Thank you for the opportunity to submit our proposal for developing the alpha version of Instamint. We are excited about the prospect of working with your innovative startup to create a dynamic and engaging platform for NFTs and digital art enthusiasts. Below, we outline our approach to meeting your functional, technical, design, security, sustainability, and quality assurance requirements.

Project Understanding

Instamint aims to build a comprehensive ecosystem for NFTs, connecting enthusiasts, experts, and galleries. Our goal is to deliver a robust alpha version of your platform within 3 months, laying the groundwork for a scalable and feature-rich marketplace.

Uses cases

Display Reports and Analyses of Activities

Condition:

- The administrator is logged into the system
- User activity and content data are available in the database

Steps:

1. The administrator logs into the management dashboard.
2. The administrator navigates to the reports and analysis section.
3. The administrator selects the types of reports they wish to display (e.g., user activity report, content performance report).
4. The administrator applies filters if necessary (e.g., by time period, by content type).
5. The system generates and displays the requested reports and analyses.

Result expected:

- Detailed reports and analyses on user activities and content are displayed to the administrator.

- The administrator can visualize trends, user behaviors, and content performance.
- The administrator can export the reports for further use.

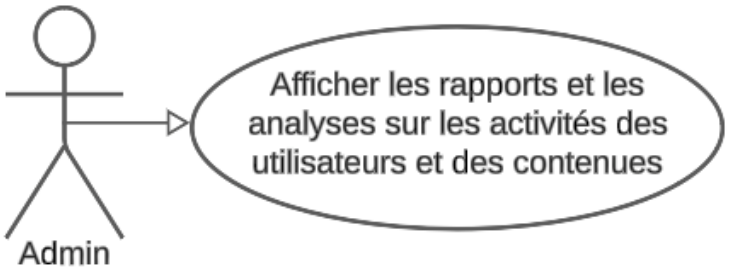

Diagramme de cas d'utilisation - Admin - Analyse et Gestion

Delete MINTER Account, tea bags, NFT or comments

Condition:

- The administrator is logged into the system.
- There are MINTER accounts that need to be deactivated or deleted.

Steps:

1. The administrator logs into the management dashboard.
2. The administrator navigates to the user management section.
3. The administrator selects the MINTER accounts to deactivate or delete.
4. The administrator confirms the deactivation or deletion action.
5. The system processes the request and deactivates or deletes the selected accounts.

Result expected:

- The selected MINTER accounts are deactivated or deleted.
- The administrator receives a confirmation message indicating the successful deactivation or deletion.

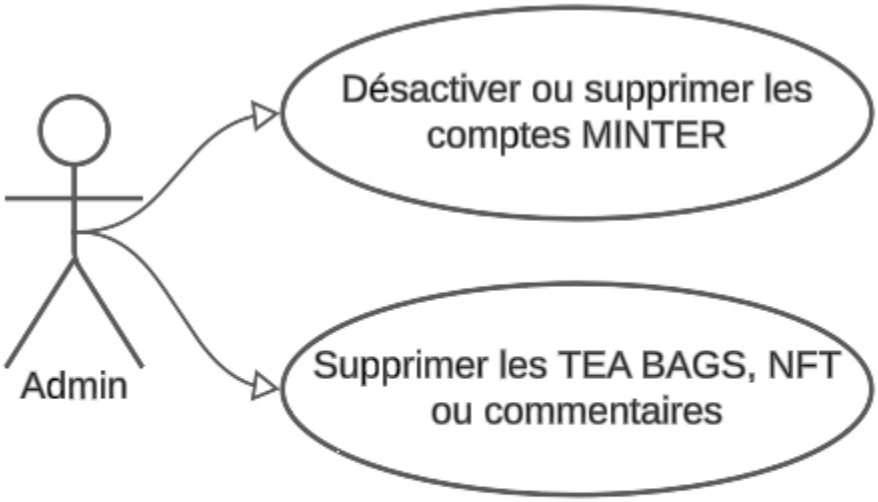

Diagramme de cas d'utilisation - Admin - Gestion des utilisateurs et contenus

Content Management by Minter

Condition:

- The minter is logged into the system.
- The minter has permissions to manage content.

