Urban anchor institutions in underserved, economically distressed areas face a critical problem: that high-volume Internet access, if it is available, is simply unaffordable. Chicago schools, libraries, community colleges, and public safety agencies face increasing demand for Internet access, but simply lack the funding to meet this demand. Urban Anchor Institutions Cannot Meet their Soaring Bandwidth Needs. When Americans lose jobs, they are forced to costs. For some, this may mean canceling a home Internet subscription and instead relying upon their local library's computers. When Americans cannot find new jobs, they are forced to seek alternatives. Many return to their local colleges in the hope that a few years' time will bring them higher qualifications and a stronger economic climate. For local governments, this translates into a staggering increase in demand. In 2009 alone, the Chicago Public Library experienced a 35% increase in library usage. At the same time, it experienced a 120% increase in bandwidth demand. Despite a soaring demand for their services, the economic climate has forced these same anchor institutions to drastically cut their costs. Because of this disparity, urban anchor institutions cannot afford the bandwidth sufficient to meet the needs of their communities. Prices such as $3,500/mo for 1Gbps service are simply out of reach for anchor institutions. In some cases, urban anchor institutions especially those in industrial areas or economically distressed communities have no access to this type of service at all. Furthermore, Chicagoans who have overcome every barrier to broadband adoption except the cost barrier rely upon their local anchor institutions. Citywide, 39% of Chicago residents do not have broadband at home, and in 22 of the city's 77 neighborhoods, Internet penetration is lower than in rural America. The poverty rate in the project's service area is more than twice the national average (29.2% versus 13.0%), and the median household income is $27,281, compared to the national average of $50,740. The SmartChicago Solution Will Connect 497 Anchor Institutions. SmartChicago will address this challenge of urban anchor institutions by directly connecting a Middle Mile network to 497 community anchor institutions, including schools, community colleges, libraries, and hospitals. SmartChicago will provide shared access and Internet connection at speeds including 50Mbps, 100Mbps, and 1Gbps. By offering significantly lower-priced Internet access, Chicago's anchor institutions can obtain bandwidth sufficient to meet their soaring demands. SmartChicago will connect the anchor institutions serving Chicagoans in Chicago's economically distressed and underserved communities. It will enable 21 library branches to continue its Cybernavigators youth volunteer program, the very type of Digital Literacy Corps that the National Broadband Plan envisions. It will enable Chicago Public Schools to implement its 21st Century Learning Initiative, aimed at fostering broadband adoption among students at 232 public schools. SmartChicago's Private Partners Will Deploy Last Mile Infrastructure in Underserved Areas. SmartChicago will also provide Middle Mile connectivity
on a wholesale basis to service providers at lower than half the cost of what is currently available. To that end, SmartChicago designed its network to include 19 major nodes and fiber access points every 500 to 1000 feet along the 113 miles of new Middle Mile network. The network will provide shared access and Internet connection at speeds including 50Mbps, 100Mbps, and 1Gbps. Already, SmartChicago has partnered with a wide variety of private-sector, Last Mile providers who will use the network to improve their own retail offerings, thereby increasing service and price competition in underserved areas. Some of these providers bring experience to SmartChicago, such as RCN Metro Optical Networks, Towerstream and Clearwire. Other expected providers plan to offer new, niche services that today’s soaring access rates make cost-prohibitive. For example, the Greater Southwest Development Corporation will leverage SmartChicago to create a new Wi-Fi network serving businesses along the 63rd Street Commercial Corridor. A Diverse Array of Public and Private Partners are Behind the SmartChicago Solution. SmartChicago is a locally-based, public-private partnership that proposes a sustainable solution to the lack of broadband access in economically distressed and industrial urban areas. The project includes public partners (the City of Chicago and its independent sister agencies, City Colleges of Chicago, Chicago Public Schools, Chicago Housing Authority, Chicago Public Library), non-profit partners (University of Chicago Medical Center, the Greater Southwest Development Corporation, DeKalb Fiber Optic, LISC/Chicago and New Communities Program) and for-profit partners (RCN Metro Optical Networks, Towerstream and Clearwire). The SmartChicago management team includes Chicago's Office of Emergency Management and Communications (OEMC), which has operated and maintained the City’s public safety fiber optic network for decades. IBM has a history of working with OEMC and will assist in the implementation of the new SmartChicago Network, which will be procured via the Public Building Commission of Chicago (PBC). The PBC has overseen and managed the construction of hundreds of miles of fiber optic network. SmartChicago Both Meets and Exceeds the Seven CCI Priorities. 1. SmartChicago will directly connect to 497 community anchor institutions: 232 schools, 21 library branches, 8 City (community) College facilities, 28 community health centers, 3 hospitals, 26 Chicago Housing Authority developments, 110 Park District facilities, 28 fire houses, 5 court houses, 2 detention centers, 13 public works facilities, and 2 museums, and an additional 11 police stations are immediately adjacent to fiber network nodes. 2. SmartChicago is a public-private partnership that will deploy 113 miles of Middle Mile fiber infrastructure with 1,200 separate access points where government, non-profit, and for-profit entities will have improved access to fiber facilities and services. 3. SmartChicago will provide low-cost access to high-speed broadband needed in order for companies to compete in the worldwide Internet-based economy. In addition to creating 13,392 new jobs directly and indirectly, SmartChicago will address needs of over 7,000 businesses in 25 Renewal Communities, 5 Empowerment Zones designated by the Department of Housing and Urban Development, six State of Illinois Enterprise Zones, and 9 Chicago industrial corridors. SmartChicago's 1500 interconnect points in commercial districts will allow chambers of commerce, existing service providers, and new initiatives to offer services to make economic development achievable. 4. SmartChicago will directly connect to 8 of the City Colleges of Chicago’s community colleges. It will also provide Middle Mile access for additional community colleges in Cook County. 5. SmartChicago will directly connect to 28 fire houses and to an estimated 1,500 traffic intersections to allow for Police Observation Devices in high-crime areas and to support Operation Virtual Shield, an existing homeland security surveillance camera network. SmartChicago will serve to backhaul data for wireless networks used by Chicago and Cook County public
safety agencies. 6. Using SmartChicago's Middle Mile infrastructure, its current private partners – RCN Metro Optical Networks, Towerstream and DeKalb Fiber Optic – and its future private partners will provide a Last Mile component in underserved areas that include 213,184 households and 7,183 businesses. 7. The proposed total cost is $85.8 million. SmartChicago's partners have joined together to exceed NTIA's 30% matching objective with cash alone, by contributing close to $26 million in new funds. When also considering an additional $4.3 million worth of in-kind contributions, the partners have committed a total match of 35% of the proposed total cost. Partners will contribute $10 million in critical working capital to sustain and expand the SmartChicago network.