WHITEPAPER v1 | 2023

THE KEY COMPONENTS OF LUNARSPACE'S DECENTRALIZED CRM: dERP

Within this document is a detailed analysis of the key components of our systems. Please note: much of the content within this document may be subject to change.

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THE KEY COMPONENTS OF LUNARSPACE'S DECENTRALIZED CRM: dERP

Welcome to the world of Lunarspace, where the boundless possibilities of web3 technology meet the needs of modern businesses. Our revolutionary dERP platform and $HAMP token are set to revolutionize the way companies manage their operations, streamline their processes, and unlock the true potential of blockchain integration.

Imagine a world where customer data is securely stored on a decentralized network, where sales and marketing efforts are streamlined with automation, and where the actions of your employees are tracked and rewarded in real-time. This is the world of dERP, and it's here to empower your business with the tools and technologies it needs to thrive in today's digital age.

With dERP, companies can take control of their customer relationships, streamline their sales and marketing efforts, and unlock the true potential of web3 technology. And with $HAMP, businesses can reward their employees for valuable actions, and unlock the true potential of blockchain integration.

Join us on a journey to discover the many benefits of dERP and $HAMP, and learn how these cutting-edge technologies can take your business to new heights.

Lunarspace, a cutting-edge web3 business accelerator, aims to revolutionize the way businesses operate by providing a robust ERP/CRM solution with the added security and transparency of blockchain technology. Our flagship product, dERP, is a comprehensive platform that integrates with the latest web3 technologies to provide an unparalleled level of security, automation, and access control.

In this whitepaper, we will go in depth on the technical details of our platform, including the architecture of dERP, the functionality of the dERP Launchpad and dPASS SBT, and the implementation of the $HAMP protocol. We will also explore the potential use cases and benefits of our platform for businesses of all sizes. With its combination of robust customization features, unparalleled security, and easy-to-use interface, dERP is poised to become the go-to solution for businesses looking to enter the world of web3.

WEB3 SOLUTIONS FOR WEB2 ENTERPRISES

dERP is designed to be a comprehensive and secure enterprise resource planning (ERP) and customer relationship management (CRM) solution for businesses and organizations of all sizes. The platform is built using a combination of modern web technologies, including JavaScript, TypeScript, and Rust, as well as various APIs and open-source libraries.

One of the key features of the dERP platform is its integration with the web3 ecosystem using the dPASS SBT and the dERP Launchpad. The dPASS SBT is a soulbound token that is used to provide secure access to the dERP platform. It is built using the Cosmos SDK, which allows for the creation and management of a token on a blockchain. The token is soulbound, meaning it cannot be transferred, bought, or sold, and is only used for verifiable and controlled access to the dERP platform.

WEB3 FEATURES

The dERP Launchpad is a smart contract-based system that is used to manage the dPASS SBT and provide additional functionality for the dERP platform. The Launchpad is built using the Cosmos SDK and is designed to be highly secure and modular, allowing for easy integration with other systems and protocols.

One of the key benefits of the dERP platform is its ability to provide a comprehensive and secure solution for managing all aspects of a business or organization. The platform includes a wide range of tools and features for managing everything from financials and inventory to customer relationships and employee management. Additionally, the integration with the web3 ecosystem through the dPASS SBT and the dERP Launchpad provides added benefits such as increased security and the ability to access and utilize new web3-based technologies and protocols.

Another benefit of the dERP is the Human Activity Mining Protocol ($HAMP) that rewards users for using the platform and contributing to it. The SuperAdmin has full control over their accumulated $HAMP, and it can be swapped for whatever IBC blockchain $HAMP is built on. All $HAMP is earned by the whole team.

In addition to the dERP platform and its associated technologies, Lunarspace also offers a Keplr wallet integration, which allows for easy and secure management of digital assets within the platform. This integration allows for the seamless management of digital assets such as the dPASS SBT and other web3-based assets.

PROBLEMS SOLVED: CRMs

Problem #1: lack of integration with other systems and tools. Many organizations struggle with disparate systems that do not easily integrate with one another, making it difficult to get a holistic view of their operations.

dERP addresses this issue by providing an integrated platform that can be easily connected to other systems, such as accounting software, e-commerce platforms, and marketing automation tools. This allows organizations to easily collect, store, and analyze data from multiple sources, providing them with a more complete view of their operations.

Problem #2: inefficient processes and data silos. Many organizations struggle with manual, paper-based, or disjointed processes, resulting in inefficiencies and data silos.

dERP addresses this issue by automating key processes and providing a centralized repository for data, allowing organizations to streamline their operations and improve their bottom line. This is done by using the latest technologies such as Space and Time decentralized SQL databases.

Problem #3: lack of security and compliance. Organizations are often required to comply with various regulations and standards, such as GDPR, HIPAA, and PCI-DSS. However, many CRM/ERP platforms do not provide the necessary level of security and compliance.

dERP addresses this issue by providing a platform that is built with security in mind, using the latest technologies and protocols to ensure that data is always protected. This includes using the latest technologies such as the Cosmos SDK and dPASS SBT to ensure secure access to the platform.

PROBLEMS SOLVED: BLOCKCHAIN IN ENTERPRISE

Problem #1: complexity and lack of scalability. Many enterprise-level blockchain solutions are complex to set up and maintain, which can be a barrier for widespread adoption. Additionally, many blockchain networks struggle with scalability issues, which can limit their ability to handle large amounts of transactions and data.

Problem #2: lack of interoperability. Different blockchain networks often have incompatible protocols and data formats, which can make it difficult for them to communicate and share data with one another. This can be a major obstacle for enterprise-level use cases, where multiple blockchain networks may be needed to support different business processes and systems.

Problem #3: security concerns. One of the key concerns for enterprise-level blockchain usage is the security of the network. With the large amounts of sensitive data and financial transactions that take place on these networks, it is crucial that they are designed and implemented with robust security protocols in place.

dERP addresses the problem of complexity and scalability by using the Cosmos SDK and Space and Time decentralized SQL databases, which provide a modular and easy-to-use framework for building and scaling blockchain applications. Additionally, dERP's use of IBC allows for interoperability between different blockchain networks, enabling them to communicate and share data more easily.

dERP also uses cutting-edge security protocols and methods, such as the use of dPASS, a soulbound token, and Keplr wallet integration. The use of these technologies is meant to provide an additional layer of security for enterprise-level blockchain usage, ensuring that sensitive data and financial transactions are always protected.

WEB3 USE CASES

dERP offers a wide range of web3 use cases that are designed to help businesses and organizations take advantage of the benefits of blockchain technology. One of the main use cases is the integration of the Human Activity Mining Protocol ($HAMP) which allows organizations to reward their users for valuable activities on the platform. This allows organizations to incentivize desired behaviors and increase user engagement, while also providing a new revenue stream through the sale of $HAMP tokens.

