

IBM's Smarter Cities Challenge

Buffalo

Report





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1. Executive summary

Introduction

The City of Buffalo, New York, is one of 31 cities around the world to receive a Smarter Cities Challenge® grant from IBM in 2013 as part of its citizenship efforts to build a Smarter Planet®. During three weeks in May 2013, a team of five IBM experts worked to deliver recommendations on a key challenge identified by Mayor Byron W. Brown and his senior leadership team:

Improve employment opportunities for young people (aged 16 - 24) in a manner that can be led by City Hall involving the necessary entities influencing youth employment including businesses, community organizations, the public school system and other related service providers.

The challenge

The City of Buffalo is one of the country's best kept secrets, with its impeccable architecture, rich history, fascinating natural treasures and blossoming culinary and social scene. The "City of Good Neighbors" lives up to its reputation with a renewed sense of energy from both community and business leaders as they redevelop the downtown commercial core and adjacent neighborhoods. With more than 20 colleges and universities in the region, there is a strong backbone for quality education and skills development. The city also is home to emerging biomedical research and high-tech manufacturing industries, providing a booming economic backbone and associated job growth.

Despite having all the makings of an ideal economic hub, Buffalo continues to deal with low youth employment, high dropout rates from schools and a disconnect across various entities, including businesses, community organizations, the public school system and other citizen services, which affects local employment.

The City is starting to make inroads to address the socioeconomic factors that affect youth development, including addressing the needs of young people who are out of school and not in employment or training. Various social programs and community services offer assistance to youths but most operate in isolation, with no single concerted effort to combine resources. Elements of data sharing and collaboration are happening but not on a broad scale with a single unifying vision to drive results with measurement and accountability.

Findings and recommendations

Buffalo is extremely rich in nonprofit service providers, committed public servants, volunteerism and passion for the city. When one also considers the recent business development, neighborhood revivals and industry growth, it has all the ingredients needed to significantly improve employment prospects for young people. City programs, such as the Mayor's Clean Sweep and the Ellicott District Community's Save a Building, provide foundational support by addressing some of the socioeconomic root causes impacting the neighborhoods in which many of the at-risk youths live.

Youth employment ecosystem

The issue of low youth employment in Buffalo and elsewhere is systemic, with several root causes and points of influence. As a result, how the entire ecosystem works together will ultimately impact outcomes. Interviewing various stakeholders from City Hall, schools, businesses, community support groups and nonprofits, the IBM Smarter Cities Challenge team found that there is no overall view of services available for youths seeking employment and no prescriptive roadmap driving the effectiveness of the various programs. Transportation and access to the Internet are also barriers. The recommendations outline the need for a Youth Employment Initiative Commission (YEIC) to drive a unified approach that best serves young people and effective communication to encourage the participation.

Data sharing to enable proactive decisions

Various sources of data regarding youth skills, business needs and available training exist, resulting in a fragmented view of the ecosystem. There is no single control point or longitudinal record of youths across the employment ecosystem, making it difficult to direct young people toward complementary and necessary services. The recommendations outline a prescriptive mechanism for data sharing and the underlying governance necessary to drive the effectiveness of the various programs, with measurement and accountability through key performance indicators (KPIs).

Partnership with business and industry organizations

While a few service providers, such as the University of Buffalo's Employment Opportunity Center, run programs that partner with businesses, many requested a closer connection with businesses to better match youth skills development with business hiring needs. Business and industry represent, at a minimum, the demand side of the employment equation; ideally, they would also represent economic and community investment partners. City Hall should incentivize the business community to develop a sustainable youth talent pool and to develop an online Ready for Employment Portal to support this effort.

Education and employable skills

Young people acquire academic, specialized, technical and life skills through a variety of sources and providers. There is no single view of credential achievement across the programs for each young person. The team determined a misalignment between youths looking for work and employer needs for the entry-level workforce. Putting in place a unified digital youth profile would both enable and automate a more effective matching of young candidates to open positions. The ability to leverage technology, including "serious gaming," to build life skills would continue the efforts to drive the employable skills of youths in new and innovative ways.

Conclusion

Buffalo City Hall recognizes the importance of youth employment and its long-term impact on the vitality and future prosperity of Buffalo. Currently the ecosystem is not working efficiently. If City Hall develops the abilities of young people to become skilled workers and be employed locally, it will ensure that the investment the business community is making in the region is all the more worthwhile and sustainable. By working with all stakeholders, the City will be in a better position to grow its current economy; develop healthier, more vibrant neighborhoods; attract new businesses; and drive talent toward the betterment of the city and its neighborhoods.

Highlights

- The City of Buffalo has all the right economic ingredients to improve youth employment prospects.
- There are systemic issues with the underlying ecosystem that must be collectively addressed by the key stakeholders.
- Key recommendations include sustainable business, community and talent pool management, a model for increased and effective data sharing and incentive policies.
- A culture of measurement and accountability, based on increased data governance, will result in measurable outcomes and better policies over time.
- Technology can help with skills misalignment, life skills acquisition, digital youth profiles, open data and information access.

2. Introduction

A. The Smarter Cities Challenge

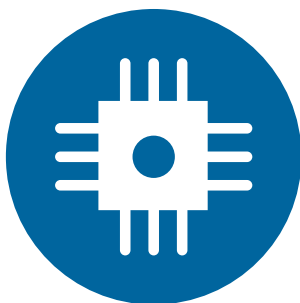
By 2050, cities will be home to more than two-thirds of the world's population. They already wield more economic power and have access to more advanced technological capabilities than ever before. Simultaneously, cities are struggling with a wide range of challenges and threats to sustainability in their core support and governance systems, including transport, water, energy, communications, healthcare and social services.

Meanwhile, trillions of digital devices, connected through the Internet, are producing a vast ocean of data. All of this information — from the flow of markets to the pulse of societies — can be turned into knowledge because we now have the computational power and advanced analytics to make sense of it. With this knowledge, cities could reduce costs, cut waste and improve efficiency, productivity and quality of life for their citizens. In the face of the mammoth challenges of economic crisis and increased demand for services, ample opportunities still exist for the development of innovative solutions.

In November 2008, IBM initiated a discussion on how the planet is becoming “smarter.” By this it meant that intelligence is becoming infused into the systems and processes that make the world work — into things no one would recognize as computers: cars, appliances, roadways, power grids, clothes and even natural systems, such as agriculture and waterways. By creating more instrumented, interconnected and intelligent systems, citizens and policymakers can harvest new trends and insights from data, providing the basis for more informed decisions.

A Smarter City uses technology to transform its core systems and optimize finite resources. Since cities grapple on a daily basis with the interaction of water, transportation, energy, public safety and many other systems, IBM is committed to a vision of Smarter Cities® as a vital component of building a Smarter Planet. At the highest levels of maturity, a Smarter City is a knowledge-based system that provides real-time insights to stakeholders and enables decision makers to manage the city's subsystems proactively. Effective information management is at the heart of this capability, and integration and analytics are the key enablers.

Intelligence is being infused into the way the world works.



Instrumented

We can measure, sense and see the condition of practically everything.



Interconnected

People, systems and objects can communicate and interact with each other in entirely new ways.



Intelligent

We can analyze and derive insight from large and diverse sources of information to predict and respond better to change.

Figure 1:
Instrumented, interconnected, intelligent

As IBM aligns its citizenship efforts with the goal of building a Smarter Planet, it realizes that city leaders around the world face increasing economic and societal pressures. Given the increased demand for services, they have to deliver new solutions ever more rapidly.

With this in mind, IBM Corporate Citizenship has launched the Smarter Cities Challenge to help 100 cities around the world over a three-year period become smarter through grants of IBM talent. The City of Buffalo, New York, USA, was selected through a competitive process as one of 31 cities to be awarded a Smarter Cities Challenge grant in 2013.

During a three-week period in May 2013, a team of five IBM experts worked in Buffalo to deliver recommendations around key issues for Mayor Byron W. Brown

B. The challenge

Buffalo is the second largest city in New York State, located in the state's western region, with a rich history as a thriving industrial city. It was incorporated as a city in 1822. Three years later the Erie Canal opened with the city at its western terminus, driving the transformation of Buffalo into a major shipping hub for goods to and from the western and mid-western regions of the country.¹ Buffalo's industrial growth resulted in a population of more than half a million people by the 1950s, with significant prosperity driven by the steel, banking and shipping industries.

In the 1950s, as railroad shipping increased, the importance of the Erie Canal for shipping to and from the west attenuated. By the end of the decade, western and mid-western shipping bypassed Buffalo completely. This change had a negative effect on not only the shipping industry, but also the steel and other major manufacturing industries. As a result, Buffalo lost almost half its population and has struggled to adapt to the nationwide move from a manufacturing-based to a service-based economy.

Fortunately, Buffalo has experienced an economic and cultural renaissance in the last few years, led by major growth in the healthcare, research, education and advanced manufacturing industries. The city has attracted significant development, including the Buffalo Niagara Medical Campus (5,000 new jobs projected by 2016), the Canal Side project, HARBORcenter and several hotel developments. In 2012, New York Governor Andrew Cuomo committed to spend \$1 billion on economic development and job creation in Western New York. Overall, the New York State Department of Labor (DOL) projects an average of 22,800 job openings each year from 2010 - 2020.

One of Buffalo's biggest challenges now is ensuring that all segments of its population benefit from the economic boom. In 2010, the unemployment rate in Buffalo for those aged 16 - 24 was 24%.² In 2011, the state-reported Buffalo Public Schools (BPS) high school graduation rate of 54% was one reason for low youth employment.

The economic and social costs of low youth employment in Buffalo include the following:

- Pessimism about the value of training and education, which drives down school completion rates.³
- Higher drug use, vandalism and other crime.
- Unemployed young adults earn lower salaries for many years after unemployment due to missed work experience and missed skills development. The net impact over 10 years is estimated to be \$22,000 in lost wages per person.⁴
- Growth in inequality and poverty.
- Reduced personal consumption due to no or low wages, resulting in lower growth and lower tax revenues.
- Increased borrowing to address lower tax revenues.
- Increased fiscal costs to provide welfare, unemployment and healthcare services or payments to out-of-work young people.
- Increased recruitment and new hire relocation costs to local businesses and industry over the long term.

Mayor Byron W. Brown asked the Smarter Cities Challenge team to develop a set of recommendations for City Hall around the following challenge statement:

Improve employment opportunities for young people (aged 16 - 24) in a manner that can be led by City Hall involving the necessary entities influencing youth employment including businesses, community organizations, the public school system and other related service providers.

Specifically, the Mayor challenged the team to address three questions:

- How can Buffalo increase employment opportunities for its young people?
- What technical and operational innovations can Buffalo leverage to improve the long-term employment prospects of young people?
- How can Buffalo ensure that youths participate in and benefit from the current economic boom?

C. The approach

With assistance from City of Buffalo leaders, the team conducted a number of activities that helped provide the insight needed to develop recommendations, as listed below:

- A kick-off meeting and press conference: met with the Mayor and senior staff to confirm the scope of the challenge and then participated in a media event to announce its launch.
- Interviews: conducted more than 70 meetings to understand the nature of Buffalo's youth employment ecosystem.
- Site visits: visited schools, community organizations, adult education programs, neighborhoods and government one-stop workforce centers.
- Research and analysis of materials: reviewed interview results, census data, Bureau of Labor Statistics reports, national and international youth employment studies, BPS data, best practice information from other cities, Internet sources and City Hall reports.

3. Findings, context and roadmap

After interviews with more than 70 people, several clear themes and observations emerged. In order to validate the observations, the Smarter Cities Challenge team conducted research on Buffalo statistics and characteristics, other cities that have addressed youth and/or employment issues and national organizations that address local employment.

As a result, the team has presented a set of validated findings and the relevant context for each, followed by a high-level roadmap of the recommendations. Section IV contains a deep dive into each recommendation.

Throughout this report, the following terms are used:

- **Youths** and **young people** refer to residents of the City of Buffalo between the ages of 16 and 24.
- **City Hall** refers to its leadership: both elected and career officials who hold a formal position in the City of Buffalo Municipal Government.
- **Service providers** is a collective term used to refer to all organizations and agencies that offer services supporting and targeting youths. They include City Hall, employers and business, education institutions and community organizations.
- **Community organizations** refers to nonprofit and for-profit organizations providing youth-related services. This includes block clubs, community centers and state and national organizations, such as Computers for Children and the Urban League.

- **BPS** is an abbreviation for Buffalo Public Schools, the school system overseeing the Buffalo School District. It serves approximately 47,000 students and operates almost 70 facilities. BPS is responsible for K-12 education and is also a major provider of General Equivalency Degrees (GEDs) through its Adult and Continuing Education unit.
- **Life skills** are behaviors used appropriately and responsibly in the management of personal affairs. They are a set of human skills acquired via teaching or direct experience that are used to handle problems and questions commonly encountered in daily human life.

A. Findings and context

Buffalo is extremely rich in nonprofit service providers, passion for the city, committed public servants and volunteerism. When one incorporates the recent business development, neighborhood revivals and job growth, Buffalo has all the ingredients needed to significantly improve youth employment. In addition, City programs, such as the Mayor's Clean Sweep and the Ellicott District Community's Save a Building, provide foundational support by addressing some of the socioeconomic root causes of low city youth employment. Together, these attributes serve as the context for IBM's key findings and recommendations.

Youth employment service providers and collaboration • Programs are reactive more than proactive • Criteria for success are not well defined or measured • Multiple, fragmented sources exist for relevant data • Collaboration must be more effective as low youth employment is systemic • Service providers laud the Mayor's Summer Youth Employment Program, while youths identify improvement opportunities	Business linkage • Businesses are not perceived to be well connected to the community and City Hall • There is a misalignment between employer needs and labor supply • Credentialing systems exist in silos and are not systemically utilized
	Education • There is a strong correlation between high school dropout rate and low youth employment • BPS is a critical partner in addressing low youth employment
	Other enablers and barriers • Transportation difficulty and cost are barriers to youth employment • Access to the Internet by phone is common, while home broadband access is inconsistent

Table 1:
Buffalo youth employment: key findings

1. Youth employment service providers and collaboration

The issue of low youth employment in Buffalo and elsewhere is systemic, with several root causes and points of influence. As a result, how the entire ecosystem works together will ultimately impact outcomes.

Programs are reactive more than proactive

Many service providers, including nonprofits, adult/continuing education, neighborhood block clubs and City Hall, are doing excellent work for the community. There is a strong sense of commitment to address youth readiness for employment, as well as community support to address school dropout rates. Each provider serves a small number of youths or a specific subset of youths seeking employment. Appendix D lists these service providers.

During the team's interviews with stakeholders from City Hall, schools, businesses, community support groups and nonprofits, it found no overall view of all services available for young people seeking employment and no prescriptive roadmap driving the effectiveness of the various programs.

Criteria for success are not well defined or measured

Across the many organizations providing services for youths at the various stages of employability readiness, the team found that success is not consistently standardized or measured. More often than not, service provider representatives could not provide a clear answer to the question "How do you know how successful you are?" On the other hand, most organizations do have powerful qualitative and anecdotal evidence of effectiveness. A few organizations embrace measurement and performance tracking, such as Say Yes to Education, a community-wide partnership dedicated to strengthening Buffalo's public schools and supporting students on their path to post-secondary completion. In another example, the Buffalo Promise Neighborhood initiative utilizes 14 indicators to track its progress.

Multiple, fragmented sources exist for relevant data

Understanding and indicating the effectiveness of overall youth job readiness is challenging. There is no single control point or longitudinal record of young people across the employment ecosystem, making it difficult to direct youths toward complementary and necessary services.

As many service providers as there are, there exist even more sources of data relevant to youth employment and preparedness, each in its own silo. For example, while BPS has a database and strong business intelligence capabilities to track the behavior, attendance and academic achievement of students enrolled in schools, it has no view of socioeconomic factors.

Collaboration must be more effective as low youth employment is systemic

The team observed a high level of awareness of other service providers but a low level of collaboration among service providers. Many service providers mentioned Say Yes to Education and the Mayor's Summer Youth Employment Program as examples of their awareness. There are anecdotal cases of referrals and collaboration. However, service providers seem mostly to operate in isolation from each other with little coordination, increasing the chance of duplicating effort in one component and underdelivering an essential service in another.

