




EcoDistricts

Accelerating District-scale Sustainability

WASHINGTON DC, SEPTEMBER 2014

An aerial photograph of a dense urban area, likely a city center. The buildings are tightly packed, with a mix of colors including red, brown, and grey. The perspective is from a high angle, looking down on the city. The text is overlaid on the image, centered horizontally and vertically.

“Cities are not about the perfect vision, they are not about a singular idea. They are about a collision of all kinds of incompatible demands”

—Sam Jacob, FAT

Agenda

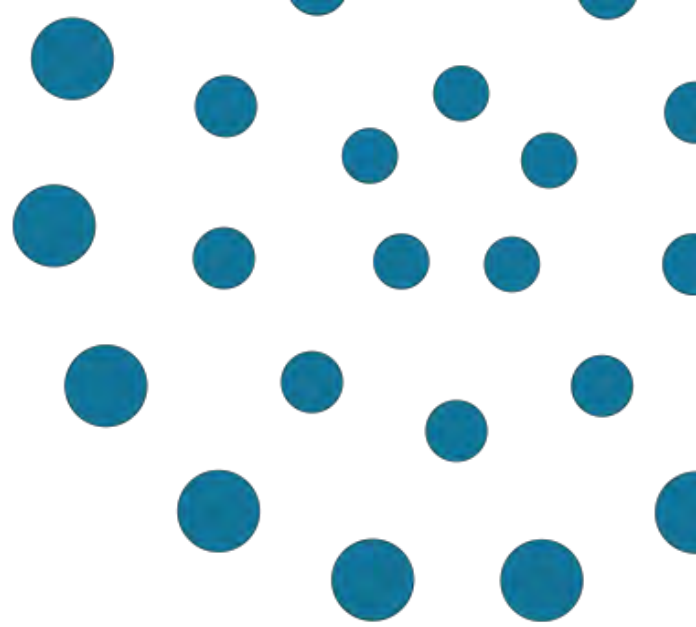
About Us

Why District Scale Sustainability

The EcoDistricts Protocol

- District Organization
- District Assessment
- District Projects
- District Management

The Role of Cities



Continuing Education

LEED CE credit:

- Attendees must enter their name on the sign-in sheet for EcoDistricts' attendance records.
- Attendees need to self-report their LEED CE hours here: <http://www.usgbc.org/account/credentials>
- You may self-report 3.5 hours and the course number is: 0090010439
- More info on the course is here: <http://www.usgbc.org/node/4604615>

AIA LU credit:

- Attendees must enter their AIA number into the sign-in sheet.
- EcoDistricts will report 3.5 AIA LU attendance on your behalf.
- If you don't enter your member number, we can't report your attendance.

Learning Outcomes

- Gain awareness of the EcoDistricts Protocol, its origin, objectives and components
 1. Organizational models for engagement and district-scale governance
 2. Methods for assessing assets and determine priorities
 3. District management frameworks
- Identify opportunities to craft public policy to support exemplar projects



Our Theory of Change



Districts provide an **important scale** to accelerate urban regeneration — **small enough to innovate** and **big enough to leverage long term investment** and public policy

World class **urban regeneration** requires an integrated delivery model, driven by collaboration and shared investment and shaped by rigorous sustainability metrics...



inspired by the global green cities movement, spearheaded by urban leaders and visionaries...

C40 Cities

MAKE A DIFFERENCE

Each city in the C40 is unique in its infrastructure and progress in addressing climate change. C40 works to empower cities to connect with each other and share technical expertise on best practices.



The growth of cities could usher in a new era in which the decision isn't green or not, but what kind of green."

-Bill Clinton, 42nd President of the United States



a **private sector** with a growing appetite for innovation and **capital** to deploy...



(How are cities tackling climate change?)

Heavyweights like Chicago's Rahm Emanuel are going around public agencies and unions to improve schools, roads, parks and more.

Wall Street Journal, July 6, 2012

SIEMENS

Building cities worth building a future in.
Siemens provides answers for Africa's rapidly growing cities.

Mayor Bloomberg on Building a Culture Where Innovation Is Prized

In June, Bloomberg Philanthropies announced the Mayors Challenge, a competition to inspire American cities to generate innovative ideas that solve major challenges and improve city life.

Forbes Magazine, 8/01/2012

and an ever growing network of **disruptors** providing the ideas, data, tools, and partnerships to scale.



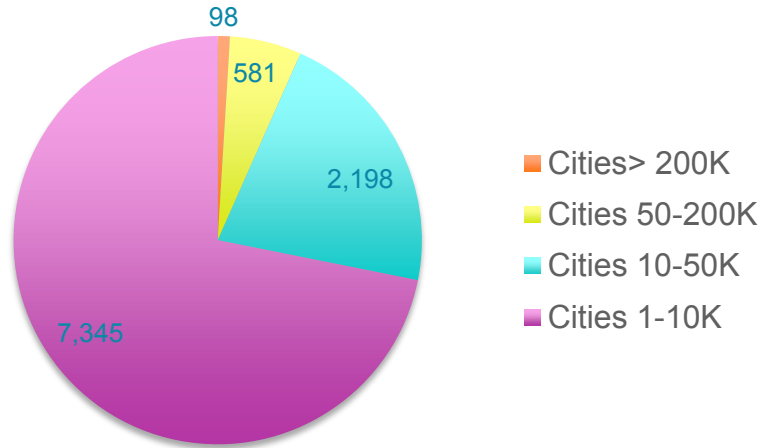


The EcoDistricts Approach

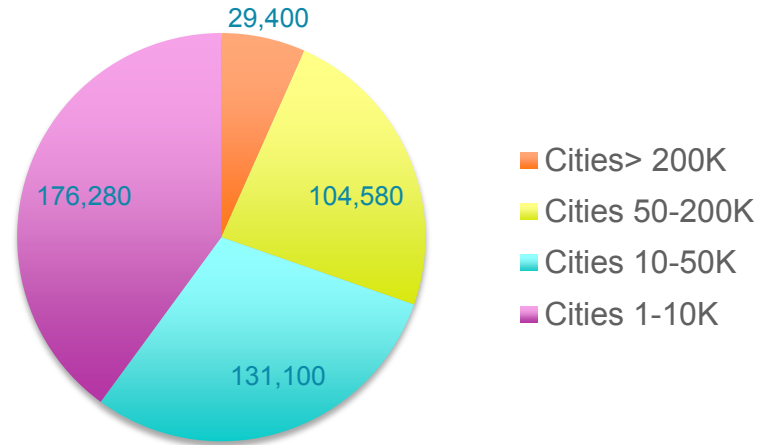
Let's Build a Market

There is an estimated
173,915 organized
neighborhoods in the US

Number of Jurisdictions in the US



Entitled Multi-Building Projects (estimated)



but first, LETS GET ORGANIZED!

1. There is a growing appetite for district-scale sustainability projects, but the marketplace is disorganized and fractured.
2. We want comprehensive solutions, but primarily focus on solving single issues at a time.
3. We want to build capacity but organizational development and pre-development funding is scarce.
4. We have lots of rating tools (e.g. LEED ND, SITES, Envision), but no agreed upon metrics and mechanism to regularly report progress over time.
5. We have a willingness to act, but few partnership and governance models to implement projects and leverage resources.
6. We want to scale projects but have public policy & regulatory frameworks.

