

Memorandum



CITY OF DALLAS

DATE June 10, 2016

Honorable Members of the Quality of Life & Environment Committee: Sandy Greyson
TO (Chair), Tiffinni A. Young (Vice Chair), Rickey D. Callahan, Mark Clayton, Philip T.
Kingston, B. Adam McGough

SUBJECT **Resilient Dallas Update**

Today's presentation will provide a quick update on the 100 Resilient Cities Program and a review of the progress to date; discuss the development of the Discovery Areas and Diagnostic Questions; and discuss next steps and opportunities for additional stakeholder engagement.

Please do not hesitate to contact me if I can provide any additional information.

A handwritten signature in black ink that reads "Theresa O'Donnell".

Theresa O'Donnell
Chief Resilience Officer
214.670.3309

c: Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Christopher D. Bowers, Interim City Attorney
Craig D. Kinton, City Auditor
Rosa A. Rios, City Secretary
Daniel F. Solis, Administrative Judge
Ryan S. Evans, First Assistant City Manager

Jill A. Jordan, P.E., Assistant City Manager
Eric D. Campbell, Assistant City Manager
Mark McDaniel, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Sana Syed, Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor & Council

Resilient Dallas Update

Quality of Life & Environment Committee
June 13, 2016



Introduction

- Quick update on the 100 Resilient Cities Program and a review of the progress to date
- Discuss the development of the Discovery Areas and Diagnostic Questions
- Discuss next steps and opportunities for additional stakeholder engagement



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.

100 Resilient Cities

100 RC has received considerable interest worldwide.

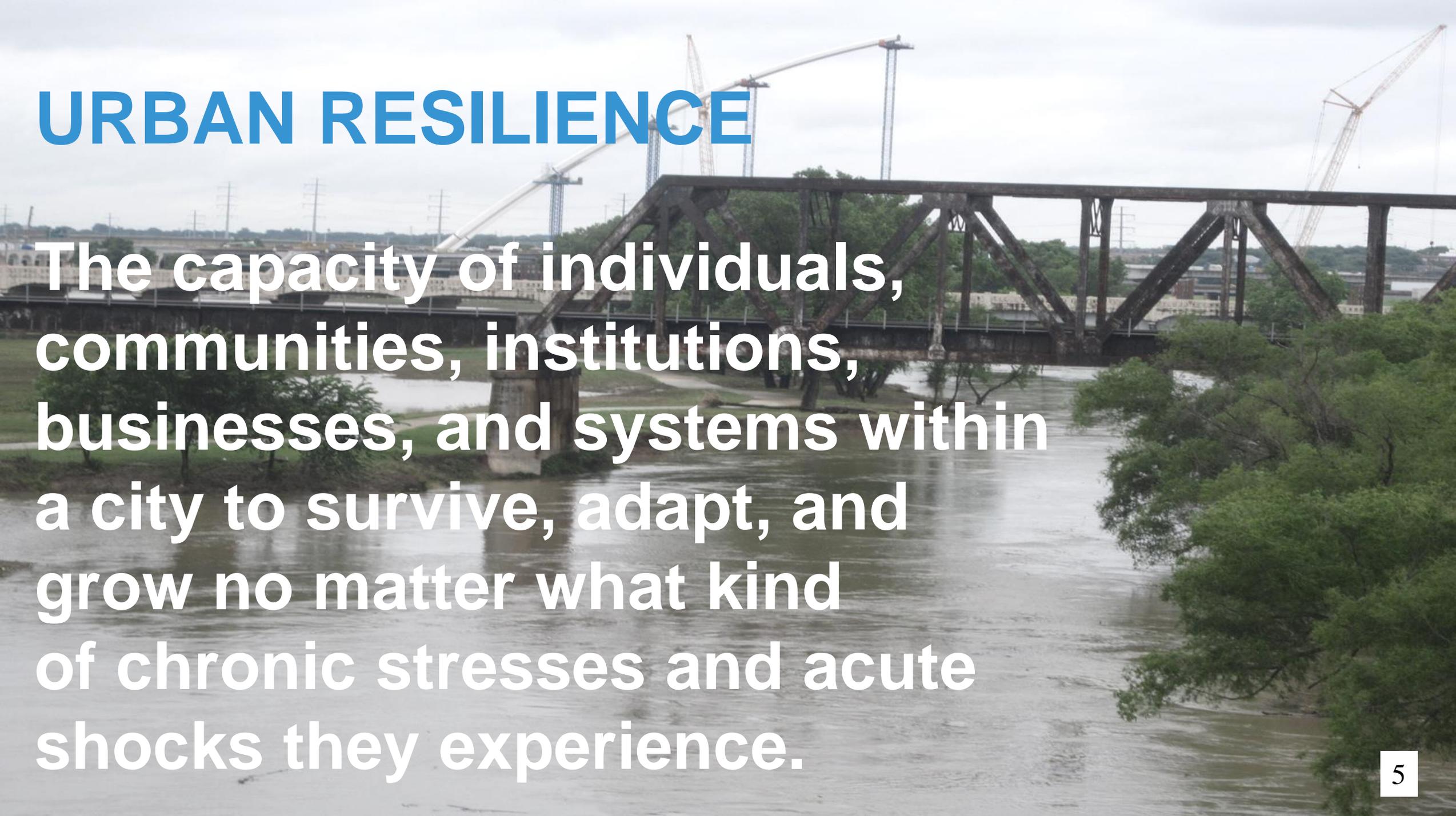
All 100 have now been selected.

