



# EXPANDING THE NYCHA TO TECH PIPELINE

**A Place-Based Approach to  
Tech Sector Opportunities in Bed-Stuy**

In partnership with



This project is the result of the collective insight and effort of numerous community and industry stakeholders.

Special thanks in particular to our partners at Bed-Stuy Restoration Corporation, including Dawnette Pinkney, Tina Oliver, and Tieaisha Warjloh Gibbs, who made the Community Workshops possible through their exceptional outreach efforts; to the residents of Marcy, Lafayette Gardens, and Armstrong Houses who shared their perspectives through the workshops; and to Shanna Castillo and the NYCHA REES team for advising on the process and recommendations.

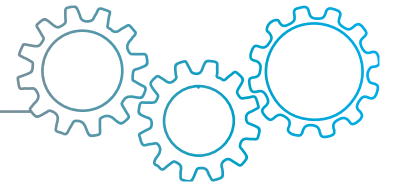


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# INTRODUCTION

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Urbane Development, in partnership with Bedford Stuyvesant Restoration Corporation (BSRC), utilized a **place-based research approach** to understand barriers to and opportunities for creating an **accessible pipeline into the tech workforce** for **New York City Housing Authority (NYCHA) residents of Bedford Stuyvesant (Bed-Stuy)**. The research focused specifically on residents of Marcy Houses, Lafayette Gardens, and Armstrong Houses.

The project is part of a series of planning grants awarded by the NYC Economic Development Corporation (EDC) and the Mayor's Office of Workforce Development (WKDEV) for research and outreach related to strategies that connect underrepresented New Yorkers to opportunities in in-demand sectors like technology.





## PROJECT GOALS

**Understand** NYCHA resident perspectives of the tech sector and opportunities therein

**Uncover** existing skills, assets and interests of residents, as well as barriers facing residents in entering the tech workforce

**Identify** opportunities for improving the cultural competency and accessibility of the tech workforce development pipeline

**Develop** actionable recommendations that respond to research findings and insights





### **Literature Review**

Identification, review, and synthesis of national and local research on the tech sector, workforce development initiatives and practices, NYCHA resident demographics, Bed-Stuy context, and barriers to workforce training participation faced by public housing or low-income residents.



### **Stakeholder Interviews**

A total of 27 conversations with 43 key stakeholders, including organizations who work directly with public housing residents (10), workforce development service providers (9), and employers and recruiters (8).



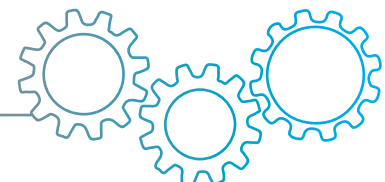
### **Community Workshops**

A series of three community workshops for residents of Marcy Houses, Lafayette Gardens, and Armstrong Houses on the following themes:

*This is Tech* - Demystifying tech and tech-enabled industries and potential roles within the tech universe

*Brand & "Hustle"* - Understanding existing skills/strengths of residents and connecting these learnings to in-demand tech sectors skills

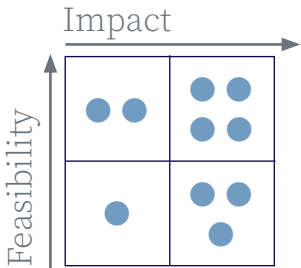
*How Do You Get There* - Reviewing tech training opportunities and co-designing a tech workforce development program



- Lowest Priority
- ● Lower Priority
- ● ● Higher Priority
- ● ● ● Highest Priority

Priority

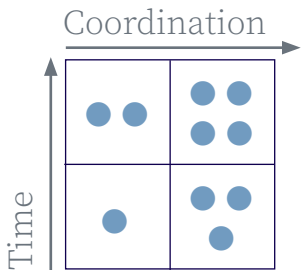
The prioritization of each recommendation is determined by considering both the potential impact of the recommendation and the feasibility of execution based on current conditions. The highest impact, most feasible recommendations take greatest priority.



- Easiest
- ● Easier
- ● ● More Difficulty
- ● ● ● Most Difficult

Difficulty

Each recommendation’s difficulty is based on assumptions about the amount of time it would take to execute and the cross-organizational coordination it requires. Recommendations that call for more stakeholders to work together are considered more difficult.



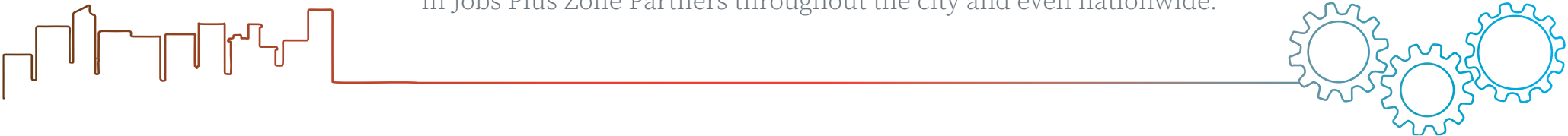
- Under \$80K
- \$80K - \$199K
- \$200K - \$499K
- \$500K or more

Potential Cost

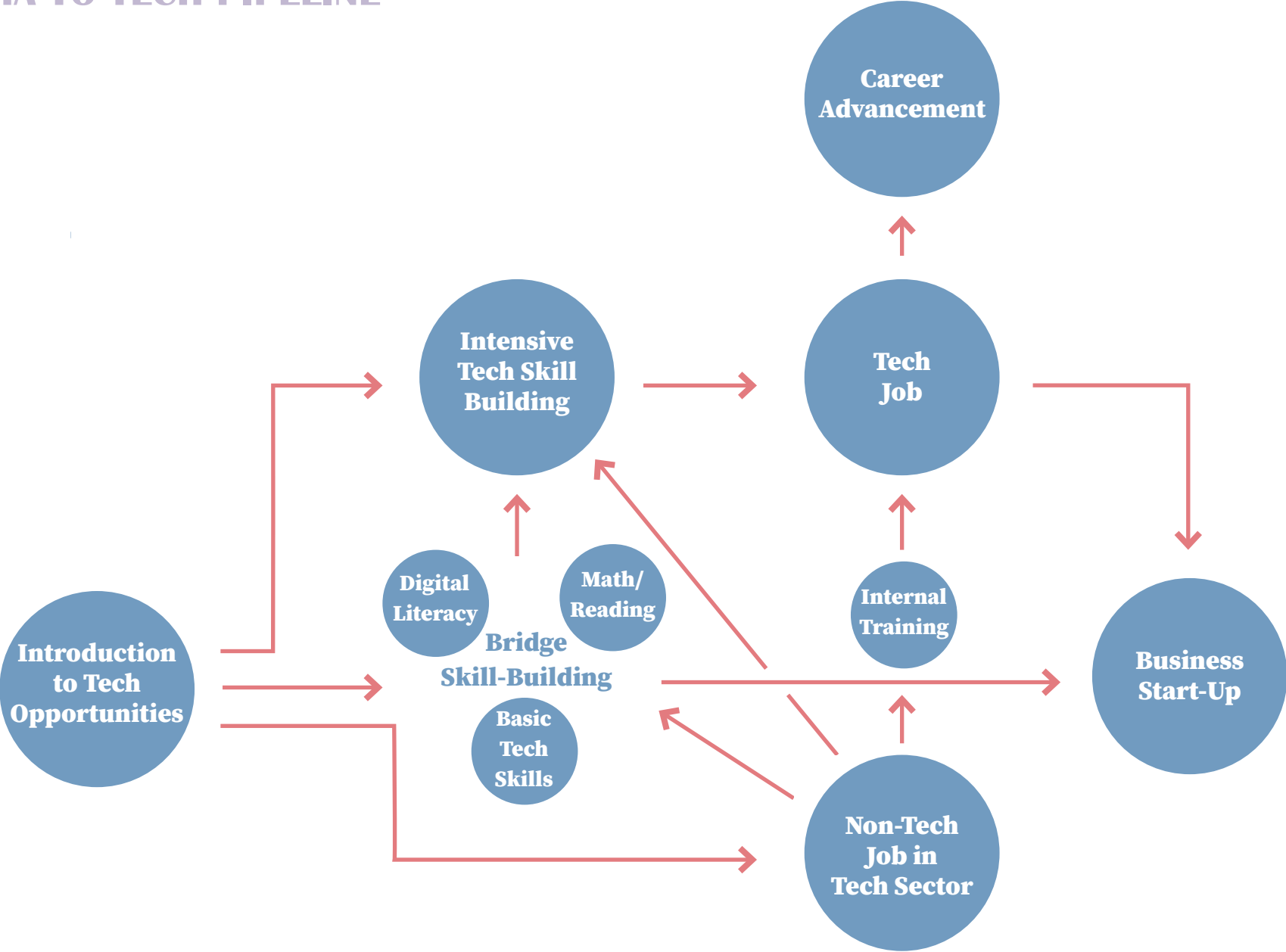
The cost of each recommendation is estimated, where possible, based on precedent costs of component parts. In some cases, the cost required to execute each recommendation ranges, based on the scale or scope of execution.

Replicability

All recommendations are focused on Marcy, Lafayette Gardens, and Armstrong Houses with BSRC, the current operator of the Bed-Stuy Jobs Plus site, as a key implementation partner. However, with adequate investment and partnership, each recommendation could be implemented in Jobs Plus Zone Partners throughout the city and even nationwide.



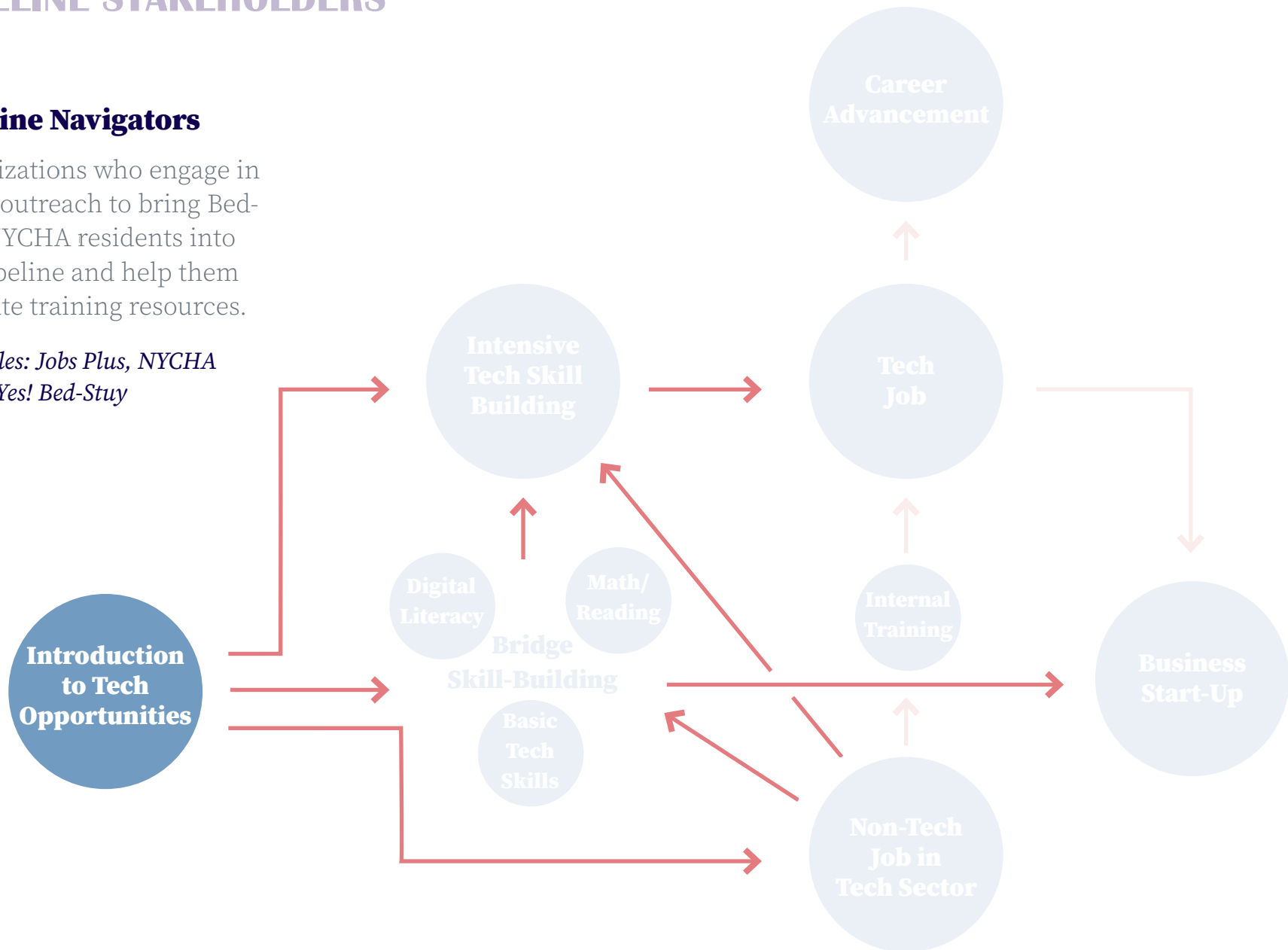




## Pipeline Navigators

Organizations who engage in direct outreach to bring Bed-Stuy NYCHA residents into the pipeline and help them navigate training resources.

