

DATA AND DECISION-MAKING

Indicators, actionable data, and ‘model villages’: NEO CANDO as an example for similar systems in India¹

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Introduction

The 74th Amendment to the Constitution in 1993 mandated constituting district planning committees (DPCs) and metropolitan planning committees (MPCs) across the nation. Traditionally, India's five-year plans at the national level were the vehicle for the country's efforts at planning for economic and social development since independence. Data and information needed for the new decentralized planning model is markedly different from the national and state-level aggregate information that is currently common. To serve the data and information needs of decentralized planning at the village and district level, a new set of institutions and/or institutional arrangements are required that will play a similarly vital role at a local level. Model villages, as envisioned by this Seminar, are possible through participatory planning and informed decision-making.

To meet the new data needs in an effective way, we present a relatively new paradigm, '*democratizing data*', that was introduced a few decades ago in the United States and is quickly gaining wide-spread support across the world. We present here the North East Ohio Community and Neighborhood Data for Organizing (NEO CANDO), a comprehensive and integrated data system built on innovative institutional partnerships. It provides data on local-level *actionable* indicators to inform local-level planning. NEO CANDO exemplifies the new paradigm of *democratizing data* for local decision-making. This paper is a contribution to the ongoing robust discussion on methods and models for effective, efficient, and equitable planning and policy decision-making in the new environment of decentralization in India.

1. Decentralized planning: the new environment

While decentralization of governance is hardly a novel concept in independent India (Venkatesan 2002), the 73rd and 74th Amendments to the Constitution enacted in 1993, set the legal framework for the first time in more than sixty years of independence (Tandon, Agnihotri, & Ramachandran 2001). These amendments rendered constitutional recognition to a three-tier (two-tier in states with population below 200,000) grassroots Panchayati Raj institution (PRI) system in the rural areas and, the urban local bodies (ULBs) in metropolitan centers (Government of India 2007). In rural areas, the district level Zilla Parishad (ZP) forms the top tier, followed by a mid-level grouping of villages – variously referred to a Mandal/Block/Taluk /Panchayat Samithis – forming the second tier⁴. The bottom tier is the village-level Panchayati Raj institution. A proportion of representatives in each of these institutions, both urban and rural, are popularly elected from territorial constituencies within the jurisdiction. States may appoint some of the representatives to these local governing bodies as provided in the constitution⁵. Additionally, in rural villages, the Gram Sabha (GS), constituting all voting age members of the village, is akin to the general assembly of the village. The GS is considered the principal mechanism for transparency and accountability (Johnson, Deshingkar, & Start 2003). The amendments also required states to conduct elections to these local governing bodies supervised by a State Election Commission (SEC) and constitute a State Finance Commission (SFC) to advise on and monitor their financial situation.

⁴ For the purposes of this paper, we will refer to the mid-level Panchayati Raj institution as Mandal Parishad (MP).

⁵ The 73rd and 74th Constitutional Amendment Acts contain provisions for State legislative bodies, if they choose to appoint representatives to local Panchayati Raj institutions.

In effect, the 73rd and 74th amendments to the Constitution required and enabled the States to enact legislation to facilitating these constitutionally recognized local government bodies to function as self-sufficient institutions of local governance. The amendments also suggest states may transfer decision-making authority to local level for several sectors of the local economy, included in the eleventh (PRI list) and twelfth (ULB list) schedules.⁶ In response, several states in the country passed conformity legislation – to amend their existing law and confirm with the 73rd and 74th Amendments – to devolve funds, functions, and functionaries to local level, although to varying degrees of compliance (Government of Andhra Pradesh 2007).

Parallel to this decentralized governance structure and to effectively transfer decision-making to a local level, the 74th amendment also stipulates a basic network of planning institutions at the district and metropolitan levels. District-level (top-tier) planning committees (DPCs) were to be set up to enable local planning on a periodic basis. Their plans were to be a consolidation of the plans prepared by lower-tier bodies⁷. Similarly, Metropolitan Planning Committees (MPCs) were to be set up in large metropolitan areas.

Individual states may determine the constitution and assigned functions of DPCs and MPCs within some broad guidelines laid out in the amendments. DPCs and MPCs should be composed of both elected and appointed members. No less than four-fifth of DPC membership (and two-third in MPCs) should be elected by and from among the elected representatives, at any level of governance within the district (or within the metropolitan area). State Legislature may appoint members of special technical capability to the DPCs and MPCs and may require the committees to consult with specialized institutions and organizations on specific issues. State Legislature may also decide the manner in which chairpersons of these committees are chosen.

DPCs and MPCs were to prepare comprehensive and integrated plans addressing the needs and opportunities within their districts or metropolitan areas. These plans should cover all sectors assigned to them by the State Legislature and deemed important by the citizens and other stakeholders in their area. Such plans were to be submitted, on a periodic basis, to the concerned state government. Thus, the 73rd and 74th amendments to the Constitution set in motion a fundamental transformation of a centralized, top-down governance and planning infrastructure in India into a decentralized local-level governance and planning infrastructure by installing a hierarchical network of embedded institutions that are expected to facilitate citizen participation and bottom-up decision-making. DPCs, MPCs, and their planning functions are among the foundational components of this decentralized decision-making structure.

⁶ The Eleventh Schedule to the constitution suggested twenty-nine different substantive areas of governance, with more if a particular State chooses, to be delegate to the village level panchayats and the GS, the lowest tier of governance. These areas include several sectors of rural economy such as agriculture and animal husbandry to matters of service provision such as electrification and drinking water supply. In the case of ULBs this list, incorporated into the constitution as the Twelfth Schedule, includes eighteen different areas of governance.

⁷ Village-level Panchayats and mid-level Mandal Parishads/Panchayati Samithis are expected to prepare their own plans. No separate planning institution is mandated at this level by the Amendment.