Another web3 use case is the integration of the dPASS SBT, a soulbound token that is used for secure and controlled access to dERP. By using a token-based access control system, organizations can ensure that only authorized individuals have access to their sensitive data and systems. This adds an additional layer of security to the platform, which is especially important for organizations that handle sensitive information.

The dERP Launchpad is another web3 feature that allows organizations to easily create and manage smart contracts on the blockchain. This allows organizations to automate complex business processes, such as supply chain management, and reduce the need for manual intervention. The dERP Launchpad also provides organizations with a user-friendly interface that makes it easy to deploy and interact with smart contracts, even for non-technical users.

Finally, the integration of Keplr wallet allows users to securely store and manage their digital assets and access the web3 ecosystem. This enables users to easily interact with decentralized applications and perform transactions on the blockchain.

Overall, Lunarspace's dERP offers a wide range of web3 use cases that can help organizations streamline their operations, increase efficiency and security, and improve their bottom line. By leveraging the power of blockchain technology, organizations can gain a competitive advantage in an increasingly digital world.

GETTING TECHNICAL

The next section of the whitepaper will provide a detailed overview of the products and protocols offered by Lunarspace. This will include an in-depth description of the dERP platform, the dERP Launchpad, the dPASS SBT, Keplr wallet integration, and any other relevant technologies or features.

First, we will discuss dERP, a robust ERP and CRM platform that provides businesses with a streamlined and efficient way to manage their operations. The platform offers a wide range of features, including customer relationship management, inventory management, financial management, and more. Additionally, dERP integrates with web3 technologies using $HAMP (Human Activity Mining Protocol) and leaderboards, allowing for a more decentralized and transparent system for businesses.

The dERP Launchpad is a smart contract-based protocol that enables businesses to launch, manage, and govern their own tokens on the Cosmos network. The launchpad is designed to be easy to use and provides a secure and efficient interaction between user and blockchain.
The dPASS SBT is a soulbound token that is used to grant secure access to the dERP platform. The token cannot be transferred, bought, or sold, and is only awarded to users by the SuperAdmin. The dPASS SBT is an essential component of dERP, as it ensures that only authorized users have access to the system and sensitive data.

The Keplr wallet integration allows users to seamlessly connect their Keplr wallet to the dERP platform within the Launchpad, allowing them to securely manage their dPASS SBT, $HAMP and any other token from the Cosmos network. This integration makes it easy for users to access their tokens and perform various actions such as transfer or staking.

In addition, there is also a dynamic leaderboard feature which is utilized to incentivize the use of dERP by rewarding users with $HAMP, through the Human Activity Mining Protocol, for their contributions and engagement. The leaderboard is a way for businesses to acknowledge and reward their top contributors, and for users to compete and strive for rewards.

Lunarspace offers a wide range of products and protocols that are designed to provide businesses with a more streamlined, efficient, and decentralized way to manage their operations. From the dERP platform to the dERP Launchpad and the dPASS SBT, these products and protocols are designed to work together seamlessly to provide businesses with a powerful and flexible system for managing their operations with blockchain tools.

dERP

Lunarspace's dERP is a robust and secure CRM/ERP platform that is built on top of cutting-edge web3 technologies. The platform is built primarily using the Rust programming language for its high performance and security capabilities and utilizes TypeScript for its front-end development. The platform also makes use of various APIs and libraries such as the Cosmos SDK and the Tendermint Protocol to interact with the blockchain and ensure secure and decentralized access control.

At its core, dERP is designed to provide businesses with a single, unified platform for managing all of their customer and internal business data. The platform includes a wide range of features and functionalities that allow businesses to manage their customer relationships, sales, marketing, and operations all in one place.

One of the key features of dERP is its ability to securely manage and store large amounts of customer and internal business data. The platform uses advanced encryption and security protocols to ensure that all data is protected from unauthorized access and breaches. Additionally, the platform is designed to be fully compliant with all relevant data privacy regulations, such as GDPR and CCPA.

STREAMLINING EFFICIENCY

dERP includes a powerful set of analytics and reporting tools that allow businesses to gain valuable insights into their customer and business data. These tools allow businesses to track key metrics such as customer acquisition and retention, sales performance, marketing ROI, and more.

dERP also includes a built-in workflow management system that allows businesses to automate and streamline their internal processes. This allows businesses to manage tasks more efficiently such as sales lead follow-up, customer service, and more.

In addition to these core features, dERP also includes several advanced web3-based features such as the integration of Human Activity Mining Protocol (HAMP) and the leaderboards. These features allow businesses to track and reward their team's performance and enable the use of dERP and the dPASS SBT.

These components work together to provide a comprehensive and secure ERP/CRM platform that is fully integrated with web3 technologies. By using smart contracts and digital assets, the platform can automate processes, enforce business rules, and provide a secure means of access control. With the added benefits of $HAMP and the leaderboards, dERP is a powerful solution that can help businesses manage their internal processes and improve their bottom line.

dERP KEY FEATURES

dERP, the flagship product of Lunarspace, is a robust and feature-rich ERP/CRM platform that is built using a combination of modern technologies and web3 integration.

One of the key features of dERP is its integration with the web3 ecosystem, which enables businesses and organizations to leverage the benefits of blockchain technology. This includes the use of soulbound tokens, such as the dPASS SBT, which provides secure access to the dERP platform and ensures that only authorized users have access to sensitive information. Additionally, dERP also integrates with the Keplr wallet, which allows users to securely manage their digital assets and access the platform using their wallet credentials.

dERP is designed to be modular and customizable, which allows businesses and organizations to tailor the platform to their specific needs. This includes features such as the ability to create custom workflows, configure access controls, and integrate with external systems and databases.

Another important component of dERP is the use of Space and Time decentralized SQL databases. This allows for the storage and retrieval of data in a decentralized and distributed manner, which provides several benefits such as improved security, scalability, and availability.

In terms of functionalities, dERP offers a wide range of features that are designed to help businesses and organizations streamline their operations and improve their bottom line. These include:

- Contact management: dERP allows users to manage and organize their contacts, including the ability to segment them into different groups and lists.
- Sales management: dERP includes a comprehensive sales management module that allows users to track leads, opportunities, and deals, as well as manage their sales pipeline.
- Marketing automation: dERP includes a powerful marketing automation module that allows users to create and execute marketing campaigns, track their performance, and measure their ROI.
- CRM: dERP includes a comprehensive CRM module that allows users to manage their customer relationships, including the ability to track customer interactions, manage customer data, and create custom reports.
- Project management: dERP includes a project management module that allows users to create, track, and manage projects, assign tasks, set deadlines and view progress.
- Time tracking: dERP allows users to track time spent on projects, tasks, and activities, and to generate detailed reports on time usage.
- Accounting: dERP includes an accounting module that allows users to manage their financials, including invoicing, expenses, and reporting.

