2.2 Technologies for Asset Management

An inventory of fixed assets on the Ohio River Greenway was created using GISCloud, a free, cloud-based software for collecting, mapping, and sharing geographical data. (GIS, which stands for Geographical Information Systems, is a standardized method of collecting and displaying geographic information.) While GISCloud is similar in function to well-known ArcGIS, it does not carry the cost of proprietary software, has a smoother learning curve, and allows for cloud-based, easily exportable data collection, representation, and sharing. Field data collection is accomplished using a mobile application (available for both Android and iOS) which shows the data fields that populate the spreadsheet. A GISCloud inventory can be used to facilitate maintenance functions ranging from the easy ordering of replacement bulbs to the tracking real-time flooding or snow removal. An example of the early stages of this work is shown in the figure below; each dot represents an installed asset and corresponding data including location, condition, manufacturer, and maintenance jurisdiction.

Figure 2. Snapshot: Ohio River Greenway features inventory, made with GISCloud software.

Source: Ohio River Greenway Inventory, 2014.

GIS technology can be used to organize a variety of data and make it actionable. The PASER Cooperative Road Condition Survey Demonstration Project showed that "the combination of GIS, GPS and the PASER rating system is an excellent methodology for the rapid, accurate, and cost-effective collection of surface condition data…"[i]

Technology supporting the collecting of user-generated data is growing in popularity. Mobile applications that allow trail users to report concerns are a useful and increasingly common technology for gathering public safety data. Some of these applications are designed for city-wide concerns, while others are designed specifically for a trailway or parks system. While it is possible that allowing public reporting might obligate trail managers to respond to a number of uninformed complaints, user-supplied data can also increase information flows and response efficiency. Trail managers are obligated, legally and professionally, to prioritize maintenance issues wherever there are safety issues on a trail. Management of lighting, landscaping, debris, and pavement conditions is important for both public perception of trail security and actual public safety outcomes.

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[i] Domonkos, PASER, p. 4