2. Current functioning of DPCs, MPCs and other local-level planning bodies

Several limitations in capacity of DPCs and MPCs exist. Some of these limitations are inherent, owing to their existence for only a short period of time since their constitutional recognition⁸. Other limitations are a product of the need for administrative and bureaucratic restructuring and the related need for change in attitudes and approaches of existing structure. The Expert Group on Planning at the Grassroots Level (Planning Commission of India 2006, p. 34-35), constituted by the Ministry of Panchayati Raj to assess planning at grassroots level, identified several shortcomings in the functioning of DPCs:

- In most States DPCs are yet to function as envisaged in the Constitution. They neither consolidate nor prepare draft district developmental plans.
- Very few States are preparing district plans even though some of them allocate funds to the district sector.
- In several States, where there is no separation of the budget into District and State sectors, allocation of funds to Panchayats does not match the legislative devolution of functions to them.
- Funds given to Panchayats are tied down to schemes⁹, thus limiting the scope for determining and addressing local priorities through a planning exercise. In this regard, [centrally sponsored schemes] CSSs pertaining to functions devolved to Panchayats now constitute the largest element of such tied funds.
- Actual provision in State budgets also differs from the gross outlays communicated. Some States do not provide matching funds to Centrally Sponsored Schemes, reducing the actual flow of funds for such Schemes to local governments.
- 'Planning' is of poor quality and is generally a mere collection of schemes and works, many of the works suggested by elected panchayat members themselves is an ad-hoc manner. Integration of Gram and Taluk [Mandal/Panchayat Samithi] Panchayat plans into the District plan, even when done, also tends to be mere summation and not a synergistic integration. This is further distorted by placing funds with MPs and MLAs¹⁰, whose utilization falls outside the pale of any planning.
- Since the so-called planning exercise follows certain chain of events at the State level as regards finalization of budgets and plans, its quality suffers seriously for lack of sufficient time. Thus detailed guidelines regarding consultation, consideration and decision making at different levels remain largely on paper and the planning process does not stir meaningful debate in Panchayats.

⁸ The Central Government insisted that DPCs are formed in order for lower-level jurisdictions to receive funds on specific projects such as the Backward Regions Grant Funds (BRGF). (Sitaram, personal communication, July 3, 2010). However, district planning is not a new concept and DPCs existed in some areas of the country before the 74th Amendment.

⁹ Central and State government in India develop and implement directly sponsored schemes in various sectors. Schemes mostly involve a supply-side intervention such as provision of basic commodities or services at subsidized prices to eligible beneficiaries. Such Centrally Sponsored Schemes (CSS) or state sponsored schemes are implemented by existing administrative infrastructure, typically bypassing the PRI/ULB institutions recognized by the Constitution. Where included, PRIs/ULBs largely serve as implementing agencies for such centrally designed schemes (Manor 2004; Varigonda 2009).

¹⁰ Members of Parliament (MP) and Members of Legislative Assemblies (MLA) of individual states

- In the absence of a well functioning District Planning machinery, taking decisions on the priorities of a district is often left to officials, guided by district development committees, which consist largely of elected representatives of legislatures and Members of Parliament and some nominated members, sometimes including elected representatives of Panchayats.

In response to these limitations, the Expert Group (p. 36) recommended that instructions be issued to all states and central ministries and departments that:

- CSS guidelines that entrust the task of district level planning and implementation to parallel bodies, such as DRDAs and District Health Societies¹¹, need to be modified to incorporate the District Planning Committee in the process of District level planning.
- The Planning Commission could inform States that the DPC would be the sole body that is entrusted with the task of consolidating plans at the district level.
- The Planning Commission could specify a time frame within which States will need to issue detailed instructions covering the manner in which the DPC would perform its functions.

Other specific recommendations of the Expert group include a separate district planning secretariat that can cater to five different areas of their functioning: Municipal Plans, District Panchayat Plans, Intermediate Panchayat Plans, Village Panchayat Plans, and maintenance of data and undertake research, with the necessary support in terms of information technology and qualified research assistants. These specific findings for DPCs and MPCs also apply at a village level. While the first four areas are specific to a certain level of planning, the final recommendation of support for data and research cuts across all levels of planning. This is identified as one of the central needs of local level planning infrastructure.

3. Data needs of local planning bodies

Data needs for local planning may include several thousands of indicators. As mentioned previously, PRIs and ULBs can be assigned responsibilities for several sectors of the local economy. For Panchayati Raj institutions in rural areas to make effective, efficient, and equitable decisions, Mani (2006, pp. 78-98) lists more than 200 indicators on which data should be available for each village. These indicators are mostly infrastructure related such as number of hospital beds or school facilities. In addition, decision-makers and planners will need socio-economic data on individuals and families to determine the needs and identify opportunities within each community.

¹¹ Several departments and ministries, both central and state, promoted the constitution of self-help groups (such as water user associations and school committees) within local communities to identify priorities and needs of the community as they relate to the tasks/programs/schemes of that particular ministry or department. These self-help groups, although representative of the local population, are independent of the PRIs/ULBs and are governed by members of the group that are either elected locally or appointed by the concerned ministry. Other agencies such as District Rural Development Authority (DRDA) are full fledged government agencies implementing centrally sponsored and other schemes. Owing to the lack of formal relationship to PRIs/ULBs, these self-help groups are referred to as 'parallel bodies' (Varigonda 2009). They are essentially independent of local government and are more resourceful due to the grant funds that directly accrue to them from the departments and ministries.

Some of this data already exists. Where available, such data is collected for specific purposes of a particular scheme or program and resides with the concerned department.¹² For example, Lal et. al. (2002) analyzed a health information system for the Reproductive and Child Health (RCH) program in Haryana, a northern state in India, and found that the local health centers collect and organize local health information at a family and individual level in thirteen different hand-written registers. Substantial information is collected on a regular basis but seldom checked for quality. Health workers use this information to report on health outcomes to higher authorities in the departments. Information collection is done as an end in itself and is seldom used for any planning purposes. Moreover such detailed information, sometimes aggregated to the village level is not shared with the village leadership for any meaningful planning or decision-making.

Another example is the large database that is being constructed as part of centrally sponsored schemes to alleviate poverty. To establish eligibility for poverty alleviation programs in India the initial attempts were miniscule and ended in several inefficiencies. In order to overcome the barriers to effective targeting, the Ministry of Rural Development conducted a door-to-door below poverty line (BPL) census in 1992. Various improvements to the survey instrument over three waves of the survey resulted in better estimates of poverty, although there is much room for improvement (Hirway 2003). Lack of reliable system of identification, local database of individuals, families, and their socio-economic conditions cripple the efforts of governments across the world in accurately identifying beneficiaries of several of their services (Vadapalli 2009). Availability of local-level data, or lack there of, determines the effectiveness of any policy/program, whether national, state, or local (Mani 2006). Rao (2009) makes a strong case for institutionalizing BPL surveys on a much larger scale to include every household, not just the potentially poor. In line with the suggestions of the Expert Group, Rao (2009) advocates for the local government bodies (PRIs) to take on the responsibility for such an extended survey on an annual basis.

