

Illuminate

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Agenda

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Introductions

Who are we?



Jubi Qayum
Electrical and Computer Engineering
Location: Arlington, Virginia



Josh Ramos
Electrical and Computer Engineering
Location: Arlington, Virginia

Persona Group

Target Audience: Adult Environmentalists

An adult who is concerned about the environment but has little knowledge of light pollution.

- Receptiveness to Information
- Influence of Media
- Basic Understanding
- General Environmental Awareness
- Community Engagement



Problem

How do we best inform this group?

To determine the **best medium** and **topics** for **addressing light pollution**, we need to consider key characteristics of our persona group.

- ☐ Environmental Awareness
- ☐ Advocacy and Activism
- ☐ Interest in Science and Nature
- ☐ Use of Technology and Media
- ☐ Strong Sense of Responsibility
- ☐ Skepticism or Distrust
- ☐ Information Overload
- ☐ Confirmation Bias
- ☐ Competing Interests
- ☐ Perceived Redundancy

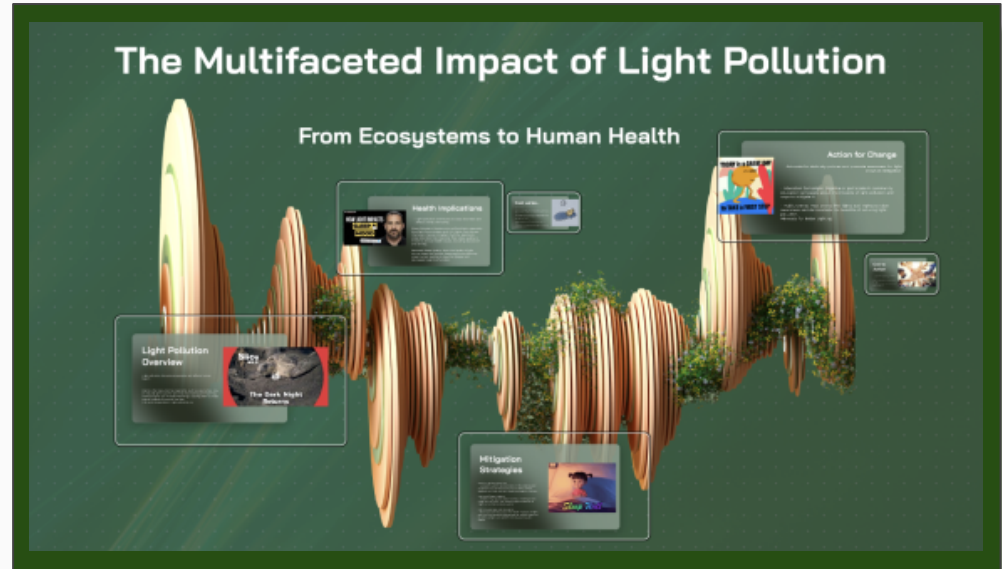
Our Solution

Illuminate

A seamless and visually captivating digital presentation meticulously crafted to shed light on the often overlooked issue of light pollution using Prezi.

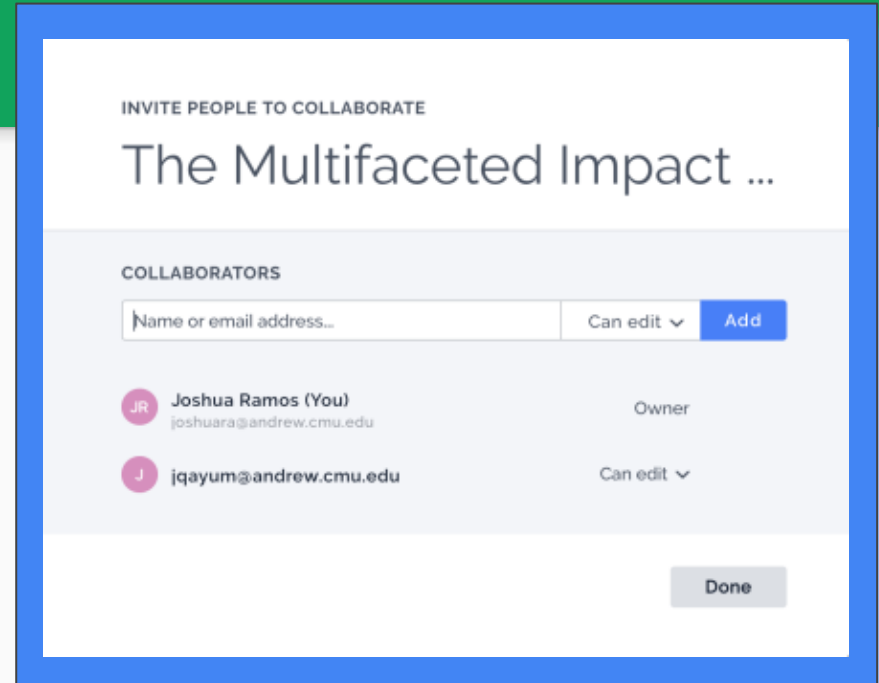
Emphasis on:

- Biodiversity
- Sustainability
- Well-being



Intended Use

- ❑ **Simple and Accessible**
- ❑ **Immerse** at your own pace
- ❑ Interact with **dynamic features** to deepen your understandings
- ❑ **Share** Illuminate with your networks
- ❑ **Contribute** what you know!



