NETWORK PERFORMANCE TOOL FOR MEDICAL TRANSPORTATION

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**Interviewee**: Mindi Knebel

**Client**: Kaizen Health Inc.

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**Abstract:**

Kaizen Health is an early stage company providing medical-related transportation services to disabled people across the country. They do not have a clear framework for understanding what the data is telling them about their network: how it is performing, and how the network is evolving. Since their service is geo-spatial, a visual tool which embeds a geographic information layer is essential for a human understanding of the network. This tool will be used by analysts at the company to develop strategies for growing their network by discovering constraints in the network and meeting the demand for services.

**REQUIREMENTS ANALYSIS:**

**Humans**

* CEO, management team, internal analysts, business development - (primary)
* Investors, clients - (secondary)

**Tasks**

**Network Coverage:**

* Secondary users will use the tool to filter services and discover Kaizen’s network coverage in all geographies and service layers.

**Network Performance:**

* Primary users will use this feature to discover strengths and weaknesses of their services.
* Use of performance data encoded based on service success metrics will provide a window into their service at a high level with filtering to drill into specifics.

**Network Prediction:**

* Primary users will combine historical data with data collected from new markets to establish benchmarks for hitting the performance metrics.
* Since these performance metrics are geo-based, users will use a linked view with filtering to evaluate performance a posteriori.

**Data**

**Rendered Service Data:**

* Kaizen requires Lyft platform to render services.
* Lyft API provides aggregate data query results:
  + Pickup
    - Location
    - Time
    - Service metadata
    - Comments
  + Destination
    - Location
    - Time

**Format:**

* JSON

**Prediction Data:**

* Data will be collected from targeted geographies and used as input to a prediction function to produce prediction data for visualization.

**Flow**

Users will navigate to the visual using a custom hyperlink produced by Kaizen. From there, the user will select the type of query they will run on the data:

1 – Network Performance

2 – Predictive Overview

If user selects Network Performance, all historical data will be loaded and presented in the window by generating the layers over the map.

User will be able to filter geographies by either typing in location-based inputs, or they may use a drag selector to filter the target area.

User will see linked views presented with multiple views juxtaposed for detailed information about their query and selection.

If user selects Predictive Overview, they will see their network in terms of the demand for their services. They can select “supply-side” options to link specific service demands to projected supply-side resources. The multi-view pane will provide performance projections.

**Nonfunctional Requirements**

Web-based tool since users will be distributed.

HIPAA compliant since some of the data collected from services qualify as protected health information

**Probes**