Memorandum

DATE August 29, 2017

TO Honorable Members of the Human and Social Needs Committee:
Councilmember Casey Thomas, II (Chair), Deputy Mayor Pro Tem Adam Medrano (Vice Chair), Mayor Pro Tem Dwaine R. Caraway, Councilmember Omar Narvaez, Councilmember Mark Clayton, Councilmember B. Adam McGough

SUBJECT **Resilience Update**

On Tuesday, September 5, 2017, the Human and Social Needs Committee will be briefed on the Resilient Dallas Update by the City's Chief Resilience Officer, Theresa O'Donnell. The Preliminary Resilience Assessment completed in December 2016 at the end of Phase I of the Resilient Dallas strategy development process has been attached for review.

Please contact me if you have any questions or require any additional information.

Nadia Chandler-Hardy
Chief of Community Services

[Attachment]

c: Honorable Mayor and Members of City Council
T.C. Broadnax, City Manager
Larry Casto, City Attorney
Craig D. Kinton, City Auditor
Bilierae Johnson, City Secretary (Interim)
Daniel F. Solis, Administrative Judge
Kimberly Bizor Tolbert, Chief of Staff to the City Manager
Majed A. Al-Ghafry, Assistant City Manager

Jo M. (Jody) Puckett, Assistant City Manager (Interim)
Jon Fortune, Assistant City Manager
Joey Zapata, Assistant City Manager
M. Elizabeth Re'ch, Chief Financial Officer
Raquel Favela Chief of Economic Development & Neighborhood Services
Theresa O'Donnell, Chief of Resilience
Directors and Assistant Directors

Resilience Update

**Human and Social Needs Committee
September 5, 2017**

**Theresa O'Donnell,
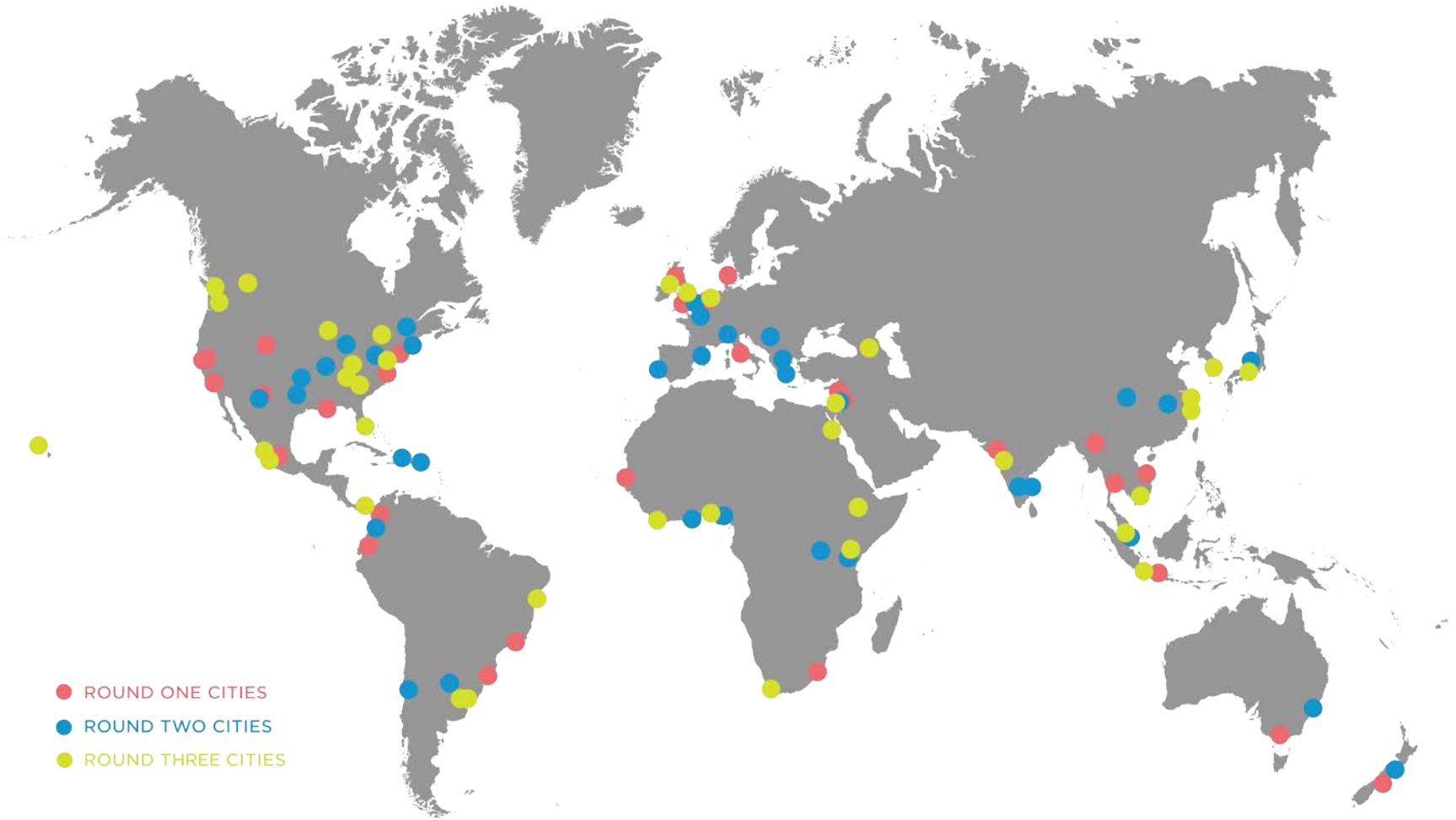Chief Resilience Officer
City of Dallas**
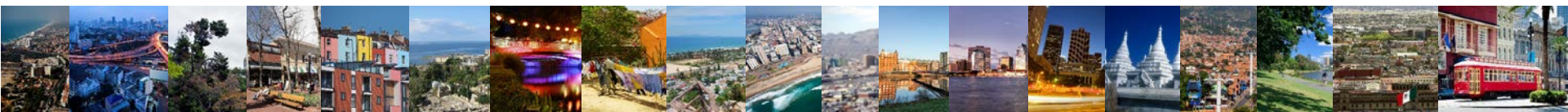
Presentation Overview

- Overview of the 100 Resilient Cities Program

- Phase I - Preliminary Resilience Assessment

- Phase II - Discovery Areas and Scope of Work

- Next Steps

100 RESILIENT CITIES

100 Resilient Cities

ROUND ONE CITIES
ROUND TWO CITIES
ROUND THREE CITIES

100RC partners with cities around the world to help them become more resilient to the social, economic and physical challenges that are a growing part of the 21st century.

Human and Social Needs

City of Dallas

Flooding in Mandalay, Myanmar

A city's ability to maintain essential functions is threatened by both acute shocks and chronic stresses.

