

Research Paper

New Building in an Established Residential Neighborhood: Understanding Local Issues Using a Template-driven, AI-Empowered System

Howard R. Moskowitz^{1*}, Stephen Rappaport² and Sunaina Saharan³

¹Mind Genomics Associates, Inc., White Plains, New York

²SDR Consulting, Inc., Norwalk, CT

³Independent Researcher, Patalia, India

*Corresponding author: Howard R. Moskowitz, Mind Genomics Associates, Inc., White Plains, New York, USA

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Abstract

The paper presents the use of AI-generated ideas in a study on evaluating offers by a builder to local neighborhood regarding use of land for building new development. The novelty of the approach comes from the use of AI-generated material evaluated by human respondents, and the use of such approach to help create an efficient system to deal with local issues. The paper moves the emerging science of Mind Genomics towards dealing with the everyday problem of negotiations about civic and property issues, showing the power of AI (Idea Coach) to make the process affordable and doable in real time.

Introduction

In the 'project of science' research studies are assumed to emerge as efforts to contribute to a picture of 'how the world works.' Those who publish their investigations are often described as 'filling gaps in our knowledge.' Indeed, much of the edifice of science rests on the practice of what is called the 'hypothetico-deductive' system, the system which requires that the researcher propose a hypothesis and do the experiment to either support the hypothesis or falsify it. It is by the accretion of such studies that the edifice of science is created, the picture of the world [1]. The assumption in science is that the researcher somehow 'knows' a great deal about the topic and can identify what might be the next experiment to perform. The experiments often end up as simple reports, supported by statistics, and introduced by detailed literature reviews. The research ends up being done and incorporated into the edifice. At the other side of the project of science is grounded theory [2]. Here the researcher does a study or reports a set of observations. It is from those observations that hypotheses emerge. Once again, however, the effort assumes at the start that the researcher does the experiment, and thus implicitly assumes that the researcher is beginning with a knowledgeable conjecture.

What then happens in those increasingly frequent cases where the issues are new, or at least new combinations of old issues, and where there has not been sufficient time to create a literature, or even to develop grounded theory and hypotheses? Can a method be developed which allows the exploration of issues in a manner which is quick, simple, yet profound in the depths of information and insight that it can promote, and even create? This paper presents such an approach with a worked example, and a timetable of events. The topic

concerns repurposing and redeveloping land in a way suitable to the existing community while allowing the developer to maximize profits.

The approach presented here, Mind Genomics, comes from a combination of three disciplines, and has evolved since the late 1990's. The disciplines are:

1. Consumer research. This area of applied science studies the way people make decisions about the topics of daily life.
2. Mathematical psychology and psychophysics; The study of how we subjectively 'measure' external stimuli and situations in our 'mind', to create an algebra of the mind. For the current topic of environment and health, mathematical psychology and psychophysics will help us create the structure of how we think about topics.
3. Statistics, specifically experimental design. This is the study of how we can combine different variables to represent alternative 'realities', these realities equivalent to different descriptions of how the world works. The normal, everyday experience of the world comes in packets of stimuli, not in single ideas. Rather than surveying the person, giving that person single questions, we create combinations of those questions, and give the person these combinations. The person then rates the combinations on a defined scale.

The issue dealt with in this paper comes from a real situation lasting several years. The issue was the sale of a large plot of land on which previously was a now bankrupt golf club. As is the case with many similar pieces of land, the golf club extended over a large area, encompassing different types of land, presenting different types of issues

such as a small lake in the premises, and of course the houses that had been built in proximity to the golf course over the period of a century.

The case itself, with the different points of view espoused by local homeowners, by the local city government, and by the builder brought up the possibility that cases of this type might be amenable to study using Mind Genomics. The ingoing notion was that one could define the situation, use AI (artificial intelligence) to suggest reasonable questions and answer, and then test responses to those answer among real people. The objective was to see what would emerge from this exercise, and whether there might be an opportunity to bring Mind Genomics into an entirely new world.

Applying Mind Genomics to Legal Issues and the Law

The origin of Mind Genomics can be traced to experimental psychology, and specifically to the study of perception. After years of experiments relating physical stimuli to sensed quality and magnitude, respectively, the notion of measuring ideas began to take shape [3,4]. Researchers have long measured the strength of ideas using a rating scale, with the respondent presented with a variety of different single ideas and asked to rate each idea, one at a time, in terms of importance. This approach, the typical questionnaire, although simple to do and quite popular, does not really get at the notion of measuring the power of meaningful ideas. Rather, the questions ask for the magnitude of general classes, such as the importance of general features, e.g., the importance of affordability, the importance of ecological stability, and so forth.

At least two key issues emerge when researchers work with questionnaires.

1. The misleading simplicity inherent in general questions. People live in a granular world, not in the world of the general. To talk about general aspects of an issue, e.g., service, price, and so forth, requires that the survey respondent abstract a single answer from a variety of experiences. The abstraction may be simple and straightforward, but the reality is that the survey respondent has to understand the aspect being questioned, pull up the specific experiences (unknown to the researcher), and then assign a rating to the memory of the issue or topic. In other words, no one really knows the basis on which the survey respondent is assigning the rating,
2. The desire to give the right answer to the interviewer, or now to the interviewing machine. Again, and again researchers are faced with the conscious or often subconscious desire by survey takers to give the 'right' or the 'politically correct' answers. Indeed, when respondents are academics, they are often the most vocal about questionnaires, insisting that the answers be simple, so that the survey taker is not at all confused. This ends up allowing the survey taker to 'game the system', producing the occasionally misleading result, such as what happened in political polls with surveys about voting for a new term for then President Trump [5].

The Mind Genomics approach emerged from studies about decision making [6], not so much with the desire to avoid biases as with the desire to present to survey takers or research respondents

with more meaningful test stimuli. Rather than asking the respondent to rate the single ideas, the early research efforts presented the respondents with combinations of ideas, vignettes, which presented a situation. The respondent was to either choose between two vignettes in terms of some criterion (e.g., preference) in what was called a 'choice experiment' (ref) or was to rate the vignette, this combination, on a scale. In either case the ratings of the choices were analyzed to show the 'driving' power of each individual component of the vignette. Respondents were not required to intellectualize, but simply to choose. In the Mind Genomics system, the vignettes, combinations of ideas or messages about a topic, are created according to a systematic plan called an experimental design. Rather than presenting respondents with single ideas, Mind Genomics presents the respondents with sets of ideas or elements. These messages are combined into vignettes by the experimental design in a way which allows each vignette to contain a small number of different elements, a minimum of two, and a maximum of four. In this way the vignettes are short, easy to read or more realistically to 'scan' as the researcher grazes across the vignette taking in the relevant information.

The Mind Genomics system creates 24 unique vignettes for each respondent or survey taker. That is, the 24 vignettes created for the first respondent are different from the 24 vignettes created for the second respondent, etc. Furthermore, the vignettes are set up so that a valid, powerful statistical analysis, OLS (ordinary least squares) regression can be performed on the results from one respondent, independent of all of the other respondents. The uniqueness of the 24 vignettes is guaranteed by a permutation algorithm [7]. The variables themselves, the elements or messages, are coded in a simple fashion, namely present or absent, called 'dummy variable coding' [8]. The happy result is that the researcher can identify a topic, and simply explore the topic by creating different elements or messages about topics relevant to the topic. There does not have to be much up-front thinking. That is, the structure of the Mind Genomics design promotes exploring of different ideas, promoting experimentation and data rather than extensive arm chair hypothesizing. In some quarters this up-front thinking is called 'analysis paralysis' ... over analyzing the problem up-front before doing the experiment. In this paper we explore the use of Mind Genomics as a rapid, inexpensive tool to deal with a local problem, a problem which has proved to be fractious. The problem involves the activities of a builder in a local residential area, the building having purchased the lands belonging to a defunct golf club, the builder desirous of building single family houses on the land to maximize sales revenue after the construction. We explore how this problem can be approached by a combination of AI, artificial intelligence, to suggest ideas, and people, to evaluate these ideas.

Setting Up the Mind Genomics Study

The Mind Genomics platform uses a templated approach, the template having evolved over a 30-year span since the introduction of its predecessor, IdeaMap®, during the 1993 conference of ESOMAR in Copenhagen [9]. By templating the approach, it became possible to fulfill the objective of 'democratizing research' world-wide, making it possible for anyone to understand the mind of people as they make decisions about the topics of the everyday

Step 1 – Name the study (Figure 1, Panel A)

‘Naming’ seems to be a simple task, but the sheer effort to reduce the research to a word or two focuses the researcher’s mind. Often the naming step turns into an exercise to hone the ‘big idea’ into something tractable, a realization which emerges after the effort is success. All too often those researchers who are new to Mind Genomics end up trying to name their study using a long phrases which ends up constraining the thinking. Forcing the researcher to use a short name opens up the researcher to thinking about the topic in a more creative fashion.

Step 2 – Develop Four Questions or ‘Categories’ Pertaining to the Topic (Figure 1, Panel B)

It is at this step that many researcher become unusually nervous as they begin to stumble about. This inability to craft questions seems endemic, across ages and cultures. It seems almost that we are taught to answer questions, but not taught to pose questions. Even seasoned researchers react with consternation and frustration at being asked to come up with four questions which ‘tell a story’, or at least four questions which end up painting a coherent picture of a topic (Figure 1).

The requirement to create four questions became simpler to fulfill with the advent of available AI, specifically ChatGPT 3.5 [10]. AI was incorporated into the BimiLeap program through Idea Coach, a program specifically developed to create questions. When invoked, Idea Coach required that the research specify the topic, background, and the nature of the level of the answer. Idea Coach would then return with 15 proposed questions from which the research could select 0-4 questions and drop those questions into the study. Idea Coach allowed the researcher to modify the specification if desired, or maintain the specification, and afterwards re-run a second time. By running the Idea Coach many times, the researcher would end up creating separate sets of 15 questions, few repeating questions, but many new questions. The ability to request Idea Coach to produce sets of 15 questions was augmented by a summarizer, with each set of 15 questions separately summarized through AI. Thus, in a matter of five minutes or so, the researcher could create up to 10 different sets of 15 questions. These sets of 15 questions would be stored in an Excel workbook. At the end of selecting the questions and answers (see below), the BimiLeap program would then take each of the pages of questions or answers,

15 per page, and summarize that page with a fixed set of AI based queries. Table 1 shows an example of one page of questions, ad the Idea Coach summarization available almost immediately after program set-up. When considering the depth of information in Table 1, one can appreciate the ‘education’ virtually immediately available to the researcher who knows little about the topic, an education which otherwise might have required a year of intensive research.

