Telstra

Telstra Innovation Hackathon 2023

Theme 2 sustainability in Action Deep Dive Session

October 17, 2023

Environmental Challenge

- E-waste is the fastest-growing waste stream in the world.

- Global E-waste Monitor[1] estimated that the world's e-waste would increase from 54 Mt in 2019 to 75 Mt in 2030.

- We only recover a third of the total value of the materials in the e-waste we generate.

- E-waste also contains hazardous materials such as lead, cadmium, mercury and persistent organic pollutants (POPs).

1 Global E-waste Monitor 2020

Global impact

How many Earths would we need
if everyone lived like U.S.A. residents?

🇺🇸 U.S.A.	5.1	
🇦🇺 Australia	4.5	
🇷🇺 Russia	3.4	
🇩🇪 Germany	3.0	
🇯🇵 Japan	2.9	
🇵🇹 Portugal	2.9	
🇫🇷 France	2.8	
🇪🇸 Spain	2.8	
🇨🇭 Switzerland	2.8	
🇮🇹 Italy	2.7	
🇬🇧 U.K.	2.6	
🇨🇳 China	2.4	
🇧🇷 Brazil	1.6	
🇮🇳 India	0.8	
🌍 World	1.75	

Source: National Footprint and Biocapacity Accounts 2022
Additional countries available at overshootday.org/how-many-earths

Telstra's impact

InfraCo

7,300 tonnes
of network waste

