

Emerging Accessibility Metrics: An Overview

State Smart Transportation Initiative

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Accessibility metrics provide quantitative information about the ease of reaching various types of destinations, usually in terms of travel time. Walk Score is an example of a common accessibility measure, but it only takes into account destinations that are within walking distance from a particular address. An ideal measurement tool can account for a variety of travel modes—walking, biking, transit and automobile—and it is customizable in order to answer a range of questions. For example:

- How accessible are jobs from a given location, using transit?
- How accessible are typical daily needs (e.g., groceries, schools and banks) by walking and biking?
- What areas are particularly inaccessible?
- How does a proposed project (e.g., a new transit line, road connection or development project) improve accessibility?

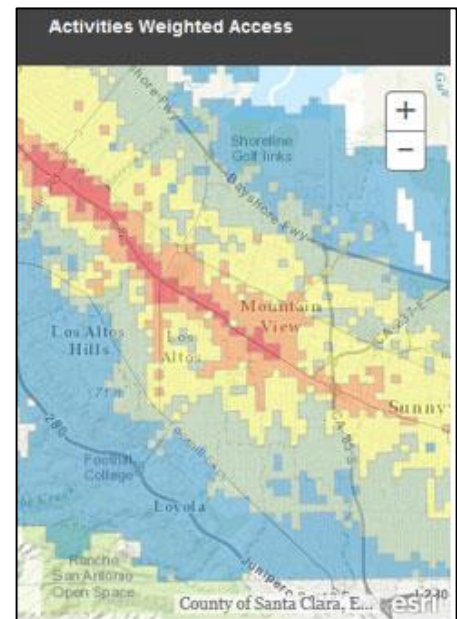
Accessibility tools that are currently available or in development include:

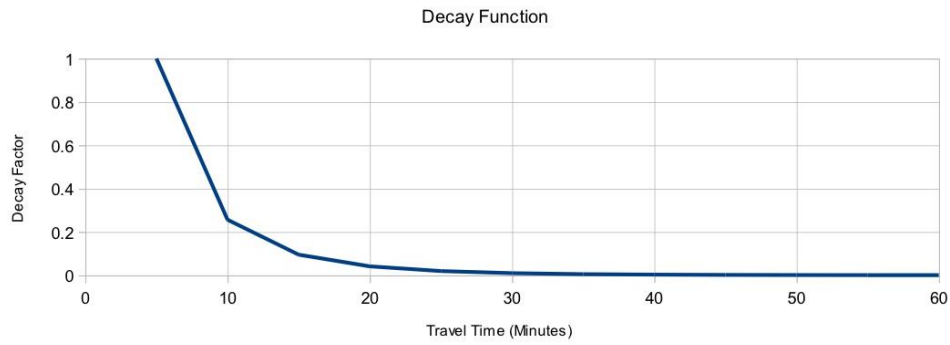
- Work by the Accessibility Observatory at the University of Minnesota;
- Work by the Renaissance Planning Group; and
- Sugar Access, provided by Citilabs, Inc.

Sugar Access, which comes with preloaded data and runs in Esri ArcMap, offers many of the essential features required of an ideal accessibility measurement tool:

- A wide variety of destination types: households, jobs and other points of interest (POIs);
- The ability to weight different destination types for a composite Access Score;
- A decay function that assigns higher weight to closer destinations;
- Transportation networks for a variety of modes (auto, transit, bike, and walk); and
- An ability to customize inputs and assumptions.

OID	POINTCLASS	FAC_TYPE	DESCRIPTIO	POL_TARGET	CAT_WEIGHT
0	400	3578,6000	ATM, Bank	3	18
1	100	5400	Grocery Store	2	24
2	110	9565	Pharmacy	2	18
3	120	9535	Convenience Store	2	16
4	140	9537	Clothing Store	1	7
5	130	9545	Department Store	1	7
6	150	9986	Home Improvement & Hardware Store	1	5
7	180	6512	Shopping/Specialty Store	1	5
8	190	9530	Post Office	1	5
9	160	9988	Office Supply & Services Store	1	3





Default destination targets and weights (top left); decay function (bottom left); sample output (right).

All figures from Citilabs, Inc.