Service providers laud the Mayor's Summer Youth Employment Program, while youths identify improvement opportunities

Community service providers strongly endorse the Mayor's Summer Youth Employment Program for helping to keep young people off the streets and providing a sense of purpose. Some expressed a desire for an extension of the program to other seasons and an expansion of placements.

Young people the team interviewed were glad to have access to the program. They also asked for internship opportunities during other times of the year. A number of young people described being demotivated by having little or no meaningful contact with supervisors and seeing peers not work hard or at all without consequence. Finally, the youths requested a stronger match between job placements and their own interests and/or training.

2. Business linkage

Business and industry represent, at a minimum, the demand side of any youth employment equation; ideally, they would also represent economic and community investment partners. The team found limited coordination, collaboration and information flow in regards to youth employment between regional businesses and City Hall, between job readiness providers and employers and between local businesses and communities.

Businesses are not perceived to be well connected to the community and City Hall

While a few service providers, such as the University of Buffalo's Employment Opportunity Center, have programs that partner with businesses, many requested a closer connection with businesses to better match youth skills development with business human resource needs. Interviewees mentioned business and industry with ambivalence. They perceive that employers are neither part of the community nor have entry requirements that are sensitive to community needs, despite the fact that their entry-level jobs could be sourced from the local job pool.

There is a misalignment between employer needs and labor supply

The Buffalo Billion Investment Development Plan identifies three sectors with the potential to form the foundation of Buffalo's next economy and to drive growth, employment, productivity and wealth. Health and life sciences, tourism and advanced manufacturing are driving a number of the fastest growing job categories. A list of Western New York's top ten employers has been included in Appendix C as a reference.

Top categories*	Rank	Annual openings	Growth	Fastest growing jobs**
Office and administrative support occupations	1	3370	4%	Bill and account collectors; receptionists and information clerks
Sales and related occupations	2	2550	6%	
Food preparation and serving related occupations	3	2810	12%	Restaurant cooks; bartenders; waiters; firstline supervisors; fast food/other combined food preparation and serving
Education, training and library occupations	4	1570	6%	
Healthcare practitioners and technical occupations	5	1490	16%	Physicians and surgeons; registered nurses; licensed practical and licensed vocational nurses
Production occupations	6	990	-3%	
Transportation and material moving occupations	7	1150	6%	
Personal care and service occupations	8	1340	22%	Amusement and recreation attendants; hairdressers, hairstylists and cosmetologists; childcare workers; personal care aides; recreation workers
Multiple	na	na	na	Security guards; landscaping/groundskeeping; automotive service technicians and mechanics; social and human service assistants; home health care aides; market research analysts and marketing specialists.

Source: NY DOL Long Term Occupational Projections, Division of Research and Statistics, 2010 - 2020

* Top Category – Occupational category contains more than 5% of the total jobs in the region

** Fastes Growing Jobs – Jobs with a projected 100 or more annual openings, as well as 10 % or higher growth

Table 2:

Western New York Top Occupational Categories and Fastest Growing Jobs, 2020 Projection

Some agencies, such as the Center for Employment Opportunities (CEO), partner with employers for job placements by providing a prevalidated pool of job-ready candidates. The team found this to be an exception rather than the rule. There is a misalignment between youths looking for work and employer needs for an entry-level skilled workforce.

There is no single knowledge base that tracks the overall employability of youths by their academic credentials, specialized skills certification and accumulation of soft skills through various service providers. This makes effective and timely matching of young candidates to open positions challenging.

Credentialing systems exist in silos and are not systemically utilized

Credentialing systems exist across various organizations, including the DOL's National Work Readiness Assessment, Employability Profile for career and technical education (CTE) students by the BPS, and the Urban League's certifications. It is not clear to what extent employers use and value the credentials when considering job applicants. There is no view of credential achievement across the programs for each young person.

3. Education

Education represents a key contributor to the youth employment pipeline. In particular, K-12 public education is commonly tasked with providing college and work preparation as well as good citizenship skills.

There is a strong correlation between high school dropout rate and low youth employment

The BPS high school dropout rate is high, with a correspondingly low 54% graduation rate in 2011.⁵

In 2008, 2,068 young people dropped out of high school in Buffalo, adding up to \$603.85 million in lost economic value to the city. High school dropouts are a major economic drain; the average high school dropout will cost taxpayers more than \$292,000 in lower tax revenues, higher cash and in-kind transfer costs and imposed incarceration costs.⁶

BPS is a critical partner in addressing low youth employment

BPS has initiatives underway to address its high dropout and low graduation rates. BPS has recently begun making up-to-date student performance data and dashboards available online to teachers, principals and administrators. The team could not confirm that district officials are significantly using the available student performance information to develop interventions or proactively address young people on the "slippery slope" to dropping out. The out-of-school youths the team interviewed said they did not get all the support they needed from the school system to be prepared for college or work.

BPS CTE curricula specifically address the employability of the young people enrolled. CTE programs generate a much higher graduation rate (78.49%, NY State Performance reports for 2010 - 11 program year)⁷ than the BPS overall. However, interviewees noted that the CTE curriculum is not up to date with the latest needs of employers. CTE curriculum changes are made every five years.

4. Other enablers and barriers

While there are many ancillary support systems and issues related to youth employment, a diverse group of interviewees noted transportation and access to the Internet at home as barriers deserving attention.

Transportation difficulty and cost are barriers to youth employment

Young people and service providers identified service availability and cost of transportation as an issue for getting to and from work. The Niagara Frontier Transportation Authority (NFTA) offers a \$60 summer youth transit pass, but there are no published youth discounts or passes at other times of the year.

Access to the Internet by phone is common, while home broadband access is inconsistent

Out of 29 young people interviewed, all have their own cellphone. Most of these have access to the Internet via their phone. Half of these have access to broadband Internet at home. Public Internet is not easily accessible. The use of social media is broad and mostly accessed via cell phone.

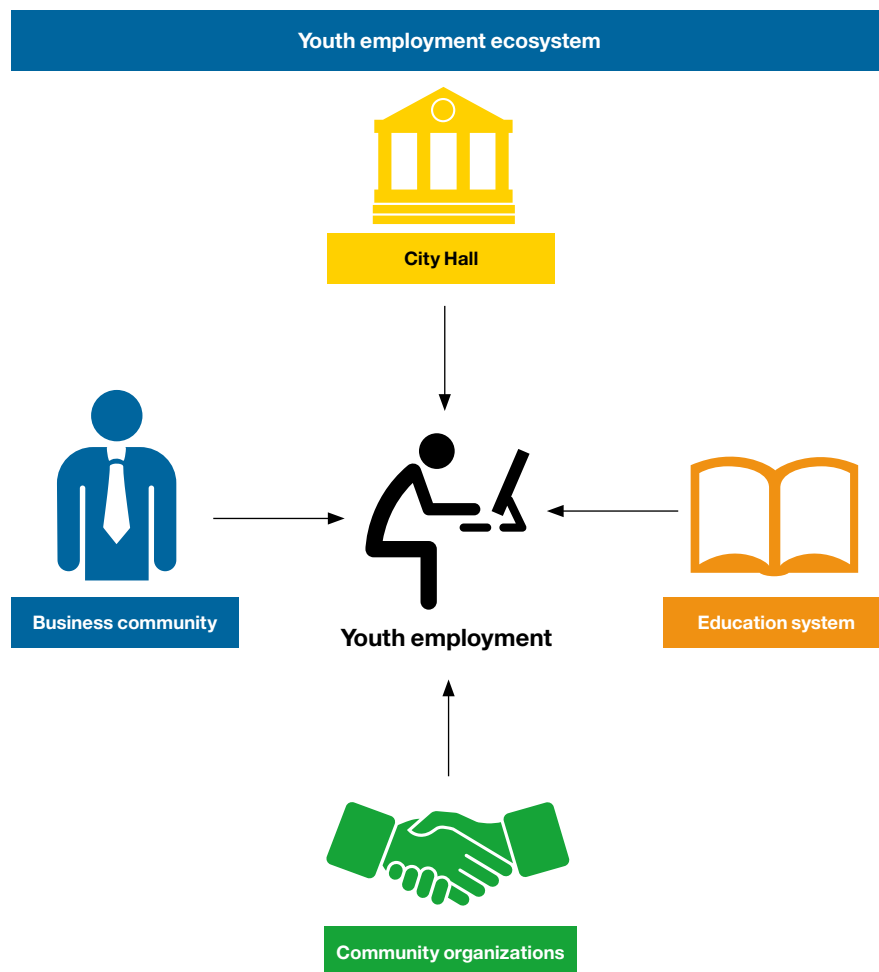


Figure 2:
Youth employment ecosystem

B. Roadmap of recommendations

Keeping the overall ecosystem in mind, the team developed eight recommendations. “Collaboration and coordination,” “Marketing and communications,” and “Measurement and accountability” are recommendations in their own right but underpin and support the effectiveness of the remaining five recommendations: “Data sharing and governance,” “Youth employment policy leadership,” “Engaging the business community,” “Youth life skills” and “Transportation for youths in employment.”

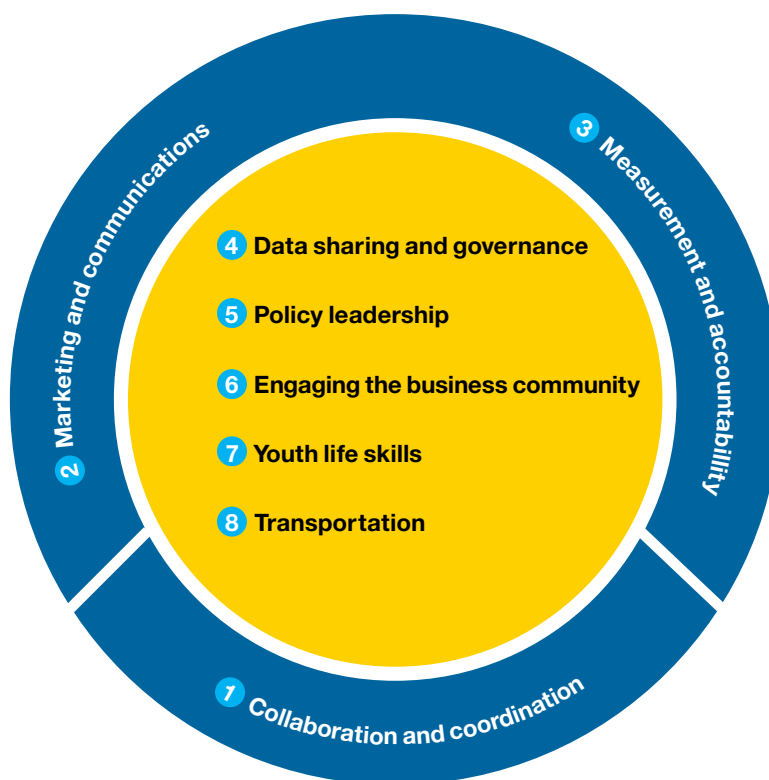


Figure 3:
Eight key recommendations

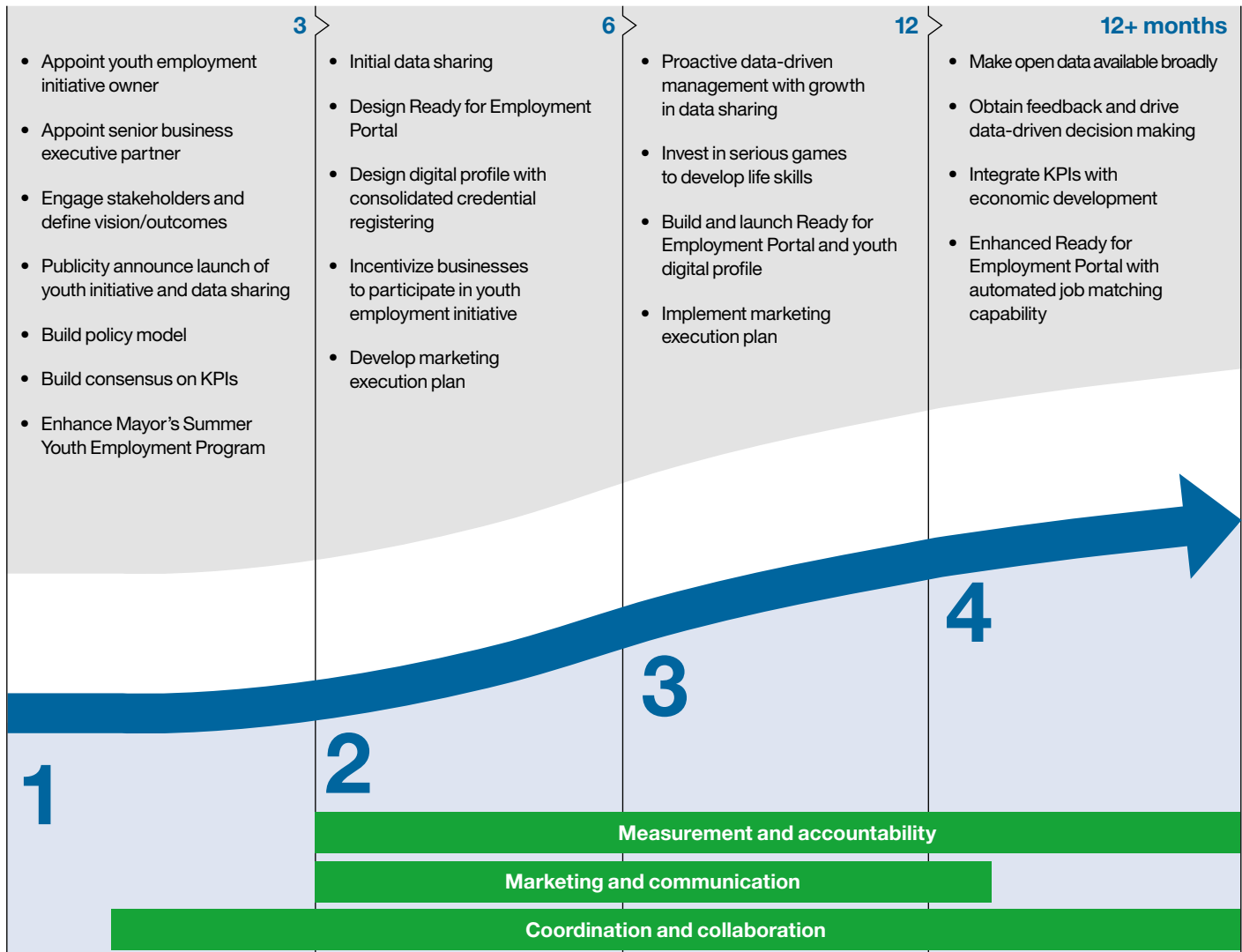


Figure 4:
Roadmap of recommendations

The integrated roadmap and action plan below serves to coordinate ongoing efforts and prioritize resources.

0 – 3 months

A few major recommendations should be launched simultaneously in the first three months.

City Hall should form a Youth Employment Initiative Commission (YEIC) with representatives from the major ecosystem partners: service providers, businesses and education. The commission should focus on the issue of low youth employment, and it should be headed by an executive appointed by City Hall, reporting to the Mayor (Recommendation 1: Collaboration and coordination)

This should coincide with the launch of a common vision and branding for youth employment, registering participating stakeholders to carry a branding logo (Recommendation 2: Marketing and communications).

The YEIC should facilitate a series of meetings with ecosystem partners to identify KPIs as common measures of success. It should also initiate discussions on data sharing between partners and common elements of programs in order to streamline programs and facilitate sharing (Recommendation 3: Measurement and accountability; Recommendation 4: Data sharing and governance).

City Hall should examine policies for public works and rehabilitation projects to provide incentives to employers and developers in extending job opportunities to young people (Recommendation 5: Policy leadership).

Although it may be too late to implement comprehensive changes to the Mayor's Summer Youth Employment Program for 2013, some changes, such as extended internship, should still be made, with full changes planned for the 2014 program (Recommendation 5: Policy leadership).

City Hall should initiate options to recruit retired seniors to provide young people with transport to their workplace and to subsidize transport for qualified youths (Recommendation 8: Transportation for youths in employment).

3 – 6 months

In the first six months, the recommendations should be further extended.

