National Best Practices to Inform the Scope of a Health Analysis Tool for the San Diego Region

Prepared for:
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1.   Introduction

There is increasing recognition that health should be considered in land use and transportation decision-making. In response, many state, regional, and local level planning authorities have begun including public health goals and criteria in policy-making and project planning. The public health community also has begun to partner with planners to integrate health considerations in the decision-making process. These efforts aim to better understand the relationships between built, social, and economic environments and health and to use this information to improve neighborhood conditions to better support health.

To accomplish these goals, decision-makers need data that is accessible, timely, and relevant. This need has led to the development of community-level indicator systems and tools to incorporate into planning processes. Indicator systems are curated collections of research metrics that are grouped into categorical domains, are selected based on a clearly defined framework of purpose, and which, as a whole, can be used to inform a variety of decision-making processes.

Recent interest in Health Impact Assessments (HIA) is one example of the use of indicators and a framework for understanding neighborhood influences on health to inform land use, transportation, and other planning-related decisions. HIA is a tool that uses a collaborative process for applying health and health-related data to a specific project, plan, or policy proposal to understand its effects on health, and to generate a set of recommendations to improve the proposal. The use of indicator data is a key part of the assessment.

Health indicators also can be incorporated at a variety of points in the planning process, not only in relation to specific proposals as mentioned above in HIA. For example, analyses using indicators can be used to target interventions to particular groups of people, to set priorities for transportation projects, or to inform zoning policies that facilitate the establishment of healthy food or that limit permitting of new fast food outlets.

Combined with protocols for integrating indicator data in decision-making, such as HIA and other health analysis tools, indicator systems provide a rigorous, collaborative, framework-based, organized structure for data that decision-makers can use to better understand the effects of their work.

1.1   Purpose of the Best Practices Report

This Best Practices Report is part of a larger three-year effort to inform the consideration of health in the evaluation of plans, projects, and programs for the San Diego Association of Governments (SANDAG) and the San Diego County Health and Human Services Agency (HHSA). The Best Practices Report consists of a best practices review, which is the first step in determining a scope for a San Diego Regional Health Analysis Tool. The concept of a health analysis tool for the San Diego region originated from the partnership of SANDAG and HHSA as a resource for local agencies, tribal governments, and community-based organizations. A five-year Community Transformation Grant from the Centers for Disease Control supports this work. A steering committee, consisting of members of SANDAG, HHSA, and Human Impact Partners is directing this best practices review and the development and consideration of approaches for the scope of the health analysis tool.

The primary goal of this initial report is to summarize a variety of characteristics related to existing indicator systems, and to provide approaches and considerations relevant for decisions about future directions for a San Diego Regional Health Analysis Tool.

Definitions

- An *indicator* is a clearly defined measure that can be used to compare the relative state or level of something at a specific point or period of time.
- *Data,* which are facts and statistics collected together for reference or analysis, are the values assigned to an indicator.
- The *framework* of an indicator system is the structured theoretical rationale behind the indicator system's creation, its goals, and how it intends to inform policy and planning decision-making in order to achieve its goals.
- A *domain* is a grouping of indicators based on a common relationship or theme, such as transportation, housing, or education, and is meant to represent the major areas of research in the indicator system's framework.
- An *indicator system* is the total list of indicators and the domains in which they are grouped, both of which are created according to a specifically agreed-upon framework for what the indicators are meant to assess. This list of indicators is the minimum element that establishes an indicator system, and an indicator system may or may not provide data that is associated with the indicators.
- For context within indicator systems, an *index* is a single quantitative summary score that is assigned to a given geographic area to represent the overall social, physical, and economic environment relevant for human health and wellbeing. An index is created by evaluating the individual component indicators and applying statistical weighting methods to represent the relative importance of each indicator in the final aggregated score. The creation of indexes allows the indicator system to compare and rank the relevant geographic areas based on this summary score.

1.2 Brief history of indicator system development

In the United States, measuring aspects of the population dates back to the British colonies in the early 1600s, when birth and death certificates began to be kept. The first Federal Census was taken in 1790, and over time has expanded to respond to the growing need for population and economic statistics relevant for planning and policy-making.

One early example of the measurement of community characteristics was the Pittsburgh Survey. Initiated in 1906 with funding from the Russell Sage Foundation, it was especially concerned with the working conditions of the urban poor. The survey asked a number of questions about the social and economic status of people from diverse communities, such as people with families, steel workers, and women. This effort paved the way for the consideration of a broader range of social characteristics as relevant for human wellbeing.

Over time, a greater understanding of the social determinants of health has motivated planners, public health practitioners, and communities to work together to address health by advancing policies that shape our environments. The development of health objectives has allowed collaborators to track policy progress towards health improvements.

One notable early example of a comprehensive compiled list of health objectives is Healthy People 2000 (HP2000), which was released in September 1990 by the United States Department of Health and Human Services and was born out of the 1979 Surgeon General's Report titled, "Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention." HP2000 established clear nationwide objectives that would set the priorities of the Department for the next ten years. Since then, the Healthy People working group has evaluated the nation's performance and updated these objectives

every ten years. Public health practitioners have used the Healthy People objectives as a basis for partnerships with planning, policy, and advocacy organizations.

While HP2000 was a successful early example of setting health objectives at the national level, more recently there has been strong interest from local jurisdictions to develop systems that they can use to influence community development and policy.

The formation of the National Neighborhood Indicators Partnership (NNIP), established in 1995 as a collaboration of the Urban Institute and local partners to foster the development and use of neighborhood-level data for use in community policy and planning processes, has provided a forum for organizations that are interested in applying this work to their local contexts. Similar to the NNIP, the Community Indicators Consortium is another national network for those developing indicator systems at the local level.

2. Health Analysis Tool Background

2.1 San Diego Association of Governments and San Diego County Health and Human Services Agency partnership

In March 2010, the San Diego Association of Governments (SANDAG) and the San Diego County Health and Human Services Agency (HHSA) partnered on projects related to regional planning, active transportation, and Safe Routes to School to address health risk behaviors that contribute to chronic disease through policy, systems, and environmental change. These projects, which made up Phase I of the Healthy Works program at SANDAG, were supported by a $3 million contract with HHSA that was funded through the Centers for Disease Control's (CDC) Communities Putting Prevention to Work program.

In September 2011, HHSA received another CDC grant, the Community Transformation Grant, and chose to partner with SANDAG again to build on the successes of the Healthy Works Phase I projects. SANDAG and HHSA initiated the Healthy Works Phase II projects in July 2012. The San Diego Regional Health Analysis Tool is one project being explored as part of this partnership.

2.2 Goals of the tool

1. Create a tool to assist local and regional agencies and tribal governments to integrate health considerations into its plans, projects, and programs.

2. Create a tool that is understandable to and usable for community members, academics, and stakeholders to assess health determinants and outcomes related to planning.

3. Take advantage of work that has already been done in the San Diego region to accomplish the above objectives, such as the Public Health and Wellness Policy Framework, the Healthy Communities Atlas, and scenario modeling tools that SANDAG is exploring.

4. Create a tool that is easy to use and can be modified over time.

5. Engage a broad range of stakeholders, including community members and academics, to develop a framework and set of methodologies to build demand for the creation of a tool and to ensure its use over time.

2.3 Vision for the tool

The tool will initially be a framework to guide existing conditions analyses related to health and planning, using a social determinants of health perspective, and will not include data.

Future phases of the tool will identify domains and indicators to include, incorporating a prioritization of indicators for analysis; provide an empirical justification to support inclusion of the selected indicators; provide a methodology for obtaining, processing, and analyzing data; identify agencies/staff responsible for data; and identify data needs and sources of data and appropriate next steps for a full development of the tool. The tool will also describe how it can be used for different purposes.

The primary users of the tool will be local and regional planning agencies. Secondary users will be community organizations, other government agencies, tribal governments, institutions (e.g., hospitals), and academics.

The tool is envisioned to be particularly useful in planning processes (including transportation and land use planning), as well as project permitting and site-specific development. Applications for community organizations and other secondary users may be identified through outreach efforts.

The tool will consider and integrate where possible with the following efforts:

- The SANDAG Public Health and Wellness Policy Framework and Existing Conditions Report

- The SANDAG Healthy Communities Atlas

- The United States Department of Housing and Urban Development's Healthy Communities Index (The index is part of the Healthy Communities Transformation Initiative)

- The SANDAG Regional Comprehensive Plan Biennial Performance Monitoring Report

- California Department of Public Health, Healthy Communities Data and Indicators Project

- The United States Department of Transportation and the CDC Transportation and Health Tool, with support from the American Public Health Association

The tool also should aim to integrate with the following scenario modeling tools:

- The California Office of Planning and Research's Urban Footprint

- The California Department of Public Health's Integrated Transport and Health Impact Modeling Tool

- The SANDAG Activity Based Model

The extent to which the Health Assessment Tool integrates with these tools may be defined during the scoping and outreach process.

3.   Best Practices Review Methods

The list of indicator systems to examine (see Table 1) was developed based on the indicator systems that the Housing and Urban Development Healthy Communities Transformation Initiative identified. The indicator systems list was then expanded by referencing a database of indicator projects available through the Community Indicators Consortium. This database yielded a list of 285 potentially relevant indicator projects. After visiting these projects online, a large portion of indicator systems were removed, resulting in an intermediate list of 70 projects for which a deeper evaluation was conducted. From this list, 20 indicator systems were presented to the project steering committee, which then prioritized 13 indicator systems for further analysis and interview.

The findings of this review were generated by reviewing reports and online materials for each of the indicator systems. In addition, interview questions were developed with the following thematic sections: 1) purpose and application of the indicator system; 2) process to develop it; and 3) reflections on the process. See Appendix C for the interview instrument.

Interviews were conducted between August 20, and September 13, 2013. Interviews were primarily conducted over the phone; one exception was Metropolitan Philadelphia Indicators Project, who was interviewed over the phone and also submitted written responses to the interview questions.

Because findings represent both sources of information—reviews of available materials and interview responses—the following report refers to the subjects of the analysis as "indicator systems," or "systems," and "respondents." In addition, the indicator systems referred to herein are more than just indicator systems – they also are tools for the analysis of health in the context of project, plan, program, and policy decision-making. For this reason, both of the terms "indicator system" and "tool" are used throughout.

4. Best Practices Review Findings

Table 1 lists the 13 indicator systems for which more information was gathered and interviews were conducted. This section describes the findings related to these indicator systems and what each are meant to accomplish; the processes undertaken to develop and maintain the systems, to market and promote the use of the systems, and to fund them; and the benefits and challenges faced in the development of the efforts.

Table 1. Indicator systems prioritized for analysis

Number	Indicator system name	Creator(s)	Data online	In development	Could affiliate/ adapt	Number of indicators	Coverage	Smallest geographic scale available*
1	Baltimore DataMind	Carson Research Consulting	Y	N	N	About 100	Metro	Census tract
2	Boston Indicators Projects (2 projects – city and metro area)	The Boston Foundation, Boston Metropolitan Area Planning Council (MAPC)	Y	N	N	About 150	City/ Metro	Census tract
3	Greater Portland Pulse (GPP)	Portland State University	Y	N	N	About 70	Metro	Census tract
4	Healthy Communities Atlas	San Diego Association of Governments (SANDAG), County of San Diego Health and Human Services Agency	N	N	NA	About 20	Metro	Census block group
5	Healthy Communities Data and Indicators Project (CDPH HCI)**	California Department of Public Health (CDPH)	Y	Y	Y	60	State of California	Census tract
6	Housing and Urban Development Healthy Communities Index (HUD HCI)**	United States Department of Housing and Urban Development (HUD)	N	Y	Y	About 40	United States	TBD
7	Mariposa Healthy Living Toolkit	Denver Housing Authority, Mithun, Inc.	N	N	Y	27	Neighborhood	Neighborhood

8	Metropolitan Philadelphia Indicators Project (MetroPhilaMapper)	Metropolitan Philadelphia Indicators Project (MPIP)	Y	N	N	More than 300	Metro	Census tract
9	Minneapolis Sustainability Indicators	City of Minneapolis, Office of Sustainability	Y	N	N	26	Metro	City
10	Oregon Rural Communities Explorer (Oregon RCE)	Oregon State University	Y	N	N	More than 200	State of Oregon	Census tract
11	Seattle Healthy Living Assessment (SHLAT)	City of Seattle Department of Planning and Development		N	Y	36	Neighborhood	Neighborhood
12	The Sustainable Communities Index (SCI)	San Francisco Department of Public Health (SFDPH), Program on Health Equity and Sustainability	Y	N	Y	89	City	Census tract
13	Transportation and Health Tool (THT)**	United States Department of Transportation (DOT)/Center for Disease Control (CDC)/American Public Health Association (APHA)	N	Y	Y	About 20	Region/State	Region

* Not all indicators in the system are available at this scale

** Tools in development that may be adjusted and refined

4.1   Overview of indicator systems

The majority of the indicator systems examined were online systems of indicators with data available in graph and/or map formats. Examples of these include Baltimore DataMind, Boston Indicators Projects, GPP, CDPH HCI, MetroPhilaMapper, Minneapolis Sustainability Indicators, Oregon RCE, and the SCI.

Three "paper" tools were examined. These tools provide data in different ways including paper format, a description of processes for doing assessments, methods of processing data, and/or applications for the health analyses. Examples of these included Mariposa Healthy Living Toolkit, the SANDAG Healthy Communities Atlas, and Seattle's Healthy Living Assessment. Although data were not presented in the reports produced by Mithun, Inc., and City of Seattle Department of Planning and Development, data were collected for individual neighborhoods for specific planning processes.

Three tools that are currently in development and that aim to facilitate the development of, or access to, indicators and data for a variety of jurisdictions also were examined. These were included in the analysis because they are potential affiliations that could catalyze efforts to develop a tool in the San Diego region. Examples of these tools include HUD's HCI, CDPH's HCI, and DOT's/CDC's/APHA's THT.

The majority of the systems that feature online interfaces were built on a pre-existing web application programming interface, such as PolicyMap (Baltimore DataMind), Bing Maps (Oregon Rural Communities Index), or others. Of the online indicator systems, seven of them allow users to download raw data directly from the site.

There was a range in the types of entities that produced these tools, and there were several tools that included partnerships between different types of organizations or institutions. Table 2 shows the distribution of types of organizations that have had a primary role in developing the indicator system.

Table 2. Types of organizations developing indicator systems

	Planning agency	Public health agency	Other government agency*	Academic institution	Private organization/ Foundation	Combination of more than one type
Baltimore DataMind					x	
Boston Indicators Projects	x				x	x
GPP				x		
Healthy Communities Atlas	x	x				x
CDPH HCI		x				
HUD HCI			x			
Mariposa Healthy Living Toolkit			x		x	x
MetroPhilaMapper					x	
Minneapolis Sustainability Indicators			x			
Oregon RCE				x		
SHLAT	x	x				x
SCI		x				
THT	x	x	x			x
Number of systems	4	5	5	2	4	5

*Other Public Agency does not include planning or public health

There was a range in the number of years the different indicator systems have been in existence. Figure 1 displays this information.