Austerity riots in Athens, Greece
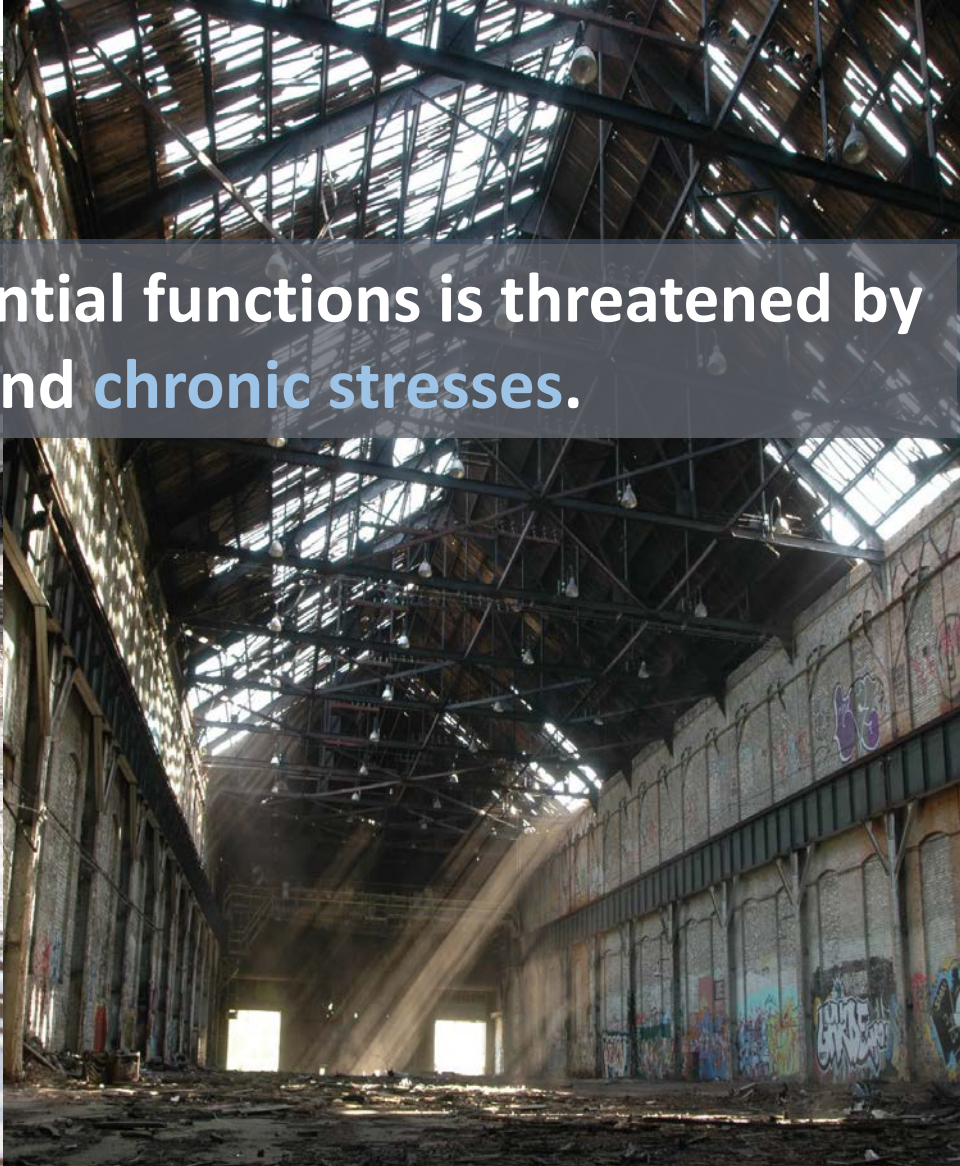
Sudden shocks or accumulating stresses can lead to social breakdown, physical collapse, or economic decline.

Human and Social Needs

City of Dallas

What are acute shocks?

Earthquake
Wildfires
Flooding
Sandstorms
Extreme cold
Hazardous materials accident
Severe storms and extreme rainfall
Terrorism
Disease outbreak
Riot/civil unrest
Infrastructure or building failure
Heat wave

What are chronic stresses?

Water Scarcity
Lack of affordable housing
Poor air quality
High unemployment
Homelessness
Poor access to public transit
Lack of social cohesion
Poverty/inequity
Aging Infrastructure
Low educational attainment
Crime & violence

# Preliminary Resilience Assessment
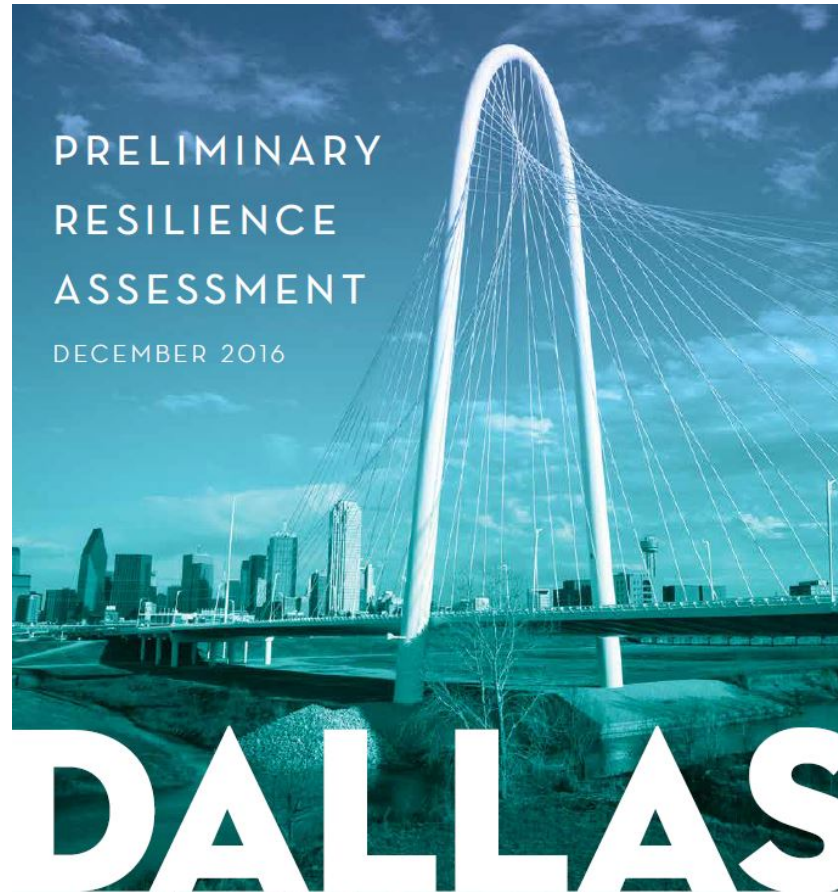
Phase I

- 2 Stakeholder Workshops with 100+ attendees

- 80 individual interviews

- Staff workshops

- 130 plans & initiatives catalogued

- Perceptions survey of citizens and stakeholders

- Data collection of city information

- Inventory of assets
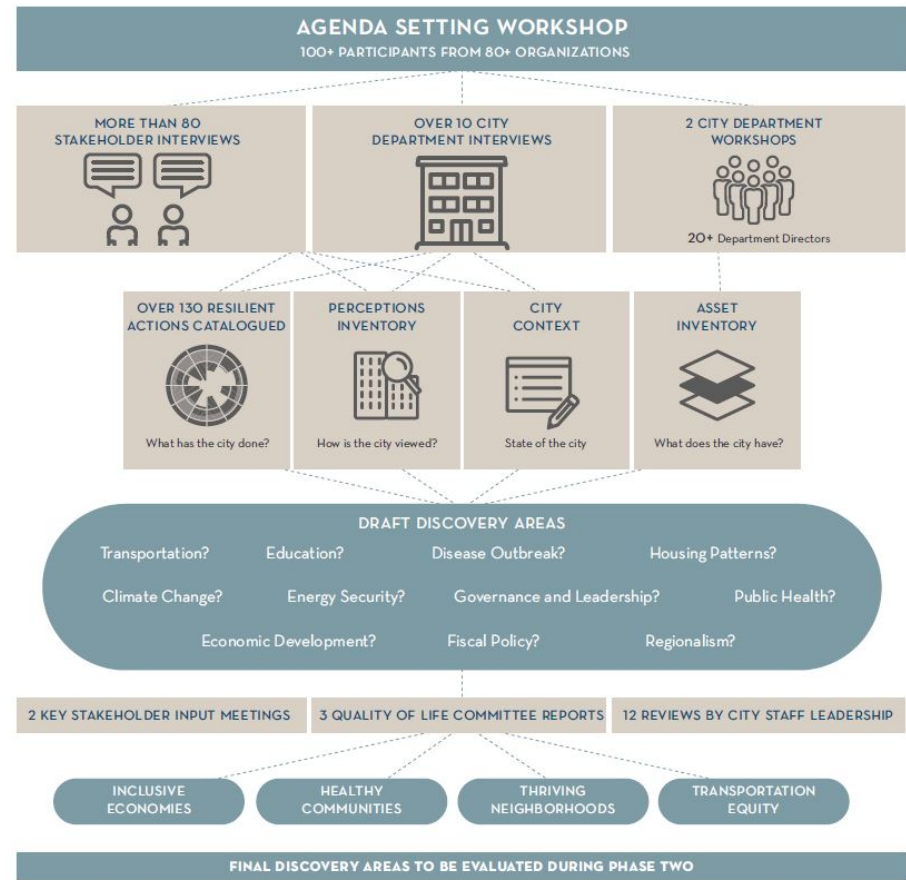
URBAN RESILIENCE:
The capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