Steps:

1. Upload Content:

1. The minter logs into the content management dashboard.
2. The minter navigates to the upload section.
3. The minter selects the content to upload.

4. The minter provides necessary details and metadata for the content.
5. The minter confirms the upload.
6. The system uploads the content and adds it to the minter's content library.

Result expected:

- The content is successfully uploaded and available in the minter's content library.
- The minter receives confirmation of the successful upload.

2. Delete Content:

1. The minter logs into the content management dashboard.
2. The minter navigates to the content library.
3. The minter selects the content to delete.
4. The minter confirms the deletion.
5. The system processes the request and deletes the content.

Result expected:

- The selected content is deleted from the system.
- The minter receives confirmation of the successful deletion.
- The deleted content is no longer available in the content library.

3. Create a Draft from Original Content:

1. The minter logs into the content management dashboard.
2. The minter navigates to the content library.
3. The minter selects the original content to create a draft.
4. The minter chooses the option to create a draft.
5. The system generates a draft copy of the original content.
6. The minter can edit and save the draft as needed.

Result expected:

- A draft copy of the original content is created.
- The draft is available for further editing and saving.
- The minter receives confirmation of the successful draft creation.

4. Create an NFT from Content:

1. The minter logs into the content management dashboard.
2. The minter navigates to the content library.
3. The minter selects the content to convert to an NFT.
4. The minter chooses the option to create an NFT.
5. The minter provides necessary details and settings for the NFT.
6. The system processes the request and creates the NFT from the selected content.

Result expected:

- An NFT is created from the selected content.
- The NFT is added to the minter's NFT library.
- The minter receives confirmation of the successful NFT creation.

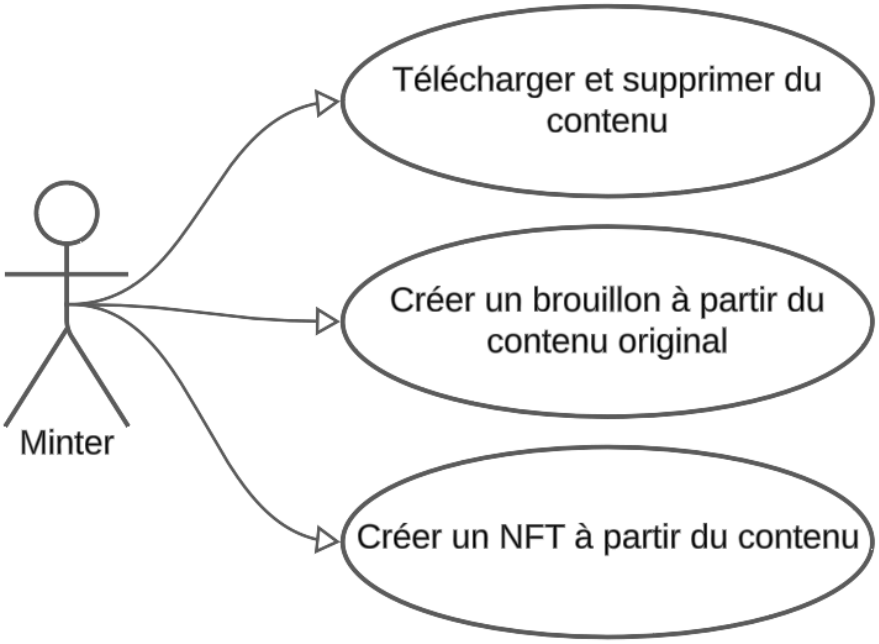

Diagramme de cas d'utilisation - Minter - Gestion du contenu

Buy, Sell, trade NFTs on the Marketplace

Condition:

- The minter is logged into the system.
- The minter has sufficient permissions and account balance for transactions.

Steps:

1. Buy NFTs:

1. The minter logs into the marketplace dashboard.
2. The minter browses available NFTs on the marketplace.
3. The minter selects an NFT to purchase.
4. The minter reviews the details and price of the NFT.
5. The minter confirms the purchase.
6. The system processes the transaction and deducts the cryptocurrency from the minter’s wallet.
7. The NFT is transferred to the minter's account.

Result expected:

- The NFT is successfully purchased and added to the minter’s account.
- The minter’s wallet balance is updated accordingly.
- The minter receives confirmation of the successful purchase.

