Achieving high performance in a public sector monopoly utility faced with rapid change

Hunter Water case study

Jim Bentley

About Hunter Water

- Monopoly State-Owned Corporation
  - ~600,000 customers
  - 6,671 km^2 area of operations
  - 5,000+ km of water main
  - Staff 456 FTE (including in-house field maintenance crew)
  - AU$2.7B asset base
  - AU$340m annual revenue

The Case for Change

- Shareholder’s vision for the region
- Drought threat
- Supply / demand shortfall
- Highest leakage in Australia
- High usage per household
- Engagement survey feedback
- Risk of disruption

Vision for Greater Newcastle:

"To build the Hunter as the leading regional economy in Australia, with a vibrant metropolitan city at the heart, a biodiversity rich natural environment, thriving communities, and greater housing choice and jobs."

Total storage
79.4%
↑0.7%
since last week

Our community's water use

August - 5,016 million litres
September - 4,513 million litres

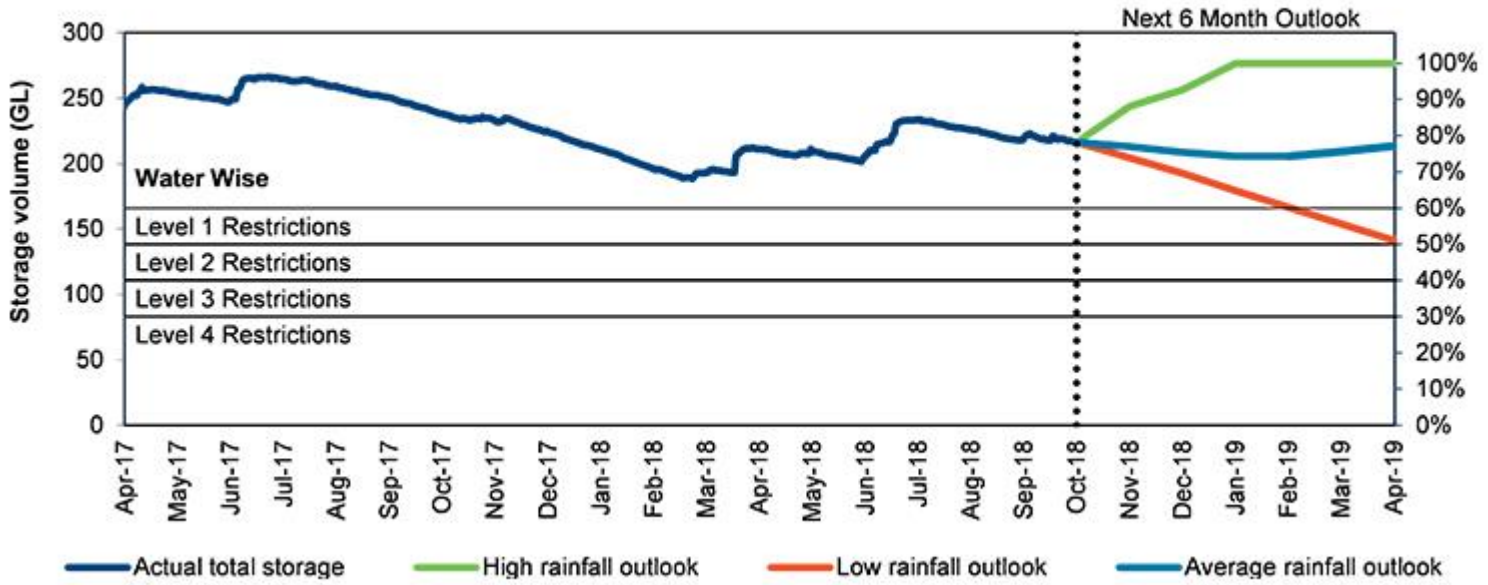

Chichester 86.2%


Grahamstown 76.9%

