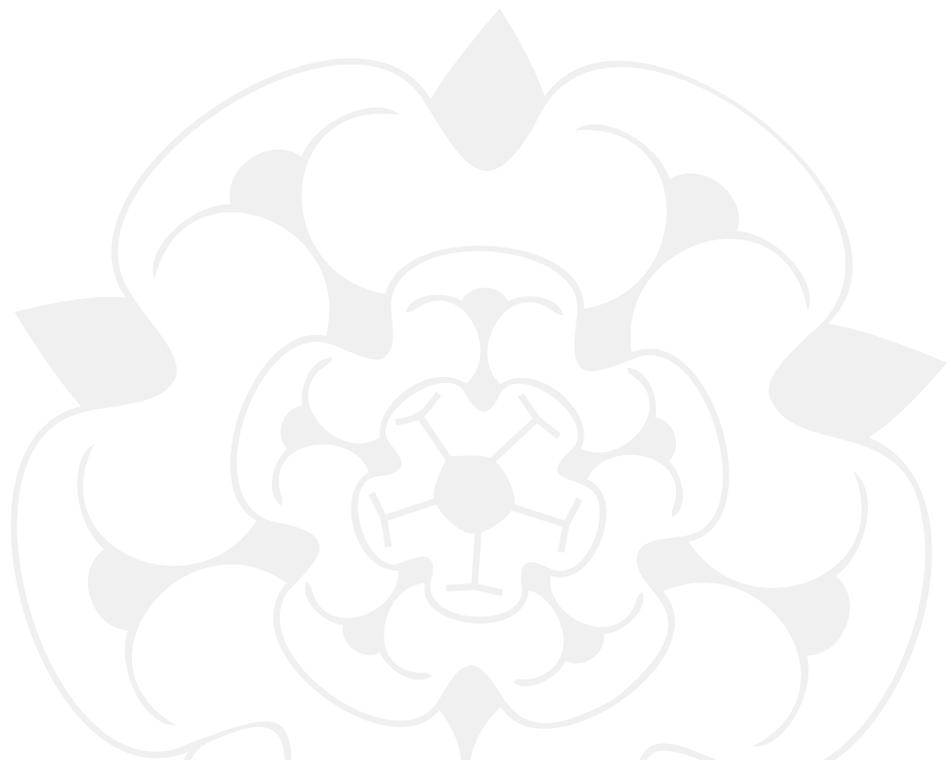


Table 1: Considerations for 'Direction' in regulatory intelligence functions

Consideration	Implication
<p>Education and awareness of intelligence can be limited</p> 	<p>Continual support and outreach are needed to educate the agency on intelligence roles, processes, terminology, and limitations – especially if the function is new.</p> <p>This is important so that the intelligence function can be appropriately directed and used.</p> <p>Executive level support will be required to overcome any resistance to change.</p>
<p>The agency may lack a clear set of regulatory priorities or focus areas</p> 	<p>Without an existing set of priorities to “dock into”, it can be difficult to identify where intelligence can most add value.</p> <p>Without clear strategic direction, the intelligence function can inadvertently (a) focus on issues or risks that decision makers do not think are important, or (b) focus on responding to tasks that do not leverage the full value of an intelligence function.</p> <p>An underemployed or unappreciated intelligence function may end up supporting only a small range of supportive clients (usually with tactical products).</p>
<p>There may not be an existing decision-making framework for intelligence products to feed into (or be tasked from)</p> 	<p>The intelligence function needs to be connected to planning activity, to help ensure that intelligence products can be integrated with other business inputs. Otherwise, intelligence outputs may be considered irrelevant or not produced in a timely manner.</p> <p>Without a regular link to planning or decision-making forums, the intelligence function may only have opportunities to support some decision making in isolation.</p> <p>Intelligence function-led attempts to bridge the link between itself and planning/decision-making, such as by creating a tasking and coordination process (or similar), will fail without executive-level support.</p>

<p>Misunderstanding about what makes intelligence different to data, performance or business reporting</p>	<p>Intelligence practitioners in regulatory agencies may find themselves continually having to defend their value-add to clients and stakeholders who do not understand the differences between different analytical functions or have never used intelligence products before.</p> <p>There may be a mismatch between decision maker expectations of the intelligence function and what the function can deliver (for example, intelligence analysts generally are not data scientists or business analysts). This can also manifest in requests to the intelligence function that do not fully maximise the value of intelligence – such as requests to collate information (compliance records or media articles).</p> <p>The intelligence function should use all opportunities to incorporate a range of qualitative and quantitative outputs from other teams (throughout the product planning and development process), to ensure intelligence products are “all source” and provide a comprehensive, multidisciplinary, understanding of risk.</p>
<p>Taskings can be more ambiguous than in non-regulatory intelligence domains</p>	<p>Analysts in regulatory agencies are often required to interpret the client’s problem or question and provide an approach for a product, rather than receiving clear and refined taskings.</p> <p>While this challenge is not unique to regulatory intelligence, it can be particularly difficult for intelligence practitioners who are new to the highly technical regulatory context and may not know what needs to be clarified with the client.</p>



Collection

In regulatory environments, intelligence collection involves both detecting activity and *recognising its absence*. Detecting an absence of activity – such as particular non-compliance – requires a nuanced, multidisciplinary approach, and the use of all available information sources. This can include the merging of several information sources to identify anomalies that could indicate a regulated party is at higher risk of non-compliance.

A range of information sources are available to regulatory intelligence practitioners. Typical examples are provided below in Table 2. As with intelligence collection in non-regulatory contexts, collection still must be focused, lawful, and ethical.

Table 2: Common regulatory information sources

Source type	Examples
Quantitative data	Regulatory agencies often hold large amounts of quantitative data from their sectors. These can include activity dashboards, performance datasets, and occurrence records. Industry groups and other agencies may have relevant statistics also.
Organisation records (qualitative)	Case management records, investigation findings/outcomes, audit reports, licensing databases, observations, meeting notes, published advisory notes (or similar) for regulated parties. Policy analysis or other advisory papers may also have been produced by other functions within the agency.
Complaints & tipoffs	Anonymous tips, sector-specific grievances, customer service inputs (where applicable), complaints by members of the public about a regulated party or a regulatory action.
Experts/sector groups	Subject matter experts (SMEs), and/or technical information, surveys or research that is often held by sector bodies/umbrella groups.
Partner agencies	Information and intelligence products from other regulators, law enforcement agencies, cross-sector bodies. Policy and cabinet papers (including Regulatory Impact Statements). Statistics from other agencies, such as sector membership activity, injury statistics, etc. Research and other information accessed via membership with international bodies (such as the International Civil Aviation Organisation).
Regulated parties	Mandatory or voluntary information submissions to meet legislative requirements, information provided during regulator site visits or interviews, submissions provided to the regulator as part of consultation processes for new policy, rules or legislation.
Open-Source Intelligence (OSINT)	Media reporting, industry publications, think tank reports, environmental scanning tools, teaching materials.