In spite of the existence of large data sets on several indicators, due to the specific requirements of schemes or programs, data collected for one scheme may not be consistent with data collected for other schemes. There is much room for duplicity of efforts and lack of quality due to poor training, incentives, or oversight (Mani 2006). Additionally, data on these indicators should be collected on a regular basis and compiled in a format that can be used for planning purposes. Such data should be widely accessible to promote meaningful participation at a village and other local levels (Rao 2009).

¹² Most data on social indicators are project specific and collected by central agencies. These are sample data. Such data is aggregated at higher levels of geography. For local planning and program implementation purposes local governments may derive relevant data on a percentage basis from the aggregate data available at higher levels of geography. Although this may meet the immediate need, there are several problems. Aggregates on available indicators at a higher geography may not reflect the exact extent and depth of incidence of a particular indicator within the jurisdiction of a local government or planning agency. Since data collected is project specific, data on all necessary indicators may not exist. Also, data from one source may not be consistent with data on the same indicator from a different source (Kandula, personal communication, July 2, 2010).

To enhance the quality and rigor of local planning efforts, the Expert Group, in light of their recommendations listed in a previous section above, suggested that district planning be assigned a separate and permanent secretariat at the district level staffed with qualified personnel (Planning commission of India 2006). In addition, the Expert Group also recommended enlisting the institutional support of universities and other research institutions, both at the district and state level, in planning, monitoring, and evaluation. Such support would be in addition to the regular technical assistance that the Planning Commission of India provides to the DPCs. To meet these data and research needs, innovative ways of providing such capacity at a local level should be sought.

Therefore, what emerges from the above discussion is, for a model village as envisioned for this Seminar to be a reality, not only the required governance structures should be in place and functional, but also a strong informational and data infrastructure should exist to inform the local decision-making leadership. For such informational infrastructure to exist, several organizations should play a role. Village level Panchayati Raj institutions, higher level planning and governance institutions, universities and research institutions, self-help groups, NGOs, and CBOs should all participate in making such information and database available at a local level. The next section describes one such system that has been in existence for more than two decades and serves very similar functions to build ‘model villages.’

4. North East Ohio Community and Neighborhood Data Organizing (NEO CANDO)

This section describes an online data and mapping system that was designed for the purposes of strengthening local planning and decision-making. Presented here are: the historical context leading to the establishment of NEO CANDO, the foundational principle of ‘democratizing data,’ the organizational support of the database, and some examples of how the database is being used in practice. This database is housed within a major private urban research university in the United States, and supported through several innovative partnerships with government and non-government organizations. The model presented here is replicated in several cities across the United States and other countries. Although the political and historical context is somewhat different, the constitution, structure, and uses of this model hold many attractive features applicable to the current decentralization context in India.

4.1 History

In the later half of the 20th century, data was available for several levels of jurisdiction through national databases such as United States Census. However, such data was limited in its expanse and depth. Individual jurisdictions such as a city or a smaller neighborhood¹³ within a city were hard pressed to obtain data that would accurately reflect the state of well-being and development within its jurisdiction. While one could compare several indicators across jurisdictions to a certain level, it was nearly impossible to examine differences within the large

¹³ Neighborhood is a term used to refer to a particular area within a city. They may be political jurisdictions within a city or just a resident-identified geographic area. An equivalent example in India would be Abids in Hyderabad or Connaught Circle in New Delhi. For the purposes of this paper, neighborhoods can be considered similar to a small community in rural areas or wards within urban municipalities. Neighborhood level planning organizations perform several functions similar to the local-level planning organizations envisioned in India.

geographic areas of cities. Cities are comprised of several neighborhoods that differ widely in general characteristics. For example, Cleveland was a rapidly declining and impoverished city in the 1950s and 1960s. Conditions within the city deteriorated further in the 1970s and a severe population decline ensued. Pockets of the city were abandoned by the more affluent population that moved out of the city into suburbs and left behind people who could not afford to do so. Concentration of such poor population within the city led to other malaises. This situation was not uncommon in many other older cities in the United States.

United States federal government responded with a number of urban renewal and rehabilitation measures (much like the number of poverty alleviation programs in India currently in operation) that were implemented in several cities including Cleveland. In addition, the State of Ohio and the City of Cleveland along with few private and nonprofit non-governmental organizations and foundations implemented many of their own programs and policies. In order to effectively evaluate such a plethora of initiatives and determine their impact on the population and their well-being, the available national-level and state-level datasets were woefully inadequate. They could provide aggregate information but could hardly meet the need to measure the differential impacts on neighborhoods within the city. Moreover, aspects of daily life and well-being were never measured or computed recurrently at such lower-level geographies.

In response to the need for increased research and evaluation capacity at a local level, the Rockefeller Foundation, an international private foundation and the Cleveland Foundation, a community foundation joined forces to fund the establishment of a Center on Urban Poverty and Community Development¹⁴ (here on referred to as the Center), first organized in 1988 “to help eliminate persistent poverty in Greater Cleveland, and ameliorate its consequences” (Minter 2001). The Center was organized as a research center within the Mandel School of Applied Social Sciences (MSASS), Case Western Reserve University (CWRU). CWRU is a private university nationally and internationally recognized for its high quality research and teaching and MSASS is consistently ranked among the best schools for research and teaching in social work in the United States. Figure 1 shows a simplified conceptual structure of NEO CANDO and the relationships involved. Although there were attempts in the past to establish such centers for data and research in other cities, several factors including the lack of appropriate and affordable technologies hampered such efforts. During the late 1980s, advances in computing power and other technologies to collect, analyze, and disseminate data became more affordable (Kingsley 1998). Additionally, the advent Geographic Information Systems (GIS) and its use in identifying the geographic spread of various social phenomena such as poverty and crime allowed mapping social and economic data that is now available at a local level.