Step 3 – Create Four Answers to Each of the Four Questions (Figure 1, Panel C)

Table 2 shows an example of 15 answers returned by Idea Coach as an attempt to answer Question #1. It is worth noting that the actual question posed to the Idea Coach moves beyond the simple question. The prompt requests that the answer ‘explain in depth’, as well as being both short (fewer than 15 words), and understandable to a 12-year-old. It is in this way that the researcher works with the AI in Idea Coach to craft a reasonable set of answers that the respondent can understand when participating in the Mind Genomics experiment. Table 2 shows both the ‘edited question’ and the first set of answers. Once again the summarizer works on each set of answers. Thus, once again the Idea Book, viz., the summarized sets of different sets of 15 questions or answers provides in 20 minutes of effort what night have taken a year or two.

Step 4: Raw Materials Test Stimuli – Elements (Phrases Painting Word Pictures) Combined by Experimental Design

The actual raw material ends up being 16 different phrases, four selected as answers to each of the four questions. Table 3 shows these four questions and their answers. The questions and answers were generated by the combination of the researcher and the AI embedded in Idea Coach. It is important to keep in mind that the researcher is able to edit the elements at any time before the actual experiment wherein human respondents will evaluate the test stimuli.

Step 5: Create the Test Stimuli, Vignettes, Using Experimental Design

The actual stimuli rated by respondents comprise vignettes, combinations of the 16 elements. The combinations are specified by an underlying experimental design, which prescribes 24 different vignettes.

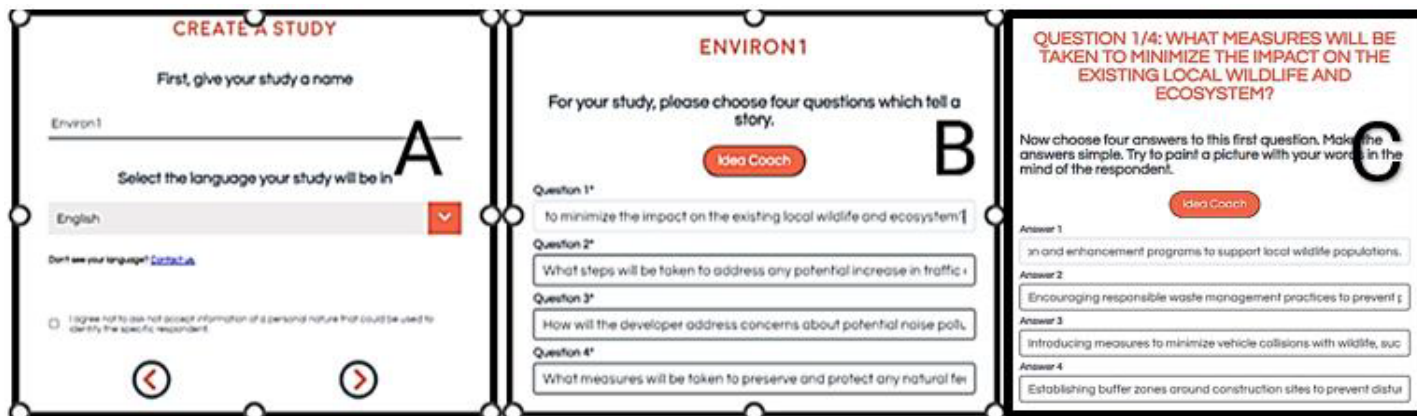


Figure 1: Panel A – name the study. Panel B – create four questions Panel C – create four answers to question #1.

Table 1: Summarization by AI of Idea Coach's first iteration of 15 suggested questions, generated in the effort to create four test questions for the Mind Genomics experiment.

Questions - Results 1

Topic: I live in White Plains, Gedney Farms, an area with many private houses, and a defunct golf course. The golf course is being sold to a land developer who promises to build single-family, high-priced houses. How should the community interact with the developer to maintain the local environment? Specifics are critical here.

Topic Questions:

- Can you provide specific details on the design and layout of the proposed single-family houses?
- How will the new development integrate into the existing neighborhood in terms of architecture and aesthetics?
- What measures will be taken to preserve and protect the existing natural elements, such as trees, wildlife, and open spaces?
- Will there be any additional amenities, such as parks, walking trails, or community spaces, included in the development?
- How will the new development impact traffic flow and congestion in the area? Will there be any plans for road improvements or traffic management?
- What steps will be taken to address any potential noise or pollution issues that may arise from the new development?
- Will there be any preservation or restoration of historic structures or landmarks on the property?
- How will the new development contribute to the local economy and job market?
- What plans are in place to ensure the new houses are energy-efficient and environmentally friendly?
- Will there be any efforts to encourage sustainable transportation options within the development, such as bike lanes or public transit access?
- How will the developer address concerns about increased demand on local public services, such as schools, healthcare facilities, and public utilities?
- What are the details of the developer's timeline for the project, including expected construction phases and completion dates?
- Will there be any affordable housing options or contributions to affordable housing initiatives within the development?
- How will the developer engage with the community throughout the construction process, addressing concerns and providing updates?
- What plans are in place to ensure a smooth transition and integration of the new development into the existing neighborhood?

Key Ideas

- Design and layout of the proposed single-family houses
- Integration of the new development into the existing neighborhood in terms of architecture and aesthetics
- Preservation and protection of existing natural elements
- Additional amenities such as parks, walking trails, or community spaces
- Impact on traffic flow and congestion, road improvements, and traffic management
- Measures to address potential noise or pollution issues
- Preservation or restoration of historic structures or landmarks
- Contribution to the local economy and job market
- Energy efficiency and environmental friendliness of the new houses
- Encouragement of sustainable transportation options
- Addressing increased demand on local public services
- Timeline for the project and expected completion dates
- Affordable housing options or contributions to affordable housing initiatives
- Community engagement throughout the construction process
- Smooth transition and integration of the new development into the existing neighborhood.

Themes

1. Design and Integration:
 - Design and layout of houses
 - Integration into existing neighborhood
 - Architecture and aesthetics
 - Preservation of natural elements
 - Preservation/restoration of historic structures or landmarks
2. Amenities and Infrastructure:
 - Additional amenities (e.g., parks, trails, community spaces)
 - Road improvements and traffic management
 - Addressing noise and pollution issues
 - Sustainable transportation options
 - Increased demand on public services
3. Economic Impact:
 - Contribution to local economy and job market
 - Affordable housing options or contributions
 - Community engagement and smooth transition
4. Energy Efficiency and Environmental Friendliness:
 - Energy efficiency of new houses
 - Environmental friendliness of new houses
5. Project Timeline:
 - Timeline for the project and completion dates

Perspectives

1. Design and Integration:
 - Plus: Well-designed and visually appealing houses can enhance the overall aesthetic appeal of the neighborhood.
 - Minus: Integrating new houses into an existing neighborhood can be challenging, as it may disrupt the existing character and architecture.
 - Interesting: Balancing the preservation of natural elements and historic structures with the need for new development can create unique and innovative design opportunities.
2. Amenities and Infrastructure:
 - Plus: Additional amenities and community spaces can improve the quality of life for residents and create a sense of belonging.
 - Minus: Road improvements and increased traffic can temporarily disrupt daily routines and create inconvenience for residents.
 - Interesting: Sustainable transportation options, such as bike lanes or electric vehicle charging stations, can promote environmentally friendly commuting.

3. Economic Impact:

- Plus: New construction projects often create job opportunities and boost the local economy.
- Minus: Increased demand for public services, such as schools and healthcare facilities, may strain existing resources.
- Interesting: Involving the community in decision-making processes and ensuring a smooth transition can foster a strong sense of community pride and ownership.

4. Energy Efficiency and Environmental Friendliness:

- Plus: Energy-efficient houses can reduce utility costs for residents and contribute to a more sustainable future.
- Minus: Implementing energy-efficient features may involve additional upfront costs for developers and potential challenges in persuading buyers to pay higher prices for eco-friendly homes.
- Interesting: Exploring innovative technologies and materials to create environmentally friendly houses can lead to groundbreaking discoveries and industry advancements.

5. Project Timeline:

- Plus: Clear timelines for the project can provide certainty and facilitate effective planning for all stakeholders involved.
- Minus: Delays in construction or unexpected setbacks can cause frustration and inconvenience for residents.
- Interesting: The project timeline may vary depending on various factors, such as weather conditions, availability of resources, and coordination with local authorities. Managing these factors effectively can showcase effective project management skills.

What is missing

- What is the expected price range for the new single family houses?
- What is the size and square footage of the proposed houses?
- What is the total number of houses or units planned for the development?
- Will there be any homeowner association fees or community dues associated with the new development?
- Will there be any restrictions or guidelines on home design or architectural style for the new houses?
- How will the new development impact property values in the surrounding area?
- Are there any plans for retail or commercial spaces within the development?
- Will there be any public or private schools included in the development plans?
- What measures will be taken to ensure the safety and security of the new development and its residents?
- Are there any plans for public art or cultural elements within the development?
- What is the anticipated timeline for the completion of any proposed amenities or community spaces?
- Will there be any public meetings or forums for community input and feedback on the development plans?
- What are the plans for landscaping and green spaces within the development?
- Will there be any stormwater management or drainage systems incorporated into the development plans?
- What impact will the new development have on the existing property values and taxes in the area?
- Will there be any efforts made to incorporate sustainable building materials or construction methods in the development?
- What are the proposed plans for street lighting and neighborhood safety features?
- Will there be any regulations or guidelines in place regarding noise levels or construction hours during the development process?
- What will the impact of the new development be on the surrounding infrastructure, such as water and sewer systems?
- Will there be any environmentally friendly features, such as solar panels or rainwater harvesting, included in the new houses?