In many regulatory agencies, intelligence functions are relatively small, meaning there are often no dedicated resources for collection or stakeholder engagement. Without dedicated collection resources, and often also without clear stakeholder mapping or a structured client relationship management system, intelligence practitioners can't rely on a steady flow of information reaching their desks – they have to *actively seek it out*. This means wearing multiple hats, from analyst to collector to relationship manager, engaging directly with industry, regulators, and other stakeholders to gather insights. While this can be challenging, it also creates opportunities for intelligence practitioners to shape their intelligence processes, build networks, and refine their ability to identify key sources of information.

Focus box 5: Operational lead generation

At an operational level, regulatory intelligence functions should be trying to identify regulated parties posing a high risk of non-compliance. Noting that past non-compliance is not necessarily a predictor of future non-compliance, analysts need to create indicators to alert them to potential signals of change. The presence of such indicators creates “leads” for further questioning, collection and analysis.

Leads might arise from:

- Public or industry complaints about a regulated party
- Mandatory reporting by regulated parties
- Information from partner agencies
- Anomalies in internal quantitative datasets.

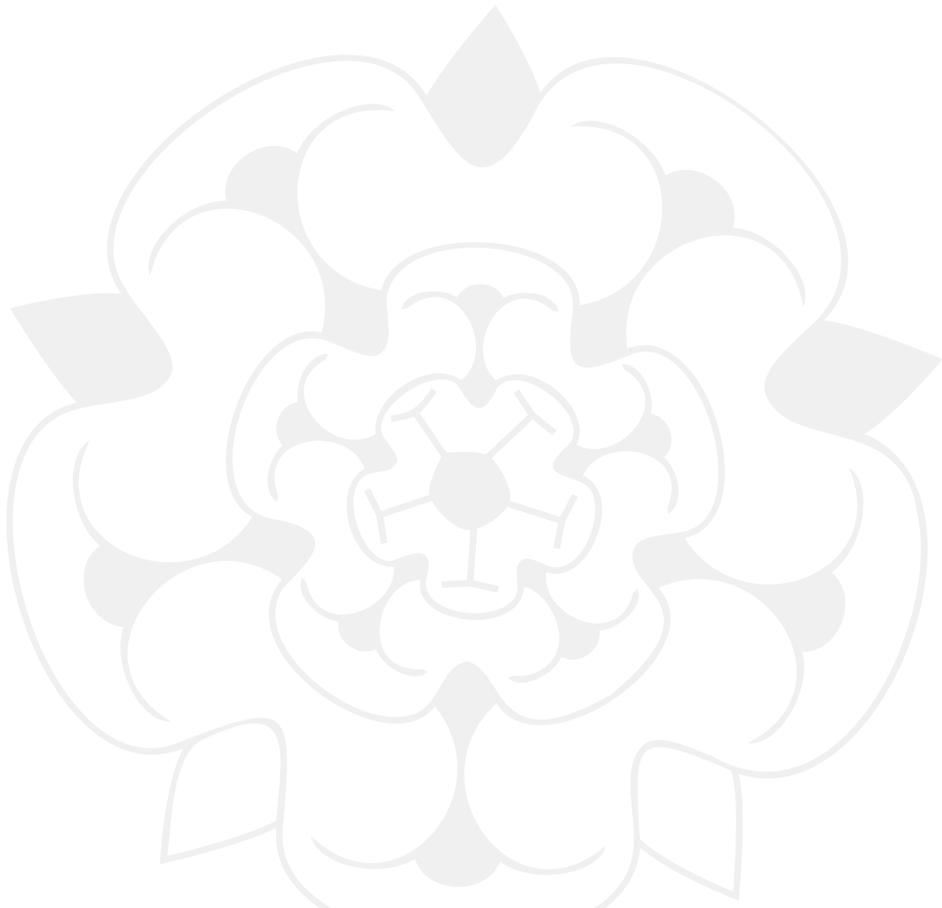
See also the Swiss Cheese Model of Accident Causation in Part 3.

Table 3: Considerations for ‘Collection’ in regulatory intelligence functions

Consideration	Implication
<p>Data-rich environments require the use of quantitative and qualitative information</p> 	<p>Regulatory agencies collect a lot of information but can be “data rich and knowledge-poor”. Familiarity with using and understanding quantitative information is critical for regulatory intelligence practitioners, including for lead detection and trend analysis. Data literacy training or similar can be helpful for regulatory intelligence analysts.</p> <p>Quantitative information generally provides the ‘what, when, and where’. Qualitative information generally provides the why and how. The ‘who’ can come from either quantitative or qualitative information sources (or both). Multi-disciplinary intelligence products are the ideal approach.</p> <p>Use of dashboards and statistics in intelligence products must be complemented by context, such as inspection notes, compliance history/narrative, and SME comments. This helps to provide the ‘so what’ for the intelligence client.</p>

<p>Limited intelligence databases or information management systems – information holdings can be fragmented</p> 	<p>Not all information about regulated parties' history and/or interactions with the regulator is recorded centrally. Frontline regulators (such as inspectors or compliance officers) often have a lot of knowledge in their heads or in hard copy notebooks or personal drives that is not transferred into a central repository where it can be easily accessed by others.</p> <p>Also, the agency's data management systems may be organised by functional group, rather than by regulated party, and there may not be a centralised case management system that offers an end-to-end view of the regulated party. Nor is there usually a single functional group that is 'responsible' for the regulated party, due to the range of interactions involving multiple regulatory teams. This means analysts must go to many different repositories to find information about a single regulated party.</p> <p>Intelligence analysts in regulatory agencies may not have access to sophisticated link analysis software. Network analysis may need to be done manually by inputting content into spreadsheets and using formulae (or a helpful data scientist).</p>
<p>Analysts can't collect all the information they need while sitting at their desks</p> 	<p>Due to the above, intelligence analysts need to build their own relationships with frontline personnel and SMEs. These individuals can help analysts find and evaluate information, put it in context, and assess its significance. They can also broker access to other useful SMEs and/or arrange site visits to help analysts understand how things work "on the ground."</p> <p>Successful relationship building between the intelligence function and other teams also enhances the profile of the intelligence function, which increases the likelihood that intelligence products will be requested and used in the future.</p>
<p>Information gaps and absence of covert collection</p> 	<p>A lack of covert collection options and limited visibility of unreported behaviour (partly enabled by self-reporting regimes) increases the importance of strong indicator development. This underlines the importance of proactive and regular monitoring using an environmental scanning framework.</p> <p>Leveraging legislative regulatory powers or moving up through the Enforcement Triangle (see Part 3) may assist with overcoming some information gaps.</p> <p>The circulation of intelligence collection priorities within regulatory agencies may improve information recording by frontline personnel and/or encourage the submission of 'notings' directly to the intelligence function.</p>

