# SUSTAINABLE NEIGHBORHOOD PROGRAM
## OVERVIEW

INFORMATIONAL HEARING

San Francisco Planning

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Citywide Planning Division

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# PRESENTATION ELEMENTS

1. Climate Challenge Overview
2. Proactive Climate Resilience in San Francisco
3. Sustainable Neighborhood Program & Tools
4. Next Steps

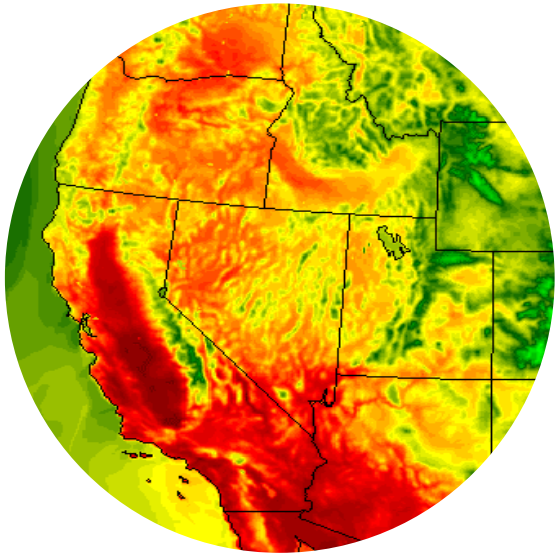

CLIMATE CHALLENGE
OVERVIEW

