

# *It's Not Rocket Science, it's Social Science*

*For anything to change, someone must  
start acting differently*

Grant Barnes  
Chief Regulatory Officer

NZ Environmental Protection Authority  
12 October 2023

# Today's agenda



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The Regulators Panacea

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Behaviour change in a regulators context

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Behaviour change tools

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First, a little context.....

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# The independent water regulator emerges

NRAR was established in response to “the biggest water grab in Australia’s history”.



## 1. Media investigation



2017: Allegations of water theft aired on ABC TV's Four Corners, prompting a formal investigation.

## 2. Independent investigation



In response, NSW Government commissioned an independent investigation into the issues raised in the program.

## 3. NRAR emerges



Within 8 months, NRAR Act was legislated and NRAR's board and executive were stood up.

# We use a combination of technology, data and investigative smarts to cover a vast terrain



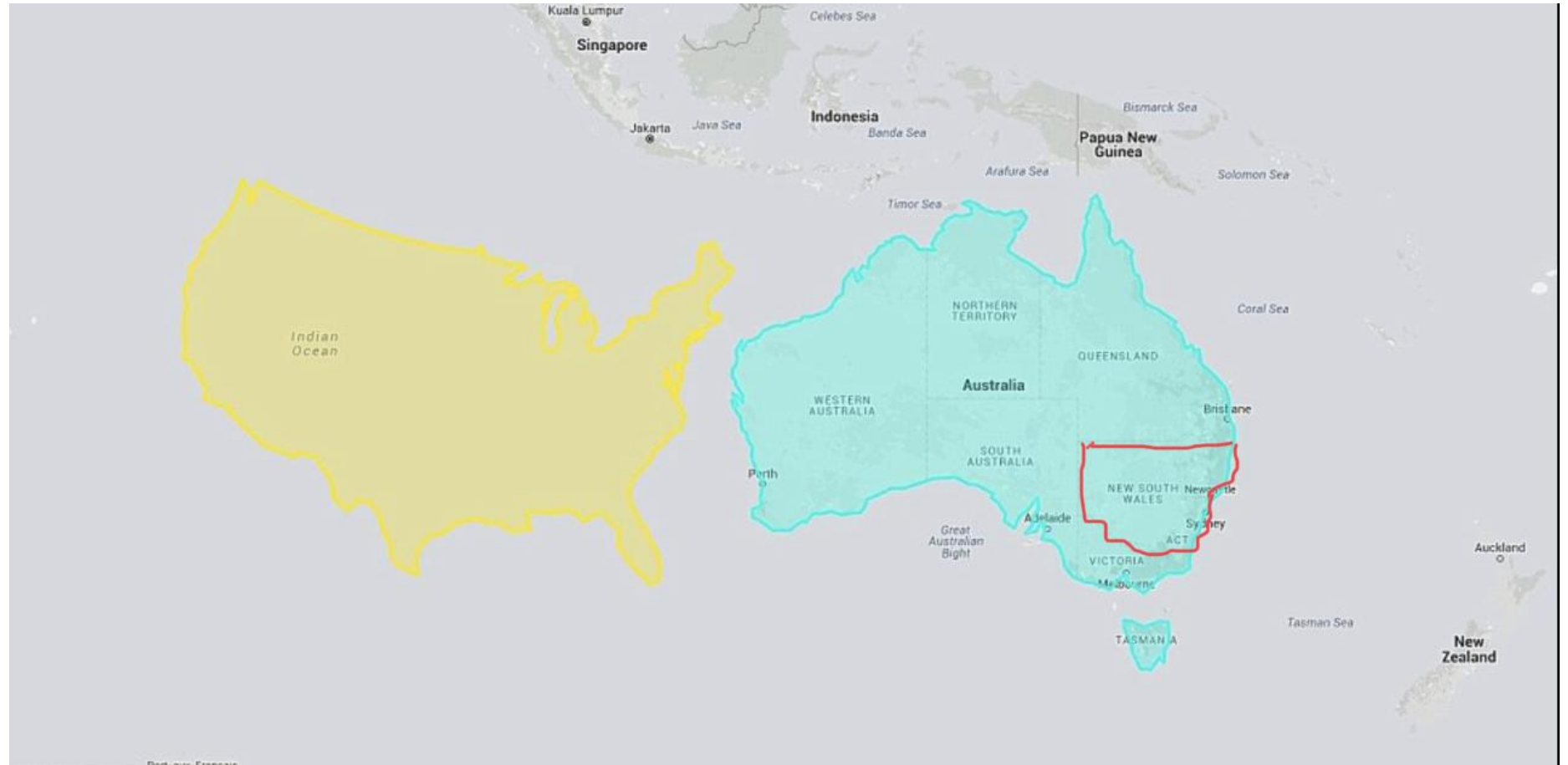
In NSW we monitor, audit and regulate water take across:

- > **800,000** sq. km of land
- > **36,000** water access licences
- > **156,000** licenced works

We are a small, risk-based regulator – we use a combination of technology, smart data and regulatory experience to monitor a vast terrain.

