



# HexalBytes

Aims for a project to encourage environmental sustainability.

Progress Presentation 2



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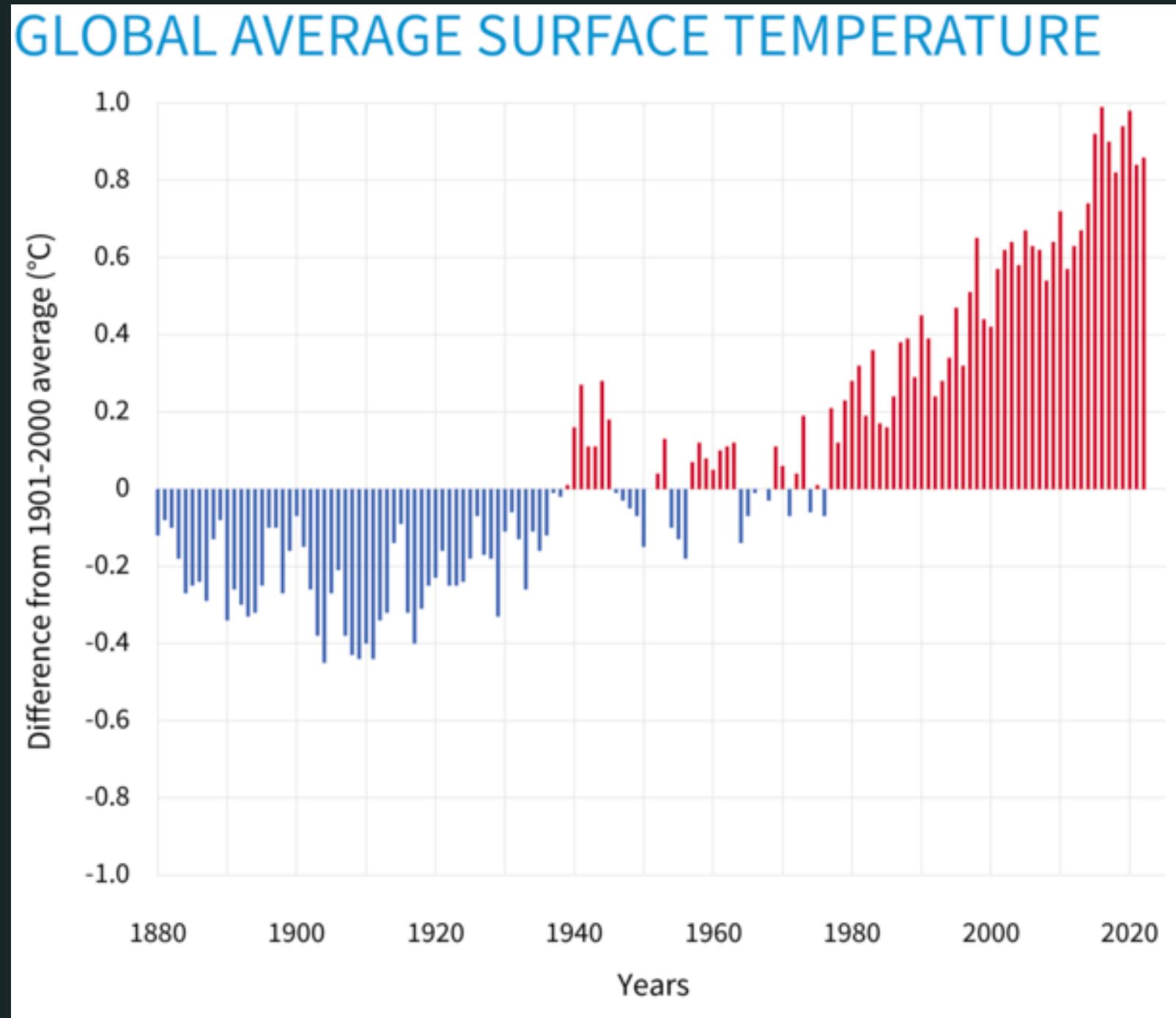
## Part 5:

Q & A



# Insight From A1 -- Pain Points

1. Increase in Global temperature

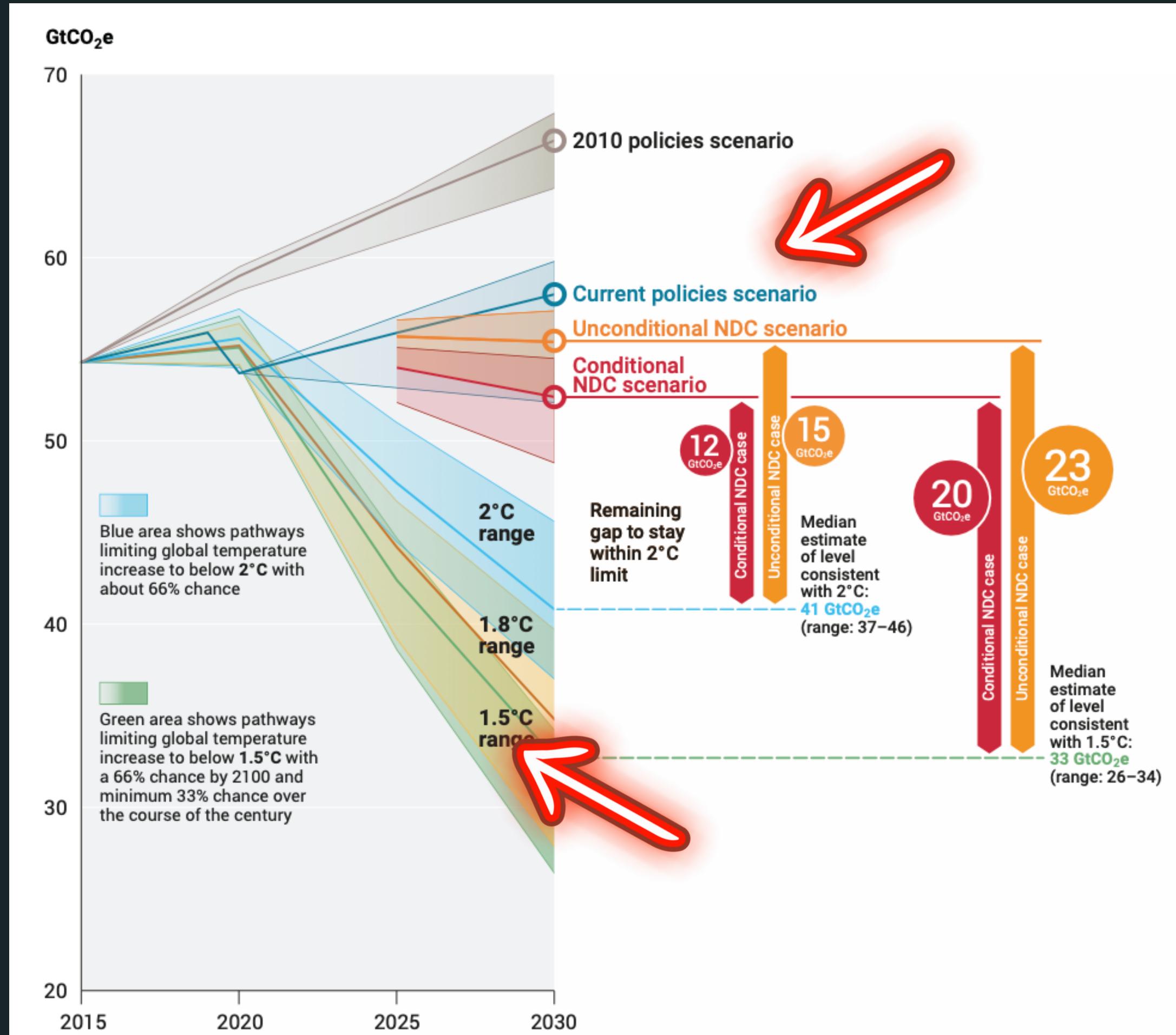


[1] Yearly surface temperature compared to the 20th-century average from 1880–2022 [1]

