

Topic Specification Challenges: The topic specification for our project presented significant challenges due to a lack of comprehensive information. The complexity of integrating blockchain, IoT, machine learning, and supply chain management for green hydrogen production added layers of difficulty in defining precise requirements and goals.

Sketching and Ideation Process: Despite these challenges, the sketching phase was instrumental in organizing our ideas and establishing a coherent plan. The sketch provided a visual representation of our concepts, which facilitated more structured thinking and helped us outline a comprehensive solution. The ideation process, as depicted in the image, includes the following key points:

1. **Web Interface Creation:**
 - Develop a web interface to display real-time token value and highlight its contribution to green hydrogen production and consumption.
2. **Collaboration with Industry Experts:**
 - Partner with green hydrogen industries and experts to create practical use cases for our token.
3. **Real-Time Data Integration:**
 - Upgrade our solution using IoT to handle real-time data and estimations for active supply chain engagement, incorporating alerting and notification functionalities.
4. **Blockchain Integration:**
 - Integrate our blockchain with supply chain actors, building a comprehensive reward algorithm and a tokenomics system.
5. **Machine Learning Algorithms:**
 - Implement real-time machine learning algorithms to interact with our token, supply chain actors, and the hydrogen industry.
6. **Comprehensive Monitoring Solution:**
 - Combine token, IoT, blockchain, and machine learning solutions to build a full monitoring web interface for all supply chain actors, detailing their actions and rewards.

Long-Term Goals and Future Vision: The long-term goals of our project played a crucial role in shaping our future vision. By focusing on the broader impact and sustainability of green hydrogen, we aimed to create a scalable and adaptable platform that would not only address current challenges but also anticipate future needs. This forward-thinking approach helped us identify key areas for innovation and development, ensuring that our solution remains relevant and effective in the evolving energy landscape.

"How Might We" Questions: To pinpoint the specific problems we should focus on, we utilized "How Might We" questions, which guided our problem-solving process. These questions helped us narrow down our focus to the most critical issues, allowing us to develop targeted solutions that address the specific needs and pain points of our users.

User Feedback and Refinement:

Throughout the development process, user feedback will play a crucial role. Engaging with users will allow us to gather valuable insights and make iterative improvements. Users will highlight the importance of real-time updates, transparency, and the ability to manage investments effectively. Their feedback will guide our design and functionality decisions, ensuring the platform meets user needs and expectations.