- Human Resource Management: dERP includes a HRM module that allows users to manage employee information, track attendance, manage payroll and benefits, and handle employee performance evaluations.
- Reporting and Analytics: dERP includes a reporting and analytics module that allows users to create custom reports and analyze their business data in real-time.
- Integration: dERP can integrate with other systems and software that has open API to provide a seamless experience for users.

Additionally, dERP also offers robust security features, including user access control, encryption, and secure data storage, to ensure that client's data is protected and secure. With the integration of $HAMP and the dPASS SBT, dERP offers an added layer of security and access control to ensure that only authorized parties have access to the platform.

dERP LAUNCHPAD

The dERP Launchpad is a dApp, but to be more exact, it is a contract-based access control system built on top of the Cosmos SDK. It allows for the creation and management of users and their corresponding roles within the dERP platform. It uses JSON-Schema to define the contract's structure and input/output parameters for each function and is implemented using Rust and TypeScript.

The contract includes several message types for performing various actions such as creating and archiving users, changing the owner of the contract, and setting the address of the dPASS SBT contract. The contract also includes several query types for querying the state of the contract and the users it manages.

The contract uses the Cosmos SDK's built-in access control capabilities to ensure that only authorized parties can perform actions on the contract and access its data. It is designed to be upgradeable, allowing for future updates and improvements to be implemented without affecting the existing functionality.

The dERP launchpad works with the browser based Keplr Wallet extension to provide users with an easy and secure way to access their dERP account, the dPASS soulbound token is used to bind the user to their account and provide them with secure access to the platform. The dERP Launchpad interacts with the dPASS SBT contract to ensure that only authorized users can access the platform and perform actions.

The dERP Launchpad is a crucial component to dERP, providing secure access control and user management functionality, and working seamlessly with the dPASS SBT, Keplr Wallet and the rest of the platform to provide a comprehensive and secure ERP/CRM solution.

dPASS SBT

The dPASS SBT is a unique token that is used for secure access to the dERP platform. It is built using the Cosmos SDK, a modular blockchain development framework, and is designed to be soulbound, which means that it cannot be transferred, bought, or sold. The dPASS is created and managed using the dERP SBT Contract, which is a smart contract that is deployed on the Cosmos blockchain.

The dPASS SBT is created during the instantiation of the dERP SBT Contract, where the contract's admin, name and symbol are set. The admin of the contract is responsible for adding and removing users and minting new tokens. Only admins and the SuperAdmin can mint new tokens, and they are only minted to users that have been added to the whitelist by the admin or SuperAdmin.

The dPASS SBT uses a token ID to identify each token, which is a unique 64-bit unsigned integer that is assigned to the token during the minting process. The token ID is used to query the token's owner and to track the token's movements on the blockchain.

To ensure the security of the dPASS SBT, the contract uses the Cosmos SDK's built-in access control features, such as the ability to add and remove admins and users and to check the token's ownership. This ensures that only authorized users can mint and transfer tokens, and that the token's ownership can be audited at any time.

Overall, the dPASS SBT is an extremely crucial component of the dERP platform, as it provides a secure and auditable way to manage access to the platform and to track the movements of tokens on the blockchain.

dERP BASE CONTRACT AND dERP SBT CONTRACT

The dERP Base Contract and the dERP SBT Contract are smart contracts that are used to manage and interact with the dERP platform. Both contracts use the JSON-Schema to define the contract's structure and the input/output parameters for each function. The dERP Base Contract uses Rust, TypeScript and Shell code, in order to provide the necessary functionality for the platform.

The dERP Base Contract has an instantiate function that takes in several required parameters such as the denomination of the token, the ID of the contract, the owner of the contract, the SBT address of the contract and the URL of the contract. The execute function of the dERP Base Contract allows for several different actions to be taken, such as minting new SBT, setting the SBT address, changing the owner, creating a user, archiving a user, unarchiving a user, enabling admin access, disabling admin access, adding a minter, and removing a minter. Each of these actions takes in specific required parameters, such as the address of the user for actions like creating a user or changing the owner.

The dERP SBT Contract also has an instantiate function that takes in three required parameters, the admin of the SBT, the name of the SBT and the symbol of the SBT. The execute function of the dERP SBT Contract allows for several different actions to be taken, such as minting new SBT, adding a minter, and removing a minter. The mint action takes in an owner and **'token_uri'** as required parameters. The add_minter and remove_minter actions take in the minter address as a required parameter.

The dERP SBT Contract also has an instantiate function that takes in three required parameters, the admin of the SBT, the name of the SBT and the symbol of the SBT. The execute function of the dERP SBT Contract allows for several different actions to be taken, such as minting new SBT, adding a minter, and removing a minter. The mint action takes in an owner and **'token_uri'** as required parameters. The **'add_minter'** and **'remove_minter'** actions take in the minter address as a required parameter.

The query function of the dERP SBT Contract has several query options, such as **'holds_sbt'**, **'owner_of'**, **'total_supply'** and **'metadata_of'**, each of which return different information about the SBT. The **'holds_sbt'** query takes in an address as a parameter and returns a boolean indicating if the address holds any of the SBT. The **'owner_of'** query takes in a token ID as a parameter and returns the address of the owner of that specific token. The **'total_supply'** query returns the total number of tokens currently in circulation. The metadata_of query takes in a token ID as a parameter and returns the metadata associated with that specific token.

Both contracts use the Cosmos SDK, a modular blockchain development framework, to perform the necessary functions and interactions with the blockchain. The Cosmos SDK provides a set of modules that can be used to perform various functions such as governance, staking, and token transfer. The dERP Base Contract and dERP SBT Contract both utilize the Cosmos SDK to interact with the blockchain and perform the necessary actions.

MANAGING RESPONSIBILITIES

The dERP Base Contract is responsible for managing the creation and management of users, organizations, and SBT addresses. It defines several message types that are used to perform various actions such as minting new SBT, setting the SBT address for a user, changing the owner of the contract, creating new users, archiving and unarchiving users, and enabling and disabling admin privileges for users. Each message type is defined using JSON-Schema which ensures that the input parameters are in the correct format and that all required fields are present.

The instantiate message type is used to create a new instance of the contract and requires the following fields: **"denom"**, **"id"**, **"owner"**, **"sbt_address"**, and **"url"**. The **"denom"** field is the denomination of the SBT, the **"id"** field is the unique identifier for the contract, the **"owner"** field is the address of the owner of the contract, the **"sbt_address"** field is the address of the SBT, and the **"url"** field is the URL of the contract's metadata.