<p>Regulated parties may report on one another to the regulator</p> 	<p>Alleged non-compliance by a regulated party may be reported, by a competitor, to the regulator.</p> <p>The motivation for doing so can be mixed but often boils down to one or more of these concerns: the allegedly non-compliant competitor will give the industry a bad name, the competitor is allegedly cutting corners to lessen their overheads (disadvantaging compliant parties), the reporting party wants to disrupt the allegedly non-compliant party, and/or the importance in principle of having an equal playing field.</p> <p>Such motivations need to be considered by intelligence analysts when evaluating incoming complaints or reported concerns, particularly when the reporting party is anonymous.</p>
<p>Legislative powers</p> 	<p>Regulatory agencies often operate within strict legislative frameworks. Certain information collection powers and information sharing protocols of the regulator (or supporting agency, department, or entity) are often explicitly delegated or outlined in legislation. This can include specific types of information that can be shared or collected, and by whom.</p> <p>A robust understanding of collection powers and information sharing provisions is critical to leverage all collection opportunities while adhering to legislated requirements.</p>



Analysis

While the core skills of intelligence analysis remain consistent across different intelligence domains, the regulatory context brings several unique considerations. These are described in the following text boxes.

Legislative Alignment

Analysis must be grounded in an understanding of the legislative framework, including statutory obligations and precedent-setting judicial decisions. The absence of rules or ambiguous requirements can create systemic vulnerabilities or permit activities that are not consistent with desired regulatory outcomes. Legislation may also prescribe the tools available for use by a regulator to encourage (or mandate) compliance. Regulated parties may also use the Official Information Act 1982 or Privacy Act 2020 to obtain information relevant to them. This can be quite a shift for intelligence analysts from national security contexts. While an awareness of all this is not unique to regulatory settings, it plays a much larger role for intelligence practitioners here than in other environments.

Compliance focus

Intelligence analysis must maintain a clear focus on behaviours and risks that impact compliance and the achievement of regulatory outcomes. This includes assessing how developments in the environment could influence compliance barriers, sector dynamics, and/or the regulator's ability to respond effectively.

Role of the Regulator

The regulator's presence, approach, and perceived effectiveness significantly influence behaviour (including compliance) in an operating environment. A lack of regulatory action (from information and guidance through to enforcement) can unintentionally enable non-compliance, whereas an inconsistent regulatory approach can have other unintended consequences. While intelligence informs the regulatory approach, the role and influence of the regulator in the system is worth considering when conducting broader environmental scans.

Technical expertise is almost always required

Regulatory systems include a wide range of SMEs who have extensive technical knowledge about bespoke subjects. Engaging SMEs throughout intelligence product development – particularly during collection and analysis phases (such as bringing them into a Structured Analytic Technique session) – improves the quality of analysis and strengthens relationships. SMEs are also extremely valuable during the quality assurance process prior to the publication of products.

Recommendations

Unlike more traditional intelligence domains where there is a clear demarcation between the roles of intelligence and policy analysts, actionable recommendations are often expected in regulatory intelligence products. These can range from strategic planning input to specific operational actions.

Recommendations may relate to:

- Identified vulnerabilities in the system
- Alignment with regulatory objectives
- Opportunities to reduce risk, enhance compliance, or strengthen regulatory controls.

Recommendation development should never be treated as a last-minute thing. The subject matter in regulatory agencies is often very technical, complex and detailed, and there may also be a history of different regulatory tools being applied to the issue already. Being unaware or getting any of this 'wrong' in a recommendation (or the analysis that underpins the recommendation) can easily undermine the credibility of the intelligence function.

Engagement with SMEs while drafting recommendations is critical – in addition to advising the analyst of any known "fishhooks", SMEs can also offer suggestions for helping to successfully "land" recommendations with targeted decision makers. However, analysts should not be offended if recommendations are not accepted. Decision-makers may consider a wider array of factors than are evident to analysts or SMEs.

Focus box 6:

Engaging with SMEs and other experienced personnel – know the history

Although we have talked repeatedly about the importance of intelligence practitioners engaging with SMEs and frontline regulators while developing intelligence products, it pays to be aware of the history and context. Such awareness should extend to any prior efforts to address a product's subject.

For some regulatory agencies, the establishment of a new intelligence function and the direct access to senior managers it provides through intelligence products, can be perceived by experienced frontline personnel or SMEs as an opportunity to surface issues they believe were previously overlooked, mishandled or even "buried" by middle management before the function existed.

Intelligence analysts should be alert to this possibility and not treat information provided by frontline staff or SMEs at face value. Analysts should always test and seek to corroborate information, irrespective of its source (this is good practice regardless of context). Balancing this requirement with the professional respect accorded to experienced regulatory personnel and SMEs requires tact and sensitivity.

Table 4: Considerations for 'Analysis' in regulatory intelligence functions

Consideration	Implication
<p>Legislative alignment </p>	<p>Intelligence practitioners must have a sound understanding of the primary and secondary legislation of their regulatory system, including breach types, legislative powers, and precedent-setting legal decisions. They should also identify their agency's legal SMEs and consult them when relevant to assessments or recommendations.</p> <p>Intelligence analysts who are new to regulatory agencies and/or otherwise unfamiliar with the policy cycle and legislation development may benefit from a 'machinery of government' course or similar.</p>
<p>Regulatory intelligence analysis leans heavily on regulatory subject matter expertise </p>	<p>Regulatory intelligence practitioners need to build expertise in two fields of knowledge: intelligence tradecraft, and the subject matter relevant to the regulatory agency.</p> <p>To provide accurate and relevant analysis, analysts require sound technical knowledge of the regulatory system, regulated parties, applicable legislation, compliance requirements, and available tools. See also SME collaboration near the bottom of this table.</p>
<p>Understanding of risk management and practices </p>	<p>For analysis to be as effective as possible, regulatory intelligence practitioners require a sound understanding of risk management concepts and practices, and how this aligns to the regulatory frameworks of their organisation. This ensures any identification or assessment of risk is aligned to the risk posture of the organisation, and recommendations are calibrated accordingly.</p> <p>A sound understanding of risk management practices and their intersection points with intelligence also assists with communicating the value of intelligence and supporting decisions makers to "action" the intelligence.</p>
<p>Compliance and outcome focused </p>	<p>Analysis must stay connected to the likelihood of non-compliance or risks to achieving regulatory goals.</p> <p>It can be tempting, given the quantity of untapped quantitative information often available in regulatory agencies, for products to focus on descriptive analysis (which although often useful, is limited in its temporal focus, i.e. focused on what has already happened).</p> <p>Analysis should have a clear line of sight to a particular compliance risk or outcome, to provide the 'so what?' for the client.</p>

<p>Role of the regulator</p> 	<p>The decisions, presence and posture of the regulator can be a significant driver of behaviour in the operating environment.</p> <p>It's important to consider this when analysing the driver(s) of non-compliance, vulnerabilities in the system, and recommendations for action.</p> <p>The competence of the regulator is also relevant, and intelligence products can sometimes expose poor regulatory agency capacity, capability, or performance. The way this is communicated requires care, while maintaining the integrity of the intelligence analysis and process.</p>
<p>SME collaboration during the analysis phase is very important</p> 	<p>Collaborating with SMEs can be an adjustment for intelligence analysts who aren't used to having their draft assessments reviewed by non-intelligence personnel. Some analysts may initially see this as compromising the objectivity of the analytical process. However, collaboration with SMEs enhances analytical quality and ensures relevance.</p>
<p>Recommendations</p> 	<p>Regulatory intelligence practitioners are often required to provide action-oriented recommendations, ranging from strategic advice to operational suggestions. This can be technically and culturally challenging, and needs to be managed very carefully, particularly in organisations where recommendations from intelligence functions have not been common place. SME engagement in recommendation development is particularly valuable.</p>

Focus box 7:

Is regulatory intelligence actually "new"?