Figure 1. Years indicator systems were established
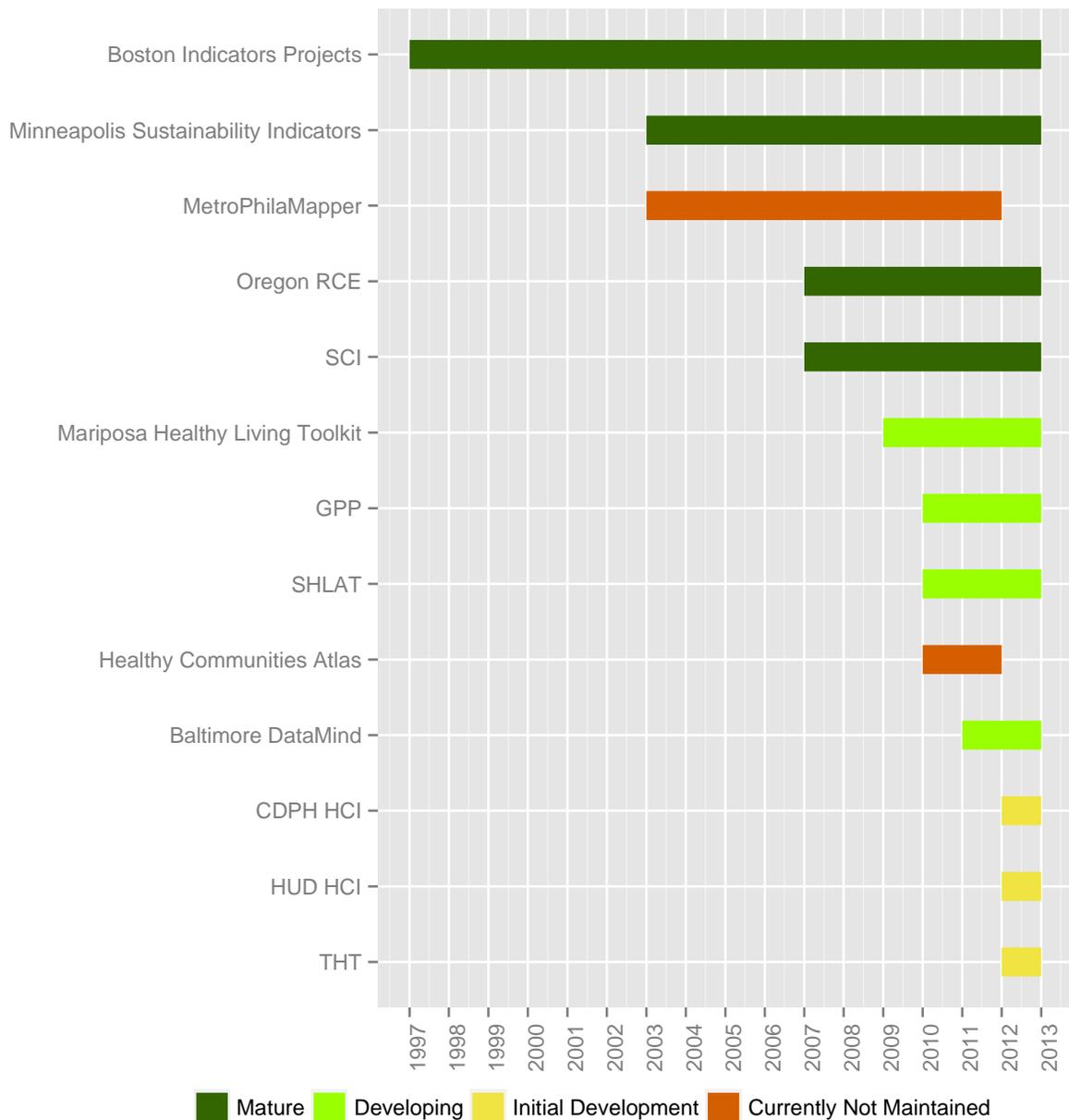
"Mature" systems represented those that are maintaining and updating data, outreach, and tool applications and have been doing so for longer than most of the tools that were examined. "Developing" tools had their systems and data in place and were conducting data updates, but were still investing more effort and time in outreach and developing local partnerships. The tools that were "currently not maintained" may not have plans to update data, but they are still used and applied locally. "Initial development" tools were those that are in the process of being developed and have yet to release their first iteration.

The start and end years of the indicator systems are rough estimates. Start dates may vary between when funding was first secured to when the first iteration of the tool was released. For tools that

were not currently maintained, end dates have been estimated because it is not known when funding was completed.

4.1.1 Indicator system goals and purposes

The research found a range of goals and purposes for the creation of the various indicator systems. Table 3 displays the self-reported motivations that were described for each indicator system.

There was much overlap in the purpose of various tools. The purposes most frequently cited were to: track progress on planning goals or strategic planning processes (some specifically called this performance tracking); translate findings into action to improve health, or inform project, program, and policy decisions; and evaluate the impacts of plans, projects, policies, and environmental changes on community health and health determinants. There were several tools that stated their basic motivation was to make data available in a systematic and evidence-based way. Some also mentioned the collaborative benefits of their tools.

Table 3. Goals and purposes cited by respondents

Goal or purpose (sorted by frequency of mention)	Systems sited	Number of systems
Track progress on planning goals or strategic planning processes.	GPP Healthy Communities Atlas Metro Boston DataCommon MetroPhilaMapper Minneapolis Sustainability Indicator SCI	6
Translate findings into action to improve health. Inform project and policy decisions (e.g., targeting and prioritizing geographic areas; and identifying, developing, prioritizing, and funding strategies for addressing issues).	CDPH HCI Healthy Communities Atlas Mariposa Healthy Living Toolkit SHLAT SCI THT	6
Evaluate the impacts of plans, projects, policy, and environmental changes on community health.	Boston Indicators Projects CDPH HCI GPP HUD HCI Mariposa Healthy Living Toolkit SCI	6

Create a consistent, systematic, and/or evidence based set of indicators that all communities in one jurisdiction can use, or that different jurisdictions can use.	CDPH HCI GPP HUD HCI SCI THT	5
Make data available. Democratize access to information. Foster public discourse.	Baltimore DataMind Boston Indicators Project Oregon RCE MetroPhilaMapper	4
Strengthen collaborations within or between sectors.	Boston Indicators Projects SCI SHLAT THT	4
Make comparisons between smaller communities or whole jurisdictions.	Healthy Communities Atlas THT	2
Understand how indicators do or don't reflect peoples' lived experience in their communities. Identify assets in communities that can be leveraged.	SHLAT	1
Pool resources.	GPP	1

4.1.2 Users and applications

Respondents listed a wide range of users for the indicator systems, including planners, public health departments, other government agencies, academic institutions, and community/advocacy organizations. Every system was accessed by multiple types of users; the most common types cited were planning departments, other government agencies or local officials, and community/advocacy organizations.

Although many respondents cited a focus on community representatives and organizations, this user group was in several cases considered secondary (with a primary focus on planning and other government agencies and officials) and also not well understood in terms of how they would or did apply the tool, and how much they used it.

All respondents felt their indicator systems could be used to simply access data or to create a baseline conditions analysis. Consequently, these uses spanned almost all of the user categories, so it was thought that planning, public health and other government agencies, and academic users and community organizations might use the systems to create a baseline conditions analysis for a variety of purposes. Overall there was overlap in applications of the tools across the user categories.

Table 4 lists the users and applications that respondents mentioned in reference to the different indicator systems.

Table 4. Types of users and applications of the indicator system projects

Type of user	Applications cited	Systems cited	Number of systems
Planning departments	- To simply access data - Create a baseline conditions analysis - Identify areas of need and target them for interventions, including for programs and services planning - Used as part of (and tailored for) a specific planning process, including identifying implementation actions - Track progress on goals/strategic planning processes - Evaluate the impacts of plans, projects, policy, and environmental changes	CDPH HCI GPP Healthy Communities Atlas HUD HCI Mariposa Healthy Living Toolkit Metro Boston DataCommon Minneapolis Sustainability Indicators Oregon RCE SHLAT SCI	10
Public health departments	- To simply access data - Create a baseline conditions analysis - Identify areas of need and target them for interventions, including for programs and services planning - Track progress on goals/strategic planning processes - Evaluate the impacts of plans, projects, policy, and environmental changes	Healthy Communities Atlas CDPH HCI HUD HCI Mariposa Healthy Living Toolkit Minneapolis Sustainability Indicators SHLAT SCI	7
Other government agencies or local officials (not including planning and public health)	- To simply access data - Create a baseline conditions analysis - Identify areas of need and target them for interventions, including for programs and services planning - Used as part of (and tailored for) a specific planning process, including identifying implementation actions - Track progress on goals/strategic planning processes - Evaluate the impacts of plans, projects, policy, and environmental changes	Boston Indicators Project CDPH HCI GPP Healthy Communities Atlas HUD HCI Metro Boston DataCommon Mariposa Healthy Living Toolkit Minneapolis Sustainability Indicators Oregon RCE SHLAT SCI THT	12
Academic institutions	- To simply access data - Create a baseline conditions analysis	GPP MetroPhilaMapper	2

Community groups, advocacy organizations, and residents	• To simply access data • Create a baseline conditions analysis • Used as part of (and tailored for) a specific planning process, including identifying implementation actions • Evaluate the impacts of plans, projects, policy, and environmental changes • Development and assessment of grant applications • Make the case to decision-makers for investments or decisions	Boston Indicators Project GPP Healthy Communities Atlas HUD HCI Mariposa Healthy Living Toolkit Metro Boston DataCommon MetroPhilaMapper Minneapolis Sustainability Indicators Oregon RCE SHLAT SCI	12
Others (media, foundations, other data providers)	• To simply access data • Development and assessment of grant applications	Boston Indicators Project Metro Boston DataCommon MetroPhilaMapper Oregon RCE SCI	5

Specific users were mentioned in each of the categories presented above. For the planning department users, four respondents specifically mentioned regional planning agencies, three mentioned city planning agencies, and two mentioned other local planning jurisdictions.

For the public health department users, respondents mentioned city and county health departments as well as state-level health agencies.

For the other government agencies or local officials (not including planning and public health), respondents specifically mentioned civic leaders and elected officials, councils of government, city managers, air district staff, housing departments, Federal Emergency Management Agency planners, transportation professionals, local and regional transportation authority staff, public works department staff, parks department representatives, police departments, and the department of the environment.

For community groups, advocacy organizations, and resident users, respondents mentioned Safe Routes to School and other bike and pedestrian advocates, Climate Plan, United Way, community development corporations, children and youth advocates and commissions, environmental advocates, labor organizations, and community-based organizations in general.

It is worth mentioning that the term "user" had different meanings for different tools. In some cases it might have referred to people who access the data, while in other cases it was indicative of a more structured partnership or active role in applying the indicator data to a particular planning process, which was the case with the Seattle Healthy Living Assessment Tool and the community organizations that participated in the implementation of the SHLAT.

The HUD HCI representatives mentioned their users were hypothetical at this point and dependent on how the pilot jurisdiction uses and promotes it. One reported key goal of their pilot is to see how the tool will be used. The different pilot sites are listed above.

Frequency of Application

There were essentially three categories of responses to the question of how frequently the tools are used. All systems that had data available online were used, and some fairly frequently, but respondents all spoke to the desire for the tools to be used more often. Tools that had been used in a specific planning process felt this use was meaningful and worthwhile for participants, and that these efforts would yield additional usage in some form. Systems that are currently in development had not been applied, and therefore were not "used."

In terms of tracking usage, several respondents mentioned using, or planning to use, some form of online tracking, such as Google Analytics, to monitor usage. One indicator system, as part of their annual report to their funder, conducted their own survey of users who had some level of involvement with the tool to assess knowledge and usage of the site. The results indicated a favorable impression among users, 80 percent had heard of the site and of these 70 percent had used it.

Respondents reported several different strategies to increase usage including the development of custom online portals with key partners, forming partnerships around specific indicators, publishing reports to highlight progress and key indicators, and planning pilot projects to engage users and refine their tools.

4.2   Processes

4.2.1   Indicators

Indicator selection

There was a range in how extensive the processes were to generate and prioritize lists of indicators. Several respondents relied on either internal staff or smaller groups of experts (often with review by an advisory or stakeholder group) to decide what indicators to include and exclude. Examples of these are: the Baltimore DataMind, Healthy Communities Atlas, MetroPhilaMapper, Oregon RCE, and SHLAT. The SHLAT is part of a larger specific planning process where the community's perspective on the indicators is obtained and incorporated in the process.

The following tools took their process one step further by holding a series of meetings with advisory members where the members were responsible for a higher level of input and involvement in the indicator selection process: Boston Indicators Project, Metro Boston DataCommon, GPP, CDPH HCI, HUD HCI, Mariposa Healthy Living Toolkit, Minneapolis Sustainability Indicators, SCI, and THT. HUD's HCI and the Metro Boston DataCommon process seem to be the most extensive of these in terms of the number of people giving input and the amount of time devoted to the process.

The Mariposa Healthy Living Toolkit process also was different as it relied on an existing tool (the SCI) and elaborated on this through the stakeholder engagement for an active planning process. Similarly, CDPH's HCI process relied on other indicator systems and stakeholder engagement processes, and these indicators may continue to be refined as they are piloted.

A majority of the selection processes involved literature reviews to support decisions about which indicators to include. In addition, respondents reported that they used a number of criteria to make decisions to refine indicators. There was significant overlap in the following criteria that were cited (note, these are not in order of importance):

- Data availability at the desired geographic scale and coverage

- Research evidence to support the connection between the indicator and population health outcomes

- Data validity and reliability

- Data updated and available on an ongoing basis

- Public source for data

- Policy relevance or actionability, of the indicator

- Community relevance

- Ability to stratify data by race/ethnicity

Indicator domains
An indicator domain matrix was created (see Table 9 in Appendix A) that presents a higher-level overview of the types of indicators included in each of the systems that were researched. This is a more manageable way to understand the types of issues considered by the system, rather than presenting all of the individual indicators included in a system.

Reference domains were created by matching each system's major domains with the broad domains of health, economy/employment, education, housing, transportation, environment, crime/safety, social cohesion/participation, food/food access, parks/open space, arts and culture, and access to public resources. These reference domains were created initially by looking at the domains used by all the systems and trying to create simplified and/or consistent and encompassing categories. The original domain names were retained in the cells of the table for reference.

Most of the indicator systems had a large majority (having at least 9 of the 12) of the reference domains included in their systems, but there were some exceptions. For example, the Transportation and Health Tool was the most limited in terms of domains, as it only had two domains. The Baltimore DataMind system, in its current state, also was fairly limited with four domains.

Many systems featured domains that included several of the reference domains, such as the CDPH HCI, which grouped their indicators at a slightly higher level than the other systems. For example, their indicator of "Meets Basic Needs for All" encapsulates several domains, such as housing, transportation, and food.

On the other hand, many tools featured several domains that addressed different facets of the same reference domain, such as the Minneapolis Sustainability Indicators and its coverage of the environmental domain.

Collecting, processing, and updating data for indicators
All respondents said they relied on available data, like the United States Census, and when possible data from other city agencies. Several systems maintained an on-going regular update cycle (Boston Indicators Projects, GPP, CDPH HCI, Minneapolis, SCI) while other systems were either updated on a less frequent or as needed basis (Baltimore DataMind, Healthy Communities Atlas, Mariposa), or have ceased to be updated (MetroPhilaMapper).

A majority of the respondents mentioned the importance of establishing relationships with others who either have access to data, or expertise with it. For example, the SHLAT team mentioned the importance of their relationship with the police precincts as critical for getting crime data. University partners were also mentioned for their ability to facilitate access to data, technology, and student assistance. Public health departments were mentioned as helping with obtaining and processing data.

Very few respondents mentioned primary data collection, but this was not out of the realm of possibility for some (Boston Indicators Projects, Mariposa, SHLAT). Some mentioned the importance of documenting processes for the purposes of pilots and future updates (Healthy Communities Atlas, HUD HCI, Mariposa, MetroPhilaMapper).

Most tools seemed to use relatively simple methods of compiling, storing, and uploading the data. Several mentioned putting data into spreadsheets and then uploading it to an interface that in some cases required some technical expertise, which the tools had set up. Two of the indicator systems used a platform known as Weave, which is a visualization tool developed by the University of Massachusetts at Lowell. It was reported that this tool required a bit of technological capacity, and its features may or may not be necessary for all indicator systems. CDPH HCI is hoping to automate several of the steps of data collection, processing, and mapping through Python scripts. This will allow future updates of source data to be automatically and more systematically incorporated into the tool's online interface.

Most respondents said the updating process took time – ranging from more than a year to only about a month or so. The amount of time may be related to the number of indicators included in the system and the level of sophistication of data processing and estimation methods, as CDPH HCI and the SCI mentioned employing more sophisticated methodologies to combine statistical areas and weight variables. Minneapolis mentioned that maintenance and updating was part of their departmental duties and that the updating process did not take a large amount of effort because of the relationships they had developed with external agencies and partners that frequently share their data with the Office of Sustainability.

