SIPS

**Street Improvement Projects (SIP)** utilize a broad toolbox of interventions to reengineer city streets with the goal of **improving safety, comfort, ac­cessibility, and mobility** for all roadway users.

They are a significant part of NYC DOT’s mission to provide for the safe, efficient and envi­ronmentally responsible movement of people and goods in the City of New York.

NYC DOT implements **more than 100** **SIP proj­ects per year**, carried out by 8 different units.

Historic Tracking

This system made it very challenging and labor intensive to answer questions about the pro­gram and project details.

NYC DOT decided to create a new system to track the SIPs that utilized a distributed data en­try process.

Data Exploration

The **data structure allows for ad hock groupings** within the hierarchy. Queries **down the tree** return all of the choices below a given node. This is used for **finding all broad-stroke treatments** (e.g. all protected bike lanes, regardless of details).

The treatment attributes are limited to the final decision node the user passed through. Recreating the full decision path of a treatment detail necessitates querying **up the tree**. This is used for **finding all specifics of a treatment** (e.g. tracing breadcrumbs to see full treatment)

The application provides planners, program managers, analysts and outreach/communications staff with the ability to quickly and easily explore the data.

The application provides a number of reference layers to give context to a manager's projects:

• All projects …

Applications

The application includes a dashboard to help unit directors to explore their group’s work. NYC DOT now uses the **dashboard as a tool to plan future work** programs at a high level (e.g. identifying gaps or over-representations in program's work portfolio).

NYC DOT has begun to **analyze the equity of the SIP program** as a whole to ensure all New Yorkers were being served. This analysis explores the geographic distribution of projects throughout the city across a number of different demographic metrics.

NYC DOT has begun to **analyze the safety impacts** **of** **the SIP program** as a whole. Every SIP project is, analyzed individually to ensure they are improving safety, but a holistic analysis has not historically been practical.