# THE GLOBAL CLIMATE CRISIS **HAS HIT HOME**

**Drought & Wildfire**

**Poor Air Quality**

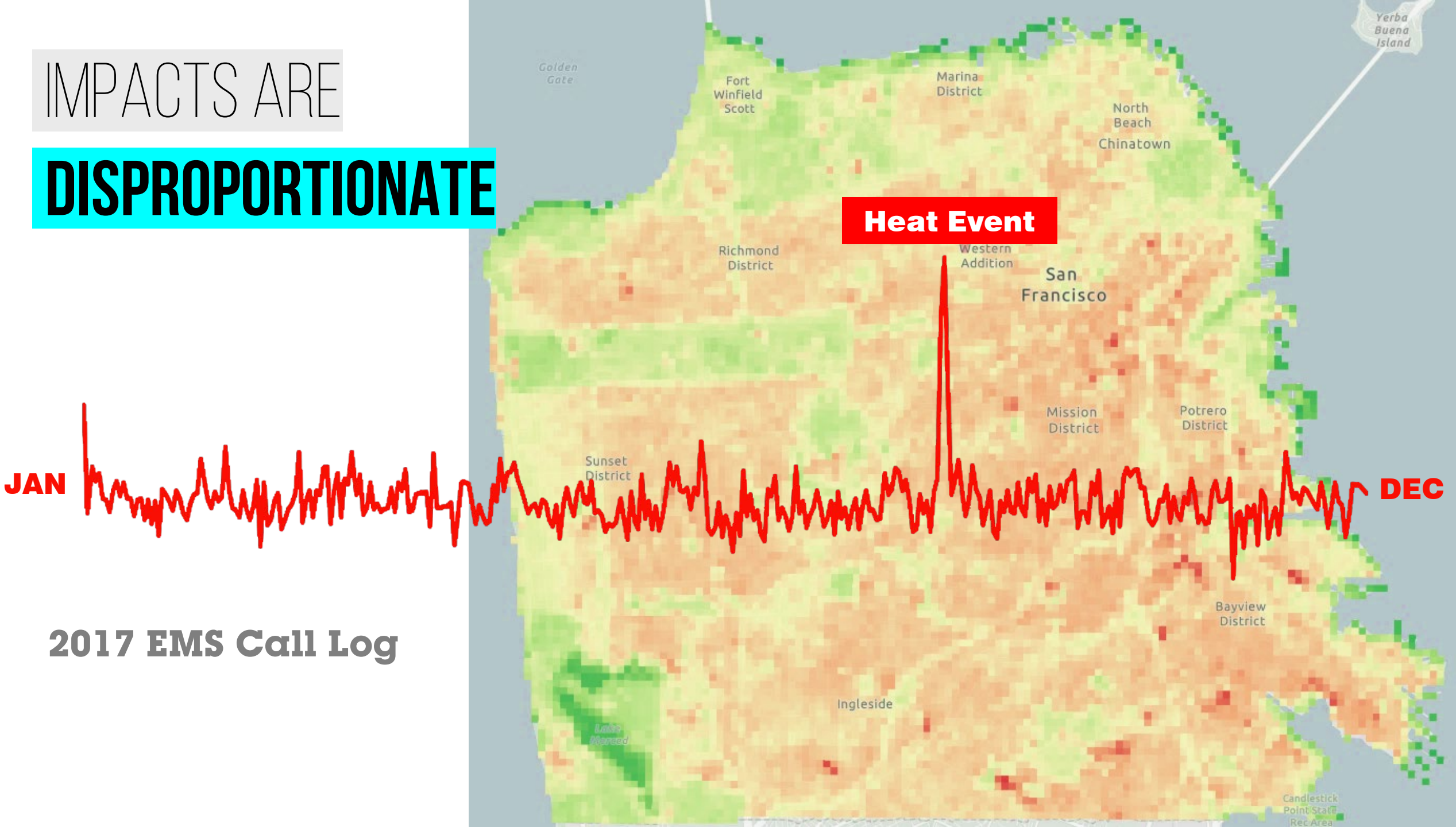
**Sea Level Rise & Flooding**



**Extreme Heat**

# IMPACTS ARE

# DISPROPORTIONATE



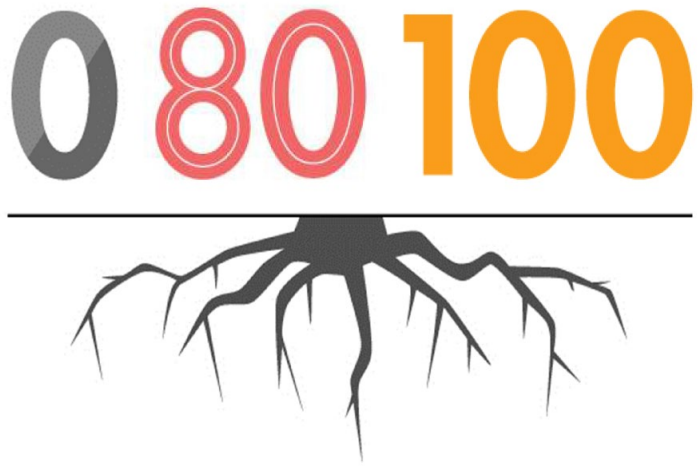

## 2017 EMS Call Log

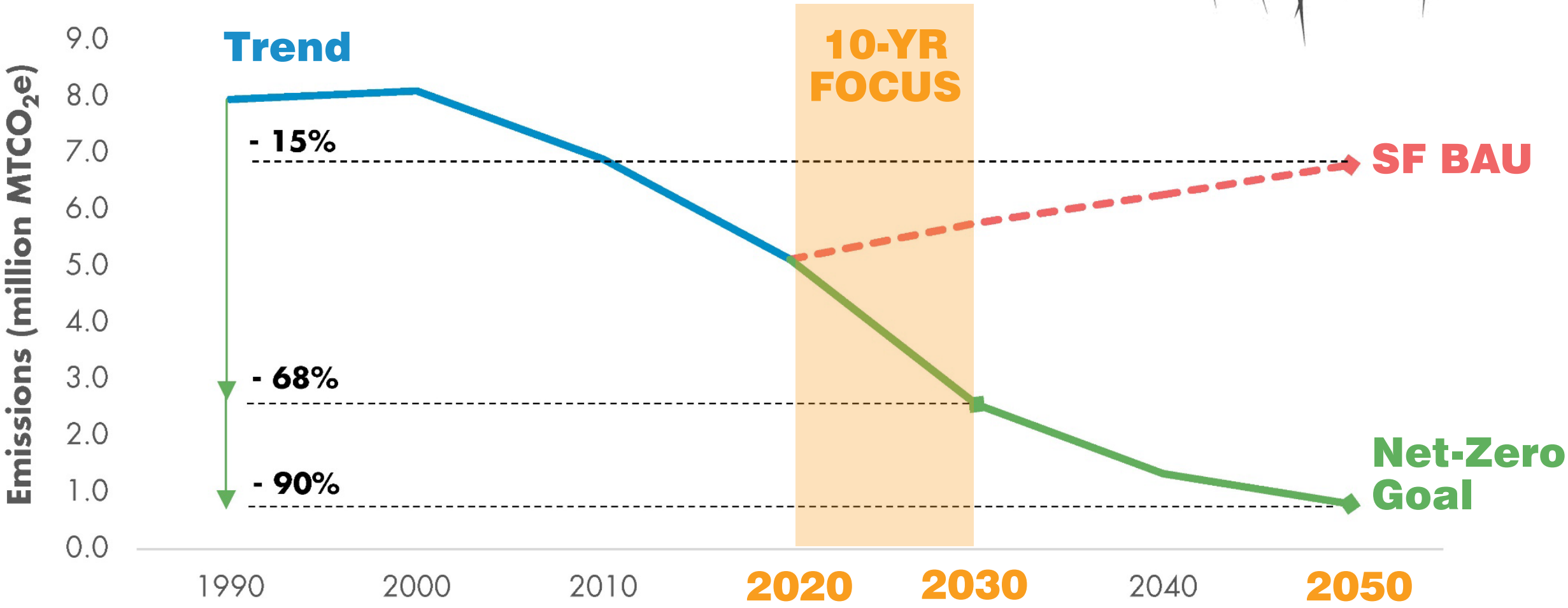
# ALONGSIDE OTHER CHALLENGES & **CURRENT CITY PRIORITIES**

- Housing & community stabilization
- Equity & environmental justice
- Public health & safety
- Responsive & smart public investment