Step 1. Create a Call to Action

Build a diverse coalition and strong brand to effectively promote district-scale sustainability

OUR VISION

Just, sustainable and resilient cities and neighborhoods for all

OUR MISSION

Provide support and leadership for urban change makers and innovators to accelerate sustainable district and neighborhood scale regeneration

Step 2. Solicit Investors

ARUP



McGUIREWOODS



CORIX[®]
Utilities

MITHUN



Google

Enterprise



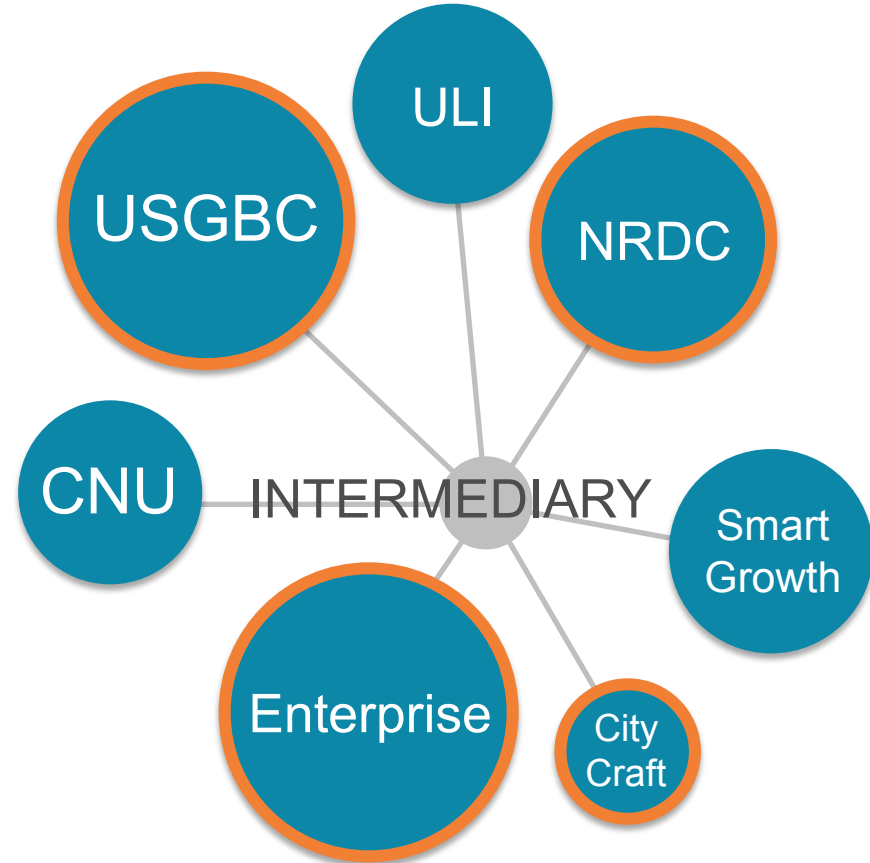
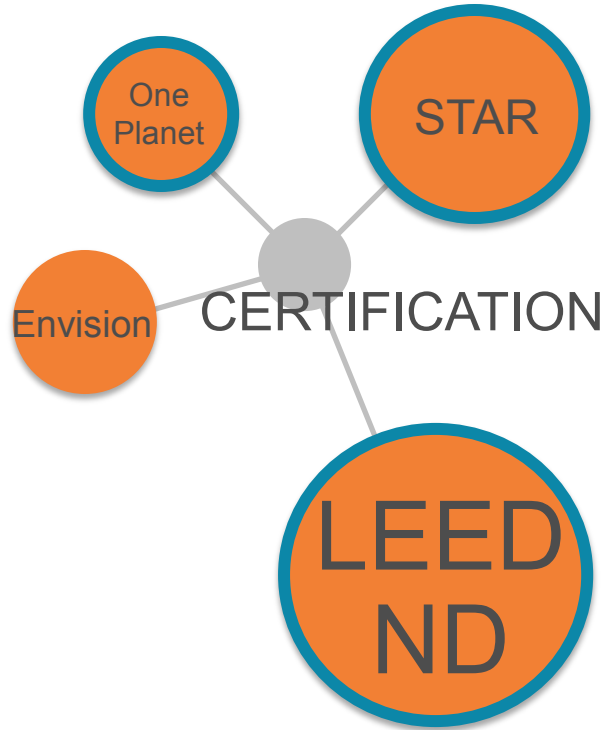
green
building
council
australia



PDC | PORTLAND
DEVELOPMENT
COMMISSION
www.pdc.us

THANK YOU

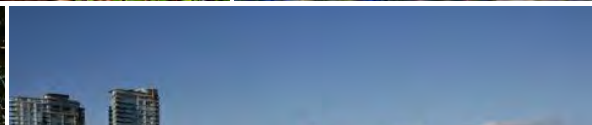
Step 3. Develop Partnerships





Step 4. Create a Global Standard

ACCELERATING INNOVATION
REWARDING LEADERSHIP



Step 5. Accelerate Innovation



PUBLIC POLICY & LEADERSHIP

Public Agencies | Utilities | Redevelopment Authorities

1.



Build
Capacity

Develop
Strategy

Accelerate
Projects

Support
Policy

2.



BROWNFIELDS



EXISTING NEIGHBORHOODS

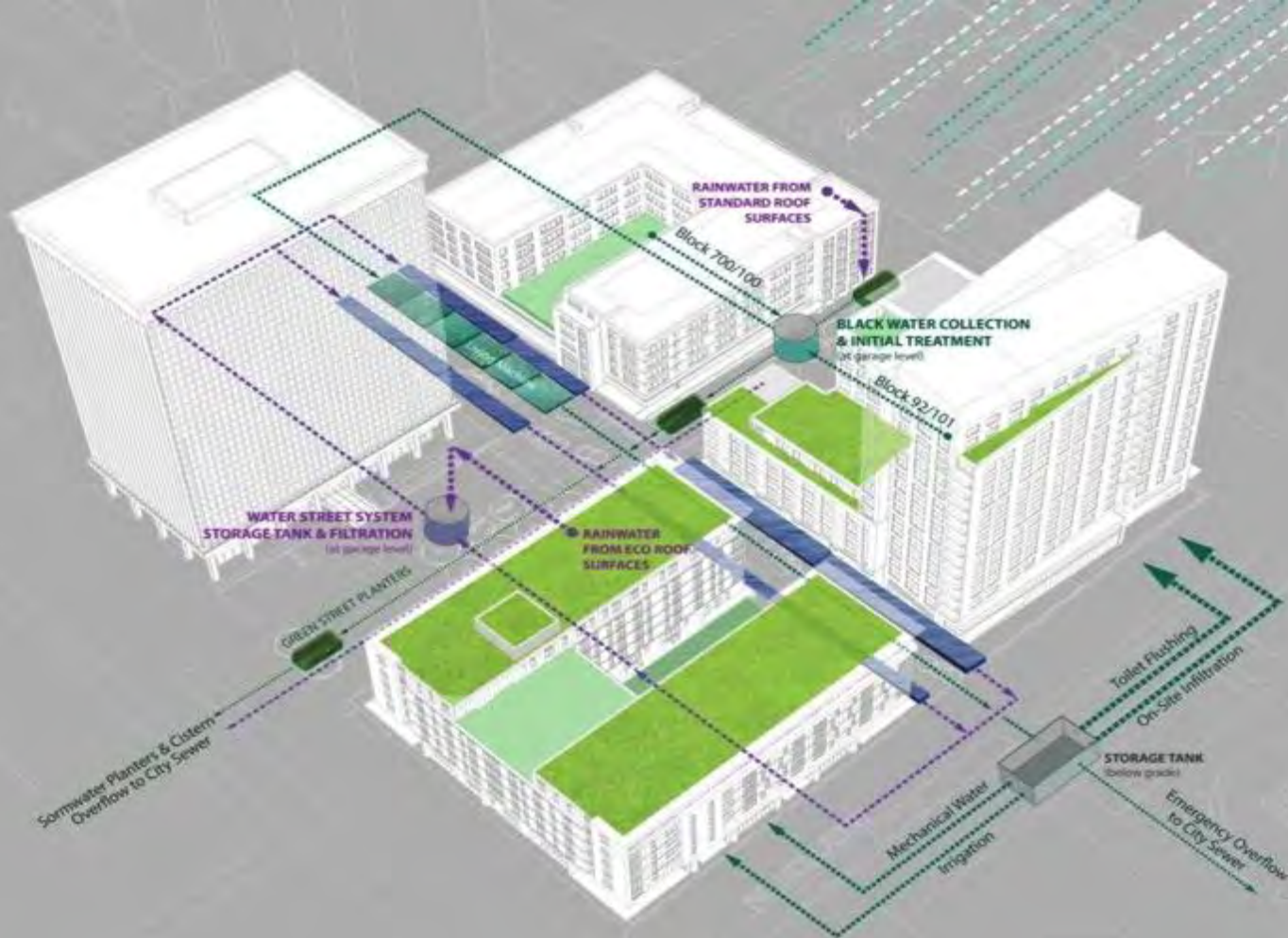


CAMPUSES

PROJECT INNOVATION

Developers | Civic Entrepreneurs | Business | Institutions







INDIGO
@TWELVE | WEST



**DREAM
IN GREEN**

PDX

APRIL 22-27
urbanforestPDX.org

Logos for **uifp**, **AIGA**, **Horroff McKenize Design**, **FURRY PROJECT**, and **urbanforestPDX.org**.



