



# CITY TECH COLLABORATIVE

WE REINVENT CITIES

## The Role of Collaboration in City Innovation

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# URBAN CHALLENGES DEMAND NEW MODELS OF COLLABORATION

Diverse and Complex Cities Require Inclusive, Data Driven, Sustainable Solutions

## MACRO CHALLENGES:

- Economic Development and Job Creation
- New and Aging Infrastructure
- Transportation and Mobility
- Flooding, Heat Waves, & Other Climate-Related Challenges
- Access and Equity
- Health and Safety

## LOCAL CONSIDERATIONS:

- Neighborhoods
- Business Districts
- Industrial Zones
- Green Spaces



## DIVERSE STAKEHOLDERS:

- Residents
- Local Government
- Corporations
- Start-ups
- Civic and Academic Institutions
- Visitors and Tourists

# MAKING SENSE OF CITIES: AN INTEGRATED, SOLUTIONS-FOCUSED APPROACH

Creating Solutions to Complex Challenges Through Collaboration, Innovation, New Capabilities, and Product Development

## PHYSICAL INFRASTRUCTURE:

Tangible urban spaces where we live, work, and play, including buildings, roads, bridges, utility infrastructure, natural spaces



## SENSING NETWORKS:

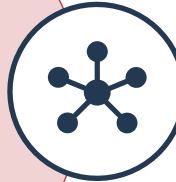
Creating new data from the built environment to understand real-time conditions, needs, and opportunities

## URBAN DESIGN:

Developing and managing dynamic, tech-enabled, public and private spaces to address evolving needs

## DATA & DIGITAL INFRASTRUCTURE:

Information and foundational IT capabilities, including cloud platforms, operating software, APIs, network services



## ADVANCED ANALYTICS:

Data sharing, aggregation, storage, and computation to generate new insight and drive operational efficiencies

## PUBLIC & PRIVATE SERVICES:

Businesses, government, and civic services that meet critical needs and drive vibrant economies