Since its inception, the Center has been providing a wide variety of services to assist in the efforts of local planning and development organizations. In addition to the research, evaluation, and other program and policy related services that are highly valued by local stakeholders in the area, the Center, during its early years, recognized the need for a comprehensive data base consisting of data on several social indicators of well-being and

¹⁴ The Center was established as the Center on Urban Poverty and Social Change. In 2006 it was changed to its current name, The Center on Urban Poverty and Community Development to accurately reflect its expanding research agenda and capacity.

development at a local level. Claudia Coulton, the founding director, one of the authors of this article, along with the then co-director of the Center conceptualized an online database that would be readily accessible and easy to use. The data base was to be populated with data that is relevant to local needs, priorities, and opportunities. The primary users of such a database were to be local and regional institutions, individuals, and groups (Begala 2001).

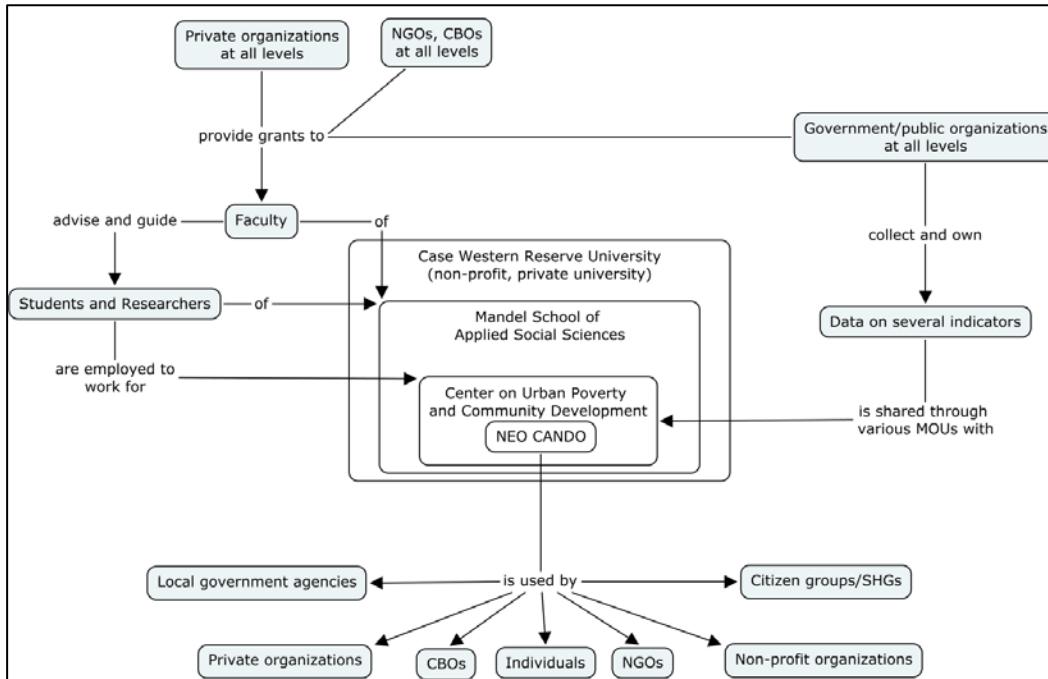


Figure 1: Basic relationship structure of NEO CANDO

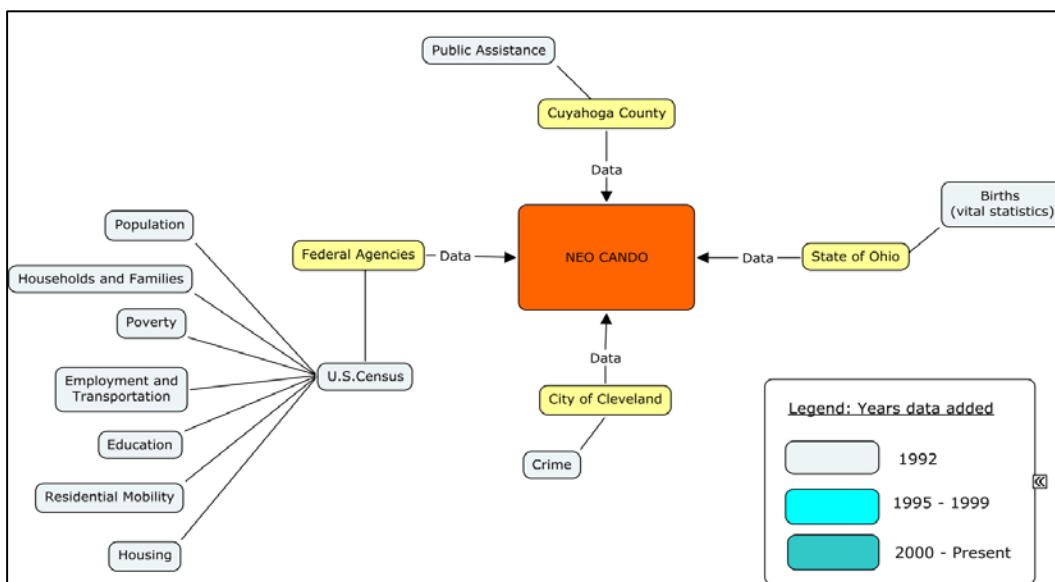


Figure 2: Data in NEO CANDO – 1992

The first iteration of such an online database, Cleveland Area Network for Data and Organizing (CAN DO), was introduced in 1992 and since then there have been numerous improvements, additions, revisions of the basic dataset, and modes and levels of access to it. The initial version started with 10 different sources of data. Nine other sources of data are added in the following two decades. Figures 2, 3, and 4 show the progressive addition of data sources. Along with new data sources, data on additional indicators from existing data sources were also added.