The execute message type is used to perform various actions on the contract and is defined as a oneOf object, meaning that it can take one of several different forms depending on the action being performed. The **'mint_sbt'** message type is used to mint new SBT and takes a single object as input. The **'set_sbt_address'** message type is used to set the SBT address for a user and takes an object with a single field **"addr"** which is the address of the SBT. The change_owner message type is used to change the owner of the contract and takes an object with a single field **"addr"** which is the address of the new owner. The **create_user** message type is used to create a new user and takes an object with a single field **"user_addr"** which is the address of the user.

The **archive_user** message type is used to archive a user, which means that the user will no longer have access to the dERP platform. The message type requires a single parameter, **"addr"**, which is the address of the user to be archived. The **unarchive_user** message type is used to unarchive a user, which means that the user will regain access to the dERP platform. This message type also requires a single parameter, **"addr"**, which is the address of the user to be unarchived.

Both the **'archive_user'** and **'unarchive_user'** message types are typically used by the SuperAdmin or other authorized users to manage access to the dERP platform for specific users.

Additionally, the **'enable_admin'** message type is used to enable admin access for a user, which means that the user will have access to the dERP platform with admin privileges. This message type also requires a single parameter, **"addr"**, which is the address of the user to be granted admin access.

All of these message types, along with the other available message types in the dERP Base Contract, work in conjunction to allow for the management and control of users, access, and privileges within the dERP platform.

TOKEN MINTING

The dERP SBT Contract, on the other hand, is used to manage the creation, minting and control of the dERP SBT tokens. The contract use the mint message to mint a new dERP SBT token, which requires the input of the owner of the token, and an optional input of **'token_uri'**. The **'add_minter'** message is used to add a minter to the contract, which is a user who is authorized to mint new dERP SBT tokens. This message requires the input of minter which is the address of the user who will be added as minter. The **'remove_minter'** message is used to remove a minter from the contract, which is a user who is no longer authorized to mint new dERP SBT tokens. This message also requires the "address" of the user to be passed as a parameter in the object.

The **'enable_admin'** message type is used to grant admin privileges to a user. This message also requires the "address" of the user to be passed as a parameter in the object.

The dERP SBT Contract, on the other hand, is focused on the management of the dERP tokens (SBT). The instantiate message type takes in three required parameters: admin, name and symbol. The admin parameter is a string that represents the admin address of the SBT, the name parameter is a string that represents the name of the SBT, and the symbol parameter is a string that represents the symbol of the SBT.

The execute message type in the dERP SBT Contract contains three options: 'mint', **'add_minter'** and **'remove_minter'**. The mint message type is used to mint new tokens and requires an object with the owner parameter, which is a string representing the address of the token owner and an optional **'token_uri'** parameter, which is a string representing the Universal Resource Identifier (URI) of the token. The **'add_minter'** message type is used to add a minter address and requires an object with the minter parameter, which is a string representing the minter's address. The **'remove_minter'** message type is used to remove a minter address and also requires an object with the minter parameter, which is a string representing the minter's address.

The query message type in the dERP SBT Contract contains two options: holds_sbt and owner_of. The **'holds_sbt'** message type is used to check if an address holds a certain amount of SBT and requires an object with the **'addr'** parameter, which is a string representing the address. The **'owner_of'** message type is used to check the owner of a certain token ID and requires an object with the **'token_id'** parameter, which is an integer representing the token ID.

Both contracts also include a query function that allows for querying certain information from the contract. The dERP Base Contract includes the **"holds_sbt"** query which takes an **"addr"** parameter, which is the address of the user to check if they hold any dERPs and returns a boolean indicating if they do or not. The **"owner_of"** query takes a **"token_id"** parameter, which is the unique identifier of a dERP token, and returns the address of the owner of that token. The dERP SBT Contract includes the **"total_supply"** query which returns the total number of tokens that have been minted. The **"balance_of"** query takes an **"addr"** parameter, which is the address of a user, and returns the number of tokens that user holds. The **"owner_of"** query takes a **"token_id"** parameter, which is the unique identifier of a token, and returns the address of the owner of that token.

LANGUAGE FUNCTIONALITY

Both contracts, dERP Base Contract and dERP SBT Contract are written in Rust, a systems programming language that runs blazingly fast, prevents segfaults, and guarantees thread safety, it is also the language which is used by the Cosmos-SDK. TypeScript, a typed superset of JavaScript that compiles to plain JavaScript, is used for the front-end and some of the back-end logic. The contracts use the Cosmos SDK, a modular blockchain development framework, to perform the necessary functions and interactions with the blockchain. The dERP Base Contract is also using the Keplr wallet implementation, dPASS SBT instantiation, and authentication for access control.

The dERP SBT Contract uses the Cosmos SDK to perform the necessary functions related to creating and managing a new token. It has an **"instantiate"** message type, which creates a new token with the details provided in the **"MintMsg"** object. This object requires the **"admin"**, **"name"**, and **"symbol"** fields to be provided, with **"admin"** representing the admin of the token, **"name"** representing the name of the token, and **"symbol"** representing the symbol of the token.

The **"execute"** message type of the dERP SBT Contract has several options for interacting with the token. The **"mint"** option allows for the minting of new tokens, with the **"MintMsg"** object required as the input. This object requires the **"owner"** field to be provided, which represents the owner of the newly minted token. Additionally, it includes an optional **"token_uri"** field, which is a universal resource identifier for this token and should point to a JSON file that conforms to the ERC721 Metadata JSON Schema.

Another option for the **"execute"** message type is **"add_minter"** and **"remove_minter"** which are used to add or remove minters to the token. Both options require "minter" field to be provided which is the address of the minter.

Finally, the **"query"** message type of the dERP SBT Contract allows for querying information about the token, such as the owner of a specific token (using the **"owner_of"** message type) or if an address holds a specific token (using the **"holds_sbt"** message type).

In summary, the dERP SBT Contract is using the Cosmos SDK to create and manage a token, with functionalities such as minting new tokens, adding, and removing minters, and querying information about token holders and token ownership. The contract defines several message types for interacting with the contract, including the **"mint"** message type for minting new tokens, **"add_minter"** and **"remove_minter"** message types for adding and removing minters, and **"holds_sbt"** and **"owner_of"** message types for querying information about token holders and ownership. The contract also uses JSON-Schema to define the structure and input/output parameters for each function, ensuring the data passed to the contract is in the correct format. The dERP Base Contract and the dERP SBT Contract are both utilizing the Cosmos SDK to perform the necessary functions and interactions with the blockchain, providing a modular and flexible approach to blockchain development.