Interface and back-end
With the exception of the Boston Indicators Projects, the tools that have an online presence reported smaller scale operations in terms of the technical structures and designs associated with the websites. For example, GPP had a graduate student design some of the interface, the CDPH HCI is using their technically savvy project lead as the web master, the SCI and Oregon RCE had one person that designed the structure of the data and the interface in collaboration with others on staff, and MetroPhilaMapper and Minneapolis Sustainability Indicators also kept their development in-house.

4.2.2 Outreach

There was no standard approach to conducting outreach to raise awareness of and educate users on how to use the tools. Some offered trainings and created "how-to materials," while others held targeted meetings with agencies or information sharing events. Only a couple had an outreach process that engaged a group of stakeholders over time in its use and sustainability. Greater detail is provided below.

- The Boston Indicators Projects, MetroPhilaMapper, Oregon RCE, and SCI offer trainings on the tool to help people figure out how to use it and what can be done with it. The Metro Boston DataCommon and the Oregon RCE put on the trainings frequently (once a month or more), while the SCI does them about once a year. Training participants, as reported in interviews and surveys, varied from community representatives, to academics, to agency and legislative staff.

- Several respondents also mentioned proactively offering specific meetings to engage community or government representatives in the tool or specific indicators (Boston Indicators Projects, GPP, and SCI).

- The Boston, GPP, SCI, and SHLAT tool respondents all emphasized the importance of creating partnerships with other city departments and with community members and organizations for the success, use, and longevity of the tools. In fact, Boston Indicators Projects reported that support (including funding) has grown over the years because of changes in policies or conditions on the ground that the indicators helped track. Boston respondents cited the connection to a policy or outcomes as critical for the continued support of the tool.

- Some said they either published or planned to publish how-to materials (GPP, CDPH HCI), and others used social media to publish newsletters and information to engage users in the concept of using data for civic change (Boston Indicators Projects, GPP, Oregon RCE, SCI).

- Boston Indicators Projects, GPP, Oregon RCE, SHLAT, and the SCI respondents either hosted or attended conferences to talk about their work and learn from others about how to improve their tools.

- Both the SHLAT and the Mariposa Healthy Living Toolkit were unique in that their tool is the outreach process and therefore inherently engages stakeholders in its use and sustainability. These tools included sections in their reports to explain how to use it.

- A number of respondents mentioned that their outreach emphasis is planned to be through pilot projects (Healthy Communities Atlas, CDPH HCI, HUD HCI), therefore it will be incumbent on the pilot sites to reach out to constituents as part of their implementation.

- The tools with the strongest focus on reaching community members and organizations include Boston Indicators Projects, Oregon RCE, SCI, and SHLAT.

- Several groups did not conduct formal outreach or training (Baltimore DataMind, Minneapolis Sustainability Indicators).

While these findings did not point to a subset of tools with the most "effective" outreach processes, generally speaking those who put effort into outreach and who employed a range of tactics saw

the greatest benefit from their outreach efforts and have managed to sustain their systems going forward. This means employing several different strategies to not only have the tool used, but also to build collaborations with a range of stakeholders. Respondents reported that engagement with potential users and collaborations with a range of contributors can ensure the value, improvement, and sustainability of the tool going forward. In addition, the tool most integrated with stakeholder engagement as part of a planning process—the SHLAT—realizes a tangible outcome from their outreach every time it is applied; namely, the development of the neighborhood plan. Because the development of the plan touches multiple agencies, this tool also serves to bring different disciplines together for the purpose of improving the tool and health.

4.2.3 Operations

Funding/Costs
Indicator systems were funded by a range of sources including federal grants, private foundations, and existing general funds. Details are shown in Figure 2.

Figure 2. Indicator system funding sources
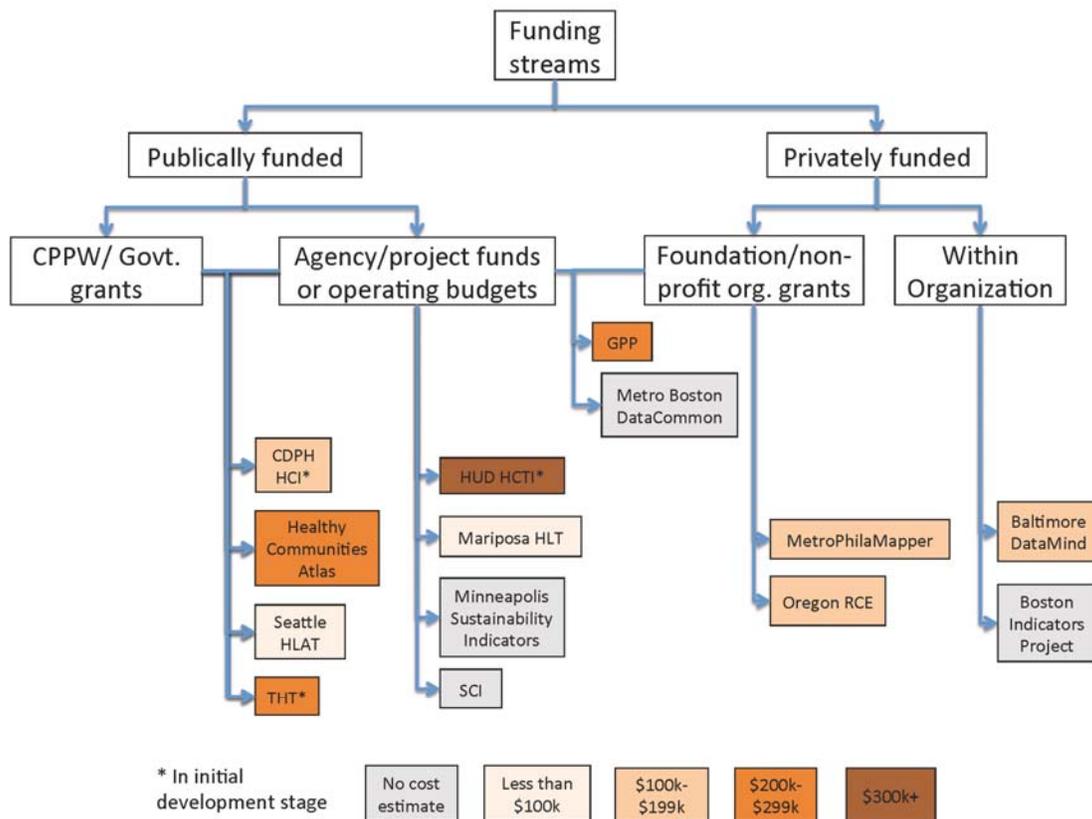
This information should be considered with the following caveats. It is particularly challenging to create a cost continuum for all of the tools for several reasons. Tools were in various stages of development and maintenance (see Figure 1), covered different sized geographic areas (everything

from neighborhoods to the entire country), provided data for a range of geographic or statistical units (from region to Census block group), collected data for varying numbers of indicators (see Table 1), and employed a range of outreach, education, and collaborative partnerships.

Tools were both publicly and privately funded and some were funded through a combination of both sources. In reality Communities Putting Prevention to Work (CPPW)-funded projects are a part of government grants, but they are highlighted here (and in Table 6 below) because of the importance of this funding source for the development of these tools. Cost estimates were unavailable for three of the respondents interviewed. On average the tools cost upwards of $150,000 per year and the range in costs was from about $50,000 to more than $500,000 per year. The only systems that cost less than $100,000 were two paper tools (SHLAT and the Mariposa Healthy Living Toolkit), although, as noted in Table 6 below, these costs represent the initial tool creation stage and may not reflect additional costs to apply the tool to a planning process. As an outlier, the HUD HCI cost more than $500,000 per year, although this is a high-profile tool, with an extensive indicator selection process and that has a national geographic scope.

Although interview questions did not address costs for initial implementation and maintenance separately, because no cost estimates were given for the three longest standing indicator systems (Boston Indicators Projects, Minneapolis Sustainability Indicators, and the SCI), the numbers in Figure 1 primarily represent implementation costs. The Oregon RCE is one exception to this, as their estimate represents costs to update data and to employ extensive outreach to engage and educate users. This system illustrates the above listed challenge with attempting to create a straightforward cost continuum for all the tools, as Oregon RCE's maintenance phase may involve more outreach than other tools. However, almost all respondents reported that the development phase was more costly than the maintenance phase. It also should be noted that cost estimates reflect mostly staff costs and do not include any data acquisition fees.

Staffing

Most of the systems were staffed at least part time by between three and five people. Table 5 provides staffing details for a combination of development and maintenance activities (interview questions did not address staffing for initial implementation and maintenance separately). Information in Table 5 may serve as a proxy for costs where estimates were not available, as these figures were current reports from respondents.

Table 5. Indicator system staffing

Number of full or part time staff	System names (stage of development)	Use/Used Contractors	Use/Used Interns or Grads	Number of systems
1-2 people	Baltimore DataMind (mostly implementation)	Yes		2
	CDPH HCI (implementation)	Yes		
3-5 people	GPP (implementation and maintenance/outreach)		Yes	9
	Healthy Communities Atlas (implementation)	Yes		
	HUD HCI (implementation)	Yes		
	Mariposa Healthy Living Toolkit (implementation)	Yes		
	MetroPhilaMapper (mostly implementation)		Yes	
	Minneapolis Sustainability Indicators (maintenance/outreach)		Yes	
	Oregon RCE (implementation and maintenance/outreach)		Yes	
	SHLAT (implementation and outreach)			
	SCI (maintenance/outreach)	Yes	Yes	
More than 5 people	Boston Indicators Projects (maintenance/outreach)		Yes	2
	THT (implementation)	Yes		

There were very few tools that employed a full time staff person devoted to the system (only GPP, MetroPhilaMapper, Oregon RCE – see also Table 6). Most respondents reported that all staff that worked on the project devoted only a portion of their time to it. In addition, six respondents mentioned that they involved graduate students or interns in the work, and six mentioned that they had hired external contractors.

HUD HCI and the THT both considered other collaborators in their response. The HUD project had a committee of subject matter experts and a national advisory panel, which made the number of people involved too great to enumerate. The THT project mentioned that in addition to the main four people, about six to eight others were involved on a more regular basis, though with only a small portion of their time.

See Table 6 for additional information regarding costs and staffing.

Table 6. Indicator system costs and staffing details

Indicator systems	Costs	Staffing	Full time staff person
Baltimore DataMind	Self-funded by a private company. About $100,000 (annual) mostly for implementation.	1 to 2 people, but not full time.	No
Boston Indicators Projects	The Boston Foundation funded the Boston Indicators Project and this was done collaboratively and with general operating funds for the Metro Boston DataCommon (MAPC); no cost estimates available.	MAPC - have about 10 people, but no one works on the indicator system full time. Everyone has other responsibilities and sometimes this other work contributes to and complements the indicators data.	No
Greater Portland Pulse	A few organizations (e.g., Metro—the elected regional government, Institute for Sustainable Solutions at Portland State University, community colleges, United Way) put in funds to get it started (between $5,000 and $60,000 each). They continually look for funding, which is hard. $250,000 per year mostly for implementation activities.	1 full time person, 2 part time graduate students, a couple others who devote some time, but are not close to full time.	Yes
Healthy Communities Atlas	The indicator system and the consultant who executed it were written into the CPPW Grant. About $150,000 for implementation activities (although, additional staff hours contributed may not be included in this estimate).	Had 4 people working (none full time) on it plus the consultant, who carried much of the execution responsibility. Consultant likely had more than 1 person working on it, but no full time commitments.	No
CDPH Healthy Communities Data and Indicators Project	2-year grant that began the project part of the sustainable communities and climate change reduction portion of Proposition 84. Project also draws upon general funds. Will need to secure other funding for operations and additional implementation, especially for any IT-related projects, such as a more robust web interface. Approval process requires more extensive documentation on the functionality and capacity of the tool. Currently applying for other grants to support this effort. About $150,000 to $200,000 for initial implementation activities.	Main staff person only spends about 20 to 30 percent of time on this project. Recently, 1 full time staff member was hired, as well as a full time research analyst. In addition, 1 part time IT business analyst will be joining them to bring the total person count up to 4.	No

Indicator systems	Costs	Staffing	Full time staff person
HUD HCI	The HCI is one aspect of HUD's 3-year Healthy Communities Transformation Initiative. Funding of about $500,000 per year includes indicator selection and creation of the Index itself; development of a web-based Assessment Tool; and the piloting stage.	In addition to a number of subject matter experts, 2 staff from Healthy Housing Solutions very involved, and a team from HUD with 2 main HUD staff.	No
Mariposa Healthy Living Toolkit	Funding came from the planning budget as part of the pre-development costs for the development. About $50,000 was allocated for toolkit development (excluding additional in-kind staff, partner, and consultant time).	For the first draft in 2009, 2 to 3 people worked on it but not devoting all of their time. In the 2012 update, there was about the same number of people working on it.	No
MetroPhila Mapper	Funded through a 3-year grant from the William Penn Foundation. About $125,000 to $200,000 per year mostly for implementation activities and about $85,000 for maintenance (excluding in-kind staff time).	1 project manager devoting most, if not all, of their time. 2 to 3 grad students. Also higher level people involved at some percentage of their time.	Yes
Minneapolis Sustainability Indicators	System funded through the Office of Sustainability through the City of Minneapolis general operating budget; no cost estimate available.	Two staff and 1 intern part time (total is about ½ to ¾ Full Time Employee (FTE) to maintain the system).	No
Oregon Rural Communities Explorer	Funded continually through the Ford Family Foundation. At the beginning, OSU contributed money to the project. Library contributed funding through data services units. Project has taken more of people's time than expected and people have given more of their time than they are being reimbursed for. About $100,000 per year for maintenance, including substantial costs for training and outreach (excludes in-kind contributions).	1 person full time, plus through 2 people and some graduate research assistants they make less than one full time equivalent (less than 2 FTE total).	Yes
Seattle Healthy Living Assessment Tool	CPPW grant and then transferred funding to general fund. About $60,000 (total CPPW grant was $108,000 and the HLAT took about half) for initial implementation (figure excludes continued implementation).	Approximately 5 people work on the tool, though they don't devote all of their time to it.	No

SCI	Functions are supported by the San Francisco General Fund and some minimal funds from sources outside SFDPH for data cleaning projects; no cost estimate available.	Approximately 4 people working supporting with one epidemiologist devoting more time than the others and with help from interns.	No
Transportation and Health Tool	Funded by CDC and DOT. Total about $180,000 per year (3-year project) for implementation.	4 people, 1 devoting most of their time to the project. 6 to 8 people with some involvement on a more regular basis.	No

4.3 Benefits/challenges of indicator systems

4.3.1 Benefits

Respondents identified a number of benefits associated with their work overall. The benefits reported are organized here into the following themes: creating an indicator system and making the resource available; having the tool be used and integrated into various decision-making processes; collaborating with partners to create the tool and promote its use; and establishing technological and research evidence foundations through the work. Specific examples from respondents are below.

Separate from any benefits seen through the various applications of the tools, respondents emphasized the value of simply having the tool—the product of their hard work. Specifically respondents said it was rewarding to put the information out there in an innovative, visually appealing, and accessible way.

Having a tool be used and integrated into decision-making was the most common benefit cited. Respondents reported the following specific examples related to this theme:

- Greater Portland Pulse was starting to see the benefits of getting beyond the initial phases of indicator development to developing strategic partnerships and determining how the indicators could be applied. They were discussing the development of tailored portals for some of their partners, such as the Portland Bureau of Planning and Sustainability, Metro (the elected regional government for the Portland metropolitan area), and a local community college.

- Mariposa Healthy Living Toolkit and the SHLAT both successfully used their tools in a planning process (Mariposa once and Seattle three times) and influenced agency practice to incorporate aspects of the tools. For example, Seattle respondents thought involvement in the tool's implementation contributed to the regional transportation authority's emphasis on the intersection of people and place in plans to develop transit-oriented communities. The Mariposa respondent reported that the City of Denver was considering requiring HIA in planning processes.

- Minneapolis' indicators were integrated in their ongoing performance tracking and review, which ensures their use going forward.

- Oregon RCE found that using the data really did elevate conversations beyond a simple understanding of community characteristics to more complex issues related to the relationships between neighborhood factors and how the information could be used.

- SCI had developed strong partnerships between the health department and other city agencies that use the information to aid in decision-making.