2. Effectiveness of policies are subpar



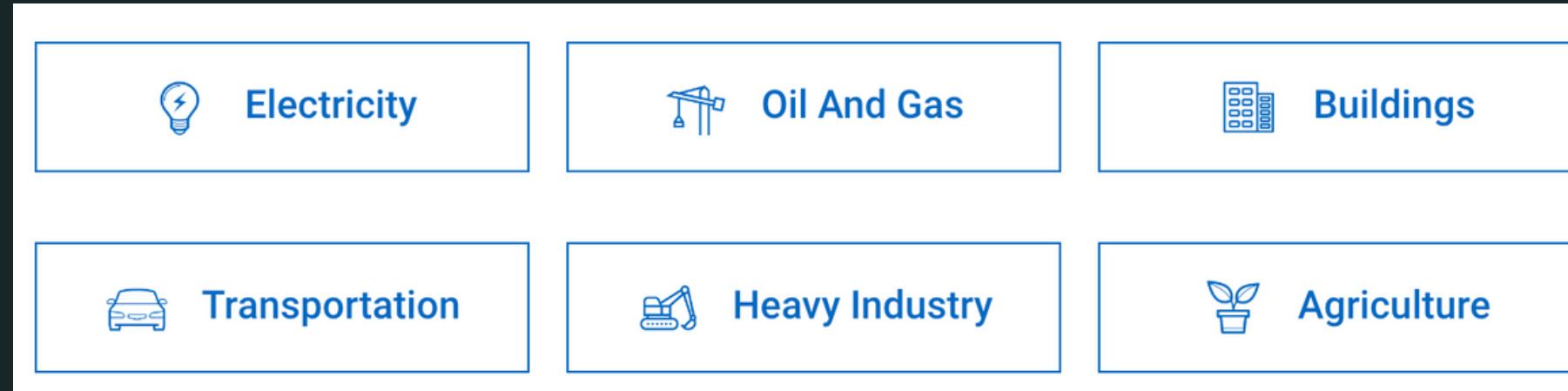
[2] Net Zero plan propose by International Environmental Agency



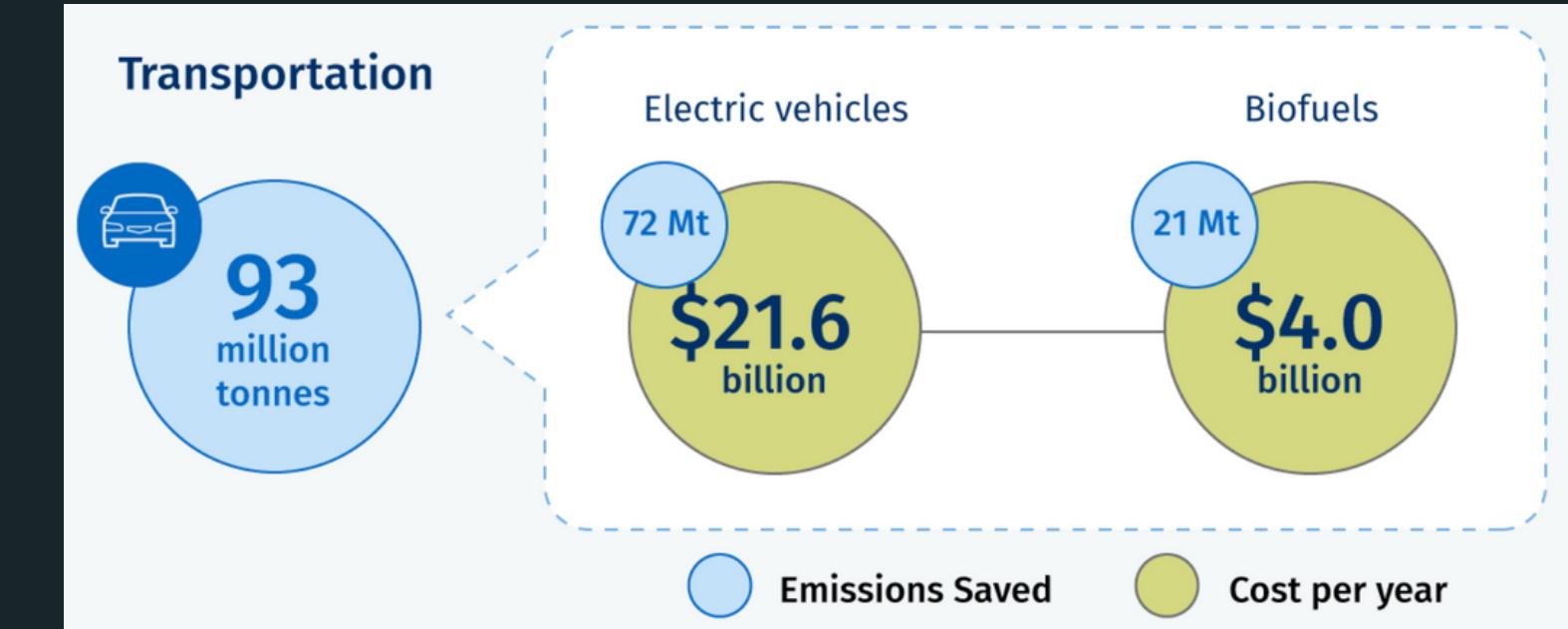
If we just keep the current policy, the CO2 emission gap between the ideal stage and reality would be huge.....



