Sparse and dense budgets overview

Domain	Finances
Assign	teepa apeiron
Status	Software deployed in production
↗ Deliverable	PEA-03 SPF Finances, PEA-04 Aggregated view - DAO level finances, RWA-01 RWA reporting specifications, PEA-07 Aggregated view - Budget level overview, PEA-06 Aggregated view - Fusion home page level
Output Type	Informal Specification

1. Need

Problem: not all budget categories have the same richness of data and yet, all data should be meaningfully presented to MakerDAO stakeholders.

Meaningful representation of varying levels of data density:

- Challenge: MakerDAO stakeholders find it challenging to access detailed budgetary information, especially concerning endgame budgets. The information is fragmented, making it time-consuming to find and analyze budgets at different scales - overall, individual scope, or sub-legacy. This lack of visibility and easy accessibility hampers stakeholders' understanding and engagement.
- Solution: create a distinction between dense and sparse views and identify visual modalities that are best applicable to each scenario. A structured system of pages that provides a comprehensive overview of MakerDAO's budgets at varying scales - from the highest level down to individual scopes and sub legacy budgets. So that MakerDAO stakeholders can easily access and understand budgetary allocations, their progression, and relative percentages without wasting time searching for each budget individually.

2. Stakeholders

MakerDAO Community.

3. Solution

The solution for addressing the needs of meaningful representation of varying levels of data density in budget categories within MakerDAO is to create a structured system of pages that provide a comprehensive overview of budgets at different scales, from the highest level down to individual

scopes and sub-legacy budgets. This includes distinguishing between sparse and dense views and identifying the most suitable visual modalities for each scenario.

4. Context

Sparse and Dense Budgets refer to the nature of data availability and historical expense records associated with different budget categories. For instance, budget categories like Core Units often possess dense data, encompassing rich historical expense information that can be readily presented. On the other hand, budget categories such as Special Purpose Funds typically have sparse data, with limited historical records available. Both sparse and dense budgets exist on the same DAO-level abstraction, i.e., both are budget categories. Hence, the naming of Sparse and Dense Budget views provides a more accurate representation, avoiding a hierarchical distinction between low and high level views and emphasizing the varying levels of data density.

In the context of representing budget data in a DAO, understanding the distinction between sparse and dense budgets is essential for selecting appropriate visual modalities. This differentiation helps determine which visual representations, such as spreadsheet tables, line charts, waterfall charts, or stacked bar graphs, are best suited for each data density. By considering this distinction, we can effectively identify the most suitable visual modalities for presenting budget information within a DAO.

5. Value

By implementing this solution, MakerDAO stakeholders can easily access and understand budgetary allocations, their progression, and relative percentages without wasting time searching for each budget individually. This improves stakeholders' understanding and engagement, enhances transparency, and enables informed decision-making within MakerDAO. Ultimately, the value lies in facilitating better financial management, fostering stakeholder trust, and driving the success of MakerDAO's operations.

6. Change

This change involves distinguishing between sparse and dense views, selecting appropriate visual modalities for each scenario, and creating a user-friendly interface that allows stakeholders to easily access and understand budgetary information. Core change requirement is user flow breakdown into manageable user stories that progressively disclose the complexity of the solution.

7. Methodology

7.1 Budget Commonalities

Identifying common parameters across budget categories is crucial for creating wireframes and selecting visual modalities. It helps determine essential data elements and design consistent layouts.

Additionally, it aids in choosing appropriate visuals to effectively communicate budget data.

7.1.1 Purely financial view of budgets

Generalized financial categories applicable across all budget categories.

CU: Actuals, Forecast, Payments, Expense Category, Difference, Monthly Budget, MKR Vesting, 3 Months runway, Transfer Request, Target Balance.

Delegates: Budget, Forecast, Actuals, Difference, Payments, Monthly Budget, 3 Months runway, Quarterly
Budget

SPFs: Date proposed, Date ratified, Amount Received, Amount Requested, Amount Expensed, Amount Returned, Forecast, Actual, Month.