Staff	200
Offices	21
Total site inspections	>5,250

# USA v Australia - comparison



# Regulators Panacea

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# Sustaining Enduring Behaviour Change

## Regulator and its authorising environment



Understand the authorising environment to generate support and buy-in from key stakeholders who can empower achievement of the Regulator's objectives.

## Regulated community and their social licence and norms



The acceptable standards of behaviour that manifest as informal understandings and/or codified into rules and law. Can be powerful drivers of behavioural change.

## Correct, enabling policy settings



Regulation as a system of component parts that come together to minimise the risk of harm. At the heart of regulation is those who enact the rules (regulators), the actions taken to manage non-compliance (controls) and the individuals or organisations that are expected to comply (regulated entities).



# Powerful social norms – Example



Herd mentality



Law not enforced



Cultural pressures to drink excessively



Acceptance of high social harm



Detection technology absent

# Social norms in an environmental context



# Behaviour Change in a Regulatory Context

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# At NRAR we.....

“Find important problems, fix them, then tell everyone”.

Source: Prof. Malcolm Sparrow, Kennedy School of Government, Harvard University





## Attitude to compliance (behaviour)

*Have decided not to comply:* criminal intent and illegal activity; recidivist or serious non-compliance

*Don't want to comply:* propensity to offend; deliberate, intentional non-compliance

*Try to, but don't always succeed:* unintentional non-compliance; willing to comply, but not sure what is expected

*Willing to do the right thing:* know what is expected and willing/ incentivised to do what is right

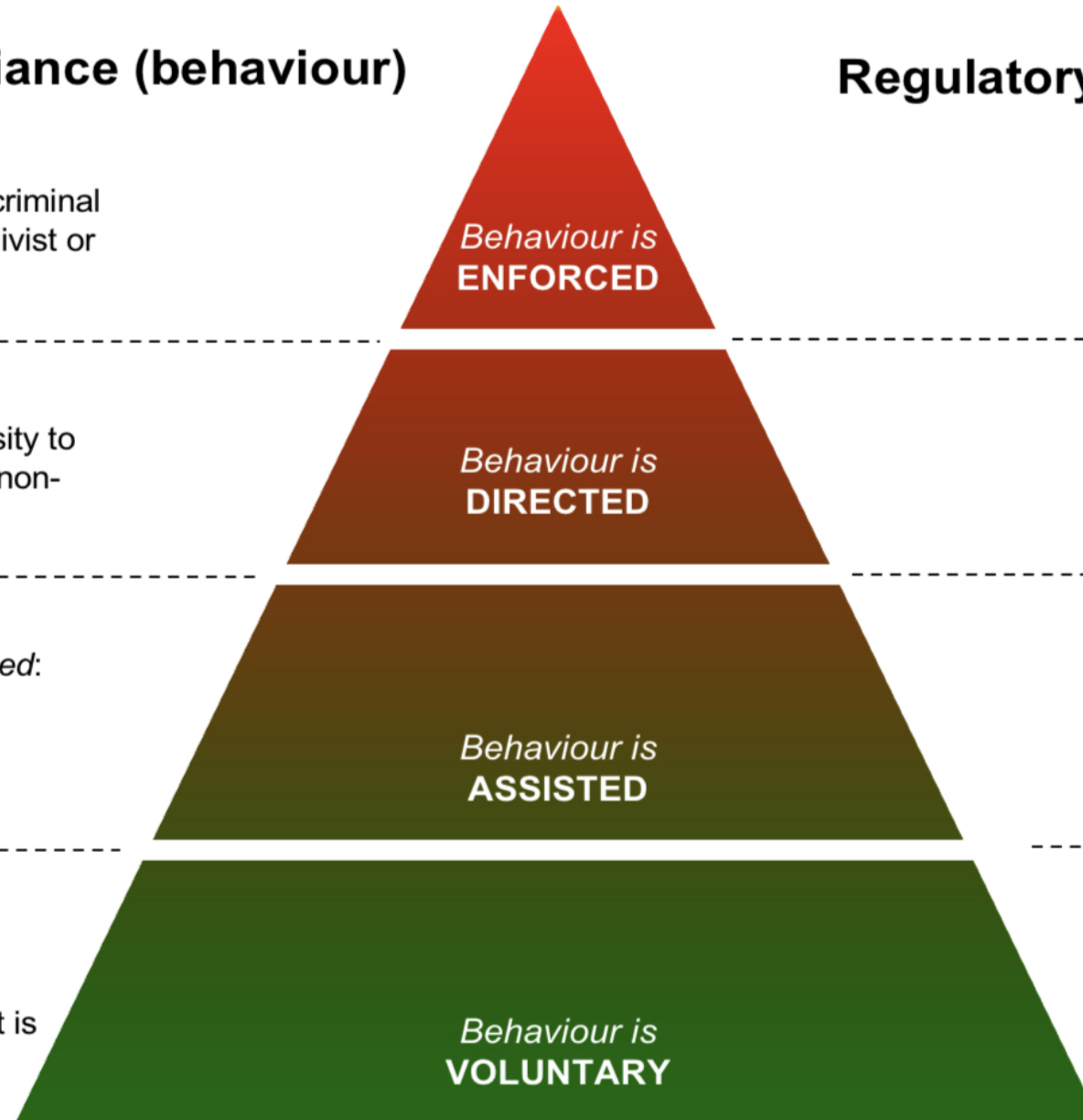
## Regulatory tools (interventions)