Four dimensions and 12 drivers are analysed to determine a city's resilience to shocks and stresses.
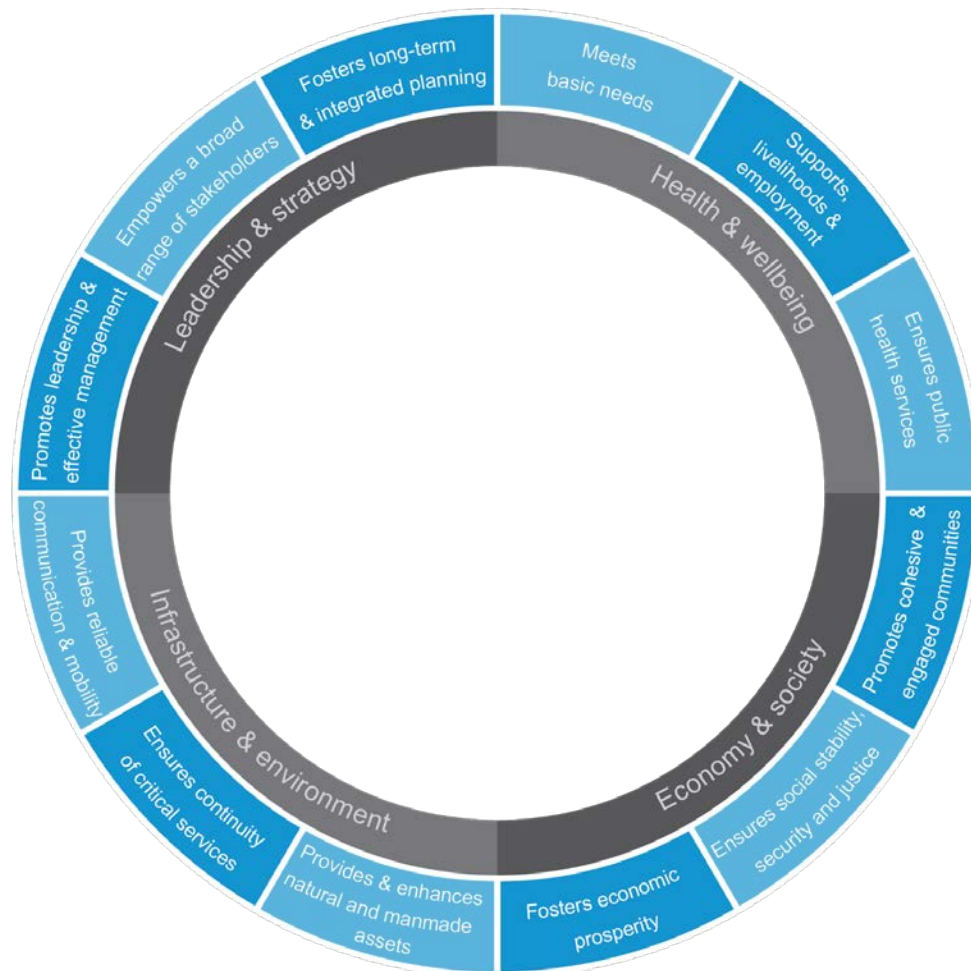
Health & Wellbeing
The health and wellbeing of everyone living and working in the city.

Meets basic needs

Supports livelihood & employment

Ensures public health services

Economy & Society
Organizations that enable urban populations to live peacefully, and act collectively.

Promotes cohesive
& engaged economies

Ensures social stability,
security & justice

Fosters economic prosperity

Infrastructure & Environment
Built and natural infrastructure that serves, protects, and connects urban citizens.

