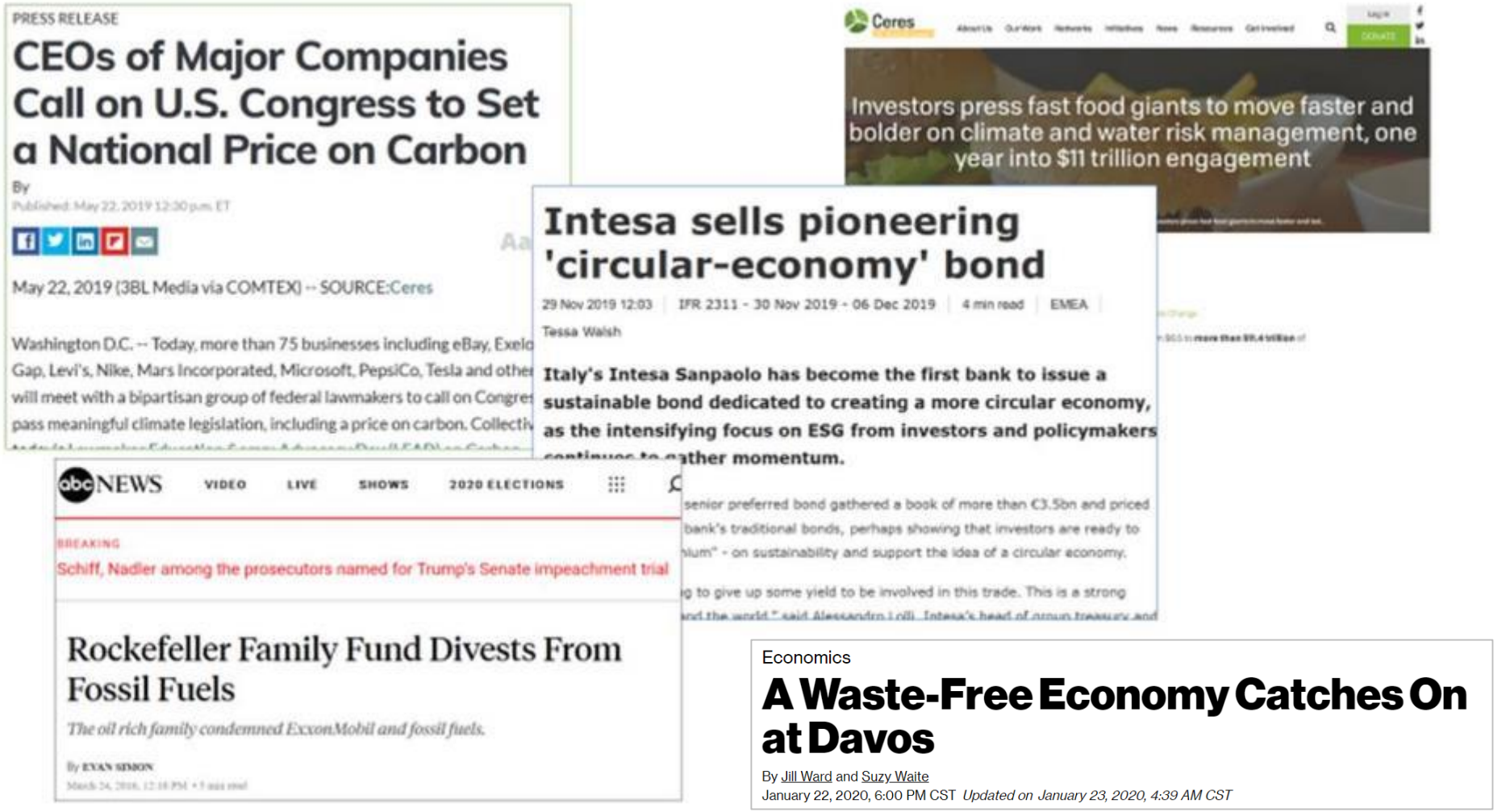
Circular Economy Feasibility Study

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

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, Exelo
Gap, Levi's, Nike, Mars Incorporated, Microsoft, PepsiCo, Tesla and othe
will meet with a bipartisan group of federal lawmakers to call on Congre
pass meaningful climate legislation, including a price on carbon. Collecti

Ceres

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

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

senior preferred bond gathered a book of more than €3.5bn and priced
bank's traditional bonds, perhaps showing that investors are ready to
- on sustainability and support the idea of a circular economy.
to give up some yield to be involved in this trade. This is a strong