City Hall should begin to examine how it uses data internally and start to reorganize around shared data. It should begin to plan for implementing a data warehouse and a set of reporting tools (Recommendation 4: Data sharing and governance).

The YEIC should continue to run ecosystem collaboration and coordination meetings, facilitating the freer exchange of data between partners, while keeping the momentum going in the marketing and communications campaign. In defining the KPIs in the first three months, it will obtain a view of what other data needs to be collected. It will also have a broader view of the data ecosystem, with partners, such as service providers and education, requesting data held by City Hall and vice versa (Recommendation 3: Measurement and accountability).

The YEIC should have started an ongoing dialogue with businesses as represented by Regional Economic Development Councils (REDC) to understand their requirements and encourage them to participate in the ongoing initiative, through business internships and greater community engagement (Recommendation 6: Engaging the business community).

City Hall should design a Ready for Employment Portal, possibly by revamping an existing website. The format for the online profiles should be standardized with the participation of businesses and community service providers (Recommendation 6: Engaging the business community).

6 – 12 months

After the first six months, the Ready for Employment Portal should be launched, with marketing support to encourage buy-in.

The data governance initiative should be well on its way, with early results of measurement emerging against KPIs. City Hall should decide on the design of its data warehouse and initiate the process of acquisition and implementation (Recommendation 4: Data sharing and governance).

The YEIC should engage the gaming industry to explore the development of a “serious game” for life skills enhancement through a contest (Recommendation 7: Youth life skills).

12+ months

After the first 12 months, the momentum of the YEIC should continue, and the City of Buffalo should begin to reap the benefits of its earlier actions.

There should be a much better understanding of the youth employment ecosystem, with the data needed for KPIs and the measurement against the KPIs. Adjustments to KPIs, data sources and programs should be follow-ups to actions taken earlier. The culture of data sharing should become more ingrained within the ecosystem (Recommendation 1: Collaboration and coordination; Recommendation 3: Measurement and accountability).

City Hall should implement its data warehouse and reporting tools, with ecosystem partners accessing information and providing data capture. The system should provide a view of relevant data on what is working and what is not as input to the decision-making process. This will influence City Hall's decisions and strategy in line with economic development plans (Recommendation 3: Measurement and accountability; Recommendation 4: Data sharing and governance).

City Hall should launch a “Serious Games for Life Skills” contest in partnership with the gaming industry, educational institutions and service providers, and it should promote the game, which would be disseminated free to young people (Recommendation 7: Youth life skills).

An ongoing dialogue with the transport authorities should result in optimized bus routes to reduce the impact of long commute times for youths travelling to and from their places of employment (Recommendation 8: Transportation for youths in employment).

With extended use of data by the ecosystem and measurement against KPIs, City Hall should begin an open data journey, deciding on what data can be openly shared, while taking technology decisions on how the initiative will be implemented and on which platform (Recommendation 4: Data sharing and governance).

When the Open Data Initiative is judged to be stable, City Hall should enhance its use through the launch of an application-design contest, reusing the winning apps for the benefit of the community (Recommendation 4: Data sharing and governance).

The Ready for Employment Portal should be progressively enhanced, and its continued usage should further encourage businesses and youths to adopt it. More young people will begin to understand the skills required, and businesses will be better able to align requirements to available skills (Recommendation 6: Engaging the business community).

City Hall should enhance the Mayor's Summer Youth Employment Program with the recommendations made, feeding data from the registration process into the data collection process (Recommendation 4: Data sharing and governance; Recommendation 5: Youth employment policy leadership).

4. Recommendations

Recommendation 1: Collaboration and coordination

City Hall should give collaborative and coordinated support to initiatives across the ecosystem and drive a holistic approach that best serves the city's youth.

Collaboration and coordination are key ingredients for achieving success in any initiative, particularly in complex ecosystems that span multiple organizations, agencies and service providers for which individuals have their own missions and agendas. It is an underlying principle that lays the foundation for success across all recommendations within this report.

The cornerstone of this recommendation is the appointment of an executive owner within City Hall for the youth employment initiative and creation of a Youth Employment Initiative Commission (YEIC).

Rationale

Many providers offer services and opportunities to the young people of Buffalo, including City Hall, community organizations, educators and businesses. All are staffed by visionary, passionate advocates.

There are many examples of collaboration among community organizations and business and, to some degree, City Hall. But everyone interviewed agreed there is a need for greater collaboration and coordination across the ecosystem, incorporating more involvement from business groups, and that City Hall is in the best position to lead this.

There is currently no single unified initiative to bring all service providers together. Consequently there is:

- No single view of the entire ecosystem driving youth employment
- Limited quantitative measurement of the outcomes of programs
- Limited evidence of whether total funding is being spent, and whether spending is being optimized across the ecosystem
- Limited coordination and targeted delivery of services that could effectively reduce dropout rates and increase youth employment

Future state

The goal is a program that drives all stakeholders toward a common set of outcomes to which they would be held accountable.

This data-driven and ecosystem-wide approach would facilitate understanding of a detailed ecosystem map, the ability to adjust and influence services and programs according to the needs of young people, greater efficiencies in data sharing across the ecosystem and a balanced representation and contribution from all stakeholders. All of these things would drive stronger youth employment.

Specifically some of the possible outcomes are listed below:

- Connection between service providers on data elements that can be shared
- Publicly available data that can be used by service providers and the community as a result of City Hall's open data initiative
- A system in place to measure outcomes of service provider activities, arising from a better understanding of the interdependencies of the services ecosystem
- Understanding of the skills gap, future skills requirements and job opportunities
- A proactive stance by service providers instead of a reactive one, such as earlier intervention with life skills to prepare youths, the ability to spot at-risk youths and early corrective action

Without coordination and collaboration, the ecosystem of service providers will continue to be fragmented, thwarting well-intentioned efforts to increase youth employment.

The City of Philadelphia's Project U-Turn⁸ offers a powerful example of a collaborative approach specifically focused on young people and has been highlighted as a best-practice roadmap for communities across the nation. Project U-Turn brings together representatives from City agencies, the school district, foundations, youth-serving organizations, businesses, parents and youths themselves in a citywide effort to improve outcomes.

Project U-Turn has effected policy change, made funding services for out-of-school youths a priority and created an aligned service delivery system. This has led to the creation of 13 Accelerated Programs — reengagement centers that help off-track and out-of-school youths to enroll in appropriate educational options. It has also led to the creation of an education support center, within the child welfare system, that supports educational stability for young people in dependent and delinquent care. The campaign has leveraged more than \$175 million in public and private resources and led to a 12% growth in Philadelphia's high school graduation rate since its launch in 2004.

Another example is the City of Cincinnati's Elementary Initiative: Ready for High School, which focuses on the school district's worst performing elementary schools. The city has improved test scores and reduced dropout rates while promoting a culture of collaboration between teachers, parents and the community. The core of its strategy is a data-driven approach that focuses on quality teaching and learning methods.⁹

Implementation

City Hall should coordinate and manage the efforts of multiple providers in a way that engages limited resources most efficiently and drives toward the common outcome of higher youth employment.

City Hall should provide leadership as a “network connector” between the various partners. Each service provider has its own charter, funding sources and constituencies; this is not an attempt to align or reorganize them, but rather to enable them to serve the community more effectively by reducing waste and duplication and by facilitating the flow of information. Most important, it is an attempt to engage the business community and industry to become significant and valued contributors.

To that end, City Hall should appoint an executive owner who champions and oversees its youth employment initiative. Ideal characteristics for this leadership role and incentives to accept the position are listed below.

Characteristics:

- A proven, successful leader whose voice is respected in the business community
- A thought leader at the local, state and national level
- An inspirational figure with a history of driving civic engagement initiatives
- A willingness to use personal influence to bring attention to important civic issues
- A role model who understands and is the voice of youth

Incentives:

- Personal gratification and sense of responsibility toward the community
- Opportunity to set the policy direction and influence decision makers, including the business community, regional economic leaders, religious organizations, community organizations and local municipalities
- Empowering the future stakeholders of the community
- Building relationships, stronger communities and presence in local media

City Hall should create a Youth Employment Initiative Commission (YEIC). The YEIC should meet monthly to research and study ways to increase youth employment, develop plans and programs to be run and in conjunction with service providers, evaluate programs to determine their effectiveness, coordinate the effective and efficient disbursement of funds received by the City of Buffalo and engage and attract business organizations.

The YEIC should reflect the diversity of the stakeholders and ecosystem. City Hall should make up no more than 25% of the group, and at least 25% of members should come from the business community.

There are several common areas of concern that could form topics for a series of regular meetings. These areas include the following:

- Data sharing between providers on common elements of data
- Criteria and measurements of success (KPIs)
- Common marketing and awareness efforts
- Common outreach programs
- Consolidation of efforts where applicable around common focal points, such as the Mayor's Summer Youth Employment Program and Clean Sweep
- New opportunities for partnership with business through intern or mentor programs

City Hall may form subcommittees or smaller work groups to accelerate specific efforts. A number of the latter recommendations require work groups that could be borne out of the YEIC.

The City of Baltimore considers the first-hand perspective of young people crucial in its efforts to support youth employment. It formed the Baltimore City Youth Commission, through which young people provide advice, recommendations and information to the Mayor, City Council and municipal agencies on community involvement, government practices and policies, and services that support children, youths and their families. More information is available in Appendix E.

Recommendation 2: Marketing and communications

The City should create a unifying vision supported by a brand, marketing and ongoing communication strategy and campaign that galvanizes major stakeholders and service providers, inspires young people and attracts new businesses to participate in driving youth employment.

Rationale

Stakeholders agree that youth employment is a critical and high-priority issue and that successful progress requires Buffalo to establish a common vision.

There is a wide range of initiatives underway to address youth employment that are well intentioned, but they are not united by common objectives. A common vision would show how diverse parts of the youth ecosystem could align in pursuit of community goals.

Furthermore, not all young people and families are aware of the programs and services available to them. Some are better known than others, such as the Buffalo Urban League. Of the 30 youths the Smarter Cities Challenge team interviewed, only half had heard of the Mayor's Summer Youth Employment Program. Each program does a commendable job of promoting its own services, whether through relationships with organizations, such as BPS or Buffalo Employment and Training Center (BETC), or through more traditional marketing methods, including online and brochure drops.

There is currently no single movement or identity that unites Buffalo youth service providers under one banner. Nor is there a unified, coordinated approach to promote the rich array of services to youths and their parents, which would help instill a sense of hope and opportunity.

During the team's discussions with young people, a significant percentage said they do not see their future to be in Buffalo: 85% plan to leave Buffalo after completing high school or other education. They gave a variety of reasons for this, including a high level of crime and simply wanting a "different scene." But the most common reason was that they do not have confidence in future job prospects, and that the careers and jobs they are interested in pursuing are not available in Buffalo.

Interestingly, the majority of these youths plan to pursue careers outside the region's top three future industries: tourism, advanced manufacturing and healthcare and life sciences. If more young people were to select careers that align to the boom industries in Buffalo, their confidence in future job prospects might increase.

Future state

The marketing and communications initiative should include the following objectives:

- Coordinate the wide range of initiatives addressing youth employment under one cohesive, identifiable umbrella
- Raise broad awareness of the overarching vision, goals and roadmap
- Attract new business and services providers to drive youth initiatives
- Impart a greater sense of hope and opportunity to young people
- Equip families and young people with concrete knowledge of available initiatives and where to go for help
- Provide a communication framework for the Ready for Employment Portal, serious games and other recommendations in this report

This program would provide a drumbeat of ongoing messages around progress and results; tell tangible success stories about youths, programs and services, jobs and opportunities; spotlight business involvement; raise the visibility of role models and mentors; and reinforce the breadth of opportunities to contribute to the work of valued nonprofit and educational groups.

It would energize all stakeholders with positive attitudes toward Buffalo, its schools and its youth, providing a greater sense of hope and opportunity.

Without this, the situation will persist whereby young people and their families do not feel, see or hear efforts to provide a better future in Buffalo.

Implementation

The City should take the following steps:

1. **Develop a unifying vision for Buffalo:** Set up a meeting or meetings, led by the YEIC, to develop the vision and discuss goals and outcomes for youth employment. It may be useful to employ an external facilitator to lead this component, given the breadth of stakeholders. The City also should seek best practices from other cities or pursue support from independent groups, such as Say Yes to Education.
 2. **Create an identity:** A key element of this approach is to create an identity or brand that becomes easily recognizable across the ecosystem, is implicit in its promise, aligns youth programs and helps deliver a unique experience. An external provider would be best placed to assist in creating this. An alternative method would be to crowdsource ideas or issue a challenge to local graphic designers.
 3. **Register participating service providers and employers:** To be eligible, their business should be in good standing, located within a reasonable commuting distance for eligible youths and provide services or employment for people aged 16 - 24. Eligible organizations would be asked to submit basic information, including a summary of who they are and what they do, and their website to complete registration. The process of registration could be done online or manually. Once successfully registered they would receive access to the initiative identifier, which could be included in all of their public-facing materials.
 4. **Enhance online presence:** The current City of Buffalo website has plans for a revamp. This represents a great opportunity to evolve the current “Kids” section, which includes a list of links to services and programs. The City should enhance the existing site and “Kids” section with a series of pages that does the following:
 - Communicates the overall vision and plan for addressing youth employment
 - Promotes all registered service providers and employers and what they can offer
 - Links to the Ready for Employment Portal
 - Highlights major programs and youth-based events
 - Tells tangible success stories about youths, programs and services, jobs and opportunities
 - Spotlights business involvement
 - Raises the visibility of role models and mentors
 - Reinforces the breadth of opportunities to contribute to the work of valued nonprofit and educational groups
 - Integrates social media, such as Facebook and Twitter
- A number of cities already have sections of their websites dedicated to young people, including Boston, Louisville and Baltimore. These examples are listed in Appendix F.
5. **Leverage social media:** Eight in ten online teens use social network sites, such as Facebook, and African-American teens are three times as likely to be Twitter users than either white or Latino teens.¹⁰ Among the young people the team interviewed, all but one said they accessed social media sites on their phones or through computers at home or in the library. Using social media in the following ways could be a relatively low-cost and effective way to reach more young people:
 - Leverage Mayor Brown’s Facebook page and Twitter account to broadcast key initiatives, programs and success stories
 - Identify key social media influencers among youths and recruit them to broadcast relevant announcements and make youth-program related posts (Appendix F refers to a simple analysis of existing Twitter handles Buffalo youths may be following)
 6. Investigate the opportunity to designate one (or more) of the Thursday at Canalside concerts, a popular summer concert series in downtown Buffalo, for young people.¹¹
 7. Develop a media event to formally launch this initiative.
 8. Train spokespersons to better represent the industry in meetings and in the media
 9. Develop media releases to increase the profile of the YEIC and its success and progress.

A number of institutions of higher learning, such as the University of Buffalo and Buffalo State University, offer marketing, communications and MBA courses. The City should collaborate with one or more of these institutions to explore a program whereby students develop a marketing plan, for example, every six months, to be executed through interns or existing City Hall resources.

Recommendation 3: Measurement and accountability

The City should develop and implement a measurement system to quantify outcomes for initiatives that impact youth employment. The measurement of results against defined success factors or KPIs would provide the basis for future decisions and policy. It would also provide a view of accountability, enabling changes as needed for more effective outcomes.

Rationale

Programs run by City Hall, such as Clean Sweep and the Mayor's Summer Youth Employment Program, have made strides in collecting data and sharing it with other departments within City Hall. However, there is an opportunity to drive quantitative measures of success that would help the City understand the impact of these programs.

Service providers would benefit from measurement, which would support their ability to make data-driven decisions and form long-term policy. This has implications for the City of Buffalo as a whole in terms of where and how to invest in the future, where to direct its efforts and the results of its decisions and policies.

Future state

A measurement and accountability system would give the City clarity around what KPIs will measure success in improving youth employment and an understanding of which programs are effective. As a consequence, the City would be better able to reallocate resources to programs that are most effective and develop more insights into the dynamics of youth employment.

With leadership from City Hall, service providers would integrate and adopt appropriate KPIs and measures.