Provides & enhances natural & built assets

Ensures continuity of critical services

Provides reliable communications & mobility

Human and Social Needs

City of Dallas

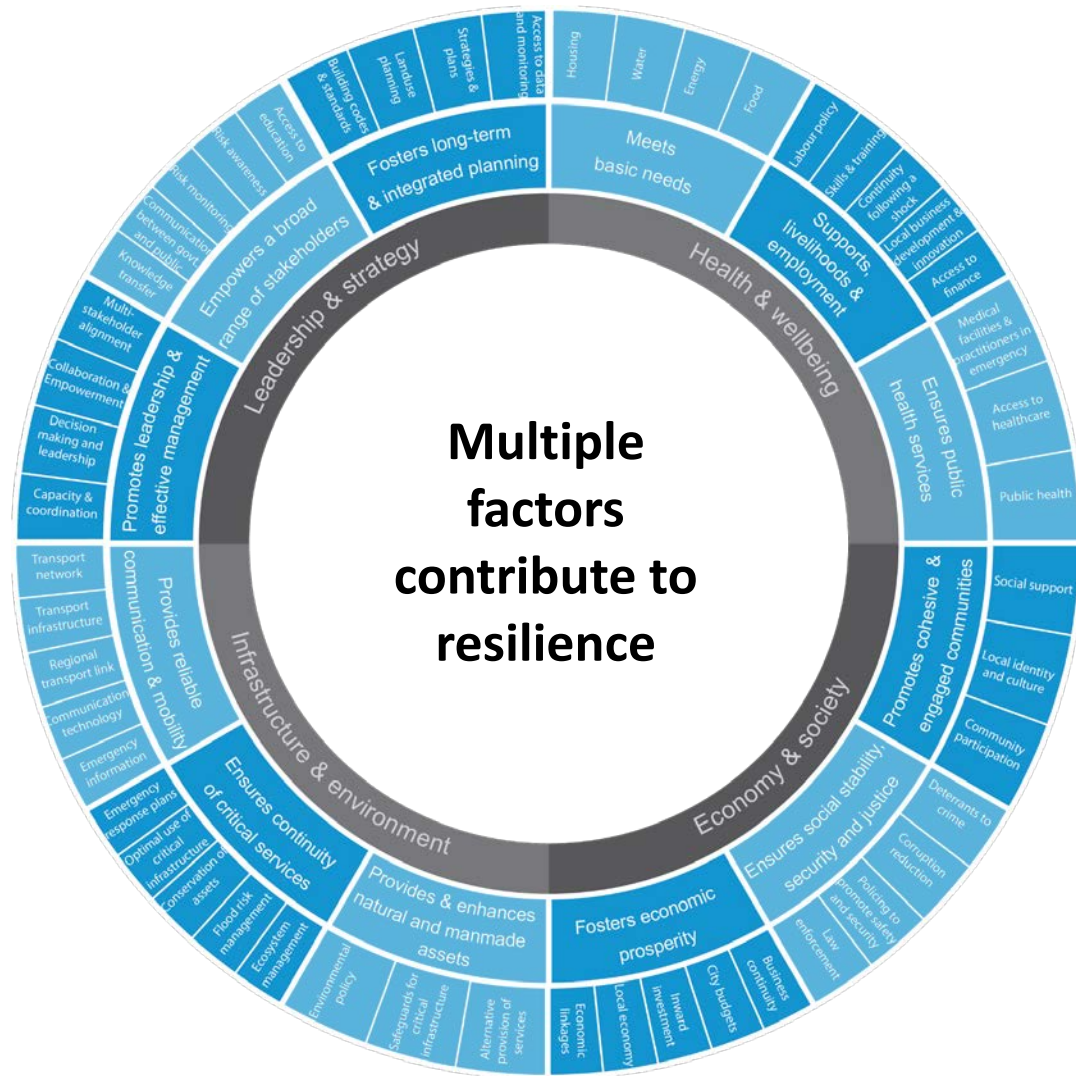**Leadership & Strategy**
Effective leadership, empowered stakeholders, and integrated planning.
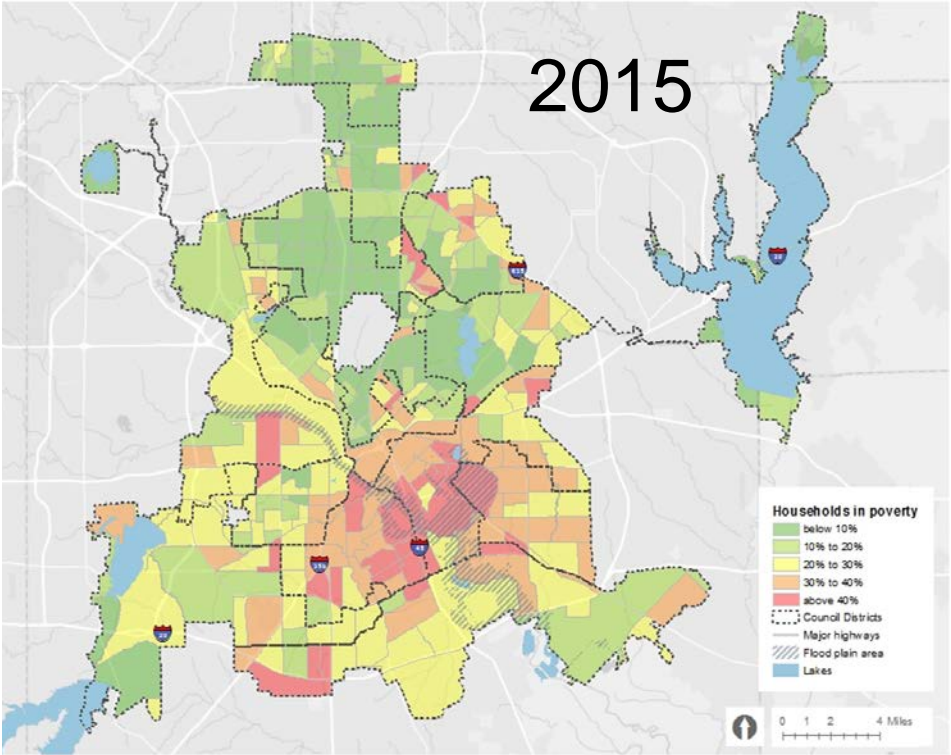
Provides leadership & effective management

Empowers a broad range of stakeholders

Fosters long-term & integrated planning

Human and Social Needs

City of Dallas

Multiple factors contribute to resilience

Reducing the Epidemic of Poverty and Ending the Opportunity Gap

Significant impact of the social and economic stresses on Dallas residents

- Dallas is one of the most segregated cities in the country in terms of race and income.
  Pew Research Center, 2015

- Dallas has the highest level of overall neighborhood-by-neighborhood inequality in the United States.
  Urban Institute, 2015
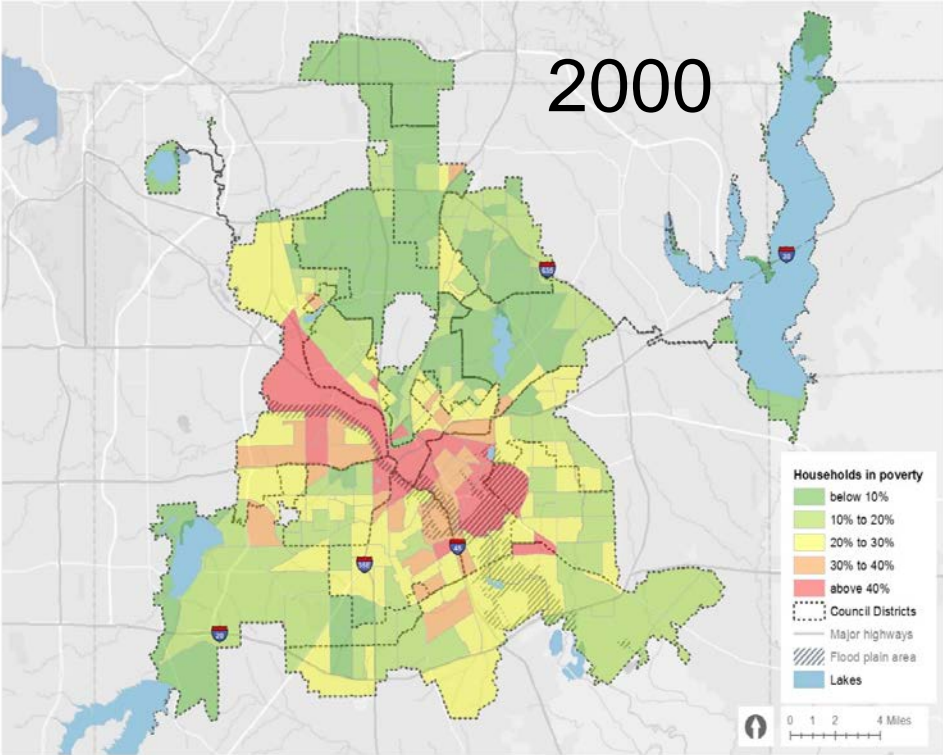
- Dallas has the highest rate of child poverty (38%) of any city in the United States with populations over 1 million. *Census Data, American Community Survey 2015*

Applying a Resilience Lens

- Understand the interrelationships of shocks and the long-term stresses that increase Dallas' vulnerability

- Understand the cascading impacts of shocks and stresses on vulnerable populations

- Build upon a foundation of strength – maximize the resources, assets, and energy available to us

- Leverage the myriad partners and stakeholders already doing good work

Phase II - Building an Equitable Dallas

Foundational principle of the Resilient Dallas strategy is building an Equitable Dallas