abc NEWS VIDEO LIVE SHOWS 2020 ELECTIONS

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

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

+

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-

AMBITION

- Does not challenge business model

WHAT & HOW

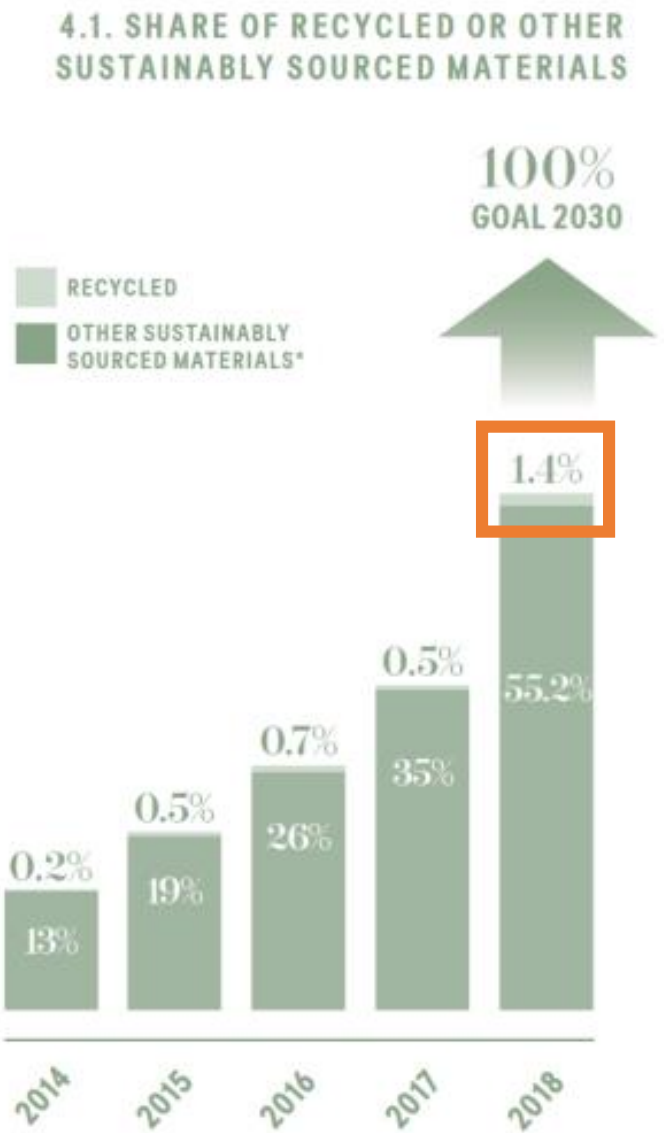
- Collection + distribution of used clothes via trucks to central facility

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

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

Lack of other stakeholder alignment

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

Utilize all waste as materials

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Equitably optimize social, economic and environmental outcomes

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

ORASCOM
RAMBOLL
YORTH GROUP

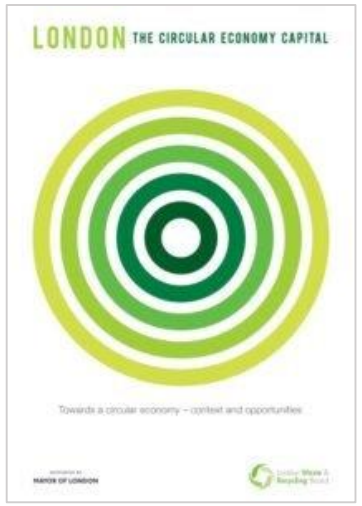
London: Becoming the Circular Economy Capital

£7 BILLION EVERY YEAR

Projected net benefit

40,000 NEW JOBS

[12,000 net new]

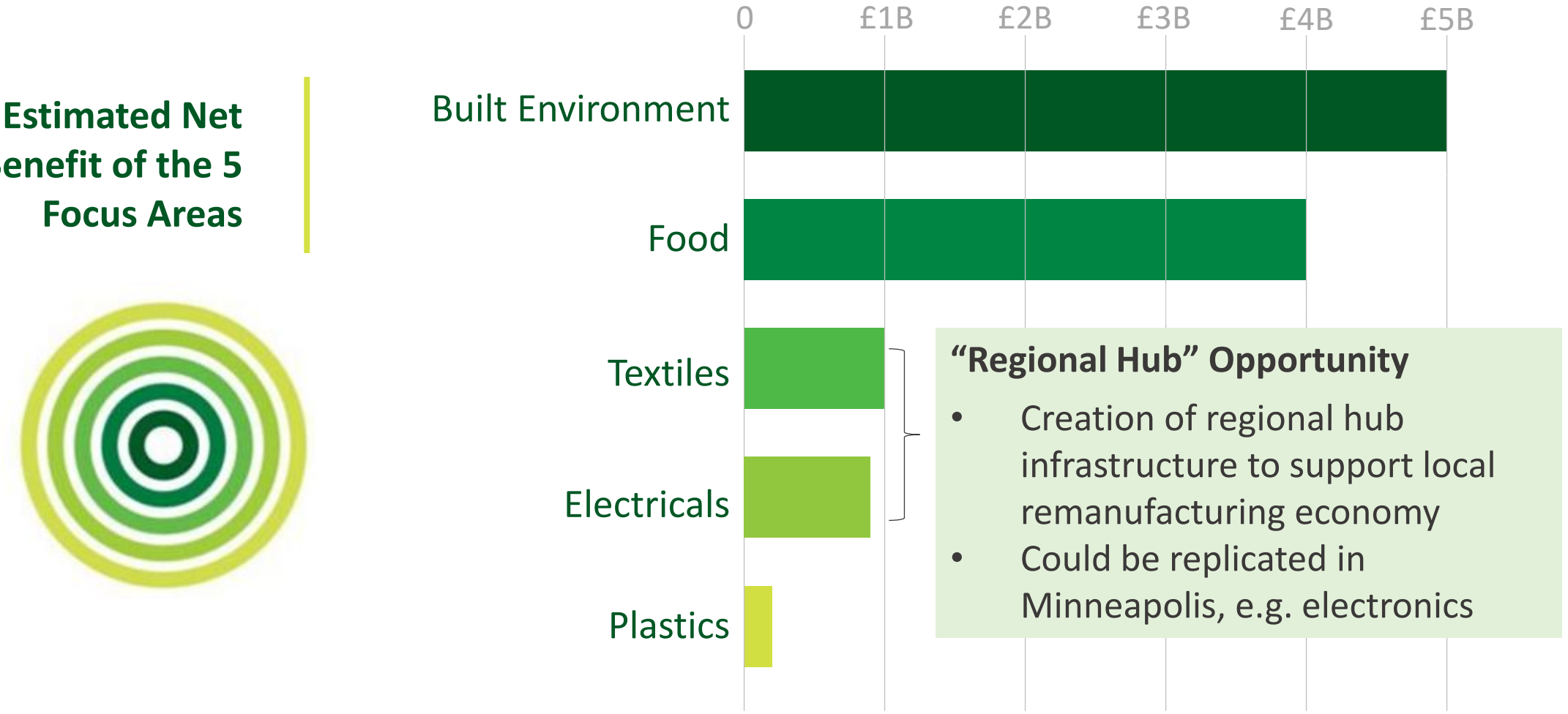


WHAT MAKES THIS EFFORT SUCCESSFUL

- 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



“Regional Hub” Opportunity

- Creation of regional hub infrastructure to support local remanufacturing economy
- Could be replicated in Minneapolis, e.g. electronics