Alternative Viewpoints

- What are the potential negative effects of the new development on property values in the existing neighborhood?
- Are there concerns about the potential overcrowding or strain on local infrastructure?
- What are the potential environmental impacts of the new development, such as increased water usage or habitat disruption?
- Are there any potential health or safety concerns associated with the new development, such as increased noise or air pollution?
- What are the potential impacts of the new development on nearby businesses or local commerce?
- Are there concerns about the loss of privacy or changes to the overall character of the existing neighborhood?
- What mitigation measures are in place to address any potential flooding or drainage issues caused by the new development?
- Are there any concerns about the increased demand for public transportation or parking in the area?
- What are the potential economic benefits or drawbacks of the new development on the surrounding property values and local businesses?
- What measures will be taken to address any potential increase in crime or security risks associated with the new development?
- What are the potential effects of the new development on the existing schools, in terms of increased enrollments or strain on resources?
- Are there concerns about the impact of the new development on the natural beauty or scenic views of the area?
- What are the potential impacts of the new development on the local wildlife and ecosystem?
- Are there any efforts to involve local businesses or contractors in the construction process to stimulate the local economy?
- What are the potential long-term effects of the new development on the surrounding natural resources, such as water supply or air quality?
- Are there concerns about the potential loss of community character or sense of identity in the existing neighborhood?
- What are the potential social or cultural impacts of the new development, in terms of demographic changes or changes to the community fabric?
- What are the potential impacts of the new development on the existing traffic patterns and transportation infrastructure?
- Are there concerns about the potential increase in property taxes or other financial burdens associated with the new development?

Interested Audiences

1. Potential home buyers: They would be interested in the specific details of the design and layout of the houses to determine if it meets their preferences and needs.
2. Current residents of the neighborhood: They would be concerned about how the new development will fit in with their existing homes and if it will maintain the overall aesthetic of the area.
3. Environmentalists and conservationists: They would be interested in knowing how the natural elements in the area will be preserved and protected during the construction process.
4. Families with children: They would be concerned about the availability of amenities such as parks, walking trails, and community spaces for recreation and socialization.
5. Local commuters: They would want to know how the new development will impact traffic flow in the area and if any measures will be taken to improve road conditions.
6. Health advocates: They would be concerned about any potential noise or pollution issues that may arise from the construction and want to know how they will be addressed.
7. Historians and preservationists: They would be interested in any plans to preserve or restore historic structures or landmarks on the property.
8. Local business owners: They would be interested in how the new development will contribute to the local economy and potentially stimulate job growth.
9. Environmental activists: They would want to know the measures that will be taken to ensure energy efficiency and environmental friendliness of the new houses.
10. Sustainable transportation advocates: They would be interested in any plans to promote sustainable transportation options within the development, such as bike lanes or access to public transit.
11. Local public service providers: They would be concerned about the impact of the new development on public services and want to know if any plans are in place to address increased demand on schools, healthcare facilities, and public utilities.
12. Community members: They would be interested in the developer's timeline for the project, as well as how the developer plans to engage with and address concerns of the community during the construction process.
13. Affordable housing advocates: They would want to know if there will be any affordable housing options or contributions to affordable housing initiatives within the development.
14. Potential investors: They would be interested in knowing the details of the developer's plans and timeline for the project and how it may impact property values in the area.

Opposing Audiences

1. Existing homeowners in the neighborhood may oppose the topic if they are concerned about the potential changes in the neighborhood's character or property values.
2. Environmental activists may oppose the topic if they believe that the development will have a negative impact on the natural elements, such as the destruction of trees or disruption of wildlife habitats.

3. Local businesses may oppose the topic if they fear increased competition or a decrease in their customer base due to the development.
4. Residents who prioritize traffic flow and congestion may oppose the topic if they believe that the new development will worsen these issues in the area.
5. Preservationists and historians may oppose the topic if they believe that the new development will disregard or destroy any existing historic structures or landmarks.
6. Affordable housing advocates may oppose the topic if they believe that the development does not adequately address the need for affordable housing options in the area.

Innovations

1. Design and Integration:

- Green roofs and living walls for incorporating natural elements into buildings
- Adaptive reuse of existing structures to preserve historic landmarks
- Use of sustainable building materials and construction techniques

2. Amenities and Infrastructure:

- Smart city technology for improved traffic management and infrastructure efficiency
- Bike-sharing or electric vehicle charging stations for sustainable transportation options
- Implementation of noise-reducing measures such as sound barriers or strategic landscaping

3. Economic Impact:

- Incentives for local businesses or entrepreneurs to set up shops or services within the new neighborhood
- Job training programs or apprenticeships for local residents to secure employment opportunities created by the project
- Creation of a community fund to support affordable housing initiatives or community development projects

4. Energy Efficiency and Environmental Friendliness:

- Solar panel installation for renewable energy generation in new houses
- Rainwater harvesting systems for landscape irrigation and water conservation
- Use of energy-efficient appliances and smart home technology to monitor and reduce energy consumption

5. Project Timeline:

- Utilization of project management software or tools for efficient coordination and tracking of project milestones
- Implementation of modular construction techniques to accelerate the building process
- Collaboration with local universities or research institutions for innovative design or construction methods

Table 2: First set of answers to Question #1, followed by AI summarization of these 15 answers.

Answers - Results 1 (Question #1)

What measures will be taken to minimize the impact on the existing local wildlife and ecosystem?

Topic Statements:

- Conducting comprehensive environmental impact assessments to identify potential risks and design appropriate mitigation measures.
- Implementing habitat restoration and enhancement programs to support local wildlife populations.
- Establishing protected areas or wildlife corridors to safeguard critical habitats and promote biodiversity conservation.
- Implementing rigorous monitoring programs to track impacts on wildlife and ecosystem health.
- Encouraging responsible waste management practices to prevent pollution of local ecosystems.
- Conducting public awareness campaigns to educate local communities about the importance of conserving wildlife and their ecosystems.
- Utilizing sustainable construction practices to minimize physical disturbance to the environment.
- Adhering to strict regulations and guidelines set by environmental authorities to ensure compliance throughout the project.
- Employing trained wildlife experts to assess and manage potential wildlife conflicts during the project.
- Engaging in collaborative research partnerships with local universities or conservation organizations to study the project's impact on wildlife and ecosystem dynamics.
- Incorporating eco-friendly technologies and energy-efficient practices to reduce the overall environmental footprint of the project.
- Limiting noise and light pollution to minimize disruptions to local wildlife behavior and breeding patterns.
- Establishing buffer zones around sensitive habitats to protect wildlife from human encroachment.
- Implementing measures to prevent the introduction of invasive species into the local ecosystem.
- Partnering with local conservation organizations to support sustainable wildlife management initiatives in the area.

Key Ideas

1. Conducting comprehensive environmental impact assessments: This involves conducting detailed assessments to identify potential risks and designing appropriate mitigation measures to minimize negative environmental impacts.
2. Implementing habitat restoration and enhancement programs: This involves actively restoring and improving habitats to support local wildlife populations and enhance biodiversity.
3. Establishing protected areas or wildlife corridors: This involves establishing areas specifically designated for the protection of critical habitats and the promotion of biodiversity conservation, allowing wildlife to move freely between different habitats.
4. Implementing rigorous monitoring programs: This involves closely monitoring wildlife and ecosystem health to track the impacts of the project and ensure timely action if any negative effects are observed.
5. Encouraging responsible waste management practices: This involves promoting and implementing practices that prevent pollution and ensure proper disposal of waste, minimizing negative impacts on local ecosystems.
6. Conducting public awareness campaigns: This involves educating local communities about the importance of conserving wildlife and their ecosystems, effectively engaging them in conservation efforts.
7. Utilizing sustainable construction practices: This involves employing construction practices that minimize disturbance to the environment, such as using eco-friendly materials and reducing waste generation.
8. Adhering to strict regulations and guidelines: This involves following environmental regulations and guidelines set by authorities to ensure compliance throughout the project, avoiding any unlawful or harmful practices.

9. Employing trained wildlife experts: This involves involving experts who have the knowledge and skills to assess and manage potential wildlife conflicts that may arise during the project, ensuring the most suitable and humane approach is taken.
10. Engaging in collaborative research partnerships: This involves working with local universities or conservation organizations to conduct research on wildlife and ecosystem dynamics, allowing for a better understanding of the impacts of the project and providing insights for effective management.
11. Incorporating eco-friendly technologies: This involves utilizing environmentally friendly technologies and practices that reduce the overall environmental footprint of the project, such as using renewable energy sources and energy-efficient systems.
12. Limiting noise and light pollution: This involves taking measures to minimize disruptive noise and light pollution, which can negatively affect wildlife behavior and breeding patterns.
13. Establishing buffer zones: This involves creating buffer zones around sensitive habitats to protect wildlife from human encroachment and disturbance.
14. Implementing measures against invasive species: This involves taking steps to prevent the introduction of invasive species into the local ecosystem, which can have detrimental effects on native wildlife and habitats.
15. Partnering with local conservation organizations: This involves collaborating with local conservation organizations to support sustainable wildlife management initiatives in the area, fostering long-term conservation efforts.

Perspectives

Plus factors:

- Comprehensive environmental impact assessments: This ensures that potential risks are identified and appropriate mitigation measures are designed, leading to better decision-making and minimizing negative impacts on the environment.
- Habitat restoration and enhancement programs: These efforts support local wildlife populations and promote biodiversity conservation, which are crucial for maintaining healthy ecosystems.
- Protected areas and wildlife corridors: Establishing these areas safeguards critical habitats and promotes the conservation of biodiversity.
- Rigorous monitoring programs: Tracking impacts on wildlife and ecosystem health helps in identifying and addressing any negative impacts in a timely manner.
- Responsible waste management practices: These practices prevent pollution of local ecosystems and contribute to maintaining a clean environment.
- Public awareness campaigns: Educating local communities about the importance of conserving wildlife and ecosystems fosters a sense of responsibility towards the environment.
- Sustainable construction practices: These practices minimize physical disturbance to the environment and promote environmentally-friendly approaches to construction.
- Adhering to regulations and guidelines: Ensuring compliance with environmental authorities helps maintain the integrity of the project and reduces the risk of negative impacts.
- Trained wildlife experts: Their assessment and management of potential conflicts can help minimize negative interactions between the project and wildlife.
- Collaborative research partnerships: Engaging in these partnerships allows for a better understanding of the project's impact on wildlife and ecosystem dynamics, leading to more informed conservation efforts.
- Eco-friendly technologies and energy-efficient practices: These reduce the overall environmental footprint of the project and contribute to sustainability.
- Limiting noise and light pollution: Minimizing disruptions to wildlife behavior and breeding patterns helps maintain their natural rhythms.
- Buffer zones around sensitive habitats: These protect wildlife from human encroachments, ensuring their habitat remains undisturbed.
- Measures to prevent the introduction of invasive species: This helps maintain the balance and integrity of the local ecosystem.
- Partnerships with conservation organizations: Supporting sustainable wildlife management initiatives reinforces the long-term commitment to conservation efforts.