### 3. Resource-intensive & Large organization's game



[3] *The \$2 Trillion Transition: Canada's Road to Net Zero*



4. Many people want to contribute to environmental protection but lack knowledge and tools to take actionable steps.

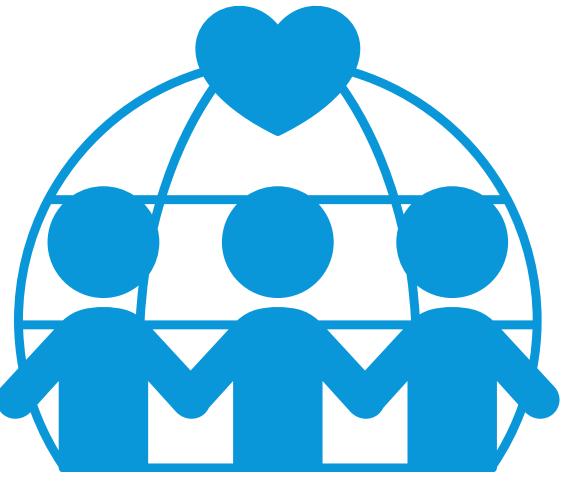


# Insights from A1 -- Stakeholders



## Primary

individuals who are conscious of the need for eco protection but are uncertain about the specific actions they can take.



## Secondary

people who are not only aware of eco issues but have also taken steps towards mitigating them.



## Tertiary

professionals working in environment-related companies that profit from environmental protection actions.

# Insights from A1 -- Field Studies

## 1. Questionnaire

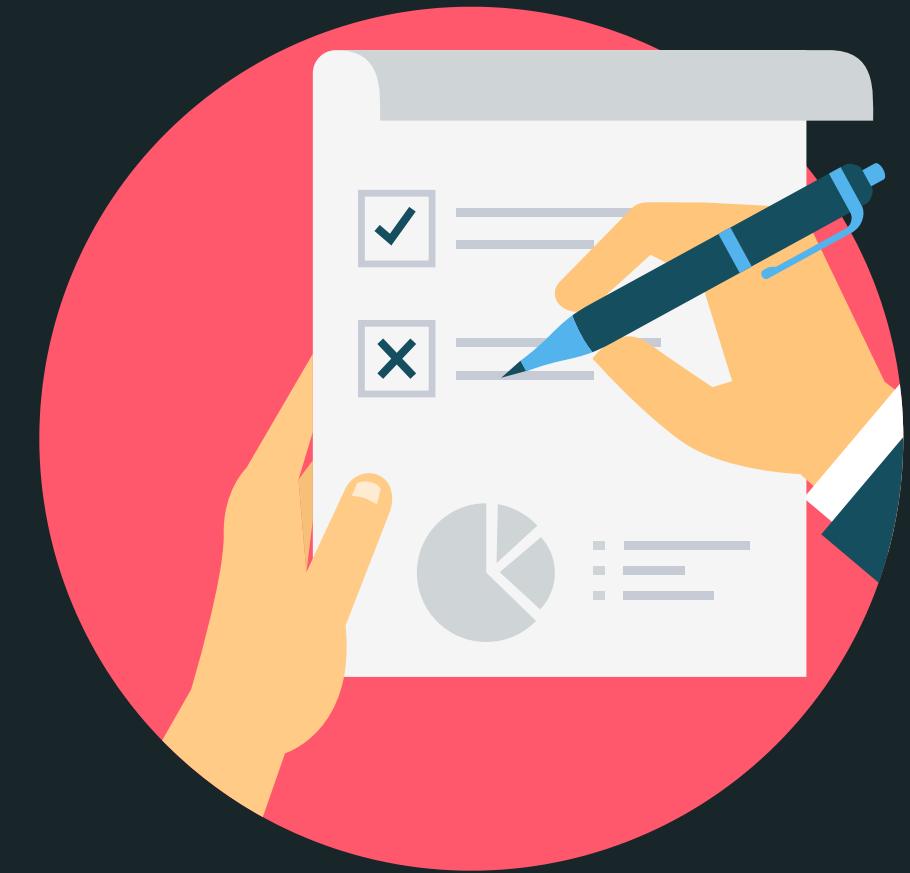
- Among the **64** participants, **40** were primary stakeholders and **24** were secondary stakeholders
- None of the primary stakeholders rated the importance of individual contributions to eco conservation as level 5

