

Circular Economy Feasibility Study



KICK-OFF MEETING 02.05.20



CONTEXT

Mounting market pressure is putting the circular economy in the spotlight

PRESS RELEASE

CEOs of Major Companies Call on U.S. Congress to Set a National Price on Carbon

By [\[REDACTED\]](#)
Published: May 22, 2019 12:30 p.m. ET

May 22, 2019 (3BL Media via COMTEX) -- SOURCE:Ceres

Washington D.C. -- Today, more than 75 businesses including eBay, Exelon, Gap, Levi's, Nike, Mars Incorporated, Microsoft, PepsiCo, Tesla and others will meet with a bipartisan group of federal lawmakers to call on Congress to pass meaningful climate legislation, including a price on carbon. Collectively, these companies represent more than \$1.5 trillion in annual revenues and 1.5 million employees.

ABC NEWS [VIDEO](#) [LIVE](#) [SHOWS](#) [2020 ELECTIONS](#) [\[REDACTED\]](#)

BREAKING
Schiff, Nadler among the prosecutors named for Trump's Senate impeachment trial

Rockefeller Family Fund Divests From Fossil Fuels

The oil rich family condemned ExxonMobil and fossil fuels.

By [EVAN SIMON](#)
March 24, 2016, 12:18 PM • 7 min read

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Investors press fast food giants to move faster and bolder on climate and water risk management, one year into \$11 trillion engagement

Intesa sells pioneering 'circular-economy' bond

29 Nov 2019 12:03 | IFR 2311 - 30 Nov 2019 - 06 Dec 2019 | 4 min read | EMEA | [\[REDACTED\]](#)

Tessa Walsh

Italy's Intesa Sanpaolo has become the first bank to issue a sustainable bond dedicated to creating a more circular economy, as the intensifying focus on ESG from investors and policymakers continues to gather momentum.

senior preferred bond gathered a book of more than €3.5bn and priced bank's traditional bonds, perhaps showing that investors are ready to plumb² on sustainability and support the idea of a circular economy.

ing to give up some yield to be involved in this trade. This is a strong and the world," said Alessandro Lelli, Intesa's head of investment banking and

Economics

A Waste-Free Economy Catches On at Davos

By [Jill Ward](#) and [Suzy Waite](#)
January 22, 2020, 6:00 PM CST Updated on January 23, 2020, 4:39 AM CST

Circular Economy Case Studies

Understanding success factors and lessons learned

SUCCESS CRITERIA

- 5 key criteria need to be met to fulfill the potential of the circular economy
- When successfully met, these criteria build on each other to create a **virtuous cycle**

Utilize all waste as materials

Efficiently transfer materials between uses

Ensure geographic proximity

Use outputs to improve local community

Equitably optimize social, economic and environmental outcomes



CASE STUDY 1: H&M: The Fast-Fashion Paradox



AMBITION

- + 100% circular by 2030
- + Use only recycled or other sustainably sourced materials



WHAT & HOW

- + Design | Materials | Production
- Product Use
- + In-Store Garment Collection

OUTCOMES

- + To date, collection of 34,000 tons of waste (~ 178 million t-shirts)
- + 59% of materials are recycled or other sustainably sourced materials



AMBITION

- + 100% circular by 2030 +
- + Use only recycled or other sustainably sourced materials

+

AMBITION

- Does not challenge business model

-

WHAT & HOW

- + Design | Materials | Production
- Product Use
- + In-Store Garment Collection

WHAT & HOW

- Collection + distribution of used clothes via trucks to central facility

OUTCOMES

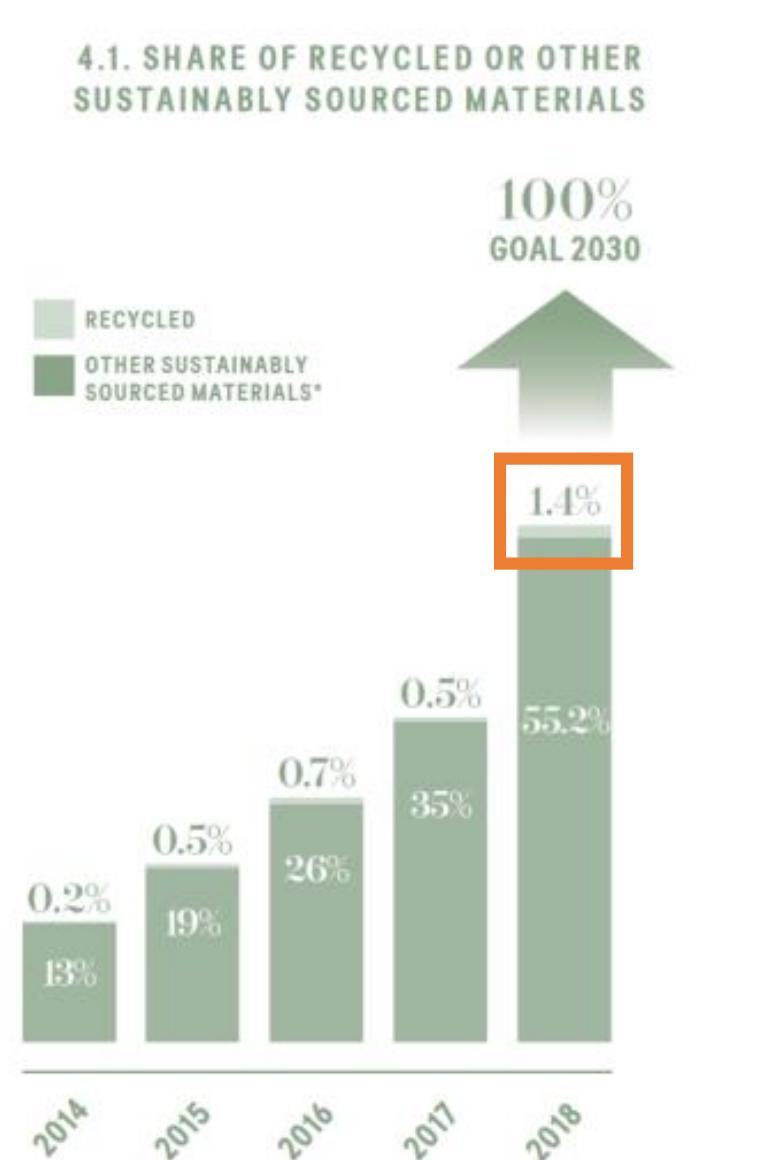
- + To date, collection of 34,000 tons of waste (~ 178 million t-shirts)
- + 59% of materials are recycled or other sustainably sourced materials

OUTCOMES

- Incentives lead to more shopping
- Downcycle, not re- or upcycle
- Negative impact on local economies

GAP: Lack of public-private alignment and public infrastructure to support efficient reuse of materials

H&M: “Recycled and Other Sustainably Sourced”