970 tonnes
of customer packaging

millions
mobile phones,
modems & devices shipped
(incl SIMs)

Telstra's Sustainability strategy

InfraCo

Our purpose and values

To build a connected future so everyone can thrive

We are changemakers   We are better together   We care   We make it simple

Our commitment

Harnessing our technology to create a more sustainable and inclusive world

Sustainability pillars

Creating a better digital world

- Connecting regional and remote communities
- Building responsible tech skills
- Advancing online safety, privacy and security
- Supporting people in vulnerable circumstances

Sustaining our planet

- Taking bold climate action
- Protecting nature and biodiversity
- Progressing a circular economy
- Enabling the transition for our customer

Our foundation

Doing business responsibly

Fair and transparent products   Ethical supply chain   Leading conduct and governance   Our people

    Building safe and resilient infrastructure

General
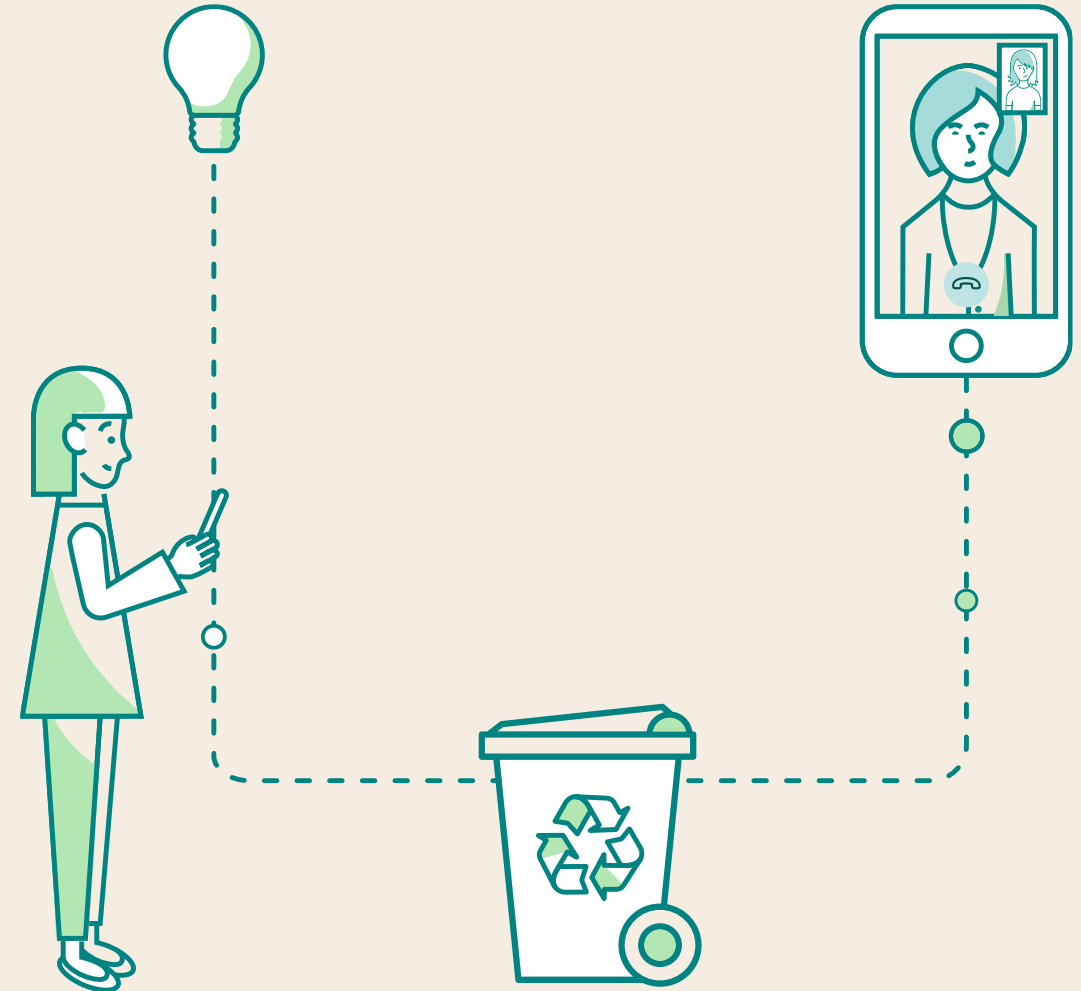
Telstra's Circular Economy Goals