Buffalo Promise Neighborhood is a good example of an initiative that has clearly defined 14 metrics to measure its impact.¹²

Implementation

This recommendation goes hand in hand with Recommendation 4 (Data sharing and governance); without effective data collection and a feedback mechanism, measurements cannot be understood or analyzed.

In the short term (first 60 days), City Hall should support the newly formed YEIC with educational materials and reviews about developing KPIs for youth-employment interventions. Some key approaches are listed below:

- Effect of initiative on specific outcomes.
- Beneficiaries are better off by how much.
- Ways in which the initiative affects different people.
- Attribution: Is the outcome truly due to the initiative?
- Counterfactual: Outcome compared to what? Metrics may show comparisons, such as before-and-after, with-and-without and control group.¹³
- Logical model of the intervention: See Figure 5.
- Results chain: Starting with inputs through activities, outputs, outcomes, and high-level outcomes. See Figure 6.

In the first 90 days, City Hall should lead the YEIC to identify and gain consensus for the KPIs it must adopt to measure youth employment improvement. These might already exist, but a more granular view may need to be developed. Examples include the following KPIs:

- Unemployment by neighborhood and age
- Indices related to job availability and youth seeking employment
- Job concentration by profession, indexed against vocational training by profession
- Teenage pregnancy
- Access to Internet at home or school
- Youth neither in school nor employed

Some of this data may be available from public sources, such as the US Census Bureau and the US Department of Education. An example of publicly available indicators for education outcomes for various age groups is the National Center for Education Statistics (NCES).¹⁴

Other data may be available from service providers. BPS will already have education indicators from its data-driven regime.

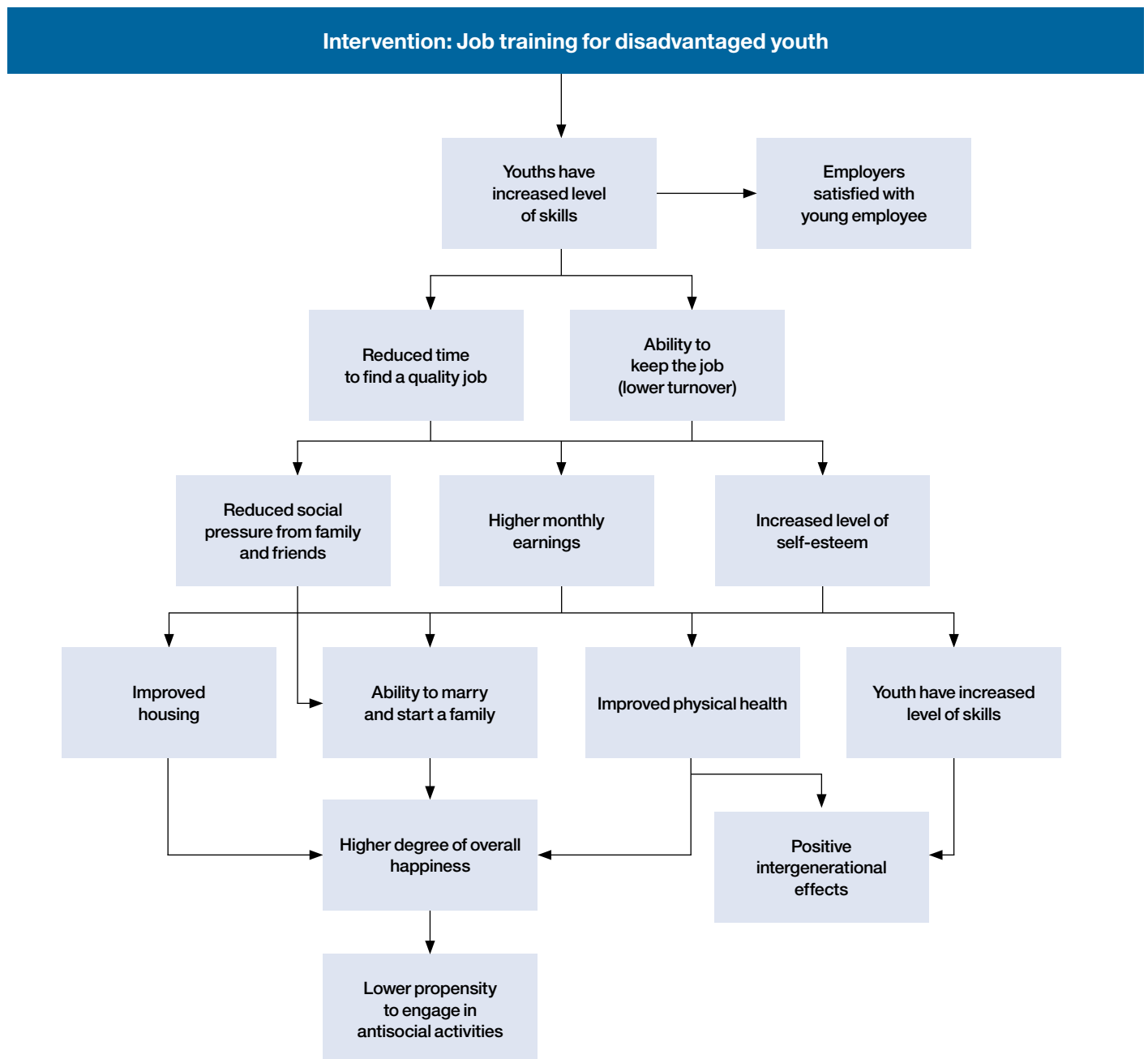


Figure 5:
Basic intervention theory of a youth livelihood project¹⁵

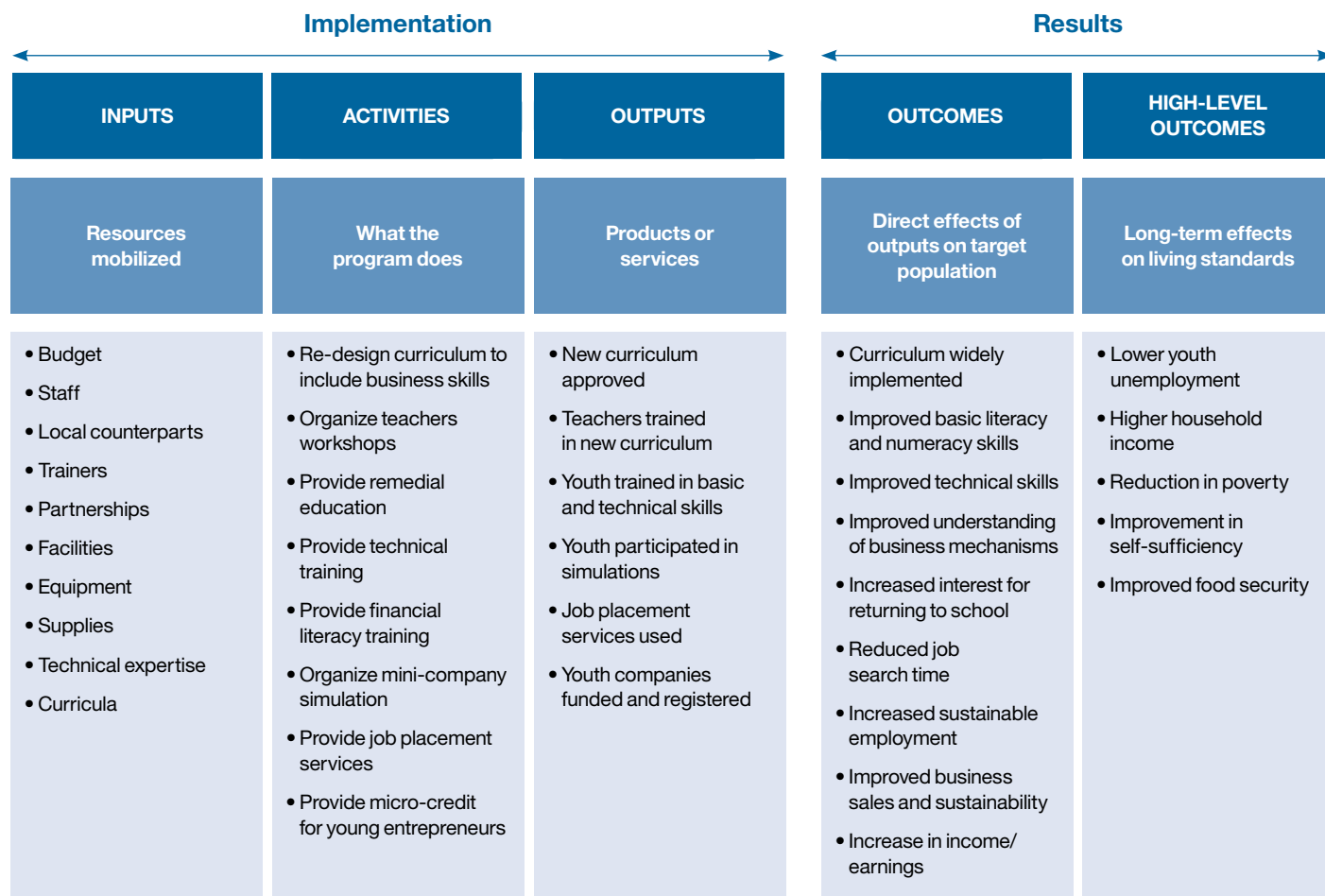


Figure 6:
Results chain¹⁶

Type of project	Input	Activities	Outputs	Outcomes	High-level outcomes
Training and skills development	- Budget allocation and expenditure (in US dollars) - Amount and share of matching funds raised - Number of program staff by level - Number of local facilitators under contract - Number of local organizations that provide in-kind contributions	- Number of workshops offered - Number of training hours - Number of youth screened/enrolled - Number of employers offering internships - Number of internships available	- Number of percentage of youth who attend at least 80% of the training - Number of certificates awarded - Number of youth placed in internships - Average length of internships completed (in weeks)	- Number and percentage of youth who are satisfied with the program - Number and percentage of youth reporting an improved ability to think critically and solve problems - Number and percentage of youth receiving follow-up job offers after internship - Percentage of local employers providing job opportunities for young people	- Household income (in U.S. dollars) - Local youth unemployment rate (%) - Levels of individual/household food consumption (including fruit and vegetables) - Number and percentage of youth who report that their house/apartment has basic infrastructure (running water, electricity, etc.) - Number and percentage of youth who report reduced levels of conflict in the previous year
Subsidized employment (such as public works and public service programs)	Same as above	- Number of workfare projects by type and location - Number of municipalities providing public work/ services	- Number of beneficiaries employed in each activity - Number of temporary jobs created (by type and sector)	- Number and percentage of youth who transitioned to formal employment within X months - Days and hours worked per week (by type of activity) - Average hourly/Daily/ monthly wage	Same as above
Employment services (such as job placement support)	Same as above	- Number of career counseling services created (in labor offices, in schools) - Number of job counseling session offered - Number of career and job fairs organized	- Number of youth participating in job placement services - Number and percentage of youth matched with employers - Number of companies and youth participating in local career/job fair	- Number of job interviews per beneficiary - Number and percentage of youth who are employed X months after the intervention - Number and percentage of youth who retain employment for at least X months	Same as above
Youth enterprise and entrepreneurship	Same as above	- Number of business plan competitions organized - Number of hours of support services provided - Average number of hours of mentoring provided per week/month	- Number of youth submitting complete business plan - Number of youth enterprises supported annually - Number and percentage of youth talking to their mentor at least once every two weeks	- Number and percentage of youth who started a new business - Number and percentage of businesses registered - Total sales last week/ month - Number of jobs created - Percentage of profits reinvested	Same as above
Youth-inclusive financial services	Same as above	- Number of workshops organized for participating financial institutions - Micro-loan scheme for young entrepreneurs launched - Youth-targeted savings account created	- Number of staff trained in partner financial institutions - Numbers of business loans issued to young people (by type of enterprise) - Average loan size - Number of youth saving accounts opened	- Annual repayment rate - Amount of current savings (1) in bank account (2) with savings group, (3) in all other locations - Number and percentage of youth who put aside savings as soon as money comes in - Number and percentage of youth who report greater satisfaction with financial situation	Same as above

Table 3:
Sample indicators for youth employment initiatives¹⁷

Available data should feed directly into a data governance model. Unavailable data should be collected, either through existing or new means. For example, the Mayor's Summer Youth Employment Program collects youth demographic data, Clean Sweep collects household data and City Hall's 311 program collects data on neighborhood service issues, among other things.

Data also should be obtained through City Hall's service provider collaboration meetings; criteria for required data will be coarse but will be refined and become more granular over time. The measures of success should be subsets of the City's economic development and overall demographic plans. They may need to be adjusted over time.

The first six months will be a period of refinement and consolidation of the measurement system as data is analyzed. Missing or supplemental data for analysis will be discovered and will feed into the data governance model.

City Hall may need additional resources to implement the data governance and measurement system. The Mayor should take the lead in instituting a regular meeting to review the measurement against the plan and adjust the plan accordingly.

The ability to analyze and understand data will improve over a one-year period. The emerging trends and outcomes should be shared with service providers in the periodic meetings.

City Hall should investigate tools to implement a measurement dashboard as an extension to the data warehouse, which will enable a view of the city as a "system of systems," and the interactions between different parts of the ecosystem. This should be the first step in establishing a city dashboard with input from various data points, starting with youth employment.

An excellent example of an operating dashboard is the one run by BPS, which provides a detailed view of school operations. A dashboard would require a reporting IT tool that uses the data warehouse.

City Hall should establish a communication pathway with service providers during the regular meetings, providing them a view of the overall effect on youth unemployment and the cumulative effect of their services. It should undertake detailed analysis of data trends, allowing for the effect of policy decisions to be tracked.

Recommendation 4: Data sharing and governance

The City should develop a governance model whereby data is collected from relevant sources, used to facilitate decisions and policies and feeds back into the decision-making process for validation purposes.

Rationale

Data is currently not shared or used in a strategic manner among the various stakeholders in the ecosystem. Consequently, there is no single continuous record of individuals, and data for a single youth may be duplicated or different across multiple programs.

Data exists in separate large "buckets" as follows:

- At City Hall, data exists in individual departments, is not freely shared and is accessible only upon departmental request.
- Each community organization has its own source of data for the scope of the program(s) it provides.
- BPS holds detailed student information, which is isolated from socioeconomic data that may be held by community organizations.

Future state

Data that currently exists in isolated silos could be a powerful resource if combined, as it could provide a holistic view of each individual, including interventions that have occurred.

For example, if BPS data were combined with socioeconomic information, the expanded view would provide early indication that a young person needs support, and it would help identify what intervention is required.

Nonsensitive, nonpersonal data should be freely available to all parties in the ecosystem with a shared objective of improving youth employment. Benefits include reduction in data collection effort, less duplication across organizations and improved accuracy and consistency of individual records. City Hall should own a centralized pool of data shared by all its departments, and expose nonsensitive, nonpersonal data to service providers.

Governments and cities around the world are deploying “open data” to drive transparency, efficiency and innovation.¹⁸ Appendix G contains links to introductory material, references and resources. Combined with active encouragement for data use, it has proven to be an important driver in ensuring accountability and the quantitative measurement of outcomes.

The New York City Open Data catalog supplies hundreds of sets of public data produced by City agencies and organizations. The datasets are now available through application programming interfaces (APIs) and in a variety of machine-readable formats, making them easy for residents, visitors and developers to consume.¹⁹

Implementation

Given the absence of a central authoritative body on youth information, and the barriers against constructing a new organizational structure, the City should take a “data market” approach, allowing service providers to find and connect with each other. The three aspects of data sharing and collaboration are described below:

1. **Between ecosystem partners:** Link partners to each other to facilitate data interchange.
2. **Within City Hall:** Break down silos and consolidate data to facilitate information flow.
3. **Between City Hall and ecosystem partners:** In the longer term, expose selected data to the community to leverage data use in new and innovative ways.