7.1.2 Synthetic view

General financial categories applicable to all these budgets:

1. **Budget**: The planned financial performance or expenses, typically expressed as a monthly or quarterly budget.
    a. predetermined financial plan for a specific period
    b. e.g., for SPFs this is “Amount Requested”
2. **Forecast**: The predicted financial performance or expenses based on historical data or trends.
    a. dynamic and regularly updated projection of financial performance.
    b. for SPFs 2. and 4. are the same.
3. **Actuals**: The actual financial performance or expenses incurred during a specific period.
4. **Payments:** The amount paid or disbursed for various expenses or transactions.
5. **Difference**: The variance between the forecast, and actuals, which can indicate financial performance.
6. **Reserves:**
7. **Dimensions**
    a. **Time Period:** The specific duration of the budget or financial data, such as monthly, quarterly, or a runway (e.g., 3 Months runway).
    b. **Budget Category**
        i. CU
        ii. Delegates
        iii. SPFs

iv. Projects

c. **Expense Category**

i. Headcount vs non-headcount

ii. Compensation and benefits, professional services, admin costs...

iii. Professional Skill Tree

1. Software development

a. FD, BD, SC

2. Design

3. Research&Analysis

8. ***Financial Transactions:*** *Various transactions related to the budget, such as transfers, amounts requested, amounts received, and amounts returned or expensed.*

7.2 Endgame Budgets

On top of formal commonalities for budget categories we have to identify and articulate the new Endgame budget categories, to see how many budgets there are in a give Endgame budget category.

Endgame Scope Alignment Artifacts

From initial endgame "12" proposal to the final "5".

Previous/12	**Endgame/5**	**New Endgame naming/5**
The Primary Scopes	**Stability** (Stability and Liquidity + Decentralized Collateral + Real World Asset Collateral)	**Stability Scope Alignment Artifact (STA)**
Stability and Liquidity	**Ecosystem Support** (Ecosystem + Finance)	**Support Scope Alignment Artifact (SUP)**
Decentralized Collateral	**Protocol** (Protocol Engineering + Infrastructure)	**Protocol Scope Alignment Artifact (PRO)**
Real-World Asset Collateral	**Accessibility** (Growth + Interface)	**Accessibility Scope Alignment Artifact (ACC)**
Ecosystem Operations	**Core Resilience** (Physical Resilience + Arbitration + Governance Security)	**Governance Scope Alignment Artifact (GOV)**
The Supporting Scopes		
Protocol Engineering		
Growth		
Physical Resilience		

Interface		
Infrastructure		
Finance		
The Governance Scopes		
Arbitration		
Governance Security		

8. Solution Requirements

📜 Endgame Scope Alignment Artifacts Budgets

🔪 Sparse and Dense Visual Modalities wireframe

https://docs.google.com/spreadsheets/d/1kU2sIz4IDbAfOLnKVsd799keTVsw9yYRQH0_SwjB154/edit?usp=sharing

Table “upper limit 16 rows” algorithm

Goal: populating the table with up to 16 rows using the highest budgets across alignment scopes, stopping when the table reaches 16 rows.

For each budget, add it to the table from highest to lowest until the table has no more than 16 rows.

For each alignment scope, if it doesn't have any budgets in the table or if there are remaining budgets for that scope that were not added to the table, add an "other" row for that alignment scope. Calculate the sum of the remaining budgets for that scope (if any) and use it as the budget value for the "other" row.

8.1 Processes and Features

1. Landing page “MakerDAO Finances” should feature navigation box tiles representing the respective budgets at that level. These boxes should be intuitively clickable.
2. Total of six visual sections, representing either dense or sparse data density for a given budget category
3. Below the tiles, the first section of the site should be a breakdown stacked bar chart representing budget compositions
    a. Static chart
    b. Ability to change metrics
    c. Ability to change components
    d. Ability to change time period

    e. Ability to change granularity
4. Next is the Hierarchical Budget Overview table defaulted to quarterly views with actual, on-chain and budget as columns for each quarter
    a. Selection element at the top to modify the data displayed: quarter/month → type (actuals, on-chain, budget, actuals/forecasts) →year
    b. The 'Type' selection should default to 'Actuals', 'On-chain', and 'Budget' when 'Quarterly' is selected (with a maximum of three types), and to 'Budget' when 'Month' is selected (with a maximum of one type).
    c. The maximum allowable number of columns, regardless of the combination, is 12. However, an exception should be made for users with larger monitors, allowing up to 24 columns.
    d. Rows should be organized by budget/scope, with a subtotal line item after each.
5. Section (makerDAO expense trends graph)
    a. Static graph
    b. Component selection
    c. Time selector
    d. Granularity selection
6. Section (makerDAO Reserves)
    a. Static graph
    b. Components selection
    c. Time period selection
    d. Granularity
7. Section (Latest Monthly Expense Reports)
    a. Static table
    b. Status selection
    c. Metric selection
    d. Load more
8. Section (FTEs)
    a. Static chart
    b. Toggle between total vs average cost per FTE
    c. Time period selection
    d. Granularity