**Problem Statement:**

The increasing volume of news articles published daily presents a challenge for readers who want to stay informed but have limited time to read lengthy content. While news platforms provide a wealth of information, the sheer size and complexity of articles make it difficult for users to quickly grasp the key points. Manual summarization, although helpful, is inefficient and time-consuming.

To address this challenge, an automated news summarization tool is needed. The goal is to develop a system that can analyze and extract the most relevant information from lengthy news articles, providing users with brief and meaningful summaries without losing essential context. Using Drupal for content management and a Natural Language Processing (NLP) library for summarization, this system aims to enhance the user experience by offering quick access to condensed news content, helping readers stay up to date without investing significant time.

**Business Case:**

As digital news articles become longer, they are much harder to keep interested and find out key information quickly. This project aims to develop an automated news summarization tool using Drupal as well as an NLP library which will provide quick access to the important information that the reader is looking for. This would provide a competitive advantage to news platforms.

**Scope:**

* **Platform**: Built using Drupal to manage and store articles.
* **Summarization Engine**: An NLP library to automatically generate summaries from text-based articles.
* **Content Types:** If you have a news article that has a lot of text you will want to see a summary and the full article.
* **Limitations**: The initial release will only support English language articles and will exclude multimedia content.

**Goals:**

* Develop an NLP-based summarization engine.
* Integrate the plugin into Drupal to summarize news articles.
* Make sure summaries are appropriate and brief but contain significant information.
* Improve user experience by offering quick summaries without overwhelming users.
* Ensure scalability for future expansion.

**Functional Requirements:**

* The system must automatically summarize news articles using an NLP library.
* The NLP summarization should extract key points while maintaining the context and meaning.

**SDLC Model:**

For this project, the **Agile** software development lifecycle (SDLC) model will be used. Agile is well-suited for this project because it allows for iterative development and frequent feedback, which is important for refining the summarization tool and user interface.

1. **Planning Phase:**
   * Define project scope, goals, and high-level requirements.
   * Establish the timeline and prioritize features for each sprint.
2. **Design Phase:**
   * Design system architecture, including the integration of the NLP library with Drupal.
   * Create wireframes for the user interface.
3. **Development Phase:**
   * Implement the summarization engine using the chosen NLP library.
   * Integrate the engine with Drupal and develop the user interface.
   * Develop the content types, such as news articles and summaries, and build the system’s back end.
4. **Testing Phase:**
   * Perform unit testing, integration testing, and user acceptance testing (UAT).
   * Ensure that the summarization works as expected and that the system is scalable and responsive.
5. **Deployment Phase:**
   * Deploy the system to a live environment.
   * Monitor for issues and gather user feedback for future improvements.
6. **Maintenance Phase:**
   * Address any bugs or performance issues post-deployment.
   * Add additional features based on user feedback, such as multi-language support.