ORASCOM RAMBOLL YORTH GROUP

Source: London Waste and Recycling Board

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

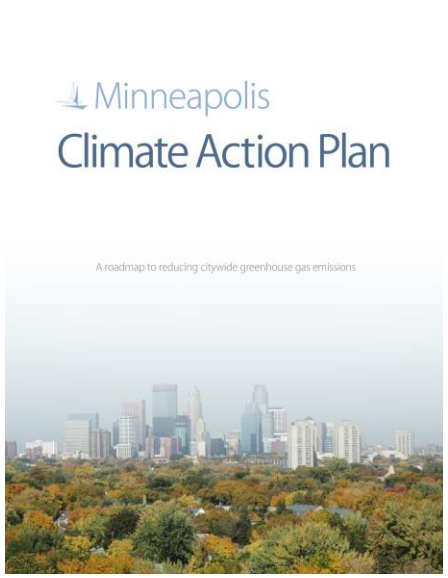
Equitably optimize social, economic and environmental outcomes

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



- 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

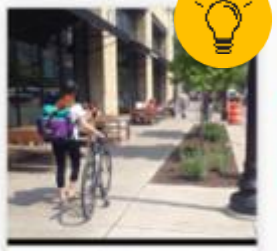
In 2040, Minneapolis will have more residents and jobs, and all people will equitably benefit from that growth.

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

High-quality physical environment

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

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

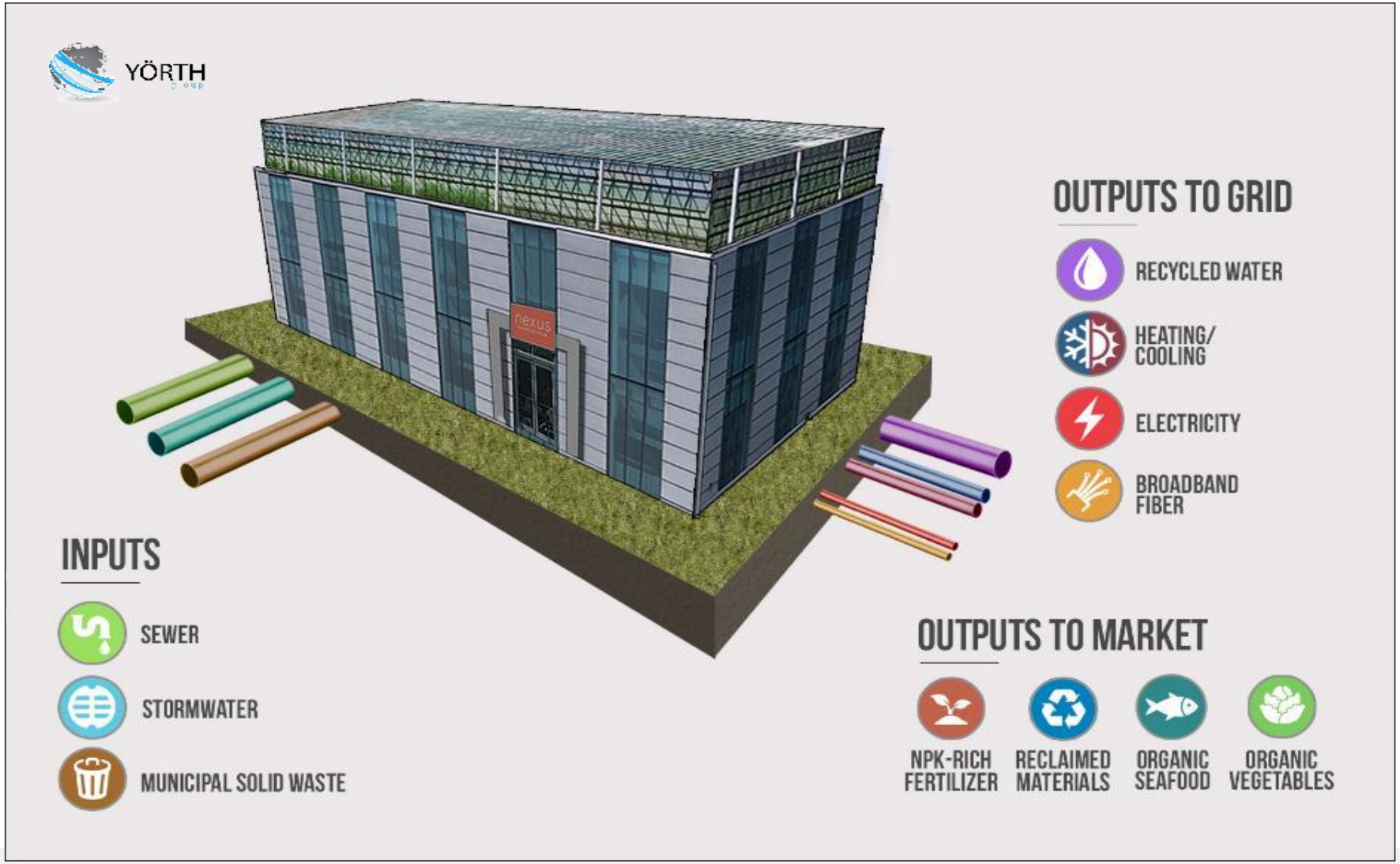
Restorative Development 2.0:

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

Input

- Municipal + Industrial Waste
- Wastewater + Storm Water
- Training + Career Paths
- Economy

Outputs

- Fertilizer
- Water
- Food
- Energy
- Living Wages

Habitat

Affordable Housing

Materials Reclamation + Remanufacturing Program

Outcomes

- Reduced stress levels
- Reduced crime rates
- Increased productivity
- Better health
- Reduced social costs
- Eliminated environmental costs

- New local businesses
- New locally made products
- New local green jobs
- Zero waste communities
- Zero emission communities
- Materials + resources back to business

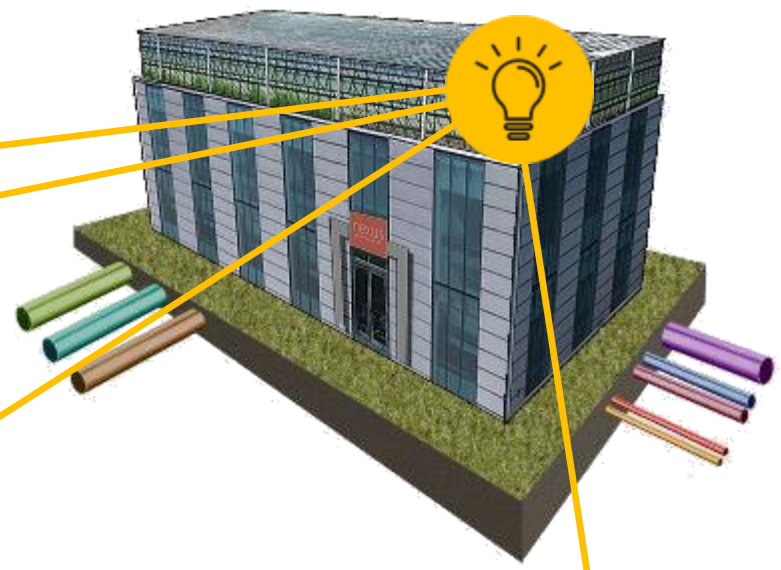
EQUITY + RESILIENCE

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

Living-wage jobs

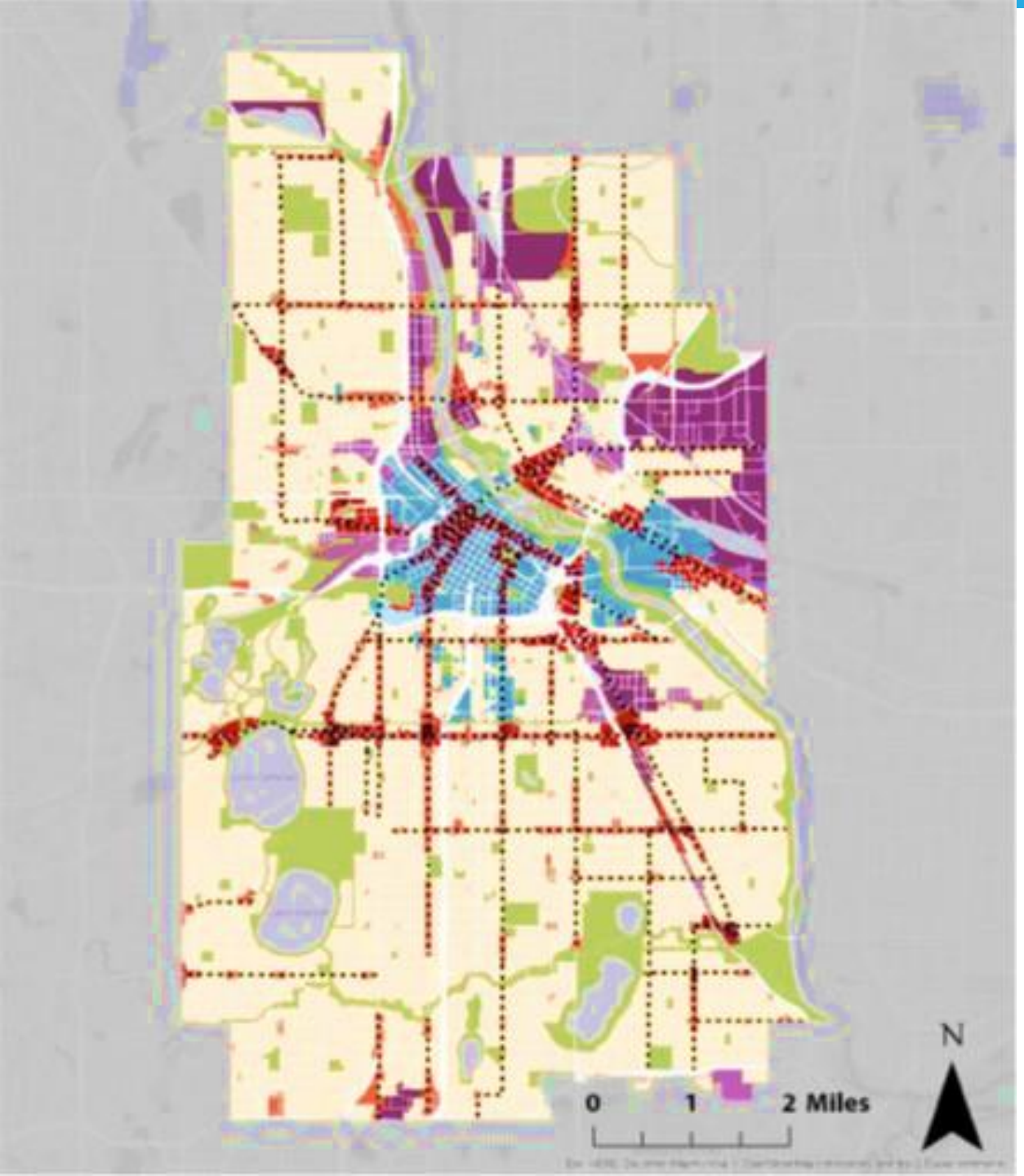
Healthy, sustainable, and diverse economy