## Biggest Barrier

- **57.5%** identified "Lack of awareness or information"
- **45%** identified "Lack of convenient eco-friendly options"

## Incentives for Environmental Protection

- **32.5%** suggested financial support for eco-friendly actions
- **30%** believes in community support



# Insights from AI -- Field Studies

## 2. Interview

- Of the **4** interviewees, we have **2** primary stakeholder, **1** secondary stakeholders and **1** tertiary stakeholder
- interviewees are motivated by tangible rewards and the impact of small, everyday eco-friendly actions
- A common challenge mentioned was the consistent integration of eco-friendly habits into daily routines
- Technological solutions should focus on tangible rewards, user-friendliness, educational content, and consistency in eco-friendly actions.

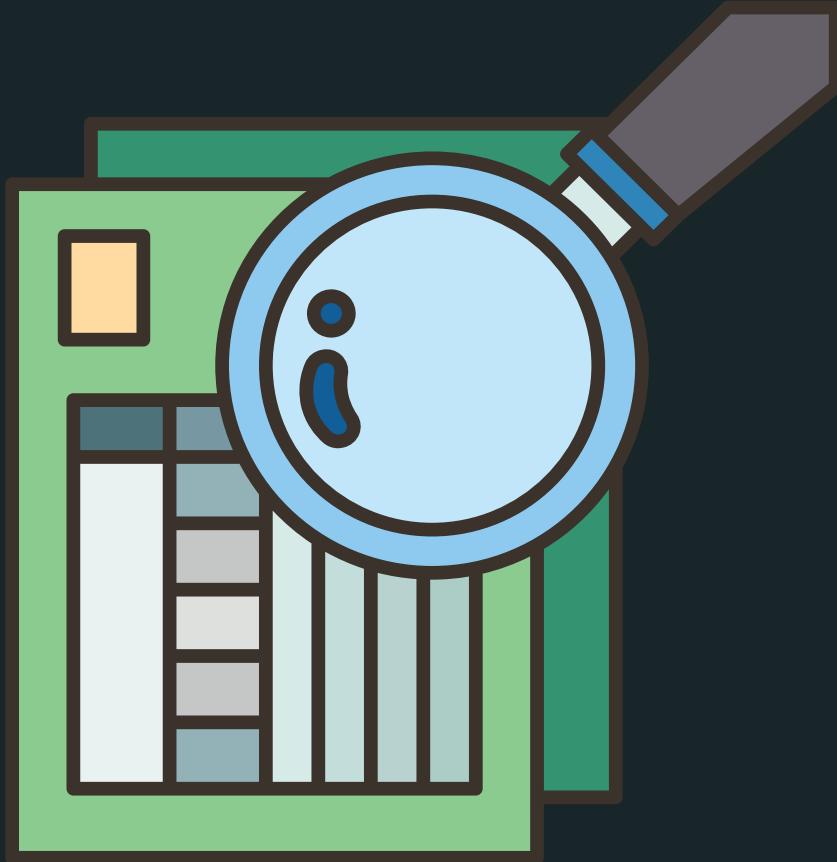




# Insights from A1 -- Field Studies

## 3. Observation

- Of the five participants observed, **3** primary stakeholders and **2** secondary stakeholders
- Primary stakeholders showed eco-unfriendly behaviors,
- Secondary stakeholders showed greater awareness and actions related to eco-protection
- The observations highlighted the need to strengthen eco awareness among primary stakeholders and provide secondary stakeholders with more concrete actions they can take