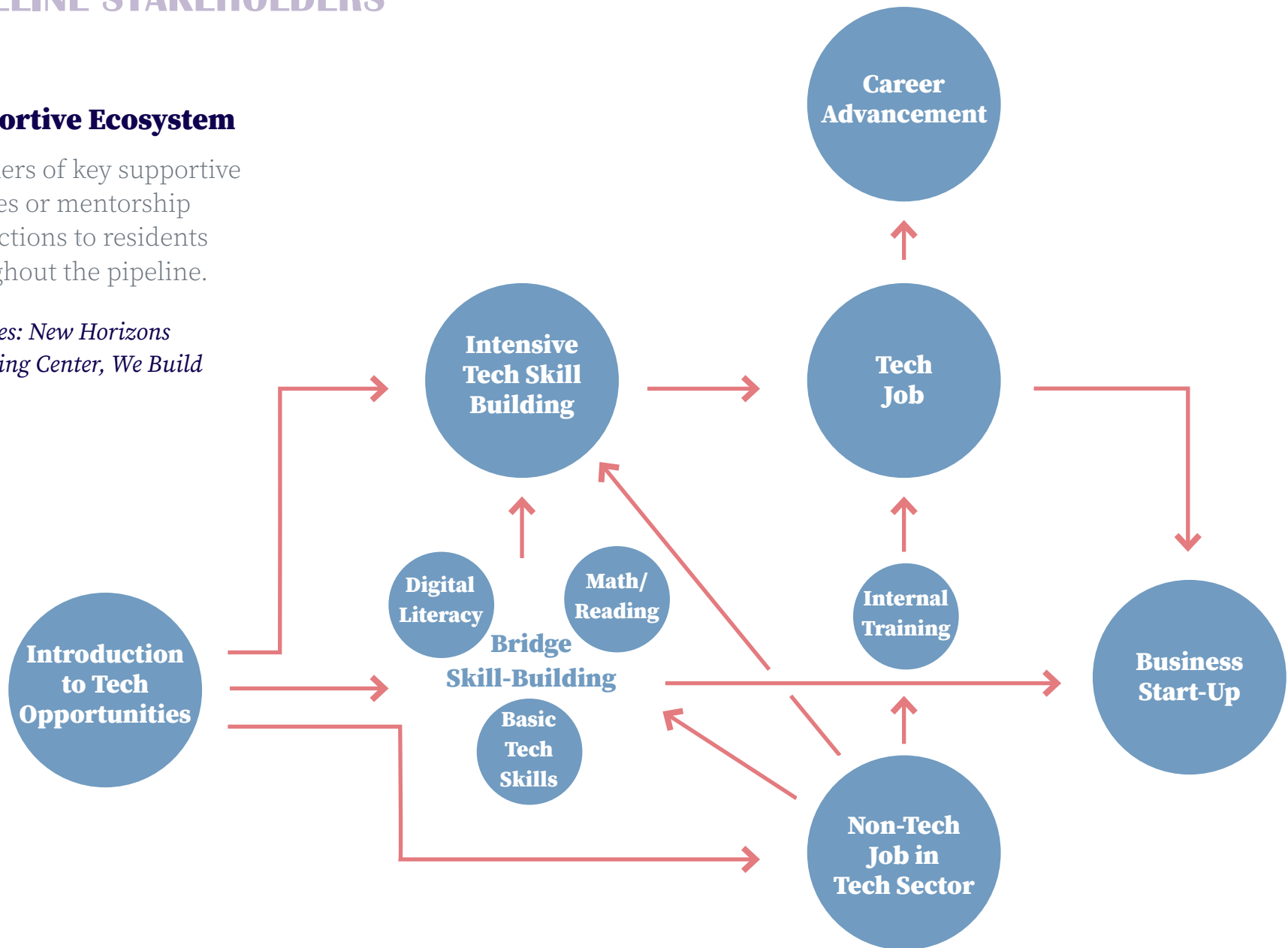
*Examples: Jobs Plus, NYCHA  
REES, Yes! Bed-Stuy*



## Supportive Ecosystem

Providers of key supportive services or mentorship connections to residents throughout the pipeline.

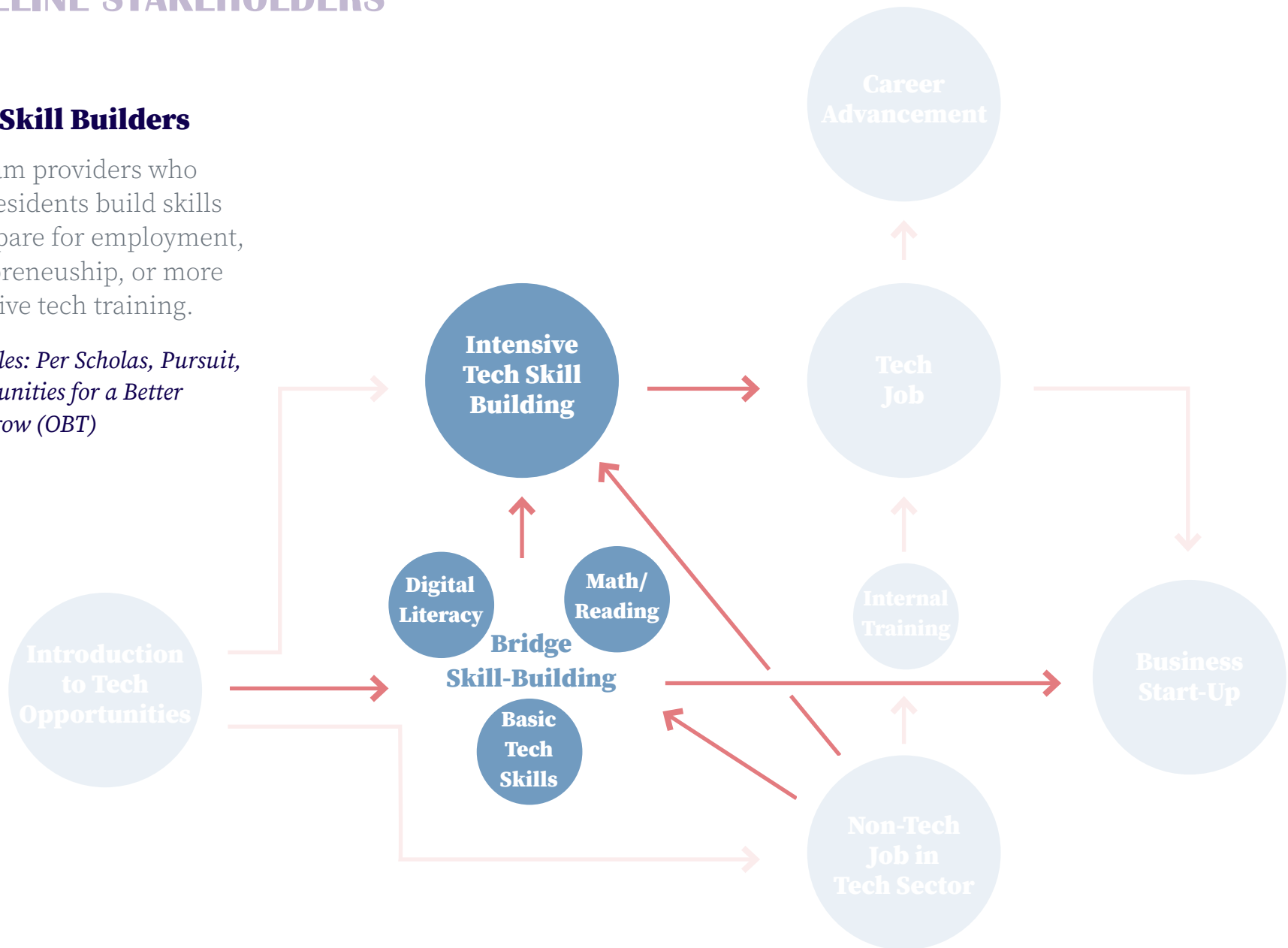
*Examples: New Horizons  
Counseling Center, We Build  
Black*



## Tech Skill Builders

Program providers who help residents build skills to prepare for employment, entrepreneurship, or more intensive tech training.