 City Tech Solution Focus Areas





# A COLLABORATIVE MODEL FOR URBAN INNOVATION



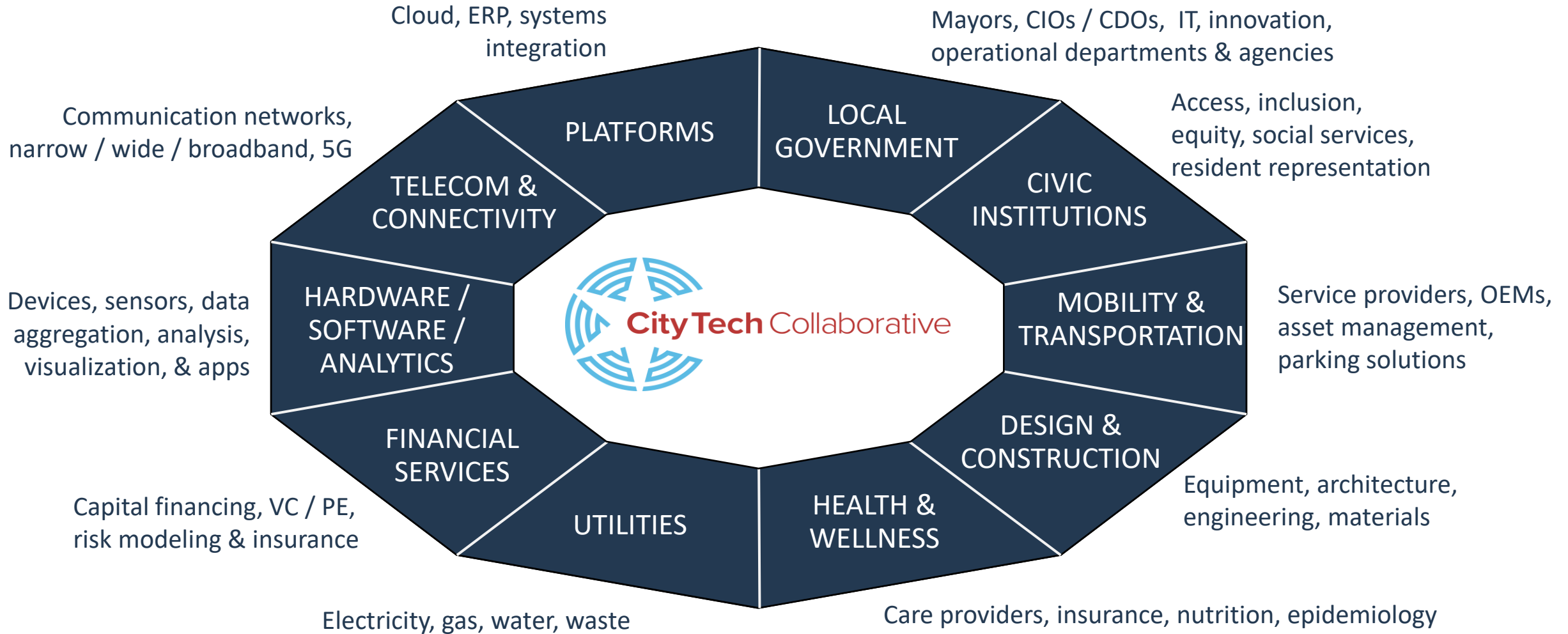


## City Tech accelerates technology-enabled solutions to make cities happier, healthier, and more productive

- 1 We tackle **public problems** and **business opportunities** that are **too big for any single sector or organization to solve alone.**
- 2 We create cross-sector teams that develop **scalable, market-ready** urban solutions; our **proven approach** and **methodology** help City Tech solutions succeed where other collaborations fall short.
- 3 We focus on industries that shape urban life – current City Tech initiatives include **Advanced Mobility, Healthy Cities, and Connected Construction.**
- 4 City Tech was born and raised in Chicago, and **every city is a potential partner.**

# CITY TECH ENGAGES CROSS-SECTOR INDUSTRY & CAPABILITY PARTNERS

Consortium Members are Evolving Across Previous Industry and Capability Boundaries, Opening New Business Opportunity



# CORPORATE MEMBERS, PARTNERS, & COLLABORATORS

City Tech's Ecosystem Combines Broad Capabilities and Deep Expertise To Implement Groundbreaking Urban Solutions