# CONTINUED EMISSION REDUCTIONS

# ARE NOT A GIVEN

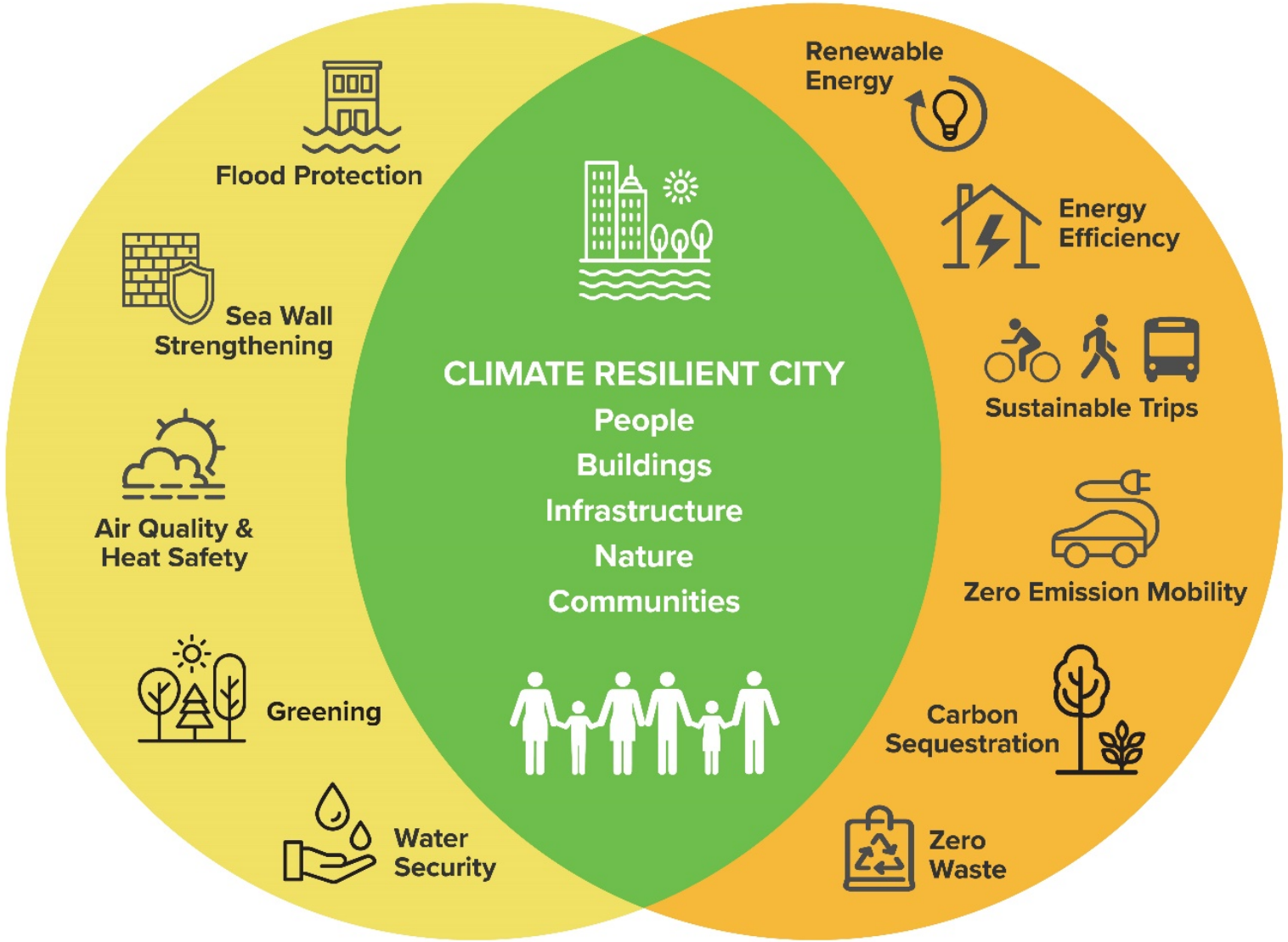


# CLIMATE RESILIENCE

## SAN FRANCISCO PRO-ACTION

# CHARTING A HOLISTIC & COORDINATED VIEW FOR ACTION




**CLIMATE ADAPTATION**

**Safeguard for Current & Future Hazards: PROTECT**

**CLIMATE MITIGATION**

**Eliminate & Capture Emissions: DRAWDOWN**

# INTER-AGENCY EFFORTS: **PLANS & PROJECTS**




Waterfront Resilience Program / Flood Study

Sea Level Rise Vulnerability & Consequences Assessment

Major Development Projects (SNF pilots)

# PLANNING DEPARTMENT'S AVENUES OF SUPPORT & ACTION

## Early Interface

Entitlements, PPAs, CEQA, DAs & General Plan referrals

## Integrated Planning & Partnerships

Area & community plans, IPIC engagement, inter-agency, General Plan updates

## Tools

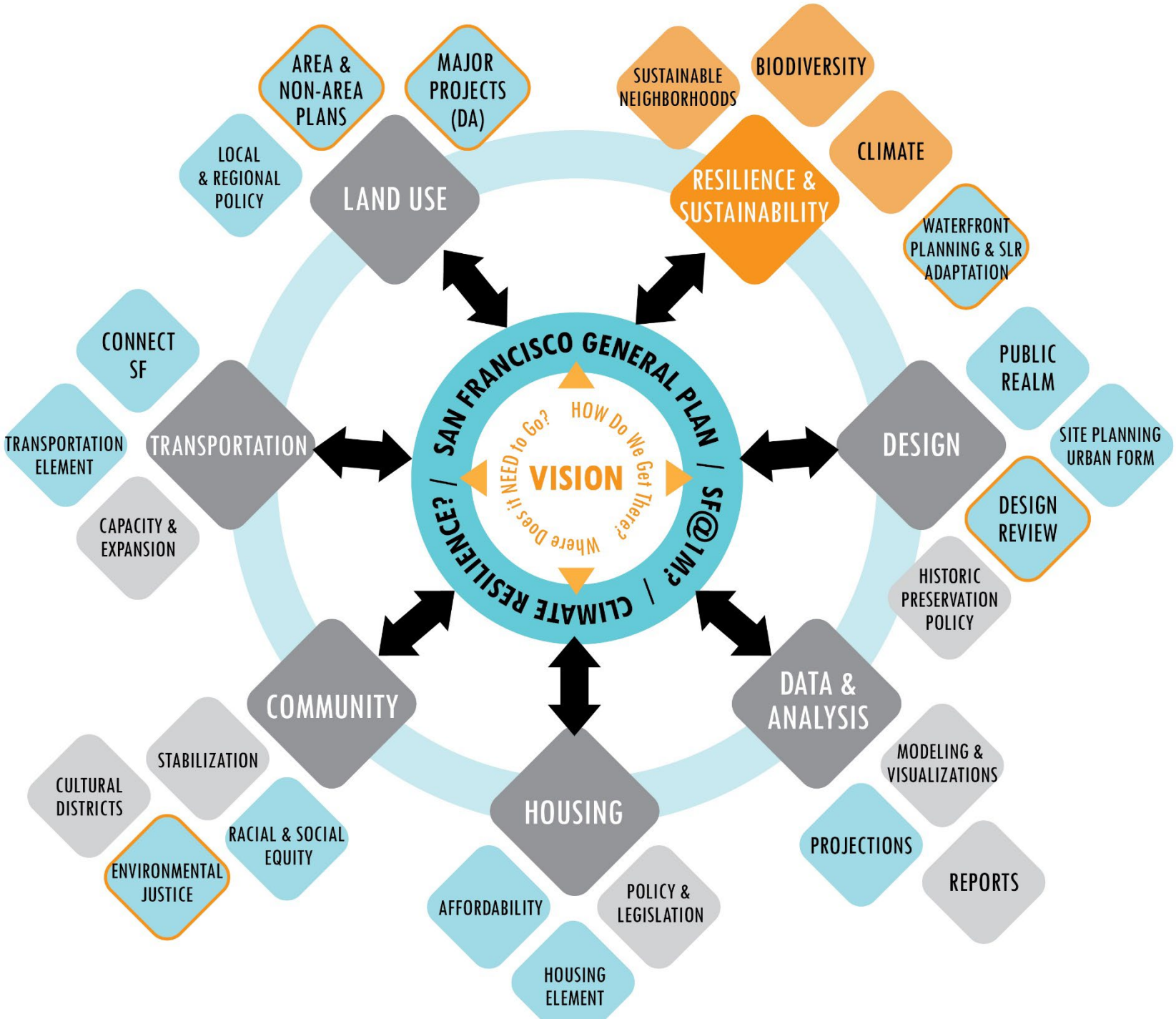
Planning Code, PIM, Better Roofs, Better Streets, UDGs, TDM, SFPlantFinder, **Sustainable Neighborhood FW**