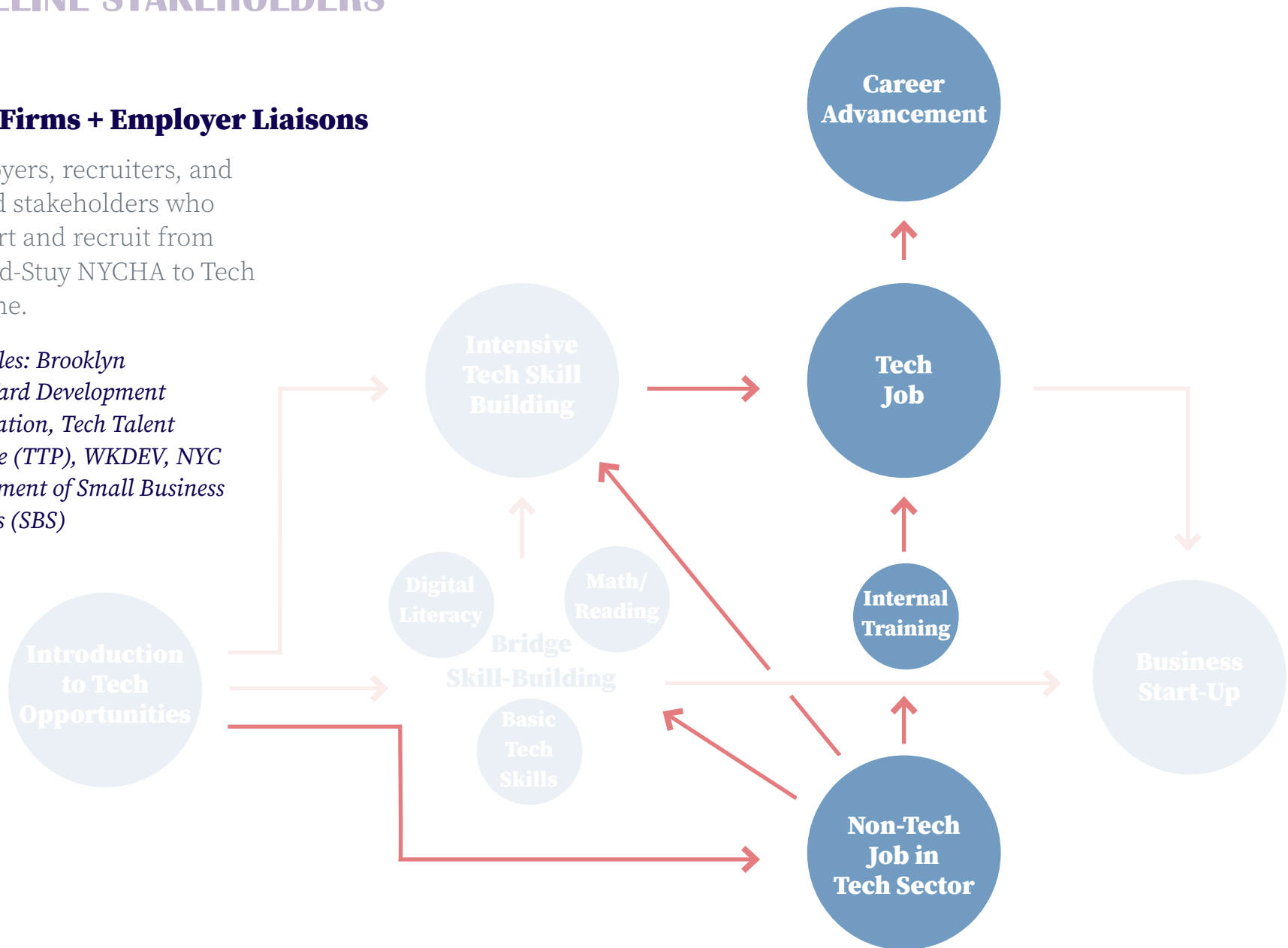
*Examples: Per Scholas, Pursuit, Opportunities for a Better Tomorrow (OBT)*



## Tech Firms + Employer Liaisons

Employers, recruiters, and related stakeholders who support and recruit from the Bed-Stuy NYCHA to Tech Pipeline.

*Examples: Brooklyn Navy Yard Development Corporation, Tech Talent Pipeline (TTP), WKDEV, NYC Department of Small Business Services (SBS)*

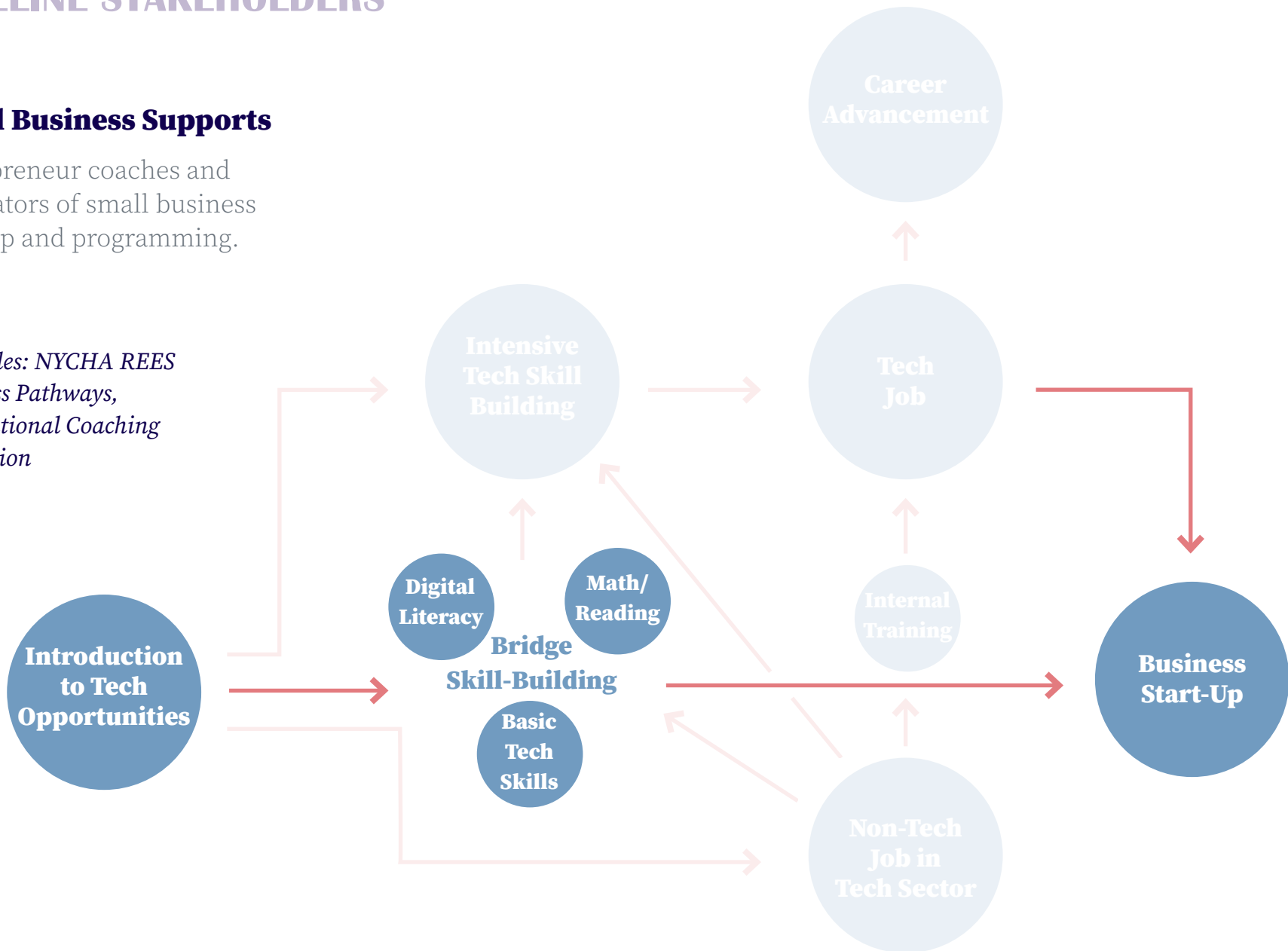




## Small Business Supports

Entrepreneur coaches and facilitators of small business start-up and programming.

*Examples: NYCHA REES Business Pathways, International Coaching Federation*



**Bed-Stuy NYCHA residents have enormous potential talent to contribute to the tech sector, and their interest in the sector stems from a variety of motivations.**

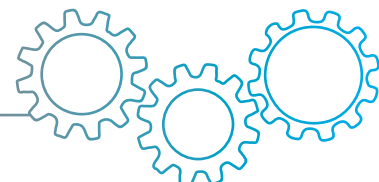
Some residents want to pursue high-skill tech training in order to qualify for jobs that pay well, offer benefits, and give them autonomy over their daily routine. Others understand that tech skills are a key tool to power other interests and skills, like music, design, fashion, and gaming; many want to use tech to enhance or launch a business of their own. Other residents want to build tech skills for the sole purpose of better participating in an increasingly digital world.

Each of these motivations has the potential to fuel the path of interested residents into tech sector employment or entrepreneurship.

**Brooklyn is home to programs and facilitators that can help residents build tech skills specific to each of these motivations, but these resources are disjointed, insufficiently marketed, or perceived to be inaccessible.**

The primary barrier to tech sector employment or entrepreneurship is not the fact that appropriate resources do not exist; it is that the web of resources is difficult for Bed-Stuy NYCHA residents to navigate. In fact, the greatest bottleneck occurs at the beginning of the training and career pipeline, where insufficient marketing of entry points limits accessibility for residents.

Human guidance and a trusted personal connection play a critical role in helping NYCHA residents understand available resources and work toward pathways through the pipeline.



### **Success along the training and career pipeline requires the consistent availability of specific supports.**

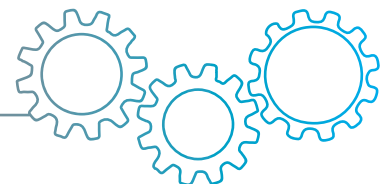
Living in a unique Bed-Stuy public housing context, residents face challenges that many other job seekers in the city do not have to overcome. A supportive ecosystem throughout the pipeline must include identifiable mentors and peer networks, payment for training time, stipends for transportation and other critical expenses, and affordable access to high quality childcare and mental healthcare.

These key supports make it possible for residents to enter the pipeline, successfully complete training programs, and enter and sustain jobs.

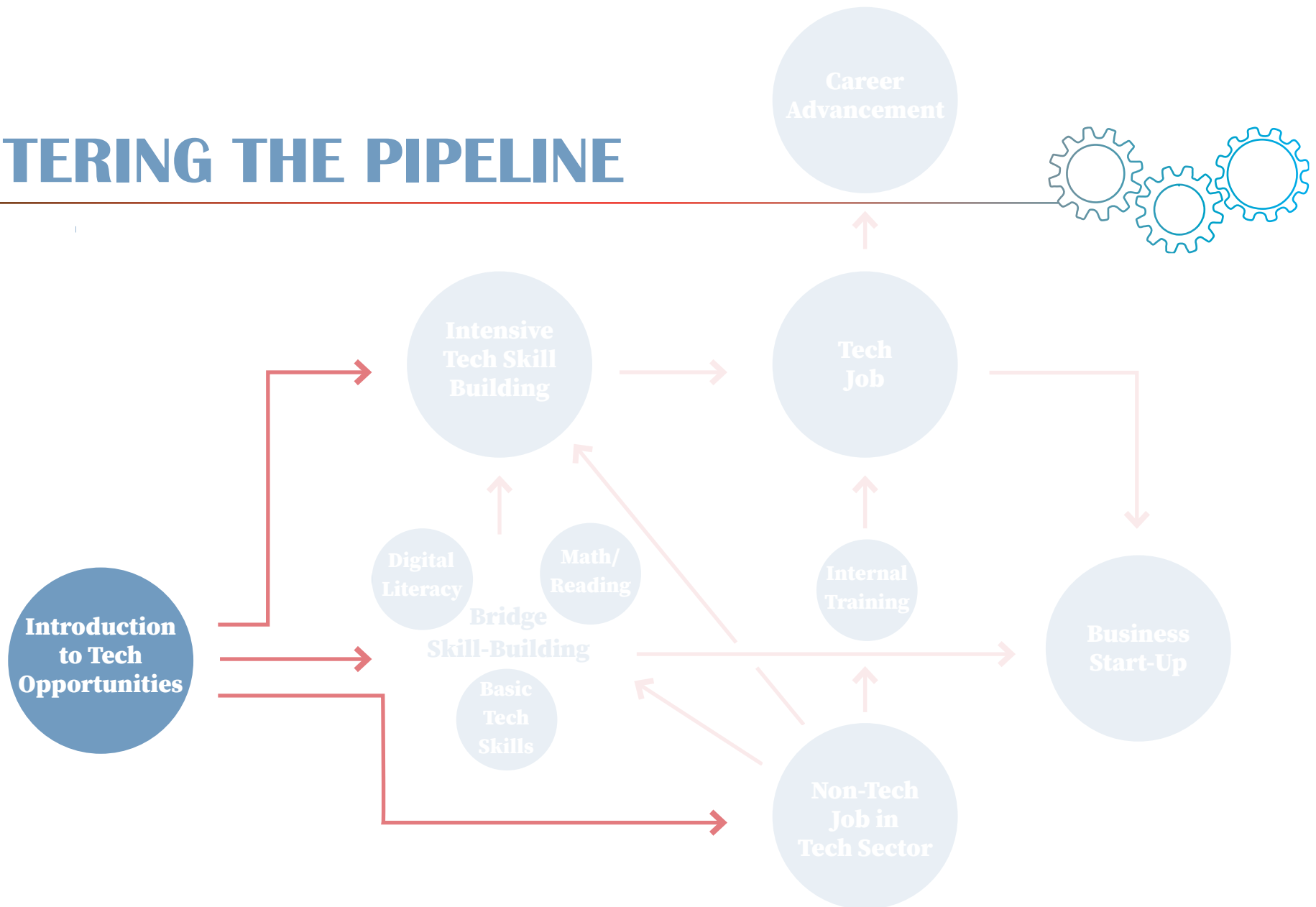
### **Employers are key stakeholders in the long-term success of a more inclusive tech pipeline, and they stand to benefit from the assets that NYCHA residents offer.**

Companies of all sizes stand to benefit from a workforce that includes a greater number of residents of NYCHA. NYCHA residents are important consumers of tech products and services whose perspectives should be reflected in design and user experience. They are also a force for creative entrepreneurship.