- No magic bullet, no single solution

- Solutions must be holistic and comprehensive

- Major "systems" must be coordinated and inter-related
  - Economy
  - Housing
  - Transportation
  - Healthcare
  - Education
  - Social Justice
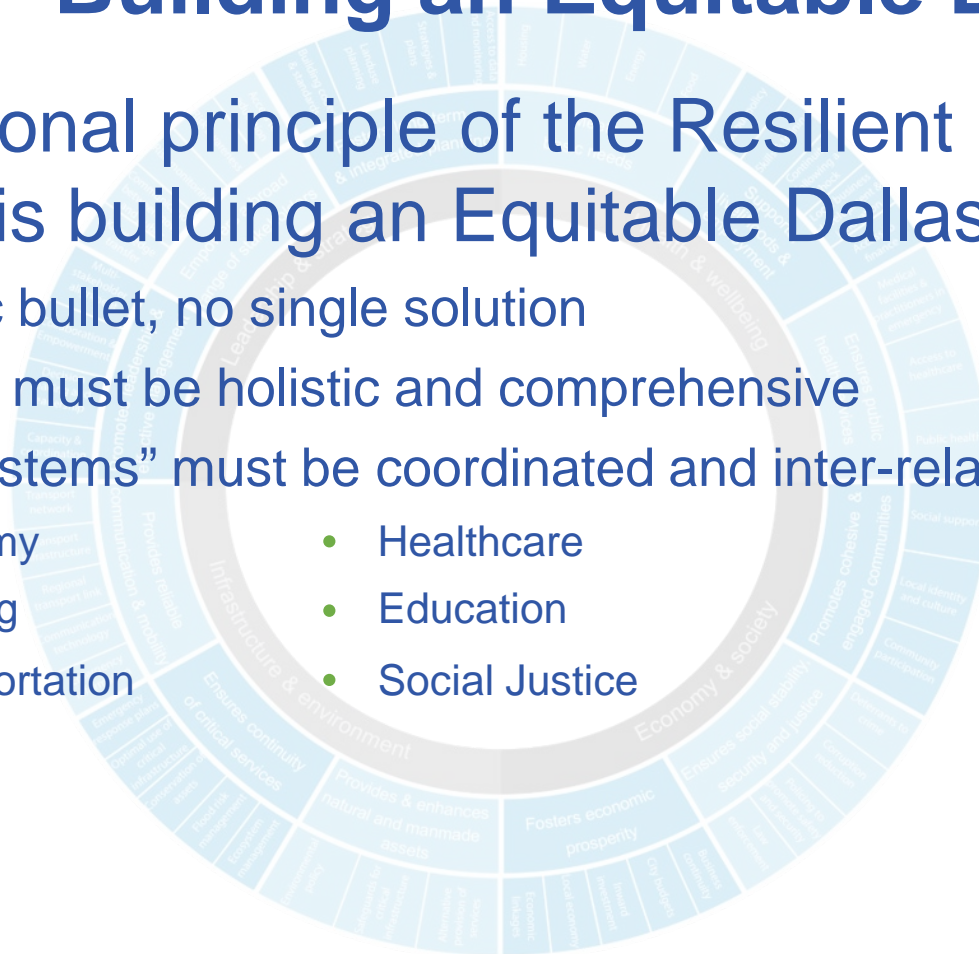
Phase II – Team Approach

Leadership and Working Groups

- **Building an Inclusive Economy**
  - Office of Economic Development and Housing Department

- **Improving Public Health Outcomes**
  - Office of Emergency Management and Dallas Fire and Rescue

- **Infrastructure and Climate Change**
  - Office of Environmental Quality, Public Works, and Information Technology

- **Transportation Equity**
  - Transportation Planning, UTA, DART, NCTCOG

100RC Partners

Water Management, Energy
Sandia National Laboratories · VEOLIA · BLUE LEGACY

Built Environment, Infrastructure, Land Use
RESILIENT ANALYTICS · amec foster wheeler · MWH · VirginiaTech · ARCADIS · AIA · Deltares · Perkins Eastman · Impact Infrastructure

Education/ Skills and Training, Economic Development, Culture and Arts
PYXERA GLOBAL · AkzoNobel · Asia Society · Give2Asia

Climate and Weather, Natural Environment
The Nature Conservancy · CSIRO · EARTH ECONOMICS · AGU American Geophysical Union · R20 REGIONS OF CLIMATE ACTION · CLIMATE CENTRAL

Transportation
WORLD RESOURCES INSTITUTE · Doppelmayr

Housing
Cities Alliance Cities Without Slums · FUNDACION MARIO SANTO DOMINGO · BUILD CHANGE · NEW STAR LIGHT CONSTRUCTION

Citizen Engagement, Government & Policy, Social Equity
ioby · Neighborland · CityHeroes · TRANSATLANTIC / POLICY LAB · CITY MART · ELADES

Information and Technology, Cyber Security
Palantir · Microsoft · DigitalGlobe · CISCO · Trimble · esri · NAVIGEM voyaging the data seas

Public Health
Save the Children

Finance and Insurance
SOCIAL FINANCE · THE WORLD BANK · Swiss Re · MFO microfinance opportunities

DRM and Emergency Response
iPARAMETRICS engineering solutions for a changing world · INTERNATIONAL RESCUE COMMITTEE · Resiliency Advisors llc.

100 RC currently has 90 partners, offering 130 services valued at $200 Million

Four Discovery Areas

- Harnessing the power of the robust North Central Texas economy to be more inclusive and create economic resilience for Dallas residents

- Exploring opportunities to improve Public Health outcomes and decrease health disparity

- Assessing the conditions in Dallas neighborhoods, and understanding the impacts of climate change on the natural and built environment

- Preparing for a 21st century Urban Mobility by leveraging the region's transportation investment to expand mobility options, and improve transportation equity

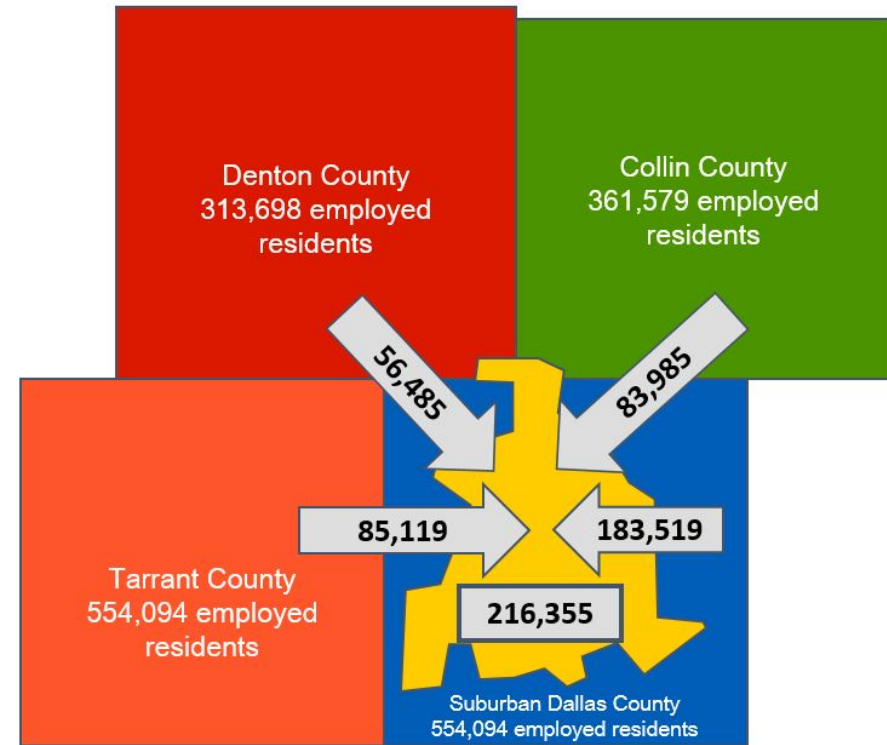# Robust North Texas Economy

DFW Economic Overview

- 4th largest population in U.S.