InfraCo

Reuse or recycle 650,000 mobile phones, modems and other devices each year to 2025

100% of Telstra-branded packaging is made of renewable or recycled material and is **fully recyclable**

Increase our network waste **recycling rate to 90% by 2025**

General

Telstra's Environment Strategy

Our FY23 Circular Economy program

InfraCo

632,919
mobile phones, modems and other devices reused or recycled

100%
Telstra branded products transitioned to packaging that is made of renewable or recycled material and is fully recyclable

79%
network waste recycling rate

Smart Modem 3

- Removed unnecessary items such as extra cables
- Removed all unnecessary plastics in the modem and the packaging
- Changed the enclosure from white to black, which allowed us to use more than 80% recycled plastics (now increased to 95%)
- Undertook proof of concept for circular modem

Metals Recovery

- Recovered 13,930 tonnes of metal
- The various metals extracted (such as aluminium, copper and lead) avoided emissions and waste from mining new metals
- Generates revenue stream

Copyright Telstra©   Building safe and resilient infrastructure

General

# Circular Economy | What this means for Telstra
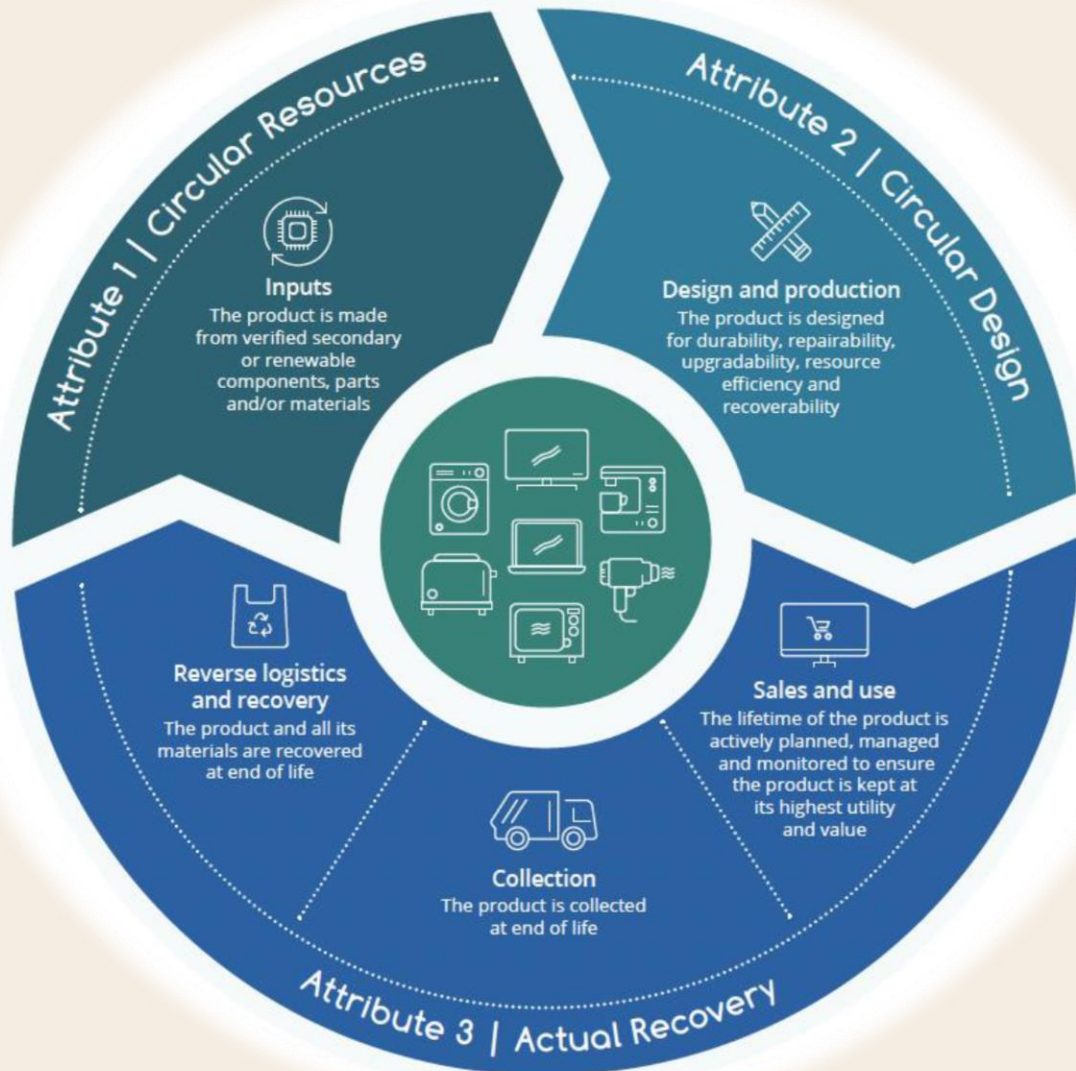
Shifting from a linear system to a circular (closed-loop) system

Based on three principles:
1. Design out waste and pollution
2. Keep products and materials in use
3. Regenerate natural systems

PowerPoint Template

General

Systemic enablers

- Aligned supply and demand for circular resources
- Standardised material usage
- Common standards and procedures for transparency
- Circularity integrated into product development
- Cross value-chain collaboration for product development
- Marketing tailored to circular products and services
- Sales models in-line with circular incentives
- Services optimising a product's use phase
- Consumer willingness to return a product