2. Sell NFTs:

1. The minter logs into the marketplace dashboard.
2. The minter navigates to their NFT collection.
3. The minter selects an NFT to sell.
4. The minter sets the price and sale details for the NFT.
5. The minter lists the NFT for sale on the marketplace.
6. The system verifies and lists the NFT for sale.

Result expected:

- The NFT is listed for sale on the marketplace.
- Potential buyers can view and purchase the NFT.
- The minter receives confirmation of the successful listing.

3. Trade NFTs:

1. The minter logs into the marketplace dashboard.
2. The minter navigates to the trading section.
3. The minter selects an NFT they wish to trade.
4. The minter searches for another NFT to trade for.
5. The minter proposes a trade to the owner of the other NFT.
6. The system sends the trade proposal to the other NFT owner.
7. If the trade is accepted, the system processes the trade and exchanges the NFTs between the two accounts.

Result expected:

- The NFTs are successfully traded between the two accounts.
- The minter's NFT collection is updated accordingly.
- Both parties receive confirmation of the successful trade.

4. Add Cryptocurrencies to Wallet:

1. The minter logs into the wallet dashboard.
2. The minter navigates to the add funds section.
3. The minter selects the cryptocurrency to add to their wallet.
4. The minter specifies the amount of cryptocurrency to add.
5. The minter provides necessary payment details or initiates a transfer from an external wallet.
6. The system processes the transaction and adds the cryptocurrency to the minter's wallet.

Result expected:

- The specified amount of cryptocurrency is added to the minter's wallet.
- The minter's wallet balance is updated accordingly.
- The minter receives confirmation of the successful addition of funds.

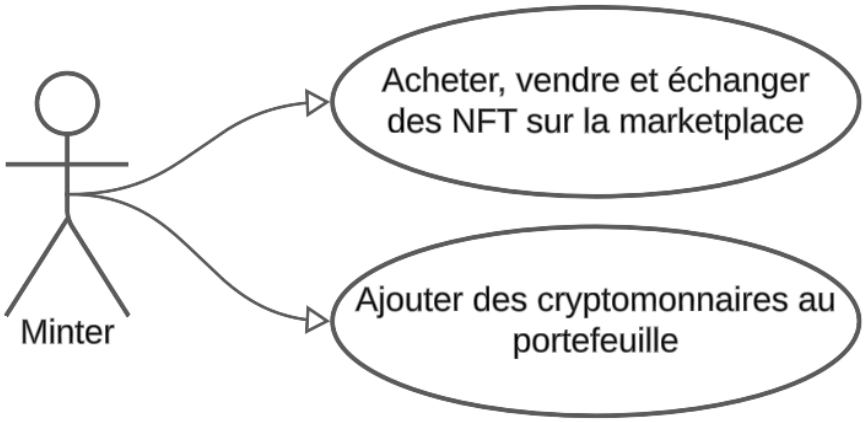

Diagramme de cas d'utilisation - Minter - Echange et marketplace

Edit Profile Information

Condition:

- The minter is logged into the system.
- The minter has permissions to edit their profile information.

Steps:

1. The minter logs into their account dashboard.
2. The minter navigates to the profile settings section.
3. The minter selects the option to edit profile information.
4. The minter updates the desired information such as name, email, profile picture, and other personal details.
5. The minter saves the changes.
6. The system processes the updates and applies the changes to the minter's profile.

Result expected:

- The profile information is successfully updated.
- The minter receives confirmation of the successful update.
- The new profile information is displayed in the minter's profile.

Enable Two-Factor Authentication

Condition:

- The minter is logged into the system.
- The minter has a valid phone number or authentication app to use for two-factor authentication.

Steps:

1. The minter logs into their account dashboard.
2. The minter navigates to the security settings section.
3. The minter selects the option to enable two-factor authentication (2FA).
4. The system prompts the minter to choose a 2FA method (e.g., SMS, authentication app).
5. The minter follows the instructions to set up 2FA (e.g., scanning a QR code with an authentication app or entering a phone number for SMS).
6. The minter verifies the setup by entering the code received via SMS or generated by the authentication app.
7. The system activates 2FA for the minter's account.