Use full force of the law - prosecution

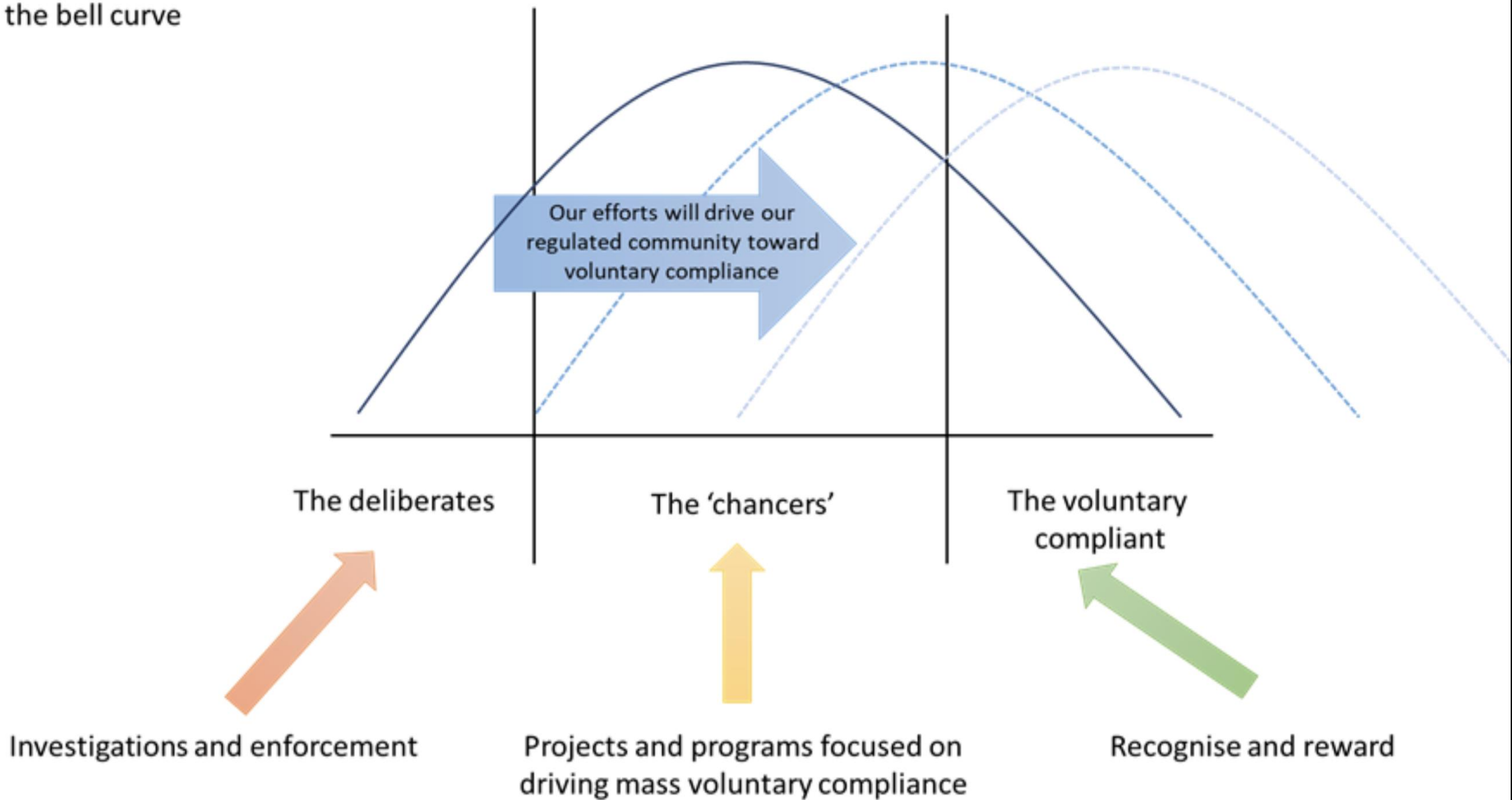
Deter by detection then action - e.g. infringements, improvement notices, compliance orders, recall, seizures, restricting use, closure, registration suspension or revocation