## Design Review

Inter-agency / disciplinary: urban design & architecture, open space & streetscapes

# CITYWIDE DIVISION

# WORK PROGRAM & INTEGRATION




**LEGEND**

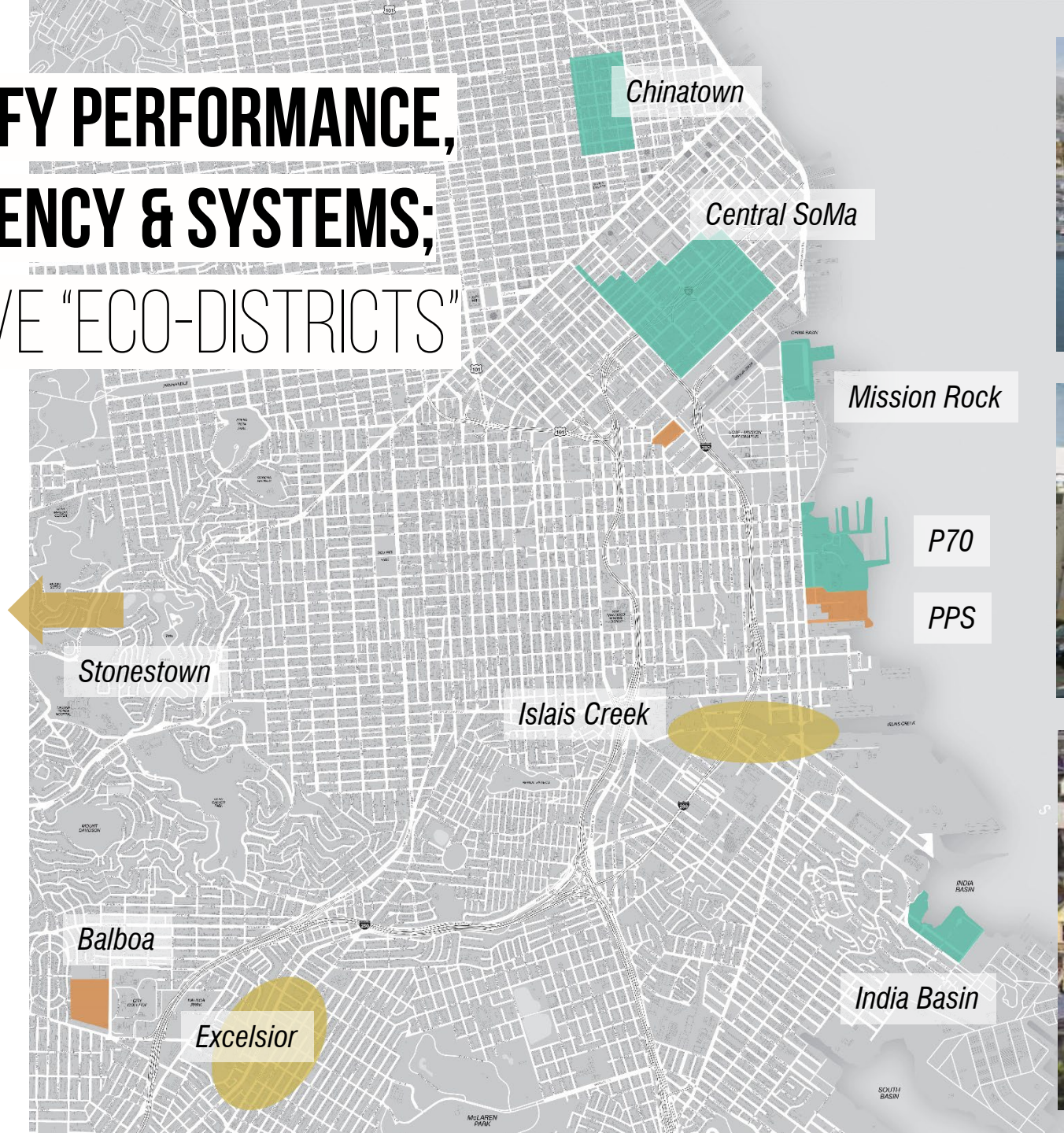
- Key Work Plan Elements
- Focus Integration to Date
- Existing Integration
- Integration Opportunity