Minus factors:

- Conducting comprehensive environmental impact assessments: These assessments can be time-consuming and costly.
- Habitat restoration and enhancement programs: They may require significant funding and resources to be successful.
- Implementing protected areas and wildlife corridors: This may involve acquiring land and potentially limiting human activities in certain areas.
- Rigorous monitoring programs: These require ongoing resources and expertise to ensure effective tracking and analysis.
- Responsible waste management practices: These may involve additional costs or changes in waste disposal practices.
- Public awareness campaigns: Educating local communities can be challenging and may require significant effort and resources.
- Sustainable construction practices: These may involve higher initial costs or require changes to traditional construction methods.
- Adhering to regulations and guidelines: Compliance with strict regulations may add complexity and potentially increase costs.
- Trained wildlife experts: Employing experts can be costly, and conflicts between wildlife and the project may still occur despite their expertise.
- Collaborative research partnerships: Establishing and maintaining partnerships may require coordination and resources.
- Eco-friendly technologies and energy-efficient practices: Initial investments in sustainable technologies may be costly, although they can result in long-term savings.
- Limiting noise and light pollution: Implementing measures to minimize noise and light pollution may require additional resources or adjustments to project plans.
- Establishing buffer zones: This may require setting aside larger areas of land, potentially impacting human activities or land use.
- Preventing invasive species: Implementing measures to prevent introductions may require ongoing monitoring and resources.
- Partnerships with conservation organizations: Collaborating with conservation organizations may involve coordination efforts and potential conflicts in objectives.

Interesting factors:

- Comprehensive environmental impact assessments help ensure that decision-making is based on thorough understanding of potential impacts.
- Habitat restoration and enhancement programs can contribute to the recovery of endangered species or the restoration of damaged ecosystems.
- Protected areas and wildlife corridors play a crucial role in promoting biodiversity conservation and allowing wildlife to move freely.
- Monitoring programs provide valuable data on wildlife and ecosystem health, contributing to scientific knowledge and adaptive management.
- Public awareness campaigns can bring about positive change in community attitudes toward

Additional information

Some missing aspects that can complete an understanding of the topic include:

- Assessing the potential socio-economic impacts of the project on local communities, including potential benefits and drawbacks.
- Considering the long-term sustainability of the project and its potential effects on climate change, including greenhouse gas emissions and carbon footprints.
- Evaluating the potential impacts of the project on water resources and implementing measures to conserve and protect them.
- Developing contingency plans and emergency response protocols to address unforeseen environmental incidents or accidents.
- Engaging with and involving local communities and stakeholders in the decision-making process and incorporating their inputs and concerns.
- Allocating adequate financial and human resources for the implementation and ongoing management of conservation measures.
- Conducting baseline studies to understand the current state of the environment and wildlife populations before implementing the project.
- Monitoring and evaluating the effectiveness of implemented mitigation measures and adapting them as necessary.
- Incorporating adaptive management strategies to respond to changing environmental conditions or unforeseen impacts.
- Ensuring the inclusion of marginalized or vulnerable communities in conservation efforts and addressing any social disparities.
- Implementing measures to minimize environmental disturbances during the construction and operation phases of the project.
- Incorporating sustainable transportation practices to reduce carbon emissions and minimize the project's ecological footprint.
- Exploring opportunities for ecotourism or nature-based activities to generate income and support local communities.
- Collaborating with indigenous communities to incorporate their traditional knowledge and conservation practices into the project.

Alternative Viewpoints

1. Alternative viewpoint on conducting comprehensive environmental impact assessments: Some may argue that conducting comprehensive environmental impact assessments is unnecessary and time-consuming. They may believe that the potential risks can be addressed as they arise during the project, rather than trying to predict and prevent them beforehand.
2. Alternative viewpoint on implementing habitat restoration and enhancement programs: Critics may argue that implementing habitat restoration and enhancement programs is ineffective, as they believe that natural habitats will evolve and adapt on their own without human intervention.

3. Alternative viewpoint on establishing protected areas or wildlife corridors: Some may argue that establishing protected areas or wildlife corridors restricts human activities and development, limiting economic growth and opportunities for local communities.
4. Alternative viewpoint on implementing rigorous monitoring programs: Skeptics may argue that implementing rigorous monitoring programs is an unnecessary expense, as they believe that the impacts on wildlife and ecosystem health will naturally stabilize over time.
5. Alternative viewpoint on encouraging responsible waste management practices: Critics may argue that responsible waste management practices are costly and time-consuming, and that the potential pollution of local ecosystems is a minor issue compared to other pressing societal and economic concerns.
6. Alternative viewpoint on conducting public awareness campaigns: Some individuals may argue that public awareness campaigns are ineffective in changing behavior and that the resources would be better spent on other wildlife conservation initiatives.
7. Alternative viewpoint on utilizing sustainable construction practices: Critics may argue that sustainable construction practices are more expensive and time-consuming, and that it is not necessary to prioritize minimizing physical disturbance to the environment when other aspects of the project are more important.
8. Alternative viewpoint on adhering to strict regulations and guidelines: Skeptics may argue that strict regulations and guidelines set by environmental authorities are excessive and burdensome, hindering progress and development.
9. Alternative viewpoint on employing trained wildlife experts: Some may argue that employing wildlife experts is an unnecessary expense, as they believe that potential wildlife conflicts can be addressed by non-specialized personnel.
10. Alternative viewpoint on engaging in collaborative research partnerships: Critics may argue that collaborative research partnerships with local universities or conservation organizations are time-consuming and do not provide tangible benefits or immediate solutions to the project's environmental impact.
11. Alternative viewpoint on incorporating eco-friendly technologies and practices: Skeptics may argue that eco-friendly technologies and energy-efficient practices are expensive and not cost-effective in the long run, outweighing their potential environmental benefits.
12. Alternative viewpoint on limiting noise and light pollution: Some individuals may argue that noise and light pollution have minimal impact on wildlife behavior and breeding patterns, and that efforts to limit them are unnecessary and excessive.
13. Alternative viewpoint on establishing buffer zones: Critics may argue that establishing buffer zones around sensitive habitats restricts human activities and development opportunities, limiting economic growth and employment opportunities.
14. Alternative viewpoint on preventing the introduction of invasive species: Skeptics may argue that the potential risks posed by invasive species are exaggerated and that efforts to prevent their introduction are unnecessary and costly.
15. Alternative viewpoint on partnering with local conservation organizations: Some may argue that partnering with local conservation organizations is unnecessary, as they believe that wildlife management initiatives should be the responsibility of the government or larger international organizations.

Interested Audiences

1. Environmentalists and Conservationists: These individuals are most likely to be interested in all of the topic statements as they are passionate about protecting the environment and conserving wildlife. They are likely to be concerned about the potential risks posed by development projects and would be interested in seeing comprehensive impact assessments, habitat restoration programs, and wildlife conservation initiatives.
2. Scientists and Researchers: Scientists and researchers focused on ecology, environmental studies, and biodiversity conservation would be interested in statements related to rigorous monitoring programs, collaborative research partnerships, and the project's impact on wildlife and ecosystems. These individuals would be interested in gathering data and studying the effects of development projects on wildlife populations and ecosystem dynamics.
3. Government Authorities and Environmental Agencies: Government authorities responsible for overseeing environmental regulations and monitoring compliance with those regulations would be interested in statements related to adhering to regulations, conducting comprehensive impact assessments, and implementing measures to prevent pollution. Environmental agencies would also be interested in partnerships with conservation organizations to support sustainable wildlife management initiatives.
4. Communities and Local Residents: Local communities and residents living near the development project would be interested in topics related to public awareness campaigns and responsible waste management practices. They would be interested in learning about the importance of conserving wildlife and ecosystems and would want to ensure that the project does not negatively impact their local environment.
5. Developers and Construction Companies: Developers and construction companies involved in the project would be interested in topics related to sustainable construction practices, minimizing environmental footprint, and adhering to strict regulations. They would be interested in implementing practices that minimize disturbance to the environment and demonstrate their commitment to environmental responsibility.
6. Wildlife enthusiasts and Outdoor Recreationists: Individuals who enjoy wildlife viewing, hiking, and outdoor activities would be interested in topics related to establishing protected areas and wildlife corridors, limiting disruptions to wildlife behavior patterns, and preserving critical habitats. They have a personal interest in conserving wildlife and would be particularly interested in projects that protect and promote biodiversity.

Opposing Audiences

- Industries or businesses that may be negatively impacted by the environmental assessments and mitigation measures. They may oppose the topic statement of conducting comprehensive environmental impact assessments as it might lead to stricter regulations and potentially curtail their operations and profits.
- Local communities that rely on industries causing environmental harm for employment and economic development. They may oppose the topic statement of conducting comprehensive environmental impact assessments as it could result in job losses and economic downturn.
- Developers or construction companies that prioritize short-term profits over long-term environmental sustainability. They may oppose the topic statement of utilizing sustainable construction practices as it could increase costs and potentially delay projects.
- Individuals or organizations with different priorities or values regarding wildlife conservation. They may oppose the topic statements of implementing habitat restoration programs, establishing protected areas, or engaging in collaborative research partnerships if they view these actions as unnecessary or interfering with other economic or development priorities.
- Industries or businesses that are resistant to strict regulations and guidelines set by environmental authorities. They may oppose the topic statement of adhering to regulations to ensure compliance throughout the project if they perceive it as burdensome bureaucracy or unnecessary restrictions.
- Individuals or communities who are uninformed or unaware of the importance of conserving wildlife and their ecosystems. They may oppose the topic statement of conducting public awareness campaigns as they may not understand the value of these efforts or may not prioritize wildlife conservation in their own lives.