$HAMP AND dERP LEADERBOARDS

$HAMP, short for Human Activity Mining Protocol, is a unique feature that allows dERP users to earn rewards for their interactions within the platform. The rewards come in the form of $HAMP tokens, which can be used to redeem rewards or access exclusive features on the dERP platform.

The Leaderboards are a feature that allows users to rank and compare their performance on the dERP platform. The Leaderboards use data from the $HAMP rewards system to rank the users. This allows users to see how they compare to other users and to help team leaders identify areas where they can improve their performance.

The Leaderboards use the data from $HAMP rewards system to rank users on the dERP platform. This allows users to see how they compare to other users and to identify areas where they can improve their performance. The Leaderboards can be used to motivate users to increase their activity within the dERP platform and to encourage friendly competition among users.

$HAMP and the Leaderboards feature provide a unique value addition to dERP by incentivizing the users to actively use the platform while providing an opportunity for users to keep track of their progress and compare their progress with other users. This helps to increase the user engagement and retention on the platform.

$HAMP BUILT ON COREUM

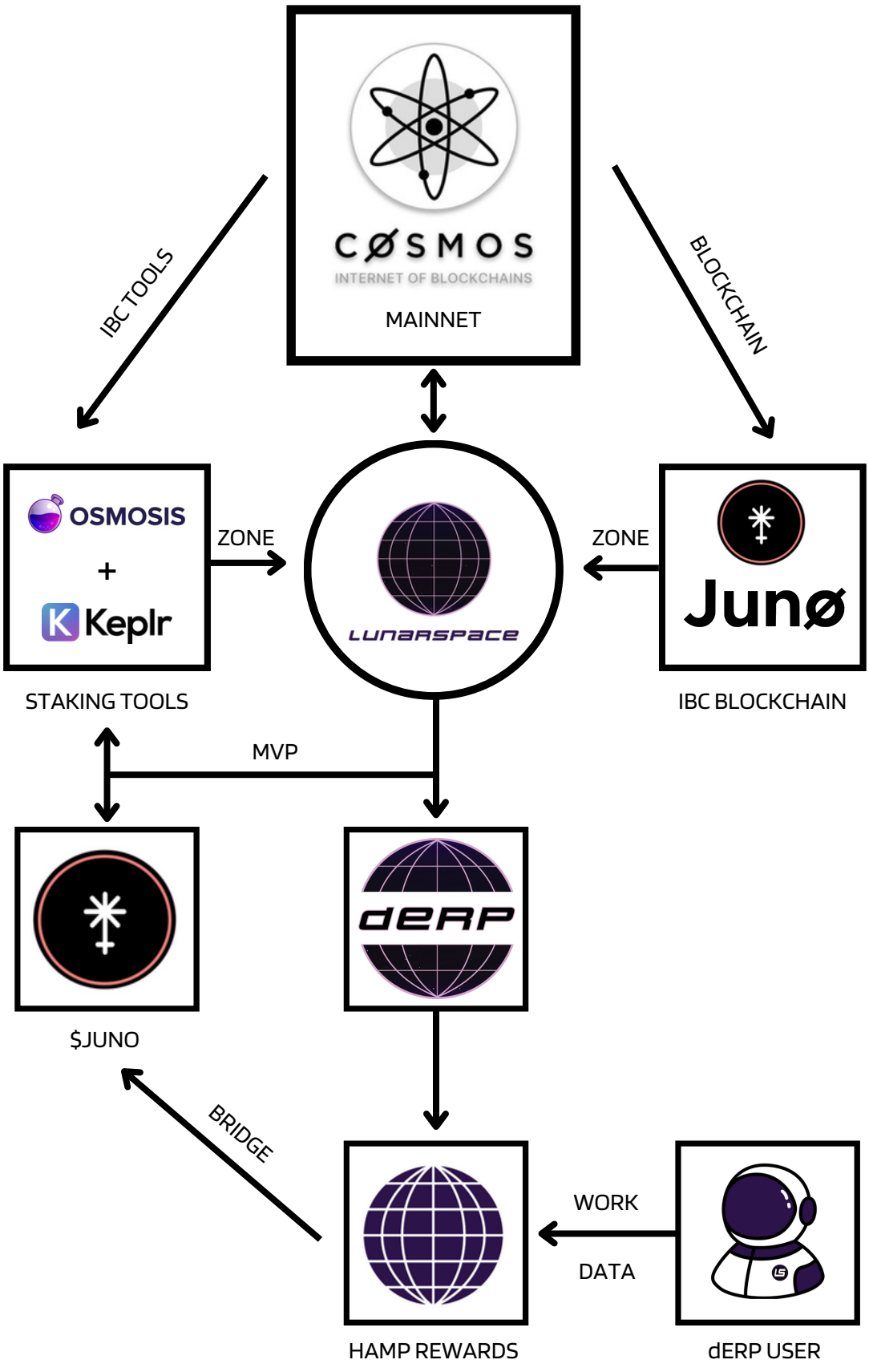
$HAMP, or the Human Activity Mining Protocol, is a web3-based protocol that is built on top of the Coreum blockchain using smart tokens. The protocol allows users to earn rewards in the form of $HAMP tokens for their engagement and activity within the dERP platform.

The smart tokens used in $HAMP are built using Coreum's smart contract platform, which allows for the creation of tokens that can have specific rules and behaviors programmed into them. In the case of $HAMP, these tokens are designed to be earned through user engagement and activity within the dERP platform and can be used to gain access to various features and functionalities within the platform.

The leaderboards in dERP, which are powered by $HAMP, allow users to see how they rank among their peers in terms of their engagement and activity within the platform. This encourages healthy competition and further engagement within the platform.

The use of smart tokens and the Coreum blockchain allows for a transparent and decentralized way to track and reward user engagement and activity, which in turn improves the overall user experience within the dERP platform. Additionally, the use of the Coreum blockchain ensures that the rewards earned through $HAMP are secure, immutable, and tamper-proof.

