Consumption

Globally solid waste is predicted to grow to 3.8 billion tonnes by 2050 almost doubling current levels[1].

92 million tonnes of this is textile waste of which only 1% are recycled into new garments[2].

1. Global Waste Management Outlook 2024 | UNEP - UN Environment Programme
2. 17 Most Worrying Textile Waste Statistics & Facts [2024] (theroundup.org)

Congestion

It is estimated that congestion costs Queensland $156 million in lost time and productivity[1].

Cars are the most popular mode of transport to get to work in all states[2].

1. The $156 million traffic burden Queensland can't afford | RACQ
2. Transport: Census, 2021 | Australian Bureau of Statistics (abs.gov.au)

Shared Goods and Services

Sharing goods and services reduces consumption and waste products. This is present through incentives such as car sharing for school runs to district heat networks with heat recovery.

Sharing goods is particularly present through clothing rental sites, where users can upload their clothing for others to rent on sites such as The Volte and Style Theory.

Social

Education

Education for all of society is essential to ensure learning facilities for all and invest in the wider community.

Queensland has over 36,000 learning spaces and support facilities.[1]

1. Facts and figures (qed.qld.gov.au)

Community Growth

Community growth can create job prospects, diverse societies and new opportunities.

Queensland's annual population growth rate was the third fastest of the States and Territories in 2024 at a rate of 2.6%, higher than the 2022-2023 national average of 2.4%. [1]

1. Population growth highlights and trends, Queensland, 2024 edition (qgso.qld.gov.au)

Queensland Independent Schools **Block Grant Authority** |
SUSTAINABILITY TOOLKIT Megatrend Cards

Artificial Intelligence

Artificial intelligence (AI) is the technology behind the rise of smart devices and autonomy.

AI is quickly becoming part of our daily lifestyles. Queensland recognises the need to include teaching about the technology within the curriculum. This ensures AI tools can aid students, schools and society responsibly and ethically[1].

1. The Australian Framework for Generative Artificial Intelligence (AI) in Schools - Department of Education, Australian Government

Technological
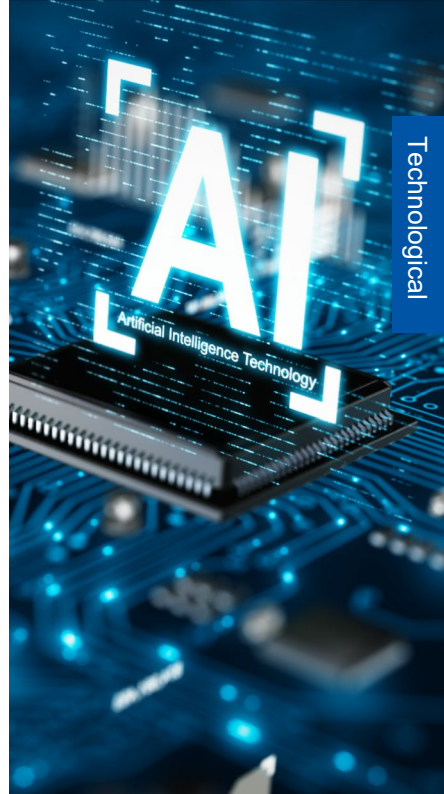
Automated Services

Automated services account for systems whereby operation takes place without human control. This includes systems from self-check outs at supermarkets to drones and robotics capable of assessing construction sites.

Boston Dynamic's Spot[1] – the mobile agile robot provides automatic sensing and detection and can record data, removing the need to send contractors to site.

1. Spot | Boston Dynamics

Technological

Smart Phone Technology

Technological

Smart phone capabilities are increasing with new launches and technology. They feature compatibility to various smart products such as TVs, watches and speakers.

From 19.9 million users in 2017, the number of Australian smartphone users is expected to increase by 3.7 million to 23.6 million by 2026[1].

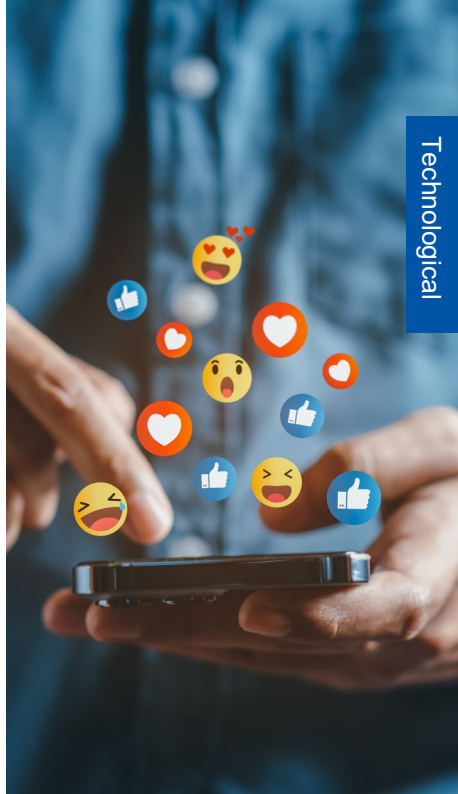1. Australia: smartphone users 2026 | Statista

Social Media

The increased use of social media, particularly with the younger generation, promotes an increased use of technology.