INVITE PEOPLE TO COLLABORATE

The Multifaceted Impact ...

COLLABORATORS

Name or email address... Can edit ▾ Add

JR	Joshua Ramos (You) joshuara@andrew.cmu.edu	Owner
J	jqayum@andrew.cmu.edu	Can edit ▾

Done

Sneak-peek

Call to Action

Join efforts to combat light pollution for healthier ecosystems and human well-being.

Automated Systems: Use smart lighting systems that can be programmed to reduce light levels during certain hours.

Timers: Set timers on outdoor lights to ensure they are only on when necessary.



“

Over 80% of the world's population lives under light-polluted skies, and in the United States and Europe, that number rises to over 99%.”

Action for Change

Advocate for dark-sky policies and promote awareness for light pollution mitigation.

- Education Campaigns: Organize or participate in community education campaigns about the impacts of light pollution and ways to mitigate it.
 - Public Events: Host events like "lights out" nights to raise awareness and demonstrate the benefits of reducing light pollution.
- Advocate for Better Lighting



Research

Our Findings

What was our focus?

- **Comparative Analysis of Media:**
 - Evaluated digital presentations, print media, video content, and social media campaigns.
 - Chose Prezi for its visual and interactive capabilities.
- **Content Development:**
 - Focused on creating visually appealing and interactive elements.
 - Included animations, videos, and infographics.
- **User Engagement Strategies:**
 - Designed to enhance accessibility and interaction.
 - Implemented techniques like clickable infographics and interactive animations.

Why this direction?

- **Engagement:**
 - Digital presentations, especially interactive ones, are more engaging for adult learners.
- **Effectiveness:**
 - Visual and interactive content helps in better understanding and retention of information.
- **Accessibility:**
 - Digital platforms are easily accessible and can be shared widely.

More Findings

What information did we find to be most informative and effective for adult environmentalists and why?

Disruption of Animal Behavior:

- **Nocturnal Wildlife:** Many species rely on darkness for hunting, mating, and migration. Light pollution disrupts these natural behaviors, leading to decreased survival rates.

Energy Consumption:

- **Inefficient Lighting:** Excessive and misdirected lighting wastes energy, contributing to higher carbon emissions and environmental degradation.

Human Health Impacts:

- **Circadian Rhythm Disruption:** Exposure to artificial light at night disrupts our natural sleep-wake cycle, leading to sleep disorders, stress, and increased risks of chronic illnesses.

Intended Effects

To Inform and Inspire Action

"Illuminate" aims to inform and inspire action among adult environmentalists and individuals concerned about biodiversity, sustainability, and well-being.

- **Inform:**
 - Increase awareness about light pollution.
 - Improve understanding of light pollution and its environmental, biological, and cultural consequences.
- **Inspire:**
 - High engagement through interactive elements.
 - Encourage users to share the presentation, amplifying its reach.



Product Analysis

How do we measure success?

- ❑ **Audience engagement**, feedback, contributions, and dissemination
- ❑ **Tracking the adoption** of sustainable lighting practices and community-driven initiatives spurred by "Illuminate"
- ❑ **Ongoing monitoring** of light pollution levels and mitigation efforts in communities exposed to "Illuminate"



Next Steps...

What more could we do?

Opportunities for Improvement:

- **Enhanced Interactivity:**
 - Incorporate more interactive quizzes and surveys to engage users.
- **Deeper Content:**
 - Add more detailed case studies and real-world examples.
- **Expanded Reach:**
 - Develop a companion mobile app for easier access and broader dissemination.

Future Directions:

- **Secondary Fields of Research:**
 - Investigate the economic impacts of light pollution.
 - Explore the effects on urban planning and public health policy.
- **Additional Research:**
 - Study the long-term effectiveness of digital presentations in environmental education.



Our Experience

Key takeaways...

- *Josh*

“I feel that I learned a lot about light pollution on a more personal level throughout this course, and working on this project allowed me to take an informative stance on the topic, which further reinforced my learning. I am very happy with our final product.”

- *Jubi*

“I didn’t know much about light pollution before working on this project, if anything at all, and this project gave me valuable insight on why it is an issue that society at a greater large disregards. I also like finding new ways of teaching people and convincing people the importance of issues I care deeply about, so I feel like the lessons I learned on the research process will stick with me beyond this project and beyond light pollution alone.”

Thank you! Q/A

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