The SHLAT was actually somewhat unique as an example of creating a tool and using it. Their tool has allowed them to integrate data and indicators into a process in a way that is meaningful to the community. It is the primary fabric for planners and public health professionals to engage in neighborhoods to improve health and quality of life. Seattle has three concrete and varied experiences of implementing the tool and they have plans to do it again. Their pilot report details the process and outcomes for the Rainier Beach and Broadview - Bitter Lake - Haller Lake implementations.

The next most commonly cited benefit was collaboration and the variety of reasons it is important for the development of indicator tools. Collaborations can help to create lasting engagement with a variety of audiences. By working with stakeholders, collaborations can create demand for the indicator tool and ensure a vested interest in the project regardless of potential changes in leadership or funding. Respondents also mentioned that collaboration made the final product better, reduced redundancy, and pooled resources.

Some examples of the benefits of collaboration were provided by respondents. For instance, the Minneapolis Sustainability Indicators project valued the engagement and involvement of decision-makers, as this ensured the future of the system. The SCI has helped institutionalize relationships with other agencies around certain powerful indicators, such as the pedestrian safety corridor indicators that are posted in police stations. Further, the SCI felt that as a result of the tool, the health department was viewed as bringing neutral information about health relationships and data to decisions being made across the city in a variety of sectors.

A few respondents mentioned the benefit of the work for establishing technological and research evidence foundations upon which others can build and expand. A few others reported that their tools benefited from taking the time to do it right, which gave them confidence in the quality of the work and its utility.

4.3.2   Challenges

Several themes also emerged regarding challenges. The key themes included difficulties related to data, collaboration, outreach and tool promotion, funding, and technology. Data and collaboration challenges were mentioned most frequently, followed by outreach and funding issues. Table 7 elaborates on these themes and shows which respondents mentioned the issue.

Table 7. Challenges cited by respondents

Challenge (sorted by frequency of mention)	Systems cited	Number of systems
Data • Trade-offs between budget and data collection or sophistication • Trade-off between making data easy to use or sophisticated • Having a regional focus challenging for data availability and consistency • Gathering, storing, processing, disseminating data • Connecting environmental measures with health data at comparable scale • Data unreliable at small geographic scales • Making evidence at a higher geography relevant for very localized planning and issues • Tracking data over time – who should do it and how • Updating data every year takes time • Paying attention to data quality • Trade-offs between democratizing data access and data quality/consistency	GPP Healthy Communities Atlas CDPH HCI HUD HCI Mariposa Healthy Living Toolkit Minneapolis Sustainability Indicators Oregon RCE SHLAT SCI	9
Collaboration • Connecting with collaborative organizations • Aligning partner goals, perspectives, and schedules to make everyone happy • Coming to consensus on some decisions • Responding to the needs of different organizations and being flexible • Deciding what to measure and how to measure it	Baltimore DataMind Boston Indicators Projects CDPH HCI HUD HCI MetroPhilaMapper Minneapolis Sustainability Indicators SHLAT THT	8
Outreach • Getting the word out • Getting all user communities engaged • Communicating about health issues and social determinants of health • Getting people to use the data to make decisions	Baltimore DataMind Mariposa Healthy Living Toolkit SHLAT Oregon RCE SHLAT SCI	6

Funding • Sustaining funding • Funder had different priorities (from their own community focused ones)	Baltimore DataMind GPP MetroPhilaMapper Oregon RCE	4
Regional focus • Grounding regional scale data in local issues	GPP Mariposa Healthy Living Toolkit MetroPhilaMapper	3
Technology • Finding and using the best visualization software	Baltimore DataMind GPP	2
Ideology of the parent organization • Difficult for organizations to come up with a valid and sustainable business model	Baltimore DataMind	1

5. Health Analysis Tool Scope Approaches

The experiences of other locations show that there are many ways to create a useful tool that could be applied in the San Diego region and that could align with regional vision and goals. The following are possible approaches to a health analysis tool that could be considered. These options and their associated considerations are meant to facilitate discussions among stakeholders and to aid in the decision-making process.

In summary, the following four approaches are provided for discussion:

- Approach 1: Develop a list of indicators and recommendations for a process to apply them

- Approach 2: Affiliate with another indicator system – use an Existing Tool

- Approach 3: Develop a San Diego-specific tool tailored to meet regional vision and goals

- Approach 4: Integrate social determinants of health in the local planning process

Below is a description of each approach, highlighting which indicator systems have used it and an explanation of what would need to be done to implement it.

5.1 Approach 1: Develop a list of indicators and recommendations for a process to apply them

5.1.1 What it is

This approach involves the creation of a paper or online report that lists domains and indicators, data preparation and processing methodologies, explanations and evidence to support the indicators' connections to health, other resources, and ideas for how the indicators and tool could be used. This approach would ***not collect or provide indicator data on a regional scale***.

5.1.2 Relevant indicator systems

Of the tools we researched, the Mariposa Healthy Living Toolkit is one example of such a tool that has some of these components. The Mariposa Toolkit is a report that includes, for each of six dimensions of a healthy community, objectives and rationale related to health outcomes, recommended indicators and strategies to use them, and resources for additional information. The Mariposa Toolkit also includes a template Report Card for tracking indicators, a template Campaign Checklist to organize action and track progress, and a list of relevant organizations and potential partners. The domains, indicators, and checklist are modeled after the Sustainable Communities Index (SCI). They only collected data for one neighborhood in the context of applying the toolkit to a planning process around a housing development.

Of the tools that were researched, the Mariposa Toolkit is the most explicit example of this approach because it is a discrete paper report that the San Diego region could reference. However, there are other tools that could serve as models for the relevant components of this approach (e.g., indicator domains and indicators, justification for indicators, performance measurement objectives, ideas for tool applications). Other tools to reference (although these all make data available online) include: Boston Indicators Projects, Greater Portland Pulse, and the SCI. These have goals for indicators either stated or implied and the Boston tools and the SCI have been used in

many planning processes. Like the Mariposa Toolkit, the SCI also offers ideas for how to incorporate indicators into a community planning process, such as a healthy development checklist and policy and design strategies to aid in meeting tool objectives. For these reasons, these tools could prove to be useful for the development of this approach in the San Diego region. Baltimore DataMind is another online tool that could serve as a reference, although this tool is not oriented as much towards planning and policy-making. The Healthy Communities Atlas represents a start for a set of indicators, but would likely need to be expanded and enhanced to encompass a broader set of indicator domains and to facilitate its use.

These indicator systems are potential models for the San Diego regional tool, but additional thought would need to be given to how extensive the tool would be, even if it were paper and not online.

5.1.3   What would need to be done

If the San Diego Association of Governments (SANDAG)[1], stakeholders, and collaborators were to decide on this approach, decisions would need to be made about: 1) the indicators to include (e.g., adapt an existing system, or come up with your own); and 2) what other elements of the tool should be included (e.g., healthy development checklist, or policy and design strategies that could be used to change indicator conditions). Decisions also would need to be made around how to recommend the tool be applied to planning decisions and processes. Creating the tool as part of a pilot process is one approach to defining the steps and unique considerations for local planning jurisdictions, but this could increase the scope of the project.

Mithun, Inc., a consultant for the Mariposa Healthy Living Toolkit, essentially did just this; they piloted the tool on the housing redevelopment plan. This was useful for them and may lead to additional applications, but it should not be assumed that the future application of the tool will necessarily be simple and/or similar to the first. For example, Seattle indicated that their experience applying their tool in several different neighborhoods was very different in each example and yielded distinctive results each time. Thus, it may be challenging to come up with a "foolproof" and consistent template for a process that local jurisdictions can use without a great deal of experience applying the tool in San Diego first. Further, conducting a pilot would involve actually collecting data – albeit for a much smaller area – and using it in collaboration with community stakeholders. In this case, the roles, responsibilities, and costs of going through this for a pilot in a local jurisdiction will need to be determined.

Cost estimate range to develop a list of indicators and recommendations for a process to apply them (no regional scale data collection): $50,000 to $75,000 to develop the list of indicators. Additional funds would need to be allocated if the tool were piloted in a local community.

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[1] In this section SANDAG is identified as the entity responsible for moving the process forward and for ultimately making decisions around the San Diego Regional Health Analysis Tool. Although SANDAG is identified, they will do this in partnership with Health and Human Services Agenecy and collaboratively with the input of a range of local stakeholders.

5.1.4   Benefits and drawbacks

The primary benefit of taking this approach is cost. It would be a lower cost approach compared to the other options. SANDAG would be able to focus on creating a framework and working with partners to apply the tool rather than on creating and maintaining data.

While not having to collect data is a benefit of this approach, cost is one of the main drawbacks. A lack of local data makes the tool less useful to local users. The onus is on local partners to invest in collecting and processing the data. This approach assumes that users will perform data collection and processing. If SANDAG offers assistance with data collection, it may be worth taking the next step to facilitate data collection for a larger geographic area, in which case Approach 1 begins to look more like Approaches 2 or 3.

Further, if SANDAG plans to pilot the tool, this will have implications for local data collection and community engagement, which requires investment. If a pilot is not pursued, the effort runs the risk of not being as useful or used and not reflecting local planning processes and realities.

Additional considerations related to this approach are included in Table 8.

5.2   Approach 2: Affiliate with another indicator system – use an existing tool

5.2.1   What it is

Several tools are attempting to lay the groundwork for indicator systems with which others could affiliate. To affiliate with any one of these, San Diego would take one of these indicator systems and online platforms and upload or publish local data to it. Affiliation would mean creating an online system that publishes indicator data to a platform that has been developed by another group. Approach 2 commits to getting the data and publishing it online (perhaps with the exception of an affiliation with California Department of Public Health [CDPH], see below). There is a range, however, in how much effort has been put forth by the potential affiliate organizations to prepare the indicators, data sources, data processing methods, online platform technologies, and other system components (e.g., development checklists, targets, or indexes). These differences are elaborated on below.

5.2.2   Relevant indicator systems

The tools that SANDAG could affiliate with are Housing and Urban Development Healthy Community Indicators (HUD HCI), San Francisco Department of Public Health (SFDPH) SCI, CDPH Healthy Community Indicators (HCI), or the Transportation and Health Tool (THT). For the HUD tool and the SCI, data would need to be gathered and published, while for CDPH's HCI and the THT these entities would do the data gathering and publishing, so the San Diego region may be able to simply use these indicators and data. However, the THT's smallest geographic unit is the region and it is strictly limited to transportation and health domains, which is likely not broad enough for San Diego's vision. For these reasons, we are not presenting the THT as a viable option below. For all of these tools, affiliation means going with the indicators that have been established in the tools, and ceding some decision-making related to what the tool actually comprises.

<u>HUD</u> - Please see the appendices for details about the HUD HCI tool. HUD is investing in the upfront work to identify data and methodologies and other decisions related to online data publishing and visualization with the intention of facilitating the initial implementation for locations that pilot

their tool. Affiliating with HUD could mean a more involved partnership with, for example, potential agreements about which indicators are used, how indicators should be visualized online, and co-branding. The HUD tool has been developed with the input from SCI representatives, so there may be many similarities in the content of the systems.

The SCI - The SCI has an existing online tool and therefore experience with implementing one, maintaining it, and reaching out to partners and users to promote its application. These experiences could prove very useful for the San Diego region if this approach is pursued. That said, affiliating with the SCI has some significant unknowns. Currently, SFDPH is not clear about their intentions to support formal affiliations with the SCI, so to pursue this approach may be as simple as setting up a mentorship relationship with the SCI manager and modeling after their tools and processes. The details and agreements of the affiliation would need to be explored with SFDPH.

CDPH – CDPH is in the process of sourcing and collecting data for the indicators they have decided will be incorporated in their system, hiring appropriate contractors and staff to develop the technical systems that would support the online interface, and establishing partnerships with potential locations that are interested in applying the indicators to local processes. Affiliating with CDPH would mean going with the indicators and interface that CDPH establishes, potentially with some flexibility for local customization around indicators (e.g., adding/subtracting some), and San Diego may be able to give some input into and influence the online interface. CDPH would be the keeper and processor of the data, however, the affiliate would collaborate with the project lead on data presentation and analysis and likely other details that come up.

With the exception of the SCI, each of these tools is still in development with no real organized user interface to present data, so overall timelines may be an issue.

5.2.3   What would need to be done

SANDAG would need to decide first which tool to affiliate with, or begin having discussions to understand the implications and feasibility of affiliating. Ultimately partners will need to commit to working with an affiliate, although it may be possible to set up arrangements with all three or some of the institutions (HUD, SFDPH, or CDPH). The institution and indicator system chosen will have implications for the next steps as each partnership would look very different.

Although there would be some variation depending on the affiliate, it is a similar process after this point as well. Indicator data will need to be collected, processed, and published; a plan developed for outreach and promotion of the tool; and a plan specified for maintenance going forward. The benefit of affiliating with either the HUD HCI, or the SCI would be having help with these tasks— the project wouldn't be starting from scratch—and would not have to figure out as much related to the online interface and back end system because both HUD and the SCI have laid this groundwork; the SCI more so than HUD. Affiliating with the SCI will likely mean a more self-directed approach compared to HUD.

Affiliating with an existing indicator system would also likely involve engaging collaborative partners locally and thinking through indicators to ensure local partners feel invested in the tool and to gain an understanding of the alignment of local circumstances, goals, and priorities, and the affiliate's system.

Although the vision is for the San Diego region to be able to use the affiliate's system, there will still be effort needed to source local data and develop the online interface for a San Diego regional tool. Therefore, some investment will be required to determine the time and resources necessary to collaborate with an affiliate around these details.

Cost estimate range to affiliate with another indicator system: $100,000 to $200,000 to develop and implement this approach. This excludes ongoing maintenance and outreach. Ongoing maintenance and outreach is dependent on the choice of affiliation and is therefore too wide-ranging to estimate.

5.2.4   Benefits and drawbacks

The benefits of this approach revolve around the resource and time-savings associated with having a pre-set indicator system to use (i.e., minimal work to identify, and define the indicators and methods to collect data) and the partnership and assistance of the affiliate entity. While this approach would still require investments in data, stakeholder engagement, tool promotion, and other activities, the affiliation would catalyze these efforts. Affiliation also would strengthen relationships with the affiliate organizations.

The drawbacks of this approach are that SANDAG would have less say on the indicators included in their system, and may face limitations in collaborating with an affiliate organization. The data and interface also may be bound by what the parent system has to offer.

Because it involves collecting and publishing data (for HUD and SCI affiliation), this approach also has the potential to cost more overall than Approach 1.

Additional considerations related to this approach are included in Table 8.

5.3   Approach 3: Develop a San Diego-specific tool tailored to meet regional vision and goals

5.3.1   What it is

This approach is more innovative than the previous approaches, as it would involve developing a tailored set of indicators; collecting, processing, and publishing indicator data and supporting information; developing a plan for outreach and promotion of the tool; maintaining it going forward; and potentially creating an online interface and back end system (if an online system is desired over a paper tool). For this approach, it also would be important, for the long term sustainability and support for the tool, to identify appropriate local collaborative partners, potentially forge new relationships, and create a shared vision and framework for partners to collaborate and contribute.

SANDAG could decide to go with this approach to develop an indicator system and actually collect and process the data for it, but not create the online visualization components. In this case, the tool would be a paper report that could be updated in future years. This is similar to Approach 1, but Approach 1 does not involve data collection, so this goes one step further.

5.3.2   Relevant indicator systems

The online systems that could serve as examples include Baltimore DataMind, the Boston Indicators Projects, Greater Portland Pulse, Oregon Rural Communities Explorer, and the SCI. Not included as examples are Metropolitan Philadelphia Indicators Project and Minneapolis Sustainability Indicators because, while these are online indicator systems, the geographic scale of the data is not refined enough. However, San Diego could still reference these for indicators or online interfaces.

The Healthy Communities Atlas (HCA) is an example of a relevant paper report, for which data were collected and processed. However, the breadth of the indicator domains and indicators for this tool is somewhat narrow in relation to the social and environmental determinants of health.