H&M: Restorative Assessment

Goal: Be 100% circular + renewable

Utilize all waste as materials

Lack of shared public infrastructure

- Inability to remanufacture materials, requires heavy private investment into R&D
- Lack of storage space/usable land
- Carbon-intensive trucking of materials to vendor facility

Efficiently transfer materials between uses

Ensure geographic proximity

Use outputs to improve local community

Lack of other stakeholder alignment

No discernible alignment between circular goals and “100% fair and equal” goals

Equitably optimize social, economic and environmental outcomes



CASE STUDY 2: London: The Circular Economy Capital of the World

London: Becoming the Circular Economy Capital

£7 BILLION EVERY YEAR

Projected net benefit

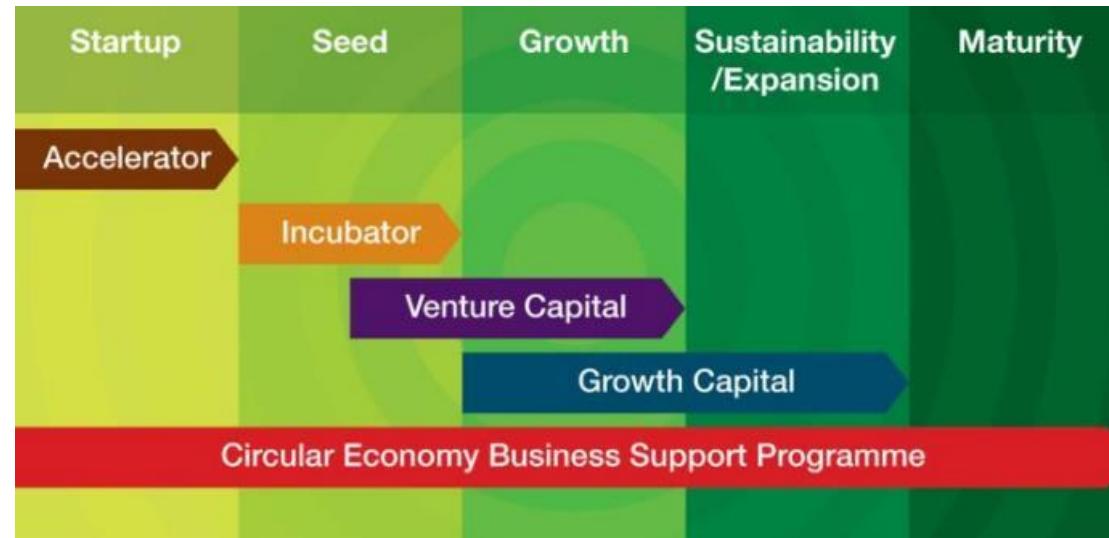
40,000 NEW JOBS

[12,000 net new]



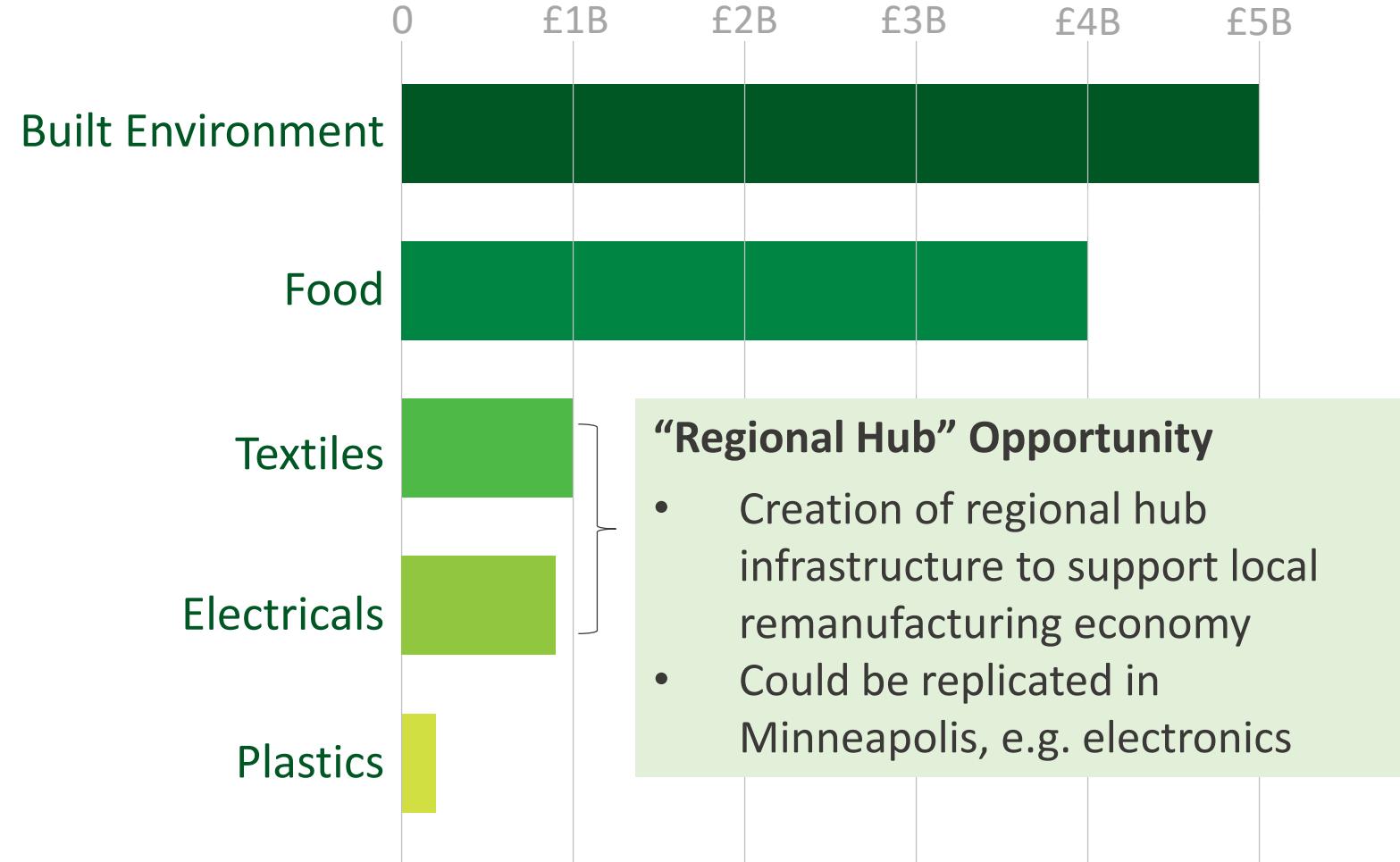
WHAT MAKES THIS EFFORT SUCCESSFUL

- Recognition of financing gap for businesses
- Creation of public financing mechanism for every level of business maturity (£50m)
- Collaboration with corporate, financial, academic, and public sector partners



London: Becoming the Circular Economy Capital

Estimated Net Benefit of the 5 Focus Areas



London – Restorative Assessment

Goal: Become the circular economy capital of the world

Close alignment between actors leads to:

- Innovative public-private partnerships
- Creation of “regional hub” infrastructure as a catalyst for new business and jobs
- Rigorous ‘action-output-outcome’ model to organize strategies and stakeholders

Opportunities:

Some social + community needs are addressed through greater access to food + jobs training, and new job creation, but holistic district-level approach is out of scope.