Investing in targeted recruitment, training and professional development of NYCHA residents will enrich the tech sector through diversified perspectives and a deeper understanding of the distinct cultures and assets within each community.



# ENTERING THE PIPELINE



**Trusted human connectors are of the utmost importance.**

Residents have expressed frustration, confusion, or apathy related to navigating available resources without guidance. Guidance is best given by a person who expresses genuine personal interest and care. **Jobs Plus Community Coaches** fill this role, but their scope and professional development opportunities are limited.

**Lack of confidence is a major barrier to opportunity.**

Through the course of the Tech Workshop series, residents consistently cited a dearth of confidence as a key factor preventing them from pursuing their goals or opportunities. At the culmination of the workshops, participants expressed greater confidence related to the tech sector and training opportunities.

**Residents trust testimony from their peers.**

Residents are more inclined to trust testimony from people from a similar background who have completed tech training programs than they are to trust information offered by program representatives.

**Training and education require investments of time and money that are prohibitive for many NYCHA residents.**

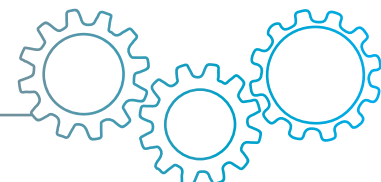
As a result, residents typically have little visibility into career options that might interest them more, suit them better, and/or offer them better salary, benefits, and quality of life than options that are readily available.

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**Jobs Plus Community Coaches** are NYCHA resident Jobs Plus employees who connect community members to Jobs Plus information and opportunities. Counselors then work one-on-one with residents as they navigate job searches and supportive resources. Coaches build relationships with residents throughout the job search process.

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After hearing presentations by two Marcy resident Per Scholas graduates, workshop participants indicated interest in Per Scholas at a much higher rate than in similar programs for which they did not hear personal testimony.





## 1. Launch recurring Tech Workshop series as a key relationship and trust-building tool and as an introduction to tech opportunities.

**Formalize and launch a recurring series of four workshops** designed to orient residents to tech sector opportunities and instill confidence in finding a fitting opportunity. City and industry partners will gain deeper insights into the NYCHA resident community's skills, while facilitators will build understanding of resident career goals and help guide them on next steps.

The series should also be considered a marketing and recruitment vehicle for City tech initiatives and tech training partners, as partners are encouraged to attend and promote their programs in a workshop hosted by Jobs Plus. *See Pilot 1: Tech Workshops.*

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

## 2. Invest in the publication and digitization of a Bed-Stuy specific Tech Workforce Navigator.

**Support the publication of a guide** that focuses specifically on resources that are accessible to Bed-Stuy NYCHA residents will support the personal outreach conducted by Jobs Plus Community Coaches and Counselors. The Navigator is designed to be utilized by NYCHA residents in conversation with frontline workforce development staff, yet it may also serve as a standalone resource where appropriate.

In its first phase, the Navigator is designed for Bed-Stuy in both print and static digital versions, and resources should be directed toward keeping this resource up to date. As a second phase, the Navigator should be adapted into an interactive, frequently updated digital version that lives online or within an app. As a third phase, the Navigator should be adapted for NYCHA residents in other Jobs Plus zones.

**Priority:**

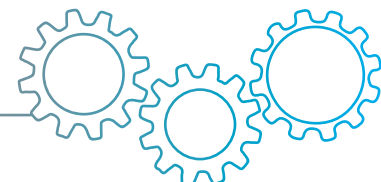


**Difficulty:**



**Potential Cost:**

Less than \$80K



### 3. Offer professional development and more hours to Jobs Plus Counselors and Community Coaches, who are trusted connectors to career opportunities.

**Invest in professional development training** for Jobs Plus Career Counselors and Community Coaches, including career counseling best practices and regular informational sessions related to tech training and employment. Counselors and Coaches should be thoroughly familiar with the range of opportunities to which they are guiding residents so that they can facilitate the most appropriate path toward employment. Training time should be paid time and/or be accompanied by an additional stipend.

**Expand the number of Coaches and the number of hours** each Coach engages the resident community. These connectors are currently overextended, with a team of four part-time Coaches responsible for 50 buildings across four developments. They regularly work with limited or last-minute information.

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

### 4. Invest in convenings between Jobs Plus staff, tech training providers, and employers to share info about tech programs and pathways available to residents.

**Organize quarterly meetings as a forum for information sharing** among employers, tech trainers, and Jobs Plus Counselors and Community Coaches, with WKDEV, REES, Tech Talent Pipeline, SBS, and Yes! Bed-Stuy as potential facilitators. Small business partners should take a priority, as they typically have the benefit of more flexible hiring processes and may be more accessible than some large employers.

**Priority:**



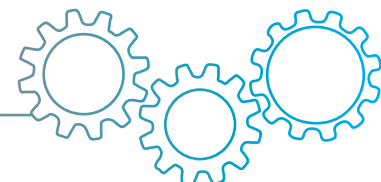
**Difficulty:**



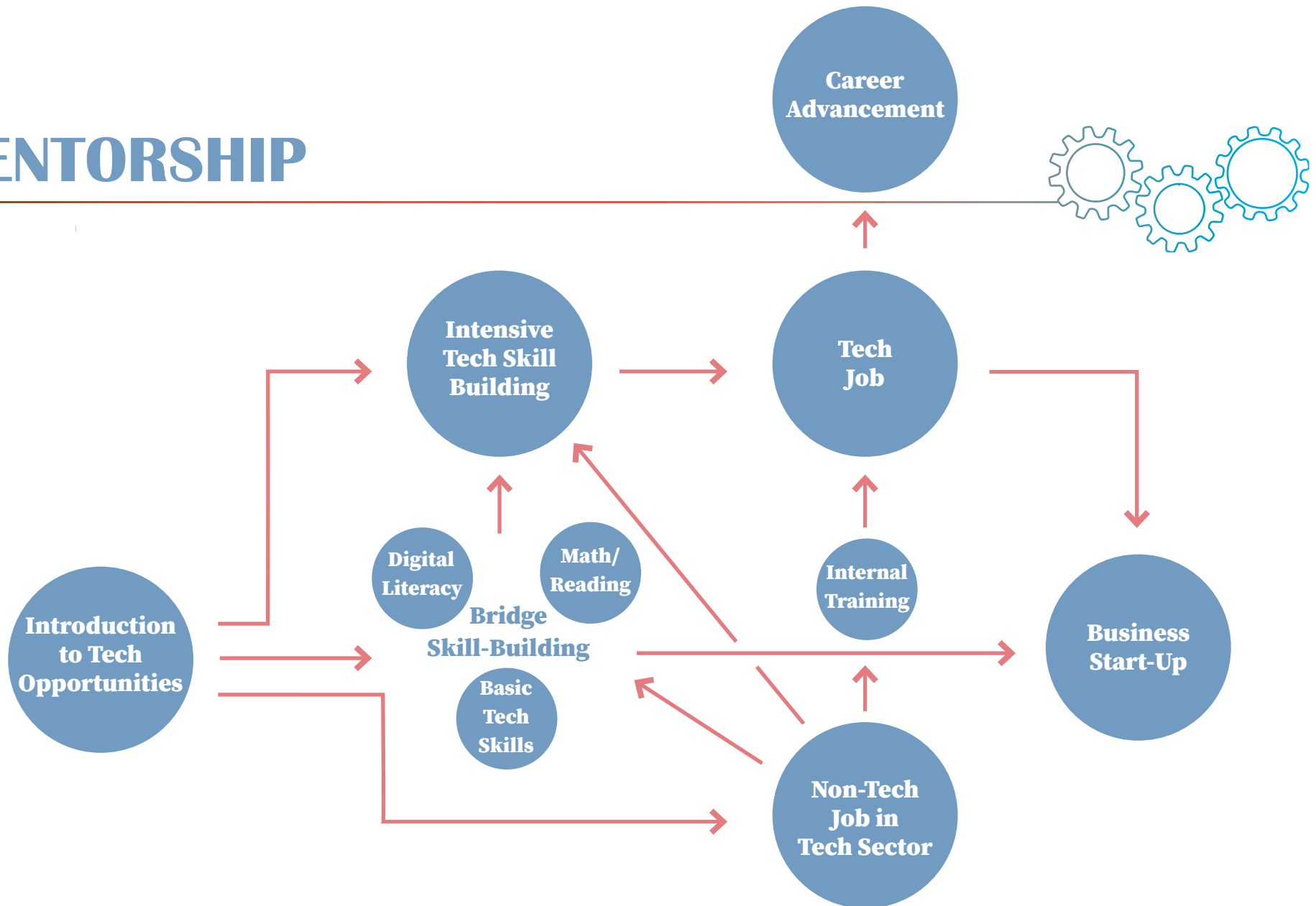
**Potential Cost:**

Less than \$80K

The meetings will support connections between deepen Counselors' and Coaches' understanding of the changing job landscape and training opportunities, improving their ability to coach NYCHA residents toward suitable programs. The meetings will also support connections between Coaches/Counselors and tech employers of both large and small firms, who can play a stronger supportive role in the training and career pipeline.



# MENTORSHIP



## **Mentorship has a high perceived value, especially at the beginning of the tech pipeline.**

Workshop participants identified a strong interest in having a dedicated **mentor** with whom they would meet regularly and who could act as a guide through their training and career journeys.

## **Residents should have access to mentors with whom they identify, but this affinity is not always critical.**

Some workshop participants noted that it was important for the mentor to be from the NYCHA or Bed-Stuy community; for others, it was more important that a mentor have strong industry connections and could give expert professional advice, regardless of the mentor's background.

## **Strong peer groups help candidates move through the tech pipeline and maintain connections to providers.**

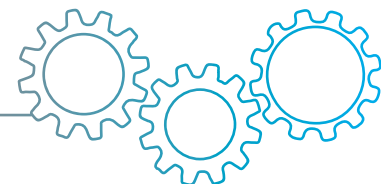
Tech training program providers have found that cohorts of participants form a strong camaraderie and offer one another support and motivation. The connections built within peer groups help keep all participants connected to the program itself, making it easier for the program to bring graduates back as mentors and for graduates to return to the program for additional resources (if they are available).

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A **mentor** is a person with experience and/or networks in the tech sector who is equipped to listen to, advise, and connection an individual. Mentorship can take the form of a deep and long-term relationship or discreet meetings focused on tactical advisement.

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Per Scholas cohorts consist of participants of all ages who create a family-like environment; providers call the cohort dynamic a “special sauce.” Graduates who stay connected assist current participants by offering mentorship and mock interviews.