The Boston Indicators Projects, Greater Portland Pulse, and the SCI are examples of tools that undertook a more involved process to engage stakeholders in the tool overall and specifically in the task of identifying the appropriate indicators to include. Support for the tools and a sense of forward momentum may be due to these engagement and collaboration efforts.

5.3.3   What would need to be done

This approach could begin with the creation of a workgroup that would be tasked with the initiation of this work. The workgroup would identify appropriate partners; seek additional funding; come up with a process for deciding which indicators to include; collect the data; process and publish it; identify potential projects, plans, or policies on which to apply the system; and conduct any training and outreach. If an online system were chosen there would be additional tasks around selecting which technology systems to use, designing the interface, and developing these systems.

Some specific advice gained through interviews includes:

- (From Boston) At first the effort should just strive to have a set of goals and commit to tracking indicators going forward and, over time, the tool will evolve

- (From Boston) Get a handle on the different audiences that your system is targeted to and be responsive to their needs

- (From multiple respondents) Develop strong relationships with partners that will be able to provide you with local data, and if possible, create a system where data sharing is institutionalized as routine work

Cost estimate range to develop a San Diego-specific tool: $200,000 to $300,000 to develop and implement this approach. This excludes ongoing maintenance and outreach. Ongoing maintenance and outreach is estimated to cost $75,000 to $150,000 per year.

5.3.4   Benefits and drawbacks

Perhaps the largest benefit to this approach is that it allows the freedom to truly tailor the tool to the local context, and be built to advance an agreed-upon set of goals. While it will be more time and resource intensive, this may result in it being more used more often than some of the other options. An online mapping system, while labor intensive, is a very effective tool for making data more useful and accessible.

Another benefit of this approach is that the HCA could be used as the starting foundation for this work. Given the fact that a significant amount of work to collect and present local data has already been done, using the HCA and building upon it could demonstrate a commitment to make the tool more collaborative and sustainable. Although substantial investments have been made in the HCA, the feasibility of building from it should be explored. As mentioned above, the HCA uses a narrower set of indicator domains (compared to some of the other systems analyzed in this report); all data are gathered for Census block groups, which are the smallest geographic/statistical areas available and can limit the indicator options; and data processing methods may be more sophisticated and therefore resource intensive.

Drawbacks are that this is the most time and resource intensive process. Additional considerations would need to be made about the pros and cons of creating a paper tool or putting the information online, as a paper tool may not facilitate the long-term sustainability of the tool. In contrast, an online system, while potentially more sustainable and usable, would require more effort and resources to implement.

Additional considerations related to this approach are included in Table 8.

5.4   Approach 4: Integrate social determinants of health in the local planning process

5.4.1   What it is

The most groundbreaking of the approaches, this approach would essentially model off the Seattle Healthy Living Assessment Tool (SHLAT) to have SANDAG recommend that local jurisdictions engage in a more proactive neighborhood planning process, and essentially have SANDAG take the lead in convening the local jurisdictional partners to create and use a tool modeled off the SHLAT. The SHLAT process uses the indicator data as a point of engagement for discussions with partners, and as a way to get a deeper understanding of the community's vision for what would make them healthy and have a better quality of life.

The Healthy Living Assessment process involves collecting indicator data for a local community that is in the process of engaging with the planning authority around a community planning process. The data are presented to community representatives and the planning agency facilitates a process to get the community's impressions of the indicator data—the extent to which it reflects people's everyday experiences related to health and quality of life in their neighborhoods. The Healthy Living Assessment also includes a survey to gather data that is related to the indicators, but that is not available publicly. These data sources are combined and used to identify community strengths and opportunity areas, which become the basis for the community plan and implementation strategies.

This approach would likely involve close collaboration with the City of Seattle Department of Planning and Development to understand how this model could be implemented in the San Diego region.

We included this in the list of approaches because it represents the most integrated way to use indicators, engage community, and have this lead to concrete and tangible changes in community

conditions. It also may represent a way to foster community goodwill and build positive relationships.

5.4.2   Relevant indicator systems

The SHLAT provides an indicator list, a community questionnaire, a neighborhood discussion guide, and data synthesis templates that are all meant to be deployed as part of a robust stakeholder engagement and community planning process. The SHLAT is the model for the process of using indicators in a local planning process, but many of the other indicator systems examined in this report could serve as the starting points for a set of indicators in a Healthy Living Assessment Tool (HLAT). In fact, of the approaches presented here, Approach 1 could be used in combination with the process outlined in this approach.

5.4.3   What would need to be done

This approach would require a strong commitment from local planning jurisdictions as it has implications for community planning practice. This approach represents more than just providing a resource (indicators and/or data) and suggestions for how to use it. It would actually be recommending a more complete process for engaging local communities using a health lens. Consultation with Seattle would be an important first step to thoroughly considering the implications and appropriateness of the HLAT for the San Diego region.

SANDAG would likely still need to engage in an indicator selection process, as the indicators form the basis of the indicators component of the HLAT and would need to reflect local priorities. Although the SHLAT is a good starting point for the indicators for which data would need to be collected, local customization and buy in would be needed. As mentioned above, SANDAG could use a combination of Approach 1 (as the starting list of indicators) and take it one step further to further describe the process and additional activities for Approach 4. Similarly, components from any number and combination of the approaches presented here could be used to develop a hybrid tool that best suits the San Diego region.

Decisions also would need to be made around initial implementation of the tool because this approach does not represent a region-wide approach. Rather it would likely be implemented in individual communities as they go through various planning processes, into which this tool could be integrated. The implementation of a San Diego region HLAT could be piloted as appropriate communities are identified.

This approach would require targeted local data collection for the indicators that are recommended for the HLAT. SANDAG may choose to collect data or offer assistance with data collection as part of this effort, or data collection could be left to the local jurisdictions, or arrangements could be made to share in the data responsibilities in some way. Further implementation of the HLAT would overlap with some existing local planning processes.

Cost estimate range to integrate social determinants of health in the local planning process: $60,000 to $150,000 to develop and implement this approach. This is a wide range because the approach includes a facilitated process and costs are dependent on a number of factors and unknowns related to how it is implemented. For example, whether a new indicator system is developed or whether one is adopted (e.g., SHLAT); whether primary data collection is supported; how and if local partners are funded; the structure of the relationship between SANDAG and the

local jurisdictions; and whether or not local jurisdictions are offered technical assistance to implement the tool.

5.4.4 Benefits and drawbacks

This approach allows SANDAG to embed a health analysis tool into existing planning and policy processes more seamlessly than in other approaches. This approach also is the one with the clearest path to authentically engaging communities in translating data for a greater understanding of the implications of planning for health and in devising potential solutions that can address local opportunities and challenges to improve community health.

The approach has the potential to influence local planning processes more than any of the other approaches because it incorporates a structured process for community and agency collaboration. By ensuring community and agency participation, this approach represents the most integrated way to use indicators, engage community, and have this lead to concrete and tangible changes in community conditions. It also may represent a way to foster community goodwill and build positive relationships. In short, this is more of a holistic community planning approach than simply developing of a set of indicators and some suggestions for ways to use them.

The drawbacks of this approach are that it involves a high level of resource investment and strategic decision-making for how the tool will be implemented and maintained. It also would have to be tailored to each local planning context every time it is used.

Additional considerations related to this approach are included in Table 8.

The following table summarizes the how the different approaches vary in terms of the categories we examined.

- Approach 1: Develop a list of indicators and recommendations for a process to apply them

- Approach 2: Affiliate with another indicator system – use an existing tool

- Approach 3: Develop a San Diego-specific tool tailored to meet regional vision and goals

- Approach 4: Integrate social determinants of health in the local planning process

Table 8. Summary of implications of approaches for consideration

	Approach 1: Develop a list of indicators and recommendations for a process to apply them	**Approach 2: Affiliate with another indicator system**	**Approach 3: Develop a San Diego-specific tool**	**Approach 4: Integrate social determinants of health in the local planning process**
Goals/ purpose of approach	End result: Produce only a prioritized indicator list as a framework, without local data	Adopt a preexisting indicator list and use preexisting interface to present local data	Create a customized tool, either online or paper-based, that is informed by an overarching framework, and will provide strategies for implementation	Use tool to integrate health into a comprehensive community planning process
Users/ Applications	Applications will be limited because of the omission of data, but users will be able to adapt the framework and indicators for their own needs	Users can be broad depending on SANDAG outreach efforts, but applications may be limited by the parent system's interface	System can be tailored for any range of users, and the application of the tool can likewise be scaled up or down depending on goals and resources	Direct users will skew more towards local planning jurisdictions, but communities engaged in a process using the tool are indirect, yet very involved users
Indicators to include	Can be chosen based on a prioritization process within SANDAG and in collaboration with stakeholders	Pre-selected based on the system with which SANDAG affiliates; may have a chance to add additional indicators	Can be chosen based on a prioritization process within SANDAG and stakeholders and will be subject to data availability	Can be chosen based on a prioritization process within SANDAG and stakeholders and will be subject to data availability
Data availability	Data is not made available for use	Data is collected and made available for use as part of the tool	Data is collected and made available for use as part of the tool	Data is not made available for use up front. It is created in the context of a specific planning process and made available for use in that particular jurisdiction.

Process for getting and publishing data	No data collection or publishing	Depending on the parent system chosen, local data will need to be collected, or the parent organization will collect the data; parent organization will publish the data	Data collection, processing, and publishing will all be done in-house using either a paper or web-based interface	Data collection, processing, and publishing can be done in-house or by local jurisdictions for individual communities engaged in a planning process
Engagement/ Outreach	In development, stakeholder engagement would include coming to consensus on and creating the framework for the system, as well as identifying indicators for inclusion After the tool is released, stakeholder engagement would consist of providing technical assistance to users who are applying the tool to their own contexts	In development, stakeholder engagement would include relationship-building to develop parameters around affiliation, confirm indicators, and to obtain and process local data After the tool is released, stakeholder engagement may occur around applying the tool to inform various project contexts and decision-making processes, as well as data updates	In development, stakeholder engagement would include relationship-building to make decisions about indicators and to obtain and process local data, and designing the tool's interface After the tool is released, stakeholder engagement may occur around applying the tool to inform various project contexts and decision-making processes, as well as data updates	In development, stakeholder engagement would include relationship-building to plan and implement the tool Tool implementation represents a stakeholder engagement process in itself
Operations (funding/ staffing/ cost)	Likely the most affordable approach, as significant cost savings will result from not engaging in data collection and processing	Likely to be more than Approach 1 but less than Approaches 3 and 4, depending on the scale of data collection that the parent system requires	Likely to be the most expensive approach, as the indicator framework and indicators, data collection and processing, and tool interface (either paper or web-based) will require significant resources to develop	Likely to be similar to Approach 3, because there is the potential for significant expenses related to stakeholder engagement and help with local data collection

Benefits/ Challenges	Major benefit:	Major benefit:	Major benefit:	Major benefit:
	Requires fewest resources to develop; SANDAG can focus on creating a framework and working with partners to apply the tool rather than maintaining data	Will be adopting a framework and interface that will decrease the resources and time to develop and maintain the tool, and will strengthen partnerships with parent organization	Will allow SANDAG full control over indicators, data, and interface	With proper deployment and stakeholder engagement, this will allow SANDAG to embed the tool into existing planning and policy processes more seamlessly than in other approaches
	Major challenge:	Major challenge:	Major challenge:	Major challenge:
	Local data won't be available to users, which limits the types of applications for the tool for those that are able to collect their own data using the tool's indicator framework	Data and interface will be limited by what the parent system has to offer, acknowledging that their system may change over time	High level of resources required, and high level of strategic decision-making for how the tool is developed and maintained is necessary	High level of resources required, and high level of strategic decision-making for how the tool is developed and maintained is necessary

6. Conclusions and Next Steps

This best practices review sought to summarize a variety of characteristics related to existing indicator systems and, based on this, provide a set of considerations and approaches to developing a health analysis tool that would increase local capacity in the San Diego region to consider health in the evaluation of plans, projects, and policies.

Existing indicator system materials were reviewed and representatives were interviewed from across the country. This information provided significant insight into the potential purposes; users and applications; indicator, technological, staffing, and funding processes; and the benefits and challenges of developing, implementing, promoting, and maintaining a variety of health analysis tools.

The Best Practices Report is the first step in determining a preferred scope for a San Diego Regional Health Analysis Tool. The concept of a health analysis tool for the San Diego region originated from the partnership of the San Diego (SANDAG) and Health and Human Services Agency (HHSA) as a resource for local agencies, tribal governments, and community-based organizations. Once developed, the tool should help guide local agencies and organizations in how to assess health in a variety of local planning and project development processes. To ensure these local planning and community organizations use the tool, potential future users may have a role in determining the best approach for the tool.

The examination of nationwide health indicator systems helped outline four potential approaches to consider for the San Diego region. Given the breadth of health analysis tools and indicator systems in existence today, the approaches identified in this report are not intended to be inclusive of the options available, but rather broadly capture the range of approaches that can be implemented.

In subsequent months, SANDAG will solicit input from a variety of stakeholders regarding the initial approaches posed in the report as a starting point for discussion and consensus. Future analysis of staff resources, funding sources, and data availability by SANDAG and HHSA will further inform the feasibility of approaches under consideration. It is anticipated that stakeholder input and the resource feasibility analysis will collectively inform the preferred approach for developing a San Diego Regional Health Analysis Tool. This work is currently scheduled through September 2016.

Appendix A: Indicator System Descriptions

Baltimore DataMind

The Baltimore DataMind system was created in 2010 by Carson Research Consulting, Inc., a for-profit corporation that provides research, needs assessments, and evaluation consulting services to a variety of clients. The tool aims to provide a publicly available, hyper-local data resource for the City of Baltimore, which is characterized by large block-to-block demographic shifts in its neighborhoods.

The tool currently uses PolicyMap, a web-based Geographic Information IS system created by The Reinvestment Fund, to power the interactive mapping component. The tool will be migrated to ArcGIS Online and updated by the end of 2013 with new indicators, and will add a framework for using the indicators in policy and planning processes in the City of Baltimore. This system allows the user to select an indicator and have it immediately projected onto a mapping interface, using pre-set chloropleth categories. The interface allows the user to click on individual geographical units, e.g., a Census tract, in order to get the value of the selected indicator for that area. The user is also able to search for specific areas to find the values for an indicator for that area. At this point, mapped data is not downloadable directly from the tool.

The data used by the tool is mainly from the Baltimore Neighborhoods Indicator Alliance, the United States Census and American Community Survey, and Open Baltimore.

Boston Indicators Projects

There are two systems in Boston that have a strong partnership. The Boston Indicators Project (BIP) was created in 2000 in partnership by The Boston Foundation, the City of Boston, and the Metropolitan Area Planning Council (MAPC), and it provides indicators for the City of Boston and coordinates with the MAPC on their planning efforts. The other project is a regional indicators system called the Metro Boston DataCommon (MBDC), and it is headed by MAPC; this is coordinated with the regional planning process and reports data by metro region and the Boston area municipalities. Both feature data at the Boston neighborhood level, at the Greater Boston regional level, as well as the State of Massachusetts level.

The BIP is a very mature system that features an extensive interactive online interface. Indicators are grouped among 10 different sectors, and each sector has a summary page that ties in a framework for working within that sector, as well as data highlights. The website provides community snapshots at the local neighborhood level, as well as a page for tools and resources. Also, BIP releases reports on their indicators on a regular basis. The BIP includes a regional 2030 civic agenda that sets developmental goals for the next 15 to 20 years.

The MBDC's online interface uses Weave as its mapping platform, and features indicators from 12 different domains. The MBDC also features community snapshots for cities and towns in Massachusetts. This tool allows the user to create their own visualizations in Weave using any data that can be uploaded from a desktop or that is hosted online. Overall, the level of visualization and mapping is very high quality, and is more extensive than at the BIP.

Greater Portland Pulse

The Greater Portland Pulse (GPP) tool was created by a partnership led by Portland State University's Institute of Portland Metropolitan Studies and Metro.