Short term (0 - 90 days): Data sharing between ecosystem partners

This step should be led by the City Hall appointee who heads up the YEIC (Recommendation 1), and it should include the following actions:

- City Hall should identify the major ecosystem partners, such as the BPS, the Urban League, Say Yes to Education, Boys & Girls Clubs of America.
- The Mayor should publicly announce the new data sharing initiative to bring the service ecosystem more closely together. A kickoff meeting sponsored by City Hall to obtain buy-in from the identified partners should follow. The service providers should appoint organizational liaisons to represent them in these meetings. The event should receive media coverage, cementing City Hall’s public image as a leader in this initiative.
- City Hall should schedule a series of regular (for example, biweekly) meetings between partners, headed by a business community leader appointed to the YEIC, to examine such issues as legislative constraints on privacy and personal data.
- The partners should focus on opportunities to share common data, such as youth demographic information, and discuss mechanisms for data interchange. The simplest would be one-to-one contracts using simple technologies, such as file transfer protocol (FTP).

Medium term (up to one year): Data sharing within City Hall

City Hall should break down its own data barriers and publish what is available for use by all of its departments by taking the following actions:

- The Mayor should call for a meeting of department heads to explain the idea and determine the constraints and needs of each department. This should be facilitated by publishing all data sets available within City Hall by its IT department, Management Information Systems (MIS), including such details as data owner, data attributes and access types.
- Users should request the use of selected data based on the published list by asking the owners for access. Nonsensitive data should be available on a read-only basis.
- City Hall should establish a data-governance structure with standards for data sharing and plan to implement a data warehouse consolidating all of its data. Currently, applications have their own independent databases, with different data schema. A data warehouse would require extraction from different databases and normalization into a common schema and may require additional skills and requisite infrastructure. Reporting tools would allow interrogation of the database.
- City Hall would have the tools to view the city as a holistic system of systems with an emerging understanding of the various levers contributing to youth unemployment (see Appendix G for supplemental notes on the data warehouse).

Long term (more than a year): Data sharing between City Hall and ecosystem partners

The community at www.infogovcommunity.com provides information on the use of data in government. Data is an invaluable resource to other service providers in driving innovation.²⁰ City Hall should take the following actions:

- Launch an Open Data Initiative to share City data for public use. It has, in the past, shared data with community service providers on request, but this is a deliberate, structured initiative.
- Examine its data and decide what can be exposed, under what standards and on what platforms (see Appendix G for references).
- Invite media coverage on the official launch of the initiative.
- Accelerate the use of its open datasets by running contests for use of the data for the community good, as below.
- Run a contest with a cash prize for applications developed using open data. Encourage schools to facilitate student or community participation in the contest.
- Leverage the Code for America Brigade,²¹ an organization of volunteers who leverage government open data for local civic engagement. This has included collaboration between the police and community using open data, for example in Oakland, CA, for crimespotting²².

Recommendation 5: Policy leadership

City Hall should leverage its power to provide contracts, licenses and permits by implementing a city youth employment ordinance for expenditures greater than \$100,000, with clearly defined enforcement, requirements and exceptions.

City Hall should also attach a city youth employment requirement to building permit applications and any programs receiving City funds. Two examples identified during the team's interviews include housing rehabilitation conditional loans and harbor development grants and investments.

Finally, City Hall should enhance certain aspects of the Mayor's Summer Youth Employment Program to include a year-round mentor program, increased business participation and supervisor training.

Rationale

Buffalo currently has a diverse local workforce and training requirement for vendors and contractors²³, including the following conditions:

- **Bid advertising:** Requires all contractors/vendors to submit a statement declaring a workforce and business utilization goal of 25% minority and five percent women.
- **Construction:** Requires contractors to have relevant apprenticeship agreements and make every effort to employ local apprentices for construction projects greater than \$100,000. Contractors must employ a minimum of 25% of their workforce from Buffalo and up to 10% from apprenticeship programs approved by the State of New York.

The City should include local and economically disadvantaged youths into these policies as a means to innovate on a well-established economic development model and specifically address the problem of youth unemployment.

The Mayor's Summer Youth Employment Program

Interviews with young people and community organizations highlighted a desire for the following changes:

- Expansion to a year-round program
- Increased matching of applicant career or profession interests to worksite placements
- Provision of guidelines, orientation and training to internship worksite supervisors to offer qualified mentoring, supervision and interaction

Young people consistently expressed their need for strong role models and mentoring from within business, government, community and industry organizations. A majority of the current Mayor's Summer Youth Employment Program worksites are government and community organizations.

Future state

IBM's recommendation of policy leadership will drive local and economically disadvantaged youths into part-time, full-time and summer employment in public works, development and rehabilitation projects and will supply qualified candidates to meet the needs of local business and trade (see Recommendation 6 description of a Ready for Employment Portal).

Implementation

"City youths" refers to those aged 16 - 24 and permanently living in the City of Buffalo. This group constitutes an estimated range of 14 - 16% of the population.²⁴

A sample requirement could be that city contractors and vendors commit to and agree to demonstrate that a minimum 20% of their workforce are city youths. City Hall should add an equivalent condition to the workforce and training requirements for construction projects utilizing City funds. For example, the City should mandate that 20% of trade and union apprenticeships are filled by city youths.

Given the uneven distribution of poverty, unemployment and educational attainment within Buffalo, City Hall should include a minimum requirement for economically disadvantaged city youths. These are defined as city youths living in neighborhoods with the lowest socioeconomic indicators. City Hall should require that 50% of young people employed or trained through the youth employment component of its workforce requirements come from this group.

To support its success with a local youth employment program, the City of Buffalo should take the following steps:

- Collaborate with community organizations
- Communicate bidirectionally with trade or industry organizations
- Efficiently deliver prequalified local young applicants to employers (through the Ready for Employment Portal)
- Link the program to an overall economic development plan, focusing on certain populations and/or neighborhoods
- Develop clear and unambiguous definitions of program requirements
- Institute consequences, such as fines or suspension of permits, if a business does not conform to requirements

The City should begin by conducting site visits. At least one other city runs similar, successful programs. It should also speak with key officials in at least one of the cities of Camden, Cincinnati and Pittsburgh to learn from the challenges they experienced in implementing a local hire strategy. For example, Pittsburgh enacted a local hire ordinance in April 2012 but has been unable to make it effective to date due to a construction industry backlash. A number of case studies are available in Appendix H.

City Hall should make the following adjustments to the Mayor's Summer Youth Employment Program, taking into consideration previous observations:

- Introduce a post-program survey for youths and employers to provide data and insights about what worked well and what improvements could be made. To increase participation, completion of the survey should be a prerequisite for receiving the final paycheck.
- Implement a robust process for matching each youth's interests and/or skill areas with placements through a few adjustments to the existing application form.
- Provide guidelines, orientation and training for worksite supervisors.
- Increase life skills content and delivery. The BETC and the Urban League could deliver life skills programs throughout the six-week program. Young people could be out on the work site four days a week, then attend a life skills program one day of the week. Subjects could include financial literacy, professionalism/work ethics, resume writing and interview skills.
- Prioritize marketing and outreach to local businesses to provide mentoring/shadowing opportunities and substantially increase business participation. Leverage the Buffalo-Niagara Partnership to assist with this.
- Implement a job shadowing and mentoring program with businesses for up to six weeks during the school year. The program should include expectations and guidelines for both participants and mentors. Successful completion (which should be ratified by the sponsoring business) would contribute toward the youth's credentials.

Recommendation 6: Engaging the business community

The relationship between the local business community and those preparing the workforce must be brokered by a strong central voice. City Hall should lead the conversation and engage with the business community to develop a sustainable talent pool.

City Hall should create a Ready for Employment Portal that helps employers identify local talent and connects young job seekers to vacancies.

Rationale

The future competitiveness of Buffalo's business community will depend on its ability to produce a skilled workforce.

Employers require specific and emerging skills to succeed in the 21st century. Entrants to the workforce need not only the basic skills of reading, writing and math, but also a range of applied skills directly related to the workplace. Currently, there is misalignment between young people looking for work and employers' needs for an entry-level skilled workforce.

The business community identified education as the sector most responsible for this, followed by the Workforce Investment Board. But business leaders, educators, community leaders and City Hall must work together to ensure young people have opportunities develop important workplace skills.

Some businesses already partner with local schools, such as Roswell Park with City Honors High School. Some also form partnerships with universities, such as M&T Bank with the University of Buffalo. But more business involvement is needed. Businesses should play a critical role in working with educators and policymakers to develop a more strategic and coordinated approach to the development and education of young people.

More should be done to promote the young labor pool that is currently available. Young people might accumulate skills and training through a variety of community support centers, school vocational training, after-school programs, summer job programs and other educational institutions. However, the credentials they acquire are not available or presented in a standardized fashion that employers can readily assess.

Future state

With City Hall providing leadership, more businesses would understand the need to participate to improve youth employment. They would provide resources and expertise toward school and after-school programs, offer positions for the Mayor's Summer Youth Employment Program and extend their employees to foster meaningful mentor relationships.

Employers would access the pool of youth talent and easily identify suitable candidates based on their digital online profiles through the Ready for Employment Portal.

Young people would view the jobs that are in high demand and then acquire the necessary skills for these opportunities. They would be matched with potential job opportunities based on their online profiles, which would include credentials.

This model of connecting job seekers and employers has been proven in the State of Oregon through iMatchSkills®.²⁵ This website takes an innovative approach to job matching. After building a personal skill profile, the jobseeker is matched to listings based on employer-specified skill requirements. The use of skills rather than occupational titles for job matching ensures that jobseekers are exposed to the broadest range of openings for which they may be qualified. Employers can also submit job listings electronically through the site. More information regarding this best practice is available in Appendix I.

Implementation

Short term (0 - 90 days)

City Hall should appoint business leaders to the YEIC to ensure strong representation and involvement as per Recommendation 1.

Business representation in the YEIC should spawn an ongoing series of discussions that identifies required skills, how existing and future programs need to evolve to ensure these skills are addressed and an assessment of adequate scale to produce the workforce numbers required. The approach must factor in high-priority job categories and projected job openings in large businesses but also those in the estimated 20,067 small businesses in Buffalo.²⁶

City Hall should strengthen its representation and involvement with the current pilot underway at Empire State Development and the Regional Economic Development Council, which addresses workforce development. This pilot plans to address the skilled workforce gap in manufacturing by creating a manufacturing training center to supplement the capacity of other current training providers, which aims to create a workforce that includes underrepresented populations in the region.

Medium term (90 - 270 days)

City Hall should collaborate with Empire State Development to centralize the function of Skills Broker, an entity handling the supply of qualified employees closely matching the demand of jobs. The role of the Skills Broker as intermediary is depicted in Figure 7.

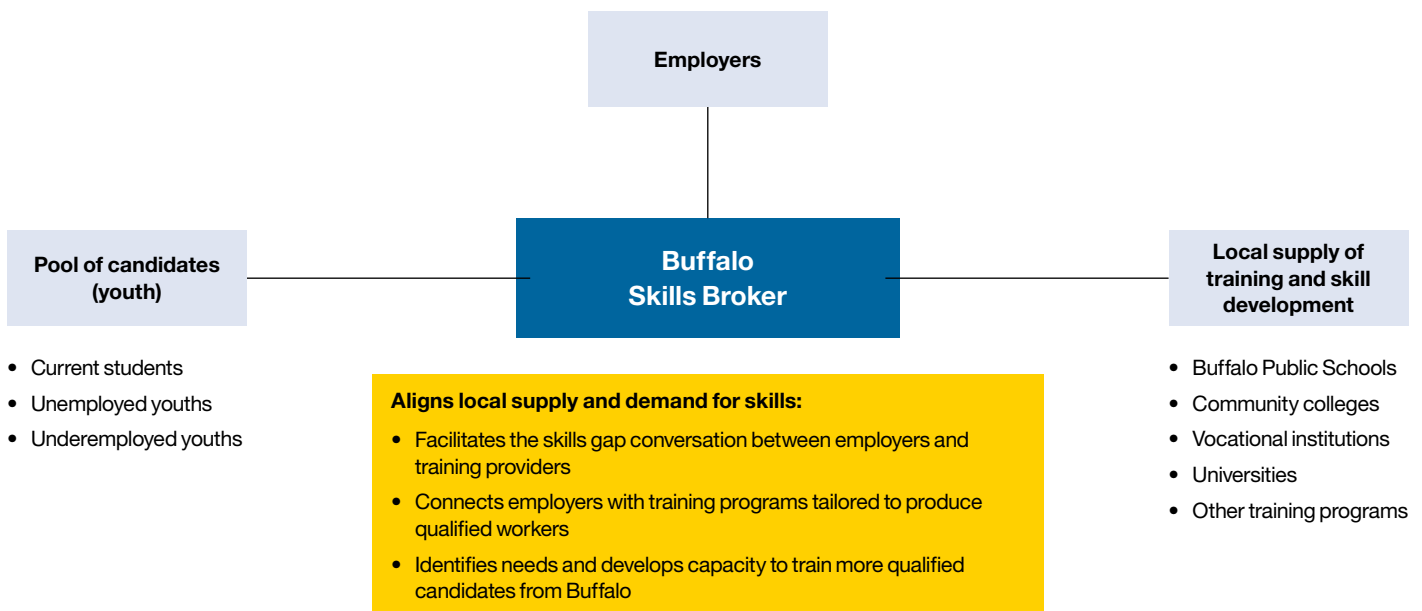


Figure 7:

Role of the Skills Broker

City Hall should provide a digital single stop for youth skills credential registration. This would result in a unified digital profile for young people looking for jobs or building employability skills, along with formal academic achievements. It should enable the following capabilities:

- Ability of the school system to publish academic credentials
- Option to publish technical or specialized skills from entities participating in certification, career and technical education
- Links other skills, such as soft skills that youths may have developed, for example, by playing serious games, attending courses that teach aspects of responsibility, accountability, listening and punctuality
- Link to the summer internship program to track and manage skills acquired
- Ability of youths to create, update and maintain their resume and for employers to make recommendations and contributions on the profile

The credential registration process should have several preauthorized approval gates, such as the University of Buffalo, BPS and City Hall, to ensure accuracy and authenticity of the registered credentials.

Longer term

The foundation from skills brokering by City Hall and the youth credential registration process should graduate into a full-service Ready for Employment Portal, a single place for tracking young candidates and jobs in the region. The portal could potentially grow into a system that automatically recommends available jobs based on a youth's digital profile. Employers must actively participate in the pipeline management of jobs and internships to ensure an open and up-to-date knowledgebase.

Examples include the following:

- 21st Century Skills readiness as part of academia²⁷
- Closing the opportunity divide²⁸
- Empire State Development²⁹
- The Minority Male Bridge to Success Project report³⁰
- Keeping Youth Connected: Focus on Buffalo³¹

Recommendation 7: Youth life skills

City Hall should leverage IT to disseminate life skills and encourage digital literacy. It should collaborate with commercial and educational groups to develop a free, digital “serious game”³² for young people. The game should provide life skills training but also entertain users.

Rationale

In the team's interviews, many service providers and employers expressed the view that even educated youths often lack life skills, which prevents them from gaining or keeping employment. They lack understanding of the need for proper dress, the job application process, the importance of showing up to work on time or calling in when unable to attend.

More than 40% of employers rate new entrants with a high school diploma as “deficient” in their overall preparation for the entry-level jobs they typically fill according to the report *Are They Really Ready To Work?*³³

Life skills are not currently being taught extensively in BPS schools, and although other service providers, such as the Buffalo Urban League and BETC, offer courses in life skills, they lack the scale to reach the majority of youths.

A digital approach would enable access and adoption. Almost all of the young people the team interviewed have access to cellphones and use them extensively. And they indicated a strong interest in playing computer or video games.

The industry recognizes that “We learn best when we play,”³⁴ and the serious games approach is already well established. For example, IBM launched a “serious game” for its IT Architect professionals in 2012 to help them become familiar with a particular method. A number of other examples have been provided in Appendix J.

A good example of an effort in developing digital literacy is the College of Computing and Digital Media at the University of Chicago.³⁵

Future state

A serious game that offers applied learning for life skills would equip youths with the necessary skills to obtain and retain employment. It would help them to focus on achieving academic or vocational skills that would secure high-paying jobs.

Implementation

Experience indicates that games are most effectively developed by game developers. [ref36] City Hall should consider various partnership models with games associations, developers and educational institutions through existing affiliates, such as the University of Buffalo.