The 'intelligence' component of "regulatory intelligence" is nothing new and rather is grounded in well-established best practice.

What is relatively new, however, is the adoption of intelligence tradecraft and processes by regulatory agencies.

Regulatory intelligence is one tool (of many) that helps regulators understand the dynamics and risks in the external operating environment, and how these can influence the behaviour of regulated parties.

Intelligence products help regulators to make informed choices about appropriate regulatory actions to address and prevent non-compliance.

Key points from Part 2

- There currently exists a degree of uncertainty and ambiguity around what constitutes regulatory intelligence. The field is emergent and sits as part of a diverse regulatory landscape where there is no “one size fits” all approach – for either regulation or intelligence.
- To understand regulatory intelligence, it is essential to understand the component parts – regulation and intelligence. Regulatory intelligence uses traditional intelligence tradecraft, but in a regulatory setting. It is this regulatory setting that requires some aspects of traditional tradecraft to be deployed with different emphasis compared to other intelligence domains of (for example) defence, national security, and law enforcement.
- Regulatory intelligence is one of many tools available to regulatory decision makers. It is focused on identifying and understanding risk and non-compliance, and provides insight and foresight at strategic, operational, and tactical levels.

Want to know more?

AELERT Regulatory Intelligence Community of Practice (2020). *Leadership in Regulatory Intelligence – Research Report*. Available to AELERT members only.

Quarmby, N. (2018). *Intelligence in Regulation*. Federation Press, Sydney Australia.

Reason, J. (2000). “Human error: models and management.” *BMJ* 2000; 320:768. Published 18 March 2000, doi: <https://doi.org/10.1136/bmj.320.7237.768>



Part 3: Understanding regulatory models

Overview

There are a range of regulatory models and frameworks in use. Our goal in this section is to propose linkages between the intelligence function and some key regulatory models that regulatory intelligence practitioners will likely encounter. We hope this will help readers to “see” where they can support the work of workgroups or teams in their agencies.

Regulatory models play a critical role in managing risks, addressing systemic vulnerabilities and addressing compliance within organisations and industries. Useful frameworks for regulatory intelligence practitioners to understand in the New Zealand context include:

- Problem-centric Regulation
- Enforcement Triangle
- Swiss Cheese Model of Accident Causation.

Each of these models offers distinct approaches to regulatory oversight and intervention.

Problem-centric Regulation

Problem-centric Regulation involves the “systematic identification of important hazards, risks, or patterns of non-compliance”, with an emphasis on resource allocation prioritised according to risk.¹⁷ Risks are treated as problems to be solved, using a range of tools available to the regulator. Problem-solving is undertaken collaboratively by a range of teams within the regulatory agency, with different teams playing different roles (or deploying different tools) according to their functions.

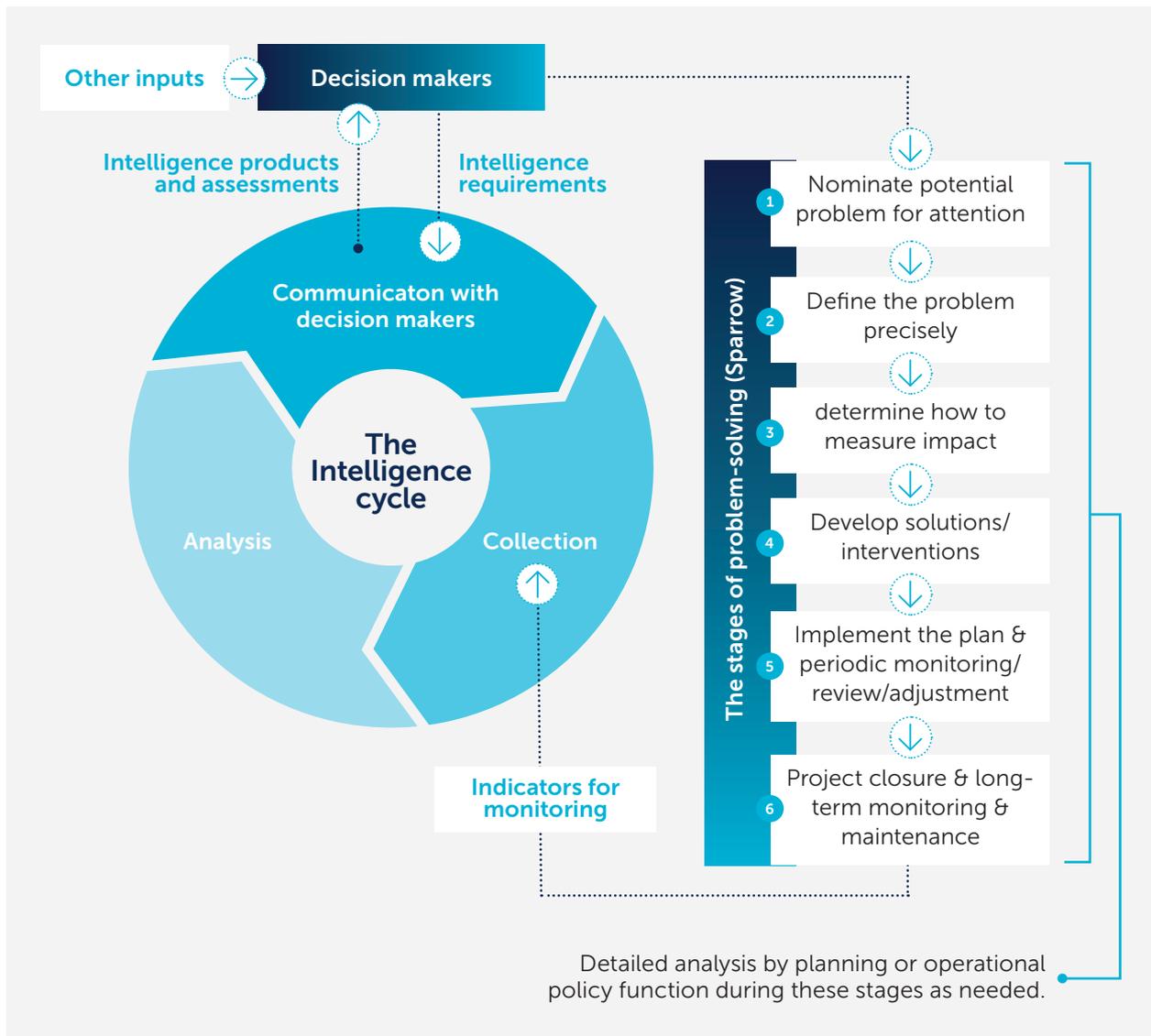
Harvard University Professor Malcolm Sparrow has written extensively about Problem-centric Regulation. He encapsulates the essence of the problem-centric approach in the following mantra: “Pick Important Problems: Fix Them.”¹⁸ He proposes a list of the problem solving “stages”,¹⁹ which we show overleaf in Figure 3 with some annotations and suggested interfaces with the Intelligence Cycle. Using this model, intelligence products are used to identify and understand key risks, and in doing so, help decision makers to prioritise (or nominate) a problem for potential action.