The tool is available as an online Weave interface, with pages for individual indicators and an overarching framework that has guided the development of the tool. The framework, which was created through an extensive regional stakeholder engagement process, identifies nine priority functional areas of study that were then used to inform the creation of indicators. The focus of GPP is on the greater Portland metro/regional area, presenting data from the counties of Clackamas, Multnomah, and Washington in Oregon, and Clark County in Washington. The user is able to explore health determinant data by topic, and demographics for the region. Data can be explored by geographic scale (smallest is the Census tract level) or by visualization type (e.g., bar chart, data table, map, etc.).

A novel approach that the GPP uses is its Data Stories section, which presents data that's organized around a specific topic and then provides a narrative to explain the data and put it into a regional context. For example, the tool features a page on Halloween in the greater Portland area, with data on the number of trick-or-treaters and the number of manufacturers of candy and costumes per county.

Healthy Communities Atlas

The Healthy Communities Atlas is a paper tool with no online component, and was created for the San Diego Association of Governments in 2012 as part of the San Diego County Health and Human Services' Healthy Works countywide initiative. The Atlas aims to align with the regional planning processes—allowing local and regional users to analyze and visualize regional data at a small area scale related to health and health determinants that are relevant to the regional planning process.

The tool provides a series of indicator sheets for each of four major domains and focuses on health determinants, with each determinant featuring extremely detailed maps or histograms of the relevant data. On each sheet, the topic and its relevance to healthy planning are briefly covered; the map or maps for that section are explained in terms of data sources and any methods used; and a short findings section explains the implications of the data presented.

California Department of Public Health Healthy Communities Data and Indicators Project

Because of California's Sustainable Communities Strategy outlined in Senate Bill 375 (Steinberg, 2008) and Assembly Bill 32 (Nunez, 2006), the California Department of Public Health (CDPH), through the California Strategic Growth Council, received a two-year research and development grant to develop a health indicator system to be a statewide resource. Funds from this project came from Proposition 84.

The CDPH Healthy Communities Index (HCI) is in development, and is currently vetting data sources and solidifying relationships with data partners. Eventually, the tool is hoped to be a centralized source of information for the chosen indicators to be used at the statewide and local levels.

The webpage for the CDPH HCI is fairly basic at this point; it is hosted directly on the CDPH website and consists of a simple project description and links to data files (some of which are already

available for download in tabular format) and reports. The web interface will be revamped and improved in the near future.

Housing and Urban Development Healthy Communities Index

The HCI is currently being developed by the United States Department of Housing and Urban Development (HUD) as part of its Healthy Communities Transformation Initiative. Healthy Housing Solutions, Inc., is the lead organization for this project (a contractor for HUD), and being that they are still quite early in their development process, there is no concrete tool at this point. The HCI will form the foundation of a more comprehensive Healthy Community Assessment Tool that will be broadly applicable to any community that is trying to incorporate healthy planning and policy into their jurisdiction.

The tool is meant to be pilot tested in four cities: Charleston, San Diego, Albuquerque, and Minneapolis. Some of the intended products to be developed include a health indicators system, a healthy development checklist, and policy and design strategies.

Mariposa Healthy Living Toolkit

In 2009, Mithun, Inc., a for-profit urban design, planning, architecture, landscape architecture, and interior design firm hired by the Denver Housing Authority (DHA), published the South Lincoln Health Impact Assessment (HIA) on a housing redevelopment in Denver, Colorado. This HIA used the Healthy Development Measurement Tool (HDMT) checklist created by the San Francisco Department of Public Health as a framework. The HIA was on a master plan for a 15-acre transit-oriented, mixed income redevelopment.

The framework was originally a simple list of indicators with local data presented. In 2012, the DHA launched the Healthy Living Initiative, also developed by Mithun, of which the Mariposa Healthy Living Toolkit was a part. The toolkit improved upon the earlier 2009 version by presenting an updated and prioritized list of indicators, updated data, a report card on progress since 2009, a campaign checklist template, and new sections on how to use the toolkit and for policy implications of the tool.

Metropolitan Philadelphia Indicators Project

The Metropolitan Philadelphia Indicators Project tool was created in 2003 by the Metropolitan Philadelphia Indicators Project (MPIP), and was funded by the William Penn Foundation. The tool was developed in order to provide a regional data portal for academic and community partners. Initially, the tool was an annual paper report but, over time, MPIP focused more on the online interface.

The online interface allows the user to first select a geographic area (the smallest area available is at the Census tract level), then a set of indicators based on their domain, and the year that data is available. Once these are selected, the interface allows you to visualize the data as a map, data table, summary statistics, scatter plot, or rank list. Each of these options has customizable formatting options to make the data appear how the user wants it to be presented. Data queries can be saved for quick future reference.

Unfortunately, due to loss of funding, the last annual report was published in 2009, and the online tool, while still functional, has not been updated for several years.

Minneapolis Sustainability Indicators

The City of Minneapolis Office of Sustainability created the Minneapolis Sustainability Indicators. The Office of Sustainability and the related Sustainability Indicators system were created when in 2003, the Minneapolis City Council passed a resolution to develop a sustainability plan for the city.

Currently, the Minneapolis Sustainability Indicators system is an online tool that provides hyper-local data to the City of Minneapolis and also informs performance metrics for all city agencies. The majority of the data is at the City level only, but some indicators are available at smaller geographic levels (e.g., ZIP code) or they are available as a stratified variable by either age or ethnicity. There are three major domains in the tool: a healthy life, greenprint, and a vital community. When the user selects an indicator, they are taken to a page with generally a city-level chart of the indicator over time, a target value for that indicator, a trend analysis that attempts to explain what the indicator has been doing over time, and the data sources. In a separate section, this tool also provides discussion on how to take action, a list of published reports, and information on the Minneapolis Climate Action Plan and on the Homegrown Minneapolis initiative.

Oregon Rural Communities Explorer

The Oregon Rural Communities Explorer was created and hosted by Oregon State University in 2010. Within the Explorer, the Communities Reporter Tool provides mapped community data for the State of Oregon and Siskiyou County, California using a Microsoft Bing-based mapping platform.

In the mapping interface, the user first selects as many communities as they want. Then, they can choose to compare up to 3 of those communities or combine up to 12 communities to get aggregated statistics. Finally, they can compare these statistics to either the whole state of Oregon or California, or to either urban or the rural parts of either state separately. Once the user finishes their selection, the interface generates a list of possible indicators and the relevant statistics for the geographic selections for the years that there is data available.

Seattle Healthy Living Assessment

The Seattle Healthy Living Assessment (SHLA) was created for the City of Seattle Planning and Development Department as part of a Communities Putting Prevention to Work grant, and was piloted in 2011 for two neighborhoods undergoing neighborhood plan updates - Rainier Beach and Broadview - Bitter Lake - Haller Lake.

The SHLA is a paper tool that is primarily used by the Seattle Planning and Development Department and their partners and collaborators—data for indicators are not presented or available for download online. The Planning Department published a paper report, however, that lists the indicators for ten domains (e.g., food access, mobility and physical activity, and community stability) and, for each indicator, provides a rationale, a benchmark, data sources, and suggested methods to assess them.

The SHLA indicators are meant to be used in conjunction with a multiple-choice community questionnaire and a guide for facilitating neighborhood discussions. Both of these supplemental tools are intended to collect information that is otherwise left out of or is unavailable in the indicator process.

Sustainable Communities Index

The Sustainable Communities Index (SCI) is the name of the former HDMT, which was created by the San Francisco Department of Public Health's (SFDPH) Program on Health Equity and Sustainability. The tool was born out of the Eastern Neighborhoods Community Health Impact Assessment as a way to put the research that was done on that project online to be made available to the public on an ongoing basis.

Currently, SFDPH uses the SCI regularly in its work with other city agencies and community organizations. The online interface presents the overarching framework of the indicators as eight different domains, and each indicator page includes information on why it is a suitable indicator of health and sustainability, methodologies for creating the indicator, any limitations that exist, and reference citations. When the user clicks a city (at this time, only San Francisco is available), they are taken to another page that features the local data, including a map, data table, interpretation of the data, their geographic equity analysis, and data sources.

Other features of this tool include resources for how to best apply the tool for a variety of audiences, e.g., planners, policy-makers, community organizations, etc., such as their healthy development checklist, policy and design strategies, and health evidence and standards.

Transportation and Health Tool

The Transportation and Health Tool is being created by a joint partnership between the Centers for Disease Control and Prevention and the United States Department of Transportation. It is currently under development and will be launched online in fall 2014.

This tool, as its name implies, will exclusively focus on transportation and health domains. When it is launched, the tool will be an easy-to-use instrument that will simultaneously allow the user to explore pre-loaded transportation and health data at the regional and state levels. It also will allow the user to compare how their state or Metropolitan Planning Organization is doing in their indicator measures relative to other jurisdictions. The tool will then provide recommendations for improving the outcome measures, as well as an evidence base for integrating health and transportation issues.

Table 9. Indicator domain matrix

#		Health	Economy/ Employment	Education	Housing	Transportation	Environment	Crime & Safety	Community/ Social Cohesion/ Participation	Food/ Food Access	Parks/Open Space	Arts and Culture	Access to Public Resources
1	**Baltimore DataMind**	Children and Family Health	Income and Economic Well Being	Education and Youth				Crime & Safety					
2	**Boston Indicators Project**	Health	Economy/ Technology	Education	Housing	Transportation	Environment & Energy	Public Safety	Civic Vitality			Cultural Life & The Arts	
2	**Metro Boston DataCommon**	Public Health	Economy/ Technology	Education	Housing	Transportation	Environment & Energy	Public Safety	Civic Vitality & Governance			Arts & Culture	Land Use & Zoning
3	**GPP**	Healthy People	Economic Opportunity	Education	ousing and ommunities	Access and Mobility	Healthy Natural Environment	Safe People	Civic Engagement			Arts & Culture	
4	**Healthy Communities Atlas**	Injury Prevention				Physical Activity and Active Transport/ Injury Prevention	Air Quality	Physical Activity and Active Transport.	Physical Activity and Active Transport.	Nutrition	Physical Activity and Active Transport		Physical Activity and Active Transport.
5	**Healthy Communities Data and Indicators Project (CDPH HCI)**	Health and Social Equity	Adequate Levels of Economic, Social Development	Adequate Levels of Economic, Social Development	Meets Basic Needs of All	Meets Basic Needs of All	Quality and Sustainability of Environment	Social Relationships That Are Supportive and Respectful	Social Cohesion	Meets Basic Needs of All	Meets Basic Needs of All	Meets Basic Needs of All	Meets Basic Needs of All

#	Name												
6	**HUD HCI**		Employment Opportunities/ Fiscal Health	Educational Opportunities	Housing Quality	Transportation Services	Environmental Hazards	Public Safety	Social Inclusion/ Participation	Neighborhood Facilities & Services	Natural Areas		Neighborhood Facilities & Services
7	**Mariposa Healthy Living Toolkit**		Healthy Economy	Public Infrastructure	Healthy Housing	Sustainable, Safe Transportation	Environmental Stewardship	Social Cohesion	Social Cohesion	Public Infrastructure	Environmental Stewardship/ Public Infrastructure	Social Cohesion/ Public Infrastructure	Public Infrastructure
8	**Metropolitan Philadelphia Indicators Project**	Health	Regional Economy/ Taxes/ Family Income/	Education/ School Quality	Housing	Regional Transportation	The Environment	Safety/ Crime and Criminal Justice	Civic Participation			Arts and Culture	Land Use Regulations
9	**Minneapolis Sustainability Indicators**	Health	Employment and poverty/ Arts and economy/ Green jobs	Graduation Rate	Cost Burdened Households/ Homelessness	Transportation Alternatives/ Bicycling	Climate Change/ Renewable Energy/ Air Quality/ Waste Reduction and Recycling/ Airport Noise/ Tree Canopy/ Stormwater/ Healthy Lakes, Streams and Rivers/ Brownfield Sites	Violent Crimes	Community Engagement	Local Food			

#	Tool												
10	**Oregon Rural Communities Explorer**	Health & Mortality	Income/ Employment & Labor Market/ Economic Resources	Education	Housing		Environment al Health	Crime & Abuse	Community Capacity/ Family Structure/ Migration	Food System	Natural Resources & Amenities		
11	**SHLAT**		Access to Economic Opportunitie s	Youth and Education	Community Stability/ Housing	Mobility & Physical Activity/ Transportation		Mobility & Physical Activity/ Safety	Community Character, Gathering, and Support Networks	Food Access	Mobility & Physical Activity/ Parks and Recreation		Mobility & Physical Activity
12	**SCI**	Health	Economy	Education	Housing	Transportation	Environment	Community	Community	Public Realm	Environment	Public Realm	Public Realm
13	**THT**	Health				Transportation							

Does not include a category for contextual factors, such as population, race/ethnicity, age, and sometimes household income, but these are included in most tools

Creating a distinct classification system that is valid and consistent across indicators systems is challenging, therefore this is as systematic as possible given the variety in projects. There may be overlap, redundancy, or misclassification in domain classifications

Appendix B: Expanded Findings from Project Interviews

Tool goals and/or purposes

- <u>Baltimore DataMind</u> – This system was developed by Carson Research Consulting, Inc. (CRC), due to the work that its Executive Director had done with the Baltimore City Data Collaborative and the Baltimore Neighborhood Indicators Alliance, though the actual project was not sponsored by either of these groups. The goals of the CRC project were to create a hyper-local, accessible mapping, and data portal for community and start-up groups to be able to use the data that was already housed in various places, but wasn't in an easy-to-use format.

- <u>Boston indicator projects</u>

  - The goals of The Boston Indicators Project are to, "democratize access to information, foster informed public discourse, track progress on shared civic goals, and report on change in ten sectors."

  - The goal of the regional Metro Boston DataCommon is to measure progress on Boston Metropolitan Area Planning Council's civic agenda, which is established as part of its 30-year plan for the region, known as MetroFuture. The MetroFuture plan supports a vision of smart growth and regional collaboration through the promotion of efficient transportation systems, conservation of land and natural resources, improvement of the health and education of residents, and an increase in equitable economic development opportunities for prosperity.

  - There is approximately a 40 percent overlap in the indicators for Boston's two projects.

- <u>Greater Portland Pulse</u> – the goal of the Greater Portland Pulse (GPP) is to have a set of indicators to include and track as part of metro-wide strategic plan; the mayor/city was interested in having indicators to track progress; United Way wanted to use indicators for community impact assessments. There was not a consistent set of indicators being tracked over time.

  - Goals were to have ONE set of measures that the entire metro region (four counties) could use to track over time.

- <u>Healthy Communities Atlas</u> - Using available data that could be mapped, get a sense of current health conditions, and how communities compare with each other. Tie indicators to the regional transportation plan. A main goal is to understand current conditions and have a way to target and identify places where built environment conditions related to health need to be improved and strategies developed to do this.

- <u>California Department of Public Health Healthy Communities Data and Indicators Project</u> – The Strategic Growth Council mandated the creation of the tool via Assembly Bill 32 and Senate Bill 375. Its goals are to provide a standardized set of statistical measures and tools to be used for planning healthy communities and evaluating the impacts of plans, projects, policy, and environmental changes on community health.

- Housing and Urban Development Healthy Communities Index – The Housing and Urban Development (HUD) Healthy Communities Index aims to develop a systematic, evidence-based approach to assist local jurisdictions in assessing the physical, social, and economic roots of community health, and identifying actionable policy and program activities to improve the health and quality of life for residents. Provide a standardized and evidence based tool that communities can use as a starting point to identify and prioritize the issues of greatest concern. Defines criteria and metrics for community health; supports healthy communities research; and showcases best and most promising practices for healthy communities.

- Mariposa Healthy Living Toolkit – The tool was adapted for a master planning process, and a health impact assessment of it, from the Healthy Development Measurement Tool, now the Sustainabile Communities Index (SCI). The purpose is to inform design and development decision-making of the Denver Housing Authority (DHA), with a focus on influencing health determinants in the built environment and in programming. To measure progress and adjust design to respond to priority community issues.

- MetroPhilaMapper – To have a regional indicator system to see how communities were changing and persisting. To have an interactive mapping interface. To make data available and serve as a regional resource for academics, non-profit partners, the public, and anyone interested in finding reliable data for the region.

- Minneapolis Sustainability Indicators – These indicators are embedded in all citywide agencies as part of their annual evaluation of performance metrics, which were adopted and developed in large part because of the actions of a mayor that favored putting these into place.