# Insights from A1 -- Summary of Key Findings from Field Studies

Team HexalBytes

An online **environmental protection community** can significantly motivate people to take actions for environmental conservation

Different stakeholders respond to **various forms of motivation**, from financial rewards to intrinsic value recognition

Secondary stakeholders often **exhibit incomplete eco-friendly behaviors**, occasionally engaging in eco-unfriendly actions. We need to strengthen their awareness as well.

These three key findings are vital for shaping the future design requirements of the project

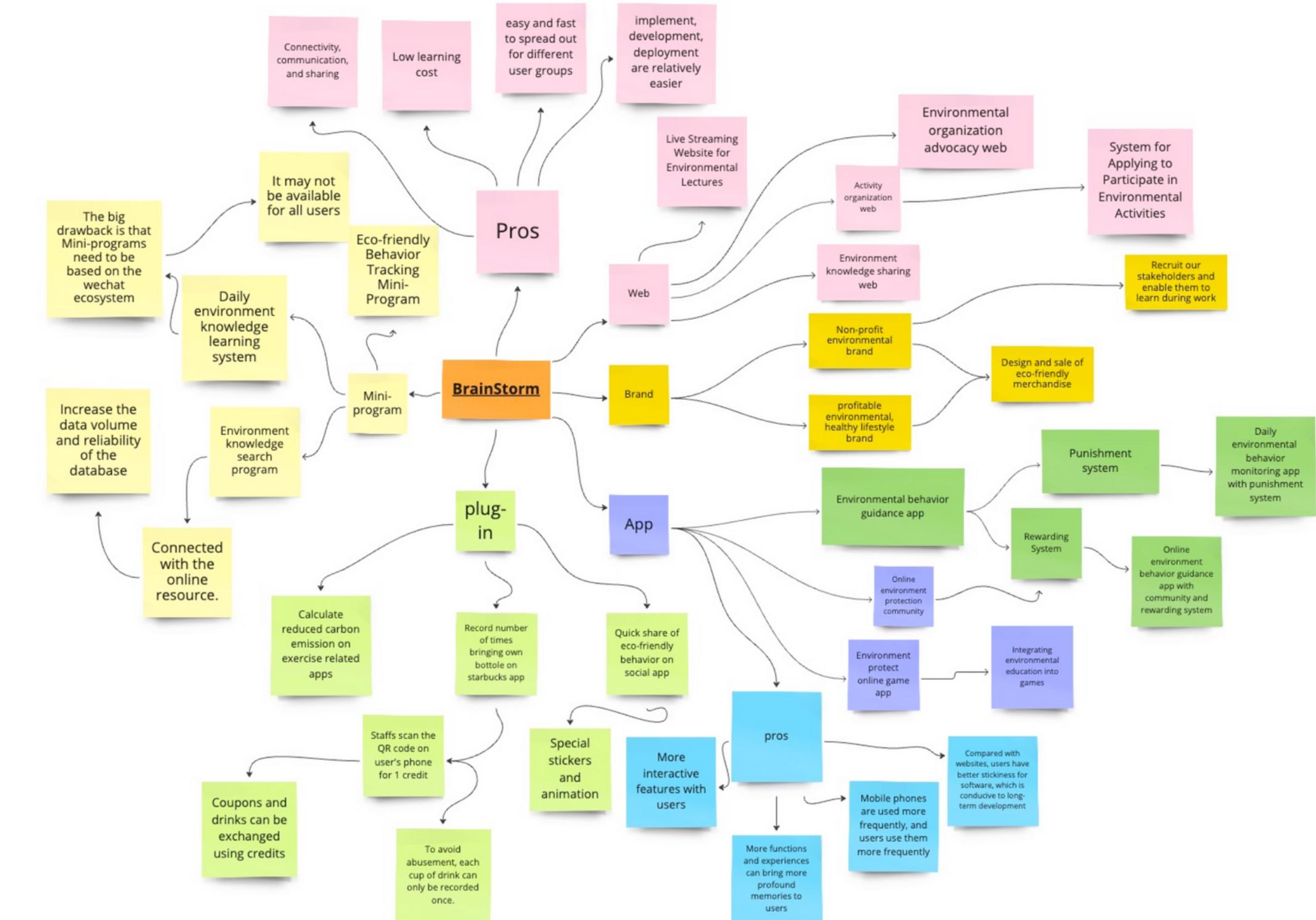
# Ideation and Brainstorm

Team HexalBytes



- Educational Campaigns
- Incentivize Sustainable Practices
- Community Lessons and Workshops
- Promote Public Transportation
- Tree Planting Initiatives
- Reduce, Reuse, Recycle Promotions
- Green Technology Innovations

...

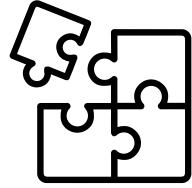


# Three Potential Solutions

Team HexalBytes



- Analysis + Comparison + Screening + Evaluate + Merge



- Come up with three potential solutions.

**Solution 1:** An **online platform** that provides discussion boards, free lectures and live streamings to users, where they can share immediate ideas with environmental experts and each other.

**Solution 2:** An **open website** that shares environmental issues, news and advice and give users insights on how small steps can help to change.

**Solution 3:** A **interactive mobile application** that tracks users' carbon emissions/footprint and recommends personalized, feasible and environmentally-friendly actions and tips for their daily lives.

# Pros and Cons

## Solution1: online environment educational platform

Pros	Score	Score	Cons
Direct interaction with experts.	!	4	2 Requires regular content updates and expert availability.
Real-time exchange of ideas.		3	4 The discussion and action might end when the lecture is finished.
Encourages community building and collaboration.		3	2 May not cater to all time zones or global audiences.

## Solution2: open environment-oriented website

Pros	Score	Score	Cons
Web is easy to hands on and share the information.	!	3	4 Hard to track users's actual actions.
Keeps users informed about the latest news.		3	3 Potential for sharing unchecked information.
Encourages actionable steps with practical advice.		3	4 Lacks the dynamic engagement of real-time interactions.