Utilize all waste as materials

Efficiently transfer materials between uses

Ensure geographic proximity

Use outputs to improve local community

Equitably optimize social, economic and environmental outcomes

TASK: RESTORATIVE BENCHMARKING ANALYSIS

Vision Benchmarking

Aligning key Minneapolis visions + plans with the goals and objectives of the restorative development feasibility study

Vision Benchmarking + Opportunities



minneapolis | **2040**

Minneapolis 2040 – The City's Comprehensive Plan

Done right, growth can help our city become a healthy, sustainable, and thriving place for all.

Adopted by the Minneapolis City Council on October 25, 2019
Effective January 1, 2020

Minneapolis Climate Action Plan

A roadmap to reducing citywide greenhouse gas emissions



Executive Summary

Introduction

This document is prepared in accordance with the regulatory requirements listed below under the DNR's rule. This Water Resource Management Plan (WRMP) initiates the fifth decade of the City of Minneapolis (City) programs and practices that have modernized the sanitary sewer and stormwater drainage systems that directly impact water resources in the City.



Credit: Minneapolis Public Works

The modern era of water resource management was initiated in the 1950s when the City began to address the flooding of the Mississippi River. Ongoing overflows of combined sewage and stormwater had resulted in a noticeable decline in the Mississippi River's water quality, which was set in motion in the 1930s. In the 1950s, the City began a planning process to reduce the occurrence of these overflows through separation of the sanitary sewer and stormwater systems in conjunction with a City-wide paving program. In the 1960s, the City began to focus on Bassett Creek, Minnehaha Creek, and the Mississippi water quality through partnerships with local organizations.

In the 1990s, while the separate separation was winding down and the watershed management programs were growing, the City expanded its water quality focus to encompass the entire City through the implementation of activities designed to improve the quality of the stormwater runoff. Actions during this era included trailhead projects such as the Chain of Lakes Water Quality Improvement Project, and initiation of City-wide activities such as increased frequency of street cleaning. Also in the 1990s, the City began a program to construct stormwater basins and other stormwater capacity improvements aimed at mitigation of areas of ongoing street and building flooding. In the 2000s, the focus shifted to the need to create and eliminate sources of clear water to the sanitary sewers, which was identified as necessary to fully

eliminate the occurrence of infrequent overflows from the sanitary sewers to the Mississippi River. These activities included identification and elimination of rooftop drainage connections to the sanitary sewers, and identification and elimination of other sources of infiltration (I/I). By the 2010s, a full range of activities initiated since the 1960s were successfully working together to improve and protect the water resources within the City.

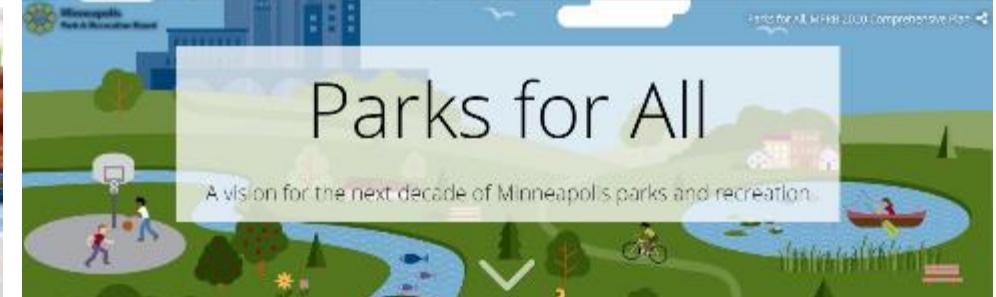
ES-1



Minneapolis
City of Lakes

Minneapolis Food Action Plan

Homegrown Minnesota



3/2019 for 2018-2028 Comprehensive Plan

Parks for All

A vision for the next decade of Minneapolis parks and recreation.

- MN2040 Plan
- Minneapolis Climate Action Plan
- Minneapolis Food Action Plan (under development)
- MPRB Comprehensive Plan: Parks for All (under development)
- Water Resource Management Plan (WRMP)
- And more!

Minneapolis 2040: Synergies with Feasibility Study



Eliminate disparities

In 2040, Minneapolis will see all communities fully thrive regardless of race, ethnicity, gender, country of origin, religion, or zip code, having eliminated deep-rooted disparities in wealth, opportunity, housing, safety, and health.



More residents and jobs

In 2040, Minneapolis will have more residents and jobs, and all people will equitably benefit from that growth.



Affordable and accessible housing

In 2040, all Minneapolis residents will be able to afford and access quality housing throughout the city.



Living-wage jobs

In 2040, all Minneapolis residents will have the training and skills necessary to participate in the economy and will have access to a living-wage job.



Complete neighborhoods

In 2040, all Minneapolis residents will have access to employment, retail services, healthy food, parks, and other daily needs via walking, biking, and public transit.



Climate change resilience

In 2040, Minneapolis will be resilient to the effects of climate change and diminishing natural resources, and will be on track to achieve an 80% reduction in greenhouse gas emissions by 2050.



Clean environment

In 2040, Minneapolis will have healthy air, clean water, and a vibrant ecosystem.



Healthy, sustainable, and diverse economy

In 2040, Minneapolis will remain the economic center of the region with a healthy, sustainable, and diverse economy.



Healthy, safe, and connected people

In 2040, Minneapolis will enjoy a high-quality and distinctive physical environment in all parts of the city.



High-quality physical environment

In 2040, Minneapolis will enjoy a high-quality and distinctive physical environment in all parts of the city.



History and culture

In 2040, the physical attributes of Minneapolis will reflect the city's history and cultures.