The Opportunity

PowerPoint Template

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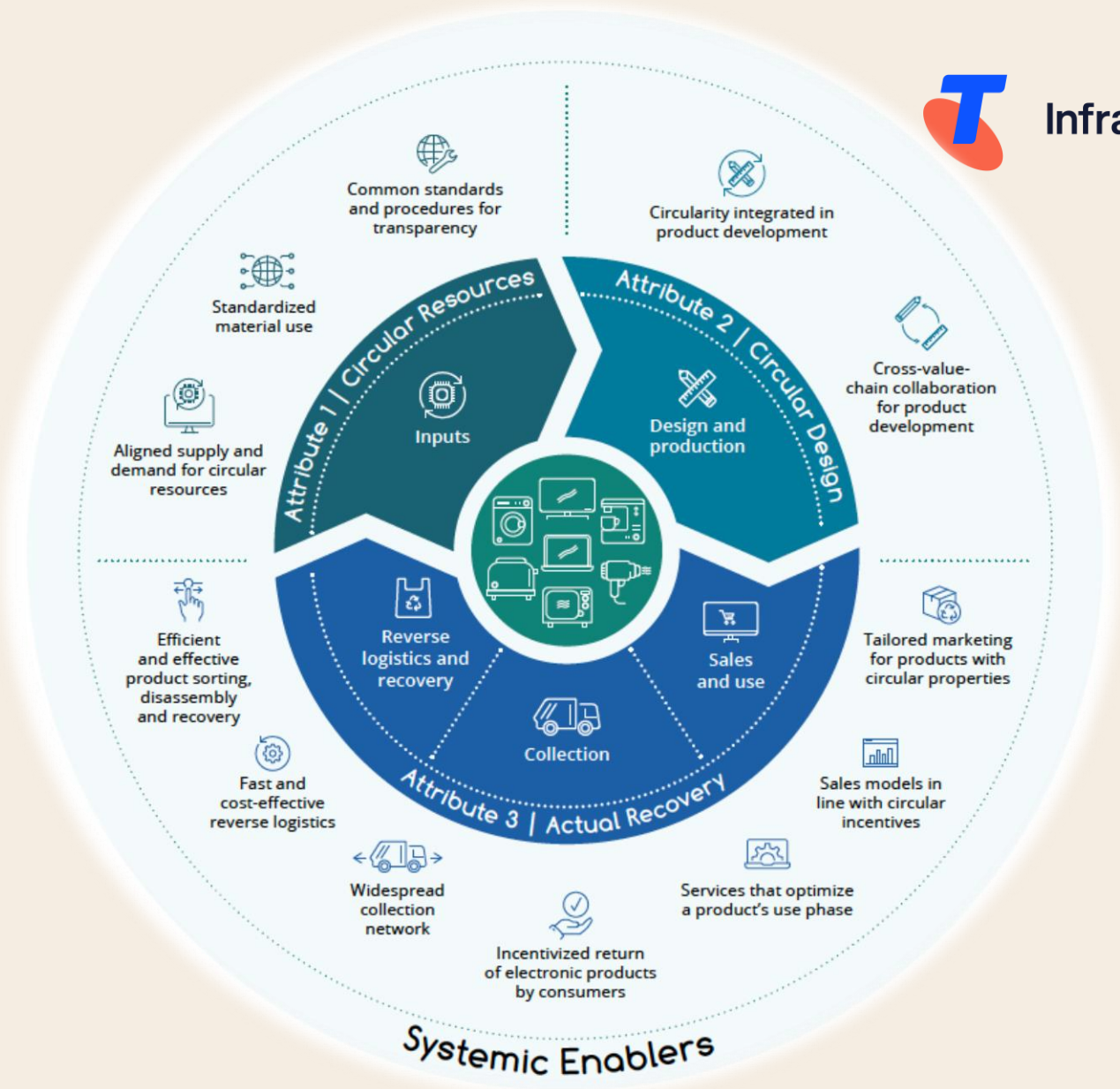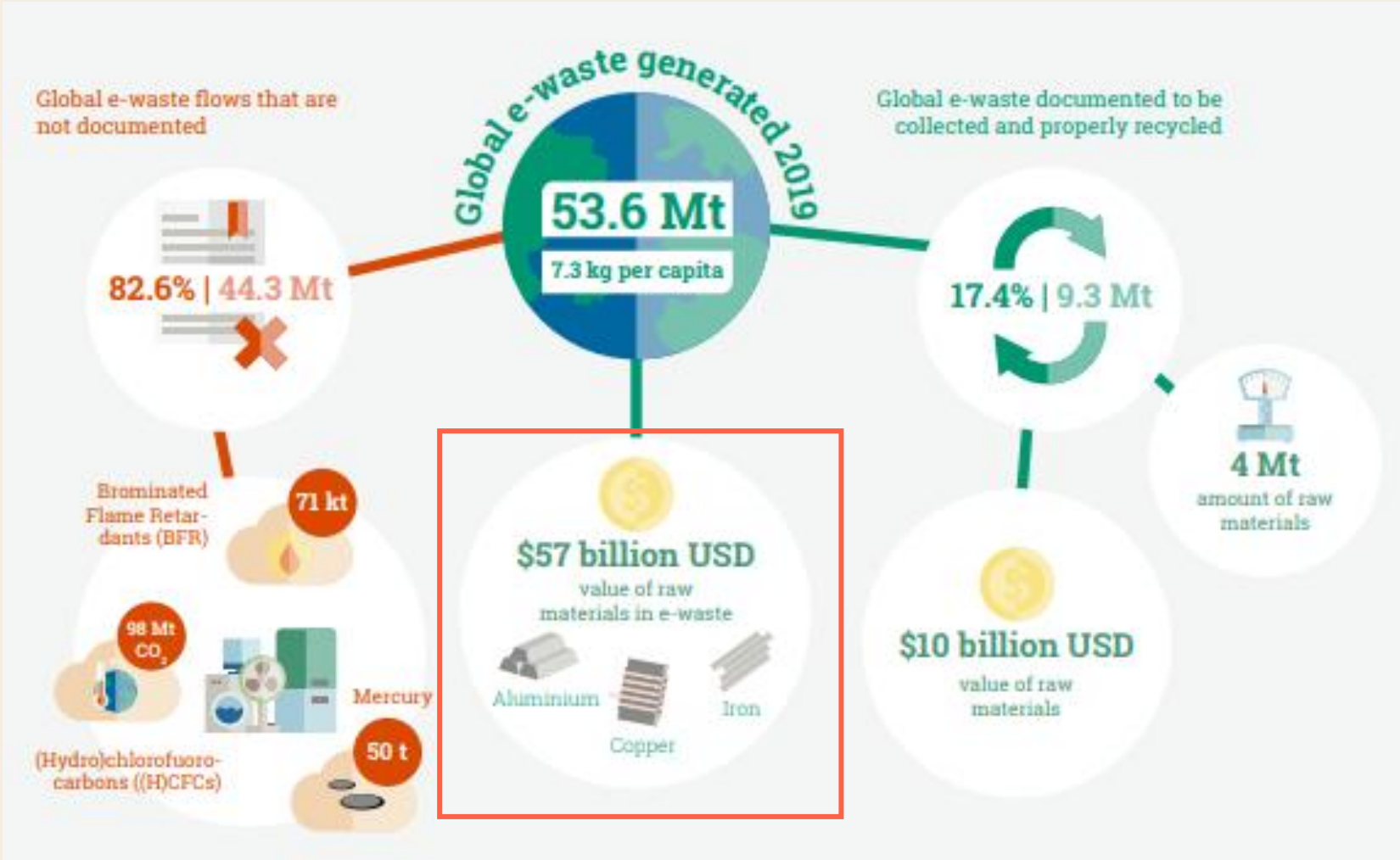
What we need help with