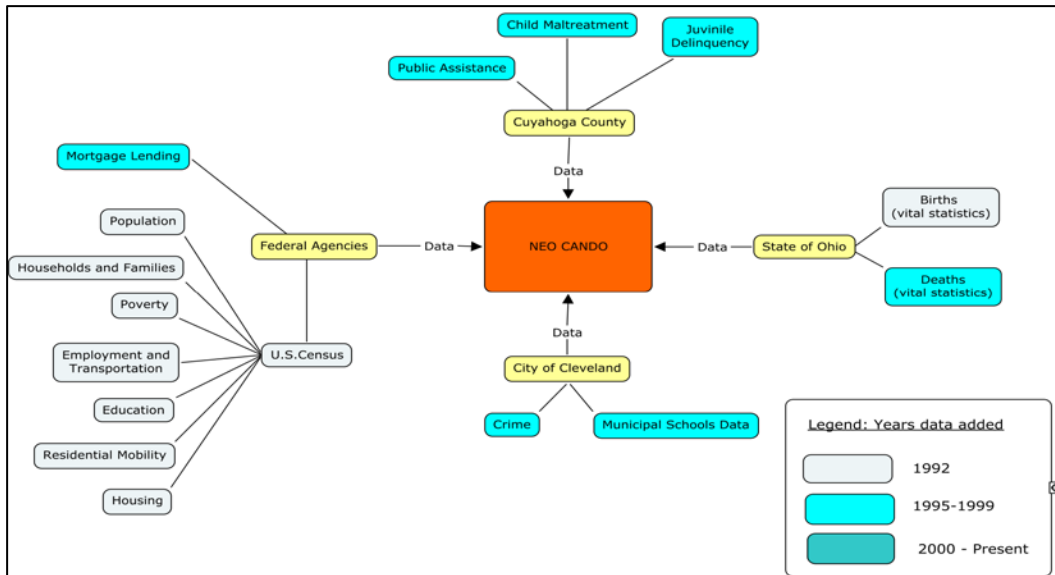


Figure 3: Data in NEO CANDO – 1995 to 2000

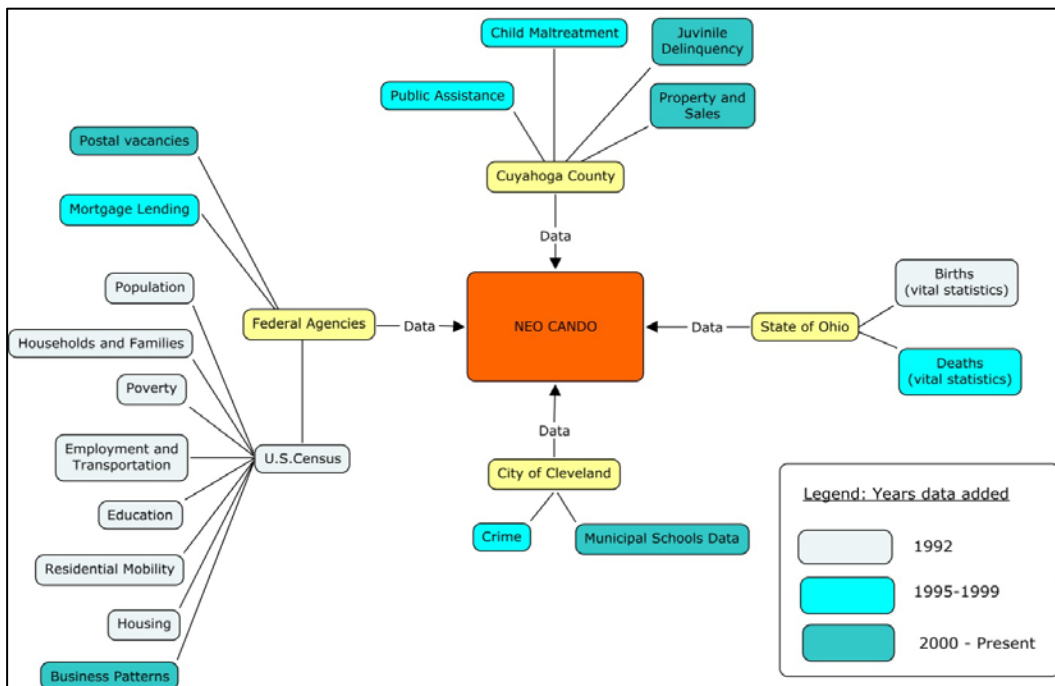


Figure 4: Data in NEO CANDO: 2001 to Present

For example, data on crime was obtained in paper format from the Cleveland Police Department for the initial version of the database. Later in 1996, crime data was obtained in digital format. Such enhancements are illustrated in Figures 2, 3, and 4. Additionally, as any system would experience, subsequent CAN DO iterations included several enhancements in software platform, mapping software, geocoding software, online interface, and the access to it. Figure 5 shows these changes over time. With the increased recognition of the utility of and need for such data that would facilitate *action* at a local-level, the geographic spread of the data collection efforts was expanded to include the surrounding region. Currently, the database covers a region of 17 counties¹⁵, covering the entire northeast region of the state of Ohio, thus changing its name to North East Ohio Community and Neighborhood Data for Organizing (NEO CANDO). While its first iteration was entirely a text interface, the current version of NEO CANDO is a sophisticated online data warehouse and mapping system that is accessible to interested organizations and individuals for no cost. Through NEO CANDO, the Center plays a vital role in developing and improving access to data on several neighborhood-level indicators that are crucial in local decision-making.

	1992	1995	2002	2004/2005	Present
<u>Platform:</u>	Unix	Windows			
<u>Geocoding:</u>	Map Info		Map Marker		ARC GIS
<u>Online Mapping:</u>	SAS			ARC GIS	
<u>Database:</u>	SAS				
<u>Access:</u>	Dial-up	World Wide Web			

Figure 5: Software changes in NEO CANDO: 1992 to present

4.2 Democratization of data: the founding principle

The primary purpose of establishing such a resource was to ensure availability of data on several social indicators that would enable a deeper and meaningful understanding of causes and consequences of poverty and other social problems at a local neighborhood level as opposed to a city or state level. In addition, availability of data to all stakeholders, whether local citizen-group leaders or policy makers and program implementers at all levels of government, was considered of paramount importance for efficient and effective action. *Actionable data*, widely available for consumers at all levels, was recognized as a primary prerequisite for policy formulation and program implementation. In addition, the data is also used by scholars, students, and other concerned citizens from across the region and the nation. Such democratization of data was a novel concept and the concept's importance is demonstrated several times over the years of the Centers' existence.