Assist to comply: use risk-based active monitoring, verification, system audit, corrective actions, guidance and education

Make it easy: provide education, advice and guidance; online forms etc



## Our regulated community: the bell curve



# “Fix problems” – Behavioural Insights

## Attitude to compliance (behaviour)

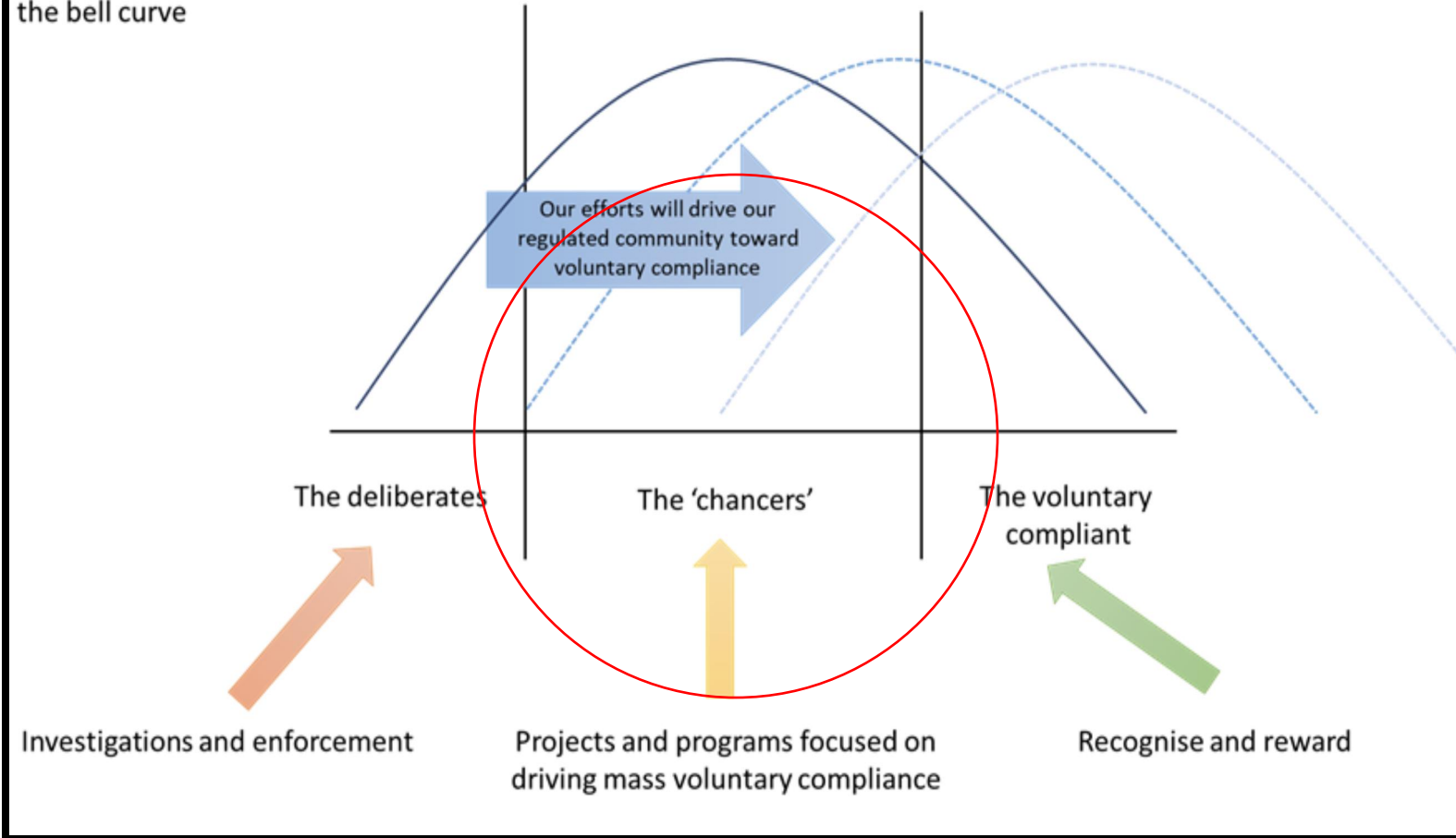
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Our regulated community:  
the bell curve