Partner models may include the following:

- Partnering with a game developer, with the developer owning the rights to adapt and market the game.
- Partnering with educational institutions, leveraging social agencies or philanthropic interests for funding, to develop a pilot model, which can be reused in other cities.
- Issuing a competitive challenge to the developer or educational community for a serious game for community betterment. The winner would receive a token cash prize, media exposure and the rights to adapt and remarket the game. Industry associations, such as the Serious Games Association, could be invited to sit on the judges' panel.

The US Army currently offers a competitive worldwide challenge for games to create a virtual environment.³⁷ Serious games for life skills already exist to some degree; City Hall should consider these developers as a starting point for collaboration. A list of references is provided in Appendix J.

In developing a serious game, outcomes must be defined for different levels of play or difficulty, including the following examples:

- Dressing for success, appropriate work behavior and work ethics
- Leading as a community advocate, leader, champion or chief
- Achieving degrees of financial literacy

As some service providers already teach life skills with well-defined curricula, the outcomes and progressive levels are well understood.

Players completing the highest level of the game would be provided with a credential or "certificate of completion." The credential could be added to the youth's online profile in the Ready for Employment Portal.

The serious game should be launched in tandem with service providers who already teach IT courses and distributed through a variety of means, such as through community service providers (for example, Computers for Kids) and City websites. Should the game prove successful, it would spread through the youth peer network.

Recommendation 8: Transportation for youths in employment

City Hall should actively influence new surface transportation routes and reduce costs and lengthy commute times for young people in employment.

Rationale

Service providers and youth groups indicated that getting to and from work using public transport is either impossible or requires many transfers, resulting in long commute times and late starts. Although the evidence is anecdotal, the subject was raised consistently during the team's interviews.

Transport and transit systems are crucial to the economic and social wellbeing of cities, and all cities are faced with transportation issues of one sort or another. There are no short-term, inexpensive solutions; transport initiatives tend to be strategic in nature, often with long-term, costly infrastructure. Without some action, however, young people will continue to struggle to commute to work, and others may be unable to work at all.

Future state

The goal of this recommendation is a reduction in instances of young people who have difficulty travelling to and from work, whether due to time or cost.

Implementation

A number of community service providers, such as the Urban League and Adult and Continuing Education, provide transport coupons. This has proven to be popular. City Hall should investigate a similar program, providing coupons in deserving cases based on clearly established criteria.

The YEIC should discuss transportation and give feedback.

City Hall should establish criteria for qualifying candidates based on recommendations by service providers working directly with young people who struggle with transport. Youths should apply at City Hall and have their data captured for monitoring purposes. Transport coupons should have an expiration date as they are intended to be incentives, not a permanent solution.

The City of San Francisco has established a discount program, Muni, that provides low- and moderate-income students free access to the local rapid transit system, SFMTA, for a 16-month period when using a Clipper card.

City Hall should encourage employers to provide bus services for their employees when warranted, with criteria varying from one employer to another. It should consider fiscal or other incentives, as appropriate, to encourage this.

In the short term, City Hall also should initiate a scheme encouraging retired seniors to provide transport for youths in the same neighborhood for a stipend. Seniors willing to provide this service and youths in need of transport should register with City Hall and be carefully screened before acceptance. City Hall should act as a broker between young people and seniors.

A transport-sharing scheme such as this would operate best with a schedule, providing young people with a dependable means of transport and retired seniors with gainful employment for a small stipend. Ideally, more than one youth from each neighborhood would be matched to each senior.

In the medium term, City Hall should collaborate with the University of Buffalo to run dedicated buses for youths. The university runs a regular bus service for students travelling between its the north and south campuses, connecting the two parts of the city. Youths would apply for a special pass issued by City Hall based on need, which would permit them to take the university bus at reduced or subsidized rates.

In the longer term, public transport should form part of Buffalo's economic development plans, including close collaboration with the NFTA to best serve the interests of its residents.

Recommendation 1: Collaboration and coordination

City Hall should give coordinated and collaborative support to initiatives across the ecosystem and drive a holistic approach that best serves the City's youth.

Scope and expected outcomes

Scope

An executive owner within City Hall to collaborate with service providers, businesses and the education system on youth unemployment and to lead a Youth Employment Initiative Commission (YEIC).

Expected outcomes

- Connection between service providers on shareable data elements
- Public open data that can be used by service providers and the community
- A system to measure outcomes of activities arising from a better understanding of the interdependencies of the service ecosystem
- An understanding by all participants of the broad direction of initiative
- A proactive stance by service providers instead of a reactive one

Cost of inaction

A continued fragmented ecosystem of service providers, often disconnected from each other operationally and strategically, with no coordinated effort.

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: City Hall and the entire service provider ecosystem for youth unemployment	Data collaboration lead Cost estimate: Low — up to \$100,000
Dependencies	Key milestones, activities and timeframe
None	Short term: City Hall to appoint leader and create the YEIC Medium term: Implement regular meetings of the YEIC Long term: Implement recommendations of the YEIC
Priority	
High	

Recommendation 2: Marketing and communications

City Hall should develop and launch an ongoing marketing plan and branding strategy that galvanizes major stakeholders and service providers, inspires young people and attracts new businesses to participate in driving youth employment.

Scope and expected outcomes

Scope

All aspects pertaining to the marketing and branding of the Smarter City Challenge recommendations, including media engagement, partnership with service providers and developing a website.

Expected outcomes

- A unifying vision supported by a brand, marketing and ongoing communications strategy
- A campaign to energize stakeholders to build positive attitudes toward Buffalo, its schools and its youth, providing a greater sense of hope and opportunity

Cost of inaction

A continued situation whereby young people and their families do not feel, see or hear efforts being made to provide better opportunities and a better future in Buffalo.

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall employee who has overall responsibility for implementing the recommendations Stakeholders: • Youths • Community organizations • Employers • Department of Community Services	• Core development team, for creation of vision, of approximately 10 people representing the key constituencies of the city, at least 50% not from City administration • External provider to facilitate creation of vision • Website designer Cost estimate: Low
Dependencies	Key milestones, activities and timeframe
• Development of vision required for successful implementation of brand and website • Budget • Resources	Short term: • Develop vision and branding strategy • Develop marketing execution plan that includes prioritization of the elements • Develop and execute media event and plan to launch youth employment initiative Medium term: Execute the marketing execution plan
Priority	
Medium	

Recommendation 3: Measurement and accountability

City Hall should develop a system to quantitatively measure outcomes of initiatives across the city and constituents, in a clearly understood dependency structure.

Scope and expected outcomes

Scope

An extension of the data governance system to set up measurement and accountability and provide the basis for future decisions.

Expected outcomes

- KPIs for youth employment
- Understanding of which programs are effective and which are not
- Reallocation of resources to effective programs
- Realignment of priorities with understanding of youth unemployment
- Better tactical and strategic decision making
- Input into City's economic development plans
- Accountability, understanding of organizations' weaknesses and strengths, allowing remedial action to be taken
- A trickle-down of KPIs and measures to service providers, allowing them to measure the success of their programs and to take corrective actions

Cost of inaction

- No quantitative measure for City Hall and service-provider programs
- No understanding of actual cost of implementing programs against benefits
- Poor allocation of resources and decisions made with insufficient data

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: City Hall service providers that use data related to youth unemployment	• May require additional City Hall human resource • Possible new tools to implement a data dashboard focusing on youth unemployment Cost estimate: Low — less than \$100,000
Dependencies	Key milestones, activities and timeframe
• Data governance system • Closer collaboration with service providers	Short term: Determine KPIs for data success Medium term: Refine and consolidate measurement system Long term: Share findings, implement data warehouse and dashboard
Priority	
High	

Recommendation 4: Data sharing and governance

City Hall should develop a governance model whereby data is collected from relevant sources, used to facilitate decisions and policies and feeds back into the decision-making process for validation purposes.

Scope and expected outcomes

Scope

All aspects with respect to the use, dissemination and analysis of data within the youth employment ecosystem, including City Hall, service providers and education partners, as follows:

- Launch the YEIC, led by a City Hall executive
- Implement data governance structure across ecosystem partners
- Put a new data warehouse system in place
- Employ staff to implement the data warehouse and Open Data Initiative

Expected outcomes

- Data collaboration within the ecosystem
- A holistic view of youth and more proactive action
- Buffalo Open Data Initiative

Cost of inaction

- Continued data silos
- Inability to measure outcomes of actions and decisions
- Inefficiencies in data collection and analysis
- Inability to view related events holistically — viewed only as a series of isolated and unconnected events

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: City Hall and service providers that use data related to youth unemployment	• Executive lead for the YEIC • Additional IT resources to implement data warehouse and Open Data Initiative, at least one database/data warehouse analyst, possible increases in IT infrastructure to support the new initiatives Cost estimate: Medium — range of \$100,000 - \$250,000
Dependencies	Key milestones, activities and timeframe
Recommendation to implement closer collaboration with service providers	Short term: Data sharing between service providers Medium term: Data sharing within City Hall Long term: Implement open data and data sharing
Priority	
High	

Recommendation 5: Policy leadership

City Hall should leverage its power to provide contracts, licenses and permits by implementing a city youth employment ordinance for expenditures greater than \$100,000, with clearly defined enforcement, requirements and exceptions.

Scope and expected outcomes

Scope

Implementation of various City policies that encourage businesses to hire local youths for jobs.

Expected outcomes

- Increased city youth employment in Buffalo public works, development and rehabilitation projects
- Enhancements to the Mayor's Summer Youth Employment Program

Cost of inaction

- Status quo whereby young people feel disadvantaged and marginalized from jobs for which City Hall can exert an influence
- No improvements to the Mayor's Summer Youth Employment Program

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: Buffalo youth, local employers who require permits from the City	• Mayor's Summer Youth Employment Program manager • Common Council Cost estimate: Low — up to \$100,000
Dependencies	Key milestones, activities and timeframe
Recommendation 6	• Change City ordinance to favor economically disadvantaged local youths in employment opportunities • Collaborate with involved parties, such as service providers and block clubs • Enforce ordinance changes • Enhance summer program to increase effectiveness
Priority	
Medium	

Recommendation 6: Engaging the business community

City Hall should lead the conversation and engage with the business community to develop a sustainable youth talent pool.

Scope and expected outcomes

Scope

- YEIC to drive skills brokering
- Create a prioritized view of high-growth job areas and the corresponding skills needed to fulfill these areas
- Work with schools, community organizations, youth services, employment centers and training centers to drive scale and adjustments to programs and curriculum
- Create a single Ready for Employment Portal
- Create a unified youth credential registration system, including a digital profile to standardize employability skills

Expected outcomes

- Better alignment of skilled youth with current and projected jobs
- A unified digital profile for youth that represents the holistic skills view of the youth
- Proactively managed job pipeline
- Accountability of service providers

Cost of inaction

Lost wage contribution to the tune of \$80 million based on minimum wages for 10,000 youths working at least 20 hours per week and a lost economic value of \$603.85 million per year because of the number of youths dropping out of high school.

Proposed owner and stakeholders	Suggested resources needed
Owner: YEIC Stakeholders: • City Hall • Employers • Education institutions • Community organizations	• Representatives of the various stakeholders • Data coordination lead Cost estimate: Low
Dependencies	Key milestones, activities and timeframe
• Recommendation 4 • Recommendation 1	Short term: • YEIC engagement with business and other stakeholders • Prioritize efforts based on job-growth area skills aligning back to the education and preparation of youth skills Medium term: • Launch the Ready for Employment Portal and its listed job openings • Launch unified youth credential registration Long term: • Aggregate jobs from various employers • Match skills profiles with jobs • Manage the pipeline of skilled youth pool with active feedback and improvements
Priority	
High	

Recommendation 7: Youth life skills

City Hall should leverage IT to disseminate life skills and encourage digital literacy.

Scope and expected outcomes

Scope

Development of a digital serious game in partnership with commercial and educational interests and an enhancement of existing courses teaching digital literacy.

Expected outcomes

- A serious game that equips youths with the necessary skills to obtain and retain employment while also entertaining
- Enhancement of programs teaching courses related to the video gaming industry, such as game design, graphic arts, video skills and digital music

Cost of inaction

Youths without life skills are poorly prepared for employment.

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: Educational institutions and all stakeholders involved in digital literacy	• Resources to explore partnerships to codevelop a digital serious game • Marketing team Cost estimate: Low — less than \$100,000
Dependencies	Key milestones, activities and timeframe
None	• Determine life skills to be taught • Collaborate with video developers, educational institutions, funding agencies to develop the game
Priority	
Low	

Recommendation 8: Transportation for youth in employment

City Hall should actively influence new surface transportation routes and reduce costs and lengthy commute times for young people in employment.

Scope and expected outcomes

Scope

Work with service providers to subsidize and supplement the cost of transport for youths commuting to and from their workplaces.

Expected outcomes

Reduction in instances of youths who have difficulty in travelling to and from work. The amount of subsidies provided will provide a measure of the program's success.

Cost of inaction

Numbers of employed youths continue to have problems getting to/from work, while others are prevented from taking jobs.

Proposed owner and stakeholders	Suggested resources needed
Owner: City Hall Stakeholders: NFTA and other transport agencies	• Supplemental transport cost • Cost-sharing arrangement with University of Buffalo Cost estimate: Low (less than \$100,000) to medium (\$100,000 - \$250,000)
Dependencies	Key milestones, activities and timeframe
None	Short term: Implement transport coupon for qualified youths Medium term: Collaborate with university for supplementary transport Long term: Collaborate with NFTA
Priority	
Medium	

5. Conclusion

Buffalo has experienced dramatic changes in its history, with a decline in its population and economic activity in the late 20th century. However, it is currently experiencing a mini-boom, with growth in the biomedical industry, healthcare, life sciences, advanced manufacturing and tourism.

In spite of this, Buffalo faces some stubborn issues, including a recurring low youth-employment problem and one of the highest school dropout rates in New York State. The Smarter Cities Challenge team found that there are significant opportunities for improvement, including a better alignment of skills to job vacancies, greater data sharing and collaboration and a common vision for all stakeholders.

As a result of numerous interviews, the IBM team derived a set of eight key recommendations aimed at decreasing low youth employment. Technology is part of the solution and is embedded in several aspects of the recommendations.

The eight recommendations largely work as an interconnected whole, reinforcing each other and drawing ecosystem partners more closely together with a shared goal of putting Buffalo on the path of economic growth and better youth employment.



6. Appendix

A. Acknowledgments

The Smarter Cities Challenge team would like to thank and acknowledge everyone that assisted in making this successful, including those not listed here through omission or oversight.