TikTok experienced an increase in users from 12% in 2017 to 38% in 2020[1], in turn, increasing screen time and phone usage.

1. [The digital lives of Aussie teens.pdf (esafety.gov.au)](esafety.gov.au)

Technological

Digital Divide

The digital divide splits society depending on access to the internet, in turn widening the gap of class and status.

Bridging the gap helps improve access, affordability and ability, a goal that Queensland has highlighted to prioritise.

1. Close the digital divide | About Queensland and its government | Queensland Government (www.qld.gov.au)

Technological

Housing Crisis

The housing crisis in various cities globally highlights economic inequality between high- and low-income households.

Since 2020, Brisbane apartment rents have risen by 23% and house rents have risen by 33%.[1]

1. [Report: A blueprint to tackle Queensland's housing crisis - QCOSS](#)

Economic

Cost of Living Crisis

The Cost-of-Living Crisis is affecting all forms of living, including rent, food costs, health prices and energy bills, resulting in increased poverty rates.

Simple necessities like bread and cereal increased in price by 10.15% between 2021-2022 in Queensland[1].

1. Report: Living affordability in Queensland 2022 - QCOSS

Inequality

Inequality because of income causes a divide in quality of life.

The Index of Household Advantage and Disadvantage (IHAD)[1] is an experimental index that summarises relative socio-economic advantages and disadvantages for households. Geographic trends show that high proportions of advantaged households are in inner metropolitan cities.

1. Inequality in Australia: an interactive map of disadvantage | Income inequality | The Guardian

Economic

Circular Economy

Addressing the circular economy ensures all life cycle stages are accounted for and valued from an economic and carbon emission perspective. A Life Cycle Assessment (LCA) can feed into a Life Cycle Costing (LCC).

Stages of the Circular Economy address 45% of global greenhouse gas emissions.[1]
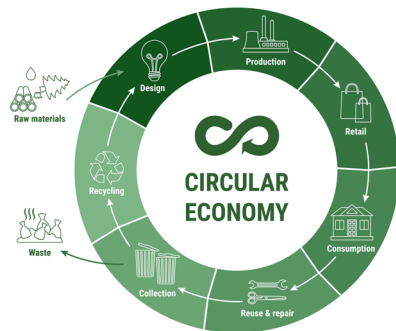
1. Completing the Picture - How the circular economy tackles climate change | Shared by Climate Change (thirdlight.com)

Employment

The global pandemic caused a large spike in unemployment rates; society and the economy are still recovering from the effects.

The unemployment rate in Queensland has increased by 0.3% in the last year.[1]

1. [Labour and employment: State | Queensland Government Statistician's Office (qgso.qld.gov.au)](qgso.qld.gov.au)

Economic

Smart Infrastructure

Smart infrastructure improves systems by providing monitoring, increasing efficiency and reducing usage.

Ipswich Motorway, Logan Motorway and Port of Brisbane Motorway are all examples of Smart Motorways[1] which utilise smart technologies to improve safety management, reduce stop-start travel and provide more real-time road information to drivers.

1. [Smart Motorways (Department of Transport and Main Roads) (tmr.qld.gov.au)](tmr.qld.gov.au)

Environmental

Renewable Technology

Various forms of renewable technology can provide clean energy sources.

Queensland aims to establish a 50% renewable energy target by 2030. Currently, 27.3% of the electricity generated in Queensland is produced by renewable energy sources.[1]

1. Queensland's renewable energy targets | Department of Energy and Climate

Environmental

Decarbonisation

Australia aims to achieve net zero by 2050 through various decarbonisation strategies. Queensland's contribution to the journey is categorised into four pillars[1]:

1. Mission-orientated Leadership

2. Building our Regions

3. Energy and Industry Transformations

4. Valuing Carbon Ecosystems

1. https://policy-futures.centre.uq.edu.au/files/13017/Decarbonising%20Queensland%20Policy%20Brief_QldUniversities_Aug22.pdf

Environmental

Natural Disasters

Natural disasters cause damage and disruption to the community, environment and the economy.

Queensland has experienced more than 97 significant natural disasters since 2011, resulting in more than $20 billion in reconstruction efforts[1]. A disaster resilience plan has been published to improve Queensland's disaster resilience.

1. queensland_strategy_for_disaster_resilience_high_res.pdf (qra.qld.gov.au)


Environmental

Pollutants

Pollutants are one of the world's largest health and environmental problems, contributing to millions of deaths annually.