Creative, cultural, and natural amenities

In 2040, Minneapolis will have



Proactive, accessible, and sustainable government



Equitable civic participation system

IMPACT OF RESTORATIVE DESIGNS



CATALYST



CONTRIBUTOR

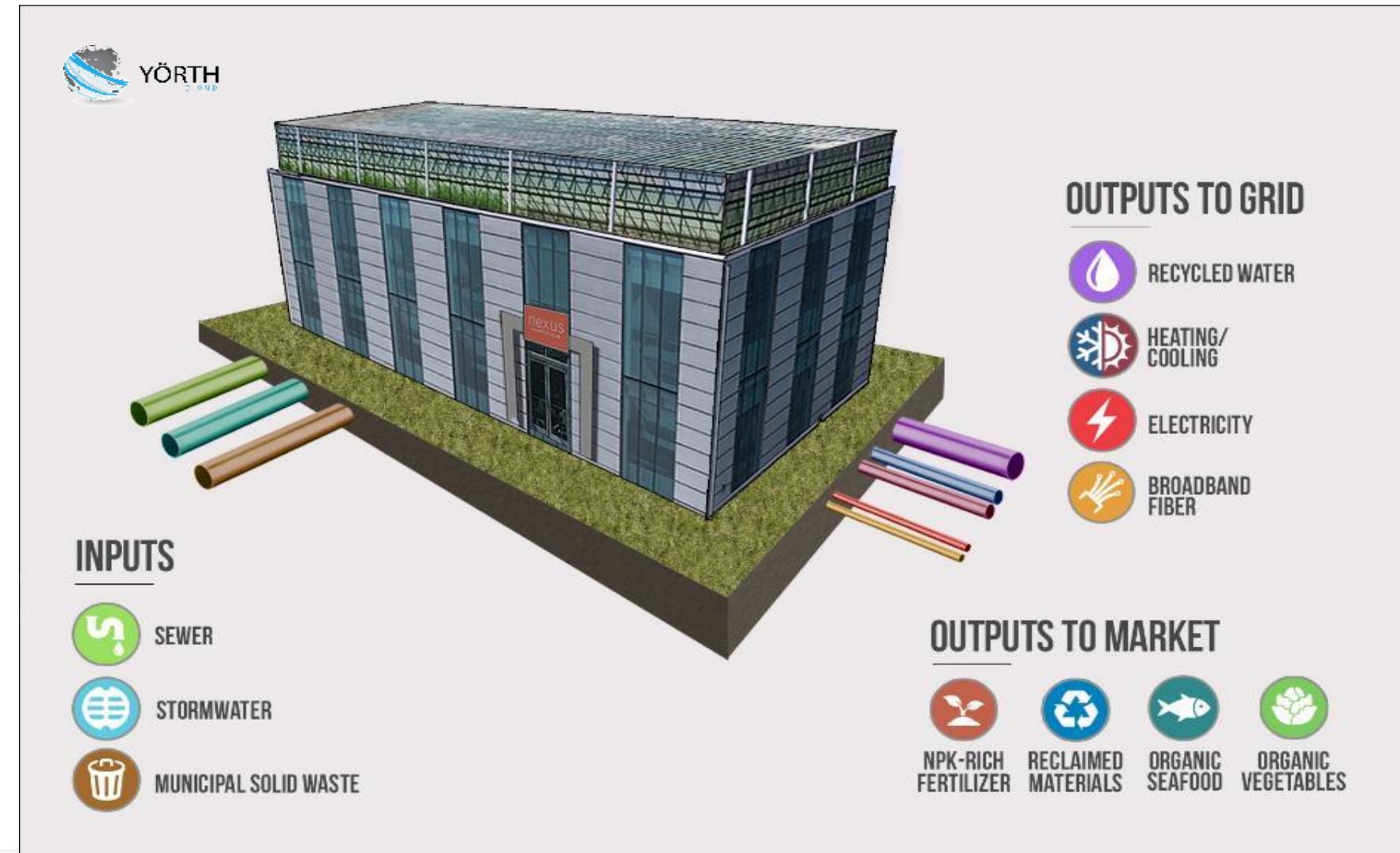
Restorative Development 2.0:

An Opportunity for the City of Minneapolis

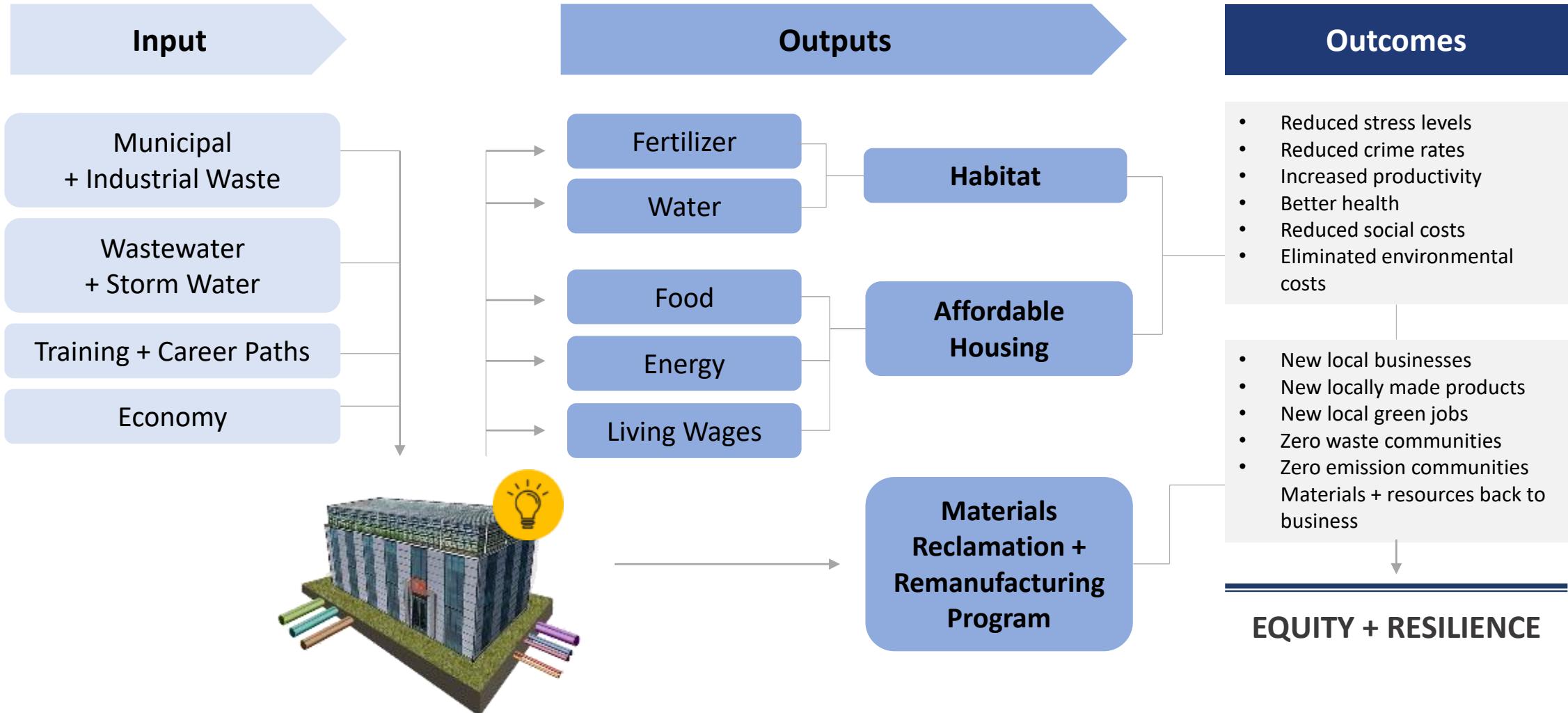
Placing the Integrated Utility Hub (IUH) into the context of restorative development