Interviewee	Role at City of Buffalo
Byron W. Brown	Mayor
Dr. Ellen Grant	Deputy Mayor
Otis Barker	Commissioner, Community Services
Oswaldo Mestre	Director, Citizen Services
Brendan Mehaffy	Executive Director, Strategic Planning
Lou Petrucci	Buffalo Board of Education
Michael Breen	Grant Writer, City of Buffalo
Peter Barone	CIO, MIS, City of Buffalo
Daryl Springer	MIS, City of Buffalo
Eric Birner	Office of Strategic Planning
Keith Lucas	Office of Strategic Planning
Nicole Drye	Program Manager, Clean Sweeps
Martha Meegan	CitiStat
Kirk McLean	CitiStat
Rasheed Wyatt	Clean Sweep Program
Richard Fontana	Common Council Member
Christopher Scanlon	Common Council Member
David Rivera	Common Council Member
Bonnie Russell	Common Council Member
Demone Smith	Common Council Member
Lorey Schultz	City of Buffalo, Communications
Mike DeGeorge	City of Buffalo, Communications

Interviewee	Role at City of Buffalo
Gina Granville	Systems Analyst, Strategic Planning
David Granville	City Consultant
Chief Aaron Young	Buffalo Police Department
Carolyn Bright	Department of Labor
Cesar Cabrera	Department of Labor
Bill McGuire	City of Buffalo
Interviewee	Role at Buffalo Public Schools
Dr. Pamela Brown	Superintendent
Sanjay Gilani	Director of IT
Fran Wilson	Chief Academic Officer
Kathy Heinle	CTE Program Manager
Lester Leopold	Adult and Continuing Education
LaRae Hens Bryant	Assistant to Superintendent
John Iorio Jr.	Adult and Continuing Education
John Crabbe	MIS
Diane Cart	Grant Writer
Michelle Brown	MIS
Josh Kovacich	MIS
Roger Amlich	Teacher
Interviewee	Role in business
Heather Okoro	Executive Director, W.I.B.
Anthony Scello	Program Manager, W.I.B.
Laura Smith	NY Partnership
Nadine Powell	NY Partnership
Christina Orsi	ESDC

Interviewee	Role in business
Adam Sassone	ESDC
Rod Green	Hillside Workforce
Kim Grant	ASG
Tom Kucharski	NY Enterprise
Stephanie Argentine	Rich Foods
David Scott	Roswell Park
Lisa Damiani	Roswell Park
Interviewee	Role in community
Dr. Julius Gregg Adams	University of Buffalo
Dr. Danis Gehl	University of Buffalo
Debra Thompson	University of Buffalo
Marnie LaVigne	University of Buffalo
Patricia Riegle	BOCES
Patricia Kiristis	BOCES
Roscoe Garner	University of Buffalo
Antoine Thompson	BETC
Ann Cordova	BETC
Mary Rose Gaughan	Wellcare
Michael Austin	BETC
Terrance Chatfield	BETC
Brenda McDuffie	Urban League
Christine Carr	Computers for Children
Pamela Henderson	Henderson Woods
Amber Dixon	BETC
Lawrence Pernick, Jr.	NW Buffalo Community Center

Interviewee	Role in community
Ida Thomas	Ellicott District Development Corporation
Kenya Hobbs	Buffalo Promise Neighborhood
Tanya Perrin-Johnson	Buffalo Promise Neighborhood
David Rust	Say Yes to Education
Bradley Butler	Consultant
Jeff Conrad	Center for Employment Opportunities
Laurie Mahoney	Junior Achievement
Ron Caruso	Rotary Club
Robert Lowery	Boys & Girls Clubs
Katie Trask	Boys & Girls Clubs
Ekua Mends-Aidoo	BNMC
Mark McGovern	BNMC

B. Team biographies



Renata Bertram

Marketing Leader, Smarter Cities and Public Sector, IBM Growth Markets

Bertram has worked at IBM for 15 years in a variety of marketing, communications and management positions in regional and local markets. She is currently responsible for defining and executing market strategies, marketing programs, field enablement and communications for the IBM Public Sector business, including government, healthcare, education and Smarter Cities in Asia-Pacific, Africa, Latin America, Central and Eastern Europe and the Middle East. She works closely with sales teams on priorities related to making our cities smarter — more interconnected, instrumented and intelligent — across public safety, water, social programs, transportation and sustainability.

Bertram has experience in leading large, high-performance teams spanning borders, managing multimillion-dollar budgets and implementing transformational organizational projects. She is based in Sydney, Australia.



Yu Kit Lee

Chief Technologist and Executive IT Architect, IBM Government and Healthcare, IBM Growth Markets Unit

Lee has worked in the IT industry for more than 20 years. He is the Chief Technologist for IBM Malaysia and an IT Architect for the IBM Government and Healthcare sectors in Asia-Pacific, Africa, Latin America, Central and Eastern Europe and the Middle East.

Lee develops and works on complex IT projects, including Smarter Planet/City in government and healthcare, solving business problems by the application of IT. He has good insight into the various issues faced by governments and healthcare organizations as they strive to modernize, improve their services, gain efficiencies or produce desirable outcomes for their stakeholders.

As Chief Technologist, Lee represents IBM in the innovative thinking behind the IBM Smarter Planet initiative, in which IT plays an increasingly important part of our lives. He is based in Kuala Lumpur, Malaysia.

**Sunil Murthy**

**IBM Business Unit Executive,
Western United States**

Murthy has extensive experience working with customers in solving their critical business needs and providing thought leadership with software solutions. He drives the IBM strategic growth initiatives that address emerging problem areas, such as big data, cloud computing and mobile among others.

Murthy brings a rich, diversified experience of more than 18 years in the software industry spanning software development, product management and thought leadership. He thoroughly enjoys solving problems by employing his deep understanding of computer science, engineering and business management. Murthy is based in Cupertino, California.

**Erica Webber**

**Associate Partner, IBM Strategy
and Transformation Consulting**

Webber has 16 years of experience bringing financial, risk and performance solutions to higher education and state/local government clients. She is currently the leader for the IBM Institutional Performance and Risk Management Solution, an IBM Smarter Analytics solution for state and local government and education. Webber is based in San Francisco, CA.

**John DiMarco**

**Program Manager, Corporate Citizenship
and Corporate Affairs**

DiMarco is responsible for managing Smarter Cities Challenge projects in Europe, the Middle East and Africa. He has extensive experience working with cross-disciplinary executive teams and government agencies on topics such as public safety, economic development, governance, green energy, transportation and healthcare services.

DiMarco has consulting experience in financial services, having worked on projects spanning customer service, operational improvements, client engagement and the development of new products and services.

C. Top ten employers in Western New York

Name	Location	Employees	Type	Subtype	Genre
1. State of New York	Albany	24,764	Government	State	
2. M&T Bank	Buffalo	15,666	Business	Public	Banking/Finance
3. Moog Inc.	East Aurora	10,320	Business	Public	Advanced Manufacturing
4. Federal Executive Board	Buffalo	10,000	Government	Federal	
5. Kaleida Health	Buffalo	8,030	Business		Health Care
6. University of Buffalo	Buffalo	7,106	Government	State	Education
7. Catholic Health	Buffalo	6,709	Business		Health Care
8. Employer Services Corp	Amherst	6,028	Business	Private	HR Outsourcing
9. Tops Markets	Buffalo	5,058	Business	Private	Retail
10. Wegman's Food Market	Depew	5,000	Business	Private	Retail

Source: Book of Lists, Buffalo Niagara Enterprise, 2013

D. Youth service providers in the City of Buffalo

Organization	Neighborhood	Ages served	Number served	Services provided	Comments
ABLEY St. Peter's Episcopal Church 12 Elm Street, Westfield, NY 14787	South				Cannot find any reference to GED on site
BOCES Adult Education — Erie 2 Chautauqua-Cattaraugus BOCES www.e2ccb.org Central Avenue Community Learning C, 324 Central Avenue, Dunkirk, NY 14048 (716) 366-3631 Serving: Chautauqua, Cattaraugus and Erie Counties. Workforce Development — Erie 1 BOCES www.e1b.org/adulted 355 Harlem Road, West Seneca, NY 14224 (716) 822-3333	- Serving Erie County, main campuses - Located in West Seneca, Tonawanda (o/S of CoB); East Side	18+ average age: 30	Erie 1 BOCES serves 278 16 - 24 in 2012 -2013.	- GED - Vocational - ESL	3,000 adults (900 in GED, ESL — 2,100 in career and technical) of which approx. 50% in City of Buffalo 1500
Adult Learning Center — Buffalo Public Schools www.upskill.org 756 St Lawrence Ave Buffalo, NY 14216	- Serving City of Buffalo - Main campus located in North Buffalo	17 - 21 years	535 - GEDs awarded = 76	- GED - Vocational - ESL - Job Readiness	- Have partnership with ECC and BETC, Bryant 7 Stratton - Morning, afternoon and evening classes
Asbury Shalom Zone www.aszonline.org 520 7th St., Buffalo, NY 14201 (716) 886-8282	- Serving 14201 - Located in Lower West side	18+	unknown	- ESL - GED	Partnership with Erie II BOCES
Boys and Girls Clubs www.bgcbuffalo.org 282 Babcock St. Buffalo, NY 14210	- Serving City of Buffalo - Located on East Side	6 - 18 years	8,000 per year	- After School - Life Skills - Literacy	

Organization	Neighborhood	Ages served	Number served	Services provided	Comments
Buffalo Employment & Training Center www.workforcebuffalo.org 77 Goodell Street, Buffalo, NY 14203 (716) 856-5627	- Serving: Erie County - Located on East Side, Ellicott	14 - 21 for summer programs 18+ for other	Approximately 25% of BETC	- One Stop Shop - GED - ESL - Job Readiness - Job Placement - Social Services	On site partners include: BPS Adult Education, EOC, Urban League, BOCES, ECC, Job Corps, NYS DoL
Buffalo Urban League www.buffalourbanleague.org 15 Genesee Street, Buffalo, NY 14203 (716) 250-2400	- Serving: City of Buffalo - Located Downtown	14 - 24 Years	200 youth per year	- Scholarships - Job Readiness - Job Placement - Social Services	
Center for Employment Opportunities http://ceoworks.org 170 Franklin St., 7th Floor Buffalo, NY 14202	- Serving: City of Buffalo - Located Downtown	18-24 years	150 individuals per year	- Job readiness - Job placement - Social services	Work with citizens returning from imprisonment
Computers for Children www.computersforchildren.com 701 Seneca St. #601 Buffalo, NY 14210	- Serving: City of Buffalo - Located on East Side	12 years above	350 per year	- Computer Classes - Job Readiness	Work in collaboration with the Urban League
ECC City Campus — Erie Community College www.ecc.edu 121 Ellicott Street, Buffalo, NY 14203 (716) 851-1001 Serving: Erie County or any other eligible applicant. ECC North Campus — Erie Community College www.ecc.edu 6205 Main Street, Williamsville, NY 14221 (716) 851-1002	- Serving: City of Buffalo - Located in Downtown and Amherst	17+		- One stop Shop, - Vocational, - GED, ESL	

Organization	Neighborhood	Ages served	Number served	Services provided	Comments
Educational Opportunity Center www.eoc.buffalo.edu	- Serving City of Buffalo - Located Downtown	Average age 22 years	Approximately 200	- GED - Vocational - ESL - Job readiness	
Employment Services — Salvation Army Buffalo Area www.buffalosalvationarmy.org 960 Main Street, Buffalo, NY 14202 (716) 883-9800	- Serving City of Buffalo - Located Downtown, Ellicott			- GED - Job readiness training	
Gerard Place Community Education Building www.gerardplace.org 2515 Bailey Avenue, Buffalo, NY 14215 (716) 897-9948	Located in Kensington, University			- GED - Life skills - Job readiness	
Goodwill Industries of WNY Inc www.goodwillwny.org Corporate Headquarters 1119 William Street, Buffalo, NY 14206 (716) 961-0300	East Side			- GED - Job readiness - Job placement - Social services	
Hillside Workforce Scholarship Program	South Park, Bennett and Emerson high schools	15+ years	180 youth	- Life skills - Job readiness - Job placement	
Junior Achievement www.jawny.org	Delivered in class via schools	K-12	2,264 students in 2011 - 2012 across 25 schools (14 elementary, 3 middle, 9 high)	- Job readiness - Literacy	

Organization	Neighborhood	Ages served	Number served	Services provided	Comments
New Hope Education Center – Harvest House www.harvesthouse.ws 175 Jefferson Avenue, Buffalo, NY 14210 (716) 855-0654	East Side		Unknown	• Over 21 • GED • Vocational	
Northwest Buffalo Community Center http://www.nwbccinc.org/ 155 Lawn Avenue Buffalo, NY 14207 (716) 876-8108 (T) (716) 876-5048 (F)	• Serving North West Buffalo • Located in North Buffalo	4 – 18 years	Thousands of children	• GED • ESL • After school programs • Head Start program • Social services	
Seneca-Babcock Community Association Inc www.senecababcock.com 1168 Seneca Street, Buffalo, NY 14210 (716) 822-5094	• South • Lovejoy • Fillmore			• GED • Job readiness • After school	Looks significant
Sisters School – St Adalbert's Response to Love Center www.responsetolovecenter.org 130 Kosciuszko Street, Buffalo, NY 14212 (716) 894-7030	• Serving City of Buffalo • Located on East Side			• GED • ESL • Computer classes • Social services	
Tomorrow's Youth Today/ GED Program – Catholic Charities www.ccwny.org 170 Kerns Avenue, Buffalo, NY 14211 (716) 893-3500	• Serving City of Buffalo • Located in Downtown • South Buffalo • East Side • Lovejoy • Fillmore			• Older than 16 years of age • GED • Job readiness • Employment assistance • Social services	• Operates in 5 locations • In total in 2011, 84 students received their high school equivalency, 298 students increased reading or math levels at least one grade level and 77 students gained employment

E. Coordination and collaboration references

Baltimore City Youth Commission

www.baltimorecity.gov/Government/BoardsandCommissions/YouthCommission.aspx

The Youth Commission was created in December 2005. In 2003 Mayor Sheila Dixon, then City Council President, sponsored a bill along with other council members to form the Youth Commission. The Council wanted to designate a body of young people in the city to allow youths the opportunity to provide advice, recommendations and information for the Mayor, City Council and municipal agencies on the development of community involvement, government practices and policies, and programs and services that support children, youth and their families. In November 2004, then Mayor Martin O'Malley signed the bill.

The City views it as crucial that it has insight and suggestions from youths so that they may continue to serve in the most efficient manner.

The Youth Commission comprises 17 voting members and 14 nonvoting members. The 17 voting members include one young person from each of the 14 council districts and three at-large seats. The young people are appointed by City Council members, the City Council President and the Mayor. The young people in the three at-large positions are recommended by the City Council President. Each voting member must be a resident of Baltimore City.

The 14 non-voting members represent various community and City agencies, including the Baltimore City School System, the Department of Recreation and Parks, the Health Department, Police Department (PAL Centers), Department of Social Services, the State Attorney General's Office, Enoch Pratt Free Library, the Mayor's Office of Employment Development, the Housing Authority of Baltimore City, the State Department of Juvenile Services, the Family League of Baltimore City and Baltimore City Community College.

The Youth Commissioners work together to accomplish the following tasks:

- Developing and maintaining a three-year action plan outlining areas for study by the commission
- Reviewing issues relating to programs and services for children and youths
- Identifying and recommending priorities among programs and services for children and youths
- Creating a forum for discussions with children, youth and their families
- Advocating for services and programs for children and youths
- Making recommendations for programs, policies and any necessary legislation to promote the health and well-being of children, youths and their families
- Working with both the public and private sector to bring forth the concerns of children and youths, as well as evaluate programming that will enhance the development of children and youths
- Developing a communication network to disseminate information about services to children and youths
- Submitting an annual report to the Mayor and the City Council

Within the Baltimore City Youth Commission are several committees dedicated to monitoring areas of City government as it pertains to youth: health, youth violence and education.

The education committee wants to increase awareness, provide a platform and make recommendations on truancy, college and career opportunities, programs and alternatives for out-of-school youths.

F. Marketing and communications references

Website examples

City of Boston

www.cityofboston.gov/youthzone

City of Boston has developed a Youth Zone that not only is a place to find activities, opportunities, after-school programs and other fun things for Boston's kids and teens to do, but is also a place that provides tips on finding a job, resume guides, scholarships and money saving information. The Boston Navigator allows youth and families to search for youth programs around Boston. Youths can stay connected through Facebook and check out events on the Boston Youth Zone calendar.

Twitter handles

The table below provides some examples of Twitter handles Buffalo youths may follow. In some cases, even though Buffalo youths represent a modest percentage of their overall followers, this represents an opportunity to extend City Hall's reach.

Organization	Twitter handle	# Tweets	# Following	# Followers
Mayor Byron Brown	@MayorByronBrown	1,030	230	2,232
Buffalo Bills	@buffalobills	18,282	236	156,774
Buffalo Sabres	@BuffaloSabres	24,863	476	146,856
Buffalo Bisons	@BuffaloBisons	8,434	86	14,300
Buffalo Place	@Buffalo_Place	374	121	2,612
Buffalo dot.com	@BuffaloDotCom	18,740	2,468	7,787
Buffalo NY	@BuffaloME			
Buffalo Urban League	@BfloUrbanLeague	72	0	146
Buffalo AmeriCorp	@BuffaloAC	1,456	373	378

City of Louisville, Kentucky

www.louisvilleky.gov/OYD

Louisville has created a Youth Development area on its website. It outlines the mission of the Office of Youth Development, offers a catalogue of all available youth programs and outlines key initiatives. Recognized as one of the 100 Best Communities for Young People and winner of the 2012 Best of the Web award.

City of Baltimore, Maryland

www.oedworks.com

In 2012, Mayor Stephanie Rawlings-Blake introduced a campaign that challenged Baltimore employers to join the city in creating valuable summer employment opportunities for its younger residents.