**THINK SMALL.
CYANPDX.COM**



**STENCIL
TOOLKIT**

WARNING!
STENCILS ARE POWERFUL WEAPONS
USE THEM RESPONSIBLY



**KEEP PORTLAND
BEERED!**

**BRIDGEFORD
ALE**

Discussion – 5 minutes

Share examples of how you're
currently promoting district &
neighborhood scale sustainability

> Quickly brainstorm at your table the key attributes and what makes them important



The EcoDistricts Protocol

Why the Protocol?

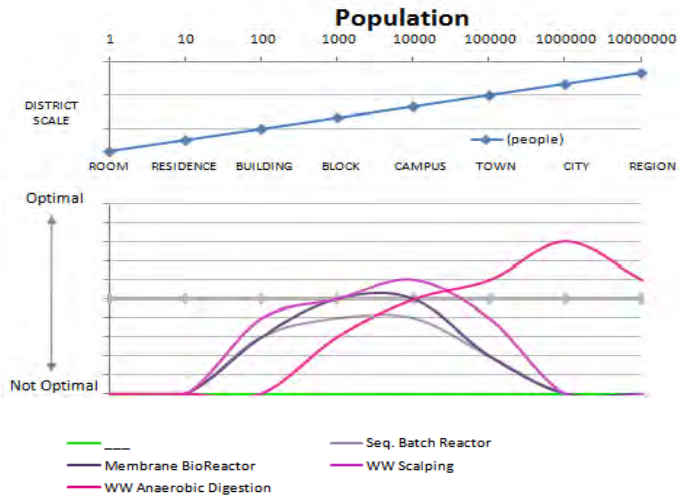
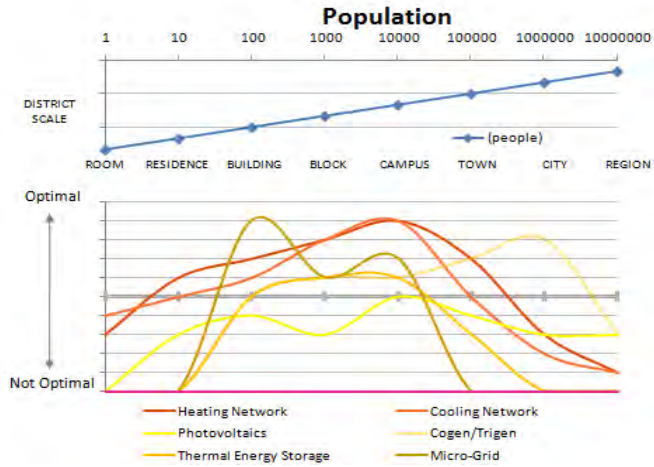
1. ■

The **market needs a clear standard** to promote **systems integration, innovation, performance and inclusiveness** across the district-scale sustainable development supply chain

2. ■

Market transformation requires a **growing pipeline** of innovative **projects that share a common approach** to create the lessons and leaders required to scale and replicate

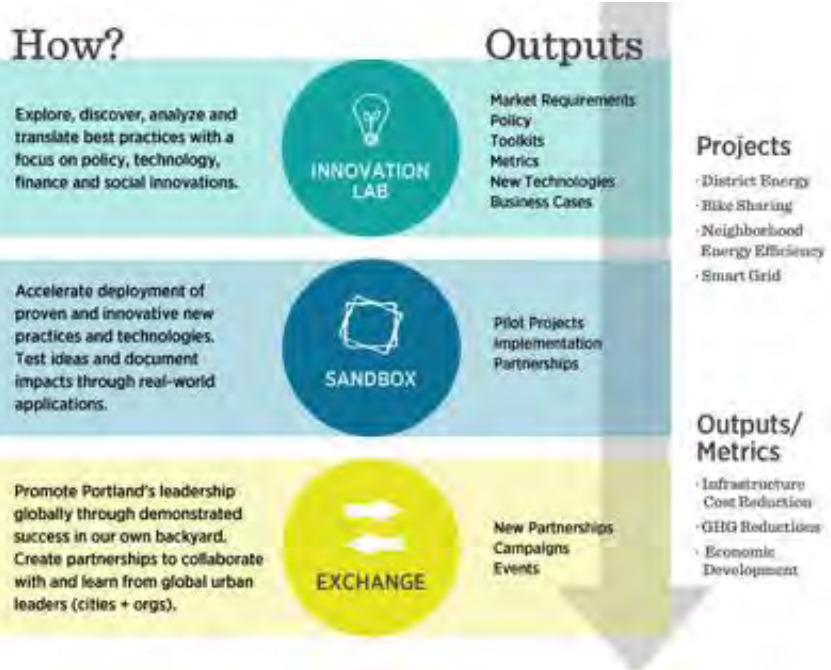
1. Systems Integration



Courtesy of ARUP



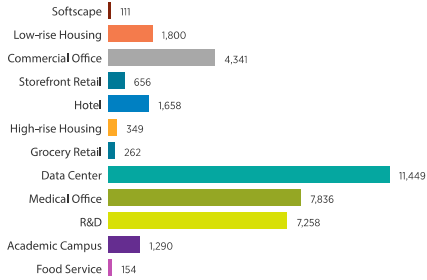
2. Innovation



3. Performance

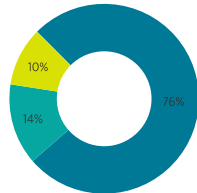
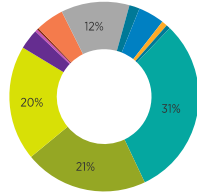
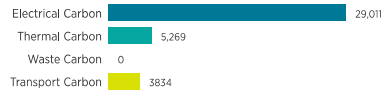
Scenario 2 Carbon Emissions

Land Use Type (mton CO2eq)



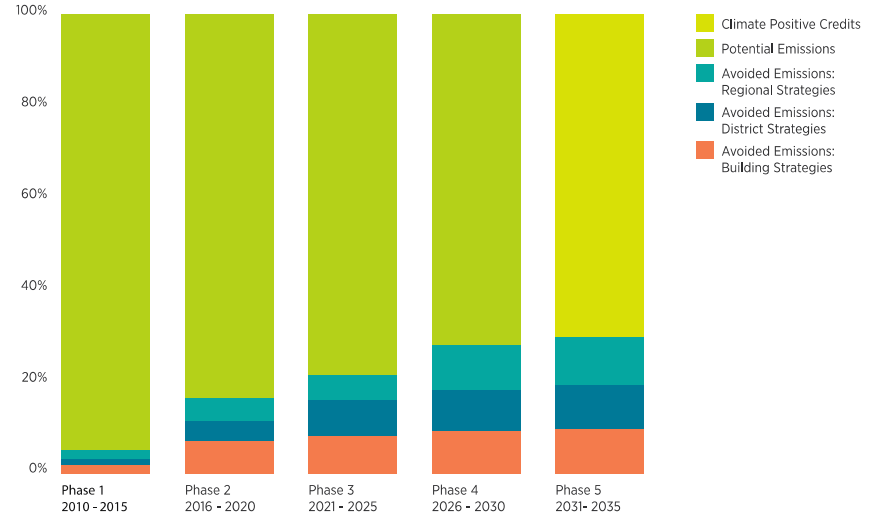
Scenario 2 Carbon Emissions

Resource Type (mton CO2eq)