## Solution3: interactive mobile application

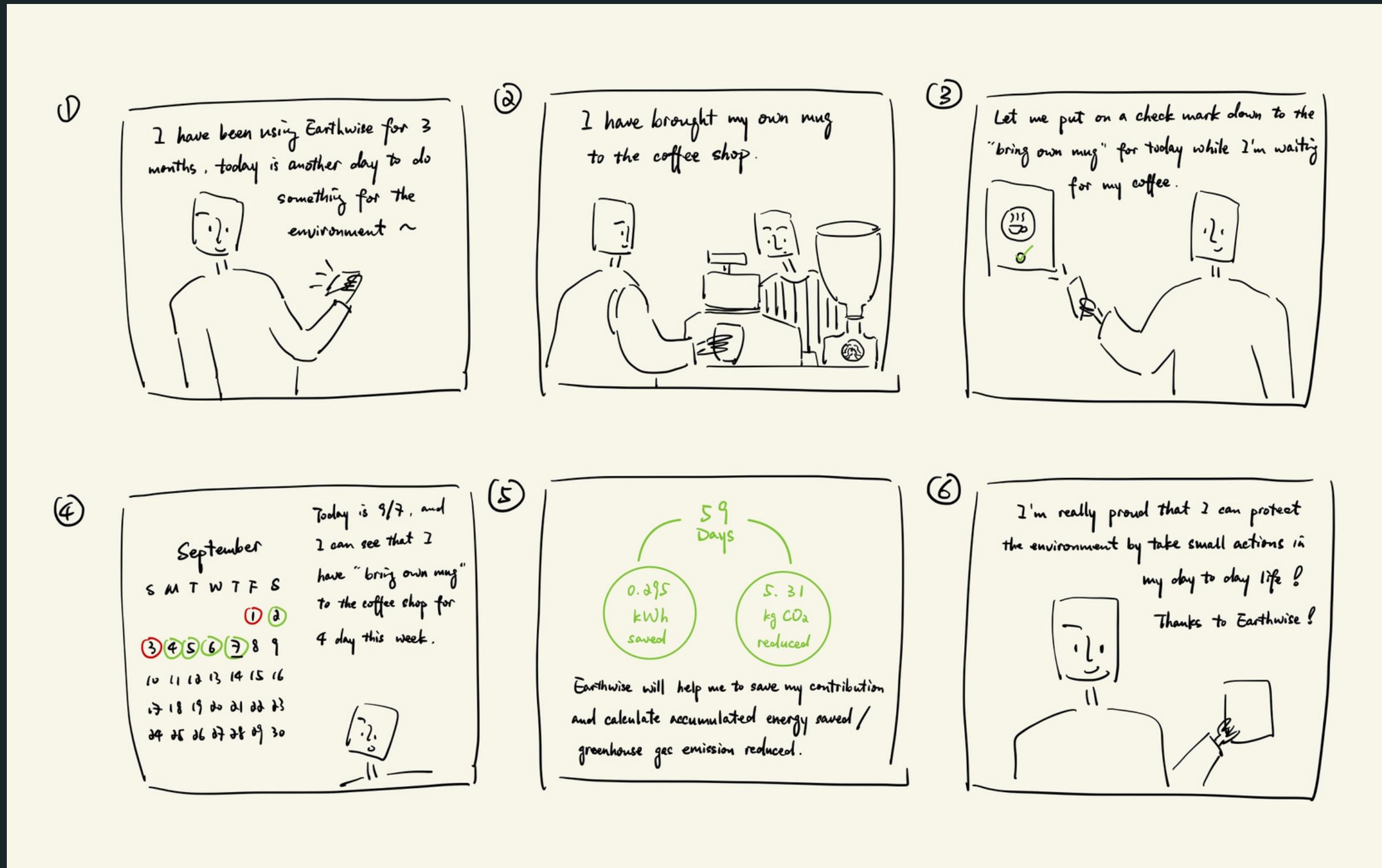
Pros	Score	Score	Cons
Track and feedback users' actions in real-time.	!	4	4 Privacy concerns with personalized data collection.
More rich features and interactions with users.		3	3 Potential for sharing unchecked information.
Can integrate with other apps or services.		3	3 Dev is expensive and requires long-term maintenance and updates.
Can build well user engagement and habit.		3	3 Users need time to be familiar and comfortable with the App.

Pros: Score 1(Not Important at all) - 5 (Very Important)

Cons: Score 1 (Not Severe at all) - 5 (Very Severe)

# Storyboard - High Level

(contribution tracker & accumulative calculation)



# Storyboard - Screen Level

(share environmental news and knowledge in community)

①

in the "community" section, users can select if they want to go to "news" or "stream" section of environment knowledge learning.

②

if the user has selected "news" option. this interface will contain default world's top environmental topics for users' review.

③

if the user type in "Canada" for their country of interest, a list of news related to environmental issues will be shown.

④

if the user has selected "stream" option. this interface will contain default hot topics of environmental lectures for users' review.

⑤

if the user type in "transportation" for their topic of interest, a list of related lectures, synchronous / asynchronous streams will be shown.

⑥

user is able to post their comments under each video and discuss the issue with anyone else interested in the same topic around the world.



# Our Next Step... Till Next Studio

Step 1: develop paper prototype.

Step 2 : design 5 set of instructions for think-aloud evaluations to test our core design requirements.

Step 3: conduct think-aloud evaluations and heuristic evaluations

Step 4: analyze evalution results and make modifications to our design according to those findings

# Questions for the Audience...

Q1:

How detailed should a collection of pictures with arrows and labels to explain transitions be or a brief video showing the transitions in real-time be?

Q2:

Would it be helpful to include our tertiary stakeholders to the think-aloud evaluation or cognitive walkthrough?

We are open for any questions or  
feedbacks from the audience :)

## Citations

[1]