# SUSTAINABLE NEIGHBORHOOD

## PROGRAM & TOOLS

# AMPLIFY PERFORMANCE, EFFICIENCY & SYSTEMS;

## EVOLVE "ECO-DISTRICTS"




**LEGEND**

- Completed
- Current pilots
- Potential



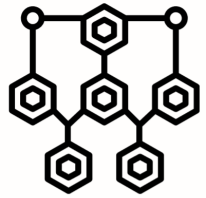
# MAXIMIZE CO-BENEFITS OF INVESTMENTS

## WHILE MEETING NEEDS & REGULATIONS

Stormwater Management / Flood Protection

Valencia Green Gateway

# PROGRAM ELEMENTS **& GUIDING PRINCIPLES**



**Vision Framework**

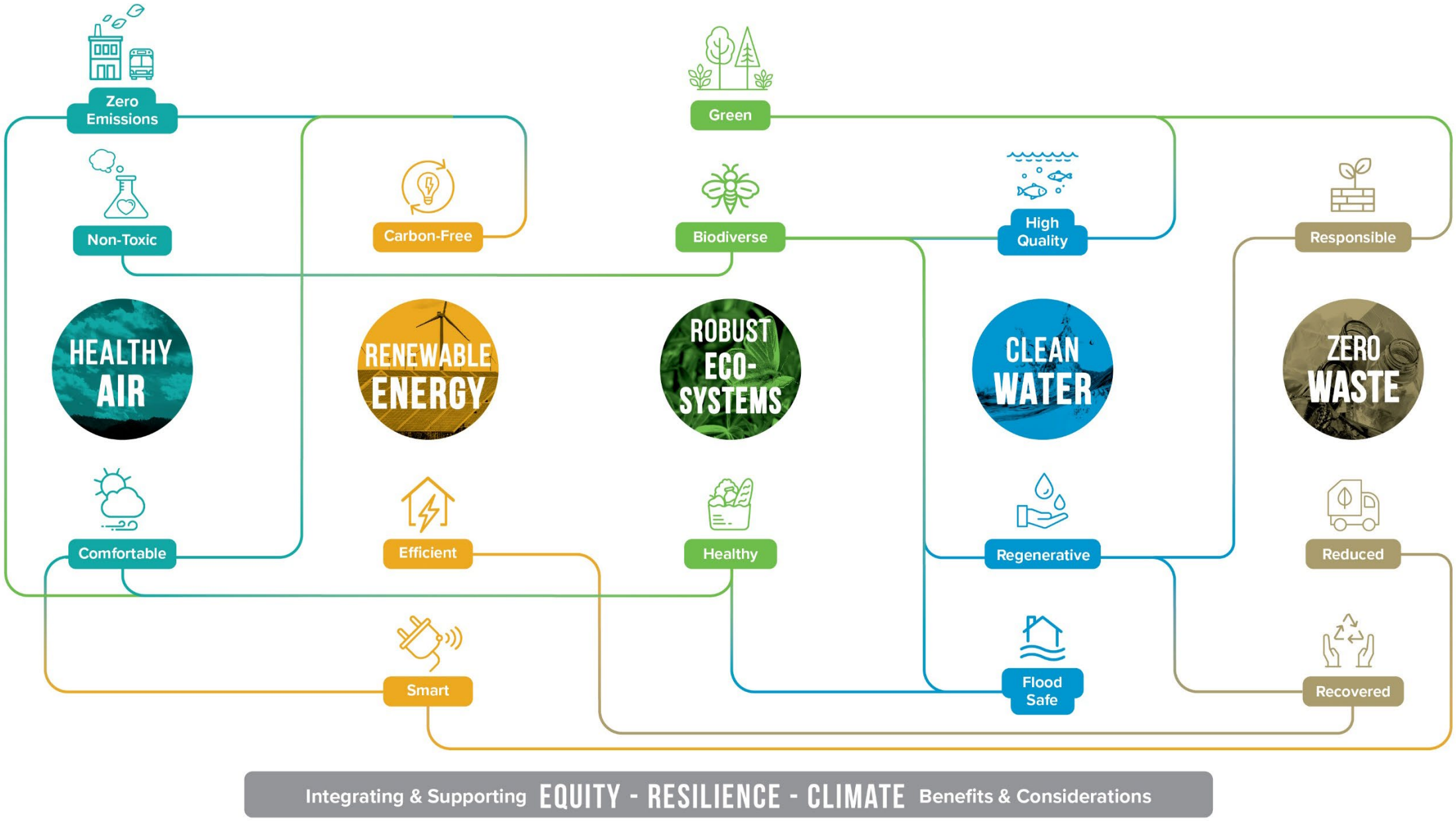
Program Summary

Project Road Map / Worksheet

Online Guide

- People-centered & compelling
- Built on best practices
- Effective & efficient
- Compelling & easy-to-use
- Flexible & scalable

# **VISION FRAMEWORK:** INTER-CONNECTED GOALS & TARGETS



# PROGRAM SUMMARY: WHAT, WHY, HOW + USER GUIDE

San Francisco **Sustainable Neighborhood Program**

WHAT>

**Introduction**

The Sustainable Neighborhood Program is a comprehensive approach and set of tools to **amplify environmental performance, quality of life, and community co-benefits** (equity, affordability, quality of life) in any scale plan or project. Comprehensive yet streamlined, it synthesizes years of sustainability, climate, and resilience advancements across City agencies and best enable public and private investments in the built environment to support important citywide goals.

WHY>

**Purpose**

San Francisco's bold commitment to help reduce global heating by achieving a **zero-emission city by 2050** requires thoughtful and urgent action by 2030. To achieve this ambitious (but essential) goal while accommodating population and economic growth, it's essential that every new building or major renovation is part of the solution rather than a costly future retrofit. Thus the Program aims to maximize synergies between sometimes siloed topics to maximize outcomes and efficiencies.