Program Emissions

% Emissions by Program



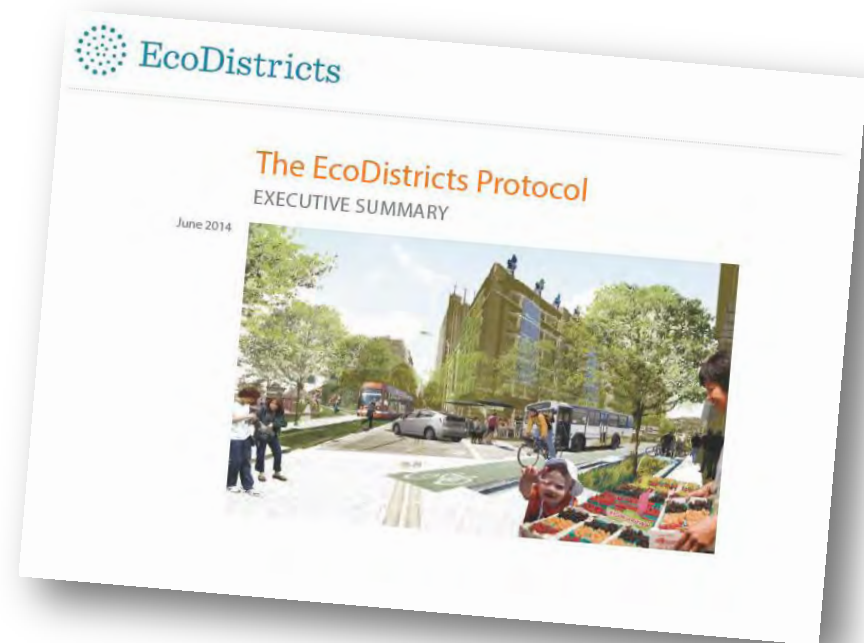
4. Inclusiveness



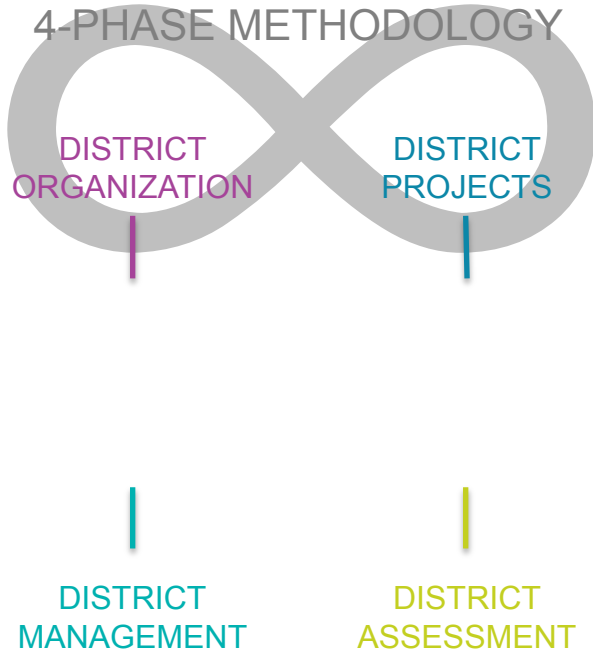
EcoDistricts Protocol

Four phase process management tool to help urban development leaders manage district-scale sustainable development projects, across a range of project types:

1. Build support and align interests
2. Shape governance
3. Analyze options
4. Guide investments
5. Measure success and reward leadership



EcoDistricts Protocol



8 PERFORMANCE AREAS



EQUITABLE DEVELOPMENT
Promote equity and opportunity and ensure fair distribution of benefits and burdens of investment and development



HEALTH + WELL BEING
Promote human health and community well being



COMMUNITY IDENTITY
Create cohesive neighborhood identity through the built environment and a culture of community



ACCESS + MOBILITY
Provide access to clean and affordable transportation options.



ENERGY
Achieve net zero energy usage annually



WATER
Meet both human and natural needs through reliable and affordable water management



HABITAT + ECOSYSTEM FUNCTION
Achieve healthy urban ecosystems that protect and regenerate habitat and ecosystem function..



MATERIALS MANAGEMENT
Zero waste and optimized materials management.



Step 1: District Organization

VISION

//

ENGAGEMENT

//

GOVERNANCE

Step 1:
Outcomes

Vision
Engagement
Governance

Why Governance matters

1

Urban regeneration projects are complex, seeking to address multiple 'wicked problems', such as climate change, social injustice, and rapid resource depletion

2

This work involves many stakeholders across diverse sectors and disciplines, often at odds and resulting in conflict and frustration

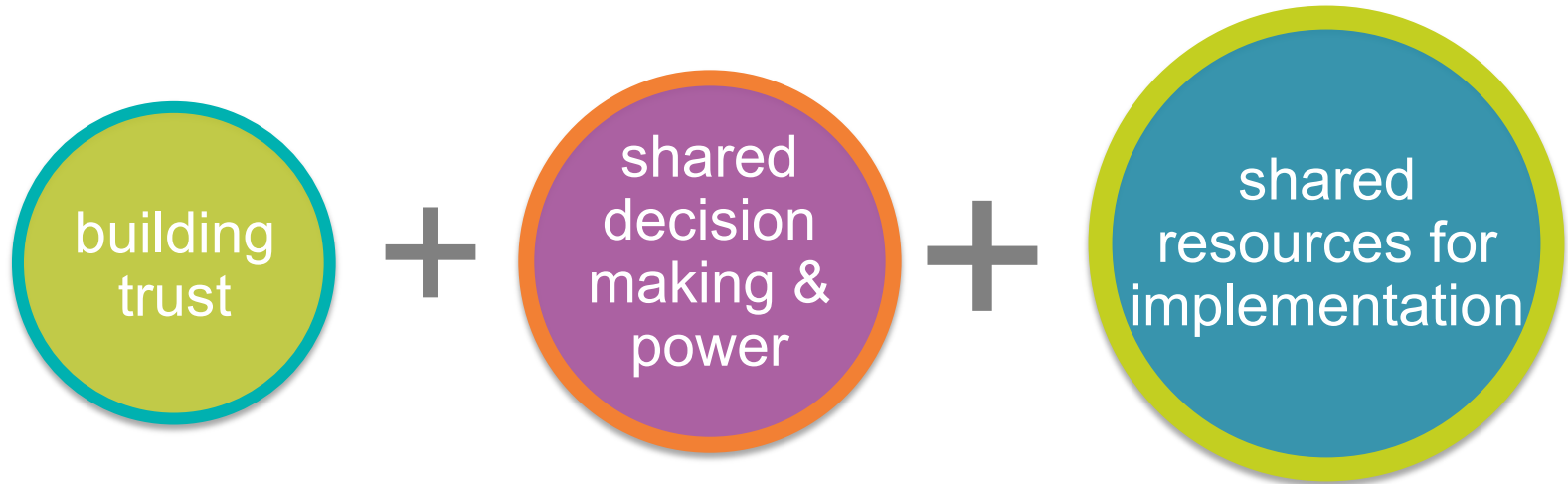
3

Effective district or neighborhood-scale sustainable development requires a new model of private-public-civic partnership that emphasizes innovation, transparency and collaborative action