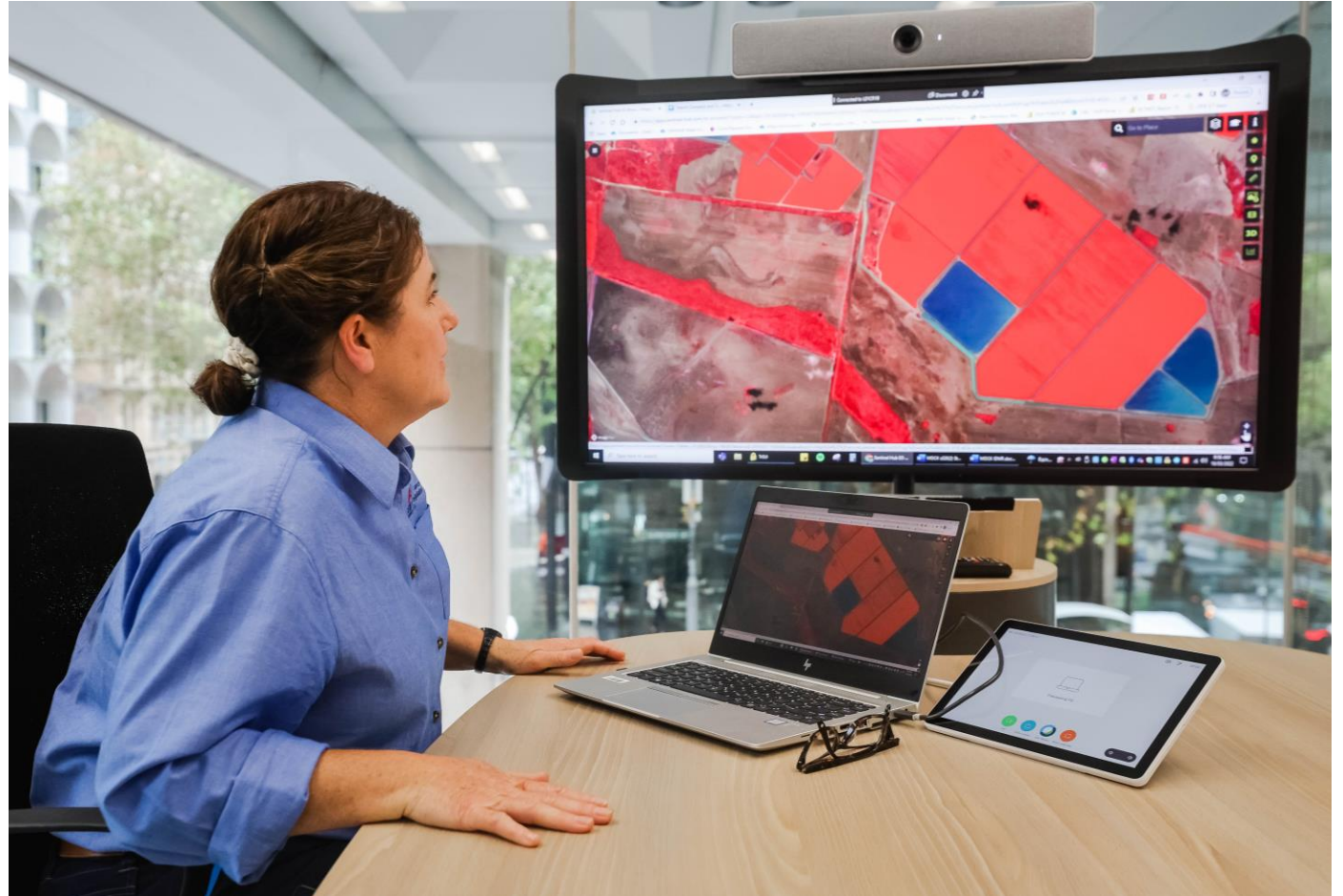
# Behaviour Change Tools

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# Regulatory priorities

We publish our regulatory priorities each year to show how and where we will focus our regulatory efforts.



# Our annual priorities '2023/24'

## Water metering



The non-urban water metering framework will ensure accurate measurement of water take, supporting us to deliver an effective and efficient compliance program.

**Region:** statewide

## Irrigated agriculture



We will target the large number of non compliant water storages in the Murray and Murrumbidgee which have the potential hold considerable volumes of water.

**Regions:** Murray, Murrumbidgee

## Overdrawn accounts



Water users who take water that has not been ordered and/or accounted for are taking water directly from other water users and the environment.

**Region:** statewide

## **1. Understand those we regulate and the community we serve**

Capture and analyse meaningful data about those we regulate and the wider community to inform branch projects.

## **2. Foster understanding of the rules and NRAR's regulatory practice**

Offer guidance and support to the NRAR team, stakeholder groups and directly to water users to foster a better understanding of the water rules, why they are important and how to follow them.