- How does Telstra leverage products to enhance circular economy outcomes, also assisting their customers to reduce their carbon footprint?

- Partnering with key suppliers on new business models for network equipment – lease, take / sell back schemes, repairs, resell, etc

- To make it easier to source, reuse and repurpose existing network equipment

- Mobility as a service rather than a product? Develop an ecosystem that supports customer retention and satisfaction which could see an increase in ARPU.

- Motivating customers to return products by providing transparency and traceability of where the recycled materials end up

- Making it easier customers to return products for reuse or end of life management back to place of purchase (reverse logistics)

- Improve reuse through repair making it more accessible. What opportunities exist for selling refurbished network equipment / devices?

- New business models for responsible production and consumption.

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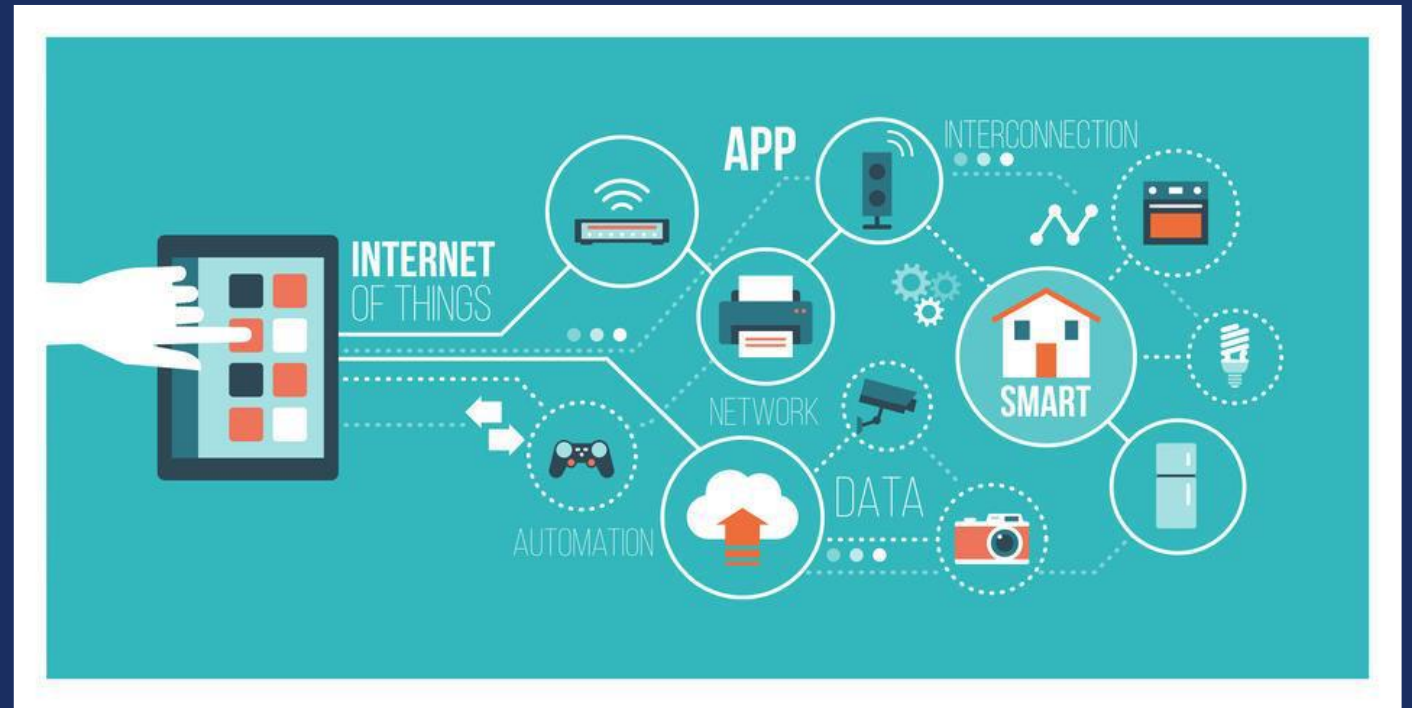
Links to circularity

[Environment and technology – Telstra](#)

[Telstra-Case-Study-May-2022.pdf (stewardshipexcellence.com.au)](#)

[VID-20220822-WA0001.mp4](#)

[Telstra: Using the Power of Technology to Create a More Sustainable Future – YouTube](#)

[What is a circular economy? | Ellen MacArthur Foundation](#)

    PowerPoint Template

General

Telstra's Sustainability Strategy

InfraCo

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General

Sustainability in action: Emission Reduction

Our Climate Change Challenge

Climate impacts on people and ecosystems are becoming more severe and widespread

If we continue on this trajectory to 2°C of global warming above pre-industrial levels:

- Droughts will impact 200 million more people

- Extreme heat will increase by 52-68 days per year and

- We will lose 99% of coral reefs around the world (World Resources Institute, 2023)

# Telstra's Climate Goals

InfraCo

In response, Telstra is taking bold climate action to decarbonise our business, and help our customers and suppliers do the same

Being bold, we've set goals including:

- Reducing our absolute scope 1+2 and scope 3 greenhouse gas emissions by at least 50% by 2030 (from an FY19 baseline); and