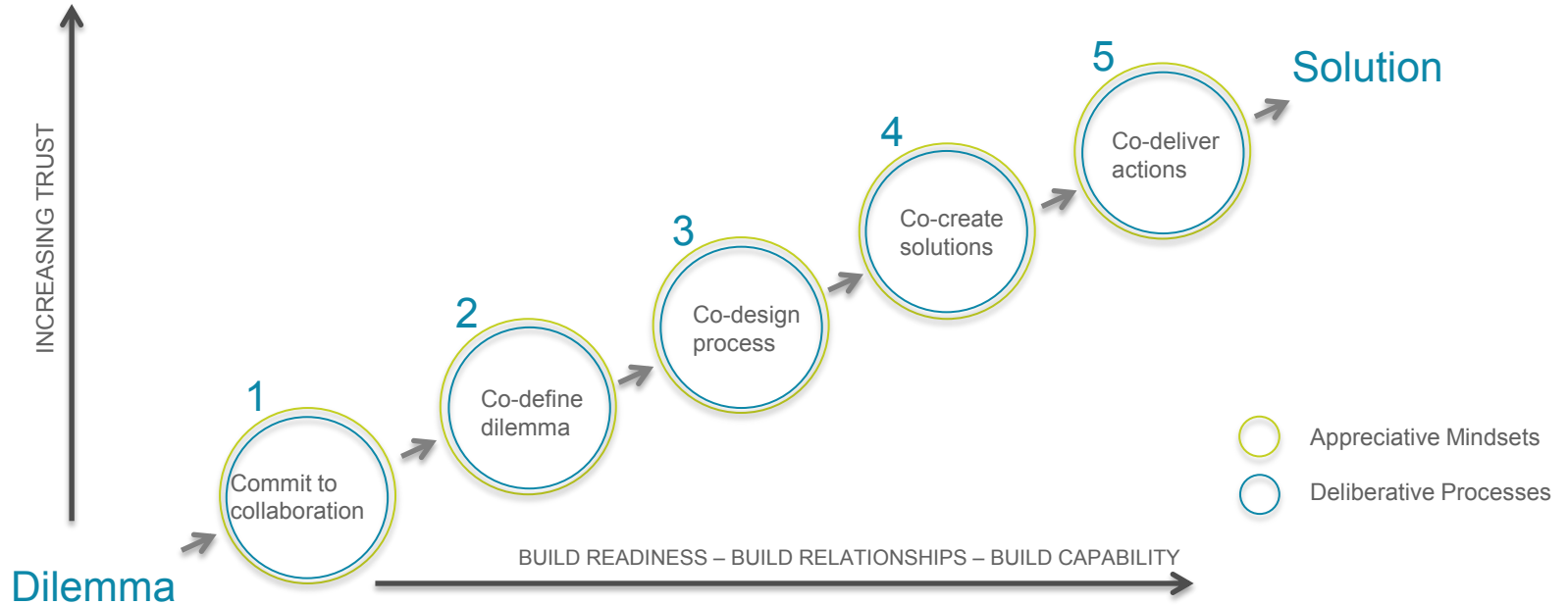


This suggests we need...

a new kind of approach to building leadership to implement projects



Its called “Collaborative Governance”



TWYFORD'S FIVE STEP
COLLABORATIVE GOVERNANCE MODEL

Warning!

“New forms of collaborative governance are likely to provide the most radical shake-up of our understanding and practice of accountability in modern times.”

Zadek, 2008

“Innovation is about divergent thinking and the creation of something new, and collaboration is an essential tool for achieving it.”

Denise, 2010

“Collaborative Governance is a way of working with diverse stakeholders to co-create enduring solutions to society’s most complex issues.”

Twyfords, 2012

So lets start with two simple questions

1. Will the nature of development change in the next 5-7 years?
2. Is sustainability a key priority?

If yes, will it be more effective to work collaboratively than individually?

District Formation

ENGAGEMENT

- engage stakeholders – identify key “investors”
- form steering committee
- develop vision/adopt goals
- sign MOU

GOVERNANCE

- determine roles and responsibilities
- formalize governance structure
- determine district funding mechanisms

Governance Options

ORGANIZATIONAL MODELS

- project-specific organizing entity
- corporations
- nonprofit corporation
- cooperative corporation
- building owners association

POWERS LIKELY NEEDED

- legal entity
- enter into contracts
- apply for grants
- borrow money
- manage projects
- pay staff
- fund projects

District Scale Financing Mechanisms

Non Tax Assessed

- Parking Benefit Districts (PBD)
- Tax-Increment Financing (TIF)
- System Development + Consumption Charges
- Voluntary Contributions

Special Assessed Districts

- Business Improvement Districts (BID)
- Local Improvement Districts (LID)
- Property Assessed Clean Energy Districts (PACE)

Mapping a Formation Strategy

1

2

3.

4.

FUNDING

START UP FUNDING

- CITY / REDEVELOPMENT AUTH
- FOUNDATIONS
- LOCAL BIZ

GOVERNANCE FUNDING

- BUSINESS IMPROVEMENT DISTRICT (BID)

ANALYSIS FUNDING

- RESOURCE CONSUMPTION SURCHARGES
- PUBLIC PURPOSE CHARGES

PROJECT FINANCE

- LOCAL IMPROVEMENT DISTRICTS (LIDs)
- TAX INCREMENT FINANCING (TIF)

ACTIVITIES

OUTREACH & ORGANIZING ACTIVITIES

ASSESSMENT, STRATEGY DEVELOPMENT & DATA COLLECTION

FEASIBILITY STUDIES , SMALL PROJECTS & PROGRAMS

LARGE PROJECTS AND PROGRAMS

ACTION

FORMATION GOVERNANCE

ROADMAP REPORTING

PROJECTS

Central Corridor EcoDistrict

San Francisco

CASE STUDY

- City led effort
- Created Policy Framework - four neighborhood typologies
 - Type 1: Blank Slate (brownfield)
 - Type 2: Patchwork Quilt (up-zoned neighborhoods)
 - Type 3: Strengthened Neighborhood (existing)
 - Type 4: Industrial Network (industrial)
- Used to guide planning activities and integrated project investment decisions
- Next steps – steering committee and governance models



Discussion – 10 minutes

Collaboration is hard. Discuss innovative projects that you've been involved in that required deep partnership to deliver projects?

> Quickly brainstorm at your table and discuss key success factors



Step 2: District Assessment

BASELINE

//

GOAL SETTING //

ROADMAP

Step 2: Outcomes

Baseline Goals + Targets Roadmap

Core Principles of Assessment

- All Performance Areas are addressed
- Undertaken in an environment of collaboration and commitment
- Identifies co-benefits among stakeholders and builds shared ownership
- Is informed by available data
- Encourages innovation
- Makes the 'invisible' visible
- Is flexible in approach
- Is transparent and reportable

Create a Comprehensive Roadmap...



INFRASTRUCTURE



BUILDINGS



PEOPLE + COMMUNITY

Based on Performance



EQUITABLE DEVELOPMENT
Promote equity and ensure fair distribution of benefits and burdens of investment and development

- OBJECTIVES**
- | Ensure neighborhood investments provide direct community benefit through job creation and investment opportunities
 - | Provide quality and consistent local job opportunities through EcoDistrict projects
 - | Mitigate the forced displacement of existing residents and businesses
 - | Ensure diverse stakeholder involvement in all EcoDistrict activities and decision making



HEALTH + WELL BEING
Promote human health and community well being

- OBJECTIVES**
- | Provide access to safe and functional local recreation and natural areas
 - | Provide access to healthy, local and affordable food
 - | Ensure safe and connected streets
 - | Expand economic opportunities to support a socially and economically diverse population
 - | Improve indoor and outdoor air quality



COMMUNITY IDENTITY
Create cohesive neighborhood identity through the built environment and a culture of community

- OBJECTIVES**
- | Create beautiful, accessible and safe places that promote interaction and access
 - | Foster social networks that are inclusive, flexible and cohesive
 - | Develop local governance with the leadership and capacity to act on behalf of the neighborhood



ACCESS + MOBILITY
Provide access to clean and affordable transportation options.

- OBJECTIVES**
- | Provide accessible services through mixed-uses and improved street access
 - | Prioritize active transportation
 - | Reduce vehicle miles traveled
 - | Use low and zero emission vehicles



ENERGY
Achieve net zero energy usage annually

- OBJECTIVES**
- | Conserve energy use by minimizing demand and maximizing conservation
 - | Optimize infrastructure performance at all scales
 - | Use renewable energy



WATER
Meet both human and natural needs through reliable and affordable water management

- OBJECTIVES**
- | Reduce water consumption through conservation
 - | Reuse and recycle water resources wherever possible, using potable water only for potable needs
 - | Manage stormwater and building water discharge within the district



HABITAT + ECOSYSTEM FUNCTION
Achieve healthy urban ecosystems that protect and regenerate habitat and ecosystem function..

- OBJECTIVES**
- | Protect and enhance local watersheds
 - | Prioritize native and structurally diverse vegetation
 - | Create habitat connectivity within and beyond the district
 - | Avoid human-made hazards to wildlife and promote nature-friendly urban design



MATERIALS MANAGEMENT
Zero waste and optimized materials management.