Result expected:

- Two-factor authentication is successfully enabled for the minter's account.
- The minter receives confirmation of the successful 2FA activation.
- The minter is prompted to use 2FA during future logins for added security.

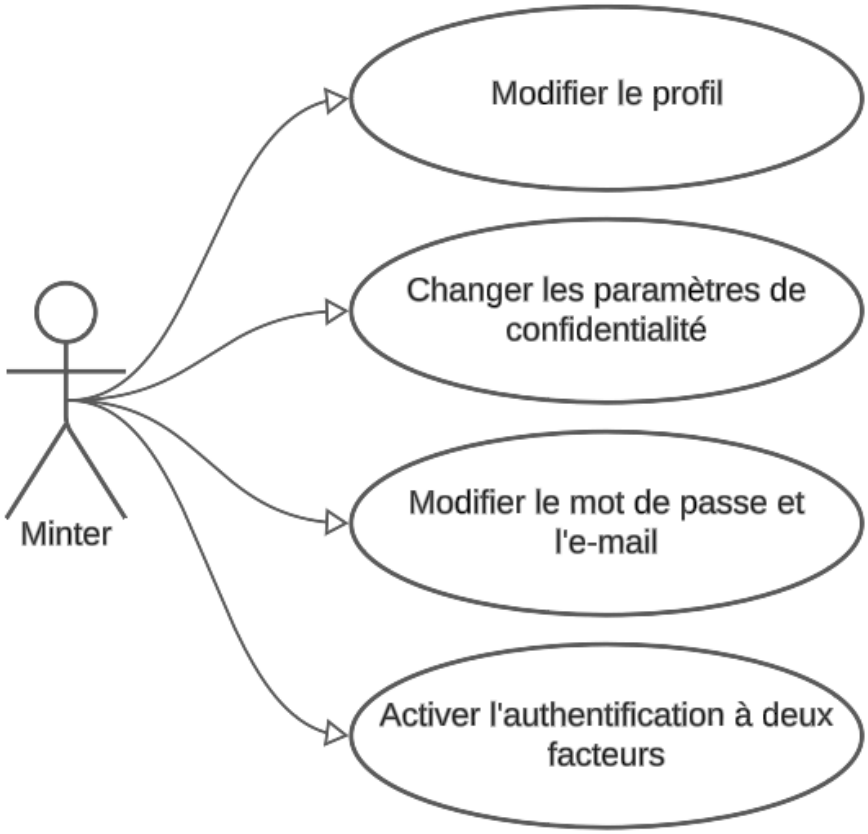

Diagramme de cas d'utilisation - Minter - Gestion du profil

View Other Minters’ Profiles

Condition:

- The minter is logged into the system.
- The other minters' profiles are set to be viewable by others.

Steps:

1. The minter logs into their account dashboard.
2. The minter navigates to the community or search section.
3. The minter searches for or selects another minter's profile.

4. The system displays the selected minter's profile.

Result expected:

- The profile information of the selected minter is displayed.
- The minter can see the public details, activities, and content of the other minter.

Like or Comment on Content

Condition:

- The minter is logged into the system.
- The content is available and allowed for interactions.

Steps:

1. Like Content:

1. The minter browses the content on the platform.
2. The minter selects the content they wish to like.
3. The minter clicks the like button associated with the content.
4. The system records the like and updates the like count.

Result expected:

- The content is successfully liked by the minter.
- The like count on the content is updated.
- The minter receives confirmation of the successful like.

2. Comment on Content:

1. The minter browses the content on the platform.
2. The minter selects the content they wish to comment on.
3. The minter enters their comment in the comment section.
4. The minter submits the comment.
5. The system records and displays the comment under the content.

Result expected:

- The comment is successfully posted under the content.
- Other users can view the comment.
- The minter receives confirmation of the successful comment.

Report Comments or NFTs

Condition:

- The minter is logged into the system.
- The minter encounters inappropriate or offensive comments or NFTs.

Steps:

1. Report Comments:

1. The minter browses the content and comments on the platform.
2. The minter selects the comment they wish to report.
3. The minter clicks the report button associated with the comment.
4. The minter provides a reason for reporting the comment.
5. The minter submits the report.
6. The system records the report and notifies the moderators.