Innovations

- Developing advanced technologies for conducting more accurate and efficient environmental impact assessments
- Introducing novel habitat restoration techniques, such as artificial reefs or floating wetlands
- Designing and implementing virtual reality experiences to educate the public about wildlife conservation
- Creating policies that incentivize businesses and individuals to adopt sustainable waste management practices
- Integrating sensor-based monitoring systems to track wildlife movements and behavior in real-time
- Launching eco-tourism initiatives that offer immersive, educational experiences while supporting local wildlife conservation efforts
- Establishing green building certification programs to recognize and promote sustainable construction practices
- Introducing satellite tracking devices to monitor and protect endangered or migratory species
- Developing biosecurity measures to prevent the spread of diseases through wildlife populations
- Offering eco-friendly tourism packages that include volunteering opportunities for conservation projects
- Implementing "no-net-loss" policies that require developers to offset any environmental impacts through conservation or restoration projects
- Developing renewable energy sources to power construction projects and minimize reliance on fossil fuels
- Creating smartphone apps or online platforms to engage the public in citizen science projects for wildlife monitoring
- Designing wildlife-friendly infrastructure, such as wildlife tunnels or rope bridges, to mitigate habitat fragmentation
- Implementing policies that restrict or ban the use of harmful pesticides or chemicals near protected habitats or water sources
- Supporting local communities in sustainable livelihood initiatives, such as eco-friendly farming or crafts, to reduce their dependence on natural resources

Table 3: The final questions and their associated answers (elements).

	Question A: What measures will be taken to minimize the impact on the existing local wildlife and ecosystem?
A1	Implement habitat restoration and enhancement programs to support local wildlife populations.
A2	Encourage responsible waste management practices to prevent pollution of local ecosystems.
A3	Introduce measures to minimize vehicle collisions with wildlife, such as wildlife crossings and signage.
A4	Establish buffer zones around construction sites to prevent disturbances to wildlife.
	Question B: What steps will be taken to address any potential increase in traffic or congestion that the new development may cause?
B1	Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks.
B2	Implement smart traffic signal systems that can adjust timings based on congestion levels to optimize traffic flow.
B3	Develop a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles.
B4	Promote flexible working hours to stagger peak travel times and reduce congestion during rush hour.
	Question C: How will the developer address concerns about potential noise pollution during construction and after the houses are built?
C1	Implement physical barriers or soundproofing measures, such as temporary walls or fences, to minimize noise pollution during construction.
C2	Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns.
C3	Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.
C4	Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively.
	Question D: What measures will be taken to preserve and protect any natural features or wildlife habitats on the golf course during and after development?
D1	Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment.
D2	Plant native vegetation and trees to enhance natural habitats and provide food and shelter for wildlife.
D3	Establish designated wildlife corridors throughout the golf course to maintain connectivity between habitats.
D4	Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions.

Each vignette comprises a minimum of two elements and a maximum of four elements, at most one element from a question. There is no effect made to connect the elements to each other. Rather, the elements are presented in a simple, stark fashion, with one element atop the other. This starkness makes it easier for the respondent to scan the vignette and assign a rating, instead of forcing the respondent to dig through a mass of text to identify the salient messages. In author HRM's experience, presenting respondents with complete paragraphs, connectives and all, with grammatically correct sentences ends up fatiguing the respondent by forcing the respondent to engage with the material in an effortful manner through the effort reading rather than simple inspection.

The 24 vignettes for each respondent differ from each other, as noted above [7]. This set of differences ensures that the vignettes cover a great number of possible combinations in the so-called design space, allowing the researcher to quickly explore the topic without having to know much about the topic at the beginning. Furthermore, the 24 vignettes

are set up for individual-level analysis of OLS (ordinary least squares) regression, necessary when the research goal is to discover how each element drives the rating. Finally, the vignettes more naturally approach what might be experienced, because the respondent has to deal with combinations of elements and cannot game the system. There is no apparent pattern, forcing the respondent to stop looking for a pattern, and simply to respond naturally. In other words, the system frustrates the search for patterns, making the respondent guess in a fashion which seems unmotivated, but which ends up working effectively.

Step 6: Create a Set of Self-profiling Questions Which Allows the Researcher to Better Understand the Mind of the Respondent

The Mind Genomics platform automatically requests the respondent to provide information about gender and age, and then gives the researcher an additional eight questions to use, each

question allowing 2-8 possible answers, from which the respondent is instructed to choose one answer. In the data analyses these groups Table 4 presents these self-profiling questions and answers, along with the rating scale (see Step 7). Figure 2, Panel A shows the respondent experience when presented with these self-profiling questions, at the start of the experiment.

Step 7: Create the Introduction to the Vignettes, and the Rating Question for Each Vignette

The respondent first reads an informative introduction to the situation, and then is presented with 24 'screens', each 'screen' comprising a shortened version of the introduction, the rating scale, and then the vignette. The rating question focuses on the mind of the respondent. It is through the rating question that the researcher will end up understanding the way the respondent thinks about the topic. The introduction and rating question appear below. Note that the rating question asks the respondent to select the answer, with the answer have 'two sides.' The two aspects are the nature of the concessions by the builder (good versus poor), and acceptance by the community of the concession (accepts versus rejects Figure 2, Panel B shows an example.

Figure 2: The respondent experience. Panel A shows the pull-down menu for the self-profiling question. Panel B shows an example of the short introduction to the vignette, the rating scale, and then one

of the vignettes. The respondent will see 24 screens similar to Panel B, as well as a first 'training' screen (Figure 2).

Step 8: Collect the Data by Internet-executed Experiment and Prepare the Data for Statistical Analysis

Respondents in the New York state area were invited to participate. The respondents were to have incomes above \$40,000, and 30 years or older. The respondents were members of various on-line research panels, available to Luc.id Inc., a panel aggregator. The respondents were invited by email. Those who participated pressed a link embedded in the email invitation, were led to the study, read the introduction and proceeded, first with the self-profiling questions, and then with the test vignettes.

The BimiLeap program collected the ratings and created a database. The database comprised 24 rows. Each row corresponded to one of the vignettes evaluated by the respondent. The first set of columns were devoted to identifying the study, the respondent, and the self-profiling information for the respondent, respectively. The second set of columns show the order of the vignette (1 to 24), and the composition of the vignette, expressed as 16 columns, one column for each of the 16 elements, respectively. When the element was present in the particular vignette the cell was given the value '1' When the element was absent from the particular vignette the cell was given the value '0'. The final set of columns showed the rating, and the response time (RT) in 100th of a second.

Table 4: The self-profiling questions (Section A), and the introduction to study topic, and the rating scale (Section B).

Section A: The self-profiling questions
What is the type of home in which you live 1=Apartment 2=Condo 3=Attached row house 4=Private house
Where do you live 1=Big city 2=Small city 3=Suburb 4=Rural
Who owns the place where you live 1=Landlord 2=Cooperative board 3=Condominium - I own my condo 4=I own my own home - paying mortgage 5=I own my own home - paid off mortgage
How do you feel about housing construction 1=Not concerned 2=Bothered by the inconvenience during construction 3=Bothered by the effect on the land 4=Bothered by potential crowding
Describe which phrase fits you best 1=I am not particular involved in my community affairs 2=I know what's going on in the community but that's about it 3=I am active in community affairs
Section B: The introduction to the vignettes and the rating scale
<i>A builder in your area has just purchased a multi-acre plot of land, in a residential area. The builder wants to build many single-family units. The homeowners are protesting. The builder is offering concessions. Here are sets of concessions. What would YOU say? You be the judge!</i> Read the paragraph -- what do YOU say 1=Poor builder concessions AND community rejects 2=Poor builder concessions BUT community accepts 3=I don't now 4=Good builder concessions BUT community rejects 5=Good builder concessions AND community accepts

Figure 2 consists of two panels, A and B, illustrating the respondent experience. Panel A shows a survey form with several questions and pull-down menus. The questions are: 'Age', 'What year were you born?', 'Gender identification', 'What is the type of home in which you live', 'Where do you live', 'Who owns the place where you live', 'How do you feel about housing construction', and 'Describe which phrase fits you best'. Each question has a 'Choose' button and a red arrow icon. A large letter 'A' is overlaid on the form. Below the questions, there is a checkbox for 'I understand that the information I give will not be used to identify who I am, nor will I be asked to provide private information which can identify me' and a 'Next' button. Panel B shows a vignette with a rating scale. The vignette text is: 'A builder in your area has just purchased a multi-acre plot of land, in a residential area. The builder wants to build many single family units. The home owners are protesting. The builder is offering concessions. Here are sets of concessions. What would YOU say. You be the judge!!'. Below the vignette, there is a list of five options: '1 = Poor builder concessions AND community rejects', '2 = Poor builder concessions BUT community accepts', '3 = I don't now', '4 = Good builder concessions BUT community rejects', and '5 = Good builder concessions AND community accepts'. A large letter 'B' is overlaid on the vignette. Below the list, there are three lines of text: 'Establish buffer zones around construction sites to prevent disturbances to wildlife.', 'Implement physical barriers or soundproofing measures, such as temporary walls or fences, to minimize noise pollution during construction.', and 'Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions.'. At the bottom, there is a rating scale with five buttons labeled 1, 2, 3, 4, and 5.

Figure 2: The respondent experience. Panel A – The pull-down menu for the self-profiling questions. Panel B – example of a screen showing the vignette along with the introduction and rating scale.

The data collected must be transformed for subsequent analysis by OLS (ordinary least-squares) regression [11]. OLS will relate the presence/absence of the 16 elements (Table 5) to the dependent variable.. The scale is set up to allow for several dependent variables:

R5x – good concession, neighborhood accepts. The rating of 5 transformed to 100, ratings of 1,2,3 and 4 transformed to 0.