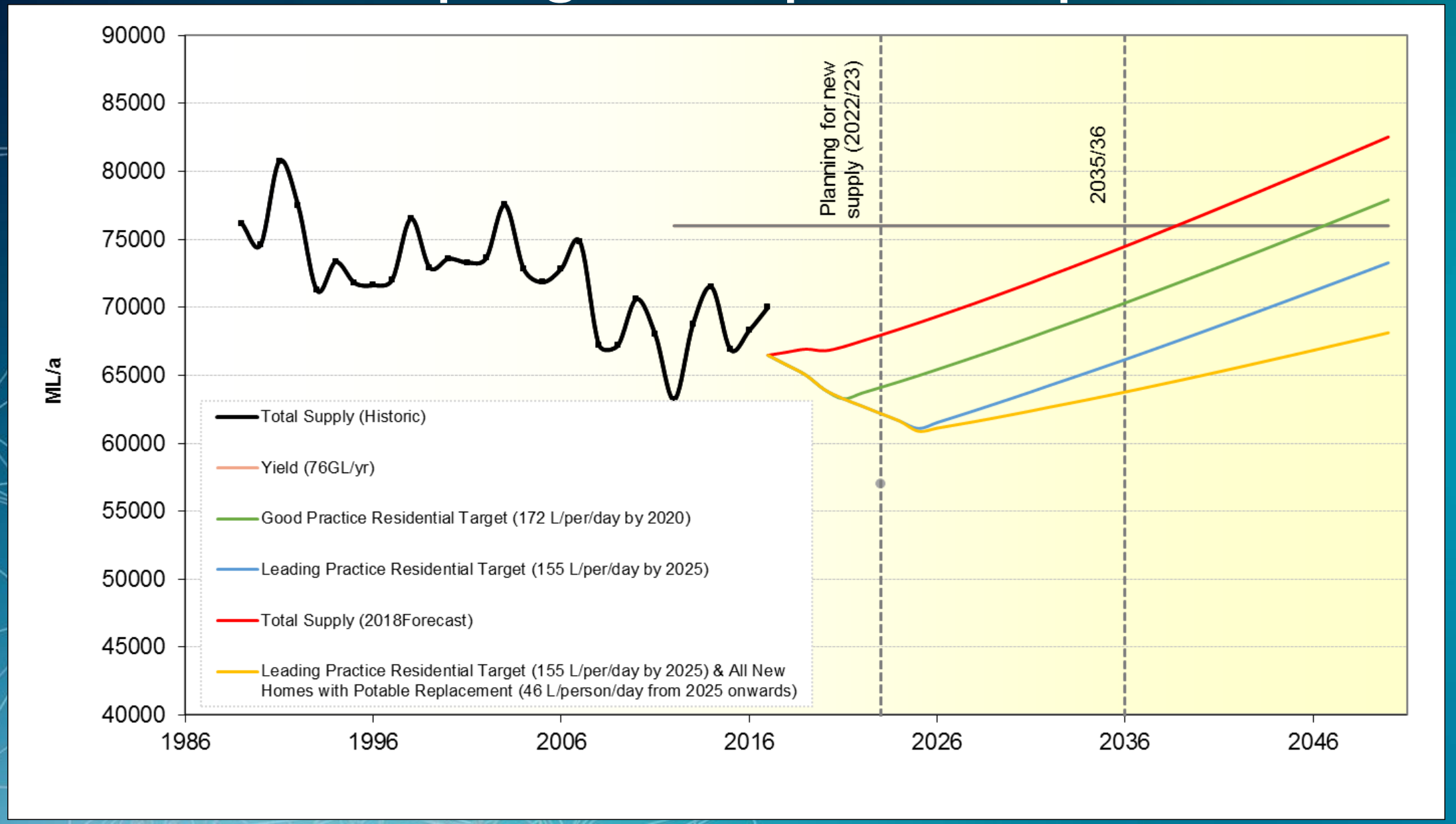

Anna Bay 58.7%


Tomago 90.3%

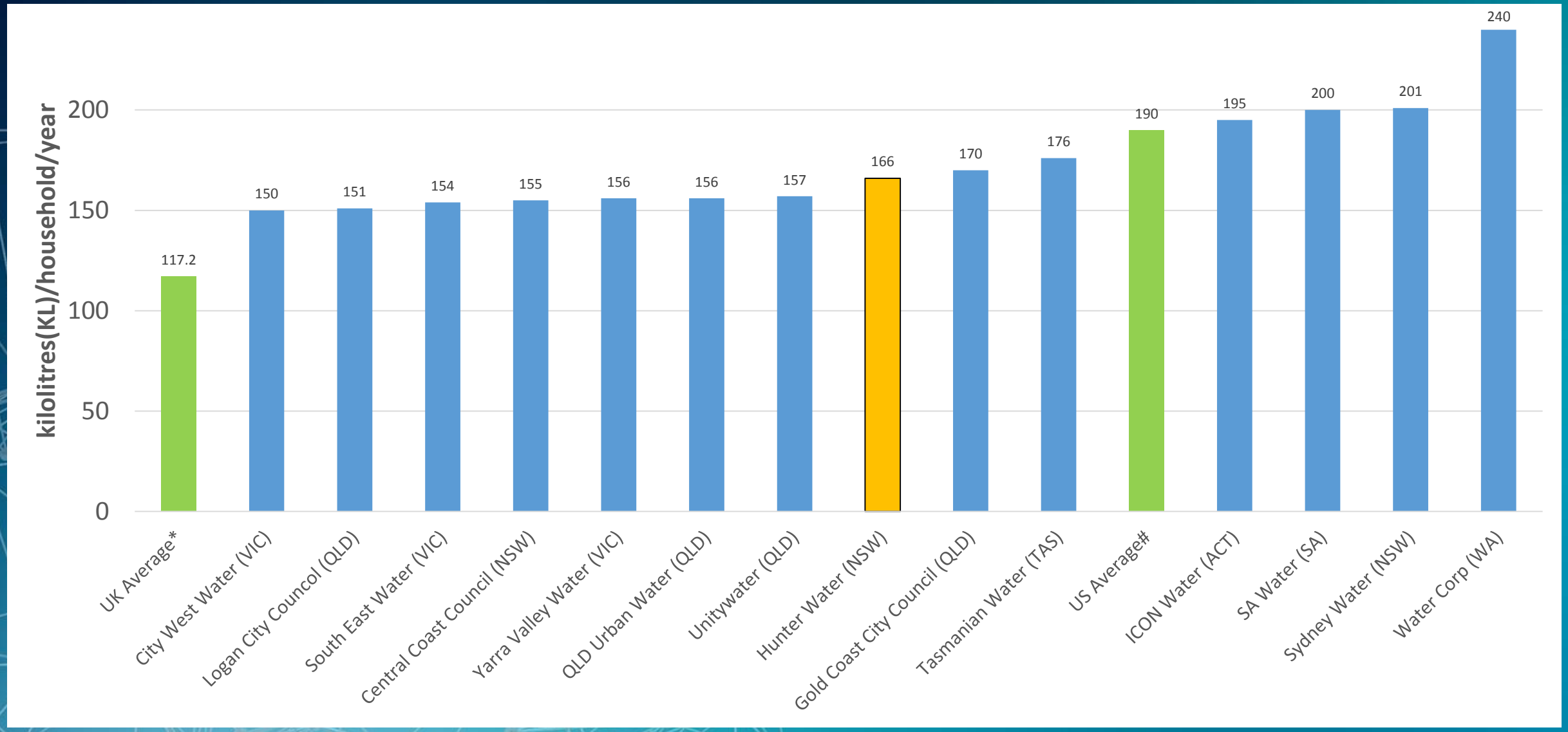
Hunter Water Storage and Outlook



Keeping our options open



Water usage per residential household



Sources: Australian Government National Performance Report 2016-17, *OFWAT 2019 Price Review, #WRF 2016 Residential End Uses of Water

Engagement Survey 2016

	% FAV	IND DIFF	ALL DIFF
PASSION/ENGAGEMENT	**81**	**+6**	**+15**
Organisation Commitment	84	+12	+13
Jobs Satisfaction	85	+5	+14
Intention to Stay	72	+1	+18
PROGRESS	**45**	**+2**	**-16**
Organisational Direction	57	+9	-8
Change and Innovation	33	-5	-24

Changing regulatory approaches

BBC Sign in News Sport Weather iPlayer TV Radio

NEWS

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Thames Water fined £120m over leaks

7 June 2018 Share

SCOTT BARBOUR/GETTY IMAGES

High leakage created an "unnecessary strain on the environment", regulators said

Three water companies warned by watchdog

By Simon Read
Personal finance reporter

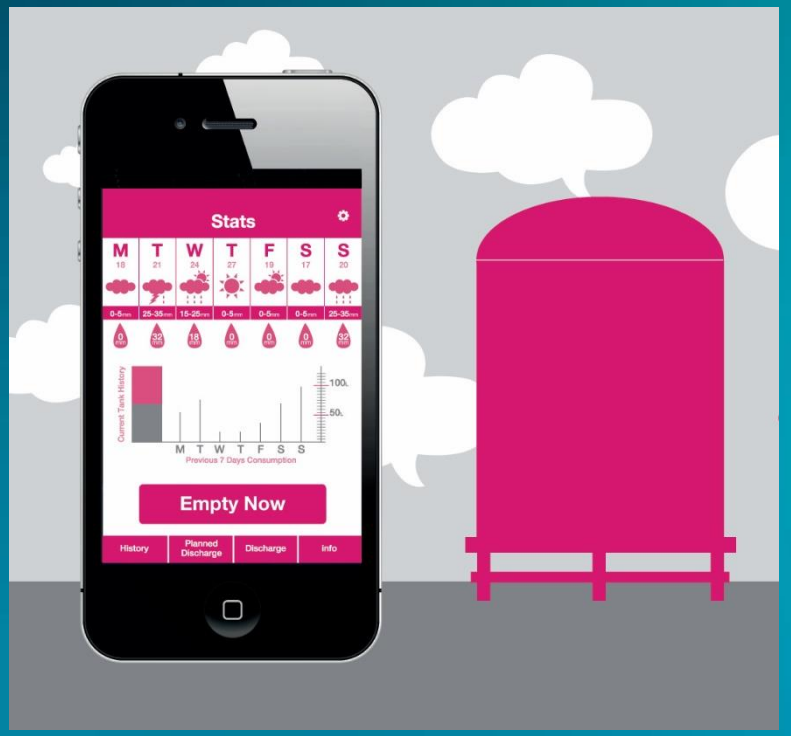
20 September 2018 Share

GETTY IMAGES

Three water companies face greater scrutiny from the watchdog after posting poor customer service records.

Risk of Technological Disruption

- What will the Uber of water be?
- How should we be adapting?



Melbourne – South East Water – Smart rainwater tanks

Water-Energy Nexus

What did we need to achieve?

1. Grow our window for supply augmentation decisions

    * reducing leakage
    * changing customer behaviour

2. Change from being a controller to an enabler of development

3. Embrace technology which could disrupt water supply and our business model

4. Develop a waste to energy program with partners in the region

Resilience

$$R = f(r, A)$$

Hunter Water's previous 'strategy'

Vision:

To be a leading water business.

Mission:

We will provide safe, affordable and reliable services.

Hunter Water's 2017+3 Strategy

Vision:

To be a valued partner in delivering the aspirations for our region.

Purpose:

To enable the sustainable growth of the Lower Hunter and enhance liveability through the provision of affordable, high quality services.