## 5. Connect NYCHA residents in the Tech Workshops with diverse practitioners to serve as mentors throughout residents' journey through the pipeline.

**Develop a pipeline of dedicated mentors** who can attend the final sessions of the Tech Workshop series and be paired with NYCHA residents who want to continue exploring the pipeline. Mentors should be made aware of key milestones on the pipeline and encouraged to follow up with mentees to ensure that they feel adequately supported at each step.

Mentors involved in the pipeline should include practitioners from small businesses and nonprofit groups alike. We Build Black, a Brooklyn group working to address the lack of Black representation in tech, is prepared to establish relationships with residents. *See Pilot 1: Tech Workshops.*

**Priority:**



**Difficulty:**



**Potential Cost:**

Less than \$80K

## 6. Establish a formal Flash Mentorship program, leveraging EDC and City relationships with major tech employers to identify mentors.

**The City should serve as a key mentor recruitment partner** for tech training programs, leveraging corporate/employer relationships to develop a pool of well-connected mentors who can participate in limited time, limited quantity mentorship engagements with NYCHA participants of training programs.

This Flash Mentorship cohort can provide NYCHA tech training program participants with professional guidance and job placement support. This focused, technical advisement should be considered separate from but complementary to a deeper, longer-term mentor relationship.

**The City and tech training providers should encourage employers** to formalize public commitments by creating time and space for mentors to engage with mentees.

**Priority:**

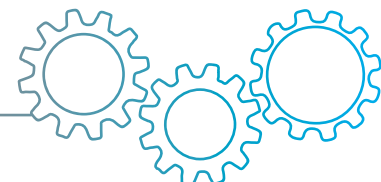


**Difficulty:**



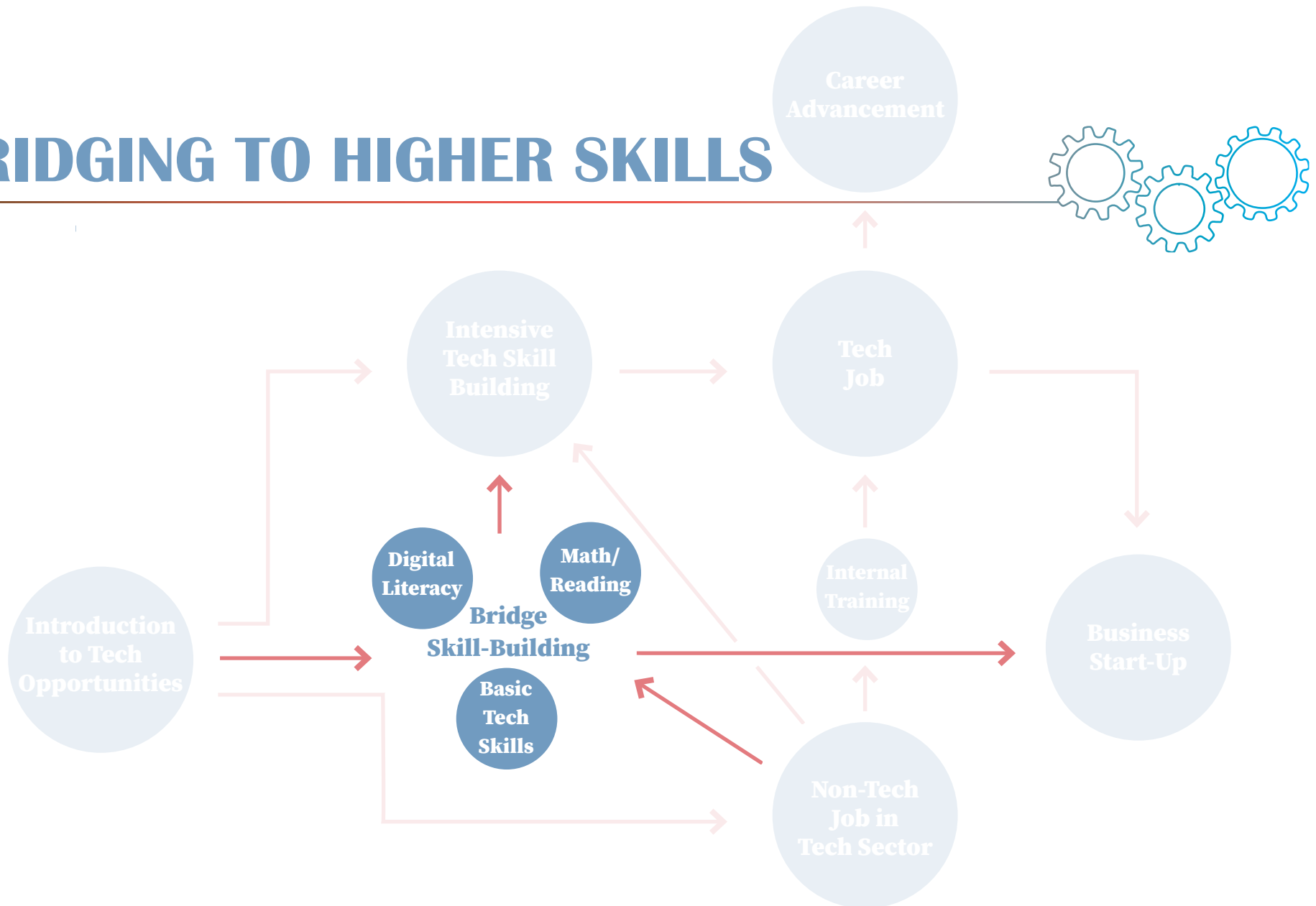
**Potential Cost:**

Less than \$80K





# BRIDGING TO HIGHER SKILLS



**The TABE tests for relevant skills, but its format makes it an imperfect measure of tech trainee aptitude.**

TABE is commonly used as a qualifying tool to test for important aptitude in training applicants, yet can eliminate qualified applicants who do not test well. Residents need more resources to practice effective test taking.

**Bridge programming can help potential tech trainees achieve necessary prerequisites while remaining in the tech pipeline.**

If a candidate must build skills or credentials before entering a training program, the amount of time that candidate is required to invest before earning an income increases. Extra steps add to the difficulty of completing the pathway. Bridge programs help consolidate those steps.

**Bridge programming is an unmet need for adults age 25+.**

Adults of all ages need similar opportunities to skill up before successfully beginning a training, and needs may vary by age group; older adults may have greater digital literacy gaps that need to be filled.

**There is no formal referral system for applicants who need to build additional skills before entering a program.**

If an applicant does not seem prepared to be successful in a program, administrators will typically make informal referrals to other providers who can help the candidate gain requisite skills. However, applicants can easily drop out of the pipeline due to the difficulty of navigating extra steps.

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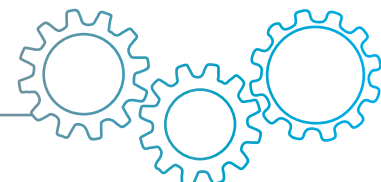
TABE, or Test of Adult Basic Education, is an exam that tests aptitude in Math, Reading, and Language, typically for technical training qualification.

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Bridge programs equip people with skills they need to qualify for job training or higher education. For tech training, those skills typically involve math, reading, and/or digital literacy.

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Per Scholas is working with The Door to provide critical bridge programming for youth aged 18 to 24 who need to build both hard and soft skills in preparation for more intensive tech training. The program opens doors into the tech sector for youth of any educational background.



## 7. Expand testing support through additional study, tutoring, and testing sessions and locations. Focus on building math and reading skills that are tested on TABE.

**Introduce test-taking coaching, tutors, and TABE practice materials** to additional and geographically accessible locations such as Brooklyn Public Library at the Marcy, Macon, and Bedford Branches. The coaching and practice sessions should focus on the skill of test-taking as much as preparing students to master the content.

While many program providers are seeking alternatives to the TABE as entry requirement, building these math and reading skills will continue to be important for tech training program participants.

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

## 8. Introduce more tech skill bridge program opportunities for adults age 25+ focused on skilling up reading and math abilities as well as digital literacy.

**More bridge programs should be adapted or created to serve adults age 25** allowing non-youth trainees to skill up while accessing the comprehensive supports available in youth bridge programs.

Adult bridge programming should be scheduled to accommodate typical work schedules where possible.

**Priority:**

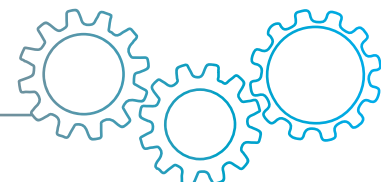


**Difficulty:**



**Potential Cost:**

\$200K - \$499K



## 9. Strengthen relationships between Bed-Stuy Jobs Plus and tech training providers citywide.

Just as Jobs Plus Counselors and Community Coaches need to be comfortable directing job seekers to an array of accessible and applicable training programs, program providers need to be aware of the role that these connectors play in moving job seekers along the training pipeline.

**In cases where a Bed-Stuy NYCHA resident is not accepted to a training program, the provider should be able to give the applicant a clear referral to Jobs Plus** so that the applicant can meet with a Counselor or Coach who can direct them to a more appropriate resource. Bed-Stuy Jobs Plus Counselors should meet directly with providers of all training programs listed in the Navigator.

**Priority:**

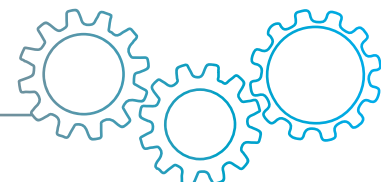


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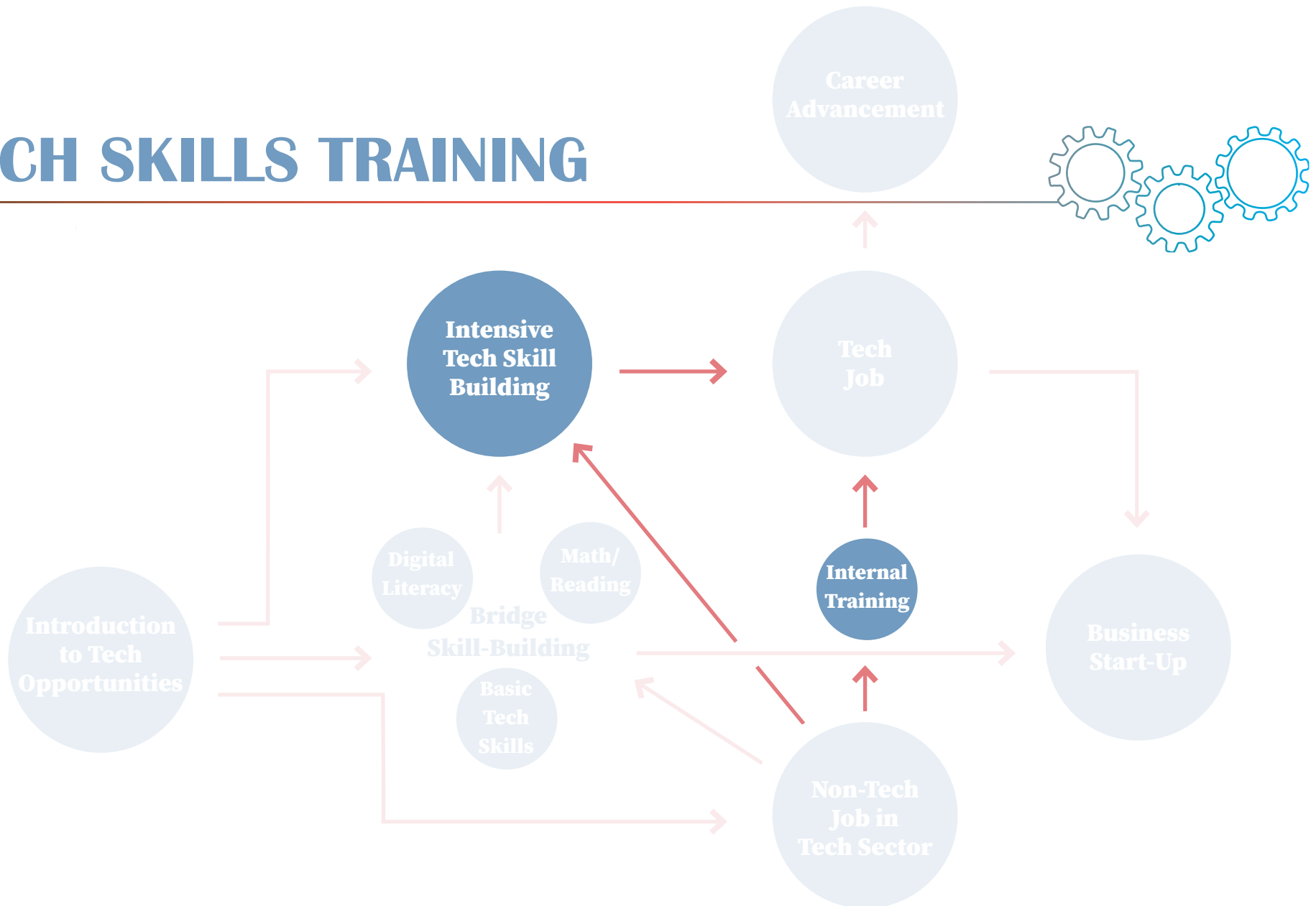