17 Quarmby, N., Young, L. J. (2010). *Managing Intelligence – The Art of Influence*. The Federation Press, Annandale, NSW, Australia. Page 45.

18 Sparrow, M. (2020). *Fundamentals of Regulatory Design*. Publisher: self-published by the author, 2020. Page 74.

19 *Ibid*, p85.

Figure 3: How intelligence supports problem-solving regulation (source: the authors)



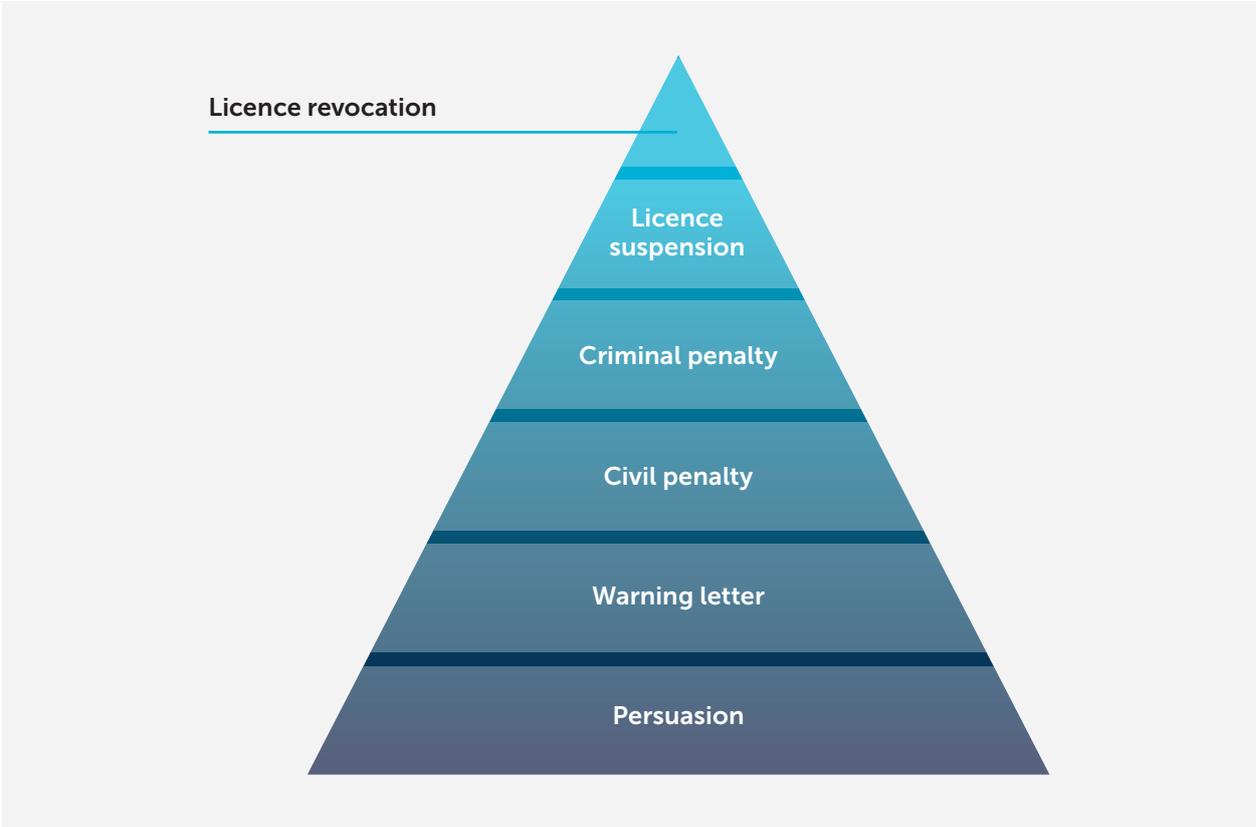
The Enforcement Triangle

The Enforcement Triangle (sometimes called the “regulatory pyramid”, “compliance pyramid”, “Braithwaite triangle”²⁰ or “responsive regulation triangle”) is a **graduated response model** showing an escalation of measures deployed to achieve regulated parties’ compliance (or exit them from the regulatory scheme if necessary). The interventions shown in the layers of the triangle are generally available to all regulatory agencies although terminology may differ slightly. Regulatory tools used by each agency can be aligned to the layers of the triangle (noting that some agencies may group layers differently). For example, educational materials are typically among the tools used at the “persuasion” level.

The model assumes that most regulated parties will try to comply and thus attract the light-touch interventions at the base of the pyramid (which are the least expensive to deploy and most commonly used by agencies). The most severe (and costly) interventions are reserved for the small number of regulated parties at the top of the pyramid, for whom earlier measures have not achieved a change in behaviour.

20 Originally developed by Ayres & Braithwaite. Ayres, I., & Braithwaite, J. (1992). *Responsive Regulation: Transcending the Deregulation Debate*. New York: Oxford University Press. Page 35.

Figure 4: The Enforcement Triangle (source: Ayres & Braithwaite, 1992)



Graduated response model

A graduated response model such as the Enforcement Triangle focuses on escalating regulatory actions based on the severity or recurrence of non-compliance.

Initial measures may involve educational outreach or warnings, aimed at fostering cooperation and understanding. Persistent or more egregious violations trigger proportionate consequences, such as fines, sanctions, or operational restrictions. This model balances punitive measures with opportunities for remediation, incentivising compliance while tailoring interventions to individual cases.

The VADE model is another example of a graduated response model and is based on the Enforcement Triangle.²¹

Using this model, regulatory intelligence practitioners can combine their analysis of an issue, risk or regulated party behaviour with (a) SME insights and (b) knowledge of previous agency efforts to achieve compliance, to situate the product’s subject within a layer of the enforcement triangle. This in turn can help intelligence clients to identify if escalation through the model might be appropriate, and to integrate this into planning decisions.