G. Data sharing and governance references

- <http://okfn.org/opendata>
- <http://opendatahandbook.org/en/index.html>
- www.socrata.com/open-data-field-guide
- www-935.ibm.com/services/us/gbs/thoughtleadership/ibv-open-government.html
- www.deloitte.com/view/en_GB/uk/market-insights/deloitte-analytics/de0d882044ad7310VgnVCM3000001c56f00aRCRD.htm

Some useful references on open data:

- http://wiki.civiccommons.org/Open_Data_Guidelines
- www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government
- www.data.gov/home

Open data platforms:

- www.socrata.com
- <http://ckan.org>

- www.opengovplatform.org
- www.junior.com
- <http://ogdisdk.cloudapp.net>

Open data definition from Executive Order:
www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf

Municipalities that have implemented open data in the US include the following cities:

- Baltimore: <https://data.baltimorecity.gov>
- Boston: www.cityofboston.gov/open
- Washington, D.C.: <http://data.dc.gov>
- New York: <https://data.ny.gov>
- San Francisco: <https://data.sfgov.org>

IBM Smarter Cities Challenge report on Helsinki, which focuses on enabling open data: http://smartercitieschallenge.org/city_helsinki_finland.html

Also see “City Forward,” an award-winning website from IBM, which incorporates the use of open data:
http://cityforward.org/wps/wcm/connect/CityForward_en_US/City+Forward/Home

Data warehouse and dashboard: additional notes

- A data warehouse pools data from various sources into a common repository. An extraction and normalization tool is required to standardize the data from the various sources.
 - This tool performs the function called “extract-transform-load” (ETL) into the data warehouse.
 - The data warehouse is typically a separate database from the source data systems and the applications that use them.
 - The types of reports and uses of the data warehouse need to be determined so that the correct types of data can be fed into the data warehouse, as well as for sizing (scalability) requirements of the data warehouse and future expansion.
 - The data warehouse as described in this recommendation is to pool all relevant data from City Hall. However, technology allows data from external sources to be input as well, for example, data from the police, fire department, the BPS and service providers.
 - Data from external sources can be fed into the warehouse in a variety of ways. The simplest and cheapest method of implementation is to use a batch transfer mechanism, such as FTP. Batch updates are not real time, and an analysis must be made as to whether real-time data is actually required or not.
 - There are more sophisticated ways to transfer data from sources, but costs of implementation and sophistication of systems will increase.
- Because of the complexities of implementation and the need to factor in future requirements, it is recommended that:
 - City Hall consider its data and reporting requirements for the present and future and conduct a study on the required infrastructure, skills and software required to implement.
 - Consider the implementation approach. A phased approach with a pilot implementation with phases of expansion is recommended.
 - Consider if external service providers should have access to the data warehouse reporting tool.
 - Consider the security model for access to external users.

H. Youth employment policy leadership references

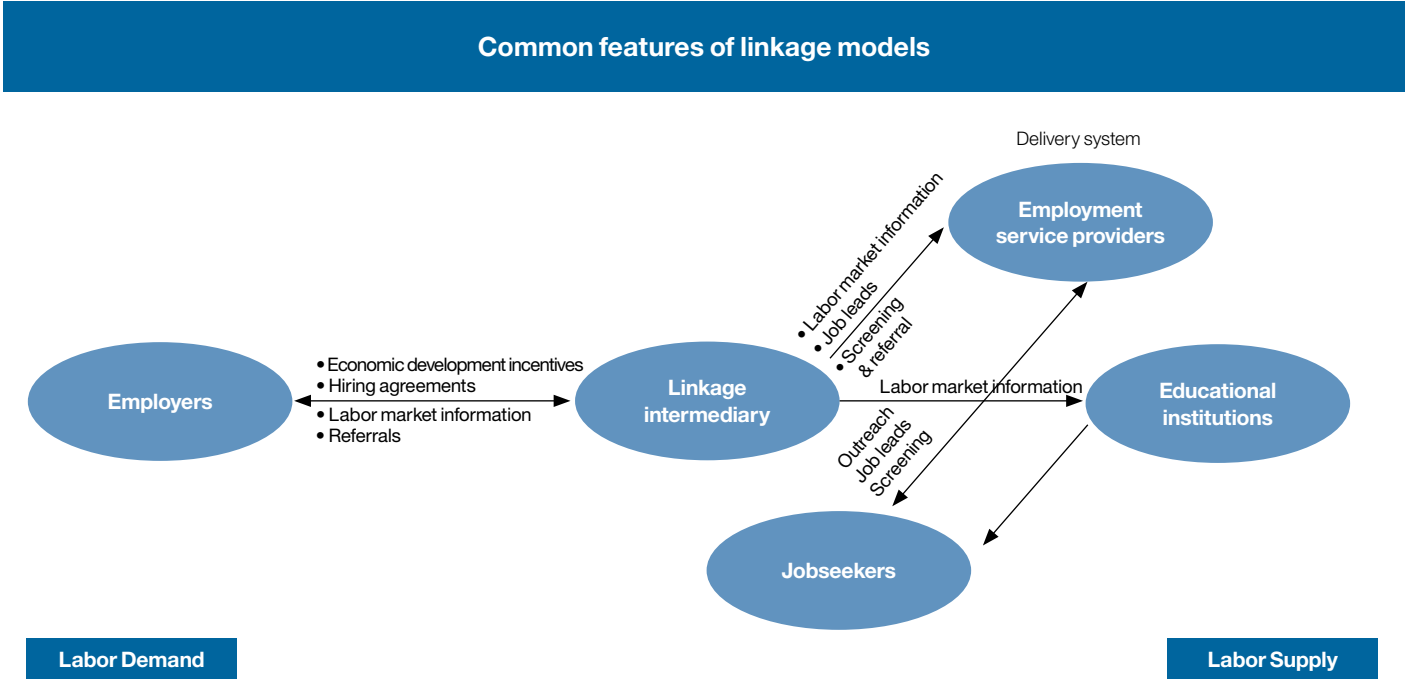
Cities across the nation have successfully tied economic development incentives to the preferential hiring of residents for more than 30 years, including Portland, OR, Hartford, CT, Berkeley, CA, and Oakland, CA. Below is a list of the key attributes (Figure 8) of the programs:

- Finding incentives that bring employers to the table, including economic development funding, real estate development funding, licensing, permits, and labor shortages.
- Providing early information on what employers are seeking to job seekers and the training centers that serve them to about current and projected job demand.³⁹
- Linking information about jobs with people seeking jobs. The intermediary for labor market and open jobs information has included the local development council, a specially developed nonprofit and the city's economic development office. Interestingly, these programs are rarely provided through government one-stop centers. In Portland's case, the program's move from the Portland Development Council to state-operated one-stop centers was accompanied by a drop in program effectiveness.
- Seriously enforcing good faith efforts to meet the local hiring policy requirements. For example, if Portland's JobNet found that a firm had failed to exercise good faith efforts, it might sanction the firm by repealing tax abatements, recalling loans or fining the firm \$25,000 for every worker hired without a good faith effort.

Portland implemented the first such employment linkage program⁴⁰ in 1978. Its JobNet (formerly First Source) program targeted the residents of Portland's North/Northeast and Outer Southeast neighborhoods, which were largely low-income communities of color. JobNet is administered out of the Workforce and Targeted Industries Department (WTID), housed within the Portland Development Commission (PDC). PDC is a quasi-governmental agency responsible for overseeing the city's economic development, redevelopment and workforce development projects and programs. Efficient delivery mechanisms and serious enforcement of good faith efforts led to outstanding results — employment of 700 workers each year, on average. The program required firms wishing to take advantage of economic incentives to sign a First Source Agreement to:

- Make information on defined positions available exclusively to JobNet
- Consider hiring from the pool of candidates referred by JobNet
- Provide JobNet with quarterly summaries of its hiring activities

The City of Berkeley has a similar program that was enacted in 1988. It uses real estate development incentives as leverage to gain employer participation in its First Source program. City staff require or encourage participation in the program whenever a business seeks a conditional use permit, small business loan or zoning variance. Other unique components of Berkeley's First Source program are the emphasis on non-construction work and that its First Source agreements apply indefinitely to the permitted or benefitting property, including all future tenants. Thanks to this approach, 80% of the more than 100 active FSP agreements are non-construction related.



Source: Frieda Molina. "Making Connections: A Study of Employment Linkage Programs." Center for Community Change. December 1998.

Figure 8:
Key attributes of employment linkage programs

Hartford's ordinance was passed in 1986. The ordinance says that, for publicly assisted projects of 40,000 square feet or more:

- 40% of all trade project hours must be performed by city residents.
- 25% of all trade project hours must be performed by minorities, and 6.9% must be performed by women.
- One in five workers must be apprentices, 50% of whom must be city residents.
- Permanent workforce after construction must be at least 50% resident and 45% minority.
- 25% of city work is set aside for small and minority contractors.

Oakland adopted its local hiring ordinance in 1993 and then created the Local Construction Employment Referral Program (LCERP). LCERP requires that all Oakland Redevelopment Agency projects and all City of Oakland construction projects of \$50,000 or more must hire Oakland residents for at least half of all work hours and for all new hires. Success with these mandatory set-asides are attained through partnerships with many community organizations (each serving diverse constituencies throughout the city), which provide outreach and referral, and the local union, which places qualified construction workers at publicly financed jobs.

In addition, Oakland runs an agency that facilitates the city's \$11 million Enhanced Enterprise Community Revolving Loan Fund. In accordance with federal Community Development Block Grant rules, companies participating in the loan fund must create at least one permanent FT position for every \$35,000 of loan funds, and more than half of these jobs must be filled by low- to moderate-income residents of the target neighborhoods. These positions are all non-construction jobs. This policy alone produced 690 new jobs in four years, 57% of which were filled by Oakland residents.

I. Engaging business community references

Best practice: iMatchSkills

This model in which job seekers and employers connect has been proven with the efforts in State of Oregon.

Their best practice is commonly known as iMatchSkills, (www.iMatchSkills.org)

This website uses an innovative approach to job matching. After building a personal skill profile, the job seeker is matched to listings based on employer-specified skill requirements. The use of skills rather than occupational titles for job matching ensures that job seekers are notified of the broadest range of openings for which they may be qualified. Employers can also submit job listings electronically through the site.

For those who still prefer to search the “old fashioned” way (at least as far as the Internet is concerned), or those who don’t want to go through the registration process immediately, the Employment Department also maintains www.workinginoregon.org. Job seekers can search for jobs in Oregon by job title, job description or by geographic location, without registration. In addition, there are links to sites containing state and federal job listings.

In addition to workinginoregon.org, the Employment Department’s JobNET tool allows users to browse all Employment Department job listings and thousands of job listings pulled from Internet and business job boards. You will find JobNET at www.qualityinfo.org/olmis/OlmisZine?zineid=00000008.

There are numerous private job boards. There are both general job boards containing all types of listings, as well as specialized job banks based on a particular industry, geographic area or other criteria. Some of the oldest, largest and best known are Career.com (www.career.com), Career Builder (www.careerbuilder.com) and Monster (www.monster.com). A good list of general recruiters and job banks can be found on The Riley Guide at (www.rileyguide.com). This alphabetical list contains descriptions of each job bank and its features.

J. Youth life skills references

- 1 Avatrends (www.avatrends.com) offers a technology solution called Avatherapy, which was created after the developer did pro bono work for organizations that deal with at risk kids in East San Jose and East Palo Alto. The software has the following highlights:
 - a. Soft skills training in pleasant/fun animations
 - b. A digital journal for making notes, recording emotions
 - c. A virtual world in which one can learn how to deal with negative emotions from Avatars

As at the time of this report, a work in progress of the software can be seen at www.avatherapy.com with ongoing enhancements to serve a number of demographics by changing content and animation.

The developer is Sheri K. Osborn sosborn@avatrends.com

- 2 Another developer who creates “playful solutions” can be contacted at <http://playgen.com>

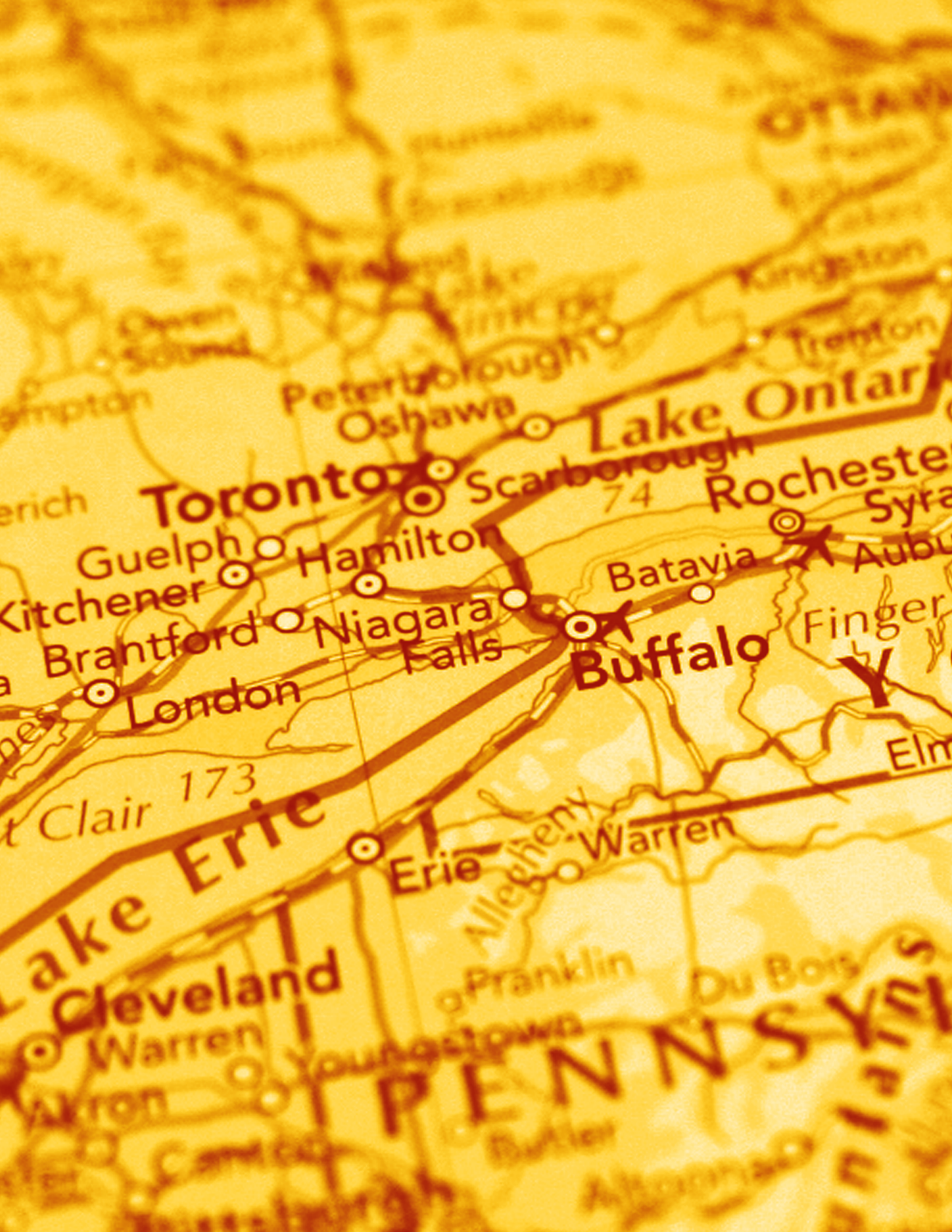
They provide social and serious games, as well as platforms for gamification.
- 3 Serious Games Interactive (www.seriousgames.dk) is a developer of serious games, virtual worlds and simulations.
- 4 GoVenture (www.goventure.net) provides educational games and simulations, as well as financial literacy.
- 5 A professor at DePaul University uses serious games to help at risk inner city youth be successful:

Nicole Pinkard, nicholepinkard@gmail.com:
http://digitalyouthnetwork.org/team_members/2-nichole-pinkard

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- 14 Mattias Lundberg, Youth employment, indicators and measurement at the World Bank. World Bank, June 2008
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Boston: www.cityofboston.gov/doit/initiatives/innovation.asp;
Finland: <http://apps4finland.fi/awards>
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