

# **Calculating family expenses using Servicenow**

**TEAM ID : NM2025TMID05646**

**TEAM SIZE :4**

**TEAM LEADER : Rasika .P**

**TEAM MEMBER : Ishwaryah J**

**TEAM MEMBER : Janani shri K**

**TEAM MEMBER : Shobana S**

## **Project design phase**

### **Problem – Solution Fit:**

Families often struggle to manage monthly expenses effectively due to manual tracking methods, scattered data (receipts, notes, spreadsheets), and lack of real-time insights. This leads to poor budgeting, overspending, and difficulty understanding spending patterns.

Our ServiceNow-based Family Expense Calculator offers a unified, automated, and analytical platform to record, categorize, and visualize all family expenses in real time. The solution bridges the gap between manual tracking and digital automation by leveraging ServiceNow's workflow capabilities.

### **Purpose:**

- Simplify the tracking and management of household expenses.
- Provide real-time dashboards and insights for better budgeting decisions.
- Improve financial awareness and control within families.
- Automate recurring expense entries and notifications.
- Enable data-driven planning for saving and future investments.

### **References:**

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>

### **Summary:**

The **Family Expense Calculator** aims to bring structure, accuracy, and clarity to personal finance management. Through ServiceNow's automation and reporting features, it provides a scalable solution for households seeking better financial discipline and transparency. This digital approach helps users transition from manual logs to intelligent, data-driven budgeting.

## Proposed Solution Template

S.No.	Parameter	Description
1	<b>Problem Statement</b>	Many families face difficulty tracking and managing expenses due to lack of automation, inconsistent records, and absence of a centralized platform for financial insights.
2	<b>Idea / Solution Description</b>	A ServiceNow application that records, categorizes, and summarizes all household expenses. It includes modules for expense entry, budget limits,
3	<b>Novelty / Uniqueness</b>	Unlike typical expense apps, it uses <b>ServiceNow's enterprise-grade platform</b> to automate tracking, ensure data consistency, and enable integration with cloud dashboards — providing a hybrid of ITSM-level automation and personal finance management.
4	<b>Social Impact / Customer Satisfaction</b>	Improves family financial literacy and transparency. Reduces stress over finances by providing a single, accessible dashboard. Encourages smart spending habits through data visualization.
5	<b>Business Model (Revenue Model)</b>	Can be expanded as a SaaS solution for small groups or organizations to manage shared expenses (e.g., hostels, PGs, co-living spaces). Potential for subscription-based model with analytics add-ons.
6	<b>Scalability of the Solution</b>	Can be extended to include income tracking, savings goals, loan management, and AI-based budget recommendations. Supports multi-user accounts (family members) with role-based access.

### Solution Description:

The **Family Expense Calculator** on ServiceNow simplifies financial management by combining data entry, categorization, and analytics under one platform. Users can log expenses manually or import them via integrations. The system automatically categorizes transactions (food, bills, education, etc.), visualizes them in dashboards, and triggers alerts when spending exceeds set budgets.

This solution leverages ServiceNow's workflow engine, notification system, and reporting tools to ensure accuracy, real-time monitoring, and effortless usability — promoting better financial planning for families.

## **Solution architecture**

### **Goals of the Architecture:**

**Automate household expense tracking and categorization.**

**Provide a unified platform for managing all family financial transactions.**

**Enable visualization and budgeting through dashboards and reports.**

**Ensure data accuracy and security using ServiceNow's table architecture.**

**Simplify access and usability for multiple family members.**

### **Key Components:**

**Expense Table (custom):** Stores all expense entries with details such as date, category, and amount.

**Category Table (custom):** Maintains predefined and user-created categories like food, travel, bills, etc.

**User Table (sys\_user):** Enables multiple family member accounts with role-based permissions.

**Business Rules:** Automate validation, budget checks, and category assignment.

**Notifications & Workflows:** Trigger alerts when budgets exceed limits or new expenses are added.

**Dashboard & Reports:** Display graphical analysis of monthly and category-wise spending.

### **Development Phases:**

#### **Module Creation:**

**Create custom tables for expenses and categories in ServiceNow.**

#### **Form & UI Design:**

**Build user-friendly input forms for daily expense entry and category selection.**

#### **Automation Setup:**

**Implement business rules to automatically calculate totals and monitor budget limits.**

**Notification Configuration:**

**Set up notifications and email triggers for budget threshold alerts.**

**Dashboard & Reporting:**

**Design reports and dashboards for visual analytics of spending trends.**

**Testing & Validation:**

**Verify that expenses are stored, categorized, and reported accurately for each family member.**

**❖ Solution Architecture Description:**

**The Family Expense Calculator solution architecture leverages ServiceNow's automation and workflow capabilities to simplify personal financial management. It is structured around custom tables for storing expense and category data, integrated with ServiceNow's user management for family-wide access.**

**A key architectural element is the Business Rule automation, which validates data entries, checks budget limits, and triggers notifications for overspending. The design ensures that every expense entry contributes to meaningful analytics presented through dashboards and reports.**

**This architecture emphasizes modularity, scalability, and ease of use — ensuring families can track, analyze, and optimize their monthly budgets within a secure, centralized platform. It promotes digital financial awareness and eliminates the need for manual record-keeping tools like spreadsheets.**

**Example – Solution Architecture Diagram (Description):**

**Data Flow:**

**Family members enter daily expenses via ServiceNow forms.**

**Data is stored in the Expense Table and linked to the Category Table.**

**Business Rules calculate totals and check against budgets.**

**Notifications trigger if limits are exceeded.**

**Dashboards visualize spending patterns by date, category, and user.**