CURRENT ECOSYSTEM



$HAMP REWARD DEFAULT VALUES

VALUABLE ACTION	POINTS PER ACTION	% PER POINT	ACTIONS TAKEN PER HAMP	POINTS PER 1 $HAMP	REWARDS EARNED
VA 1	1	1%	100	100	1 HAMP
VA 2	1	1%	100	100	1 HAMP
VA 3	1	1%	100	100	1 HAMP
VA 4	1	1%	100	100	1 HAMP
VA 5	1	1%	100	100	1 HAMP
VA 6	1	1%	100	100	1 HAMP
VA 7	1	1%	100	100	1 HAMP
VA 8	1	1%	100	100	1 HAMP
VA 9	1	1%	100	100	1 HAMP
VA 10	1	1%	100	100	1 HAMP
VA 11	5	5%	20	20	1 HAMP
VA 12	5	5%	20	20	1 HAMP
VA 13	5	5%	20	20	1 HAMP
VA 14	5	5%	20	20	1 HAMP
VA 15	5	5%	20	20	1 HAMP
VA 16	10	10%	10	10	1 HAMP
VA 17	10	10%	10	10	1 HAMP
VA 18	10	10%	10	10	1 HAMP
VA 19	15	15%	6.67	6.67	1 HAMP
VA 20	20	20%	5	5	1 HAMP
TOTALS	**100 pts**	**100%**	**-**	**-**	**-**

TOKENOMICS

The $HAMP smart token, built on the Coreum blockchain, will have a fixed total supply of 100 million tokens. The token will be locked to only allow transfer of ownership to users who have been verified as part of a specific dERP platform. This verification will be done using a unique identifier, such as a Cosmos address or the dPASS SBT, linked to each verified user.

The tokenomics for $HAMP will be designed to incentivize valuable actions within the dERP platform. Users will earn $HAMP as a reward for completing valuable actions within the platform, as determined by the SuperAdmin of the specific dERP platform. The SuperAdmin will have the ability to adjust the rewards for different actions and set a vesting period for earned $HAMP.

The $HAMP tokens can be used within the dERP platform for a variety of purposes, such as accessing premium features or participating in governance decisions. Additionally, the tokens can be swapped for $CORE, the native cryptocurrency of the Coreum blockchain, but only by the SuperAdmin of the dERP platform. This ensures that only the SuperAdmin can turn the rewards earned by the team into monetary value.

The tokenomics design is intended to provide a balance between incentivizing valuable actions within the platform and maintaining the integrity of the token's value. This will be done using a vesting period for earned tokens and the restriction of token ownership to verified users of the specific dERP platform.

- Total supply: The total supply of $HAMP will be determined by the amount of valuable activity (VA) generated by users within the dERP platform. The VA will be converted to $HAMP at a fixed rate determined by the dERP SuperAdmin.
- Distribution: $HAMP will be distributed to users of the dERP platform as a reward for engaging in valuable activity within the platform. The distribution rate and the specific valuable activities that will be rewarded will be determined by the dERP SuperAdmin.
- Transferability: $HAMP will only be transferable to users who have been verified as part of a specific dERP platform. This will be done using the dPASS SBT, which will act as a unique identifier linking each verified user to their respective dERP platform.
- Liquidity: $HAMP can be swapped on Coreum's decentralized exchange for $CORE, the native token of the Coreum network.
- Staking: Users can stake their $HAMP to earn additional rewards and increase their influence within the dERP platform. The specific staking rewards and requirements will be determined by the dERP SuperAdmin.
- Burn: $HAMP can be burned by the SuperAdmin of the dERP platform to remove it from circulation and decrease the total supply of $HAMP.

By implementing these tokenomics, $HAMP will be a secure and valuable token that can only be acquired and used within the dERP platform and will provide additional incentives for users to engage in valuable activity within the platform.

GIVING $HAMP VALUE

The $HAMP (Human Activity Mining Protocol) is an innovative mechanism that incentivizes users of dERP to engage in valuable activities within the platform. $HAMP is built on top of Coreum, a smart contract platform and utilizes the concept of smart tokens to reward users for their actions.

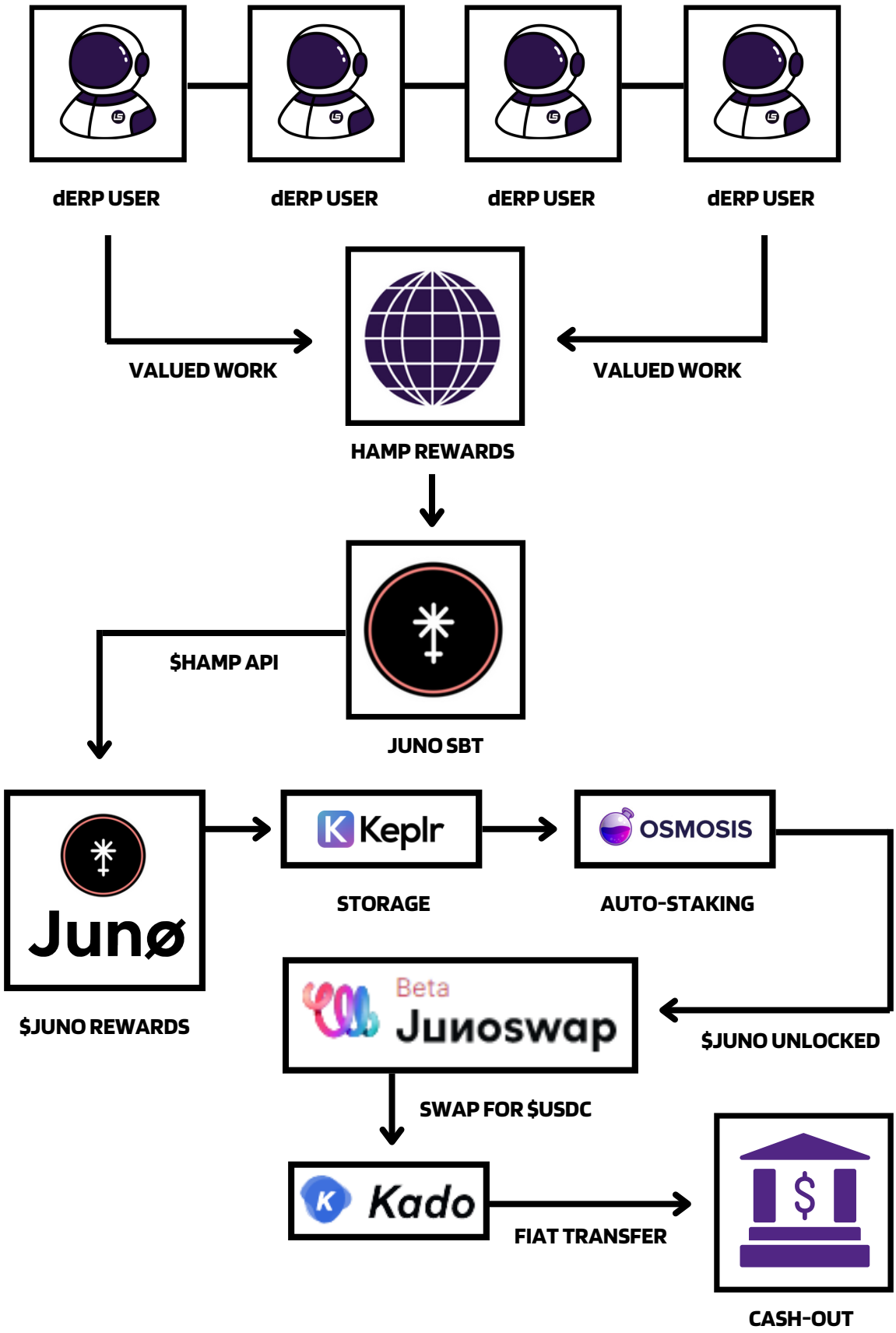
The $HAMP rewards system is built on a set of predefined valuable actions (VA) that are assigned different point values and percentage of $HAMP earned per point. For example, VA1 is assigned 1 point and 1% of $HAMP earned per point, VA11 is assigned 5 points and 5% of $HAMP earned per point, and VA20 is assigned 20 points and 20% of $HAMP earned per point.