R3x - cannot decide. The rating of 3 transformed to 100, rating of 1,2 4 or 5 transformed to 0.

R54x – good builder concession. Rating of 5 or 4 transformed to 100, rating of 1,2 or 3 transformed to 0

R52x – neighborhood accepts. Rating of 5 or 2 transformed to 100, rating of 4,3 or 1 transformed to 0.

R41x – neighborhood rejects. Rating of 4 or 1 transformed to 100, rating of 5, 3, or 2 transformed to 0

R21x – poor builder concession. Rating of 2 or 1 transformed to 100, rating of 5,4 or 3 transformed to 0.

Table 5: Parameters for linear models for the total panel relating the presence/absence of the 16 elements to the binary dependent variables and to response time (RT). The elements are sorted by the coefficient for R54.

	Builder Concession	Good	Good			Poor	??	
	Neighborhood Response	Accept		Accept	Reject		DK	
	Total Panel	R5X	R54X	R52X	R41X	R21X	R3X	RT
C3	Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.	16	25	17	9	2	5	0.8
C2	Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns.	14	23	15	13	4	3	0.7
C4	Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively.	15	23	18	9	4	3	0.8
A1	Implement habitat restoration and enhancement programs to support local wildlife populations.	15	22	17	8	3	3	1.2
A3	Introduce measures to minimize vehicle collisions with wildlife, such as wildlife crossings and signage.	12	22	15	10	4	2	1.2
A2	Encourage responsible waste management practices to prevent pollution of local ecosystems.	12	21	16	10	4	2	1.0
B1	Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks.	16	21	17	9	5	6	1.0
B2	Implement smart traffic signal systems that can adjust timings based on congestion levels to optimize traffic flow.	13	21	15	10	4	6	1.2
B3	Develop a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles.	13	21	15	12	6	4	1.1
C1	Implement physical barriers or soundproofing measures, such as temporary walls or fences, to minimize noise pollution during construction.	12	21	13	11	3	5	1.0
D1	Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment.	15	21	16	7	1	5	0.9
D4	Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions.	13	21	13	10	2	5	1.1
B4	Promote flexible working hours to stagger peak travel times and reduce congestion during rush hour.	12	20	12	11	3	8	1.1
D3	Establish designated wildlife corridors throughout the golf course to maintain connectivity between habitats.	14	20	16	6	3	4	1.0
A4	Establish buffer zones around construction sites to prevent disturbances to wildlife.	14	18	18	5	4	6	0.9
D2	Plant native vegetation and trees to enhance natural habitats and provide food and shelter for wildlife.	14	17	15	6	3	6	1.0

After the transformation was made, a vanishingly small random number was added to the newly created transformed variable in order to add the needed variability to allow the OLS regression to ‘run’, and not ‘crash’. When the OLS regression encounters a dependent variable with no variability, the analysis crashes. The very small number (<10-4) is a prophylactic measure which ensures against crashes.

Step 9: Use OLS Regression to Relate the Presence/Absence of the 16 Elements to the Newly Created Binary Dependent Variables

The OLS regression is run on the full set of 2424 cases, 24 cases or observation for each of the 101 respondents. The equation is simple, showing the degree to which each of the 16 elements ‘drives’ the newly created binary scale, as well as how the elements drive response time.

$$\text{Dependent variable} = k_1A1 + k_2A2 + \dots + k_{16}D4$$

The equation does not have an additive constant. Previous analyses incorporated the additive constant as the 17th term of the equation. Although somewhat more statistically ‘rigorous’, estimating the additive constant created problems in the comparison of the coefficients across groups, and across studies. Analysis of the coefficients estimated with versus without the additive constant in the equation showed that the coefficients were of different values, as expected, but strongly and positively correlated with each other. Strong performing elements were strong whether estimated with an additive constant or without an additive constant. Table 5 shows the coefficients for the different

binary dependent variables, and the response time. The top of Table 5 shows the meaning of the dependent variable. For this study, the key dependent variable will be R54x, a good concession from the builder, but it is instructive to consider all of the binary dependent variables and the response time. Most concessions offered by the builder were seen to be positive. Coefficients for R54 equal or greater than 21 are shown in shaded cells. Despite the strong performance of most elements, however, there is no sense of a pattern in the mind of the respondents. The coefficients are close together, hovering around 21, some coefficient lower, some coefficients higher.

Table 5 shows a ‘flatness’ of rating value across the elements. Of course, in the absence of anything else the researcher could simply look at the strong performing elements, and stop there, listing out these elements, as well as listing the. Table 5 does not reveal a clear relation between strength of performance and long response time.

Uncovering Different Ways of Thinking about the Topic Through Mind-set Segmentation

A hallmark of Mind Genomics is that people differ from each other in the way that they think about a topic, with these different ways not necessarily being random person to person variation. Rather, many studies suggest that when it comes to the topic of the everyday world, people’s different opinions about aspects of the topic appear to form clearly distinct groupings, mind-sets in the language of Mind Genomics, clusters in the language of statistics [12]. These

differences in the way people think about topics is clear when we deal with products, especially food, but also many of the products and services that we purchase and consume [13]. The differences emerge in responses to social issues, and clearly emerge in the law, except perhaps for one topic, murder, where these mind-sets do not seem to loom large [14]. With the prevalence of mind-sets in the population, can we find these mind-sets in the population of our 101 respondents who are dealing with the issue of their response to builder concessions with regard to building of a community of stand-alone houses in a community. The large number of high positive coefficients for the 16 elements in Table 5 (Total Panel; R54x) presents us with an interesting possibility, namely that all of the elements are positive, viz., that all of the builder concessions appear to be good ones. Faced with this somewhat flat distribution of coefficients from a low of +17 to a high of +23 for R54x (good concession), will this case of builder concession become an example of how there are no clear mind-set?. The possibility is certainly real. Nothing dictates that every issue should comprise within it radically different mind-sets. Attitudes about builder concessions may be shared by all people. Table 6 shows the outcome of clustering the 101 respondents, first into two clusters or mind-set, then into three clusters or mind-sets. The method of clustering, k-means, divides the 101 respondents by the pattern of their 16 coefficients. The distance between any two respondents is

defined as $(1 - \text{Pearson } R, \text{ or correlation coefficient})$. The Pearson R ranges between a value of 1 when two sets of objects, e.g., coefficients, align perfectly, viz. are parallel, going in the precise same direction, and a value of -1 when two sets of objects move in opposite direction. The k-means clustering technique is purely mathematical, attempting to satisfy several criteria at the same time [15].

The clustering was done on the coefficients for R54, viz., perception that the builder concessions are good. One could also do the clustering on the basis of R52, acceptance of the builder concessions, but for this paper we focus only on R54x. Table 6 shows a great number of positive coefficients, magnitude 21+. The coefficient value of 21 may be too lenient a criterion. In Table 6 we highlight the coefficients of 25+, making the criterion more stringent. The two-mind-set solution can be more easily interpreted than the three-mind-set solution. With this more stringent criterion in place the mind-sets may be interpreted as:

Mind-Set 1 of 2 – Focus on a pleasant environment for both people and wildlife

Mind-Set 2 of 2 – Focus on traffic as well as maintaining the local environment.

Coming to an Agreement

Table 6: Results from the segmentation of respondent on the basis of R54x, builder provides good concessions. The criteria for ‘strong performing’ element has been increased from the conventional value of 21 to a more stringent value of 25+ in order to allow for clearer definition of the nature of the mind-sets.

		Total	MS 1 of 2	MS 2 of 2	MS 1 of 3	MS 2 of 3	MS 3 of 3
	Base (number of respondents in this group)	101	47	54	26	35	40
	Mind-Set 1 of 2 – Focus on a pleasant environment for both people and wildlife						
C3	Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.	25	30	21	29	20	27
D3	Establish designated wildlife corridors throughout the golf course to maintain connectivity between habitats.	20	27	13	20	15	22
D1	Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment.	21	25	17	20	17	24
	Mind-Set 2 of 2 – Focus on traffic as well as maintaining the local environment						
A3	Introduce measures to minimize vehicle collisions with wildlife, such as wildlife crossings and signage.	22	15	28	12	29	23
A1	Implement habitat restoration and enhancement programs to support local wildlife populations.	22	16	27	9	29	27
B4	Promote flexible working hours to stagger peak travel times and reduce congestion during rush hour.	20	15	25	25	33	6
	Elements which fail to meet the stringent criterion of coefficient 25+						
C4	Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively.	23	21	24	20	23	24
C2	Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns.	23	23	23	22	24	24
A2	Encourage responsible waste management practices to prevent pollution of local ecosystems.	21	20	23	16	28	20
B1	Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks.	21	20	22	28	28	9
B1	Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks.	21	20	22	28	28	9
B2	Implement smart traffic signal systems that can adjust timings based on congestion levels to optimize traffic flow.	21	21	21	22	24	16
A4	Establish buffer zones around construction sites to prevent disturbances to wildlife.	18	15	21	12	26	17
C1	Implement physical barriers or soundproofing measures, such as temporary walls or fences, to minimize noise pollution during construction.	21	24	19	19	21	23
D4	Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions.	21	23	19	17	20	24
B3	Develop a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles.	21	24	18	28	25	11
D2	Plant native vegetation and trees to enhance natural habitats and provide food and shelter for wildlife.	17	20	14	16	13	21

The relative flatness of the data in terms of range, along with the strong performance of many of the elements in terms of how good the respondents feel about the builder concessions generates a situation not typical to Mind Genomics. For most topics dealt with in previous studies, the experiment presented above have shown clearly different mind-sets. Perhaps the only case where there has not been clear and strong differences between or among mind-sets has been the case of murder [14]. Yet, here we have the situation of most elements being positive. The issue now evolves to selecting the best element from the total panel, C3. *Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.* The wisdom of selecting C3 is confirmed by listing the strong performing elements for both mind-sets, as is done in Table 7. The table shows the strong performing elements for both mind-sets. C3 is common to both mind-sets and thus should be the key concession accepted by the local community. In addition, the negotiation might consider two other requests from the builder, in order to satisfy the two mind-sets:

Mind-Set 1: D1 Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment.