**Potential Cost:**

Less than \$80K



# TECH SKILLS TRAINING





**Residents must keep earning income during training in order to meet basic needs, but paid trainings for adults are rare.**

Job training programs need to offer stipends or compensation so that participants can afford to invest significant portions of their time. While some youth tech trainings offer stipends, adults have no options for programs that support their entry into the tech workforce pipeline from a day-to-day financial standpoint. A travel stipend is one of the most important supports.

**Tech training should be developed in partnership with tech firms.**

Employers see a distinct advantage in candidates prepared to fill specific roles in the context of their corporate culture. A direct linkage of this kind prepares candidates to not only fill a tech role, but to understand how skills play out in the context of their future employer(s) and ensure success in that role.

**NYCHA residents are most interested in practice-based training.**

Residents see hands-on learning styles, including apprenticeships and on-the-job training, as the most effective and appealing way to build relevant skills.

**Solid internal training within companies can make non-tech roles an important stepping-stone into the tech sector.**

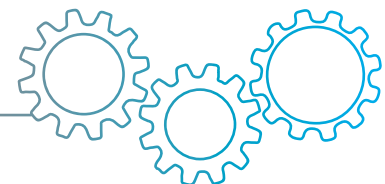
Companies increasingly outsource jobs like custodial or warehouse work, but some firms have developed internal training pipelines for non-tech employees. Pursuit's Level Up program formalizes tech training of non-tech workers. Other companies encourage informal peer-to-peer training across departments.

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Opportunities for a Better Tomorrow (OBT) gears its Cloud Computing Program specifically to prepare trainees for roles at Amazon, who serves as a partner in developing the training.

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Uncommon Goods has employed warehouse workers who showed interest and initiative in building new tech skills. These workers were given opportunities to work with, learn from, and eventually join the Product Development team.



## 10. Provide tech workforce trainees with monthly MetroCards to cover the cost of travel in order to address a key cost barrier.

**Standardize the inclusion of monthly MetroCards** as a necessary cost per trainee for tech bridge programs and intensive tech training programs alike. The provision of travel stipends or metro cards is an established best practice in use by many workforce development entities and social service organizations.

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

## 11. While residents are engaged in any training, programs should utilize an “earn to learn” approach to reduce the opportunity cost barrier.

**Training programs should standardize the provision of participant stipends/payments**, directly addressing a primary barrier cited by residents. Stipends should be robust enough to eliminate trainees’ reliance on full time work to meet basic financial obligations.

For bridge program participants, compensation could potentially take a graduated structure to help incentivize/reward completion and transition into a full tech training program.

**Priority:**

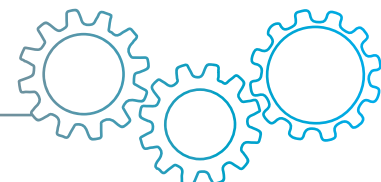


**Difficulty:**



**Potential Cost:**

\$500K or more



## 12. Further reduce training barriers by creating a trainee stipend fund linked to individual residents, rather than specific training programs.

**Establish a stipend fund** to supply residents with a baseline wage as they train for the future. The fund should be open to all adults, particularly age 25 and up. Fundable training time should span the entire workforce pipeline, including bridge programming and preparatory courses, as well as immersive tech training programs.

The stipend should move with participants as they advance through their individual training journey, earning to learn irrespective of which training programs they select. *See Pilot 4: Universal Tech Training Income for Adults.*

**Priority:**



**Difficulty:**



**Potential Cost:**

\$500K or more

## 13. Facilitate sharing of tech talent best practices among training providers and employer-led internal training programs.

**The City should encourage the adoption of tech training best practices** outlined by the Tech Talent Pipeline by endorsing programs and bootcamps that verify their adoption of best practices. If appropriate, developing a standard evaluation and/or benchmarks for key practices could be useful in helping employers understand the quality of the training.

**Create an employer playbook** that details an approach to building an internal tech talent pipeline. The playbook should center on strategies for as well as benefits of training and coaching employees in low-skill, low-wage functions for tech roles. Identify a lead employer with proven success to spearhead the playbook content. Include incentives like the Brooklyn Chamber of Commerce “Good Help Workforce Services” On-the-Job Training Support, which helps firms create and institute internal training programs.

**Priority:**

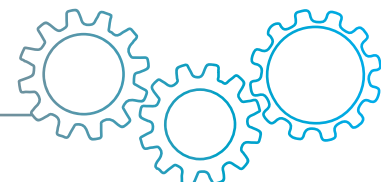


**Difficulty:**

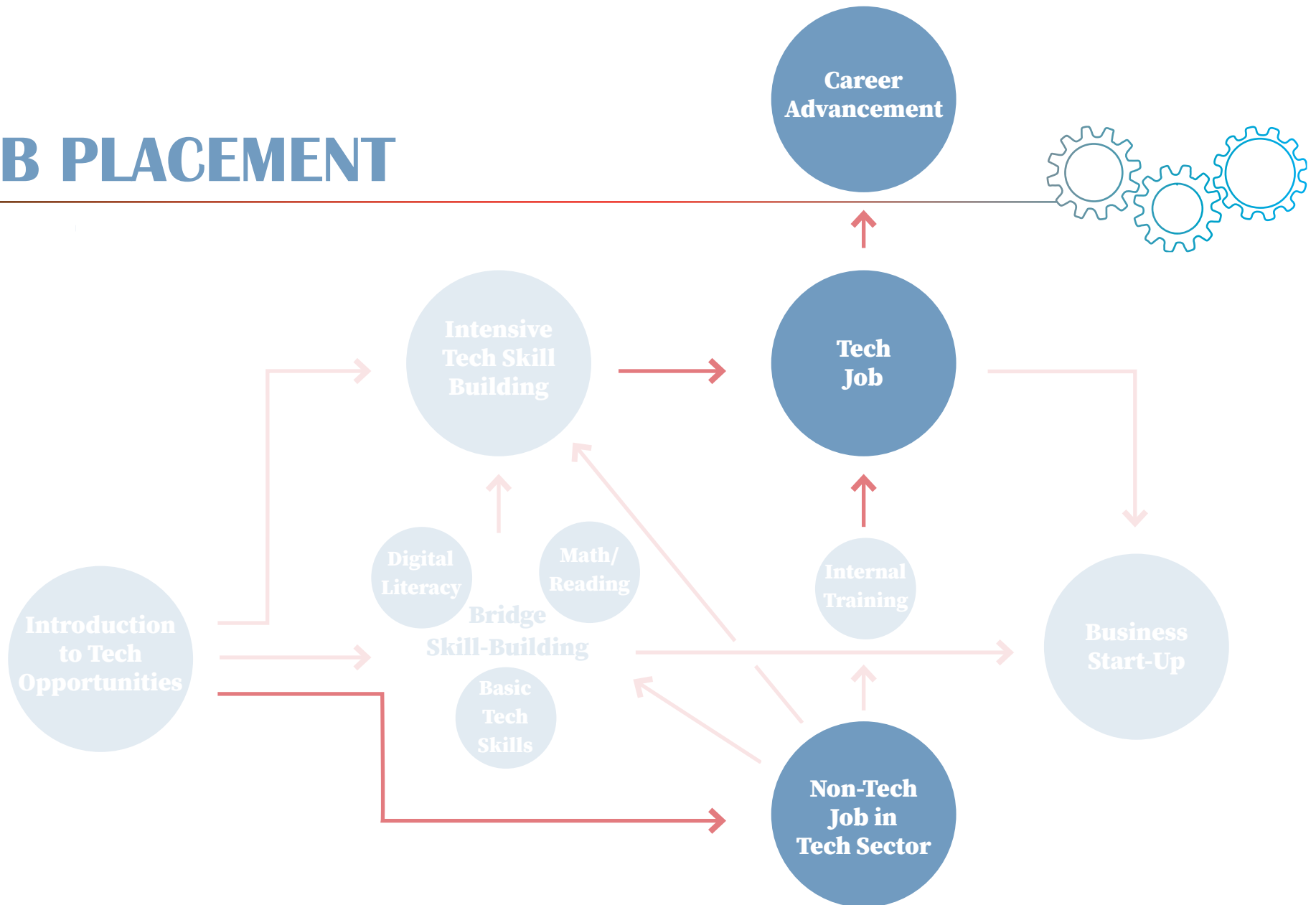


**Potential Cost:**

Less than \$80K



# JOB PLACEMENT



## **The handoff between training providers and employers requires deep relationship-building.**

Tech training providers cultivate relationships with employers, who learn the program's reputation and trust that program graduates will be well-prepared employees. Employers trust these providers more than they trust generic coding bootcamps, which may be perceived as lacking rigor and unable to prove the integrity of participants' skills or aptitude.

## **Employers value candidates who have engaged in external creative initiatives and independent projects.**

The extracurricular activity is taken as key evidence of motivation, curiosity, and commitment to continued independent learning. For some employers, this evidence of initiative is critical even for candidates who have completed trusted training programs.

## **While in-demand hard skills will continue to evolve, foundational skills are a constant need for success in tech sector opportunities.**

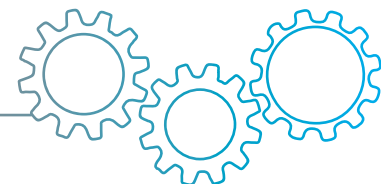
Providers and employers emphasize that problem solving and critical thinking are needed in any job; these are future-proof skills. Providers focus heavily on building these soft skills, along with professionalism, collaboration, and self-efficacy, during training programs.

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Employers like Redshift Technology noted that they are most enticed by applicants who prove that they can pursue a project independently. A strong candidate might use free online resources to create a simple game.

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Employers like Bed-Stuy-based Highbrid Media and Element9 have described a need for internal training to adapt to rapidly changing technology in their industry. Problem solving skills are integral to employees' success in internal training.



### **Many NYCHA residents are interested in City employment.**

Workshop participants expressed a strong desire for stable jobs with good benefits, and providers have additionally found that jobs with the City are perceived as a positive option for stability, health insurance, and other benefits.