Refresher: Integrated Utility Hub (IUH) Concept

- IUH converts liabilities into value
- Serves as “invisible” infrastructure hub of the district
- Provides platform for public-facing businesses and communities spaces



IUH in the Circular Economy



A new, market-based approach to district-level development leveraging public-private partnerships



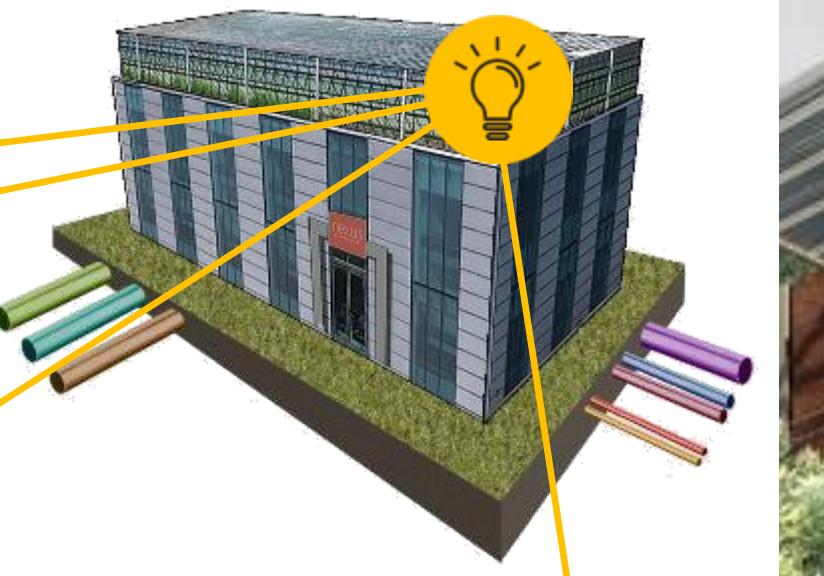
Living-wage jobs



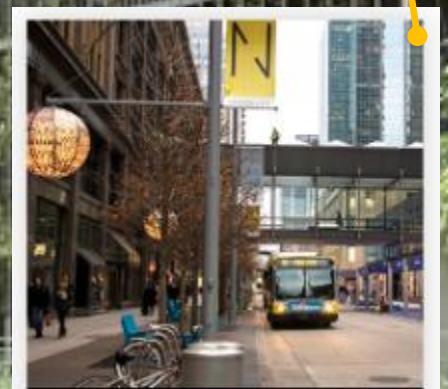
Healthy, sustainable, and diverse economy