Queensland has multiple plans in place to tackle various kinds of pollutants, i.e.:

- Emissions reduction targets

- Litter and Illegal Dumping Online Reporting System

- National Clean Air Agreement

- Point Source Water Quality Offsets Policy

- Plastic Pollution Reduction Plan

1. Pollution | State of the Environment Report 2020 (des.qld.gov.au)

Environmental
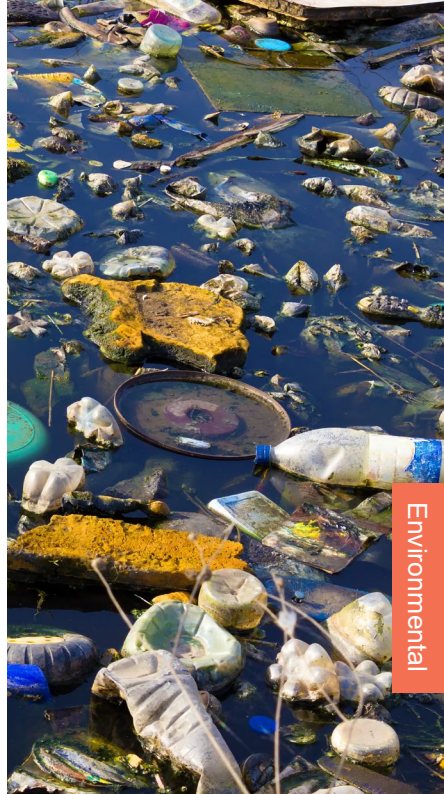
Net Zero Targets

Global targets have been developed to reduce greenhouse gas (GHG) emissions.

Australia has set a target to transition to net zero by 2050 through decarbonising the grid and investments in generation, storage, transmission and system services.[1]

1. AEMO – roadmap to net zero AEMO report – the roadmap to net zero | energy.gov.au

Political

Urban Leadership

The impact from urbanisation of cities can influence wider states and nations.

C40 Cities Climate Leadership Group (C40) [1] are a leading organisation who share concerns regarding international protocols and treaties addressing climate change. The approach allows lessons shared to be applied simultaneously to cities with similar population, infrastructure and budget.

1. C40 Cities Climate Leadership Group C40-Cities.pdf (gsnetworks.org)

Political

Prevention

Preventing harmful impacts of climate change is to be driven by policies and targets.

Queensland produced 9.3 million tonnes of headline waste between 2022 and 2023[1]. Waste prevention techniques reduce the amount of waste generated, reducing its impact on the environment.

1. [Recycling and waste in Queensland report | Environment, land and water | Queensland Government (www.qld.gov.au)](www.qld.gov.au)

Political
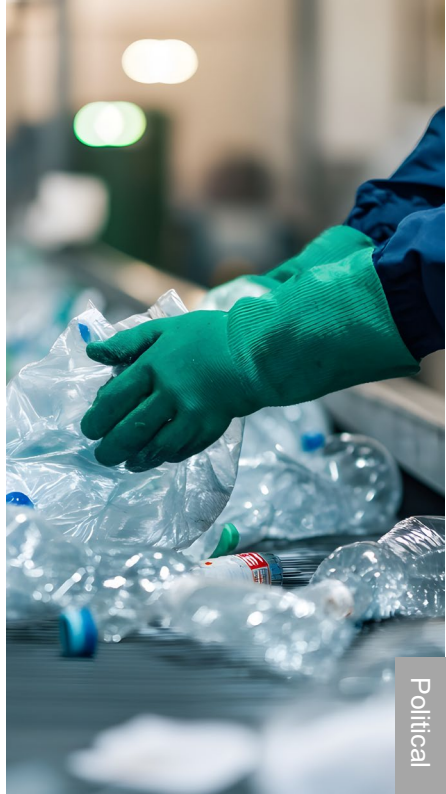
Producer Responsibility

Producer responsibility ensures the user can effectively select, use, and dispose of the product correctly. Understanding a product's carbon impact helps users make more environmentally conscious decisions.

Providing a form of Product Carbon Footprint (PCF) or Environmental Performance Declaration (EPD) captures the life cycle of a product. BASF is a prime example of a digital application that calculates PCFs for its 45,000 sales products, which are available through its global portfolio.[1]

1. BASF PCFs Product Carbon Footprint (basf.com)

Reduce Your **Carbon** Footprint

Political

Behavioural Change

Both policy implementation and behavioural change in the community drive change.

BASIN[1] recognise the multi-level behavioural perspective when enhancing water security in Africa. They aim to improve decision-making to promote inclusive water security globally.

1. BASIN – Behavioural Adaptation for water Security and INclusion - Grantham Research Institute on climate change and the environment (lse.ac.uk)

Political