### **Maintaining connections to supportive services is critical for success after training, both before and after job placement.**

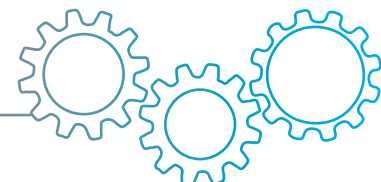
When residents transition from trainee status to job seeker status to employee status, they quickly move from a highly supportive environment to assuming sole responsibility of career stress and previously subsidized costs. Program graduates can experience a gap between training and employment that leads to significant financial hardship and can prevent them from securing a job in the tech sector. This support is also critical in helping the resident sustain employment after a job is secured, particularly as rising income begins to disqualify the resident from certain public benefits.

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Per Scholas has an emergency fund that can be tapped to assist graduates who experience financial hardship in the job search process, but the funding is not sufficient to cover the need.

### **The NYCHA perspective can bring a critical added value to the tech sector.**

Recruiters avoid bringing NYCHA residents' community into their professional brand to avoid the potential of implicit bias in the hiring process. However, some employers explicitly call out the value of the perspective that employees from a public housing background can bring to certain roles, particularly where human-centered design is involved.



## 14. Ensure key support services remain available during the hiring process and after job placement.

**Providers should ensure that health and social services remain in place** as residents graduate from their training program into full-time work. Workforce service providers could partner with outside professionals or bring services in-house through full-time mental health and social worker positions.

**NYCHA REES should foster a connection between tech training programs and NYCHA Childcare Pathways graduates** in order to support participants in finding quality childcare. This connection will allow new tech graduates to easily identify local providers while supporting members of the NYCHA entrepreneur ecosystem.

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

## 15. Establish a public-private partnership to fund extended childcare and travel subsidies for tech training graduates to counterbalance income increases.

Under the Earned Income Disallowance program, NYCHA residents who experience increased income after participation in an economic self-sufficiency program (such as Jobs Plus) have rent increases deferred for a full year. In the second year, their rent increases by only half of the amount that it would normally.

**Public and private stakeholders, such as foundations and employers, should collaborate on a funding stream** to reduce the impact of childcare and transportation cost increases for new entrants into the tech workforce. In year one of employment, the full cost of childcare and transportation would be eligible for subsidy. A gradual decrease could be instituted each subsequent year up to year 3 following the start of tech employment.

**Priority:**

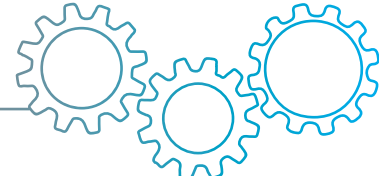


**Difficulty:**



**Potential Cost:**

\$200K - \$499K



## 16. Create a formal tech apprenticeship program for NYCHA residents, leveraging NYCHA and broader New York City procurement power.

**Partner with tech workforce training providers** to assess the technology needs of NYCHA and the City of New York and design an entry-level apprenticeship program for residents to learn vis-a-vis projects within NYCHA and NYC government agencies and build marketable work experience.

Employ guidelines modeled after HUD Section 3 hiring goals for technology contractors working with NYCHA and NYC government. Require City technology contractors to engage as official partners in the NYCHA apprenticeship program, enabling sustainability and expansion over time. *See Pilot 2.1: Tech Apprenticeship and Social Enterprise.*

**Priority:**



**Difficulty:**



**Potential Cost:**

\$200K - \$499K

## 17. Expand NYC tech competitions and initiatives to include a NYCHA focus in support of building tech credentials.

**Leverage the reach and power of public innovation initiatives** to include NYCHA residents. Launch an interim iteration of the BigApps competition targeting NYCHA residents, particularly those who are entering the tech training pipeline or are already part of the tech workforce. The competition could support trainees in developing extracurricular or independent work while leveraging emerging NYCHA talent to participate in community-developed tech solutions.

Additionally, the City should reserve space for NYCHA residents at PropTech NYC, making it a launching point for NYCHA residents in the realm of real estate technologies and ensuring the perspectives of NYCHA residents in the field.

**Priority:**

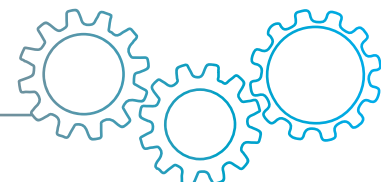


**Difficulty:**



**Potential Cost:**

\$80K - \$199K



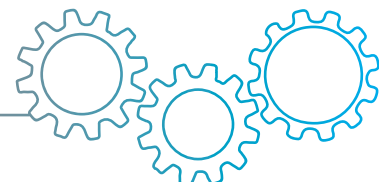


## 18. Promote awareness of programs and other incentives available to companies that hire and train public housing residents.

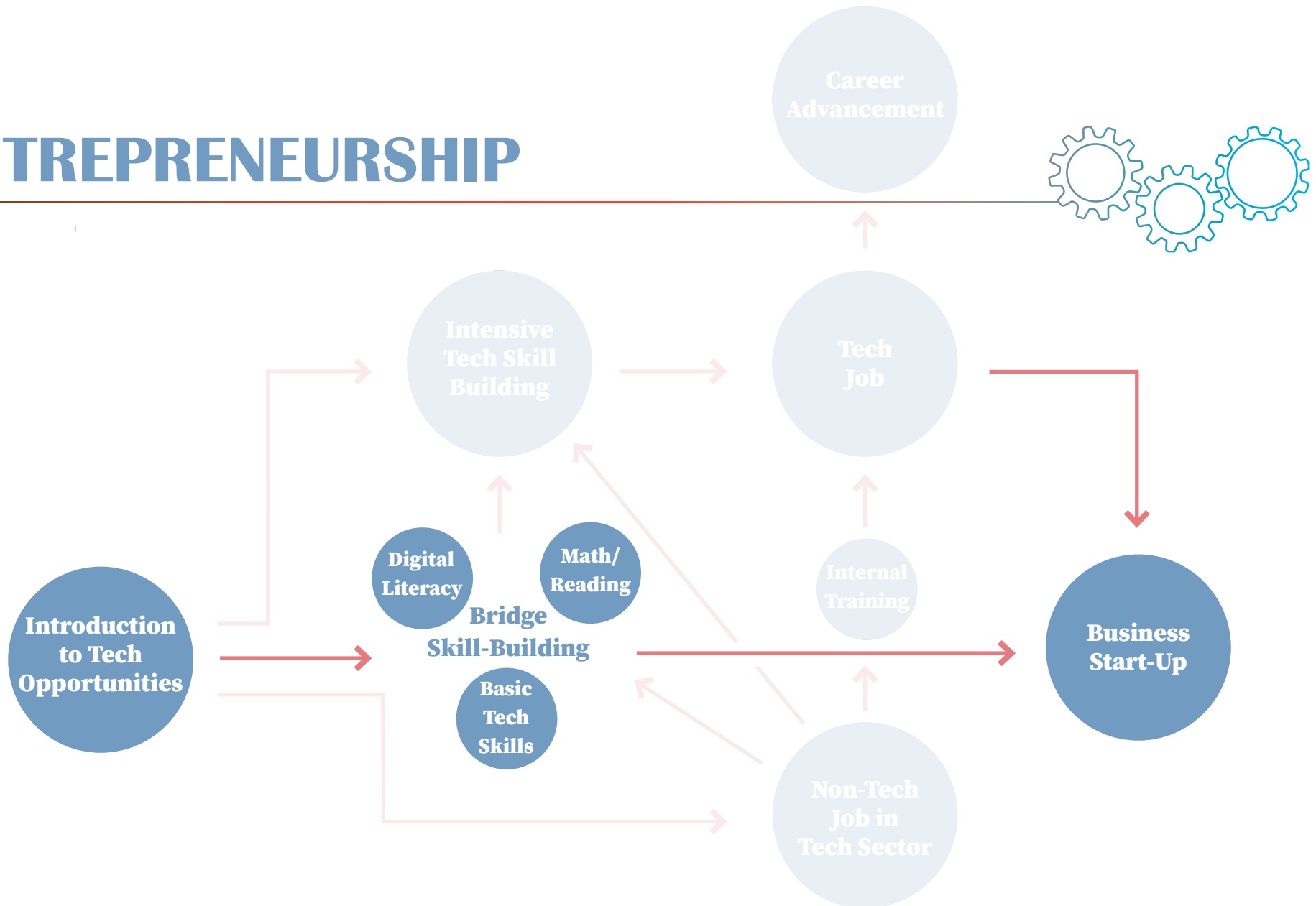
**Research and develop a one-stop resource** detailing tax and other incentives from which tech companies may benefit by hiring public housing residents. While emphasis should remain on hiring for tech positions, such incentives could strengthen hiring of public housing residents for non-tech roles, with a long-range goal to engage in non-tech to tech internal career training.

**Priority:****Difficulty:****Potential Cost:**

Less than \$80K



# ENTREPRENEURSHIP



## **The pursuit of entrepreneurship is strong among NYCHA residents.**

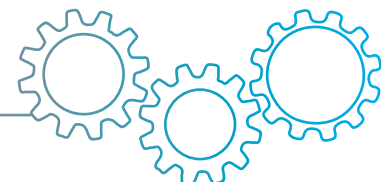
Around a third of workshop participants expressed intent or desire to start a business. Additionally, many participants were passionate about the intersection of tech and media and interested in developing expertise on content creation for YouTube to generate ancillary income.

## **Entrepreneurial NYCHA residents are in search of formalized training programs to launch their concepts and leverage the power of technology.**

Residents' entrepreneurial goals do not necessarily involve founding a tech company, but they recognize that technology is a valuable tool for starting, operating, and expanding a business. Several of these participants also mentioned that they don't know what they don't know; that is, they understand that tech tools can be powerful, but they are unsure of how to identify and use those tools. The interest in closing this gap in understanding is very strong.

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NYCHA REES was able to partner with SBS to recruit NYCHA residents for a popular NYC Craft Entrepreneurship program. These free courses, offered in partnership with Etsy, helped NYCHA residents start a creative business and earn income through their own Etsy shop.



## 19. Make professional coaching available through the existing NYCHA REES relationship with a reputable coaching partner.

**Provide access to professional coaches** for aspiring entrepreneurs. In addition to tech-specific mentorship, certified career and professional coaches can provide a different type of professional and personal mentorship. Deeper coaching can be highly beneficial in building confidence, identifying and planning long-term goals.

**Priority:**



**Difficulty:**



**Potential Cost:**

\$80K - \$199K

## 20. Bolster NYCHA entrepreneur development by adding tech skills component to NYCHA Business Pathways and affiliate business development programs.

**Improve training related to tech tools** as part of the Business Pathways programs. Recognizing that some level of digital fluency is imperative for smart business operations, NYCHA entrepreneurs should have a core technology curriculum woven into their business development supports.

Formalize digital literacy, internet-based research, market research, web and social media analytics as key parts of the business development curriculum. *See Pilot 3: Entrepreneur Enhancement.*

**Priority:**

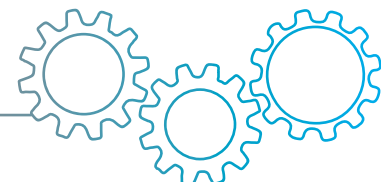


**Difficulty:**



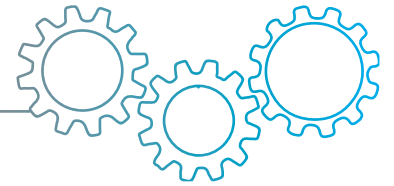
**Potential Cost:**

Less than \$80K



# PILOTS

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**Five pilots emerged as key opportunities extending from the project findings and recommendations. Pilots were selected based on their potential to impact persistent barriers in the NYCHA to Tech pipeline as well as their responsiveness to community input.**

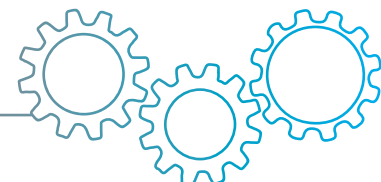
**Pilot 1: Tech Workshops** answer the call for a supportive connection to tech opportunities. Resident responses to research workshops were overwhelmingly positive and participants were ready to explore additional opportunities at the conclusion.