Mind-Set 2: C4 Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively.

The benefit of a Mind Genomics experiment in this case emerges as a way to find 'second best' ideas that will work for the different mind-sets.

How Good are the Ideas the Ideas – Index of Divergent Thought (IDT)

A continuing issue in Mind Genomics revolves around the topic of the elements, specifically are the elements 'good' or 'poor'. This question is relevant, indeed increasingly so, as the ability of people to think critically seems to be diminishing. Certainly, the pre-AI days showed that the effort to create four questions ended up being a frustrating experience, and a clear stumbling block to the use of Mind Genomics.

It was only after the introduction of AI in the form of the Idea Coach that the task became easier. Let us now merge the use of AI with the specific topic dealt with here, viz., the issues regarding the concessions offered by a builder. The elements were developed in conjunction with AI. The data suggest a large number of strongly positive elements. In order to quantify the true strength of the ideas, a computational method should be developed which accounts for the strength of the elements, as well as the proportion of the population among which the elements perform strongly. Thus, the underlying 'thinking' becomes much more impressive when the elements perform strongly, viz., have high coefficients, with large groups in the population. In contrast, when elements perform strongly, but only among a small size group of respondents in the population, we can say that the thinking is not quite as good. Table 8 shows the computations leading up to the IDT, the index of divergent thought. The IDT provides one empirical way to measure the strength of performance. The IDT ends up being the square root of the weighted sum of square of all the elements with positive coefficients, across six groups: total panel, the two mind-sets, and the three mind-sets, respectively. Typical results in the past have ranged from a low near 55 and a high near 75. The 87 generated in this study suggests that the thinking is particularly good, perhaps aided by the fact that the strong performing elements because there are no counter-current patterns generated by mind-set with opposing ideas. That is, the basic ideas are good, that good performance reinforced by the similar patterns of mind-sets which differ only slightly from each other.

Deeper Thinking about Mind-sets for R54 (Good Builder Concessions) Using AI Summarization

The final analysis for this rich set of data regarding a local community issue comes from the AI summarization of the strong performing elements for R54 (good builder concessions), done for the two mind-sets. Table 9 shows the summarization, based upon a series of queries submitted to AI (Idea Coach), which looked only at the elements with coefficients of 21 or higher for the mind-set, for dependent variable R54. The AI provides the researcher with what ends up being a 'second pair of eyes.'

Table 7: Selecting the best single concession (C3) and one additional concession to satisfy each mind-set more deeply.

	Builder Concession	Good	Good		RT
	Neighborhood Response	Accept		Accept	
	Mind-Set 1 of 2 – Focus on a pleasant environment for both people and wildlife				
	Builder Concession	Good	Good		
D1	Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment.	18	25	17	0.9
D3	Establish designated wildlife corridors throughout the golf course to maintain connectivity between habitats.	17	27	20	1.1
C3	Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.	16	30	15	0.7
B3	Develop a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles.	16	24	19	1.2
D4	Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions.	16	22	17	1.1
	Mind-Set 2 of 2 – Focus on traffic as well as maintaining the local environment				
B1	Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks.	18	22	19	1.0
C2	Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns.	15	23	16	0.7
C3	Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents.	16	21	19	0.9
C4	Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively.	16	24	21	1.0

Table 8: Computation of the IDT, Index of Divergent Thought.

	Total	MS 1 of 2	MS 2 of 2	MS 1 of 3	MS 2 of 3	MS 3 of 3
Sum Total of Squares of All Positive Coefficients	7151	7477	7279	6733	9245	6928
Average of All Positive Coefficients (sum coefficients/base)	71	159	135	259	264	173
Number of respondents in the column (in the subgroup)	101	47	54	26	35	40
Weight = Proportion of the respondents in the subgroup	0.33	0.16	0.18	0.09	0.12	0.13
Weighted Total (Weight x Sum Total of Squares of All Positive Coefficients)	2360	1196	1310	606	1109	901
Final Score = sum of weighted total	7482					
Index of Divergent Thought (IDT) = Square root of final score	87					

Table 9: AI summarization of the strong performing elements for the two mind-sets, based upon the coefficients for R54 (Good concession from the builder).

<p>Mind-Set 1 of 2 – Focus on a pleasant environment for both people and wildlife</p> <p>Create a label for this segment:</p> <p>Sustainable Transportation and Environmental Conservation</p> <p>Describe this segment:</p> <p>This segment is focused on improving transportation systems and reducing noise pollution in residential areas. They propose implementing smart traffic signal systems to optimize traffic flow, developing transportation demand management plans to encourage carpooling and the use of electric vehicles, and implementing measures to minimize noise pollution during construction. They also emphasize the importance of providing a dedicated hotline for residents to report noise-related issues and ensuring a prompt response to address concerns. Furthermore, they suggest orienting houses away from potential noise sources, establishing a community noise complaint resolution process, and creating nesting areas and wildlife corridors within golf courses to promote the thriving of wildlife. They also emphasize the installation of bird-friendly designs in golf course structures to prevent bird collisions.</p> <p>Describe the attractiveness of this segment as a target audience:</p> <p>Based on the given attributes, this segment appears to be environmentally conscious and concerned about minimizing the negative impacts of various activities on the environment and people's quality of life. They are interested in implementing smart traffic signal systems to optimize traffic flow and reduce congestion. They also prioritize developing a comprehensive transportation demand management plan that encourages sustainable practices like carpooling, ridesharing, and the use of electric vehicles.</p> <p>In addition, this segment shows a strong commitment to minimizing noise pollution during construction by implementing physical barriers or soundproofing measures. They value open communication and swift response to address noise-related issues, as demonstrated by the dedicated hotline or communication channel for residents to report concerns and the establishment of a noise complaint resolution process.</p> <p>Moreover, this segment also highlights their concern for wildlife and their desire to create a harmonious environment for them within the golf course. They emphasize the importance of establishing wildlife corridors to maintain connectivity between habitats and implementing bird-friendly designs to minimize bird collisions.</p> <p>Overall, this segment can be considered highly attractive as a target audience due to their strong environmental consciousness, commitment to sustainable practices, and consideration for both human and wildlife wellbeing. They are likely to be receptive to initiatives and policies aimed at improving the environment and minimizing negative impacts.</p> <p>Explain why this segment might not be attractive as a target audience:</p> <p>This segment might not be attractive as a target audience because it consists of individuals who are primarily concerned with traffic management, noise pollution, and wildlife conservation in the context of a golf course environment. These issues and solutions may not be applicable or relevant to a wide range of individuals or businesses outside of the specific setting of a golf course. Thus, targeting this segment may not result in a significant reach or impact on a broader audience. Additionally, implementing some of these solutions may require significant resources, making it less appealing for certain organizations or individuals to engage with this segment as a target audience.</p> <p>List what is missing or should be known about this segment, in question form:</p> <ol style="list-style-type: none"> 1. How effective have smart traffic signal systems been in optimizing traffic flow in other areas? 2. Have transportation demand management plans successfully incentivized carpooling, ride-sharing, and electric vehicle usage in similar contexts? 3. What specific noise levels are considered acceptable during construction and how do they compare to existing regulations? 4. How accessible and user-friendly is the dedicated hotline or communication channel for residents to report noise-related issues? 5. What measures or considerations have been taken to ensure that houses are effectively oriented away from potential noise sources? 6. How successful has the community noise complaint resolution process been in addressing residents' concerns? 7. Have nesting areas, bird boxes, and other wildlife structures been previously implemented in other golf courses, and what has been their impact on wildlife populations? 8. Are designated wildlife corridors currently present in the golf course and if so, how have they contributed to maintaining habitat connectivity? 9. What bird-friendly designs have been proven effective in minimizing bird collisions in golf course structures? 10. What other potential environmental impacts, if any, could arise from implementing these measures and how can they be mitigated? <p>List and briefly describe attractive new or innovative products, services, experiences, or policies for this segment:</p> <p>Some attractive new or innovative products, services, experiences, or policies for this segment could include:</p> <ol style="list-style-type: none"> 1. Smart Traffic Signal Systems: Implementing smart traffic signal systems that can adjust timings based on congestion levels can help optimize traffic flow and reduce traffic congestion. This would lead to a smoother and more efficient transportation system. 2. Transportation Demand Management Plan: Developing a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles can help reduce traffic congestion and promote sustainable transportation options. 3. Noise Pollution Mitigation Measures: Implementing physical barriers or soundproofing measures, such as temporary walls or fences, during construction can help minimize noise pollution and reduce its impact on residents. 4. Dedicated Hotline for Noise-related Issues: Providing a dedicated hotline or communication channel for residents to report noise-related issues ensures a swift response to address concerns. This would help improve resident satisfaction and address noise-related problems effectively.

5. Strategic House Orientation: Orienting houses away from potential noise sources, such as major roads or industrial areas, can minimize noise impact on residents and create a quieter living environment.
6. Community Noise Complaint Resolution Process: Establishing a community noise complaint resolution process where residents can voice their concerns and ensure that their issues are addressed promptly and effectively can help improve resident satisfaction and maintain a harmonious community.
7. Wildlife Conservation Efforts: Creating nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment can enhance biodiversity and create a more attractive and eco-friendly golfing experience.
8. Wildlife Corridors: Establishing designated wildlife corridors throughout the golf course to maintain connectivity between habitats ensures the preservation of wildlife and their natural movement patterns within the golf course area.
9. Bird-friendly Golf Course Structures: Installing bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions, demonstrates a commitment to wildlife conservation and supports the well-being of local bird populations.

Which messages will interest this segment?

1. "Implement smart traffic signal systems that can adjust timings based on congestion levels to optimize traffic flow."
2. "Develop a comprehensive transportation demand management plan that encourages carpooling, ridesharing, and the use of electric vehicles."
3. "Implement physical barriers or soundproofing measures, such as temporary walls or fences, to minimize noise pollution during construction."
4. "Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns."
5. "Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents."
6. "Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively."
7. "Create nesting areas, bird boxes, and other structures to encourage wildlife to thrive within the golf course environment."
8. "Establish designated wildlife corridors throughout the golf course to maintain connectivity between habitats."
9. "Install bird-friendly designs in golf course structures, such as windows with minimal reflection or visual cues to minimize bird collisions."