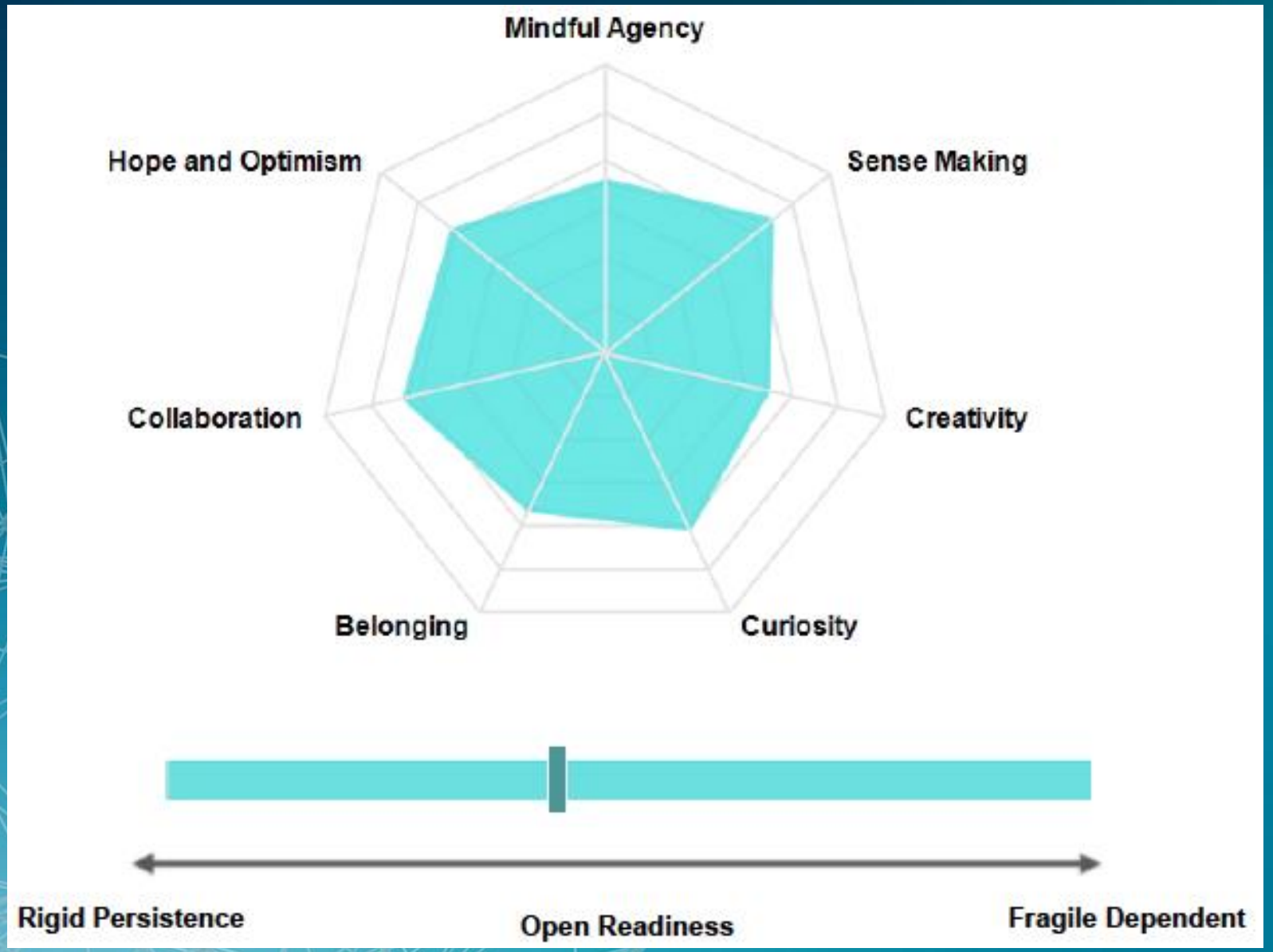

Maintain prices in line with inflation
Full support from customers and community
Aspirational Goals
Add 10 years to decision making for source augmentation
Carbon neutral by 2030

Key focus on culture change, starting with senior leadership:

- Bespoke leadership development program co-designed with Winsborough
- Focus areas of trust, influence and learning
- HOGAN personability tools Winsborough 360
- CLARA Learning power assessment

Becoming a learning organisation: CLARA Tool

Hunter Water CLARA Results



Learning and Resilience

- Learning power as a tool to being about internal culture change
- Customer journeys as learning journeys
- Behaviour change at scale for a more resilient water future

What happened?

- Marketing team transformed summer demand management campaign using learning power principles – aimed at raising curiosity and building hope and optimism.

Learning to Love Water with our communities

HUNTER WATER
HYDRATE
feel great!

WATER WISE RULES FROM 1 JULY

WATER WISE RULES APPLY FROM 1 JULY TO EVERYONE WHO USES WATER SOURCED FROM HUNTER WATER, INCLUDING RESIDENTS, BUSINESSES AND GOVERNMENT

THE RULES ARE OUTDOOR ACTIONS TO SAVE ONE BILLION LITRES OF DRINKING WATER PER YEAR AND REDUCE BILLS

WATER WISE

THREE KEY RULES

1. **All hand held hoses must have a trigger nozzle attached.**
2. **Watering with a sprinkler, irrigation system or hose is permitted any day before 10am or after 4pm. This avoids the hottest part of the day when water wastage occurs due to evaporation.**
3. **No hosing of hard surfaces such as concrete, paths and driveways. Use a broom instead.**

4PM TO 10AM

Water your lawn | Hose your garden | Irrigate | Use a sprinkler

These actions can be performed any day before 10am or after 4pm.
This avoids the heat of the day when water wastage occurs due to evaporation.

ANYTIME

Use a watering can | Wash a vehicle | Top up or fill a pool | Fill a bucket | Hoses must have a trigger nozzle | Sweep hard surfaces

These actions can be performed at any time.
Remember, hoses must always be used with a trigger nozzle, whatever the action or time of day.