- OBJECTIVES**
- | Eliminate practices that produce waste wherever possible
 - | Minimize use of virgin materials and minimize toxic chemicals in new products
 - | Optimize material reuse and salvage and encourage use of regionally manufactured products or parts
 - | Where opportunities for waste prevention are limited, maximize use of products made with recycled content

Identify Projects

PERFORMANCE AREA	STRATEGY	BUILDINGS + INFRASTRUCTURE (HARDWARE)	PEOPLE + BEHAVIOR (SOFTWARE)
EQUITABLE DEVELOPMENT	access	affordable housing multi-modal transit options information centers (library, schools, etc) 20-minute neighborhoods access to parks and open space	green business start-up loans EcoDistrict jobs center enhance local job demand through project agreements community benefit agreements
	represent		sustainability management association
HEALTH + WELL BEING	access	parks and open space healthy food sources	job opportunities training and learning opportunities
	feel	safe streets and pedestrian zones	air quality improvement challenge trash clean ups
COMMUNITY IDENTITY	identify	signature landmark, park or building district brand improvements foster local businesses and products green infrastructure	district brand campaign district safety campaign create "third places"
	interact	parks and open space pedestrian encounter zone urban agriculture create "third places"	public events regular community connections
	lead		community events neighborhood governance collaborative decision making strong neighborhood networks
ACCESS + MOBILITY	shift	bicycle facilities bicycle parking pedestrian facilities (side/cross walks) transit facilities (bus, lightrail, streetcar) 20-minute neighborhoods	bike challenge non-SOV district dashboard education campaign
	share	car share facilities bike share facilities pedestrian-oriented development	car share program bike share program district dashboard education campaign
	manage	transportation demand management (parking) transportation demand management (zone pricing)	district dashboard

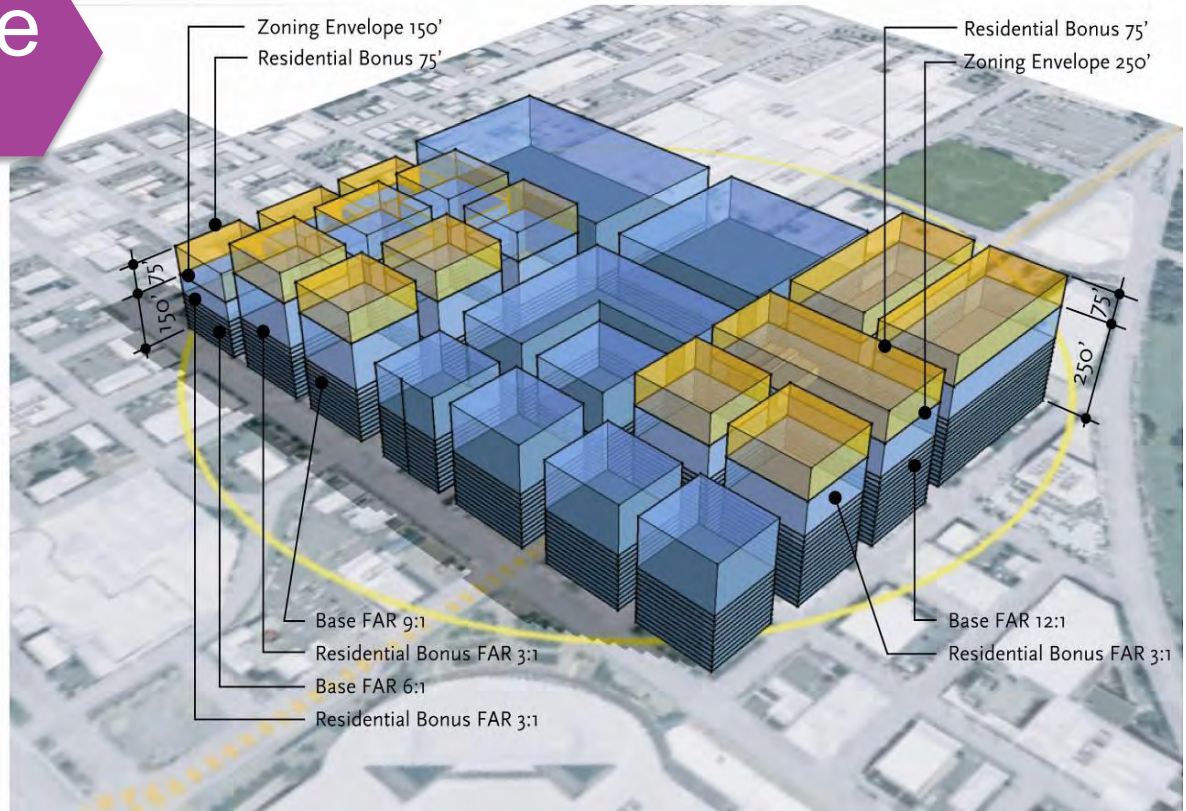
Prepare Baseline

master/ neighborhood plan

- Land use plan – zoning and uses
- Integrated infrastructure plan
- Community assessment



Prepare Baseline growth projections



Prepare Baseline community asset mapping

Who Does It

- Local Community Groups, Residents, Anyone!

What are Considered Assets?

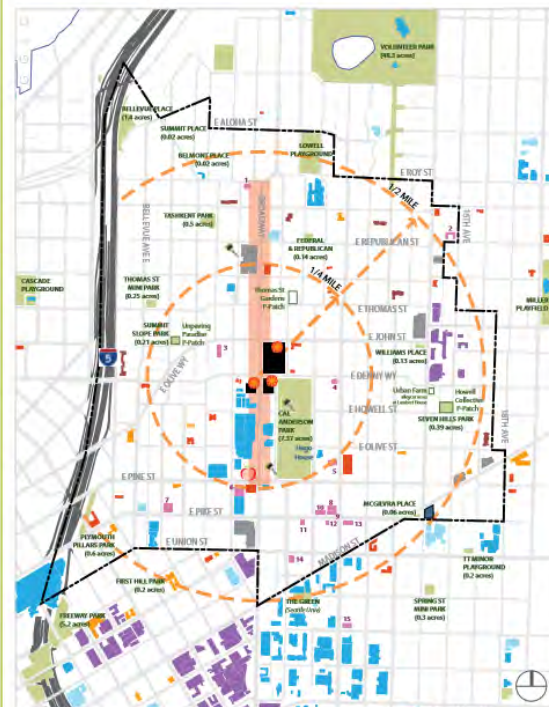
1. People
2. Physical Structures and Businesses
3. Community Services
4. Businesses
5. Social Groups
6. Health and Social Services

Why Do It?

- Easily Move Developments Forward
- Identify Surplus and Deficits of Community
- Incentivize Community Engagement

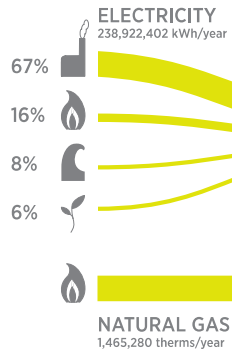


COMMUNITY: SITE ASSETS



EcoDistrict Community Site Context & Assets Map Diagram
This map shows how well served the EcoDistrict study area is from a density, connectivity, and diversity of services perspective. There are many community services like parks, grocery stores, arts and civic institutions within walking distance of the Station Area Sites.
(Image Credit: GGLCO)