Mind-Set 2 of 2 – Focus on traffic as well as maintaining the local environment

Create a label for this segment:

Environmental Conservation and Community Well-being

Describe this segment:

This segment is focused on implementing measures to support and enhance local wildlife populations, prevent pollution of local ecosystems, and minimize disruptions to wildlife caused by human activities. It also emphasizes collaboration with transportation agencies and traffic management departments to analyze and optimize traffic flow, reduce congestion during rush hour, and minimize the impact of vehicle collisions with wildlife. Additionally, this segment aims to address noise-related issues and concerns by providing a dedicated communication channel for residents to report noise problems and establishing a community complaint resolution process. Overall, this segment is dedicated to creating a more sustainable and environmentally friendly community that prioritizes the well-being of both wildlife populations and residents.

Describe the attractiveness of this segment as a target audience:

This segment of individuals and communities demonstrates a strong commitment to environmental conservation and the well-being of local wildlife populations. They prioritize sustainable practices and demonstrate a willingness to take action in order to preserve and enhance the natural habitats and ecosystems in their area. Their interest in implementing habitat restoration and enhancement programs, responsible waste management practices, and measures to minimize vehicle collisions with wildlife indicates a deep concern for the protection and conservation of local wildlife populations.

Furthermore, their collaboration with transportation agencies and traffic management departments shows their proactive approach in identifying and addressing traffic congestion issues, reflecting their commitment to reduce pollution and improve traffic flow. Their promotion of flexible working hours to reduce congestion during rush hour exemplifies their consideration for the overall welfare and quality of life for residents in their community.

The dedication to addressing noise-related issues through prompt response and resolution processes demonstrates their commitment to ensuring a peaceful and harmonious living environment for residents. Additionally, their efforts to orient houses away from potential noise sources, such as major roads or industrial areas, further indicates their focus on providing a high quality of life for residents and minimizing the negative impacts of noise pollution.

Overall, this target audience is highly attractive due to their strong sense of environmental stewardship, proactive problem-solving approach, and commitment to finding sustainable solutions for the benefit of both wildlife populations and residents.

Explain why this segment might not be attractive as a target audience:

This segment might not be attractive as a target audience because their primary interests and concerns are focused on wildlife conservation, habitat restoration, waste management, and transportation and traffic-related issues. These interests may not align with the objectives or products/services that a company or organization is trying to promote. Additionally, the segment may have specific needs and preferences that may not be easily met or fulfilled by the company, therefore making it less of a viable target audience.

List what is missing or should be known about this segment, in question form:

1. What are the specific wildlife populations that are in need of habitat restoration and enhancement programs?
2. Are there specific pollution sources or waste management practices that are most prevalent and need to be targeted?
3. Which specific areas or highways have a high incidence of wildlife-vehicle collisions and require wildlife crossings and signage?
4. What level of disturbance does the wildlife experience from construction sites, and what types of buffer zones would be most effective?
5. Have traffic patterns and bottlenecks already been analyzed, or is further analysis needed to identify potential solutions?
6. Are there specific peak travel times that need to be addressed through the implementation of flexible working hours?
7. What are the main noise-related issues commonly experienced by residents in the area?
8. Are there specific noise sources, besides major roads and industrial areas, that also need to be considered when orienting houses?
9. Is there an existing process for resolving noise complaints or is the establishment of a community noise complaint resolution process new?
10. What are the potential barriers or challenges in implementing these measures, such as financial constraints or community resistance?

List and briefly describe attractive new or innovative products, services, experiences, or policies for this segment:

1. Wildlife-friendly landscaping services: Offer landscaping services that focus on creating and maintaining habitats suitable for local wildlife. This can include planting native vegetation, providing nesting areas, and installing bird feeders or bat boxes.

2. Waste reduction and recycling incentive programs: Implement programs that incentivize responsible waste management practices, such as offering discounts or rewards for recycling or using reusable products. This can help reduce pollution in local ecosystems by minimizing waste and promoting sustainable practices.
3. Wildlife-friendly infrastructure design: Develop innovative infrastructure designs that minimize vehicle collisions with wildlife. This can include the installation of wildlife crossings, signage, and fencing to guide animals away from busy roads and highways.
4. Noise-cancelling technologies for residential areas: Introduce innovative noise-cancelling technologies for homes located near major roads or industrial areas. This can help minimize the impact of noise pollution on residents and improve their quality of life.
5. Community-based traffic management platforms: Establish digital platforms or mobile apps that allow residents to monitor and report traffic-related issues in real-time. This can provide valuable data for transportation agencies and help identify potential bottlenecks or areas that require traffic flow optimization.
6. Wildlife-friendly construction practices: Encourage developers and construction companies to adopt wildlife-friendly practices by establishing buffer zones around construction sites. This can help minimize disturbances to local wildlife habitats during the construction process.
7. Eco-friendly transportation solutions: Introduce innovative transportation options such as electric or hybrid vehicles, bike-sharing programs, or efficient public transit systems. This can help reduce congestion, pollution, and noise levels in the community.
8. Smart home technology for energy and resource conservation: Promote the use of smart home devices and technologies that allow residents to monitor and optimize their energy consumption. This can help individuals reduce their ecological footprint and contribute to a more sustainable community.
9. Nature education and ecotourism experiences: Develop nature education programs and ecotourism experiences that promote environmental awareness and appreciation for local wildlife. This can include guided tours, workshops, or volunteer opportunities to engage residents and visitors with the natural beauty of the area.
10. Sustainable urban planning policies: Advocate for sustainable urban planning policies that prioritize green spaces, biodiversity conservation, and sustainable development. This can include implementing green building codes, preserving natural habitats, and incorporating renewable energy sources in urban infrastructure.

Which messages will interest this segment?

1. "Implement habitat restoration and enhancement programs to support local wildlife populations."
2. "Encourage responsible waste management practices to prevent pollution of local ecosystems."
3. "Introduce measures to minimize vehicle collisions with wildlife, such as wildlife crossings and signage."
4. "Establish buffer zones around construction sites to prevent disturbances to wildlife."
5. "Collaborate with local transportation agencies and traffic management departments to analyze traffic patterns and identify potential bottlenecks."
6. "Implement smart traffic signal systems that can adjust timings based on congestion levels to optimize traffic flow."
7. "Promote flexible working hours to stagger peak travel times and reduce congestion during rush hour."
8. "Provide a dedicated hotline or communication channel for residents to report noise-related issues, ensuring a swift response to address concerns."
9. "Orient houses away from potential noise sources, such as major roads or industrial areas, to minimize noise impact on residents."
10. "Establish a community noise complaint resolution process, where residents can voice their concerns, and ensure that their issues are addressed promptly and effectively."

These messages will interest the segment interested in environmental conservation, wildlife protection, traffic management, and noise pollution mitigation.

Table 10: AI summarization of the open-ended question.

Open ended question

How does being a judge about this negotiation between builder and community make you feel?

Mind-Set 1 of 2 – Focus on a pleasant environment for both people and wildlife

Open communication technology has made residents feel more connected to their community and more responsible. It gives them a voice in their community and makes them feel better. However, it can be uncomfortable to judge and must consider the opinions of both sides. The technology is important for community development and making people feel good and welcoming. However, it can also be torn between supporting the builder and the community, as it may not be the best solution for everyone. Despite this, the technology has made people feel more in control of their projects and more concerned about their information. Overall, the technology has made people feel included and appreciated.

Mind-Set 2 of 2 – Focus on traffic as well as maintaining the local environment

The text discusses various aspects of a specific topic giving an opinion, including feelings of honor, involvement, and potential challenges. The respondent expresses gratitude for the opportunity but feels uncertain about their decision-making abilities. They express interest in the specific topic but are hesitant to judge others. The respondent also discusses the responsibility of the specific topic, including wildlife conservation, noise pollution, and traffic congestion. Despite these concerns, the respondent feels empowered and interested in the specific topic. However, they are uncomfortable with the lack of experience in the field and feel uncomfortable making judgments. The respondent also expresses their excitement about the giving an opinion and the other one they attended. Overall, the respondents express their interest in the specific topic and the potential for growth in their community.

Do Open Ended Comments Give Any Deeper Insight into the Mind-sets

After the respondent finished rating all 24 vignettes, the respondent was presented with the instruction to answer the following question by writing one or more sentences: How does being a judge about this negotiation between builder and community make you feel? Table 10 shows the AI summarization of the open ends, with slight editorial changes by the authors to make the summarization more relevant to parties in a negotiation. The summarization was done by QuillBot, an AI editor [16]. The differences between the mind-sets emerge in Table 10, but once again the differences are a matter of 'shading' rather than of radically different points of view.

Discussion and Conclusions

The goal of this paper, dealing with a local property development issue, represents a new direction for Mind Genomics, one perhaps

frequently encountered in legal and professional circles, rather than in research papers. The original efforts of Mind Genomics were based in the effort to understand the preferences of people for the 'stuff' of everyday life, whether products or services. The almost universal finding from all of the Mind Genomics experiments was the emergence of a limited number of clearly defined mind-sets. When the research moved to political polling [13] or to social research of serious problems [17] clearly different mind-set once again emerged. It is only with problems of the local community that we see the absence of such strong mind-sets. The mind-sets do emerge, as they must with statistical processing forcing them out of the data. However, the mind-sets are similar to each other in the response to most of the messages. It is only the 'shading' of the responses where we find differences, and where we struggle to come out with these different groups. The subtlety of point of view of such issues has already been recognized, although not in the language of Mind

Genomics [18-22]. As we go through these results, the question now emerges as to how to treat differences of opinion in the situations where the mind-sets reflect modest quantitative differences, shadings of opinion rather than striking differences. It may well be that in many situations dealing with negotiations, the different offerings brought by the parties are almost all equally acceptable. In such cases Mind Genomics may reveal an entirely new opportunity to study the way people make decisions, not so much in the world of preference patterns but rather in the world of graduated 'give and take', the world of subtleties in negotiation, rather than dramatic differences in thinking about a topic.

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