**Value & Benefits**

The Planning Department's unique early interface with project sponsors and stakeholders, and frequent role as inter-agency convener, positions the agency to support and motivate innovative and integrated sustainability measures. The Sustainable Neighborhood Program:

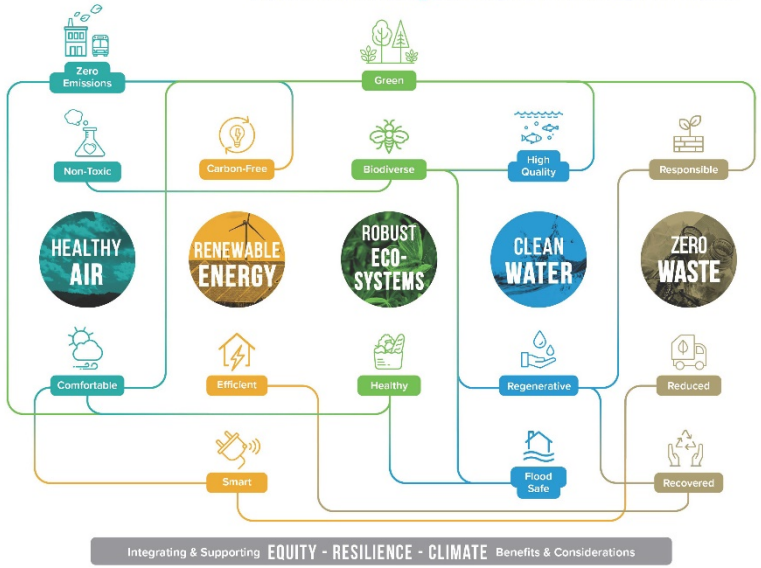
- Clarifies 5 environmental goals that align with priorities like housing, mobility, open space, affordability, and community empowerment.
- Embeds and advances equity, resilience, and climate imperatives across topics.
- Leverages City, community, and private-sector actions for maximum co-benefits.
- Provides a consistent platform for multi-party review, engagement, and decision making.
- Helps identify opportunities, constraints, best practices, and potential partnerships for success—within and beyond individual site boundaries.
- Supports consistent and regular monitoring and reporting.

EVERY NEW BUILDING OR MAJOR RENOVATION CAN BE PART OF OUR EQUITY, RESILIENCE & CLIMATE SOLUTIONS

## Sustainable Neighborhood FRAMEWORK

HOW>>

The Program's key organizing tool, designed in concert with fellow agencies and global best practices, provides a comprehensive yet streamlined vision: **5 GOALS** for any project or neighborhood. By employing **3 DRIVING PRINCIPLES** it enables all users (City staff, project sponsors/owners, designers, and community members) to drive bold action. **[1] PEOPLE-CENTRIC** because community-based solutions enhance sustainability while building collective social impact. **[2] DYNAMIC SYSTEMS and SCALE AGNOSTIC** consider and connect strategies beyond site boundaries and across goals to maximize co-benefits while meeting individual requirements. **[3] FLEXIBLE** to recognize today's technologies and project realities evolve quickly, so clear targets can be met through endless options.




The development and implementation of Sustainable Neighborhood Framework embeds **3 CRITICAL IMPERATIVES** to be considered and supported throughout any suite of strategies that meet the **15 TARGETS AND 5 GOALS**:

**Equity**

Adopting more sustainable practices can help address the health and prosperity disparities historically and currently faced by communities of color. To do so, sustainability strategies/actions should be pursued with thoughtful procedural, structural, and distributional considerations and explicitly intend to benefit vulnerable populations.

**Climate**

Well-designed sustainability strategies/actions should help minimize climate change by eliminating carbon emissions. Per the City's Climate Action framework, this includes co-benefits to renewable energy, sustainable mobility, zero waste, and carbon sequestration. Likewise, by following the dynamic framework, inadvertent impacts to mitigation efforts can be avoided.

**Resilience**

Resilient communities include people, buildings, and infrastructure that can withstand and recover from severe shocks and slower-to-accumulate stressors. As the effects of climate change are already here, investing in resilience today protects from current challenges (often while reducing energy and operational expenses) and reduces costly future repairs.

# **ROAD MAP:** CONSISTENT BASE FOR ITERATIVE PROCESS ACROSS 5 WORKSHEETS

**[GOAL 1]**


**ENSURE NON-TOXIC & COMFORTABLE AIR INDOORS & OUT**

### EQUITY

OPPORTUNITIES: Reduced health impacts of cumulative indoor & outdoor air pollution (respiratory and cardiovascular) and associated hospital visits; increased co-benefits from just transition & infrastructure investments (solar)

CONSIDERATIONS: access to sustainable transportation & EV charging, potential disproportionate cost implications (esp. for renters) and climate justice burdens

### RESILIENCE

OPPORTUNITIES: Ensure occupants can shelter in place during extreme heat and poor air quality days, support local climate-smart manufacturers remaining in business, reduce operations expenses that help community stabilization

CONSIDERATIONS: pressure of increased renewable electricity demands on systems and markets, increased use of air conditioning and related GHG

### CLIMATE

OPPORTUNITIES: Eliminated GHG emissions from building systems, materials, and operations; increased renewable energy demand; reduced displacement of GHG emissions to communities where materials are produced or transported