## **3. Make water compliance a shared responsibility**

Build productive relationships and partnerships, including communities of practice, and work together to help water users comply with the water rules.

# Perception surveys



Figure 1: Importance of enforcing NSW water rules



On a scale from 0 to 10, please rate how important you think it is for NSW water rules to be enforced? (0 is not important and 10 is important) Base: Stakeholders (n=40), Regulated entities (n=1006), General public (n=1003)

# Key findings

- important for NSW water laws to be enforced and little acceptance of these rules being broken
- a sense that water laws are complicated, and that compliance and enforcement has been mismanaged in the past
- moderate confidence in enforcement at present
- limited awareness of NRAR, what NRAR is doing and the extent of its impact on water enforcement
- low levels of agreement that NRAR is communicating sufficiently



Increase community engagement



Extend the reach of education



Enhance our communications



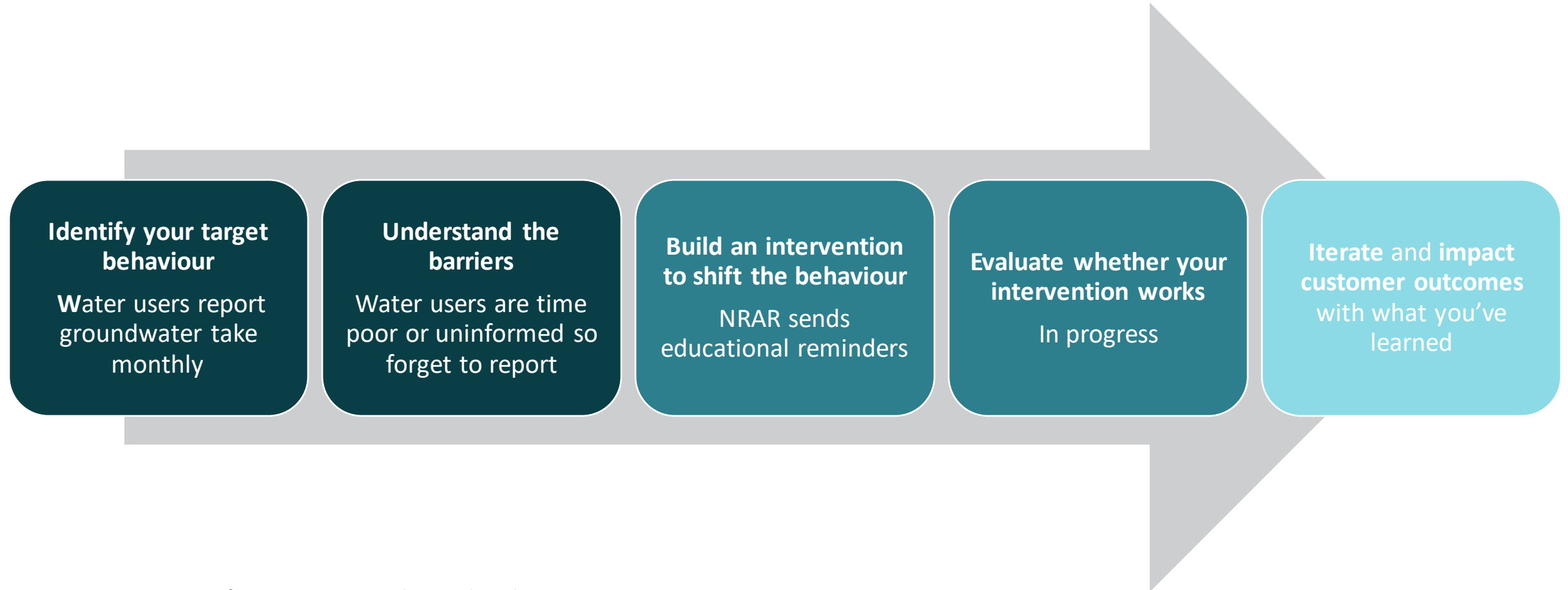
Expand our presence in regional NSW



Continue our capability build (people and technology)



# Using behavioural insights to encourage compliance



Source: NSW Department of Customer Service, Behavioural Insights Unit

# Tone of voice

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We are a proactive regulator that makes it easier to follow the rules



We don't shy away from enforcing the law. We will use education and encouragement where we can, and enforcement if you make us



We focus on the benefit of compliance and the consequence of noncompliance



Our work is a shared responsibility

# The EAST framework

## Easy

- Are we writing in plain English?
- Are our instructions clear?
- Have we broken down the steps they need to take into manageable tasks?