- Enabling renewable energy generation equivalent to 100% of our energy consumption by 2025

Sustainability in action: Emission Reduction

How we are reducing our electricity to reduce emissions

Area	Energy-saving Opportunities
Networks and infrastructure	• Design and operate networks/infrastructure to use less energy • Decommission legacy technology
Office buildings, exchanges and data centres	• Use energy saving technology • Monitor our electricity consumption
Field services & staff	• Transition to electric vehicles • Encourage less business travel
Customers	• Provide energy efficient products and services (which reduces our scope 3 emissions) • Enable monitoring of energy / emissions use
Supply chain	• Procure products and services that are energy efficient. • Educate and support our supply chain to reduce their emissions (which reduces our scope 3 emissions)

Sustainability in action: Emission Reduction

General
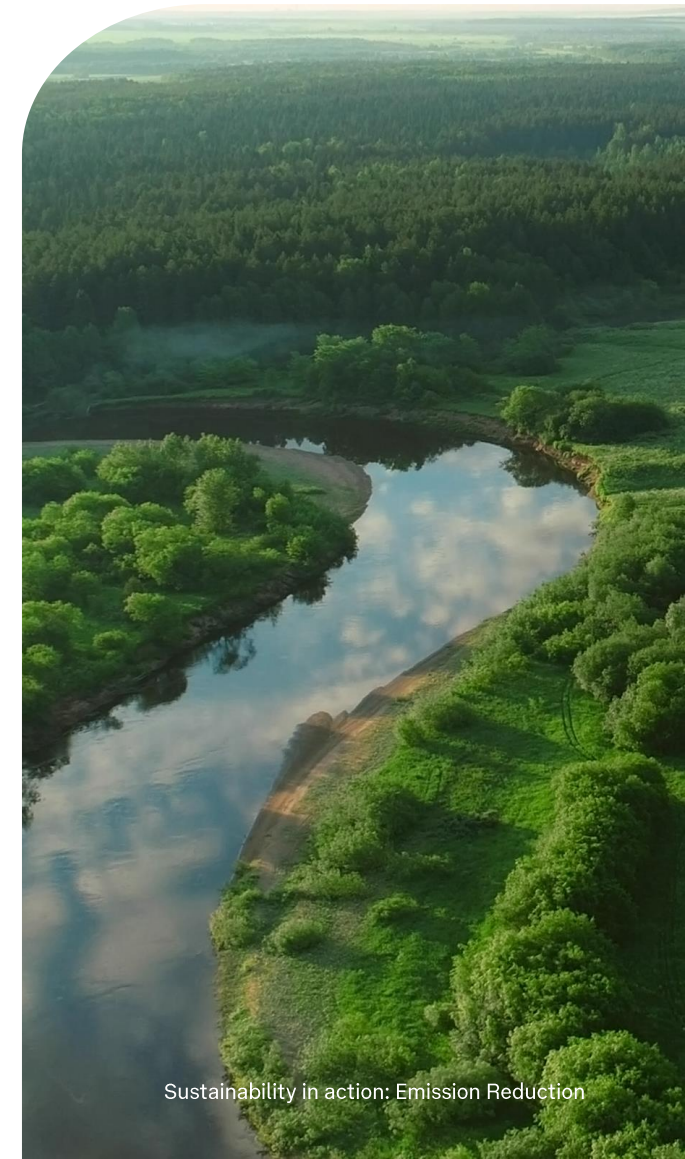
Our FY23 Energy Efficiency program

Our network sites are our largest consumers of electricity, and therefore majority of our energy reduction and optimisation projects are undertaken at these sites

- LED lighting
- Air conditioning and controls
- Power, conversion and generator systems
- Decommissioning

$49M Invested
in energy reduction projects
across Telstra Group

130,742
MWh pa of energy saved across
Telstra Group from energy efficiency
& decommissioning programs

Winner 2022 National Energy
Efficiency Council
Leading Energy User Award

Sustainability in action: Emission Reduction

We don't have all the answers, we need your help

     Sustainability in action: Emission Reduction

Thank you