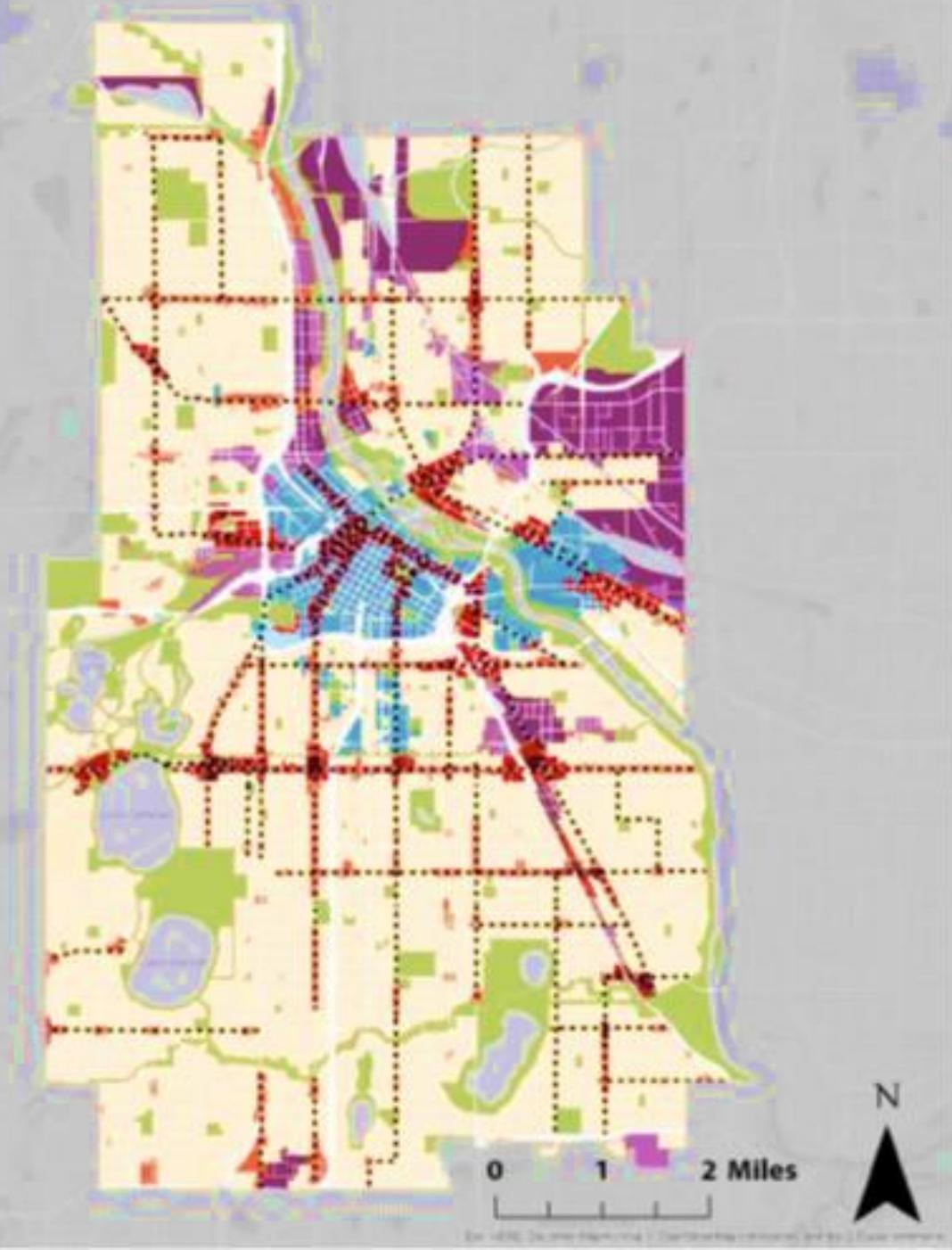
Complete neighborhoods



Integrated Utility Hub



High-quality physical environment

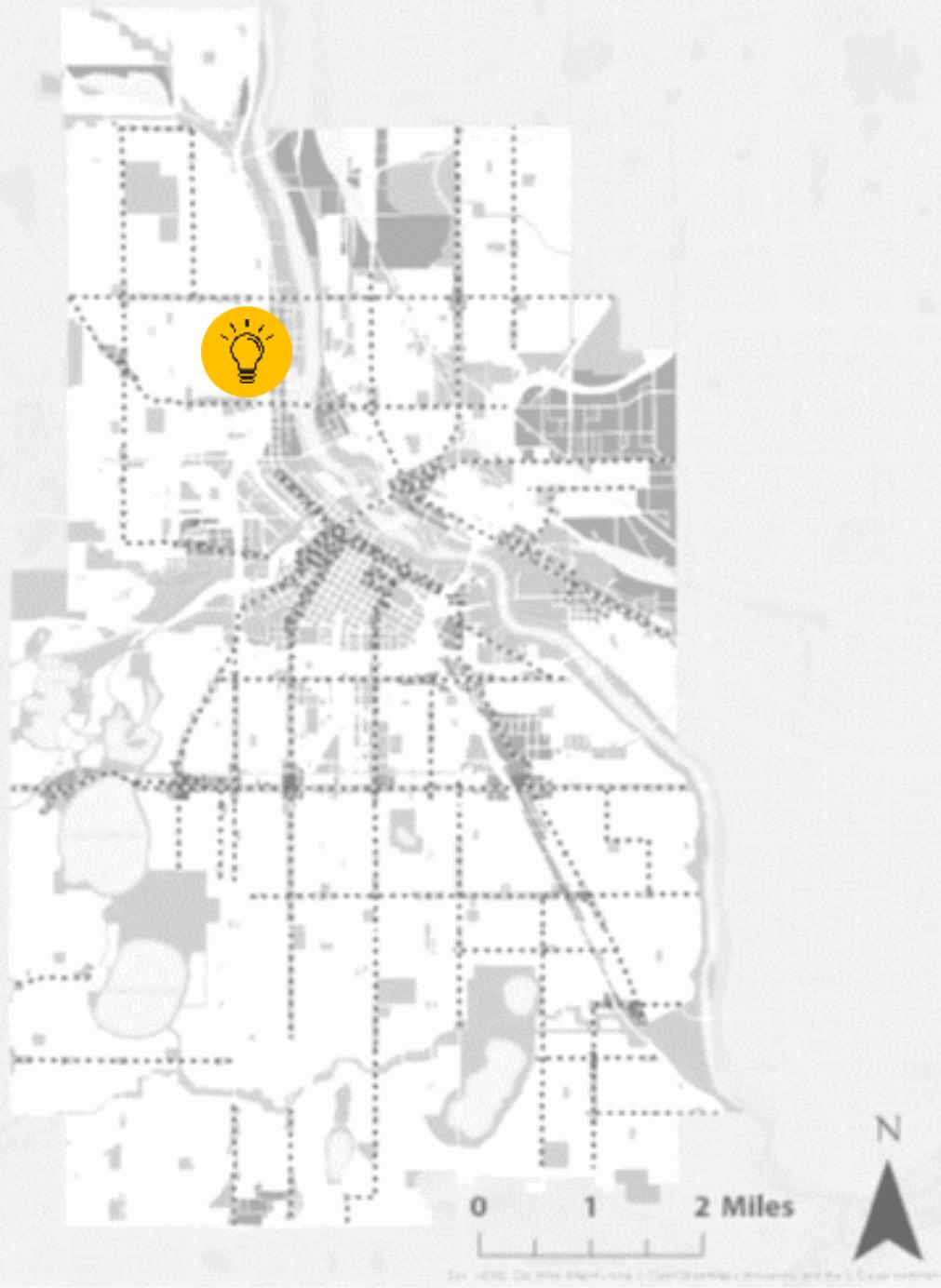


Minneapolis 2040 Land Use Map

Minneapolis 2040 identifies **the creation of “production + processing” jobs** as a foundation for an equitable job market that can sustain living wages

Zoning updates that are relevant for restorative development efforts:

- Clearly dedicated zones **for Production & Processing** (dark purple) and **Mixed Production & Processing use** (light purple)
- These could serve as locations for IUH districts and/or circular economy remanufacturing businesses