- 6th largest economy by output

- 5th largest by personal income

- 5th largest employment market

- Unemployment rate of 3.7%

Dallas is the vibrant, urban core of a thriving, prosperous region

Dallas must import talent to fill top jobs

- Dallas has well over 1 million jobs

- 625,000+ workers commute into Dallas every day to work

- 263,00 workers leave Dallas everyday to fill low-skill jobs

Denton County
313,698 employed residents

Collin County
361,579 employed residents

56,485

83,985

85,119

183,519

216,355

Tarrant County
554,094 employed residents

Suburban Dallas County
554,094 employed residents

Economic Opportunity Gap

- Despite the robust economy, the poverty rate in Dallas *increased by 42%* from 2000-2014

- Strong economy has left many residents behind
  - 39% of households in Dallas live in asset poverty
  - 45% of households with children live in asset poverty

- Unemployed and underemployed people often lack the skills/training necessary to prosper in this strong economy

Discovery Area 1 – Building an Inclusive Economy

- Understand how the robust North Central Texas economy could expand to become more inclusive, and provide market-driven opportunities to residents who have been excluded from the traditional labor force during this remarkable period of prosperity.

Inclusive Economy

- Who are the people in Dallas who are impoverished, disconnected from the traditional labor force, struggling financially, and are most vulnerable to financial/economic risk?
- What is the current state of service provision to vulnerable populations and what are the gaps of service provision?

Partners – AECOM, Fourth Economy, Manchester Bidwell

Deliverables -
- Community profile and needs assessment
- Statistical analysis of economically vulnerable populations
- Analysis that describes the major factors/socioeconomic characteristics associated with lack of access to mainstream labor market

Inclusive Economy

- What are the barriers and impediments that prevent some Dallas residents from finding and maintaining living wage employment?
- What resources are available to the City and its partners to better provide service to vulnerable populations?

Stakeholders – Workforce Solutions of Greater Dallas, Dallas Community College District, United Way, Dallas Independent School District

Deliverables -
- An analysis of barriers and impediments for vulnerable populations in Dallas
- Workshop with impacted community members to discuss barriers, solutions, and how resources can be leveraged to provide coordinated services and referrals

Healthcare in Dallas

Disparity in Health Care

Report: Texas has the highest number of uninsured Hispanic kids in the country

About two out of three of uninsured Hispanic children are eligible for Medicaid or CHIP but not enrolled.

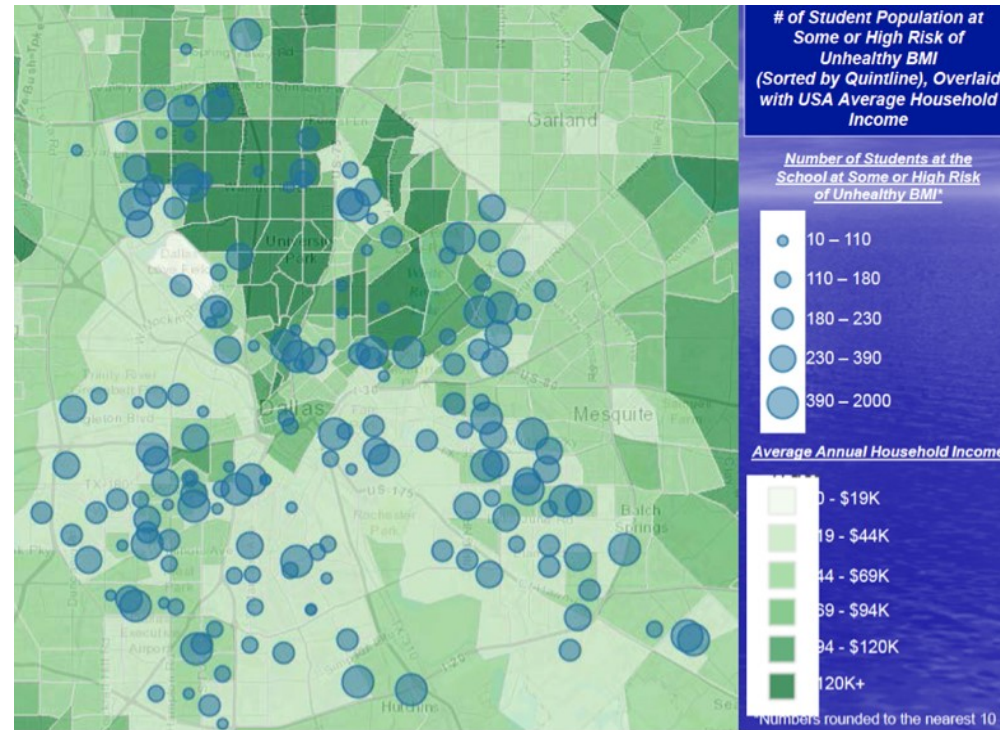Learn more: http://bit.ly/1ZvbIUz

Community Need Index
Aggregates a number of socioeconomic risk factors

- Poverty
- Educational attainment
- Racial/ethnic minorities
- Limited English proficiency
- Unemployment
- Lack of health insurance

Growing up poor in Dallas

- 38% of Dallas children live in poverty

- 20% don't have health insurance

- 28% have inadequate food and nutrition

- 160,000 children are obese

- 60,000 children have asthma

# of Student Population at Some or High Risk of Unhealthy BMI (Sorted by Quintline), Overlaid with USA Average Household Income

Number of Students at the School at Some or High Risk of Unhealthy BMI*

- 10 – 110
- 110 – 180
- 180 – 230
- 230 – 390
- 390 – 2000

Average Annual Household Income

- 0 - $19K
- 19 - $44K
- 44 - $69K
- 69 - $94K
- 94 - $120K
- 120K+

Numbers rounded to the nearest 10

Dallas Fire and Rescue

- $267M annual operating budget
- 82.5% of calls for service are not fires

Dallas Fire and Rescue

First line of defense in healthcare

- 1,200 highly-trained paramedics

- 43 ambulances

- 218,000 runs a year

- 69,000 runs to Emergency Rooms

- Average cost is $1575

Health Deserts

60% of Emergency Room visits could be more appropriately handled by a primary care physician

Discovery Area 2 – Healthy Communities

- Identify how the City of Dallas can make a meaningful contribution to improving public health outcomes for its vulnerable residents.

Healthy Communities

- What are the economic, physical, social determinants of health that contribute to traumatic environmental stress in Dallas' neighborhoods of concentrated poverty and what are the barriers and impediments that make it difficult for residents to receive adequate health care services?

Partners - George Washington University, Children's Health, Dallas Health and Wellness Alliance, Perkins + Will, and Health and Human Services

Deliverables -
- Identify systemic barriers and root causes of community and childhood adversity
- Develop community understanding of how adversity creates stressors that become toxic to a child's development and long-term health
- Provide recommendations to address chronic stresses and the inter-relationship with acute shocks

Healthy Communities

- What role can Dallas Fire and Rescue play to improve public health outcomes and increase health literacy in communities with a high risk of health care disparity?

Stakeholders - DFW Hospital Council, Dallas County Medical Society, Dallas County Health, Parkland Hospital, UT Southwestern, NCTTRAC, American Heart Association, American Red Cross, Children's Health

Deliverables -
- Research best practice models and determine which programs, operational strategies, and public education/curriculum models that are the most appropriate and effective for Dallas
- Identify top goals and priorities to make Dallas Fire Rescue a leading edge community paramedicine program

Parkland

UT Southwestern
Medical Center

DALLAS-FORT WORTH
HOSPITAL COUNCIL

DCHHS
Safe families, healthy lives.
Dallas County Health and Human Services

Thriving Neighborhoods

Discovery Area 3 – Thriving Neighborhoods

- Assess the conditions in Dallas' low and moderate-income neighborhoods, and explore the impacts of extreme weather events on the natural and built environment.

Thriving Neighborhoods

- How can public sector investment in targeted neighborhoods unlock development potential and new employment opportunities for vulnerable populations?
- How can city and other governmental resources be prioritized and strategically deployed to serve as catalysts for private investment and development?