Complete neighborhoods



Integrated Utility Hub

High-quality physical environment



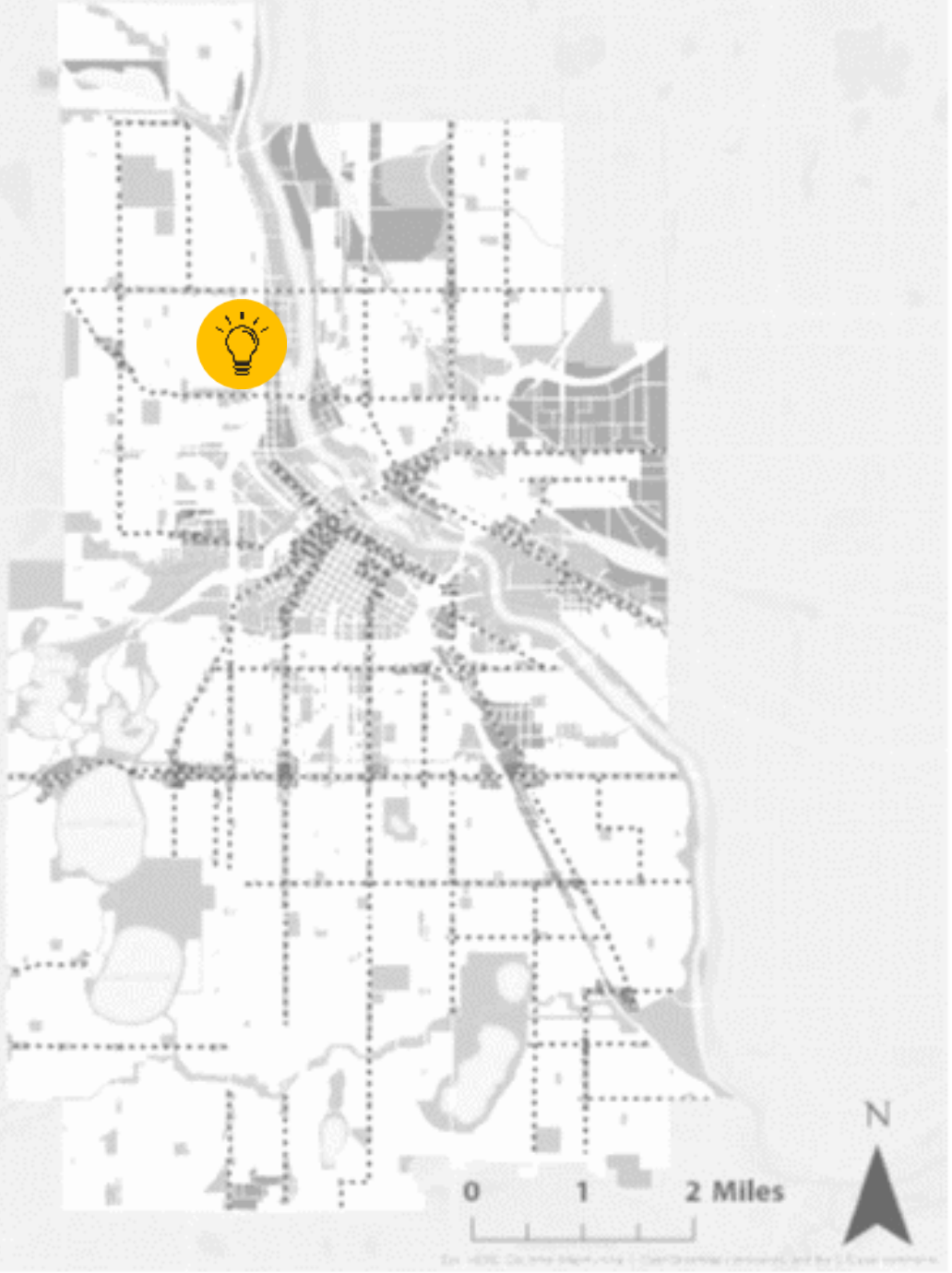
Minneapolis 2040 Land Use Map

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 u**se (light purple)