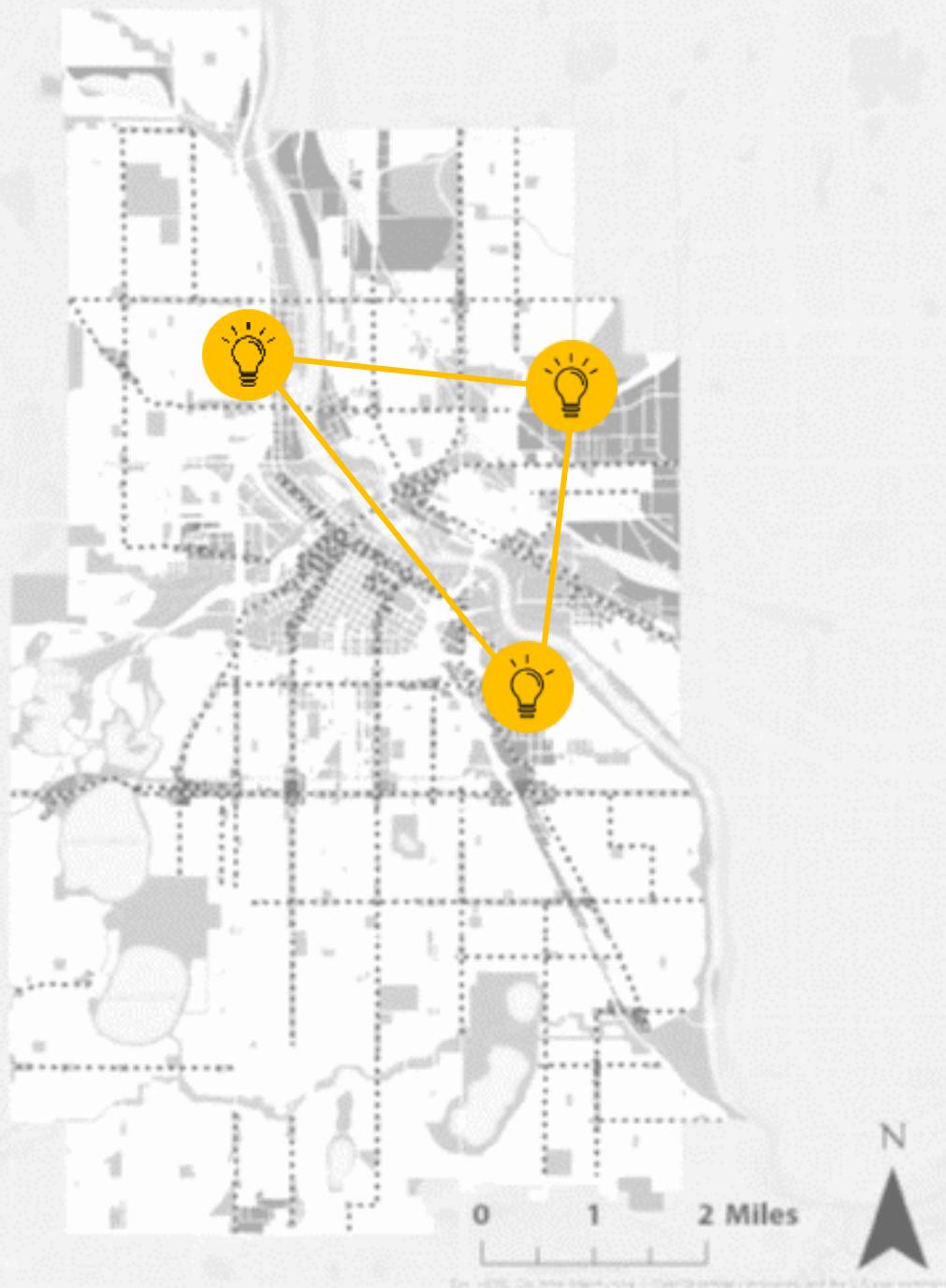


Land Use: Context for Restorative Development



IUH Ecosystem Pilot

UHT provides a possible location for full-scale pilot



Land Use: Context for Restorative Development



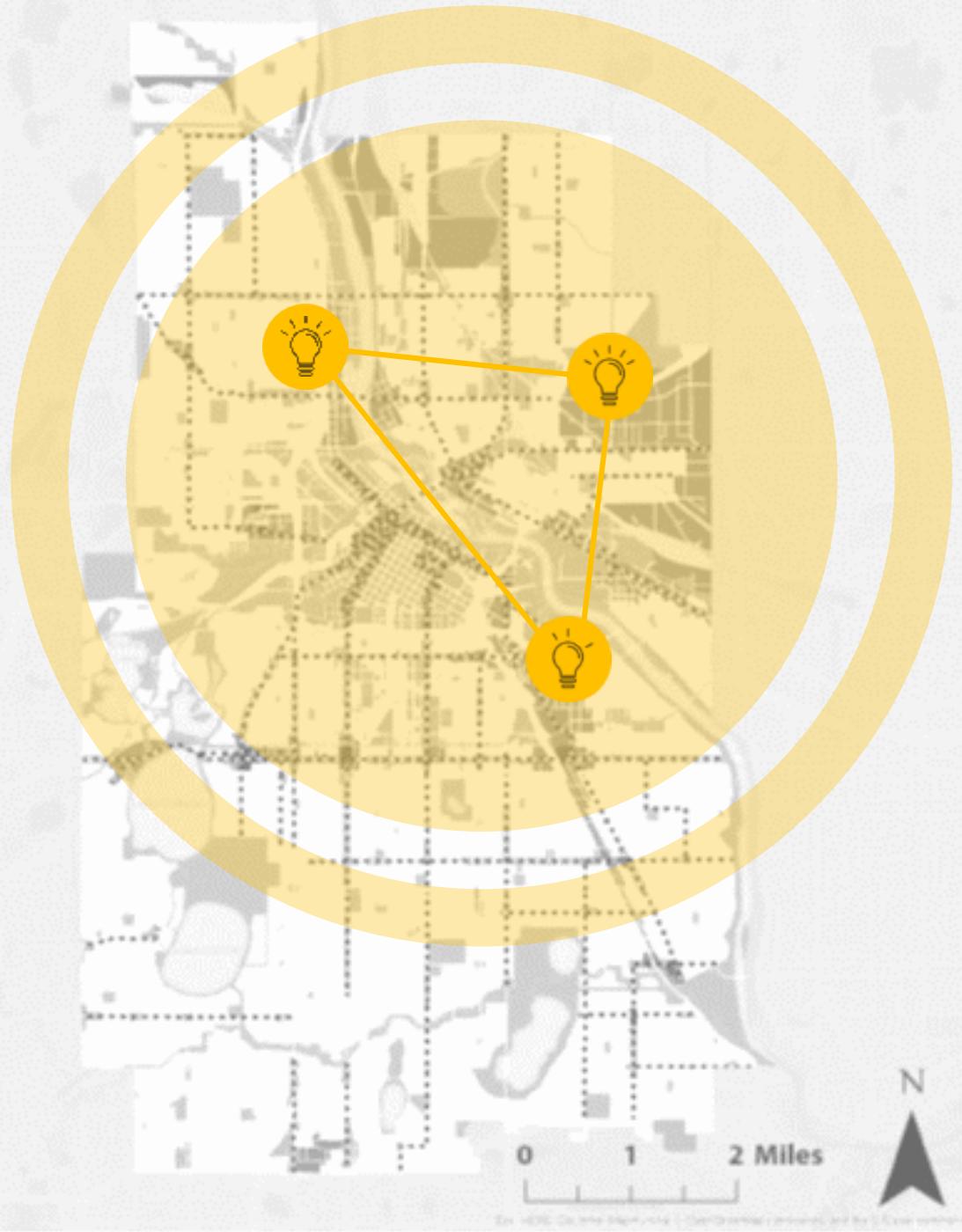
IUH Ecosystem Pilot

UHT provides a possible location for full-scale pilot



IUH Network

Potential network of 3+ IUH districts



Minneapolis 2040 Land Use Map



IUH Ecosystem Pilot

UHT provides a possible location for full-scale pilot



IUH Network

Potential network of 3+ IUH districts



Restorative Development Infrastructure

Public/private infrastructure to support:

- Reuse + Remanufacturing Regional Hub
- Industrial Symbiosis

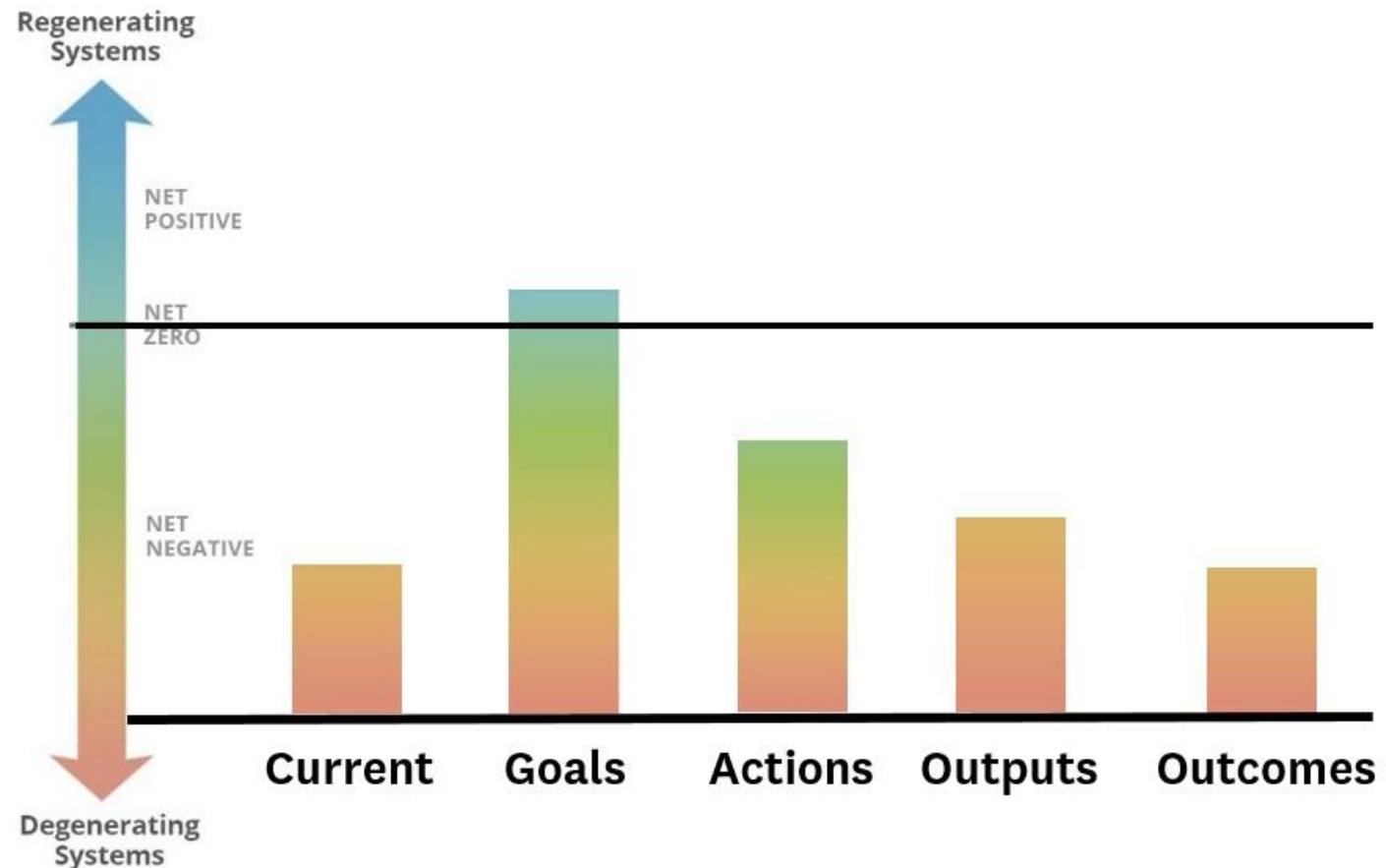
Definition of Success

Definition of Success: Restorative Development Planning



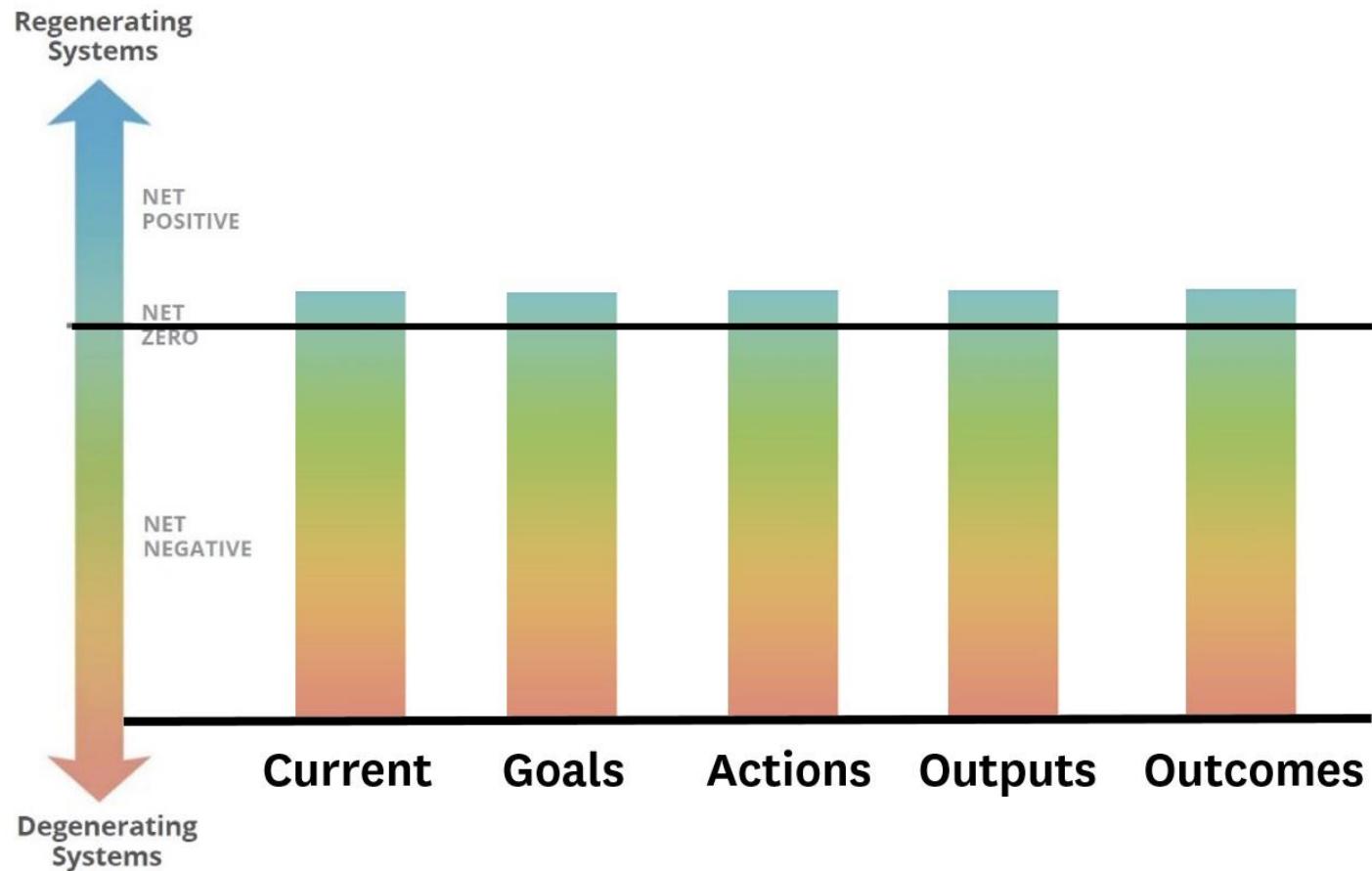
Definition of Success: Restorative Development Planning

Example schematic of traditional “green” approach



Definition of Success: Restorative Development Planning

Example schematic of truly restorative approach



Project Timeline + Tasks

Project Timeline

At Risk	Task Name	Status			Q1		Q2	
			Dec	Jan	Feb	Mar	Apr	May
Flag	+ Integrated Utility Hub (IUH) Technical Analysis							Integrated
Flag	+ Restorative Development benchmarking analysis							Restorative Development
Flag	+ Performance Assessment (environ/ social/ economic/ identity)							Performance /
Flag	+ City Scorecard and Ecological Equity Statement for current and historic status							City Score
Flag	Prepare Baseline Assessment Report							

Current Tasks

Update on data collection and next steps!