## City Tech Consortium Members & Philanthropic Partners

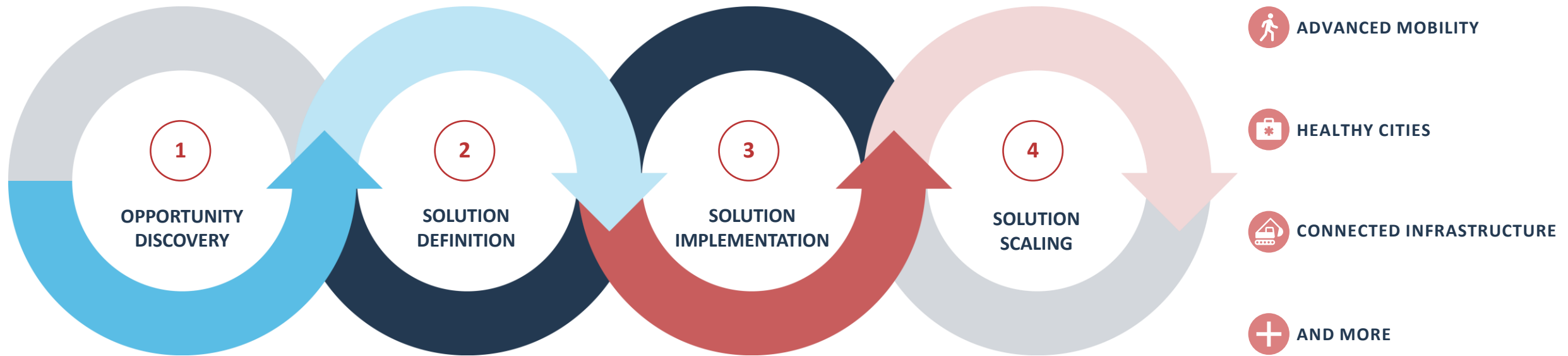


## Select Solution Participants & Strategic Partners

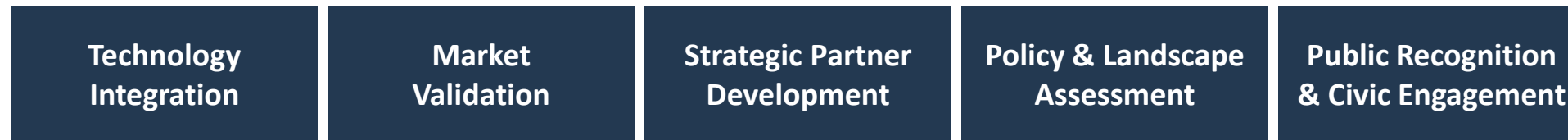


# A PROVEN APPROACH TO RESULTS-FOCUSED, HIGH-IMPACT COLLABORATION

Our Solutions Methodology Delivers Innovative, Market-Focused Results



## ACCELERATED RESULTS & BUSINESS IMPACT:





# PREVENTING FLOODING: SMART GREEN INFRASTRUCTURE MONITORING



## PILOT TEAM



## PROBLEM STATEMENT

Cities are making major investments in green infrastructure (GI) yet have limited ability to:

- » Consistently monitor the performance of the investment
- » Optimize investments in GI to maximize benefits
- » Compare GI investments against traditional grey infrastructure solutions



## PILOT

Create and deploy sensors, communications, and cloud analytics supporting GI performance data collection at four urban GI sites in both public and private locations.

**Start:** June 2015

**Current Status:** Technology installation completed March 2017 and data collection completed in November 2017. Opti successfully transitioned to market.



## PREVENTING FLOODING: SMART GREEN INFRASTRUCTURE MONITORING

### ✓ SOLUTION

A low cost IoT-based sensing package, allowing GI performance data from multiple sites to be aggregated for individual and collective performance management.

### 📊 OUTCOMES

- ✓ A novel, sensing technology to meet the challenges of data collection from decentralized stormwater infrastructure across a city.
- ✓ New data sources and frequency to enable existing GI maintenance as well as performance feedback to inform future designs.
- ✓ The ability to collect GI performance data from multiple sites and enable systemwide GI and traditional stormwater infrastructure planning.
- ✓ New, real-time stormwater storage capacity data to enable future real-time or performance based management systems and contracts.



# MANAGING CONGESTION: NIGHT GAME ALERTS



## PILOT TEAM



## PROBLEM STATEMENT

Transit systems are often at capacity during daily rush hours or special events, these peaks cause:

- » Longer travel times
- » Frustrated riders
- » Safety concerns



## SOLUTION

New tools to communicate directly with riders, providing information and relevant micro incentives to change travel behavior.



## OUTCOMES

- ✓ Over 2,000 participants opted-in to the program over a two week advertising period
- ✓ 17.5% reduction in transit ridership from opted-in individuals during peak periods
- ✓ Proof that cost-effective demand management tools can reduce congestion impact, improve transit system management, and rider experience
- ✓ Blueprint for public/private partnerships to fund ongoing incentive programs





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## City Tech drives collaborative, multi-party innovation through 2 critical elements:

- 1 A carefully **curated ecosystem of partners** defined to address the challenges of a particular industry
- 2 Proven process to align the success factors of innovation:
  - Partners' joint understanding of the problem
  - Their incentives to solve the problem
  - Their unique capacity to co-innovate a solution to the problem, include people, technology and investment



# THANK YOU

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