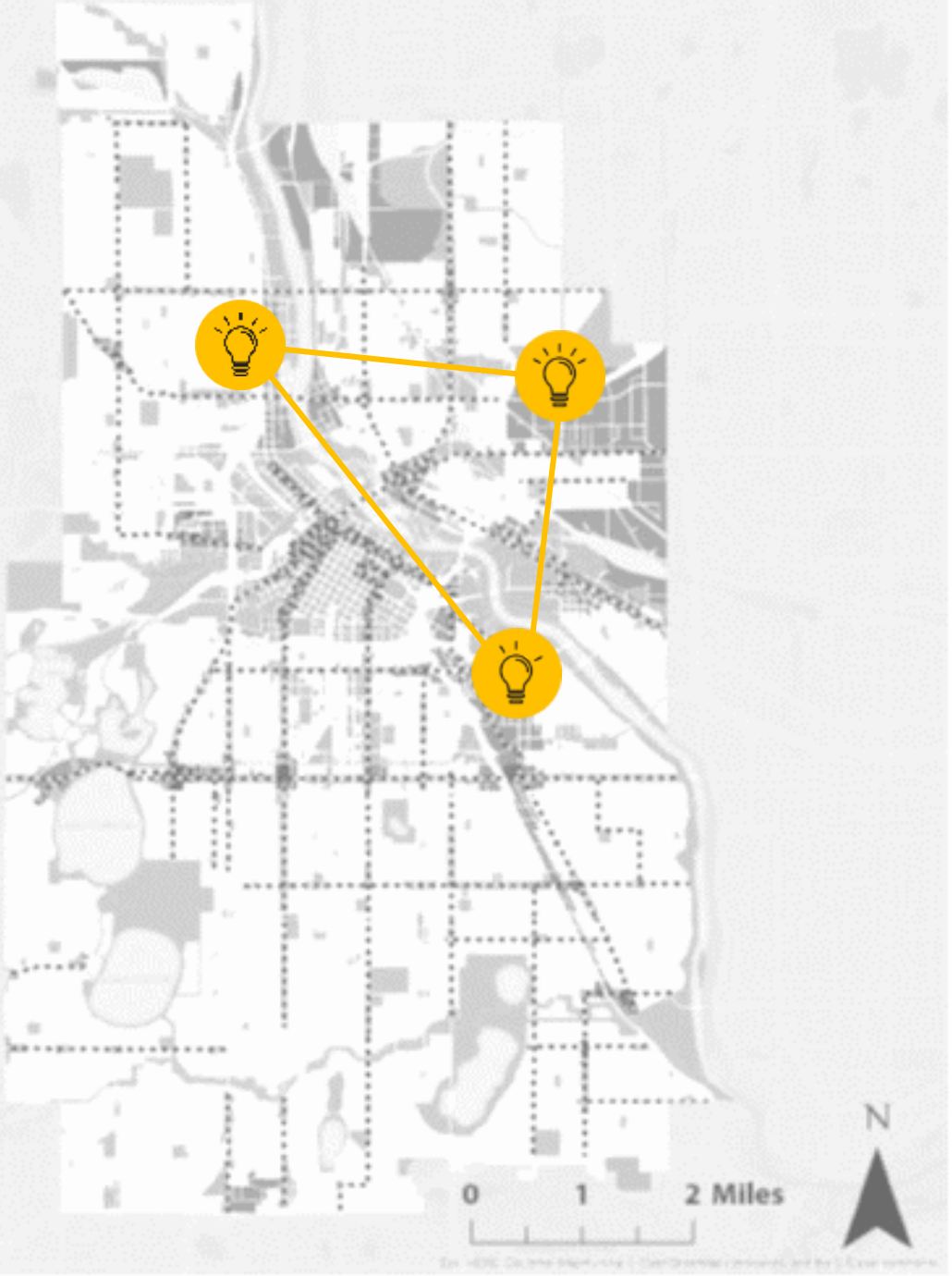
- These could serve as locations for IUH districts and/or circular economy remanufacturing businesses



Land Use: Context for Restorative Development

IUH Ecosystem Pilot

UHT provides a possible location for full-scale pilot



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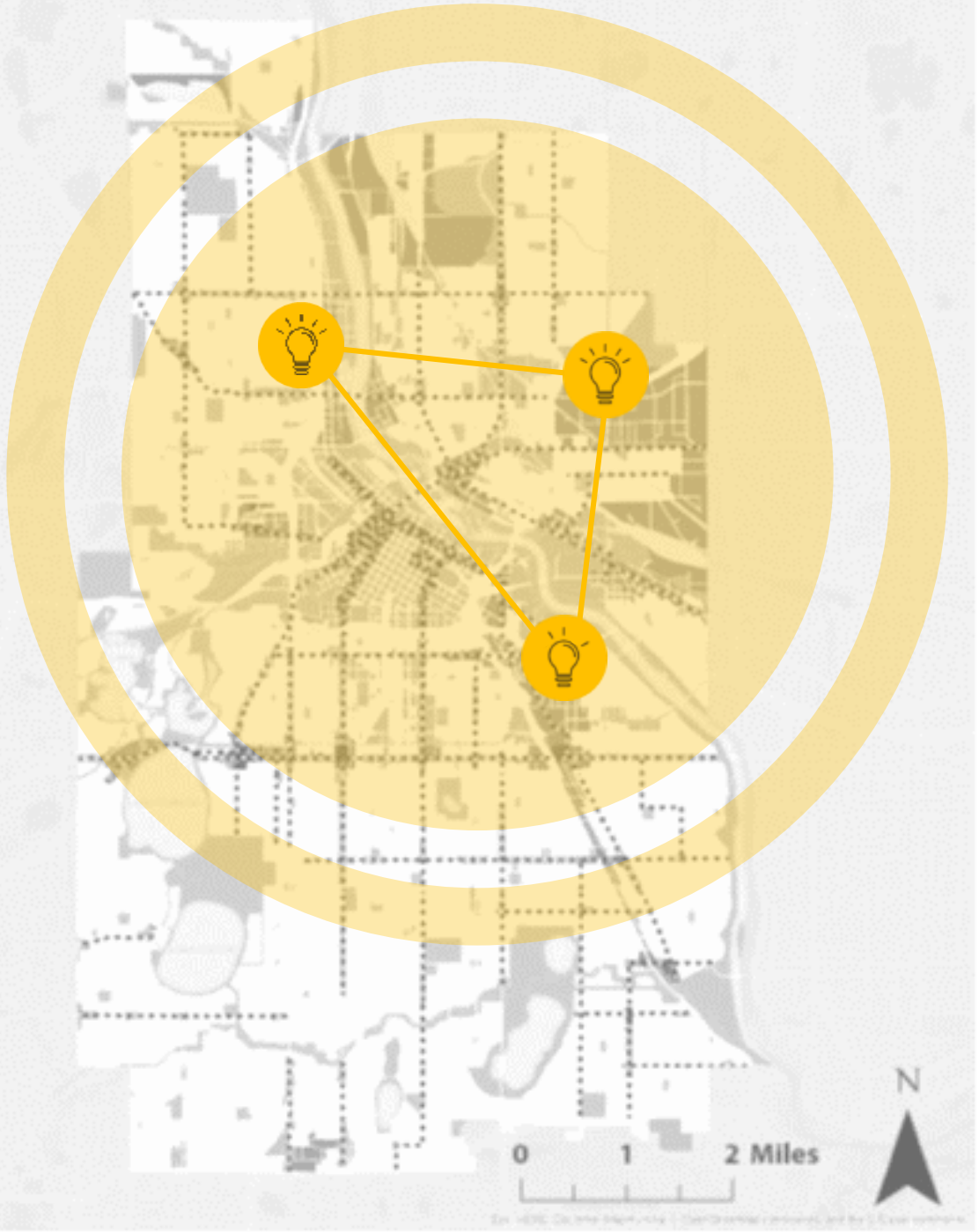
IUH Network