Partners –Policy Solutions

REINVESTMENT FUND

Deliverables -

- Perform a market value analysis to identify and define neighborhood typologies based on market strength and existing levels of investment.
- Identify intervention strategies for areas of need and catalyst areas.
- Recommended housing and economic development incentive programs, regulatory policies, and models for public-private partnerships

Thriving Neighborhoods

Web-based portal for GIS mapping analysis

- Build a resilience heatmap by layering on demographic/economic data, social determinants of health, transportation infrastructure and other datasets onto MVA database

Vulnerable populations Demographics Socio-economic data Jobs and income	**Infrastructure in disinvested neighborhoods** Street conditions Sub-standard water, sewer, sidewalks, street lights Flood plain, drainage and storm sewers
Health/risk factors Availability of health services Food deserts – healthy food and pharmacies Incidence of chronic disease Parks and open space EMS runs	**Transportation/Mobility** Public transit – routes, frequency, timing **Asset mapping of services** Libraries, rec centers, churches, non-profit and philanthropic services

Human and Social Needs

City of Dallas

Thriving Neighborhoods: Questions-Partners-Tasks

- How do extreme weather events affect Dallas' natural resources and critical infrastructure?

Partners - AIR Worldwide, Texas Trees Foundation, The Nature Conservancy American Geophysical Union (AGU), and Trust for Public Lands

Stakeholders – Office of Environmental Quality, Office of Risk Management, Trinity Watershed Management, Dallas Water Utilities, Office of Emergency Management
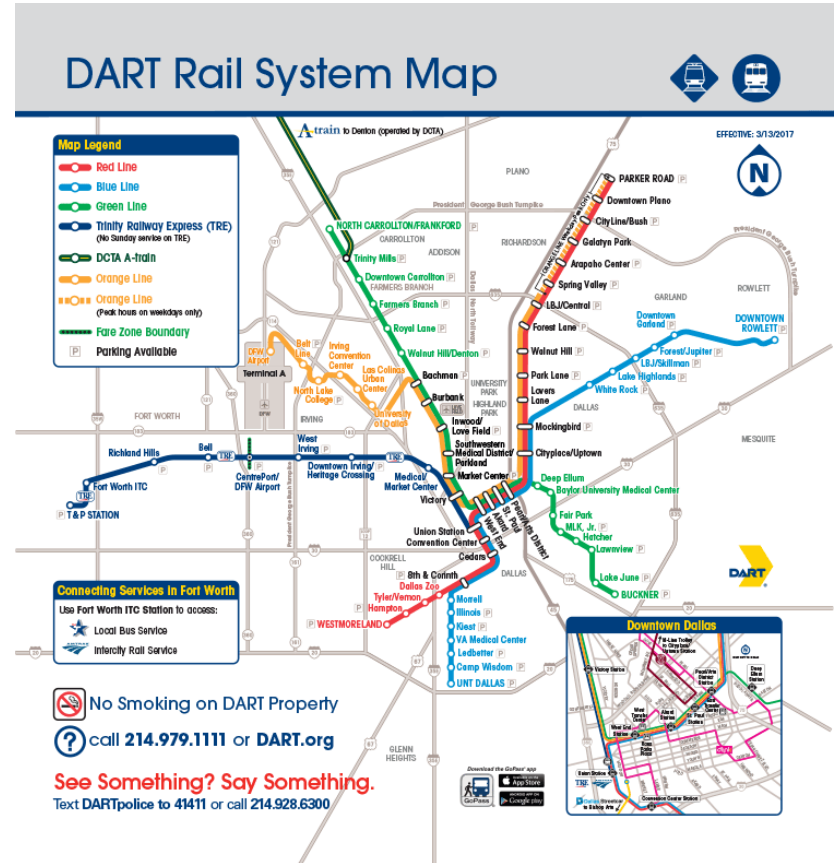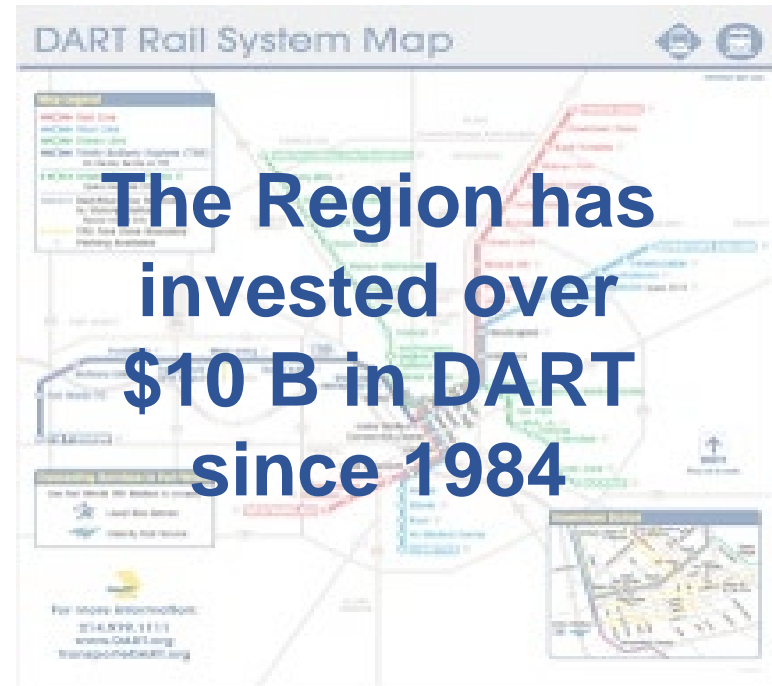
Deliverables -
- Catastrophe risk modelling - AIR
- Urban Heat Island Study – Texas Trees Foundation
- Accelerating Environmental Health in Dallas – The Nature Conservancy
- Thriving Earth Exchange Science Partnership - AGU
- Smart Growth for Dallas – Trust for Public Lands

Human and Social Needs

City of Dallas

Transportation Equity

Mobility Options are expanding

The Region has invested over $10 B in DART since 1984

This year, DART received $292 million from Dallas taxpayers

Human and Social Needs

City of Dallas

Mobility, Jobs, and Housing

- The Metroplex ranks 5th nationally in jobs

- Less than 20% of jobs are accessible by transit in less than 90 minutes

- More than 70% of HUD assisted properties are considered unaffordable when housing costs and transportation costs are combined

Jobs within 30 minutes by transit

Most of Dallas' jobs accessible by transit within 30 minutes are in downtown and surrounding areas, though some suburbs have job centers near public transportation routes. But while the Dallas-Fort Worth region as a whole ranks fifth nationally in terms of the number of jobs, it ranks 21st in how many of them can be reached by transit in under one hour.
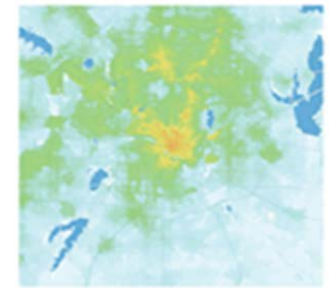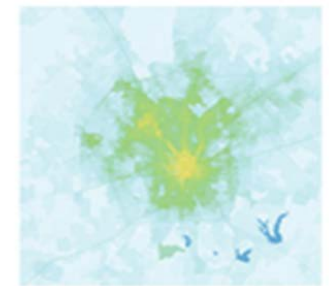
Averaged 7 - 9 A.M.