## Attractive

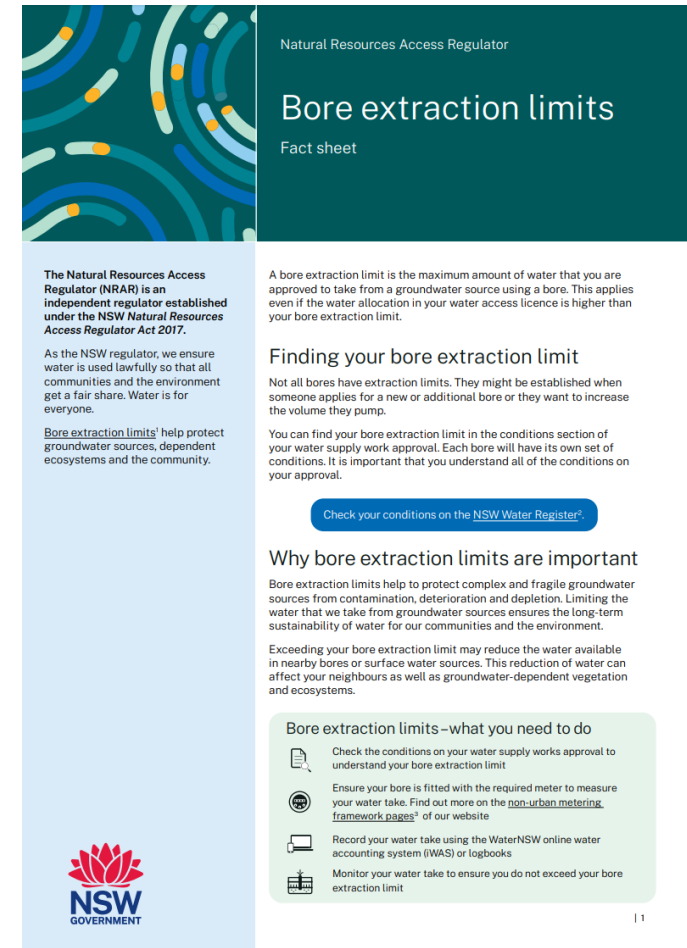
- Is the document visually appealing?
- Does it capture the reader's attention?
- Do the colours and formatting direct the reader's attention to the main points?

## Social

- Have we used social norms or peer influence in our messaging?
- Can we include testimonials or case studies to inspire others?
- Can we include compliance rates from a specific region to create social pressure?

## Timely

- Is this reaching the water user at a time they are most likely to act on it?
- Have we highlighted relevant deadlines?
- If there is a sense of urgency, have we highlighted it?



Natural Resources Access Regulator

## Bore extraction limits

Fact sheet

A bore extraction limit is the maximum amount of water that you are approved to take from a groundwater source using a bore. This applies even if the water allocation in your water access licence is higher than your bore extraction limit.

### Finding your bore extraction limit

Not all bores have extraction limits. They might be established when someone applies for a new or additional bore or they want to increase the volume they pump.

You can find your bore extraction limit in the conditions section of your water supply work approval. Each bore will have its own set of conditions. It is important that you understand all of the conditions on your approval.

[Check your conditions on the NSW Water Register.](#)

### Why bore extraction limits are important

Bore extraction limits help to protect complex and fragile groundwater sources from contamination, deterioration and depletion. Limiting the water that we take from groundwater sources ensures the long-term sustainability of water for our communities and the environment.

Exceeding your bore extraction limit may reduce the water available in nearby bores or surface water sources. This reduction of water can affect your neighbours as well as groundwater-dependent vegetation and ecosystems.

#### Bore extraction limits - what you need to do

- Check the conditions on your water supply works approval to understand your bore extraction limit.
- Ensure your bore is fitted with the required meter to measure your water take. Find out more on the [non-urban metering framework pages](#) of our website.
- Record your water take using the WaterNSW online water accounting system (IWAS) or logbooks.
- Monitor your water take to ensure you do not exceed your bore extraction limit.

NSW GOVERNMENT



# Brand and campaigns



## NRAR's Know the Rules campaign

Here you will find more on the campaigns created to help water users become voluntarily compliant.



## Water, what are you really taking?

Find out more about our latest campaign designed to change behaviour around unlawful water take



## Women in Water

On International Women's Day 2021, NRAR profiled influential women in the water sector.





# Brand and campaigns



# Direct, indirect and third-party channels



We use a variety of channels to get our messages out to our intended audiences

## Indirect channels

Media – radio, TV, online, print

Social media – organic and paid  
Website

- Search engine optimisation
- Search engine ads

Conferences – state, national, international

Advertising campaigns – print, radio etc

## Direct channels

Letters

Events – field days, roadshows

Emails and newsletters

Phone calls

SMS

## Third-parties

Relationship development

External newsletters and billing information


External websites and social media channels

# What are the big questions NRAR faces?

What drives increased user compliance?

How do we make the best compliance decisions?

How do we know our compliance decisions will be effective?