Potential network of 3+ IUH districts



Minneapolis 2040 Land Use Map

IUH Ecosystem Pilot

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IUH Network

Potential network of 3+ IUH districts

Restorative Development Infrastructure

Public/private infrastructure to support:

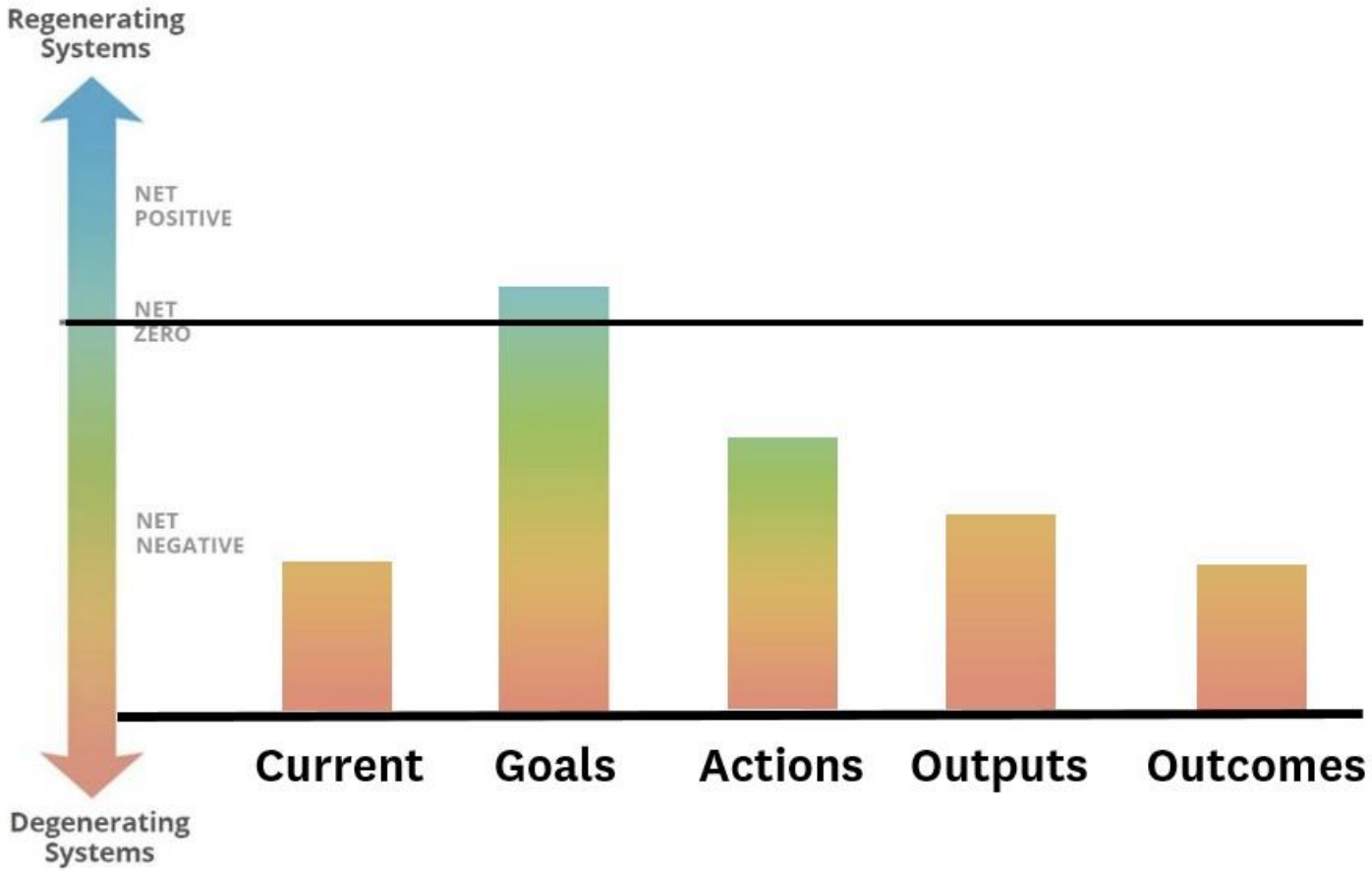
- Reuse + Remanufacturing Regional Hub
- Industrial Symbiosis