Prepare Baseline footprint assessment

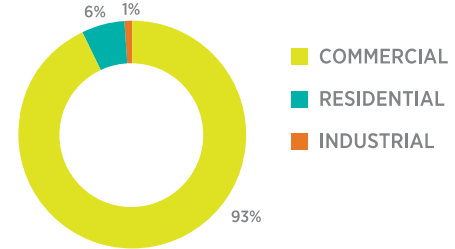


CARBON EMISSIONS
177,097 tCO₂/year

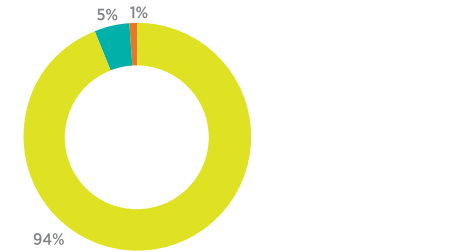


ENERGY DEMAND ESTIMATES

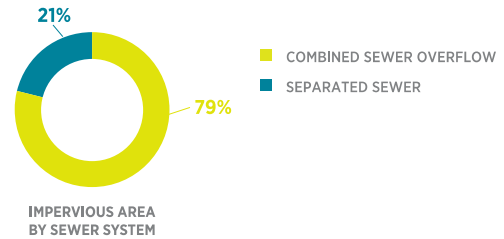
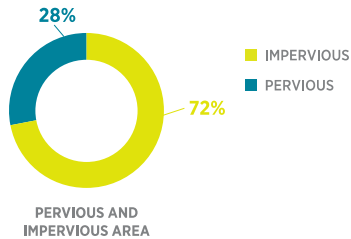
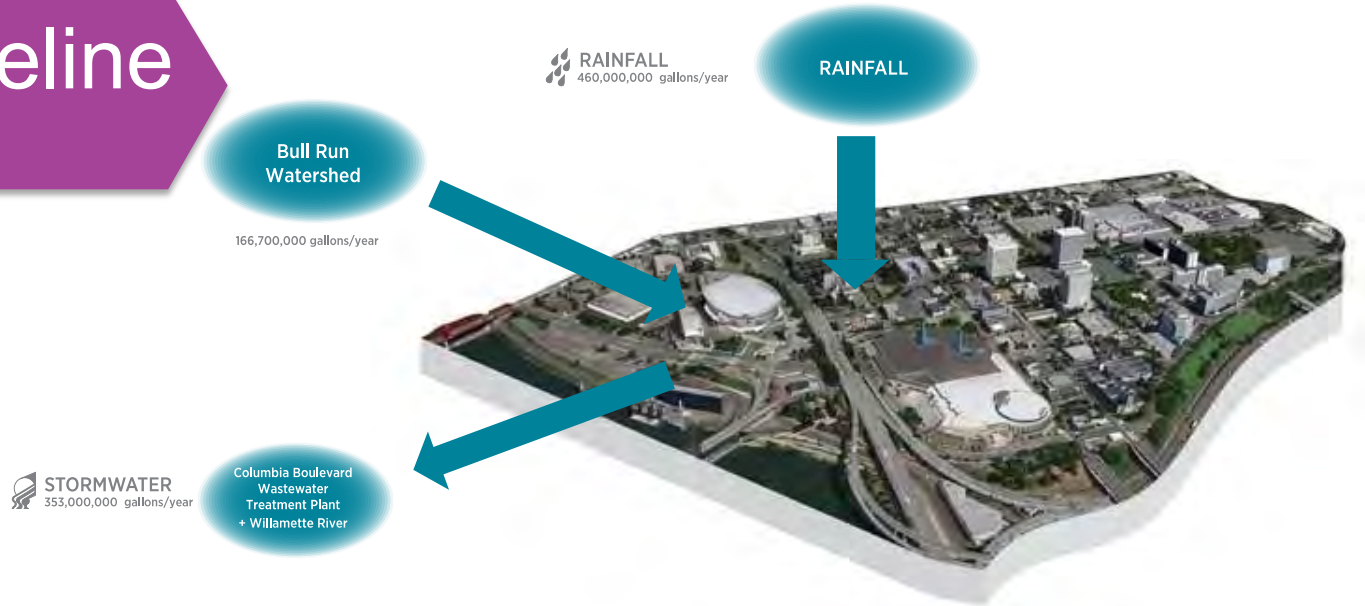
ENERGY DEMAND BY LAND USE
(2010)



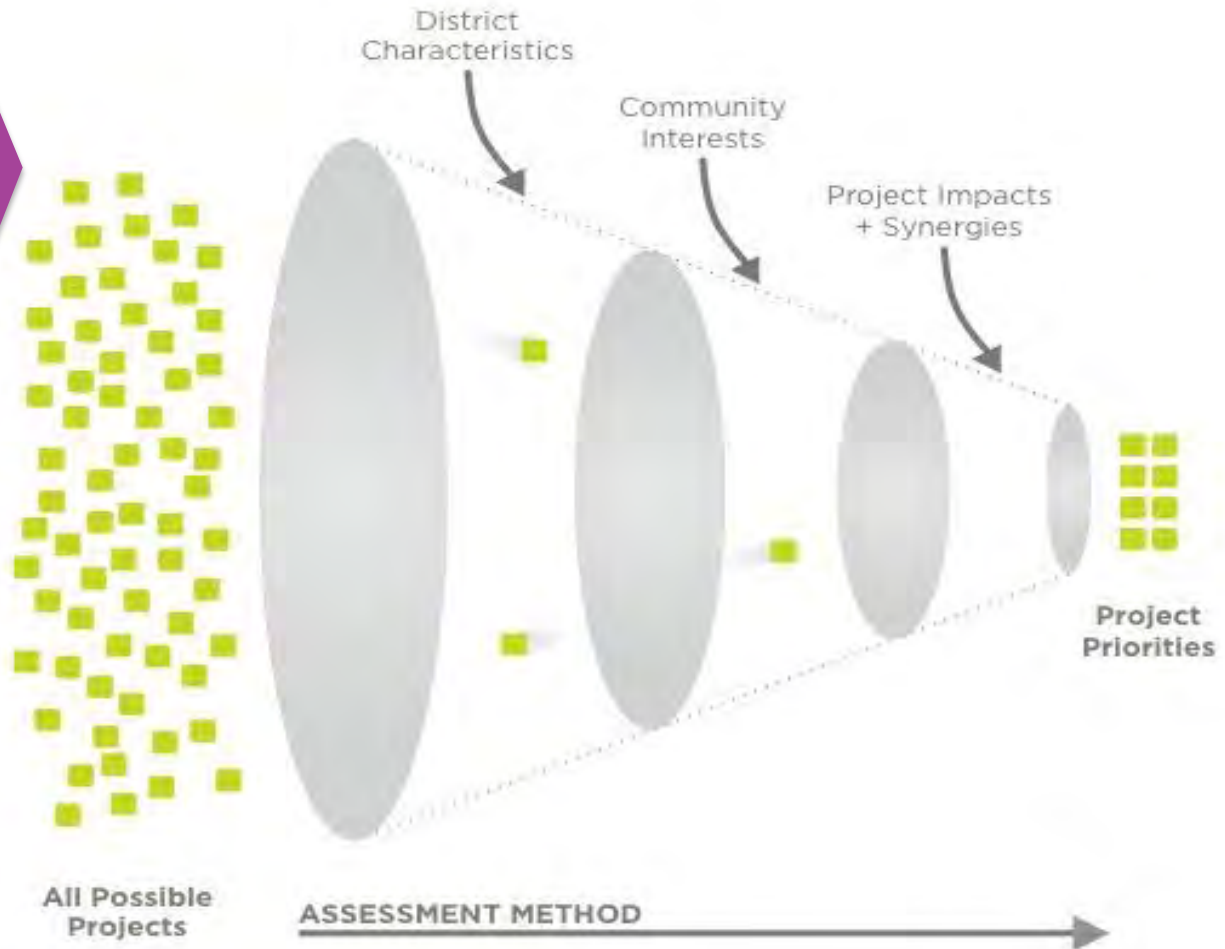
ENERGY DEMAND BY LAND USE
(2030)