The system also calculates the number of actions taken per $HAMP earned, the points required per 1 $HAMP and the rewards earned. For example, for VA1, 100 actions need to be taken to earn 1 $HAMP, 100 points are required to earn 1 $HAMP, and 1 $HAMP is earned as a reward.

The use of smart tokens to reward users for their activities allows for a transparent and secure system that ensures that the rewards are fairly distributed among the users based on their actions. Additionally, the use of Coreum as the underlying platform ensures that the rewards can be easily transferred and traded within the web3 ecosystem, providing added value to the users. The leaderboards also provide a game-like experience and allows users to compete, which increases engagement and motivation to earn $HAMP.

In summary, $HAMP is a powerful tool that helps to increase user engagement and incentivize valuable activities within the dERP platform, it is built on top of the smart contract platform Coreum and utilizes smart tokens to ensure fair and transparent distribution of rewards. The leaderboards also provide a competitive experience which increases engagement and motivation to earn $HAMP.

CURRENT UTILITY PROCESS



DECENTRALIZATION

Decentralized systems, such as those built on blockchain technology, offer several benefits over centralized systems, including increased security, transparency, and immutability. However, decentralized systems can also present certain challenges, such as lower performance and scalability.

In the case of dERP, the platform utilizes a hybrid approach that combines the best of both centralized and decentralized systems. The platform is built on Cosmos SDK, a modular blockchain development framework, which allows for the creation of custom blockchain networks and decentralized applications. The use of Cosmos SDK allows dERP to leverage the security and immutability of a decentralized system while also maintaining the performance and scalability of a centralized system.

In terms of data storage, dERP uses Space and Time, a decentralized SQL database, which allows for the storage of large amounts of data in a decentralized and secure manner. This allows dERP to maintain the security and immutability of a decentralized system while also maintaining the performance and scalability of a centralized system.

Additionally, dERP uses a variety of security protocols such as access control, encryption, and key management to ensure that sensitive data is protected.

The use of a hybrid approach in dERP allows organizations to take advantage of the security and transparency of a decentralized system while also maintaining the performance and scalability of a centralized system. This approach is ideal for businesses that require a high level of security and data integrity but also need to maintain a high level of performance and scalability in order to meet the demands of their operations.

DECENTRALIZED SQL

Lunarspace's use of Space and Time decentralized SQL databases is a key component in providing a secure and reliable ERP/CRM platform. The decentralized nature of the database ensures that data is stored across multiple nodes, making it much more difficult for any single point of failure to occur. Additionally, the use of a SQL-based database allows for easy querying and manipulation of data, making it more user-friendly for businesses and organizations of all sizes.

One of the main benefits of using Space and Time is the increased security it provides. By distributing data across multiple nodes, it becomes much harder for hackers to access or manipulate data. Additionally, the use of smart contracts on the blockchain provides an extra layer of security, as all transactions and data manipulation must be approved by consensus among the nodes.

Another benefit of using Space and Time is the increased scalability it provides. As the number of users and transactions on the platform grows, the decentralized nature of the database allows it to easily expand and handle the increased load. This contrasts with traditional centralized databases, which can become overwhelmed as usage increases.

Lastly, Space and Time allows for increased transparency and immutability. All the data and transactions stored on the database can be easily audited and verified, making it easy to detect any suspicious or malicious activity. The data stored on the database can also not be altered or tampered with, providing an additional level of security and trust.

In summary, the use of Space and Time decentralized SQL databases in dERP provides a secure, reliable, and scalable solution for storing and manipulating data, while being transparent, immutable, and easy to audit. This allows dERP to provide a comprehensive and secure ERP/CRM platform with added benefits of web3 integration.

SCALABILITY

Space and Time is a decentralized SQL database that allows for horizontal scaling and high performance, which can help improve dERP's scalability. However, it is not the only aspect of scalability that needs to be considered. Other factors such as the architecture of the system, load balancing, and the use of caching can also play a role in improving scalability. Additionally, while Space and Time can handle the scalability of data storage, it's important to also consider the scalability of other parts of the system such as the network infrastructure and the application logic. To improve the scalability of dERP, Lunarspace would have to consider implementing a microservices architecture, using a load balancer, and implementing caching mechanisms.

SECURITY

dERP has a comprehensive security program in place to ensure that user data is protected, and the platform is secure. These include:

- Encryption: dERP uses industry-standard encryption algorithms to encrypt user data both in transit and at rest. This ensures that sensitive data such as customer information, financial data, and personal details is protected from unauthorized access.
- Authentication and access control: dERP implements a robust authentication and access control system to ensure that only authorized users can access the platform and sensitive data. This includes multi-factor authentication and role-based access controls to limit the actions that different users can perform.
- Vulnerability management: dERP has a vulnerability management program in place to identify, assess and mitigate security risks. This includes regular security testing, penetration testing and regular security audits.
- Compliance: dERP is built to comply with industry-standard data protection regulations such as GDPR, HIPAA, SOC 2, ISO 27001, and more, to ensure that user data is handled in a compliant manner.
- Firewall and intrusion detection: dERP uses a firewall and intrusion detection system to protect the platform from external threats such as hacking attempts and denial of service attacks.
- Network security: dERP uses secure protocols such as HTTPS, SSH, and SFTP to protect communication over the network. It also uses VPNs to secure remote access to the platform.
- Data backup and disaster recovery: dERP has a data backup and disaster recovery plan in place to ensure that user data is protected against data loss due to hardware failure, natural disasters, or other unforeseen events.
- Smart contract security: dERP use smart contract security best practices such as formal verification and formal testing to ensure that smart contracts on dERP are secure.
- Secure Key Management: dERP uses secure key management techniques to ensure that private keys are only accessible to authorized parties and are not compromised in any way.