¹⁵ A county is equivalent to a district in India

To serve the needs of such a diverse body of users, NEO CANDO provides data on several indicators such as:

- Population and housing data from the national census
- Economic data such as welfare dependency and mortgage lending
- Vital statistics such as birth, death, infant mortality rates, and low birth weight
- Housing information such as tax delinquency and land use
- Crime data from Cleveland police Department, County Coroner's office, and County Juvenile Court
- Child maltreatment
- Proficiency and attendance data from the Cleveland Municipal School District
- Foreclosure data from the County Court of Common Pleas

Data are collected from varied sources at national, state, regional, and local levels on a periodic basis. These primary organizations collect data for their specific needs. For example, vital statistics data on birth is obtained from the Ohio Department of Health, a state office; school enrollment statistics are obtained from the Cleveland Municipal School District, a local municipal office; property data is obtained from the County Auditor's office, a County office; and population data is obtained from the decennial and annual datasets of the United States Census, a federal government office. The research staff at the Center organizes the data from all these various sources in a manner that allows for examining various characteristics of any particular neighborhood on any of the indicators available through any of the sources. "Users can extract data at the census tract, city, village, township level, or for an entire county" (Center on Urban Poverty and Social Change 2009). From a user's perspective, data from varied sources are seamlessly integrated and available for them to address issues of local concern. For a local non-profit organization that operates on tight budget and minimal human resource capacity, this service proves to be invaluable. In order to facilitate easy use of this data system, the Center also organizes technical assistance and training workshops for several government and non-governmental organizations. The Center also offers technical assistance via telephone and email. Handouts, a complete online data dictionary, computer discs, and online tutorial explaining the structure and organization of the system and demonstrating its use are available from the Center.

4.3 Applications: Examples from local area organizations

Since its first iteration, the database was used in addressing a number of issues of local relevance. Local planners from all types of organizations use the database to obtain relevant data on indicators that are of immediate importance to them. Government and non-governmental organizations incorporate profiles of their geographies in their grant applications. Individual policy makers check the database for decision-making. Local community organizations use the database to identify land parcels for specific uses within their communities or to estimate possible program target population. Students at MSASS use the dataset to work on hands-on projects with the communities surrounding the university. Researchers from across the country use the database to compare trends in Cleveland with other cities. Below are a few examples of how NEO CANDO has been used in the recent past.

- 4.3.1 Demonstrating the need for community services: In order to show the need for an all-girls site-based program in her grant application to a Women’s Community Foundation “that helps girls reach their fullest potential through activities that focus on self-respect, life endeavors, community, and the arts,” Rebecca Kodysh used NEO CANDO to demonstrate that “a high percentage of juvenile offences committed in [Hough] neighborhood were committed by females, and that a high percentage were committed by youth ages 10-14.” (Center on Urban Poverty and Community Development 2009)
- 4.3.2 Documenting, analyzing, and supporting school improvement efforts: Using NEO CANDO data, Joy Brewington, a data analyst compared the spread of poverty levels across various neighborhoods with the availability of school funding in those neighborhoods. She found that schools in the poorest neighborhoods with highest needs got the lowest funding whereas the schools in wealthier neighborhoods with less needs got more funding. Such disproportionate funding was described in a magazine article that was distributed to parents and other citizens. As Joy put it, “knowing data helps shape stories, and stories provide readers with information they need to form opinion, make decisions, and take action.” (Center on Urban Poverty and Community Development 2009a)
- 4.3.3 Documenting hunger trends in Greater Cleveland: Terry Lenahan, a policy and planning associate with the Center for Community Solutions, a non-profit policy research institution in Cleveland used NEO CANDO and discovered that the use of public assistance in the form of food stamps, a federal food assistance program, is spreading out into the suburbs of the City of Cleveland. Traditionally, suburbs are more affluent than the central cities and Terry discovered that poverty is spreading into the outer areas of the city and policy needs to pay attention to these trends. “Based on her findings, policy makers and service delivery organizations are able to anticipate the growing problem of hunger in the County and began planning to provide increased services.” (Center on Urban Poverty and Community Development 2009b)
- 4.3.4 Evaluating economic development in Cleveland’s urban neighborhoods: Mr. Fahui Wang of Louisiana State University in the southern United States used NEO CANDO to study the relation between the job accessibility (distance from residence to potential jobs) and the incidence of crime in a neighborhood. He found that although jobs are available, the lack of access to them is dependent on several other socio-economic factors of the neighborhood and such lack of accessibility correlates with inter-urban variations in crime rates. Mr. Richard Smith from the University of Michigan used NEO CANDO data to examine the differences between the benefits of two successive federal programs of economic revitalization in the City of Cleveland. He found that the federal programs had a beneficial effect on commercial property prices whereas there was no such beneficial effect on residential property prices. His research concluded that such policies should be implemented in consonance with a comprehensive plan to benefit both the place and people within. (Center on Urban Poverty and Community Development 2009c)
- 4.3.5 Evaluating social change, developing community: Data from NEO CANDO was used by Jeffery Sugalski, a real estate development specialist at a local community development

organization, to demonstrate the decrease in crime resulting from a new shopping center. He compared crime statistics before and after building the shopping center in that neighborhood and was able to show a dramatic decrease from the year 2002 to 2005. Using this data, he obtained grants to redevelop this particular property into a new shopping center. (Center on Urban Poverty and Community Development 2009d)

- 4.3.6 Foreclosure¹⁶ crisis in Cleveland: Cleveland was one of the most effected cities during the real estate and foreclosure crisis of 2008 that led to the most recent global financial meltdown. The Center researchers studied the trends in foreclosure in the city and released a series of technical research reports to inform local action. As a result, Cleveland is one of the most informed cities of the nature and extent of the devastation caused by the crisis. This work led to a collaborative effort of several other local organizations in identifying properties that need to be demolished or rehabilitated, thus guiding and informing the decision-making of local NGO and government organizations.
- 4.3.7 Greater University Circle¹⁷ Initiative: Data from various sources are typically available for predetermined census geographies. However, people do not live in census geographies. They live in communities and neighborhoods of their choice. The Cleveland Foundation, a local community foundation is leading a large development initiative covering several census tracts and cutting across four different cities in the region. Data for such a geographic area is not readily available. NEO CANDO makes data available for this custom geography to meet the needs of planners and policy makers of the Cleveland Foundation and its partners in this unique development initiative.