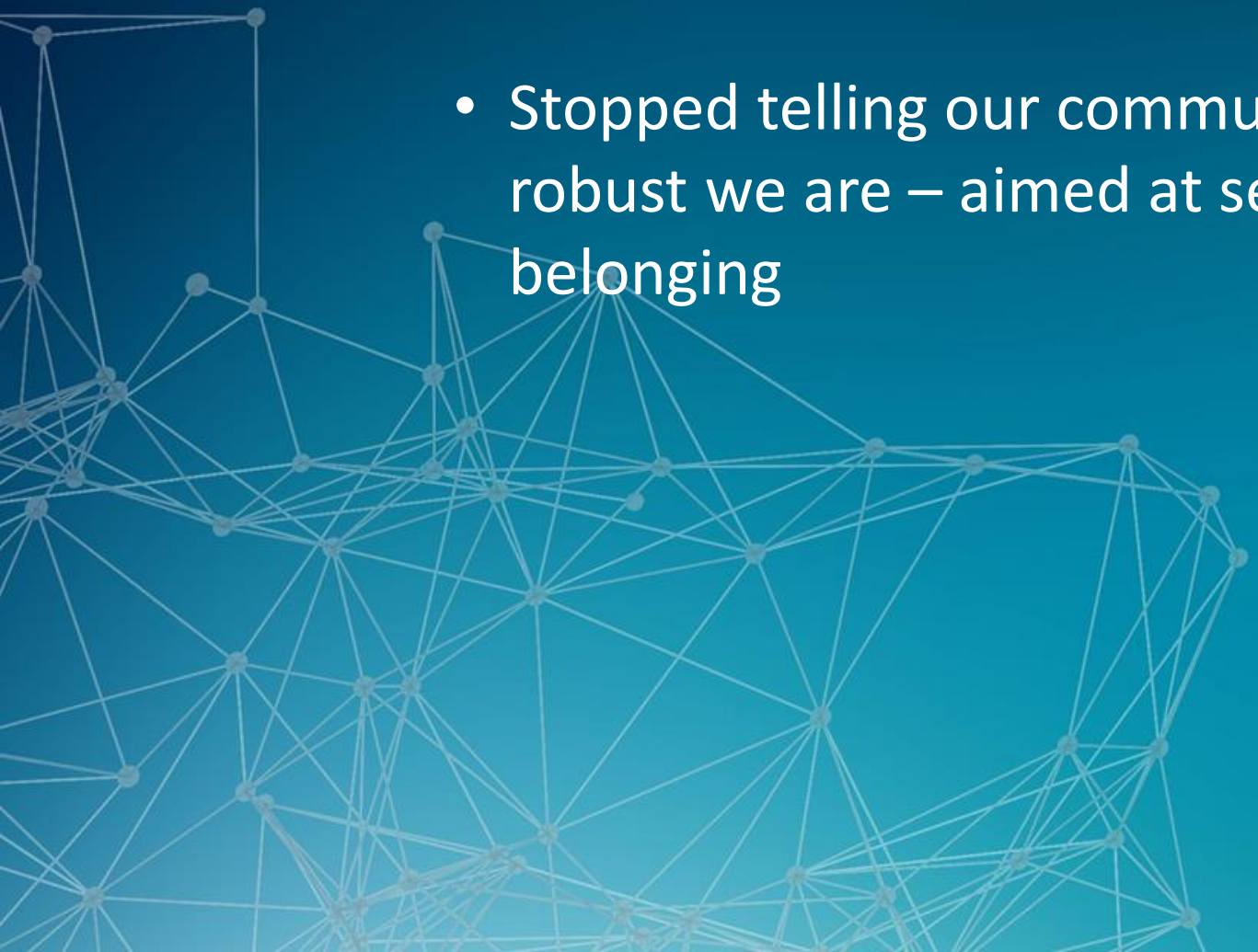
EXEMPTIONS

Sports grounds | Firefighting | Rainwater or bore water

Hunter Water's supply can be used in the event of, or to prevent, an accident, health hazard, surface discolouration or environmental issue.
You can always use water to defend property from fire or test fire protection systems.
Watering systems can be used to establish new lawns and gardens for up to 14 days from installation.
Other exemptions apply. Visit hunterwater.com.au/waterwise to find out more.

love water

What happened? (Cont)



- Stopped telling our community how strong and robust we are – aimed at sense making and belonging