Definition of Success

Definition of Success: Restorative Development Planning

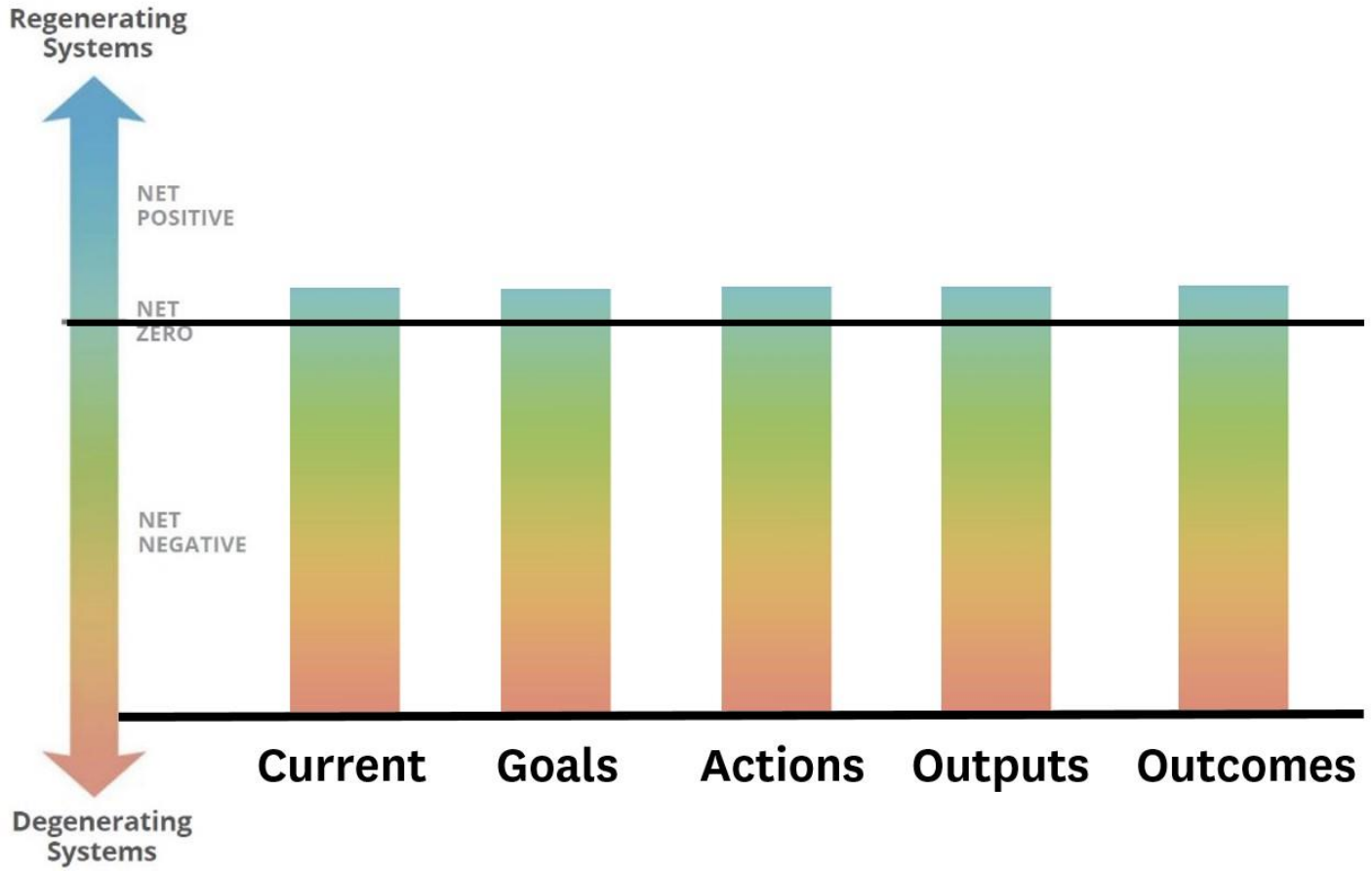
Definition of Success: Restorative Development Planning

Example schematic of traditional “green” approach



Definition of Success: Restorative Development Planning

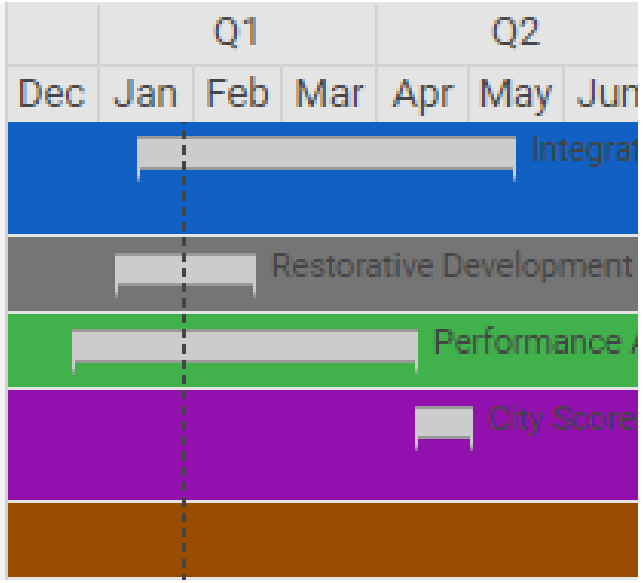
Example schematic of truly restorative approach



Project Timeline + Tasks

Project Timeline

At Risk	Task Name	Status
	Integrated Utility Hub (IUH) Technical Analysis	
	Restorative Development benchmarking analysis	
	Performance Assessment (environ/ social/ economic/ identity)	
	City Scorecard and Ecological Equity Statement for current and historic status	
	Prepare Baseline Assessment Report	



Current Tasks

Update on data collection and next steps!