In addition to the uses that NEO CANDO serves in the community, it also serves university needs in several ways. Researchers from the university use the database to examine trends in local neighborhoods on a wide variety of issues and produce research dissertations, policy reports, and scholarly research articles that are invaluable resources for policy makers at all levels of decision-making. NEO CANDO also supports an extensive array of teaching activities. The university as a whole benefits from the increased research capacity and attracts nationally and internationally known researchers in the fields of community development, planning, housing development, applied social sciences, statistics, economics, and public policy. Students using this resource also develop valuable analytical skills. Their knowledge of local community benefits their immediate future employers in the area.

As the above examples demonstrate, availability of quality *actionable* local data, and easy accessibility to it, propels responsible and responsive decision-making at a local level. Similar to the efforts of the Center in Cleveland, several other research centers in cities across the United States established their own indigenous data and mapping systems to cater to similar

¹⁶ The latest global economic recession has roots in the housing crisis in the United States. Cleveland is one of the cities heavily affected by this housing crisis. Thousands of homeowners lost their homes to predatory lending practices. Homes were abandoned and vandalized, resulting in decreased net real estate value for neighborhoods and cities. The social and economic impacts on children and families were debilitating.

¹⁷ University Circle is an area within the City of Cleveland. Several educational and cultural institutions call this area home. The spill over effects of economic and social development due to these institutions impacts a larger region around the Circle. This larger region is located in four different cities located in close proximity in the area.

needs of their cities and neighborhoods. All these systems are built on the same common principle: *democratizing data*. Four key uses of these data systems are: assessing conditions and trends of cities and neighborhoods; planning and implementing specific improvement initiatives; partnering in community-wide or regional initiatives; and helping in comprehensive strategic planning (Tatian 2000). A number of such city-wide data systems grew across the nation indicating a national movement advocating for neighborhood (local-level) actionable indicators. A national partnership was developed to advocate for and develop neighborhood indicators and neighborhood data systems. This partnership, the National Neighborhood Indicators Partnership (NNIP) is a vibrant national organization with expanding membership every year (Kingsley 1998). NNIP releases several handbooks and manuals each year, explaining and demonstrating the use of such data systems in local decision-making and planning. NNIP also provides a forum for sharing information, research, and operational planning support for its members.

4.4 Structure of NEO CANDO

The applications described above show the utility of NEO CANDO in addressing specific local needs. Such local needs vary between cities, and within each city, between neighborhoods. Local leaders, policy makers, local NGOs, and other concerned citizens are best suited to address such needs. These movers and shakers in the local scene must have access to quality local-level *actionable* data in order to effectively address local needs. With such *democratization of actionable* data as the primary purpose, local organizations in Cleveland partnered with national and international organizations and the university to establish this invaluable resource.

Partnerships include international private foundations such as the Rockefeller Foundation; national foundations such as Annie E. Casey Foundation; local foundations such as the Cleveland Foundation, Sisters of Charity Foundation of Cleveland, and George Gund Foundation; national community development and housing organizations such as Enterprise Community Partners and Local Initiatives Support Corporation; local community development and housing organizations such as Neighborhood Progress Incorporated; many local community development corporations; agencies at all levels of government; and several local, regional, and national universities and research organizations. These support organizations do one or more of the following: provide funding to maintain NEO CANDO, provide data to populate NEO CANDO, or have research partnerships to use data from NEO CANDO. A majority of funding comes from external government and non-governmental sources. NEO CANDO and the Center are both housed within a university setting. Professors, researchers, staff, and students from the Mandel School of Applied Social Sciences organize, maintain, and make this database available over the World Wide Web for all interested parties for no cost. A simpler version of this complex web of relationships and partnerships is shown in Figure 1.

4.5 Lessons from NEO CANDO and NNIP

In a paper reviewing such efforts by various NNIP partners in making *actionable* data available to local stakeholders, Kingsley (1998) lists ten tentative lessons learned:

- Such systems should be designed not just to monitor change in trends but for the explicit purpose of changing things

- They should be designed as a single integrated system that can support one-stop shopping for data needs
- Indicators in such systems should be at the neighborhood (local) level – not just for the city as a whole
- The system should be a data warehouse – not just a set of files on indicators
- Such systems should serve multiple users using information to build capacity in poor communities
- Such systems should be built to democratize information – stakeholders should be able to access and use data themselves
- Such systems should help stakeholders address individual issues but within a comprehensive strategy and individual actions should lead to a comprehensive strategy
- Information from such systems should facilitate local collaborations
- Any such system should recognize inadequacies in local data – especially on assets not just on deficiencies
- Such systems should constantly assure the integrity of data and the sources and institutions that provide data

In response to the needs of neighborhoods, communities, and cities, these data systems provide data on *actionable* indicators that users can use in local planning and decision-making. Such data systems promote informed action that is responsive to local needs. Universal accessibility to data allows citizens to be engaged and meaningfully participate in decisions affecting their immediate lives.

5. Applicability of NEO CANDO model in India

In an earlier section we laid out the urgent need in Indian communities for the availability of local-level data to promote effective, efficient, and equitable local government institutions. Data that is relevant to well-being at a local level is markedly different from data that is typically collected to understand and track progress at a national, state, or a regional level. NEO CANDO demonstrates the utility of local-level *actionable* indicators for local decision-making. For example, national-level data on clean water availability or HIV AIDS incidence is useful for comparison between nations and facilitates action from an international perspective. Similarly, knowing the state-wide incidence of malaria or availability of primary education can enable action at the national level in terms of distribution of available resources to address the disparities between states. In the same way, to enable action at a community level, we need data on community-level indicators. Such local-level *actionable* indicators, specific to the context, where necessary, need to be developed. Once developed, data on such indicators should be easily accessible for all stakeholders. Collecting and tracking data on local-level *actionable* indicators can help in prioritizing local needs, funding meaningful initiatives that are responsive to local needs, and evaluating efforts and policies that are designed to address such needs.

NEO CANDO described above has an immediate applicability in the context of increased local responsibility in governance, administration, and planning in India. The model also promotes responsible and active citizenry. In this section we list a few benefits of such a system in India. At the end of the section we also list a few issues that need to be addressed before such a system can be established. The benefits listed are grouped under three primary categories:

PRIs/ULBs, universities, and society at large. This list is not comprehensive. Our hope is to generate a robust discussion and debate on possible roles each of these bodies of participants can play in enhancing and/or promoting effective, efficient, and equitable local governance institutions in India.