CONSIDERATIONS: Potential for electric vehicle prevalence to increase VMT and congestion, potential unknown impacts of new technologies and materials

| TARGETS | APPROACHES | EXISTING REQUIREMENTS | ENHANCEMENTS *(CITY COMMITMENTS)* | BEST-PRACTICE STRATEGY DIRECTORY |
|---|---|---|---|---|
| **ZERO-EMISSION environments** | LAND USE | / Proximity of density to transit | / On-site grocery & childcare | Design ground-floor space to appeal to tenants that provide needed neighborhood services |
| | SYSTEMS & OPERATIONS | / All-electric preferred [GBC '20] | / *100% fossil-fuel free heating, cooling, hot water, appliances*<br>/ *100% renewable energy (see Energy)* | Use building or development-scale electric heat pump systems |
| | | | | Specify all-electric appliances free of chemical refrigerants |
| | | | | Eliminate delivery and passenger idling, providing plug-in areas for refrigerated delivery trucks |
| | CONSTRUCTION PRACTICES | / Construction air filtration [GBC] | / 100% diesel-free generators | Eliminate diesel emissions from generators |
| | | | | Require construction equipment to use clean fuels and minimize idling |
| | MATERIAL SELECTION | / GHG Emissions checklist [CEQA] | / 50% local sourcing | Source at least 50% of construction materials from <500 miles |
| | | | | Source recycled materials and/or materials manufactured with renewable energy |
| | SUSTAINABLE TRIPS | / Transportation Demand Management<br>/ Sidewalk widening, bike racks [BSP, PC] | / Bike parking space per bedroom<br>/ 10% Class 1 spaces fit cargo bikes | Design bike parking areas scalable to 1 stall per bedroom |
| | | | | Design flexible spaces for telecommuting or onsite co-working for occupants |
| | | | | Coordinate with adjacent bicycle network design and construction |
| | ELECTRIC VEHICLES | / 100% EV-ready off-street parking [EC]<br>/ EV chargers @ 5% of spaces [EC] | / Off-street, public EV charging stations<br>/ Zero-emission public realm & open space | Design at least 50% of off-street parking spaces to service electric vehicles and bicycles |
| | | | | Use manual and/or electric powered landscape maintenance equipment |
| **100% NON-TOXIC interiors** | MATERIAL SELECTION | / Low-emitting materials [GBC/LEED] | / Zero-VOC interior materials | Specify carbon-smart insulation (wood, straw, clay-straw, hemp, cork, sheep's wool, etc.) |
| | | | | Use formaldehyde-free wood products and glues |
| | AIR FILTRATION | / High-quality air filtration [Art 38] | / 100% of occupants can remain during unhealthy air quality events | Implement energy recovery ventilators and passive ventilation |
| | | | | Use HVAC systems that can adjust filter levels to manage wildfire smoke |

# **ROAD MAP:** CONSISTENT BASE FOR ITERATIVE PROCESS

[GOAL 1]


**ENSURE NON-TOXIC & COMFORTABLE AIR INDOORS & OUT**

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| | AIR FILTRATION | / High-quality air filtration [Art 38] | / 100% of occupants can remain during [illegible] events | Implement energy recovery ventilators and passive ventilation<br>Use HVAC systems that can adjust filter levels to manage wildfire smoke |

**Project Targets**

**Project-Specific Strategies**

# **ROAD MAP:** POTRERO POWER STATION EXAMPLE

| TARGETS | APPROACHES | EXISTING REQUIREMENTS | GOALS FOR THE POTRERO POWER STATION | POTRERO D4D STANDARDS AND CONSIDERATIONS |
|---|---|---|---|---|
| **GREEN space equivalent to 1/2 site area** | **Open Spaces** | 36 SF per unit, 48 SF if common space (does not require greening) [PC] | • Public access to 1,170 linear feet of waterfront, 100% of waterfront areas to be publicly accessible<br>• 100% of public realm stormwater managed by green infrastructure<br>• Provide approximately 6.9 acres of parks and open space | **Section 4 Open Space**<br>4.1 Open Space Network<br>4.3 Resilience and Adaptation<br>4.4 Open Space Pedestrian Circulation<br>4.6.7 Plants: Interpretation and Education<br>4.16 Waterfront Park<br>4.17 Waterfront Park – Circulation<br>4.18 Shoreline Open Space Elements – Program & Design<br>4.19 Waterfront Outdoor Food Service Areas |
| | **Living Roofs** | 30% roof area as living roof [PC alt] | | |
| | **Green Walls** | | | |
| | **Green Infrastructure** | Manage 25% of stormwater onsite [SMO option] | | |
| **BIODIVERSE landscapes of 100% climate appropriate, majority local species** | **Right-Of-Way** | 1 street tree every 20' [PC] | • 100% of greening to be climate appropriate or programmed to accommodate Active Use<br>• At least 50% of understory plants should be California and San Francisco native plants and include pollinator species<br>• Interpretive signage can support eco-literacy on site | **Section 4 Open Space**<br>4.5.1 Urban Forest Composition<br>4.5.3 Tree Species Selection<br>4.5.7 Tree Species Selection<br>4.6.1 Plants: Site and Program Specificity<br>4.6.3 Invasive Plants<br>4.6.4 Plant Selection<br><br>**Section 5 Streets**<br>5.11.13 Habitat and Wildlife Connections<br>5.11.2 Tree Species Selection<br>5.12.5 Streetscape Planting Selection<br>5.12.7 Multistory Planting<br>5.13.8 Support Pollinator Habitat<br><br>**Section 6 Buildings**<br>6.8.9 Living/Green Walls<br>6.19.1 Better Roofs<br>6.19.5 Living Roof Pollinator Habitat<br>6.19.6 Living Roof Uses |
| | **Tree Canopy** | | | |
| | **Understory Planting** | | | |
| | **Natural Areas** | | | |
| | **Building Façades** | | | |
| **HEALTHY food & wildlife systems** | **Buildings** | Bird Safe Buildings [PC] | • 100% of newly provided public and private streets to have sidewalks or recreation paths and nighttime lighting<br>• Minimum of 25% of open space available for active recreation use (e.g., sports fields, flexible play areas)<br>• Provide access to healthy and affordable food through permanent and temporary on-site amenities | **Section 3 Land Use**<br>3.1.1 Permitted Uses Table<br><br>**Section 4 Open Space**<br>4.4 Open Space Pedestrian Circulation<br>4.10 Bicycle Parking – Open Space<br>4.13 Wellness<br>4.24 Humboldt Street Plaza<br>4.28.1 Flexible Field<br>4.29.1 Sculptural Play Features<br>4.30 Louisiana Paseo<br>4.31 Rooftop Soccer Field<br><br>**Section 5 Streets**<br>5.2 Pedestrian Network<br>5.3 Bicycle Network<br><br>**Section 6 Buildings**<br>6.17.1 Frontages for Wellness and Gathering<br>6.17.2 Frontages for Community Use<br>6.18.14 Active Design<br>6.18.16 Building Amenities for Wellness<br>6.18.17 Family Friendly Design<br>6.19.6 Living Roof Uses |
| | **Open Spaces** | | | |