KIDS&KOALAS
HUNTER WATER

MEDIA RELEASE

Wednesday, 1 July 2015

$1BILLION FOR HUNTER WATER INFRASTRUCTURE

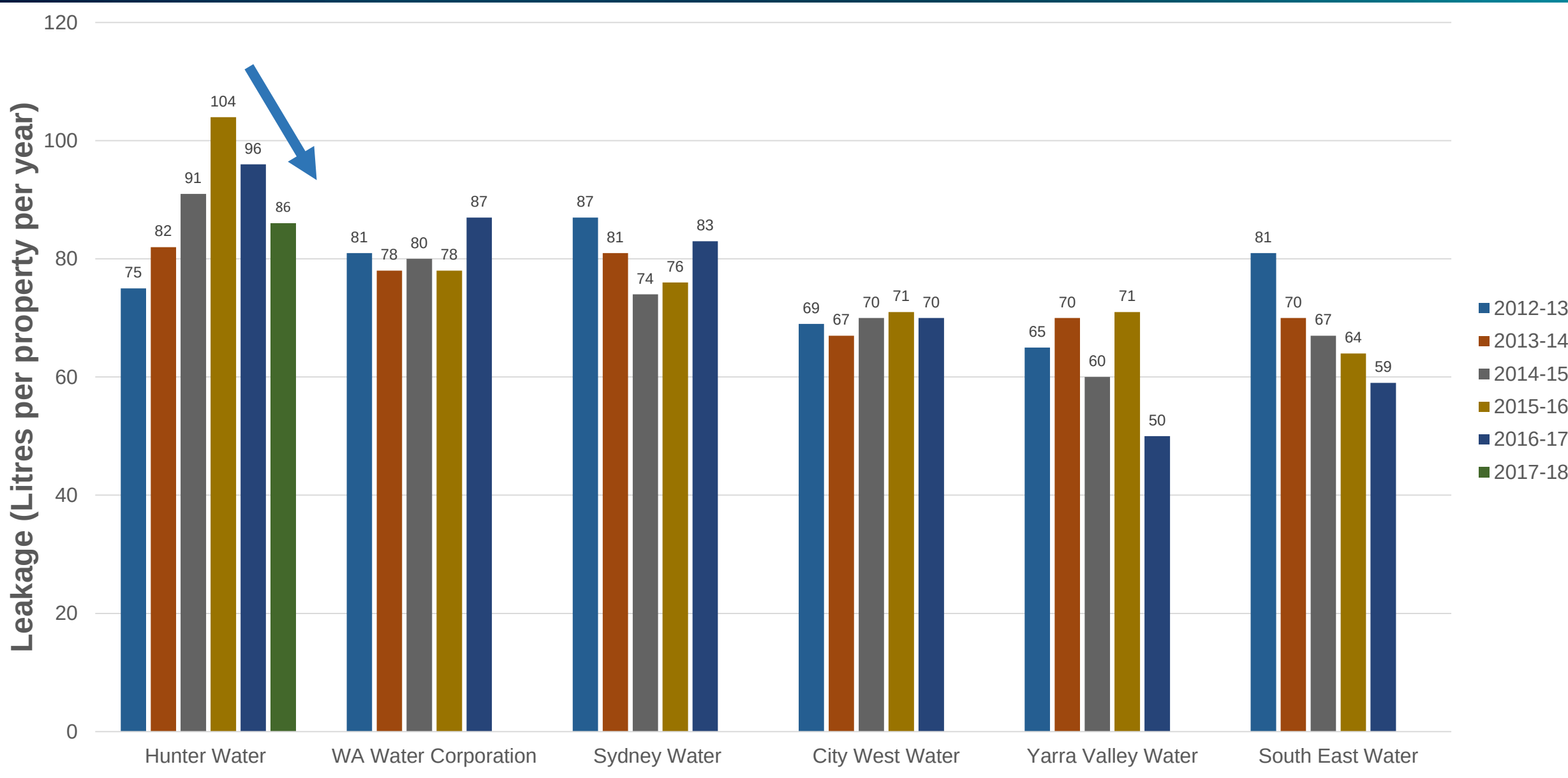
Hunter Water will invest $1.1 billion into better infrastructure during the next 10 years in the Hunter, to support the increase in the region's population to one million people by 2050.

What happened? (Cont)

- Cross-organisation teams set up to tackle leakage and encourage technological innovation.

Where are we now?

Leakage

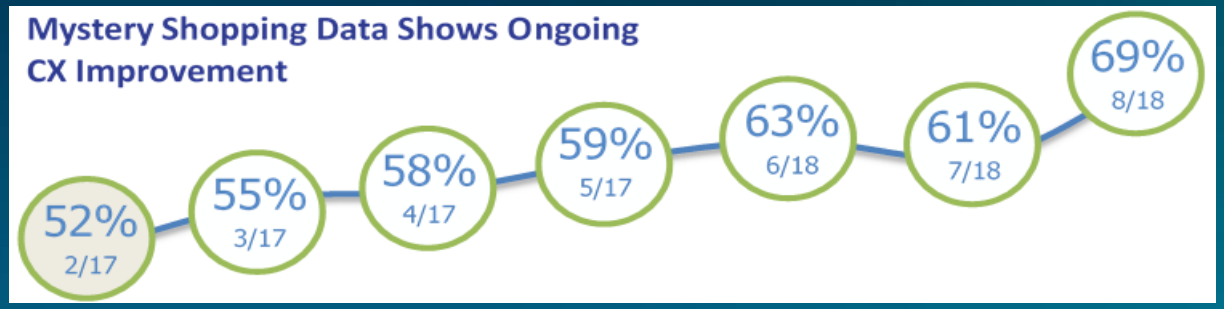

Leakage (Litres per property per year)
120
100
80
60
40
20
0
75
82
91
104
96
86
81
78
80
78
87
87
81
74
76
83
69
67
70
71
70
65
70
60
71
50
81
70
67
64
59
Hunter Water
WA Water Corporation
Sydney Water
City West Water
Yarra Valley Water
South East Water
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18

Development Services Statistics

In a year in which we received a record number of development assessment applications:

- Average processing time reduced from 21 days (2017) to 11 days (2018)
- Average processing time for Compliance Certificates reduced from 5.4 days (2017) to 2 days (2018)
- 95% score us 9/10 and 91% extremely likely to speak positively about development services at Hunter Water

