Why are we here?
The City of Plainfield awarded an Innovation Planning Challenge Grant from the NJ Economic Development Authority.
Primary Focus

What: "Recommend High Speed Communication Technology (HSCT) Improvements"

“Fiber and wireless speeds accelerate investment and economic development”
West End Industrial Corridor

14 Existing Businesses
Occupied & Vacant Properties
Owner- and Tenant-Occupied

2.3M Sq. Ft.
Strong Starting Point: Existing Corridor Assets

Embedded in the top “Super Star City” in the U.S. – NYC-Newark-JC MSA

“Potential” for low cost electricity due to underutilized electrical infrastructure that was sized for the heavy manufacturing of the past.

Low cost, large spaces, high-floor loading with access to robust logistics resources

Existing Corridor Businesses
Historically-Significant Architecture
Why? For What?

“Transform vacant and underutilized historically-significant architectural assets into technologically advanced workspace that can accommodate emerging innovation sectors and industries … while maintaining the industrial character of the corridor”
What's in it for Plainfield...

Diversify the Economy

Attract New Residents

Generate Inclusive Employment Opportunities
NJII’s Approach to the Objective Statement…

“If you build it, they will come.”

X

“What is a high potential direction of economic development for Plainfield? How can organizations and resources align with technology to accelerate progress in that direction?”

✓
Our mandate is “Industry” …

So, what does ”Industry” look like in the Plainfield Area?
5 of the top 10 Industry Clusters in the Plainfield Area are SPECIALTY MANUFACTURING

1. MFG: Medical Devices
2. MFG: Biopharmaceuticals
3. MFG: Upstream Chemical Products
4. Business Products
5. Education & Training
6. MFG: Food Processing
7. Local Government Services
8. Distribution and E-Commerce
9. MFG: Paper & Packaging
10. Local Health Services
Manufacturing generates the largest economic output for the Plainfield Area – more than $2.0B in 2019 (GRP)

Top Industries by Employment
1. Healthcare
2. Retail
3. Government
4. Professional Services
5. Waste Management
6. Food Services
7. Manufacturing
So, what?

1. A proven economic development strategy is to amplify existing strength

2. Complementary business like to co-locate
Is there excess “Industry” demand that we can pull into the Plainfield Area?
“Despite the near-record level of development in the industrial sector, the state faces a product deficit that even the nearly 5.3 million square feet of space currently under construction cannot satisfy.”
Manufacturing Companies <500 Employees in NYC-Newark-JC MSA
The Rise of Urban Manufacturing

Many U.S. manufacturers are seeking facility spaces ranging from 5,000 to 75,000 square feet, and many are finding their ideal locations in cities and urban locales across the country.

A key driver of urban manufacturing is manufacturers’ ability to gain proximity to workforce.

Well-suited for areas with a rich history of manufacturing and ties to a strong local economy.
Where is the intersection of Technology & Manufacturing
At the intersection of high-speed communication technology and manufacturing is the “Industrial Internet of Things (IIoT)” or ”Industry 4.0”.
IIoT Example: Warehouse & Inventory Management
Are Manufacturing Companies Benefiting from IIoT?

Survey: 350 U.S. Manufacturing Companies // 35% of Respondents, <$50M Revenue

Percentage of Respondents Claiming “Significant Impact on Profitability”

- Machine Uptime: 55%
- Quality: 72%
- Productivity: 75%

Source: MPI, Internet of Things Study - 2017
Only 9% of manufacturers are currently using IoT.

Top Barriers to Adoption:
1. Cyber Security
2. Unclear ROI
3. Integration
4. Interoperability
5. Talent

Sources:
2018 M&D Report, The Industry 4.0 Factor, Sikich
Bain & Company: Beyond Proofs of Concept, Scaling the Industrial IoT
Who is creating IIoT Technologies?

Dynamic market with a large number of small startups entering the market, competing with large, established technology providers.

$90B+ Combined Manufacturing, Energy, and Utility Market by 2023

29.2% Annual Growth Rate (~8x National Growth Rate)

"Young" / High-Growth IIoT Companies

What do they need?
Cheap Space
Access to Customers
IIoT Technology Companies

West End Industrial Corridor

“Traditional” Manufacturing Companies
The Solution
West End Industrial Corridor – Physical Improvements

1.) Redeveloped Property
Multi-functional Flexible Office Space for IIoT Companies

2.) On-Development/Private 5G Wireless Network

Data Center & Application Service Provider
West End Industrial Corridor – Community Programs

- IIoT Demonstration & Technical Assistance Center
- Digital Manufacturing Training Center
- Entrepreneurship Education Center
- Data Center & Application Service Provider
- Data-Enabled Industrial Park
Only **9%** of manufactures are currently using IoT.

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Potential Solution:

**IIoT Demonstration & Technical Assistance Center**

Trusted 3rd Party offering educational, informational and hands-on demonstrations for showcasing new technology that aids in overcoming the technology adoption barrier.

Vendor Agnostic

Income Source: Vendor Sponsorship (Considered Marketing for their technology)

Operated by an “Application Services Provider”
Corridor Level (i.e. Shared Community) Applications

- Energy // Smart Grid (PSEG Partnership)
- Air Quality Monitoring
- Circular Economics

Data Center & Application Service Provider

Data-Enabled Industrial Park
West End Industrial Corridor – Community Programs

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Data Center & Application Service Provider

Data-Enabled Industrial Park
Top Barrier (No. 5) to IoT Adaption: Talent

Good fit or Workforce Development: Both Manufacturing & Technology do not depend (heavily) on credentials

IoT training programs are emerging at large corporates – hard to SMEs to replicate this
West End Industrial Corridor – Community Programs

- IIoT Demonstration & Technical Assistance Center
- Digital Manufacturing Training Center
- Entrepreneurship Education Center
Plainfield Area
Student Population:
Enterprise

The Technology Infrastructure as
assets to pilot Smart city
applications

Student Engagement
Opportunities – Smart City, Smart
Industrial Park,

Entrepreneurship Education
West End Industrial Corridor

Physical & Digital Improvements
+ Community Programs
→ Desired Project Outcome

Data Center & Application Service Provider

Data-Enabled Industrial Park
Downtown Connectivity Solution
How has the community responded?

Jan. 29th – Corridor Business Engagement  
March 4th – Community Engagement Meeting

The majority of business and community leaders engaged have responded positively

Feedback Highlights:

• “AND-OR” Misconception – “Good idea, but our community may not be ready for this type of initiative. We need to focus on foundational education outcomes.”

• Gentrification: "I’m concerned this effort (combined with others) will push out the blue collar families that I employ on the plant floor."

• Community Silos: How can this effort be designed to be inclusive around the various ethnic communities in Plainfield?
What’s Next? Phase 2

**Objective (1): Deepen understanding of stakeholder needs, assets, and motivations**

**Proposed Activities:** Direct, 1:1 customer discovery targeting the following

**Deliverables:** Interview Summaries & Synthesis (i.e. What did we learn?)

**Objective (2): Effective and efficient communication with stakeholders**

**Proposed Activities:** Creation of marketing collateral, leveraging the NJII strategic communications team.

**Deliverable:** Marketing artifacts

**Objective (3): Search for additional planning funds.**

**Proposed Activities:** Work together with the City of Plainfield’s development team to target funding source and author proposals as needed.

**Deliverables:** Contributions, as needed, to a next funding proposal.