	0 - 1,000 jobs
	1,001 - 2,500
	2,501 - 5,000
	5,001 - 7,500
	7,501 - 10,000
	10,001 - 25,000
	25,001 - 50,000
	50,001 - 75,000
	75,001 - 100,000
	100,001 - 250,000
	250,001 - 500,000
	500,001 - 750,000

Austin

Dallas

Houston

San Antonio
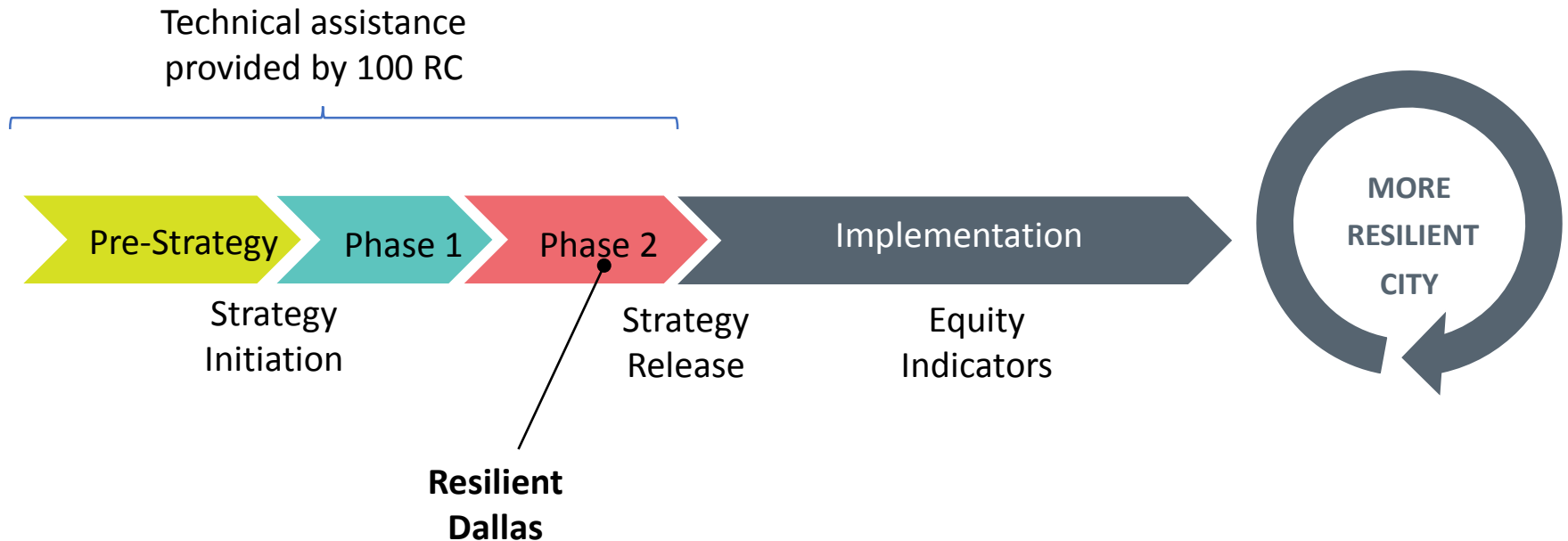
Discovery Area 4 – Transportation Equity

- Identify how Dallas can leverage transportation investment to strengthen access to economic opportunities and improve the quality of life in low and moderate-income neighborhoods.

Transportation Equity

- What is the current state of transportation equity for Dallas residents?
- What projects or policies could Dallas' transit providers implement to provide transit dependent populations with improved access to employment, education, healthcare and basic retail services while also balancing the need to attract new riders?

- **Partners** - University of Texas at Arlington, AECOM, Staff

- **Stakeholders** - UTA, Dallas Area Rapid Transit, North Central Texas Council of Governments, Brunk Government Relations Services.

- **Deliverables** -
- Comprehensive policy analysis and quantitative study of transportation metrics including; transportation affordability, job accessibility by mode, transit coverage, transit quality, and accessibility
- Prioritized list of recommendations to improve bus coverage and accessibility to vulnerable populations and strategies for solving last mile transportation issues

Resilient Strategy Process

The strategy is a tactical roadmap to build resilience that articulates priorities and specific initiatives for short-, medium-, and long-term implementation

Technical assistance provided by 100 RC

Pre-Strategy → Phase 1 → Phase 2 → Implementation → **MORE RESILIENT CITY**

Strategy Initiation

Strategy Release

Equity Indicators

Resilient Dallas

Equity: Partners

- CUNY Institute for State and Local Government. Equality Indicators cohort study

- W.K. Kellogg Foundation $1.75M grant to Communities Foundation. Truth, Racial Healing and Transformation

Participation and Input
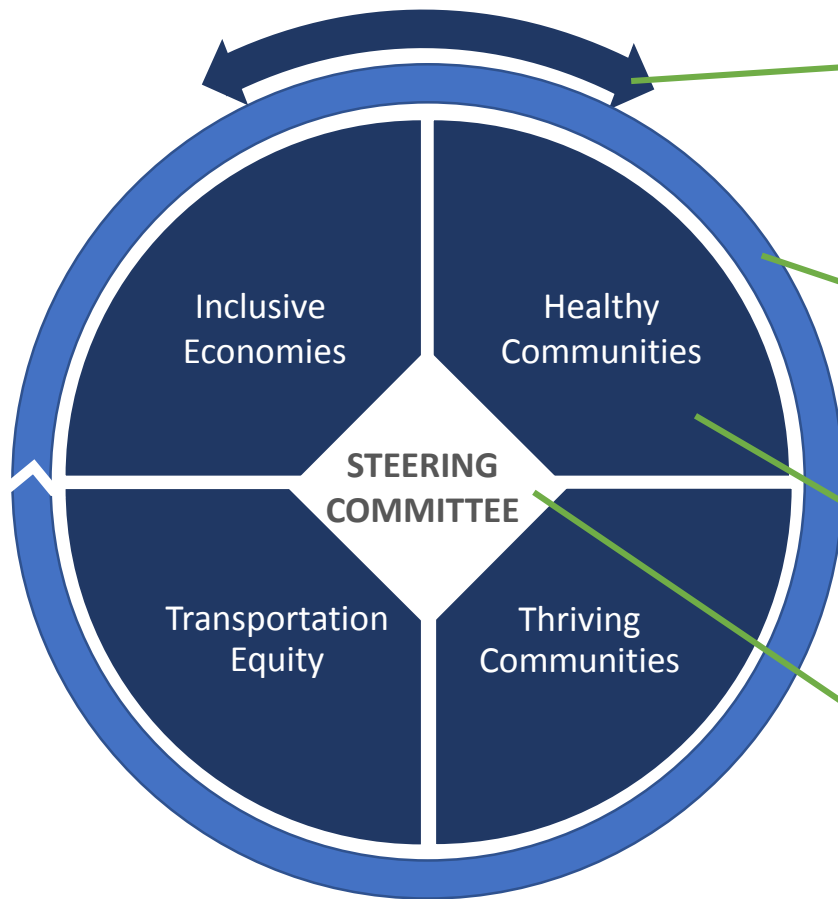
Citizen Advisory Committee
Chaired by Regina Montoya
15+ Members
Review and sounding board for strategy

Community Stakeholder Committee
Convened by Theresa O'Donnell
120+ Members
Informed and Validated Discovery Areas

Discovery Area Working Groups
Led by City Departments
6-10 Members from City and Community
Researches and analyzes each discovery area

Steering Committee
Chaired by Theresa O'Donnell
Working Group Leads
Ensures synergy of working groups

Human and Social Needs

City of Dallas

Next Steps and Questions

- Workgroups to conclude research analysis

- Citizen Advisory Committee review strategy recommendations on September 19th

- Present Resilient Dallas Strategy recommendations to Human and Social Needs Committee in early-October

Resilience Update

Human and Social Needs Committee
September 5, 2017

Theresa O'Donnell,
Chief Resilience Officer
City of Dallas