

3.1 Project 3: My Community—Create SMPS Document

First, I changed my community to DataKind because I feel I can contribute better to this project.

What?

Create a data science project to develop economic empowerment and poverty alleviation solutions within underserved communities, leveraging data to inform decision-making and create actionable insights.

Why?

This initiative is driven by the need to address the persistent challenges of poverty and economic inequality. As DataKind seeks to amplify its impact on financial inclusion, it aims to harness data science to identify and analyze the factors contributing to poverty. By understanding these dynamics, we can develop targeted interventions that enhance access to resources and opportunities for marginalized populations. The strategy involves creating data-driven models that assess economic barriers and identify effective pathways for individuals and communities to achieve financial stability.

How?

Key Business Intelligence System Components:

- An interactive dashboard for stakeholders to visualize vital economic indicators and poverty metrics
- An Extract, Transform, Load (ETL) process that consolidates data from various sources relevant to economic conditions and poverty levels

Data

- Build a Poverty Solutions Data Warehouse focusing on economic indicators, social determinants, and community demographics.
- Integrate data from public datasets, nonprofit organizations, and local governments.
- Update the database regularly to maintain accurate and current information.

Tools

- Python and R for data analysis and modeling
- Tableau or Microsoft Power BI for data visualization
- SQL Server for managing the backend database
- GitHub for code repository and collaborative development

SMPS Research Q and A:

Q1: Existing systems: Do we already have one?

A1: DataKind needs a dedicated system for analyzing economic and poverty data. Existing information is fragmented across different databases and needs more integration for comprehensive analysis.

Q2: Feasibility: Are there any known data or functionality gaps?

A2:

- **Data Gaps:** While some relevant datasets exist, there may be data granularity or availability limitations for some geographic regions.
- **Functionality Gaps:** DataKind has the necessary tools and expertise to implement this project, although additional training may be required for some team members.

Q3: Sustainability: Ongoing resource requirements? Cycle?

A3:

- **Hardware:** Cloud-based infrastructure is preferred for scalability and maintenance.
- **People:** A data scientist and a project manager will be needed initially, with the possibility of expanding the team as the project scales.
- **Cycle:** The system will require continuous updates, with monthly data refreshes to reflect the latest economic conditions and insights.

Q4: Stability: What might threaten the system once it's built?

A4: Risks include server outages and potential data accessibility issues from third-party sources. However, partnerships with local organizations can enhance data reliability.

Q5: Vendor options: Are any being considered?

A5: Cloud service providers like AWS or Microsoft Azure are being considered for hosting the data infrastructure. A cost analysis will determine the most viable option.

Q6: Horizontal expansion requirements: Any new FTE, hardware, or software resources?

A6: Additional personnel, including data analysts and community outreach coordinators, may be required as the project grows. New software licenses may be necessary depending on the chosen analytics tools.

Q7: Vertical dependencies: Is anyone else involved? Especially someone higher up?

A7: Key stakeholders include DataKind leadership, community organizations focused on poverty alleviation and policymakers who can utilize the insights generated from this project.

Q8: Company growth rate scenarios

A8: A significant increase in DataKind's engagement with economic solutions may necessitate changes to data collection processes, scaling up resources, and expanding partnerships with additional organizations to enhance project impact.