21 For more information about VADE, see Pink, G. (2021). *Navigating regulatory language – an A-to-Z guide*. RECAP Consultants Pty Ltd, Canberra, Australia.

Swiss Cheese Model of Accident Causation

The Swiss Cheese Model of Accident Causation (commonly known as the “Swiss cheese” model) likens to a slice of Swiss Cheese an organisation’s defences against failure.

- **Each layer** symbolises a safeguard—policies, procedures, audits, or training—designed to intercept breaches. By layering diverse defences, the model reduces the likelihood of systemic failure, emphasising redundancy and resilience in regulatory frameworks.
- **The holes in each slice of cheese** represent individual weaknesses in different parts of the defence system. The holes vary in size and position in the slices. A system failure occurs when holes in all the slices momentarily align, allowing a hazard to pass through each slice, leading to an accident.
- **The aligned holes** create “a trajectory of accident opportunity”, through which the hazard can pass.²²

The model’s creator, James Reason, proposes that most accidents can be traced to one or more of four levels of failure, these being: organisational influences, unsafe supervision, preconditions for unsafe acts, and the unsafe acts themselves. The holes in the defences arise because of either **active failures** or **latent conditions** (or a combination of both).

Active failures (sometimes called active “errors”)

The unsafe acts committed by people who are in “direct contact” with the system, and these failures are usually short-lived.²³ In the aviation system, this could be a pilot (for example) who makes a mistake or violates procedure.

Latent conditions

Latent conditions – as the term suggests – may lie dormant within the system for many years before they combine with active failures and local triggers to create an accident opportunity. Unlike active failures, whose specific forms are often hard to foresee, latent conditions can be identified and remedied before an adverse event occurs. Understanding this leads to proactive rather than reactive risk management.²⁴

Latent conditions tend to arise because of “decisions made by designers, builders, procedure writers, and top-level management” and translate into “error provoking conditions” in the workplace, such as time pressures, understaffing, fatigue, inadequate equipment, and inexperience.²⁵

Using this model, regulatory intelligence can be used to identify and monitor indicators of latent conditions that might combine with active failures to create harmful situations, and highlight these for attention by decision makers. Ideally, the agency’s decision makers would have a suitable decision-making cadence or framework to enable such products to provide early warning, and for decisions to be made to prevent the holes forming.

22 Reason, J. (1990). *Human Error*. New York: Cambridge University Press, page 173.

23 Reason, J. (2000). “Human error: models and management.” *BMJ* 2000; 320:768. Published 18 March 2000, page 769.

24 *Ibid.*

25 *Ibid.*

How does intelligence work with these models?

Intelligence enhances the efficacy of regulatory models, like those described above, by supporting the identification and understanding of risks in the external operating environment. When well-integrated with decision-making frameworks, intelligence helps regulatory decision-making become more informed, responsive, and proactive. It is essential for intelligence practitioners to understand the regulatory models used in their agencies, so that they can know where best (and when) to provide intelligence inputs to enhance regulatory decisions.

Table 5: How intelligence can support regulatory models

Model	Intelligence application
<p>Problem-centric Regulation</p> 	<p>Intelligence analysts should familiarise themselves with not only the regulatory tools that are used in their agencies, but also the policies and procedures that govern their use.</p> <p>In particular, the analyst should be asking which tools have already been deployed to address the subject of the intelligence product, the impact this had (if any), and reason(s) why a certain tool(s) might have been chosen compared with other tools.</p> <p>This helps to inform not only the analysis of the situation and related implications for intelligence clients, but also the development of recommendations (where applicable). This all helps to add value for the intelligence client.</p> <p>Applicable intelligence products: many types, provided that the intelligence products are used to inform agency decisions and not requested or delivered after the fact.</p>
<p>The Enforcement Triangle (and graduated response models generally)</p> 	<p>Intelligence enables regulators to calibrate actions based on the nature and extent of assessed non-compliance.</p> <p>By continuously analysing patterns and drivers of non-compliance, regulators can adapt their approach dynamically, anticipating challenges and pre-empting systemic vulnerabilities.</p> <p>Applicable intelligence support/products: strategic assessments, driver/root cause analysis, environmental scans, identifying and prioritising potential profile subjects, specialised information collection.</p>

Swiss Cheese Model of Accident Causation



Intelligence helps identify vulnerabilities or gaps within each layer, relating to policies, training, audits, or the carrying out of procedures. By monitoring emerging risks and systemic trends, intelligence can help to maintain robust and responsive regulatory settings, reducing the chance of misalignments that could lead to breaches.

If the latent conditions and potential active failures can be identified by the intelligence function (through research and engagement with SMEs), this can in turn inform intelligence monitoring priorities (e.g. regular scanning, bespoke collection planning).

Monitoring these priorities, once they are embedded into an environmental scanning framework, positions the intelligence function to provide early warning to decision makers of indicators, patterns and trends that may signal an impending failure. This helps the agency to proactively manage risks.

Applicable intelligence support/products: indicator/warning monitoring, pattern/trend analysis of accidents and near-misses, environmental scans, system/sector strategic assessments, driver/root cause/back casting analyses, etc.



The use of intelligence products to support regulatory decision-making, even when linked to a familiar regulatory model, can pose challenges for new regulatory intelligence clients. Intelligence managers may need to take time to walk new clients through the following concepts:

- **Intelligence analysis is guided by a set of professional standards, including the requirement to be unbiased.** Intelligence analysts are trained to be aware of their biases and to mitigate these as much as possible when applying the Intelligence Cycle. This may involve, for example, the analyst providing alternative explanations or a range of options for the reader to consider. This can frustrate new clients who are expecting the analyst to be more “definite” about their assessments, or to recommend a specific course of action.
- **Understanding that intelligence products are often based on incomplete or conflicting information** (and that this is par for the course for intelligence practitioners!).²⁶ New clients may be unaware that intelligence analysts evaluate all collected information, and that a single piece of “anecdotal” information that differs from accepted wisdom can be just as valuable as information that has been corroborated many times over. New clients may incorrectly think that the use of anecdotal information (or “single-source, uncorroborated” in intelligence parlance) means the intelligence assessment or product cannot be trusted.
- **The use of inferences to develop assessments. And, linked to this, the use of probabilistic language and confidence levels.** This can be very confusing for new clients – particularly for regulators who are used to dealing with facts and evidence. It is important that the intelligence function proactively engages with clients to help them understand that assessments are simply the “best judgement” of the intelligence function, based on the information available and the related limitations, at the time of publication. And that assessments can be updated and circulated as new information is received.
- **How to actually use intelligence products, noting the above.** New clients may wrongly believe they “must” act on the basis of a new intelligence product (simply because the intelligence product now “exists”), and that this overrides other considerations, existing priorities, and stewardship responsibilities. Not so! Intelligence is simply one input to decision making (see Figure 3), and many other considerations apply. This is discussed in more detail in Part 4.