**Pilot 2: Culturally Responsive NYCHA Tech Training** puts resident experience and cultural context front and center, while also responding to the importance of workplace culture in shaping tech roles in practice.

**Pilot 2.1: NYCHA REES Tech Apprenticeship** leverages a proven approach to workforce development to meet resident demand for experiential learning.

**Pilot 3: NYCHA REES Entrepreneur Enhancement** focuses on equipping NYCHA entrepreneurs with key knowledge to operate their businesses with a competitive edge.

**Pilot 4: Universal Tech Training Income for Adults** pushes New York City to boldly invest in the future of a more equitable workforce by removing opportunity cost, the prevailing barrier for residents.



## Tech Workshops



**Launch a recurring Tech Workshop series as an introduction to tech opportunities.**

**Estimated Cost:** \$75,000 - \$100,000 for one year (assuming six series and 150 residents reached). A third estimated for staff costs; a third for participant stipends; and a third for materials, food, and childcare

**Suggested Partners in Execution:** Jobs Plus, TTP, YES! Bed-Stuy, NYCHA REES, Per Scholas, We Build Black, tech employers

The **key objective** of the Tech Workshops is to build trust and relationships, paving the way for residents to see themselves in the tech sector, gain an understanding of the tech landscape, and feel confident in finding a fitting opportunity. Workshops serve as an inclusive recruitment vehicle for City tech initiatives and tech training partners, providing deeper insights into existing assets and skills within the NYCHA resident community.



## Tech Workshops

Workshops function as network-building tools where participants:

- Connect to programs and an intergenerational community of neighbors
- Receive a dedicated mentor to support their tech journey
- Join a peer cohort for ongoing peer support

Facilitators lead residents through a 4-part series of structured activities to:

- Uncover existing assets and goals of participants
- Demystify tech opportunities and pathways
- Guide participants to concrete next steps

Use the format developed by Urbane Development in pilot workshops that took place in October 2019, and add a fourth session for hands-on tech work and a concluding “sign-up” activity to register residents for their preferred training. Locate workshops at Jobs Plus facilities and plan to test the use of NYCHA community rooms to increase accessibility for residents.

Action Step:

- City project team should identify an appropriate entity to lead workshop facilitation. Urbane will train the facilitation group and transfer materials. Jobs Plus and the workshop facilitator work together to solicit and solidify workshop partners (trainers, employers, graduates, community/workforce development partners, and mentors).





## Culturally Responsive NYCHA Tech Training



**Meet the needs of NYCHA Bed-Stuy residents and employer partners through a program designed to respond to both corporate and participant cultural context.**

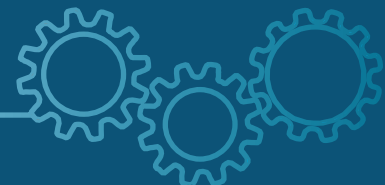
**Estimated Cost:** \$350,000 - \$500,000 for one year (assuming four cohorts); costs include curriculum development, recruitment and staff, participant stipends, travel, and mental health supports

**Suggested Partners in Execution:** NYCHA REES, Mastery Coding, We Build Black, Jobs Plus, TTP, YES! Bed-Stuy

A **culturally responsive** program uses cultural context to inform content development and delivery. Resident cultural context informs training structure, while corporate cultural context informs how skills are applied.

A Culturally Responsive Tech Training pilot fills the talent needs of an employer partner and is grounded in the experience of NYCHA resident trainees. Participants learn in-demand skills as applied in the context of an employer partner. Hard and soft skills are taught in a supportive environment, with trainers and material that connect with the target community.

This pilot has the flexibility to serve as a pathway into tech roles in the private or public sector. NYCHA and/or the City of New York should occupy the employer partner role for the pilot, informing a training that feeds into a tech apprenticeship as outlined in Pilot 2.1.



## Culturally Responsive NYCHA Tech Training

### Training specifics:

- Curriculum developed by a partner with proven ability to create tailored training
- Approximately 90 hours of project-based modules with video courses over 12 weeks full-time or 24 weeks part-time with flexible scheduling
- Training stipend equivalent to \$15/hour minimum recommended
- Connection to supportive services and mentorship
- Located at Jobs Plus, with facilitation by Tech Workshop partner
- Job placement with the employer partner is expected upon training completion
- Potential training tracks include the following, depending on employer partner needs: User Experience/User Interface Design (UX/UI), Java+ for Web Development, Unity Certification 3D Software Development, Project Management

### Action Step:

- Convene NYCHA, EDC, WKDEV, and SBS representatives to determine the desired direction and framing of the training - either preparing candidates for a public sector tech apprenticeship or working with a private corporate partner to meet their talent needs.

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Identifying a corporate partner with entry-level User Experience (UX) needs is recommended. An inclusive tech sector must allow broader perspectives and experiences to inform product development. Targeting Bed-Stuy NYCHA residents for UX roles provides at least two key benefits:

- Residents learn transferable skills that build on existing social capital
- Employers gain insights into product use and gaps among a vastly underrepresented user group.



# Pilot 2.1

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## NYCHA REES Tech Apprenticeship



**Leverage NYCHA and broader City of New York technology needs to support an apprenticeship to jump-start NYCHA resident tech careers.**

**Estimated Cost:** \$250,000 - \$400,000 per cohort; costs include program development, recruitment and staff, participant stipends, travel, and mental health supports

**Suggested Partners in Execution:** EDC, TTP, NYCHA REES, SBS, Chamber of Commerce

**Apprenticeships** are a proven workforce development strategy for making opportunities more accessible to underrepresented residents. A NYCHA Tech Apprenticeship program creates resident opportunity while supporting some of NYCHA's operational needs.

NYCHA residents in Bed-Stuy perceive apprenticeships as secure opportunities. Residents also favor NYCHA and City employment, making these practical entry points for residents starting a new career. Apprentices work on projects for NYCHA and the City of New York. NYCHA tech needs should inform the apprenticeship direction. City tech service contracts may provide revenue streams to cover program costs.



# Pilot 2.1

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## NYCHA REES Tech Apprenticeship

Focus projects could include:

- Create/update NYCHA and City web products and apps
- Web, app, and digital marketing support for local small businesses, including NYCHA REES Business Pathways entrepreneurs, through SBS

Training Specifics:

- Curriculum and facilitation by We Build Black or other partner with proven curriculum and business development credentials
- Approximately 9 months of project-based learning
- Target cohort of 20 participants for a deeply focused experience
- Mentorship connections through We Build Black, Tech Workshop partners and the proposed Flash Mentorship program
- Access to supportive services through Jobs Plus partners
- Apprenticeship stipend of \$18/hour minimum recommended
- Leverage NYC Big Apps competition or other City tech and open data initiatives to build apprentice portfolios for future tech employment and increase NYCHA representation in municipal tech endeavors

Action Step:

- City project team should launch an audit of tech needs to inform the apprenticeship scope and curriculum, then identify a training developer.

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User Experience (UX) Design apprenticeships should be considered a priority to support the development of responsive resident tools.



## NYCHA REES Entrepreneur Tech Skills Enhancement



### **Bolster NYCHA entrepreneurs through value-added tech skilling and tools for business owners.**

**Estimated Cost:** <\$80,000 for one year (assuming two cohorts and a total of up to 50 trainees) for staff prep, instruction time, and participant stipend

**Suggested Partners in Execution:** EDC, TTP, NYCHA REES, SBS, Chamber of Commerce, WIBO, BOC Net

**Resident entrepreneurship** is alive and well across the City's NYCHA campuses. In Bed-Stuy, residents of Marcy, Lafayette & Armstrong exemplify the ingenuity and creativity that drives residents to establish businesses that meet the community's needs.

Enhance existing NYCHA REES business incubation by incorporating a tech skills curriculum that goes beyond the basics currently offered by SBS. Extend this additive training to aspiring NYCHA entrepreneurs that do not fit within established NYCHA REES pathways.



## NYCHA REES Entrepreneur Enhancement

Offer tech training stipends to NYCHA REES entrepreneurs to enable them to invest time into building their business.

Match entrepreneurs with an appropriate tech mentor as part of the recommended Flash Mentorship program. Connect them with e-commerce mentors from Uncommon Goods, Etsy, Shopify, or similar tech companies to help build product development, sales, and digital strategy expertise. Identify a primary e-commerce partner to create a “Shop NYCHA” online destination.

For future consideration: Develop a business incubation program modeled after workforce training/ apprenticeship programs that incorporate wrap-around services and “earn to learn” support. This entrepreneur training should be open to any aspiring entrepreneurs working to start businesses that do not fit within the food or childcare pathways established through NYCHA REES. Incubate businesses using in-class time focused on regulatory guidance, business operations, accounting, and finance and digital marketing training.

### Action Step:

- 1. Convene NYCHA REES Business Pathways administrators and execution partners to outline RFP parameters for tech curriculum providers.



## Universal Tech Training Income for Adults



**Reframe resident commitments to skilling-up for the tech workforce as valuable and valued work.**

**Estimated Cost:** \$250,000 - \$600,000 for recruitment and program administration; range accounts for either income supplement or income replacement for up to 25 participants

**Suggested Partners in Execution:** New York City Council, Human Resources Administration, Jobs Plus, Tech Training Partners, New York Public Libraries

Financial constraints are a prevailing barrier for residents interested in skilling-up in tech. Tech Workshop participants cited opportunity cost challenges, reinforcing “earn to learn” as a key to accessing opportunities. Expand the inclusivity of tech training resources with flexible tech training income framework, providing basic income as residents train for the future. Fundable trainings should **include bridge programming and prep courses**, as well as immersive tech trainings.

Tech training income follows individual candidates as they advance through their personal training journey, earning to learn irrespective of which program(s) they select.



## Universal Tech Training Income for Adults

Launch a test cohort of Marcy, Lafayette, and Armstrong residents interested in skilling up for the tech workforce.

- Establish a set of qualified opportunities, including full and part-time programs and single courses
- Work with Community Coaches to recruit 20 to 40 residents
- Enrollees create a training plan with Jobs Plus Counselors (or TBD partner)
- Collect dynamic trainee data throughout and use pipeline retention, training completion, and advancement benchmarks to test viability

Tech training income could be supplemental or replacement. Accommodate both full-time (FT) and part-time (PT) training tiers. Income could be either:

- Income supplement at \$700/mo. for FT trainees and \$350/mo. for PT, or
  - Income replacement at \$15/hr. for FT trainees; \$13/hr. for PT
- Note: \$18/hr. is considered living wage.*

Look to existing Universal Basic Income (UBI) models to structure the fund (Stockton, CA; Alaska; Finland, Switzerland, Netherlands), with municipal or state administration of the fund.

### Action Step:

- Mayor's Office of Workforce Development and NYSDOL Division of Employment & Workforce Solutions should identify a philanthropic funder and thought partner to define the parameters of the fund.







# EXPANDING THE NYCHA TO TECH PIPELINE

**A Place-Based Approach to  
Tech Sector Opportunities in Bed-Stuy**

In partnership with