Result expected:

- The comment is successfully reported.
- The moderators are notified for further action.
- The minter receives confirmation of the successful report.

2. Report NFTs:

1. The minter browses the NFTs on the platform.
2. The minter selects the NFT they wish to report.
3. The minter clicks the report button associated with the NFT.
4. The minter provides a reason for reporting the NFT.
5. The minter submits the report.
6. The system records the report and notifies the moderators.

Result expected:

- The NFT is successfully reported.
- The moderators are notified for further action.
- The minter receives confirmation of the successful report.

Follow Other Minters

Condition:

- The minter is logged into the system.
- The other minters have followable profiles.

Steps:

1. The minter logs into their account dashboard.
2. The minter navigates to the community or search section.
3. The minter searches for or selects another minter's profile.
4. The minter clicks the follow button on the selected minter's profile.
5. The system records the follow action and updates the follower list.

Result expected:

- The selected minter is successfully followed.
- The minter receives updates from the followed minter's activities.
- The minter receives confirmation of the successful follow.

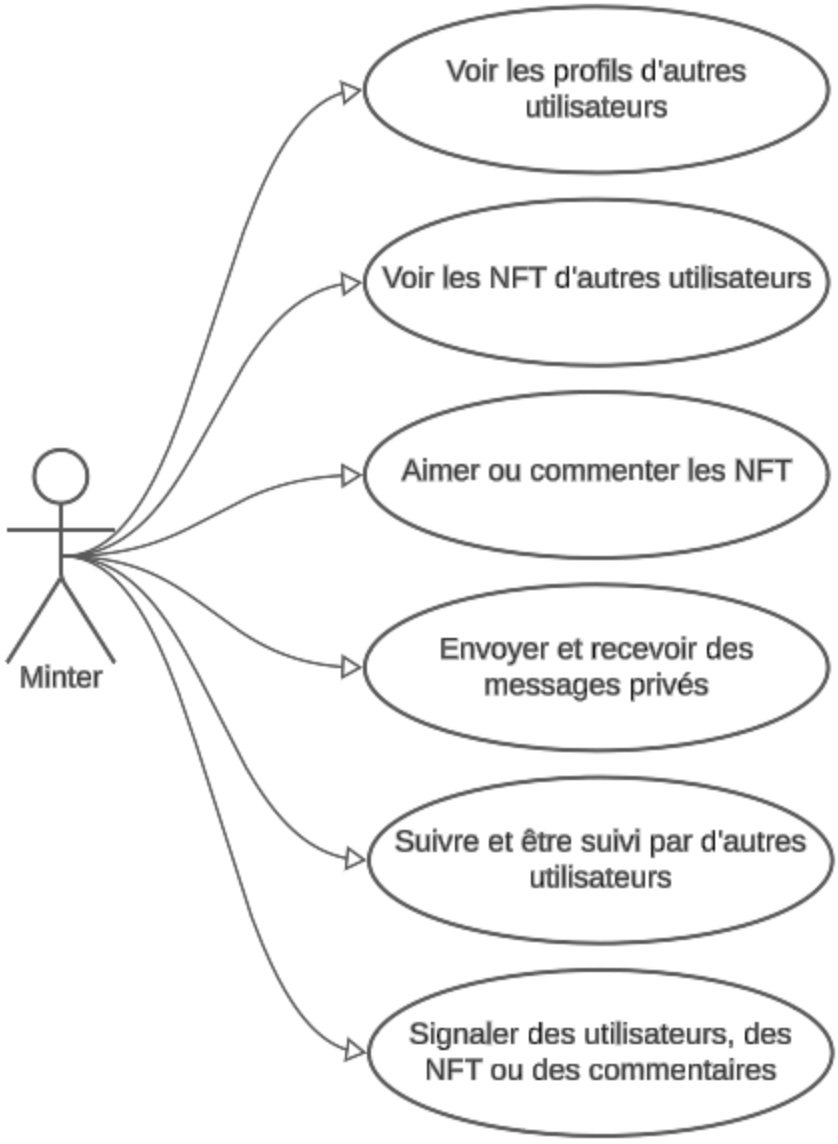

Diagramme de cas d'utilisation - Minter - Interaction sociale

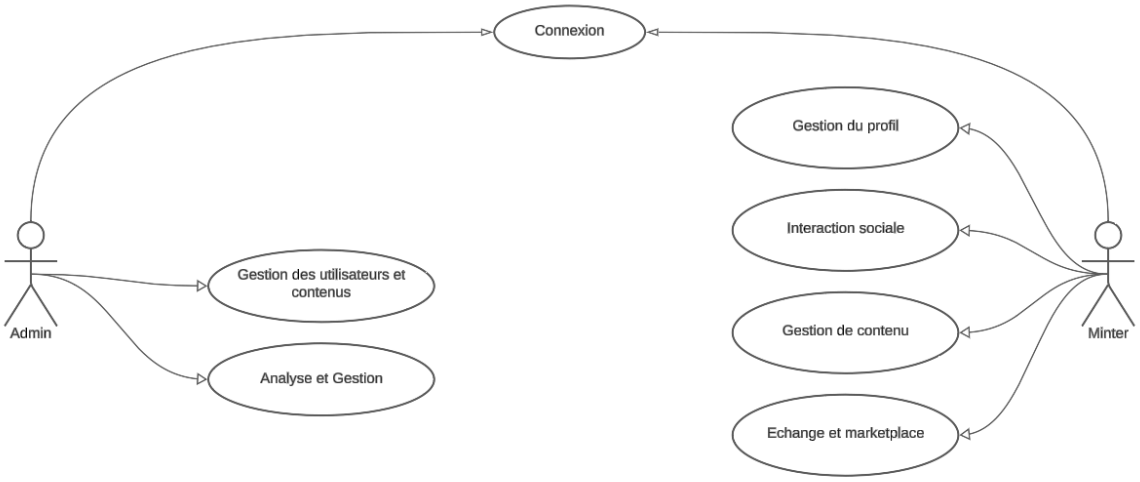

Diagramme de cas d'utilisation - Minter / Admin Après connexion

General Requirements

- Ensure all public URLs are SEO-friendly by rendering HTML pages.
- Implement a privacy and data collection consent popup for non-logged users.

Key Features:

1. **MINTER Registration and Login:**
    - Secure account creation and activation via email.
    - Password reset, secure deletion with a 6-month retention policy.
2. **MINTER Privacy/Security Settings:**
    - Secure updates to password/email.
