



## CUSTOMER SPOTLIGHT

# Using R & Shinyapps.io to close the K-12 connectivity gap

### SUMMARY :

EducationSuperHighway accelerated its mission to upgrade school internet access by replacing manual reporting with dynamic R and Shiny tools. By standardizing 50 state-level metrics into interactive visualizations, the team provided officials with real-time evidence to identify fiber-starved districts and catalyze national action on K-12 connectivity.



### ABOUT :

EducationSuperHighway is a leading non-profit organization dedicated to closing the K-12 digital divide by upgrading internet access in every public school classroom across America through data-driven advocacy and infrastructure initiatives.

### INDUSTRY :

Academic

### TECHNOLOGY USED :

shinyapps.io

# The Challenge:

## Manual Reporting and Geographic Silos

The organization relied on complex, data-rich reports to persuade state governors to upgrade school infrastructure, but the process of generating unique metrics for all 50 states was becoming a massive time sink. Manual data exploration and static map creation limited the team's ability to iterate quickly and share insights across the organization.

- **STANDARDIZATION BOTTLENECKS:**

Staff spent excessive time creating individual visualizations and metrics for each state, leading to duplicative work and inconsistent reporting.

- **TECHNICAL BARRIERS:**

Access to sophisticated map visualizations was restricted only to team members who knew how to code in R, slowing down the advocacy efforts of the broader team.



# The Solution:

## Democratizing Data through Shiny

The data team adopted Shiny and shinyapps.io to build a dynamic, affordable web platform that standardized statistics across the entire country. This solution allowed non-technical staff to curate their own data investigations, export map figures for presentations, and identify nearby providers for schools lacking bandwidth.

- **SCALABLE VISUALIZATIONS:**

Using packages like ggplot2 and leaflet, the team created interactive maps showing the geographic distribution of school districts needing fiber upgrades.

- **ORGANIZATIONAL EFFICIENCY:**

Standardizing state-level metrics allowed the data team to redirect their bandwidth from manual report generation to developing new, deeper analytics.

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