26 Stephen Marrin has observed: “In 2001, the CIA website noted that: invariably, analysts work on the basis of incomplete and conflicting information. [CIA’s] analysts are taught to clearly articulate what is known (the facts), how it is known (the sources), what drives the judgements (lynchpin assumptions), the impact if these drivers change (alternative outcomes), and what remains unknown.” (See Marrin, S. (2011). *Improving Intelligence Analysis – bridging the gap between scholarship and practice*. Routledge Studies in Intelligence. New York, Routledge (Taylor & Francis Group), page 30).

Key points from Part 3

- Regulatory models are a helpful way to conceptualise how regulators can manage risks, vulnerabilities and compliance, within complex regulatory systems.
- The three models discussed in this section – Problem-centric Regulation, the Enforcement Triangle, and the Swiss Cheese Model of Accident Causation – will be familiar to many regulators in the New Zealand context.
- Intelligence products are easily integrated with these models, provided that regulatory agencies have appropriate decision-making frameworks in place to receive and utilise the insights provided.
- Some new intelligence clients may need support to understand certain aspects of analytical tradecraft and practice, to use products to best effect.

Want to know more?

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Part 4: Making it work

Overview

Despite growing recognition of its value, regulatory intelligence can still face real-world challenges when it comes to practical implementation. This section shifts from concept to execution – exploring what it takes to make regulatory intelligence work in practice. It addresses common obstacles such as definitional challenges and limited organisational investment, and fragmented understanding of its role in decision-making.

Building on earlier sections that defined the field, introduced models, and explained core concepts, this final chapter brings attention to the conditions that enable intelligence to be effectively applied, and to thrive in regulatory settings.

Demystifying Regulatory Intelligence

Regulatory intelligence can struggle to gain traction not because of its lack of value, but because of persistent uncertainty about what it actually is. Unlike its more established counterparts in law enforcement or national security – where intelligence frameworks are often more clearly defined and deeply embedded – regulatory intelligence frequently operates in smaller, leaner environments where its role can be less formalised. Additionally, many regulatory functions are structured as multidisciplinary teams, blending risk, performance, data analytics, strategy, or business planning.

While this diversity can enrich practice, it can also blur the boundaries of the intelligence function itself, making it harder to establish shared understanding, clear processes, and a coherent mandate. Working through this blurriness can be a challenge, both for regulatory intelligence practitioners, and those seeking to commission and utilise the outputs from intelligence functions.

Focusing firstly on the practitioners. Regulatory intelligence staff can find themselves in unfamiliar territory with having to define, explain, and sometimes champion the intelligence cause. Additionally, with the absence of an agreed definition across regulatory agencies of what regulatory intelligence actually is, it often falls to individual intelligence teams or staff to try to define their profession and their place in the wider regulatory apparatus.

The lack of definitional clarity does not just present issues for intelligence practitioners, but also those responsible for managing and investing in functions such as intelligence. Without established understanding of the role, remit, and value of regulatory intelligence, it can be difficult for investment decisions to be made. This includes investment not only in intelligence staff, but also the supporting systems such as technology, data capabilities, and analytical tools.

While this Handbook seeks to advance the understanding of what regulatory intelligence is, and where it fits, this challenge can often best be addressed when intelligence is integrated into decision-making. Because the very purpose of intelligence (regulatory or otherwise) is to inform decision-making, it is this connection point that demonstrates the real (and often tangible) benefit of intelligence.

Regulatory decision-making

Regulatory decision-making is a multifaceted endeavour, requiring a deep understanding of the diverse tools and frameworks available to address intricate challenges. It is not a matter of applying a universal formula but rather of tailoring responses to the specific context, industry dynamics, and the nature of compliance issues at hand. As Sparrow (2019) notes, regulatory problems in the real world “come in awkward shapes and sizes which often have no natural home within the existing structure of regulatory bureaucracies”.²⁷ Accordingly, effective regulators must balance consistency with flexibility, ensuring interventions are proportionate, informed, and capable of evolving alongside emerging risks.

Regulatory decision makers play a crucial role in determining the impact of intelligence: they hold authority over whether to act in response to intelligence insights. In many cases, knowing what to do with intelligence can feel unclear, leading to hesitation or missed opportunities. Intelligence practitioners focus on gathering, assessing, and analysing information – but they are not the ones responsible for making decisions or taking regulatory action. That responsibility lies with policymakers, regulatory organisations, and regulatory practitioners.

When decision makers understand their role, they can confidently use intelligence to shape policies and strategies, prioritise risks, and take meaningful action. Simply put – analysts provide insights,²⁸ but decision makers drive the achievement of outcomes. Clear roles and responsibilities ensure intelligence is used effectively, preventing it from being overlooked or misapplied.

Decision-making processes or frameworks are vital for effective regulatory decision-making,²⁹ and they are also crucial for utilising intelligence outputs efficiently. However, it is not uncommon for regulatory intelligence and decision-making to struggle, both in terms of connectedness and effectiveness. Reasons for this include:

Overwhelmed

Agencies, especially those unfamiliar with intelligence, may find it challenging to integrate intelligence into decision-making and address or prioritise the complex or high volume of risks and issues identified in intelligence assessments.

Risk aversion

There may also be risk aversion due to fears of media scrutiny, litigious regulatory sectors or peak bodies disputing intelligence findings, and concerns about previously archived risks and issues now being documented.

27 Manch, K (2019). How regulators can benefit from a focus on risk. ANSOG news.

<https://anzsog.edu.au/news/how-regulators-can-benefit-from-a-focus-on-risk-harvards-malcolm-sparrow/>

28 See also [Pherson's Analysis Spectrum](#) – which depicts the three temporal types of intelligence analysis, (i.e. hindsight, insight, foresight), and maps these to six types of analysis: exploratory, descriptive, explanatory, interpretive, anticipatory and prescriptive.

29 Manch, K (2017). What does good regulatory decision-making look like? *Policy quarterly* (Victoria University of Wellington. Institute for Governance and Policy Studies), May 2017; v.13 n.2:p.72-81.

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Technical gaps

Customers of intelligence products in regulatory environments often lack familiarity with the nature of intelligence and its application. Probabilistic language, information gaps, and recommendations in intelligence reports can contrast sharply with routine performance or risk reports.

Surprise factor

Additionally, intelligence teams in regulatory environments are typically small, and regulatory operating environments can move at a slower pace (compared to high volume environments such as policing), leading to lower output frequency compared to larger intelligence functions in high-demand settings. Intelligence dissemination can then sometimes appear as 'out of the blue' if it is not routine or regular.

Effective use of intelligence is crucial for both regulators and analysts. Without properly harnessing intelligence value, confusion about its purpose may persist, potentially resulting in ignored or improperly addressed risks, strained relationships between regulators and analysts, and suboptimal regulatory outcomes. It is not uncommon for multiple iterations of intelligence functions to occur over time, due to structural realignments, changes in senior leadership sponsorship or investment in intelligence, and turnover within what are often already small teams.