    - Two-factor authentication (2FA) integration.
    - Import contacts, manage profile visibility, and support for multiple languages (i18n).
3. **Profile Customization:**
    - Editable username, profile picture, bio, and unique link.
4. **Social Features:**
    - Viewing profiles, liking and commenting on NFTs, following users.
    - Private messaging and reporting mechanisms for users, NFTs, and comments.

5. **TEA BAG Management:**
    - Creation and management of TEA BAG profiles and associated NFTs.
6. **Search Functionality:**
    - Comprehensive search options for NFTs and users/TEA BAGS.
7. **Notifications:**
    - Customizable notification settings.
8. **Cryptocurrency Integration:**
    - Wallet management and NFT transactions.
9. **Content Management:**
    - Uploading, drafting, and minting digital content.
10. **Marketplace Features:**
    - Buying, selling, and trading NFTs.
11. **Admin Dashboard:**
    - Administrative control over user accounts, TEA BAGS, NFTs, comments, and reports.

Technical Specifications

- **Code Quality**: All code will be linted, secure, maintainable, and readable.
- **Version Control**: GitHub will be used for version control.
- **Scalability**: The platform will be architected to handle >1000 req/s.
- **Database**: A suitable database for e-commerce will ensure data integrity.

Design Specifications

Color Palette

- **Accent**: #16502d, #37c871, #55ff99, #b3ff80
- **Neutral**: Dark #4a504d, Medium #b7c8ba, Light #e0f0e4

Typography and Spacing

- Use 4px units (U) for consistent spacing and sizing.
- Defined font sizes for titles, headings, subheadings, body, and small text.

Design Consistency

- Minimal rounded elements, with a focus on consistent component styling.

Security Measures

- MFA for all third-party services.
- Third-party source code audits.
- No secrets in source code or repositories.
- Adherence to best practices for handling sensitive information.