- Oregon Rural Communities Explorer – To provide an information resource to rural community members to elevate the conversations that people are having about health and equity. To be a trusted source of information about communities that is used to make decisions about programs and policies that contribute to the overall wellbeing of Oregonians. Foster informed public discourse.

- Seattle Healthy Living Assessment – "To identify health assets and health gaps in a community and a template for synthesizing data." "Research has shown that our neighborhoods have clear impacts on our health that range from obesity and diabetes, to mental health and life expectancy. The Healthy Living Assessment is a tool for uncovering these findings and translating them into actions that may improve community health."

- Sustainable Communities Index – Developed as part of a community engagement and visioning process for a specific neighborhood planning project, where the health perspective was being incorporated from an early point. Rather than develop the indicators for separate planning processes as they came up, they replicated them for neighborhoods across the city. Intention was to create a set of indicators that reflect community wellbeing and that match up with policy and design strategies that could be used in development plans and planning projects. Has become broader more about performance tracking for sustainability overall.

- Transportation and Health Tool - The goal is to increase knowledge and awareness about the links between transportation and health; inform health-supportive **state** and **regional**

transportation policy and project decisions; and strengthen collaborations between transportation and public health sectors.

o Want to offer an easy to use online tool with pre-populated data; an assessment of how well your state or Metropolitan Planning Organization (MPO) is doing to include health within the transportation decision and policy-making process; recommendations for policy improvements; an evidence base for integrating health and transportation

Users and applications

- Baltimore DataMind – Due to underdeveloped evaluation tools for the first beta version the uses of the tool are unknown at this time, but the second version of the project will include more robust tracking methodologies.

- Boston Indicator Projects – Community organizations include data in grant applications. Funders use it to understand data and outcomes and how to connect their work to larger civic goals and the indicators of these. Used in strategic planning – measuring and tracking progress on civic agenda; to identify people in the community to which to target services (Federal Emergency Management Agency planner)/ Another planner used the data to show patterns of foreclosures, which built support for a grant to address the foreclosure issues.

- Greater Portland Pulse – Identify areas to implement specific projects. Some people just go to the site to get specific datasets. Updating existing conditions for specific plans. GPP is in the process of developing portals with custom data and interfaces for their more involved partners (Bureau of Planning and Sustainability, Metro). This allows their partners to tailor the site to their needs.

- Healthy Communities Atlas – Some users use the Healthy Communities Atlas data to do their own analyses and others just use the results in baseline conditions reports or to identify target areas for interventions (bike and pedestrian planning work), for example.

- California Department of Public Health Healthy Communities Data and Indicators Project – Plans for indicators to be used in Community Health Needs Assessments for the Affordable Care Act, state health department accreditation. For state health department to measure progress towards meeting the Centers of Disease Control's (CDC) chronic disease goals. Plans for MPOs to use indicators in Sustainable Communities Strategy and comprehensive planning processes.

- Housing and Urban Development Healthy Communities Index – Plans for HUD HCI to be used by city planners to document existing conditions in preparation for a planning process, community advocates to make the case for investments in certain neighborhood resources, concerned citizens to support their arguments to public officials about decisions before them, public health professionals to document health data and risk factors, and local officials to decide where to make certain investment (e.g., affordable housing projects).

- Mariposa Healthy Living Toolkit – Used the toolkit to evaluate how three different development options being considered by the DHA performed. The best option became the approved redevelopment plan. The tool also used to determine implementation steps (physical plan and also programming and social services) for the development.

- MetroPhilaMapper – The tool has been used by various partners of Metropolitan Philadelphia Indicators Project in advocacy campaigns, grant writing and research proposals, student dissertations, and content in the tool has been cited in articles by local media outlets.

- Minneapolis Sustainability Indicators - Undertook a climate action process to get at the climate change indicator (resulted in an ordinance that was brought before the city council to benchmark energy use). Also brought about a state requirement for storm water planning (from the public works department).

- Oregon Rural Communities Explorer - Program planning, improving personal understanding of rural issues and communities, preparing presentations, grant writing, business planning. Tool is more focused on community than specifically geared towards people whose role is planner, although they do work with county planning departments.

- Seattle Healthy Living Assessment – They have specifically used the Seattle Healthy Living Assessment in three different communities. In each community they work with local community organizations and the health department to gather available data for a set of indicators and then they do surveys and meetings with community to get reactions to the indicators and personal experiences. One big function is community building, but they also engage other city agencies in the process to create the plan and begin implementing it.

- Sustainable Communities Index – Used for a baseline conditions assessment and to provide policy recommendations. Used by a youth commission to highlight priority areas for future campaigns and to develop working groups. Has been used to forge relationships with other city agencies around certain indicators or sets of indicators. For example, they have a staff person who provides technical assistance to the transportation agency and Walk SF around the traffic safety and other transportation indicators. They also have a specific health department partner that focuses on land use and zoning, climate change, and labor and the work environment.

- Transportation and Health Tool – It is envisioned that it will allow transportation professionals to see how their state or region compares to others and to get ideas for strategies to improve where/how improvement is needed. Also hoped it will be used to foster communications between transportation and non-transportation representatives and to allow these folks to work on issues with co-benefits across agencies and organizations.

Frequency of application

- Baltimore DataMind – Because their evaluation tools for the first, beta version of their tool are underdeveloped, the uses of the tool are unknown at this time, but the second version of the project will include more robust tracking methodologies.

- Boston indicator projects – Used, but would like them to be used more.

- Greater Portland Pulse – Used by some frequently, but would like it to be used more. They are working on this with the portals and partnerships.

- Healthy Communities Atlas Used by some, but efforts to make data available online would make the tool more used more frequently. Staff is working on developing an online application.

Staff felt this use was meaningful and worthwhile for participants, and that these efforts would yield additional usage in some form.

- California Department of Public Health Healthy Communities Data and Indicators Project – Some users access it frequently (local health departments and the state health department). Otherwise, they are working on developing a pilot program to engage other types of users. Google analytics mentioned as a way to gauge how frequently it is used.

- Housing and Urban Development Healthy Communities Index – The project is in development

- Mariposa Healthy Living Toolkit – Used in one planning process – throughout the stages of the planning process. Updated data based on implementation and construction to date, and presented to the DHA, but it has not been used in other planning processes. DHA is considering it for use in future projects.

- MetroPhilaMapper – For a period of time, certain media groups and advocacy organizations used the tool frequently, but because the tool has not been updated in several years, usage has gone down. The original paper version of the tool was meant to turn readers over to the website that had download links for data and reports, and was used less and less as MPIP focused on the interactive web interface.

- Minneapolis Sustainability Indicators – In terms of website usage, they are visited frequently compared to other city departments. They are proactive in publishing results and highlights of indicators. Mentioned tracking measures – they use them for tracking usage.

- Oregon Rural Communities Explorer – They are always striving to reach more people and they have seen an upward trend in the number of visiting the site (they track with Google analytics). They also know that of the people they have surveyed, a lot had heard of the site (80%) and of those a majority had used the data (70%).

- Seattle Healthy Living Assessment – It has been used three times as part of a specific planning process for an area of the city and they are intending to use it again in other areas.

- Sustainable Communities Index – Used pretty frequently, but there are still some who have not heard of it and they would like it to be used more. It is hard to keep tabs on how much it is being used, especially by certain users (students, academics, community groups). Census data is very popular, though it is not their primary focus.

- Transportation and Health Tool – In development.

Indicator selection process

- Baltimore DataMind – Mainly borrowed the process used by the Baltimore Neighborhood Indicators Alliance to maintain consistency.

- Boston Indicator Projects – (for Boston Indicators Project) Held a series of forums with a diverse group of stakeholders and considered what was important to measure and what data available. (for regional indicators) Went through a 5-year, very inclusive and extensive process for coming up with MetroFuture – the region's 30-year plan (citation). MetroFuture comprises 65 specific

goals for the year 2030, as well as objectives and indicators to measure progress toward achieving the goals. The regional indicator project consists of these indicators developed as part of MetroFuture.

- Greater Portland Pulse – Started with the categories of indicators, found experts in the different categories, asked experts for 18-month commitment. Then in each category they identified desired outcomes (goals) and then drivers that could contribute to those outcomes. Indicators measure drivers and once these were identified they researched to see if they were available. Criteria – data available, represent all four counties in the region, represent the racial/ethnic categories of residents in the region, indicators allow for the detection of disparities.

- Healthy Communities Atlas – Formed a small working group that consisted of the consultant's team, public health agency representatives, and the San Diego Association of Governments staff. This group used their technical understanding and knowledge of the literature to propose indicators to include. Public Health Stakeholder and Technical Working Groups reviewed and approved of the final set of indicators. Criteria – data available to create recommended indicators at the desired geographic scale (Census block group).

- California Department of Public Health Healthy Communities Data and Indicators Project – Indicator domains came from the one-year (and five meetings) visioning process that the Health in All Policies Workgroup engaged in. Also BARHI and County Health Rankings were guides. Criteria – validity and reliability, availability of data, sustainability of the data source, data updated, use public sources of data whenever possible.

- Housing and Urban Development Healthy Communities Index – Very extensive process. HUD and consultant, Healthy Housing Solutions (HHS), proposed ten domains. HHS conducted a literature review to identify indicators in these domains. They asked a group of subject matter experts to do additional literature review for the ten domains and considering a set of criteria, propose two to four indicators in each domain. Then HHS and HUD asked a National Advisory Panel (about 25 people) to go through a similar feedback process based on a set of criteria and HUD/HHS are now in the process of incorporating the NAP's feedback. Their goal is to have approximately 40 indicators. Criteria – measurability, nexus to health, data availability at a neighborhood scale, publicly available data, indicator actionability, community relevance. They are in the process of finalizing the final list of indicators and this has taken about a year to get to this point.

- Mariposa Healthy Living Toolkit – Started with SCI indicators and adapted to Denver. Criteria – data availability, indicator relevance to the decision on the housing redevelopment, and the scale of the development. Had a community and a technical working group review the indicators. Did a round of review in 2009 (took two months) and an updating round in 2012 (included a more rigorous process). Referenced the literature and the NYC Active Design Guidelines, as well as LEED-ND, LEED-NC, Enterprise Green Communities Criteria, and the Sustainable Sites Initiative.

- MetroPhilaMapper – Much of work done in-house and with a 15-member advisory group that involved business, finance, education, child advocacy, environmental organizations.

- Minneapolis Sustainability Indicators – The initial process was consensus based and a community process. Now they update the list and this process takes about six to eight months. For update, start with the city departments (subject matter experts), confirming this is still the best way to measure this and what is the appropriate target level and year. The environmental advisory commission gives feedback and the city council members give feedback and approve them.

- Oregon Rural Communities Explorer – Their process is not that extensive because they do not have much of a filter. Their goal is to make as much data available as possible and to make it simple and easy to use. They do not have targets for their indicators. They adjust the indicators as necessary when they do yearly updates, so they do not get too concerned with getting it perfect.

- Seattle Healthy Living Assessment – Mostly an internal process of coming up with the indicators, but since they used them in conjunction with a survey and could get feedback about the meaning of the indicators, they indicators were supported by a community process. Criteria – based on existing data, presence of research indicating a connection between the indicator and population health outcomes, available at the neighborhood AND city level.

- Sustainable Communities Index – Selected as part of a community visioning and planning process and informed by academic research. Also informed by needing to be collected and maintained over time. The process of updating them is more internal and based on research, knowledge and experience now.

- Transportation and Health Tool – With a set of core partners (CDC, Department of Transportation, American Public Health Association, Planning Communities), came up with a long list of potential indicators. Then did literature search and removed many of these (down to 34). Criteria – research and understanding of the indicator, data availability, scale of date, data coverage, balance between topic areas, meaningful/understandable. Then talked about with a group of about 40 experts and got down to 14 indicators. Not calling contextual factors indicators.

Collecting, processing, and updating data for indicators

- Baltimore DataMind – Using Census data and other city agency data.

- Boston indicator projects – Use available data and have some funding to collect their own data. University partner was helpful for data issues.

- Greater Portland Pulse – Rely on data that is public and free. Also relied on stakeholders who were data savvy and graduate students helped too. Initially took three to four months to get data up. Have access to university's resources – the office of academic computing (this is a huge advantage). They use Weave, which allows them to upload spreadsheets to it. They can be pretty simple and quick about inputting and uploading data.

- Healthy Communities Atlas – Urban Design 4 Health did all the data collection and processing. It took a while, but they have documentation, so it could be updated if desired.

- California Department of Public Health Healthy Communities Data and Indicators Project – Using mostly public sources of data. Data from state agencies. Have in-house technological capacity to process and prepare data, but looking to hire others to help.

- Housing and Urban Development Healthy Communities Index – Doing initial steps of figuring out how to apply the data to the indicator and will provide technical assistance – to make it easier for pilot cities to get the data, process it and upload it.

- Mariposa Healthy Living Toolkit – Relied on preexisting data (Census and City agency data) and surveys that were already done and relevant for the neighborhood. Also partnered with the local boys and girls club to implement the Pedestrian Environmental Quality Index, and did some limited mapping analysis.

- MetroPhilaMapper – Had to mostly rely on existing data and documentation. They could not get access to some city data. Started getting and processing data in-house and then used outside help for mapping.

- Minneapolis Sustainability Indicators – Update process takes four to six months. Work with partners (e.g., public health department) to get the data and some partners process it for them. Use Census data and they do the processing.

- Oregon Rural Communities Explorer – Use available data. Update yearly. Takes about four months to update the data. In some cases they have to key in the data (if they got it from spreadsheets). They prepare the data in spreadsheets and upload those into a SQL server.

- Seattle Healthy Living Assessment – They use data that is in the public domain, but some of their data was collected manually because this was easier and more reliable. Also developed relationships with city departments with data (like police precincts), which was important. They also do surveys as part of their process.

- Sustainable Communities Index – Rely on data that is easier to get (Census) and that they can get access to through other city departments and data partners (DataSF). Very time intensive to update it – took them over a year to get the data, clean it, process it, and upload it.

- Transportation and Health Tool – Using regional and state-wide data, so this is not as much of an issue for them. Their issue is more about whether or not indicators are meaningful at a state or regional scale.

Interface and backend

- Boston indicator projects – Open source. Use Weave as data visualization component. Use Jengo and Geoserver. Mentioned Tableau as having a nice interface, but this is proprietary. They seem really tech savvy. Advice: look for a technical partner.

- Greater Portland Pulse – Graduate student designed interface. Use Weave, but don't necessarily recommend it. They have help from the university's computing department when they have issues with Weave.

- California Department of Public Health Healthy Communities Data and Indicators Project – Have technical capacity in the main leader of the project and with input from others. He is the web master.

- MetroPhilaMapper – Designed in-house. Not too sophisticated. Mapping done by a consultant

- Minneapolis Sustainability Indicators – Designed in-house and also with the help of an intern interested in these. Use the city's content management system

- Oregon Rural Communities Explorer – Used one programmer, some contractors and the university's existing design to create the interface and the structure of the data. They also focus group tested them and have checked in with users to make sure the interface is still working.

- Sustainable Communities Index – Had one contractor design the interface and back end with the input of staff in the department. The interface is simple – you input text and upload tables and maps. Once their structure was in place it is easy to work with, but more set and hard to change if you wanted to.

Outreach process

- Baltimore DataMind – Haven't really done any outreach but are thinking of partnering with foundations to get grants to train community members.

- Boston indicator projects – Do specific outreach. Trainings every other week and conference once a year or every other year focused on how to use data for civic change. Blogging and Twitter.

- Greater Portland Pulse – Put out a newsletter to report on data updates and new developments, present at conferences, Facebook page points out connections between current events and data. Do specialized presentations to potential partners (Portland Community College) and they (when asked) will do data customizations and special projects. Are working on publishing a tool box and case studies for how to use an indicator site. Attend conferences – regional equity conference.

- Healthy Communities Atlas – Worked through established stakeholder groups put together by the MPO. Also thought that the word got out through the representatives for the local jurisdictions, as these were a primary intended user.

- California Department of Public Health Healthy Communities Data and Indicators Project – Haven't done a lot. Planning to do it through pilot projects as there is a strong participatory element to getting users involved. Plan to put out manuals on how to do specific things on the website.