Prepare Baseline footprint assessment



Refine Priorities

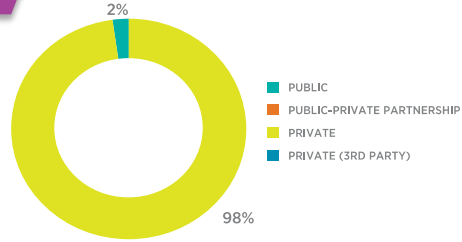


Refine Priorities

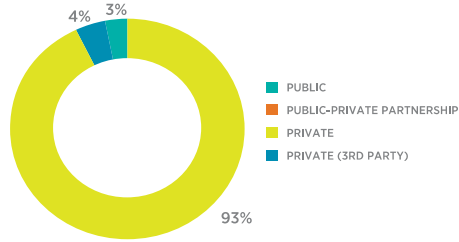
	CITY GOAL	DISTRICT POTENTIAL	ECODISTRICT GOAL	RECOMMENDED STRATEGIES	RECOMMENDED GOAL*	
prosperous district	NONE ROI	0-56 YEARS ROI	NONE ROI	<p>All strategies of the Roadmap are recommended to achieve the full potential of the Prosperous District.</p> <ul style="list-style-type: none"> Existing Building Retrofit Program High Performance New Buildings Aggregate Renewable Energy Program District Energy Utility Energy Efficient Street Lights District Dashboard and EcoDistrict Concierge High Performance New Buildings District Water Utility 	≤ 10 YEARS ROI	
	10,000 NEW JOBS	10,000-50,000 NEW JOBS	NONE NEW JOBS		10,000 NEW JOBS	
	45% ENERGY REDUCTION	45-63% ENERGY REDUCTION	100% ENERGY REDUCTION		60% ENERGY REDUCTION	
	NONE WATER REDUCTION	44-77% WATER REDUCTION	NONE WATER REDUCTION		58% WATER REDUCTION	
	93% WASTE REDUCTION	57-93% WASTE REDUCTION	100% WASTE REDUCTION		93% WASTE REDUCTION	
biophilic district	80% SITE EIA	50-100% SITE EIA	<p>WATER Meet both human and natural needs through reliable and affordable water management.</p> <p>HABITAT + ECOSYSTEM FUNCTION Achieve healthy urban ecosystems.</p>	<ul style="list-style-type: none"> Green Sites Green Infrastructure Corridors Greenstreets Clackamas Park 	10% DISTRICT EIA	
	40% STREET EIA	25-100% STREET EIA				100% 100M TO NATURE
	100% 100M TO NATURE	25-100% 100M TO NATURE				
connected district	40% COMMUTE SOV	40-50% COMMUTE SOV	<p>ACCESS AND MOBILITY Provide access to clean and affordable transportation options.</p>	<ul style="list-style-type: none"> Retail Commercial Streets Boulevard Streets Flexible Streets Pedestrian Bridges Bike Sharing Car Sharing District Dashboard EcoDistrict Concierge 	40% COMMUTE SOV	
	100% ACCESS TO SHARING	0-100% ACCESS TO SHARING			100% ACCESS TO SHARING	

Determine Priorities

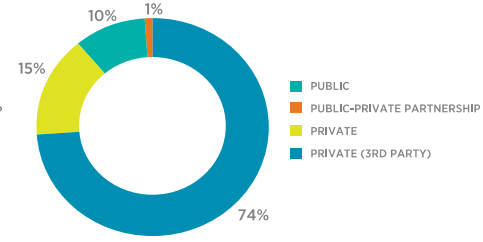
BASE DISTRICT INVESTMENT



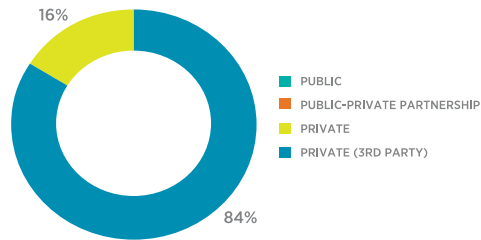
ECODISTRICT INVESTMENT



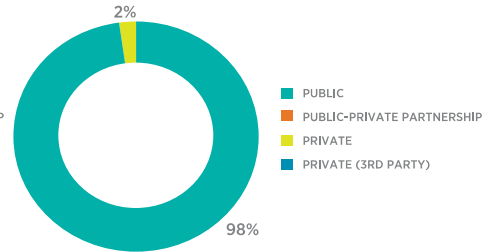
ECODISTRICT STRATEGIES ONLY



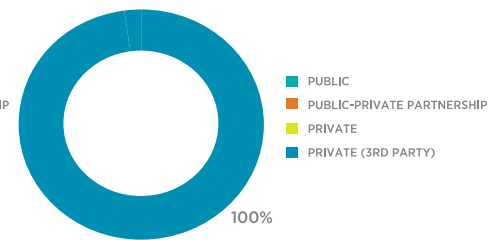
EFFICIENT DISTRICT



BIOPHILIC DISTRICT



CONNECTED DISTRICT



Determine Priorities

Immediate Actions + Investments

IMMEDIATE 2 year	SHORT-TERM 5 year	MID-TERM 10 year	LONG-TERM 10+ year
EXISTING BUILDING RETROFIT PROGRAM	HIGH PERFORMANCE NEW BUILDINGS	AGGREGATE RENEWABLE ENERGY PROGRAM	PEDESTRIAN BRIDGES
DISTRICT ENERGY UTILITY	DISTRICT DASHBOARD	RETAIL COMMERCIAL STREETS	CLACKAMAS PARK
DISTRICT WATER UTILITY	ECODISTRICT CONCERGE	BOULEVARD STREETS	
GREEN STREETS	GREEN SITES	GREEN INFRASTRUCTURE CORRIDORS	
CAR SHARING	FLEXIBLE STREETS	BUILDING CHARACTER	
BIKE SHARING	ENERGY EFFICIENT STREET LIGHTS		
DISTRICT ZERO-WASTE PROGRAM			

Summary of Investments

PRIVATE

- Existing Building Retrofit Program
- High Performance New Buildings
- Green Sites
- Building Character
- EcoDistrict Concierge
- District Dashboard
- District Zero-Waste Program

PRIVATE THIRD PARTY

- District Energy Utility
- District Water Utility
- Aggregate Renewable Energy Program
- Car Sharing

PUBLIC

- Retail Commercial Streets
- Boulevard Streets
- Flexible Streets
- Pedestrian Bridges
- Green Infrastructure Corridors
- Green Streets
- Clackamas Park
- Energy Efficient Street Lights

PUBLIC-PRIVATE PARTNERSHIPS

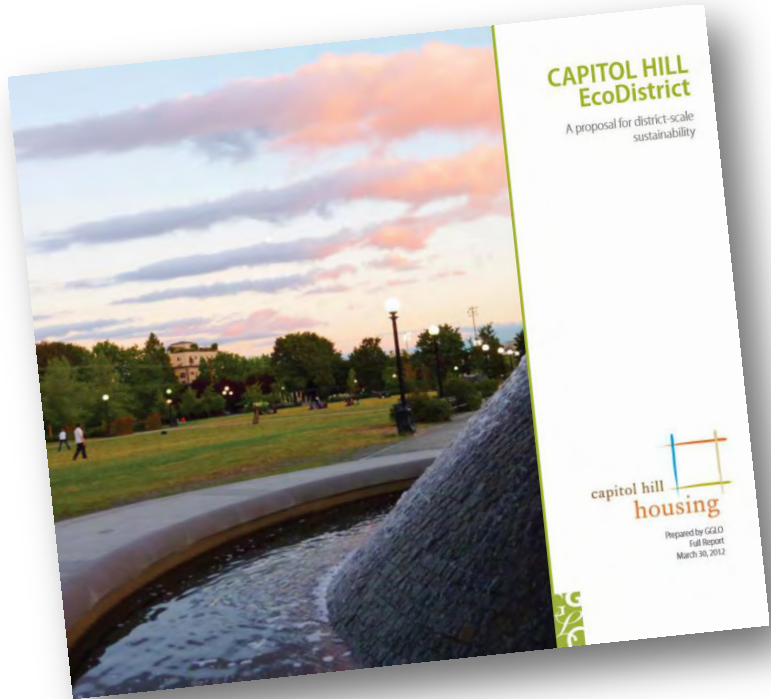
- Bike Sharing

Strategies outlined with a dotted line above and in lighter green text at right are prioritized in the City of Portland's N/NE Quadrant Plan. The EcoDistricts Roadmap considers these projects to be part of the base case district, but includes them because they are essential to meeting EcoDistricts performance goals.

Capital Hill EcoDistrict

Seattle

CASE STUDY



- Community-Led Initiative
 - Spearheaded by the Capitol Hill Housing Authority with funding from the Bullitt Foundation
 - In response to planned light rail infrastructure and investment
- Highlights vision, goals, and strategies for achievement
- Hired Project Director
- Developed comprehensive plan
- First Project: community solar

Discussion – 10 minutes

Share at your table an example of an **innovative assessment** you've been involved in.

> Quickly brainstorm at your table the key attributes and what makes them important