# ROAD MAP SUMMARY:

MARKET & OCTAVIA PLAN EXAMPLE

| GOALS | TARGETS | EXISTING REQUIREMENTS | PLAN POLICY RECOMMENDATIONS (*City Policy* & ***Plan Area Regulations***) |
|---|---|---|---|
|  | Zero Emission | – Bike parking by unit [PC]<br>– 100% EV ready parking [GBC] | – Bike parking by bedroom, scaled for cargo bikes |
| | Non-Toxic | – Low-emitting materials [GBC] | – Zero-emitting materials |
| | Comfortable | – High-quality air filtration [Art 38] | – Shading & living walls |
|  | Efficient | – Reduce energy use [Title 24/GBC] | – *All-electric buildings & systems* |
| | Carbon Free | – 15% roof area solar PV or thermal [GBC]<br>– All-electric preferred development [GBC] | – **15% roof area solar PV or thermal**<br>– GHG-free (renewable) energy purchase |
| | Smart Operations | | – Smart systems & plug loads |
|  | Green | – 30% Living Roof alternative [PC] | – **50% living roof**<br>– *Plantings equivalent to 25% of site area* |
| | Biodiverse | | – *100% climate appropriate species*<br>– *50% minimum local and California natives* |
| | Healthy | – Bird Safe Buildings [PC] | – Non-toxic landscaping practices<br>– Access to healthy & affordable food |
|  | Regenerative | – Non-potable water for flushing & irrigation [Art 12C] | – *Non-potable water for cooling & street cleaning* |
| | Flood Safe | – Stormwater/urban flood disclosure [PolC] | – *Build to 100-yr storm + SLR elevations* |
| | High Quality | – Slow & reduce stormwater runoff [SMO] | – *Prioritize green infrastructure* |
|  | Responsible | – LEED points [GBC] | – Sustainable, low-carbon materials |
| | Reduced Waste | – Recycling & composting (buildings) | – Recycling & composting (open spaces) |
| | Recovered/Reused | – Construction waste diversion (65%) | – Construction waste diversion (75%)<br>– *Maximum deconstruction / re-use* |

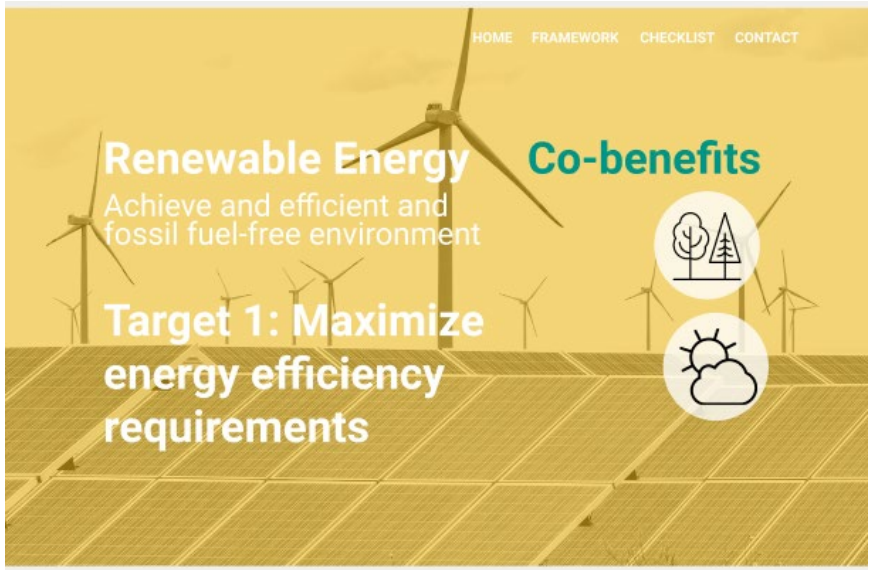
# **ONLINE GUIDE:** DYNAMIC PORTAL TO REGULATIONS & RESOURCES [DRAFT FORTHCOMING]


Sourcing all energy needs from renewable sources is the most effective way to reach our goal of a **zero emission city**. It also creates job opportunities in the green economy and

**Equity**

**Opportunities**: healthier air; lower utility costs, improved indoor comfort through responsive smart systems; minimized rate volatility; retain energy revenue in the local economy; provide renters equal access to energy efficiency upgrades; increase job opportunities for energy upgrade work

**Considerations:** avoid passing upfront retrofit costs to residents; limited triggers/funding for existing building retrofits; explore opportunities for community-owned solar




The San Francisco Green Building Code requires new construction to reduce energy use by 5%, 3% for major renovations or 2% for core and shell projects.

**With a few tweaks you can achieve much more!**

**Solar Orientation**

Orient your buildings to reduce solar gain in summer and increase in winter (and for energy generation!)

>Orient the longest facade east to west
> Use skylights for passive heating
>Natural ventilation

**Envelope**

Minimize Energy loss through maximum insulation, window quality, and building envelope construction

>Use high performace windows
>Ensure tighter and better insulated building envelopes

# NEXT STEPS

- / Commission feedback
- / Pilot wrap-ups
- / Engagement
- / Refinements
- / Return to Commission (resolution) & launch

# THANK YOU!

www.sfplanning.org/resilience-and-sustainability

San Francisco Planning

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Citywide Planning Division

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