Mystery Shopping



TRANSACTIONAL

No ability to score of rate our CSRs on their individual performance

Mystery shopping program in February 18

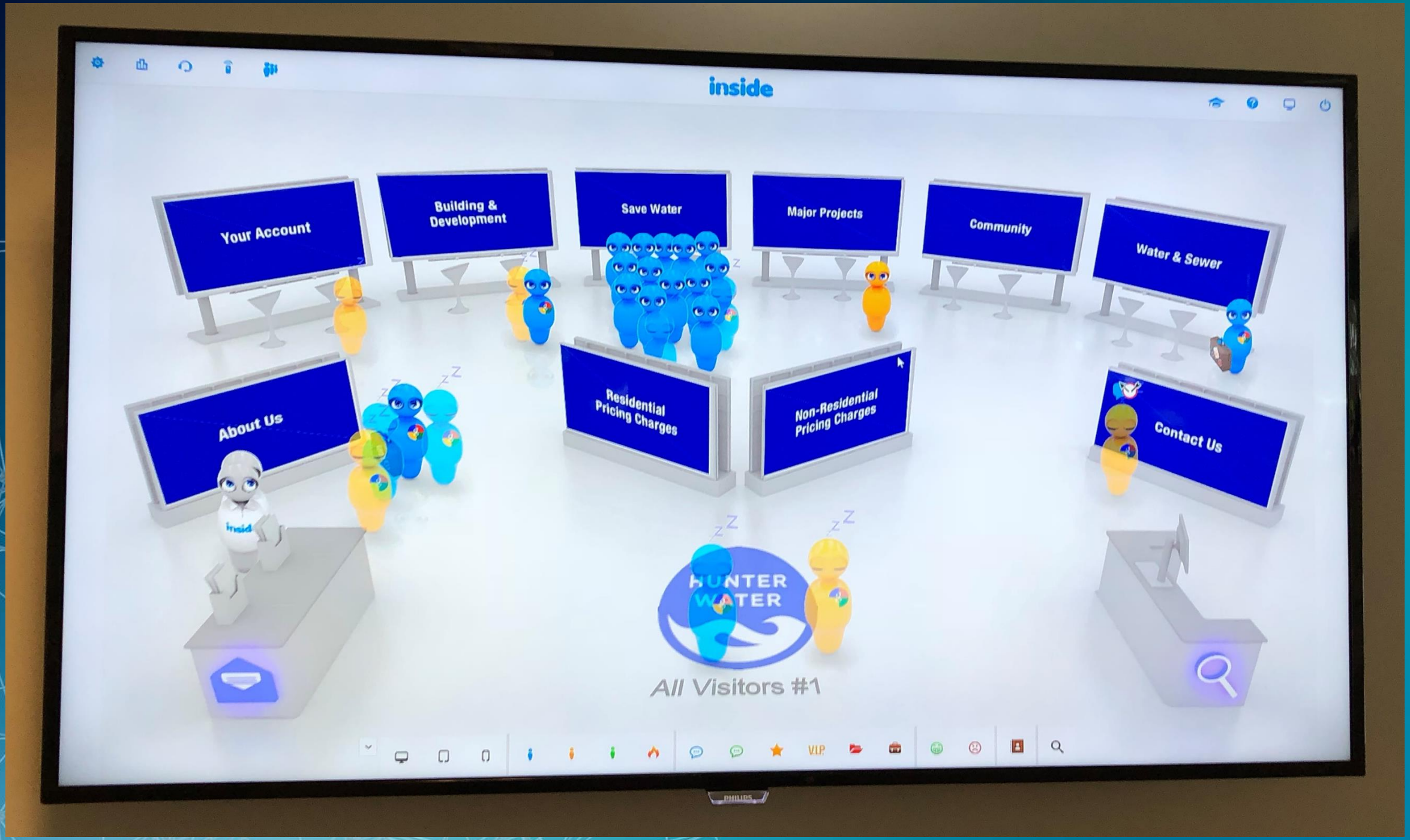
Focus on ease, sentiment & success

BEHAVIOURAL

Used as a coaching tool

From **52**% to **69**% in 7 months

Top performance and most improved program


inside
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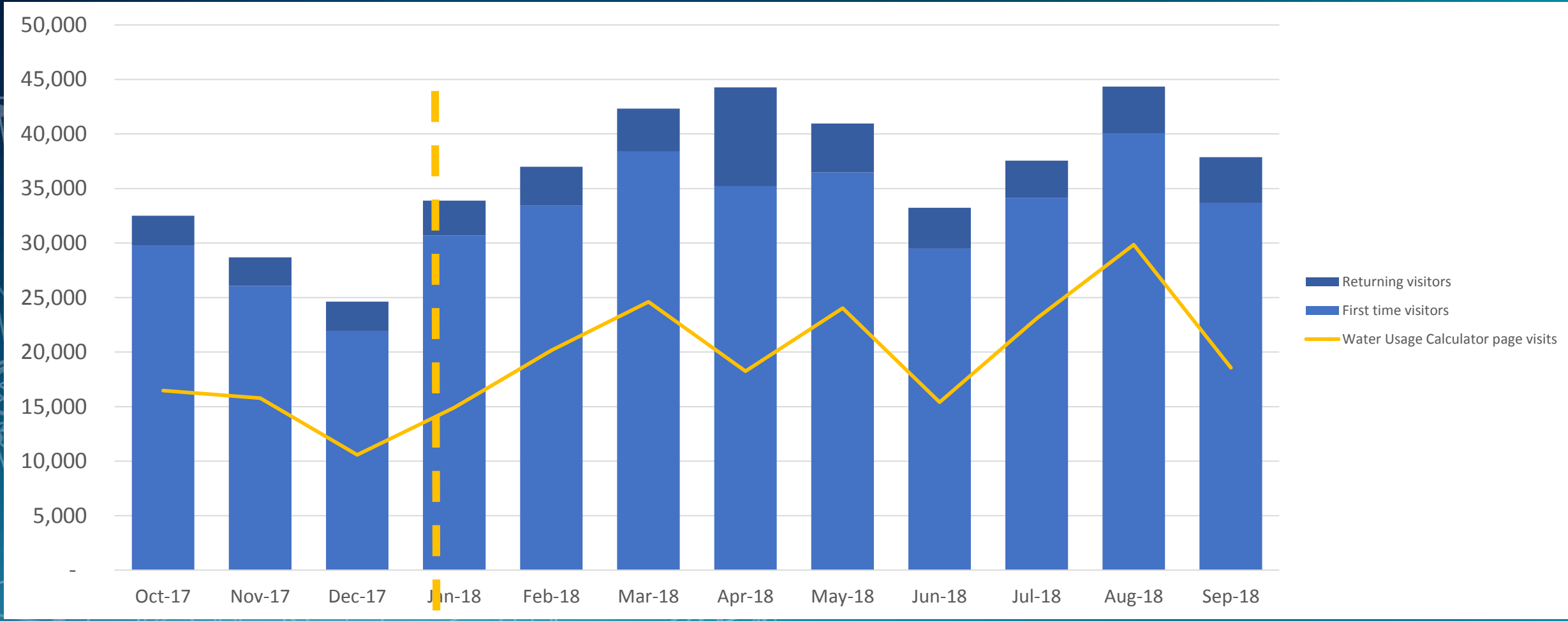
Save Water
Major Projects
Community
Water & Sewer
About Us
Residential Pricing Charges
Non-Residential Pricing Charges
Contact Us
HUNTER WATER
All Visitors #1