Traditional  
approach to  
answering  
questions

Experience

Intuition

Partial analysis

Past practice

Assumptions


**We should always be able to do better!**

# How do we better address these questions?

## NRAR Objectives

Enforce water laws to maintain public confidence

Be effective, efficient, transparent, accountable



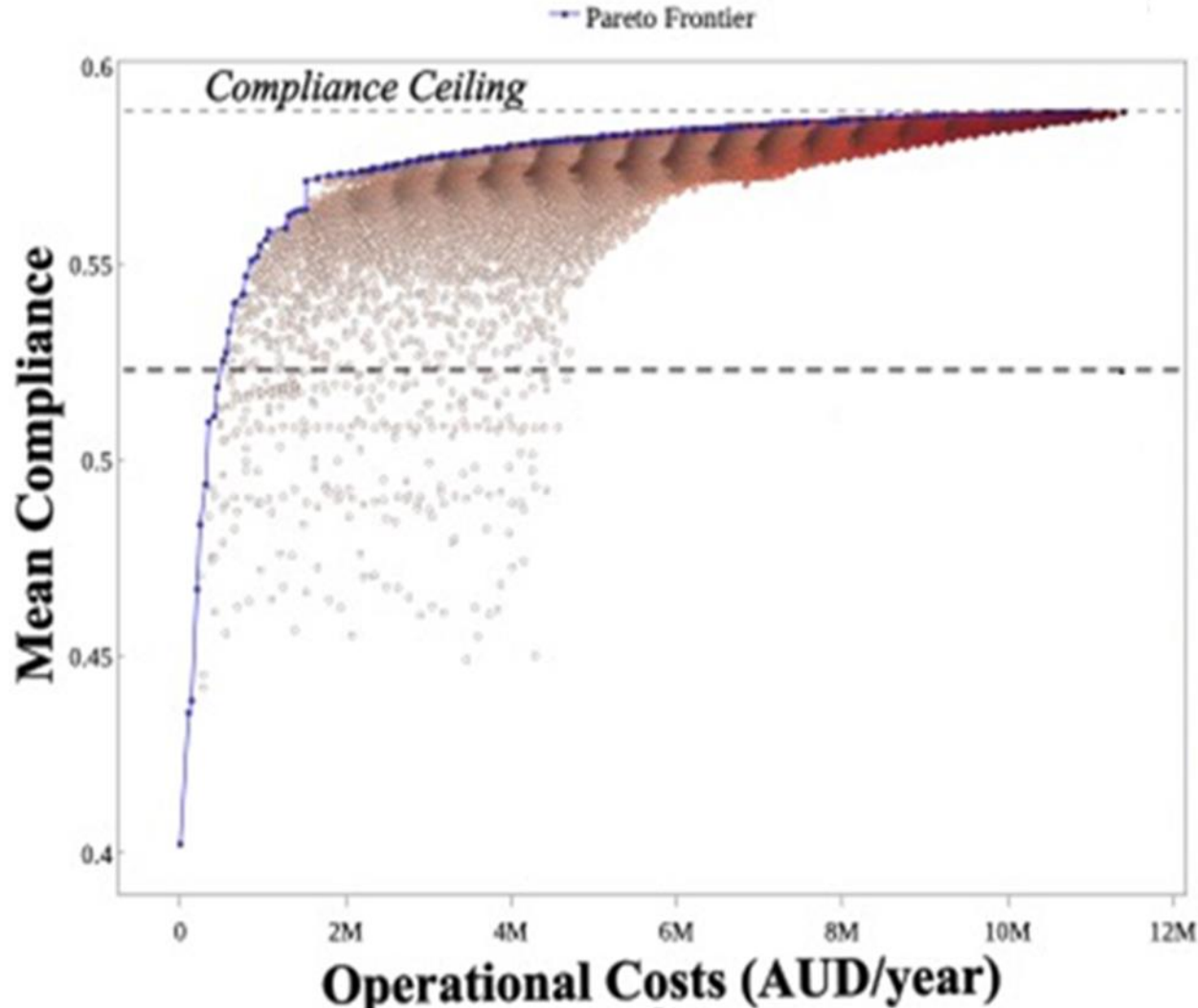
How do we achieve this

Partner with academia to build model of water user behaviour

Shows compliance outcomes and costs across different conditions

Evidence based, unbiased, testable, scalable

# What can the model do? Operational resourcing



*What is the best level of NRAR resourcing for this compliance campaign in a catchment?*

Run 1,000s of scenarios across range of variables

Shows optimal resourcing level

# Takeaways



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Understand the regulated community and their behaviours and motivations – the ‘deliberates’, the ‘chancers’

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Influence social norms to change behaviour to minimize harms and control risks

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Manipulate the risk and reward matrix to find what is most effective.

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# Questions