Despite the challenges that can occur with the nexus between regulatory intelligence and decision-making, there is growing evidence that good practice is starting to take hold in some parts of the New Zealand public sector.

What does good look like?

Regulatory agencies in New Zealand differ considerably, in scale, remit, responsibility, and organisational structure. There is no 'one size fits all' when it comes to establishing an intelligence function (beyond the scope of this Handbook), nor a playbook that would cover all decision-making environments. Additionally, there is no scientific formula that will deliver the perfect intelligence analyst-to-regulator ratio, for those seeking the answer to the often-asked question: "how many intelligence staff do I need?"

However, there are some core and common components that, if in place, will greatly increase the likelihood of a successful integration of intelligence into decision-making:

Understanding that intelligence is not the sole tool to inform decision makers

Intelligence is a powerful tool, but it is just one piece of the puzzle when making regulatory decisions. Decision makers need a range of inputs – knowledge of resourcing constraints, legal requirements, past experiences, and expert insights – all working together to shape well-rounded decisions. Just as regulators must carefully select the right tool to achieve a desired outcome, there is also an art in understanding how different tools complement each other. Strong decision-making comes from balancing intelligence inputs with these other factors, ensuring actions are effective, practical, and aligned with broader regulatory goals.

Understanding the bigger picture

This involves recognising what drives organisational priorities, how these priorities are managed and reported on, and the extent to which they are understood and updated. If intelligence and decision-making are not already well integrated, it may be beneficial to utilise the goals or priorities within organisational strategies and operating models to demonstrate how intelligence could be relevant. Additionally, when there is regular official reporting, such as on compliance trends, intelligence can facilitate decision-making by providing clear insights alongside this reporting.

Understanding the sum and the parts

It is important to note that the “success” of regulatory intelligence is dependent on many other component parts (such as strategic and financial planning, risk management, resource management) – working well individually, and collectively. For example, if a regulatory agency is unclear about its strategic priorities, its regulatory posture, its risk management, and the desired outcomes, intelligence will almost certainly fail to have meaningful impact.

Identification of the supporting decision-making processes and frameworks that are in place, and importantly, that are missing or inadequate

An absence of decision-making processes, clear tasking and coordination, accountability mechanisms, and low risk appetites, all increase the likelihood of intelligence functions struggling to make an impact. Without a clear ‘next step’ for intelligence outputs (such as established decision-making forums), it can be difficult for intelligence outputs to gain traction. This not only creates despondent analysts, it also introduces or heightens risk if left unaddressed. Ideally, regulatory intelligence can be seen as a relationship, one that must occur symbiotically and dynamically, with decision-making.

Taking a multidisciplinary approach

Decision-making environments in regulatory contexts often perform optimally if there is (or has been during the production of intelligence), strong linkages with policy, legal, and technical expertise. As highlighted earlier, there is no ‘one size fits all’ approach with regulatory action, and in many cases a range of regulatory tools will need to be deployed. Whether a particular sector group needs an educative approach, or a high-risk entity requires enforcement; this requires regulators and intelligence practitioners to know the regulatory craft and understand how intelligence can help inform the right decision at the right time, and in the right way.

Investing in the partnership between intelligence staff and decision makers

Due to differences in regulatory operating environments and structures, there can be significant variance in the willingness or ability of decision makers to adopt and utilise intelligence concepts and outputs. Similarly, experienced intelligence analysts often come from more structured environments with robust intelligence systems and processes. The organic and evolving nature of many regulatory intelligence environments can lead to frustration among intelligence analysts, who may feel pressured to take on multiple roles (analyst, educator, promoter, etc.). This dynamic between analysts and decision makers can sometimes impede the effective actioning of intelligence.

The final words in this section are left to regulatory expert, Professor Malcom Sparrow, who issues a stark warning to agencies who are unable or unwilling to properly invest in intelligence, and connect it strongly to the business:

A failure to invest adequately in proactive intelligence gathering and strategic analysis can have serious consequences. Without systematic efforts to uncover emerging risks, to measure their significance, to understand their nature and their key components, agencies fly blind. They remain oblivious of the magnitude of what they face. Resources are allocated without any clear sense of relative priorities, resulting in underinvestment with respect to non-self-revealing categories of risk. Without early warning when opponents change tactics, control strategies remain static, and operational methods fixed. One might as well try to play chess blindfold, and with one's chess pieces bolted to the table.³⁰

Looking forward

While this chapter has highlighted the challenges that can impact the effective integration of regulatory intelligence into regulatory systems, there are also several benefits that regulatory intelligence teams may have compared to larger scale functions. These include closer proximity to senior decision makers, broader exposure to various regulatory intelligence outputs (instead of being solely tactical or strategic) and the potential for successful engagement with customers new to intelligence who can respond positively to intelligence outputs.

When intelligence analysts see themselves as part of the regulatory system, it strengthens their sense of shared purpose and responsibility. Rather than working in isolation, they recognise that their insights directly influence decisions that positively impact public safety, fairness, and compliance. By understanding their role in shaping regulatory outcomes, they can see the real-world effects of their work – whether it is preventing harm, improving enforcement, or ensuring policies are informed by evidence. This connection makes intelligence more than just analysis; it becomes a powerful tool for meaningful change, reinforcing a collective commitment to serving the public good.

Regulatory intelligence functions are often newer compared to more established functions such as policy and business intelligence, bringing a fresh and exciting dimension to the regulatory landscape. In many cases, they tend to be well received, sparking genuine interest from both the public and related sectors eager to understand their role and potential impact.

One of their greatest advantages is the ability to design and innovate their practice from the ground up, rather than inheriting rigid legacy systems. While the lack of established processes or blueprints can be daunting for some, it presents a unique opportunity for intelligence innovators to shape methodologies, refine tradecraft, and introduce new ways of thinking. Unlike traditional intelligence roles that may be bound by routine analysis, regulatory intelligence allows practitioners to take an experimental, adaptive, and forward-thinking approach, ensuring their work remains relevant, effective, and tailored to evolving regulatory challenges.

Regulatory intelligence is here to stay – evolving, adapting, and gaining momentum. Despite early challenges, it is fuelled by a growing community of passionate, skilled practitioners who are shaping its future with innovation, dedication, and a commitment to driving meaningful change.

³⁰ Sparrow, M. (2000). *The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance*. Brookings Press, Washington DC, USA. Page 275.

Key points from Part 4

- Regulatory decision makers play a crucial role in turning intelligence into action, ensuring the insights are driving regulatory outcomes.
- Decision-making processes or frameworks are vital for effectively integrating intelligence into regulatory decision-making and capitalising on its value.
- While there is no 'one size fits all' for regulatory intelligence functions, there are some core and common components that can increase the likelihood of a successful integration of intelligence into decision-making.
- Regulatory intelligence functions have several benefits, including close proximity to decision makers, direct line of sight to meaningful outcomes, and space for innovative approaches.

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