Monthly website visitors: hunterwater.com.au



Drawing water out of air

BY HELEN GREGORY

A PIONEERING University of Newcastle research team that has developed technology to produce drinking water from thin air is preparing to showcase its revolutionary work on the world stage.

UON's Hydro Harvest Operation team is the only Australian cohort to reach the final stage of the two-year and $1.75 million Water Abundance XPRIZE competition, which challenges teams to create a device that extracts a minimum of 2000 litres of water per day from the atmosphere using 100 percent renewable energy, at a cost of no more than two cents per litre.

Professor Behdad Moghtaderi from UON's Newcastle Institute for Energy and Resources said teams were working with the aim of delivering decentralised access to water to help solve the global water shortage crisis.

His team's low-cost, fuss-free and energy-efficient prototype is capable of converting the air's humidity into drinkable water. "We went into the competition wanting to keep the technology as simple as possible to ensure it would have worldwide applications, especially for developing countries," Professor Moghtaderi said. "Atmospheric water generators are usually based on refrigeration cycles that cool the air to below the dew point, the point at which condensation will form. We're turning that idea on its head. Our process is based on heating the air, not cooling."

TRAILBLAZERS: Clockwise from back, Dr Priscilla Tremain, Dr Andrew Maddocks, Dr Cheng Zhou, Professor Behdad Moghtaderi and Associate Professor Elham Dooroodchi. Of the initial 98 teams, only four were from Australia.

The modular and environmentally friendly technology can work anywhere without being bound to climate, which could potentially transform the future of water generation. "The first step is to use desiccant to absorb water at night," he said. "Then we use solar energy during the day to produce hot, humid air that moves over and around the desiccant. The hotter the air, the more water it's going to hold and then by cooling that hot air, we get the water back."

Prize organisers said there was more than three quadrillion gallons of untapped water in the atmosphere, or enough to meet the needs of every person for a year.

The Hydro Harvest Operation team is comprised of Professor Moghtaderi, Associate Professor Elham Doroodchi, Dr Andrew Maddocks, Dr Priscilla Tremain and Dr Cheng Zhou, working under UON's newly established Global Impact Cluster for Energy, Resources, Food and Water. Associate Professor Doroodchi said the team was "thrilled" to be selected as finalists in the competition. "It feels great to be representing our country as we have been working incredibly hard to turn our simple idea into a viable reality," she said. "Even if we don't win, we will pursue the idea to ensure greater access to water for all." They will join four teams from India, USA and the UK in the competition's finale, with the winner to be announced in August.

University of Newcastle Global Impact Cluster Energy, Resources, Food and Water research

Water from dehumidification

Engagement Survey 2018 vs 2016

	2018	2016	IND DIFF	ALL DIFF
PASSION/ENGAGEMENT	**79%**	**81%**	**+5**	**+11**
Organisation Commitment	84%	84%	+13	+12
Jobs Satisfaction	81	85	+1	+8
Intention to Stay	71	72	+2	+14
PROGRESS	**63**	**45**	**+12**	**-5**
Organisational Direction	69	57	+14	-2
Change and Innovation	46	33	+6	-10

Key Changes

	2018	2016
Organisation Direction	83	52
Senior Leadership	59	46
Cross Unit Collaboration	44	37
Processes	41	44
Technology	40	44

Conclusion

1. A more inspiring purpose appears to have led to employees being actively engaged

2. We have overcome fear of change resulting in some important KPI improvements:
   * 17% reduction in leakage
   * halving of time taken to provide approvals to developers
   * from mid-way to top 2 in mystery shopping scores

   Leaders now dare to believe!

3. Strong evidence that community is now curious about how to use water more wisely
   * too early to say whether their behaviour will change, but encouraging signs

Jim Bentley
jim.bentley@hunterwater.com.au