Lunarspace is considering implementing additional security measures such as multi-factor authentication, network segmentation, and data encryption both in-transit and at-rest. Additionally, ensuring secure key management and access control are in place to protect against unauthorized access to sensitive data and systems is crucial. We also have a robust incident response plan in place, in case of security breaches or other security incidents occur.

IMPLEMENTATION

1. Discovery: During this phase, the Lunarspace team works closely with the client to understand their specific needs and requirements for their dERP platform. This includes identifying any unique business processes or workflow that need to be incorporated into the platform.
2. Planning: The team develops a detailed project plan that outlines the scope, timelines, and resources required for the implementation including a detailed breakdown of the tasks that need to be completed, along with the dependencies and milestones for each task.
3. Configuration and Customization: This phase involves configuring the platform to meet the client's specific needs. This includes customizing the platform's user interface, data model, and workflows to align with the client's existing business processes. Additionally, any necessary integrations with other systems or platforms are to be implemented during this phase.
4. Testing: Once the platform is configured and customized, it is thoroughly tested to ensure that it meets the client's requirements and that all functionality is working as expected. This includes functional testing, user acceptance testing, and performance testing.
5. Deployment: After successful testing, dERP is to be deployed to the client's production environment. This includes configuring any necessary infrastructure, such as servers, databases, and networking, as well as performing a final set of acceptance tests to confirm that the platform is working correctly in the production environment.
6. Training and Support: Once the platform is deployed, the team provides training and support to the client's users and administrators to ensure they can effectively use and manage the platform. This can include on-site training, documentation, and ongoing support and maintenance.
7. Continual Improvement: The implementation process doesn't end with deployment; the team continues to work closely with the client to ensure that the platform is meeting their ongoing needs and that any issues or problems are quickly identified and resolved. The team will also work with the client to identify opportunities for continual improvement and to implement updates and new features as necessary.

ONBOARDING

ONBOARDING A NEW "ZONE" CLIENT

1. Lunarspace conducts a brief discovery process with the "Zone" to understand their specific needs and requirements for using dERP.
2. Lunarspace creates a new instance of dERP for the "Zone" and sets up a SuperAdmin user account with a temporary password.
3. The SuperAdmin receives an email with instructions on how to access the dERP platform, including a link to the login page and the temporary password.
4. The SuperAdmin logs into the platform and is prompted to change the password to a more secure one.
5. SuperAdmin sets the basic configurations of the zone.
6. SuperAdmin can invite new users and assign them roles and permissions.
7. SuperAdmin can set up custom workflows and configure the system to meet the specific needs of their organization.
8. SuperAdmin can begin uploading and processing documents, analyzing data, and engaging with patients or other stakeholders through the communication and collaboration tools provided by dERP.

SUPERADMIN CREATING AN ADMIN WITHIN THE dERP LAUNCHPAD

1. The SuperAdmin logs into dERP using their unique credentials, such as their email and password, and is directed to the dERP Dashboard.
2. The SuperAdmin navigates to the "Users" section of the Dashboard and selects the option to "Add User".
3. The SuperAdmin is prompted to enter the new admin's information, such as their name, email, and role.
4. The SuperAdmin assigns the new user the "Admin" role and can also set specific permissions and access levels for the new admin.
5. The SuperAdmin inputs the new admin's information and clicks "Save" to create the new admin user.
6. The new admin receives an email with a link to set their password and log into dERP.
7. Once the new admin has set their password, they can log into dERP using their email and password and will have access to the features and permissions assigned to them by the SuperAdmin.

2022 RECAP

1. Initial development: creation of a functional MVP that includes the core features and functionalities of the platform such as contact management, sales management, marketing automation, CRM, inventory management.
2. Testing and refinement: ensuring that the platform is functioning as expected and that all features and functionalities are working efficiently and securely. This included user testing, load testing, and security testing to identify and address any issues or bugs in the platform.
3. Deployment and scaling: ensuring support for large numbers of users and organizations. This included building out the necessary infrastructure to support the platform, such as servers, databases, and other resources.
4. Continued development and maintenance: Even after the platform is deployed and scaled, the development team continued to work on improving and expanding the platform to meet the evolving needs of its users. This included the addition of new features, functionalities, and integrations, as well as ongoing maintenance and support to ensure that the platform remains secure and reliable.
5. Web3 integration: integrating dERP with web3 technologies such as $HAMP, blockchain, and smart contracts. This could include building out the necessary infrastructure to support these technologies and integrating them into the platform in a way that provides value to users and organizations.

2023 ROADMAP

1. Prototyping: a prototype of dERP should be created. This prototype will allow the team to test and validate the core functionality of the platform, as well as identify any areas that require further work.
2. Alpha Testing: alpha testing phase should be conducted. This phase should involve a small group of users who will test the platform and provide feedback on its usability and performance.
3. Beta Testing: once the alpha testing phase is complete, a beta testing phase should be conducted. This phase should involve a larger group of users who will test the platform in a real-world environment.
4. Release: after the beta testing phase, dERP should be ready for release. The team should also continue to monitor and improve the platform through regular updates, bug fixes, and new feature releases.
5. Sales: Lunarspace plans on rolling out dERP to a select number of initial clients to ensure security and usability while maintaining best-practices for our client base.

IMPACT

Lunarspace aims to have a significant impact on both businesses and the blockchain industry by providing a comprehensive and secure ERP/CRM platform with added benefits of web3 integration. The dERP platform, which includes the dERP Launchpad, dPASS SBT, Keplr wallet integration, and other relevant technologies, allows businesses to streamline their operations and improve their bottom line.

By accelerating blockchain adoption, Lunarspace is helping to pave the way for mainstream enterprise-level blockchain usage. This can have a major impact on the industry, as it can lead to increased adoption and acceptance of blockchain technology, ultimately driving its growth and development.

By providing a robust and secure platform that allows businesses to take advantage of the benefits of web3 technologies, Lunarspace is helping to bridge the gap between the traditional business world and the blockchain industry, ultimately driving innovation and growth in both spaces.

The integration of $HAMP, a Human Activity Mining Protocol, into dERP provides a unique incentive for users to actively engage with the platform and earn rewards for valuable activities. This, in turn, leads to increased adoption and engagement within the platform.

By building dERP and $HAMP on Coreum, we can take advantage of the fast, low-cost, and secure transactions offered by this blockchain. This will allow businesses to easily integrate dERP and $HAMP into their existing systems, while also taking advantage of Coreum's robust ecosystem and decentralized infrastructure.

dERP and $HAMP, when built on Coreum, provide a powerful solution for businesses looking to improve their operations, increase engagement and drive adoption of blockchain technology. We look forward to working with the Coreum community to bring this vision to life and revolutionize the way businesses operate.

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