5.1 Benefits to PRIs/ULBs:

- 5.1.1 Existing technical capacity: PRIs/ULBs are fledgling local government institutions that operate on minimal budgets and are yet to acquire the technical capacity required for planning. Same is the case with many DPCs and MPCs. These governance and planning organizations may not need to hire data managers, statisticians, or enumerators. As the Expert Group on Grassroots Governance suggested, such capacity either already exists in universities or it can easily be acquired by them. Partnerships between local planning and governance organizations and local universities, colleges, and research institutes across the country can address the need for technical capacity. These partnerships may evolve, in the future, into stand-alone institutions providing needed data services to DPCs, MPCs, PRIs, and ULBs.
- 5.1.2 Existing physical infrastructure: IT infrastructure that needs some sophisticated maintenance will be an added burden for PRIs/ULBs in their current fiscal state. Where it exists, this may be a non-issue. But majority of PRIs/ULBs do not possess it now and will have to spend their future funds that may be more necessary for other immediate needs. Universities, for their current purposes, already have some of this infrastructure. PRIs/ULBs can leverage this existing infrastructure capacity in universities in building data systems to serve the needs of local government and planning bodies.
- 5.1.3 Existing research capacity: With such quality data available for use, researchers at universities are more likely to use it and inform public policy debate and lend their research capacity in policy making for local bodies.

5.2 Benefits to the Universities:

- 5.2.1 Improved infrastructure: Partnerships with local governance and planning bodies can bring in additional resources to enhance the existing research and data infrastructure in universities and colleges. This will not only enable them to serve the needs of local communities but also improve their own research capacity and academic excellence, especially in the fields of community development, public administration and several other related fields.
- 5.2.2 Educational tools: Students in universities will be able to learn and apply their skills in collecting data, analyzing it, and preparing reports as needed. Such data systems and consequent research and service activities can be integrated into course curricula. Students will be able to get hands-on experience in addressing some of the toughest issues facing communities and their governing institutions.

5.2.3 Leverage for further research: Universities can maximize their presence and impact through this strategic partnership by serving as an intermediary between PRIs, civil society, and NGOs. Universities can leverage this resource and obtain more support for additional research that can help local communities.

5.2.4 Improved presence and influence: Scholars from universities, with all the research accumulated from such work, can be active participants in the local, regional, state, national, and international policy debates.

5.3 Benefits to the society at-large:

5.3.1 High quality research services: Society at-large will benefit from the research and technical services of the university to the PRIs. With a team of technical and research experts, there will be increased value-added input from informed and trained personnel that are independent and knowledgeable of the consequences of local decisions based on information that is available locally.

5.3.2 Avoidance of bureaucratic red tape: Several of the issues pointed in an earlier section such as duplication, lack of quality, multiple departments housing data, and multiple processes to acquire such data can all be avoided. If an easily accessible data warehouse is established where all data from multiple sources is integrated and housed, crucial need for *actionable* data at a local level can be met. Such a reliable one-stop-shop facilitates informed decision-making.

5.4 Possible issues to be addressed:

Prior to such a data system being established in a local setting, several issues may need to be addressed. We identify here four major issues.

5.4.1 Existing data systems: There are several examples of existing data systems that are in operation in India at various levels. Some of them are openly accessible. National Informatics Center designed and made available several data and planning tools to assist local-level planning and decision-making (Banerjee 2001). Such systems and tools must be reviewed and their relevance and utility assessed to build on the experiences accumulated through their use.

5.4.2 Relationships: With many departments operating at various levels, data is distributed across all these departments and levels of decision-making. For a data system of the sort we demonstrated in this paper to be operational, many innovative and unique partnerships and relationships must be established and institutionalized. These relationships may vary depending upon the context in which such a system may be instituted.

5.4.3 Ownership: Data collected in the process is public data. Universities and research institutes add value to it by compiling it and making it available in seem less fashion. Ownership of the entire process, the physical infrastructure, and use rights should be clarified and should be tied to the mission of *democratizing actionable* data.

5.4.4 Accessibility: NEO CANDO and other NNIP data systems are completely web-based and assume that most of the users have access to internet. Accessibility to Internet in India is sparse. To make data easily available to stakeholders, other means may have to be employed.

6. Conclusion

A ‘Model Village’, as visualized by this seminar, is possible only with responsible planning and governing organizations at that level. Panchayati Raj institutions – village, mandal/taluk/samithi, and district level – find themselves at the center of an increasingly decentralized administration. DPCs and MPCs are expected to lead grassroots planning. As these organizations are taking on responsibility for a variety of functions to build ‘model villages,’ this is an opportune time to build necessary infrastructure to ensure their vitality in fulfilling their constitutionally mandated role. This paper, concurring with other sources, identifies local-level data collection and management as one of the essential pre-requisites for an increased and responsible role for local governance and planning institutions in building ‘model villages.’ Availability of such data has benefits at multiple levels and for multiple individual and institutional actors:

- Promotes effective, efficient, and equitable governance at a local level by enabling citizens to be more active and informed participants.
- Helps universities and other higher educational and research institutions to be active participants in providing much needed technical and research capacity at a local level and enhance their own research and teaching capacities.
- Enables local governing institutions to be more responsive and informed about local priorities and design policies and programs to meet those priorities.

As an illustration we presented the example of North East Ohio Community and Neighborhood Data for Organizing (NEO CANDO). NEO CANDO demonstrates how local-level neighborhood/community indicators can be developed and data from various sources can be collected and value added by integrating disparate datasets addressing varied purposes from several different agencies. Such a data system simplifies the task for local individual and institutional actors. NEO CANDO also illustrates the unique institutional arrangements necessary for such a system. Private and public funders, academic and research institutions, local governmental and non-governmental institutions, individual researchers and activists, and individual and institutional stakeholders all work together in remarkable combinations of financial, human, and intellectual resources to serve the purpose of effective, efficient, and equitable governance and service delivery. Similar institutional arrangements can benefit the cause for efficient and effective decentralization of governance and planning in India.

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