- Housing and Urban Development Healthy Communities Index – Will happen through pilot cities – more up to them how they want to do it.

- Mariposa Healthy Living Toolkit – Its written materials are intended to facilitate the continued use of this tool in other planning processes. Getting people involved in the planning process that used the tool is also part of the outreach process.

- MetroPhilaMapper – Series of workshops that trained a wide variety of users (legislative assistants, mayor's office of community service, people in social services agencies).

- Minneapolis Sustainability Indicators – No outreach or trainings.

- Oregon Rural Communities Explorer – Trainings around the state (1 to 2 hour workshops, 8 to 12 per year) and are part of a leadership development training that their funder puts on. Maintain listserv of users. Facebook and Twitter. They have a person who does the trainings and he also provides some assistance for users who need it (not time intensive, though).

- Seattle Healthy Living Assessment – The tool is the outreach and it brings together different city departments and community members and organizations.

- Sustainable Communities Index – They do about one training per year on the tool for community groups and/or city agency representatives. They do an indicator exercise as part of its Health Impact Assessments training that they do once per year. They do meetings by request too with community organizations and actively build partnerships with representatives in other agencies or organizations around certain indicators.

- Transportation and Health Tool – educating champions at different geographic scales and across jurisdictions.

Funding/Costs

- Baltimore DataMind – Self-funded. They are a private company. About $100,000 (annual).

- Boston indicator projects – The Boston Foundation funded the Boston Indicators Project and this was done collaboratively and with general operating funds for the Metro Boston Indicators Project.

- Greater Portland Pulse – A few different organizations put in funds to get it started (between $5,000 and $60,000 each) and these are their core partners. They continually look for funding, which is hard. $250,000 per year

- Healthy Communities Atlas – Project (and the consultant who executed it) were written into the CPPW Grant about $150,000.

- California Department of Public Health Healthy Communities Data and Indicators Project – A two-year grant was part of the sustainable communities and climate change reduction portion of Proposition 84. They will need to get other funding for operations and implementation, especially for any IT-related projects, such as a more robust web interface, as the approval process requires more extensive documentation on what the functionality and capacity of the project will be. CDPH is currently applying for other grants to support this effort, $150,000 to $200,000.

- Housing and Urban Developement Healthy Communities Index - The HCI is one aspect of HUD's three-year Healthy Communities Transformation Initiative. Funding of $500,000 per year includes indicator selection and creation of the Index itself; development of a web-based Assessment Tool; and the piloting stage.

- Mariposa Healthy Living Toolkit – funding came from the planning budget as part of the pre-development costs for the development. What they ended up doing was more than they were funded to do. About $50,000; excluding additional in-kind staff, partner, and consultant time.

- MetroPhilaMapper – Three-year grant from the William Penn Foundation also used funds for another project and put it towards this. $125,000 to $200,000 per year.

- Minneapolis Sustainability Indicators – Project funded through the Office of Sustainability through the City of Minneapolis general operating budget.

- Oregon Rural Communities Explorer – Funded continually through the Ford Family Foundation. At beginning Oregon State University contributed money to the project. Library also has kicked in money. Project has taken more of people's time than expected and people have given more of their time than they are being reimbursed for. $100,000 per year, but should get more.

- Seattle Healthy Living Assessment – Communities Putting Prevention to Work (CPPW) grant and then transferred funding to general fund. About $60,000 (total CPPW grant was $108,000 and the Healthy Living Assessment took about half)

- Sustainable Communities Index – Functions supported by general fund.

- Transportation and Health Tool – Funded by Centers for Disease Control and Department of Transportation. Total about $180,000 per year (3-year project).

Staffing

- Baltimore DataMind – One to two people not full time

- Boston indicator projects – Have about ten people, but no one works on the indicators project full time. Everyone has other responsibilities and sometimes this other work contributes to and complements the indicators data.

- Greater Portland Pulse – One full time person, two part time graduate students, a couple others who devote some time, but are not close to full time.

- Healthy Communities Atlas – Had 4 people working (none full time) on it plus the consultant, who carried much of the execution responsibility. Consultant likely had more than one person working on it, but no full time commitments.

- California Department of Public Health Healthy Communities Data and Indicators Project – More than 1 person devoting only a portion of their time to the project.

- Housing and Urban Developement Healthy Communities Index – Too many people involved to give an accurate estimate. In addition to a number of subject matter experts, two staff from Healthy Housing Solutions very involved, and a team from HUD with two main HUD staff.

- Mariposa Healthy Living Toolkit – Two to three people working on it but not devoting all of their time.

- MetroPhilaMapper – One project manager devoting most, if not all of their time. Two to three graduate students. Also higher level people involved at some percentage of their time.

- Minneapolis Sustainability Indicators – Two staff and one intern, though not sure if the two staff are full time on this project (probably not).

- Oregon Rural Communities Explorer – One person full time, plus through two people and some graduate research assistants they make less than one full time equivalent (less than 2 full time employees).

- Seattle Healthy Living Assessment – Approximately five people work on the project, though they don't devote near all of their time to it.

- Sustainable Communities Index – Approximately four people working on it some with one of these people devoting more time than the others and with help from interns here and there.

- Transportation and Health Tool – Four people, one of whom is devoting most of their time to the project. Six to eight people with some involvement on a more regular basis.

Benefits/Challenges

- Baltimore DataMind – *Benefits*: data visualization is rewarding and not many people are doing it. *Challenges*: Funding challenges. Technology challenges – finding the right program (e.g., google maps or policy map) that is user friendly and has the functionality you want (ability to print or paste an electronic version into a file). Getting the word out about the project was hard. Collaborating with partners – had a hard time reaching and connecting with organizations doing similar things to make the work less redundant and to pool resources.

- Boston indicator projects – *Benefits*: Its collaborations around the data and indicator work is key to the longevity of the project. For example, if there are leadership changes, the project doesn't end, but you can figure out how to shift responsibilities temporarily. *Challenges*: collaborations are hard. One example, partners are accountable to different people and have different timelines, so it can be difficult to align goals and schedules to accomplish something everyone is happy with. Can be hard to please everyone.

- Greater Portland Pulse – *Benefits*: are just starting to be more strategic with getting the site and information used and creating partnerships after three years (most of this time was spent developing the indicators). Being part of the NNIP has been a big benefit – having leaders and examples to follow. *Challenges*: tradeoffs between budget and data collection or sophistication. Has been hard to operate in the absence of an overarching ideology or framework because they can't advocate for anything themselves. Having a regional focus is both good and bad – makes data issues hard sometimes – e.g., getting consistent data.

- Healthy Communities Atlas – *Benefits*: got a good and useful product that caught people's attention and is being used by some. *Challenges*: they had wanted to connect health outcomes to measures of the built environment, but the health data collected are not easily comparable due to their scale. Collecting the data, storing it, and disseminating it are all challenges, but they did overcome these to produce the Atlas.

- California Department of Public Health Healthy Communities Data and Indicators Project – *Benefits*: infrastructure and programming resources (e.g., systems that function through the same programs, like SAS) make it so you can do more with your initial investment. Collaborations with other indicator projects and a commitment to not be competitive or redundant. *Challenges*: collaborations – responding to the needs of different organizations and being flexible. May have to change original plans to create an indicator that is more used. Challenging to get all user communities engaged. Getting data is challenging.

- Housing and Urban Development Healthy Communities Index – *Benefits*: having a very thoughtful and robust process for selecting indicators that involved a large group of stakeholders with a diversity of perspectives. *Challenges*: Getting people on the same page about goals and data. Keeping the project moving. Having the project be used. Tradeoff between making data easy to use or sophisticated and fancy. Can take a long time to do it right and have a robust process.

- Mariposa Healthy Living Toolkit – *Benefits*: Brought people to the table that normally wouldn't be involved in housing decisions. Successfully integrated indicators into the redevelopment process. Developers now required by the housing authority to meet criteria plan for health outcomes. City council member became champion of integrating health in decision-making. *Challenges*: tracking data over time – who should do it, at what level, and the best way to do it. How to talk about health, especially to community members. Keeping people involved over the long term and how to motivate change. Making evidence at a higher geography relevant for very localized planning and issues.

- MetroPhilaMapper – *Benefits*: pushed idea of data as important for informing community priorities. Earlier system to join the NNIP. System fulfilled its original purpose and goals. *Challenges*: the regional scale made it hard to ground the data in local issues. Getting stakeholders on the same page about the project's goals. For example, funder was hands off and an academic institution, so they were more interested in data quality and publishing, rather than on community concerns. Funding challenges – funded by a foundation that was hands off and had different priorities. Funding priorities also shifted from the goals to make data available to make better policy and program changes to an impact oriented purpose where people wanted to show changes. All their challenges caused the project to now become an archive that doesn't get updated. They emphasized having multiple sources of funding and having a connection to the community to increase project sustainability and longevity.

- Minneapolis Sustainability Indicators – *Benefits*: incorporating indicators in ongoing performance review, which validates them and confirms their utility and importance. Figuring out how to go from a paper report to online reporting was a big success, especially doing so at a low cost. Important to pay attention to emerging issues and reflect those in the tool. Has been good for them to have engaged policy-makers at a high level and to have them see value in the process. *Challenges*: Indicator selection decisions difficult – what to measure and how to measure it. Census data is unreliable at small geographic scales.

- Oregon Rural Communities Explorer – *Benefits*: have seen some success with their initial goal of elevating the conversation – people ask more about relationships between community characteristics and how to use the information in program planning. Their site is really easy to use. Businesses are using the information for the business decisions, which shows there is an

economic development benefit to the work. They have modest goals, so they can pay attention to doing them well. *Challenges*: updating a lot of data every year, which requires people and they don't have a lot of people. Foundation funded, which feels tenuous. Data quality is hard – you need people who are able to keep the data straight and who pay attention to the details and can see when things are funky. This is a challenge with using grad students. Challenging to get people to use the data to make decisions. People use the data to justify something that they are already doing, rather than it determining what is done. Challenging having the goal of democratizing access to data, but maintaining the credibility of the data and them as the resource.

- <u>Seattle Healthy Living Assessment</u> – *Benefits*: The tool is a great complement to community process. It champions people and takes people to champion. It is and continues to be the primary fabric of planners and public health people. They are looking to implement it again locally and even share it with others in different locations. *Challenges*: data and resolution are challenges. Challenging aligning frameworks and goals – public health and planners want them to be able to connect the work to specific health outcomes, but this doesn't make as much sense to the community and it is not always possible to do. They have moved to talking more about community resilience, the presence of jobs and economic development. These are also things that are harder for planners to work on. It is a challenging framework for planners – think about things holistically and broadly.

- <u>Sustainable Communities Index</u> – *Benefits*: It is an amazing tool. They haven't seen many like it, that are simple and effective and with visually compelling maps. They have created strong partnerships. For example, their work around pedestrian safety corridors has resulted in these maps being posted in police stations and used for decision-making. Some indicators are really powerful and are used by different groups and city agencies. The tool has helped institutionalize relationships with other city departments. Has resulted in the health department being viewed as a neutral entity that can bring information about health relationships and data to decisions being made across the city in a variety of sectors. Specifically, their air quality work has contributed to the addition of an article to the health code that specifies sensitive use categories and air quality areas of concern and requires the use of filtrations systems to remove a percentage of the particulate matter. They have done different but similarly exciting work around making building code violations data available and creating standards for publishing it online and in commercial contexts, so people can use it to make decisions about where to live. *Challenges*: time intensity of maintaining and promoting the information and data – they have more than just data, but also policy and design standards, literature evidence, and promoting the development checklist. It is hard to keep the staff and tool in people's consciousness to have the data used and make a difference in decision-making.

- <u>Transportation and Health Tool</u> – *Benefits*: a very comprehensive literature review has told them areas that need more research and is an amazing resource. *Challenges*: everybody brings a vision of what they want it to be and some are experts with strong opinions. You have to manage expectations very carefully. You need to have a strong and clear set of goals and a vision that you can keep coming back to in these challenging times.

Appendix C: Interview Instrument

San Diego Association of Governments/Health and Human Services Agency – Health Analysis Tool Scope Development
Best Practices from Other Locations

<u>Name of the indicator system and location:</u>

Name of interviewee:
Interviewee's affiliation:
Date of interview:

Explanation of the project and request for input

I am with a non-profit organization, based in Oakland California, called Human Impact Partners. Just to tell you a little bit about us - our mission is to increase the consideration of health and equity in decision-making and we do this by raising awareness of and collaboratively using data, processes and tools to evaluate the health benefits, impacts and equity implications of decisions.

I'm talking to you today because the San Diego Association of Governments (also known as SANDAG) and the Health and Human Services Agency (HHSA) in San Diego, as part of their Community Transformation Grant from the Centers for Disease Control, have hired us to develop a scope for what we have been calling a health analysis tool – which is just a fancy name for an indicator system. The tool is one part of a broader strategy to build capacity throughout the San Diego region to conduct health assessments on a variety of proposed planning-related projects, policies and plans at the regional and local levels.

In this context, our partners in San Diego have asked us to do some research to better understand other efforts to scope, develop and implement similar types of health analysis tools or indicator systems that have been created across the country. We have done a scan of other indicator systems (of which there are many) by looking at what is available online and have narrowed our list down to a few that we would like to learn more about. We have prepared a list of questions to help us understand best practices in terms of the goals, applications and users of other indicator systems; the processes utilized for scoping, developing, marketing, staffing and maintaining projects; and successes and challenges experienced in these efforts. We are planning to interview about a dozen locations and summarize what we hear in a report that we will present to SANDAG and HHSA.

We have identified the XX as a project that we would like to hear more about. We think your experiences will be very valuable for our partners and we would very much appreciate your time and insights related to the project. Would you be willing to participate in the interview? It shouldn't take more than an hour.

Do you have any questions for me before we get started?

Questions

Purpose and Applications

1) Why did you decide to create the XX? What were the goals of the project? What would you say is the primary purpose for the XX?

2) Who are the users? *[Prompt: If the groups below are not mentioned, ask about them specifically]*
    ___ local planning jurisdictions
    ___ public health departments
    ___ other government agencies (e.g., transportation, housing)
    ___ community groups or advocacy organizations?

3) Do you know how these different groups have used it and what have been some of the outcomes?

4) Do you have a sense for how much (or how little) it is being used by different groups *[Prompt: frequent, occasional, never]*? If you have an online version and a paper version (or report), do you have a sense for which is more utilized?

5) Who are some of your partners and how do you work with them? *[Prompt: partners could be development or implementation-related or client/user-related]*

6) Is the project part of a collective with other locations? If so, what do you have to do to be part of the collective?

Process

What has been your process?

1) For funding the project? *[Prompt: Where does your funding come from? Was it difficult to secure? Did you have to convince any particular people and how did you do that?]*

2) For selecting the indicators? *[Prompt: Did you do research to inform your choices? Who was involved in making decisions about indicators to include/exclude? Did you engage any stakeholders in particular (policy-makers, agency staff, community/advocacy organizations, others)?]*

3) For getting and processing the data? *[Prompt: you could give me a couple examples of data sources and how you got them?]*

4) For designing the components and interface and adding the data? Did you work with any contractors? *[Prompt: process for implementing the online technological components?]*

5) For outreach to or training for potential users, or piloting the project in a particular area? Do you have a sense for the level of ease or difficulty of use?

6) What is your philosophy on high resolution data (i.e., small geographic scale)?

7) How many staff people work in the program/department that is responsible for XX?

8) What were and are the costs – actual and/or staff time – to implement, maintain and respond to questions or requests about the system? How involved does staff have to be every time the tool is used?

Reflections

[Pay attention to things that have already been mentioned that these questions ask about]

1) What were some of the things that worked out really well with the project?

2) Did the system fulfill its purpose and/or meet its goals?

3) Did you have any unexpected benefits or issues that came up (e.g., audiences, users, applications, design aspects)? If issues came up, how did you deal with them?

4) What were/are some of your challenges? *[Prompt: challenges related to indicators and data, implementation or maintenance, and/or promoting the tool and having it used]*

5) Do you have anything else to share about the project overall or implementing and sustaining it?