Sustainability

- Compliance with the European Green Deal and European Climate Law.
- Use of sustainable hosting solutions.
- Optimized architecture to minimize environmental impact.

Quality Assurance Processes

Detection of Solution Vulnerabilities

- A continuous vulnerability monitoring process is in place to measure and mitigate vulnerabilities. This cyclical process identifies IT assets and correlates them with a constantly updated database to identify threats, misconfigurations, and vulnerabilities. The urgency and impact of each vulnerability are analyzed, and rapid response is ensured for severe threats. Prior to any change, a report listing the number of vulnerabilities and their risk level (probability * impact) is generated. If no vulnerabilities are detected, the change is implemented.

Server Load Management

- A server load management process ensures that the server can accommodate all users. This process simulates website and server activity to observe reactions and measure site stability under high user loads.

Performance Evaluation

- A performance evaluation process regularly monitors and guarantees optimal user experience. Similar to the load management process, activities are simulated on the site, and server response times for each feature are measured.

Carbon Footprint

- To evaluate the ecological impact of the application, an environmental footprint analysis will be conducted. This analysis identifies polluting facets of the application and implements appropriate solutions to mitigate these impacts.

Compatibility

- A compatibility process ensures the ability to change hosts seamlessly and quickly, avoiding dependence on a single service provider.

Deliverables

- A mobile application
- A web application mirroring the mobile app (or vice versa)
- An administration web interface
- A backend structured in microservices
- A response to the call for tenders including
    - A provisional schedule
    - An estimate of developments costs
    - An estimate of structural costs
- A report containing
    - The actual schedule
    - The assessment of ecological risks and/or the sustainability of the chosen technical solutions
    - The quality processes employed
- 2 proposals for user experience innovation
    - Documentation of
        - Code

        - The deployment process
        - The setup of the development environment
    - A user manual accessible to the administrator of the developed solution
    - All deployed technical web deliverables on NOMDUGROUPE.nstamint.fr
    - Final presentation slides

Timeline

We commit to delivering the alpha version within 3 months from the start date.

Provisional schedule of working days

Sprint 1 - March 22 - April 21

- Configuration of the development environment
- Initial setup of the repository and CI/CD tools
- Technical architecture and database design
- Development of authentication features
- Management of privacy and security settings
- Creation and customization of user profiles
- Development of profile page and news feed features

Sprint 2 - April 22 - May 21

- Development of post publishing and profile interactions
- Extended implementation of TEA BAG features
- Integration of cryptocurrency management
- Development of the NFT marketplace
- Partial integration testing for developed features

Sprint 3 - May 22 - June 3

- Development of the admin dashboard and reporting tools
- Complete integration and scalability adjustments
- Finalization of documentation and deployment preparation
- Deployment of the application on the hosting platform
- Initial monitoring and adjustments based of feedback

Budget and Payment Terms

Project Details

Sprint Duration - 4 weeks per sprint

Development Period - March 22, 2024 - June 3, 2024

Number of Sprints - 3

Team Size - 4 developers

Development Focus - Visual functionalities and social features

Cost summary per sprint

Description	Hours per Developer	Developers	Cost per Hour (EUR)	Cost per Developer per Sprint (EUR)	Total Cost per Sprint (EUR)
Development	160 hours	4	50 EUR	8,000 EUR	32,000 EUR

Total estimated Project Cost

- Total cost for 3 sprints: 96,000 EUR
- Azure : 575 EUR
- Bucket : 100 EUR
- Contingencies (10%), 9667,5 EUR
- Total estimated cost (including contingencies): 105,667

Payment Terms

- Staggered payments at the end of each sprint
- 30% deposit upon contract signing

Offer Validity

This estimate is valid until April 30, 2024

Analysis of Risk

PESTEL Analysis

Factor	Influence on Instamint	Color Indicator
Political	Increasing regulation of NFTs and cryptocurrencies	🟥 High Alert
Economic	Fluctuations in cryptocurrency markets affecting NFT transactions	🟨 Moderate Alert
Social	Shifting attitudes towards NFTs and digital art	🟩 Low Alert
Technological	Blockchain innovations offering new opportunities	🟩 Low Alert
Environmental	Impact of cryptocurrency mining on the environment	🟥 High Alert
Legal	Potential new laws impacting NFT-related operations	🟥 High Alert

