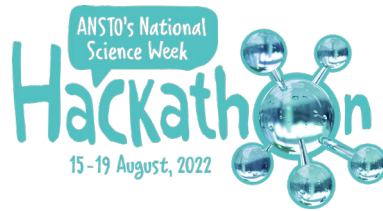




Australian Government



# Challenge brief

Your local council is looking to the future to develop a more sustainable community and improve quality of life by 2030.

Specifically, your council is focussing on glass as a source material for new local developments. The council has approached your team to design and implement an innovative glass-based solution to improve quality of life in your local community for the future.

## Your task:

- Identify a **problem area** in your local community and relevant **end-users** who experience it.

---

- **Research** and **understand** how glass is used, manufactured, and its waste managed in Australia and your **local community**.

---

- Design a **creative** and **unique** solution using glass to **solve the problem** and improve **quality of life** in your local community.

While feasibility and viability are important considerations, we will accept solutions that assume a reasonable level of new research or expertise to be achieved between now and 2030.

## Resources:

### Circular economy roadmap for plastics, glass, paper and tyres

FULL REPORT | JANUARY 2021  
CSIRO | PDF | 112 pages

FULL REPORT



[www.csiro.au/-/media/News-releases/2021/circular-economy/20-00205\\_LW\\_CircularEconomyReport\\_WEB\\_210121.pdf](http://www.csiro.au/-/media/News-releases/2021/circular-economy/20-00205_LW_CircularEconomyReport_WEB_210121.pdf)

### Circular economy roadmap for plastics, glass, paper and tyres

SUMMARY | JANUARY 2021  
CSIRO | PDF | 18 pages

REPORT SUMMARY



[www.csiro.au/-/media/News-releases/2021/circular-economy/20-00205\\_LW\\_CircularEconomySummary\\_WEB\\_210119.pdf](http://www.csiro.au/-/media/News-releases/2021/circular-economy/20-00205_LW_CircularEconomySummary_WEB_210119.pdf)

### Assessment of Australian recycling infrastructure - Glass packaging

Department of the Environment and Energy | PDF | 12 pages



[www.agriculture.gov.au/sites/default/files/documents/assessment-australian-recycling-infrastructure-glass-packaging.pdf](http://www.agriculture.gov.au/sites/default/files/documents/assessment-australian-recycling-infrastructure-glass-packaging.pdf)

### Industry-first apartment made from waste glass and textiles

UNSW | Website



[www.smart.unsw.edu.au/news-events/news/industry-first-apartment-made-waste-glass-and-textiles](http://www.smart.unsw.edu.au/news-events/news/industry-first-apartment-made-waste-glass-and-textiles)

## Tips:

- Reach out to your local council in advance, they will be able to give you some ideas on what issues they are currently trying to solve for your community. There might even be something already in the pipeline that your team could contribute towards.

---

- Research and understand what happens to glass waste in your local community. Where does it go? Which company runs these facilities? Could you speak with them?

---

- What happens to glass waste in your local community? Where does it come from? What type of glass is it predominantly?

---

- Try not to focus only on how glass can be recycled into new materials, but also how it can be re-used and re-purposed.

---

- What are some of properties of glass that make it such a versatile material? What are some new and emerging technologies based on glass that you could use in your solution? Could you suggest ways to improve existing technologies?

---

- Think creatively about prevention, re-purposing, recycling, multi-purposing.

---

- Remember to make use of your Experts and STEM Mentors, they will be able to guide you in terms of the scientific viability of your ideas. ASK LOTS OF QUESTIONS!