Risk Matrix

Risk	Risk Type	Probability	Impact	Color Indicator
Technological	Medium	High	Strengthen platform security and resilience	🟨 Moderate Alert
Market	Medium	Medium	Diversify offerings and intensify marketing efforts	🟨 Moderate Alert
Regulatory	High	High	Proactive regulatory monitoring and adaptation	🟥 High Alert
Operational	Medium	Medium	Optimize operational processes and customer support	🟨 Moderate Alert
Reputational	Low	High	Actively manage reputation and public relations	🟨 Moderate Alert

SWOT Analysis

SWOT	Strengths	Weaknesses	Opportunities	Threats
Technological innovation	Immersive user experience	Dependence on blockchain technologies	Growth in the NFT market	Changing regulations
Market presence	Partnerships with artists	Challenges in market adoption	Increased competition	

Interprétations

Interpretation of the Risk Matrix

The Risk Matrix for Instamint highlights the primary risks faced by the platform, categorized by their likelihood of occurrence and potential impact on the project. Technological and regulatory risks stand out with both a medium to high probability and high impact, underscoring the need for a robust mitigation strategy in these areas. The presence of operational and market risks with medium probability and impact indicates the necessity for effective planning and diversification of strategies to ensure growth and stability. Reputational risks, while less likely, could have a significant impact, necessitating particular attention to reputation management and public relations.

Interpretation of the SWOT Analysis

The SWOT Analysis reveals internal strengths, such as technological innovation and immersive user experience, that favorably position Instamint in the NFT space. However, internal weaknesses, such as challenges related to market adoption and dependence on blockchain technologies, could hinder growth. External opportunities, such as the growth of the NFT market and potential for partnerships with artists, offer avenues for expansion. Nonetheless, external threats, including changing regulations and increased competition, require ongoing vigilance and adaptation to secure Instamint's market position.

Interpretation of the PESTEL Analysis

The PESTEL Analysis provides a framework to understand how various macro-environmental factors might influence Instamint. Political and legal factors, such as government regulations, demand regulatory vigilance. Economic elements, like cryptocurrency market fluctuations, directly affect NFT transactions. Socially, evolving attitudes towards NFTs and digital art can impact demand. Technological advancements present both opportunities for innovation and

challenges in maintaining competitiveness. Environmental concerns related to cryptocurrency mining highlight the importance of sustainable practices. Together, these factors shape the strategic landscape for Instamint, emphasizing the need for an adaptable and proactive approach in a rapidly changing environment.

Innovation Proposals

Add Stories that a User Can Add and View

Concept: Inspired by platforms like Instagram and Snapchat, "stories" are ephemeral content that allow users to share moments from their daily lives. In the context of Instamint, this could be an innovative way for users to highlight their NFTs or share moments related to their NFT experience.

Development:

- **User Interface:** Design an intuitive interface where users can post and view stories. This could include features like swiping to move to the next story, a timer indicating the remaining duration of the story, and icons for interaction (e.g., to buy an NFT featured in a story).
- **Storage and Accessibility:** Stories are temporary, so a duration after which they are automatically deleted needs to be defined. Additionally, it is necessary to determine how the stories will be stored and retrieved.
- **Interactivity:** Allow users to react to stories, perhaps by expressing interest in an NFT or leaving a comment.

Add a Blockchain Wallet Connection System

Concept: Allow users to connect to the platform using their wallet, offering a secure and convenient method that aligns your platform with web3 standards.

Development:

- **Wallet Integration:** Choose popular wallets (like MetaMask, Coinbase Wallet, etc.) to integrate. Then use their respective APIs to enable the connection.
- **Authentication and Security:** Authentication via a wallet is inherently secure, but it is important to understand how to properly implement the authentication process to avoid vulnerabilities.
- **User Experience:** Clearly explain the benefits and functionality of connecting via a wallet for users who might not be familiar with this technology.
- **Functional Integration:** Once connected via their wallet, users should be able to directly use their NFT assets on the platform, such as using them in stories.

Contact Information

For any inquiries, please contact us at chaufournais.loic@gmail.com . We look forward to the opportunity to work with Instamint and contribute to the success of your platform.