Dallas and El Paso are the only 2 Texas Cities.



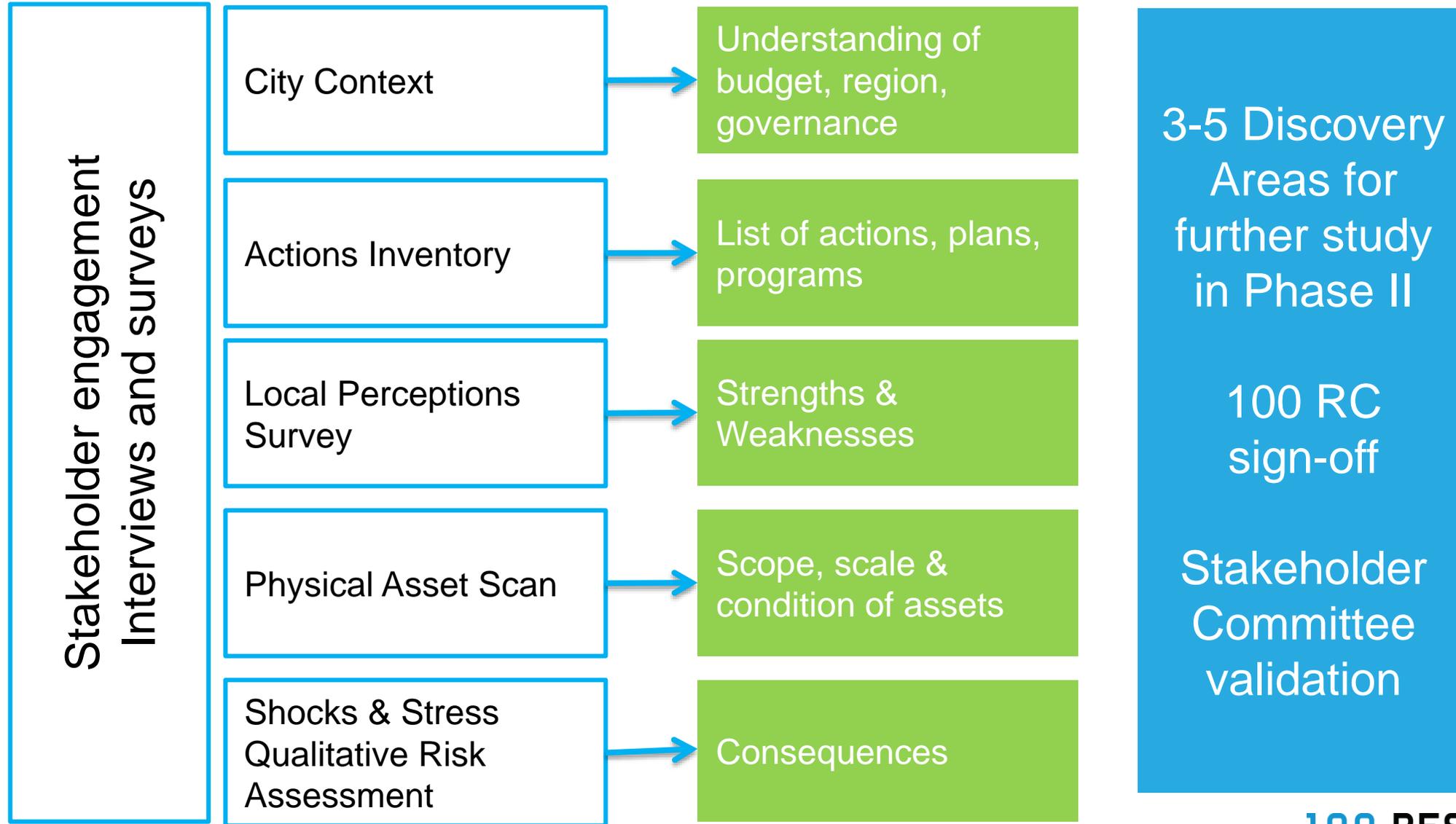
100 RESILIENT CITIES

URBAN RESILIENCE

A large steel truss bridge is under construction over a wide river. Several tall cranes are positioned around the bridge structure, indicating ongoing work. The background shows a cityscape with buildings and utility poles under an overcast sky. The river is calm, and there are green trees on the right bank.

The capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kind of chronic stresses and acute shocks they experience.

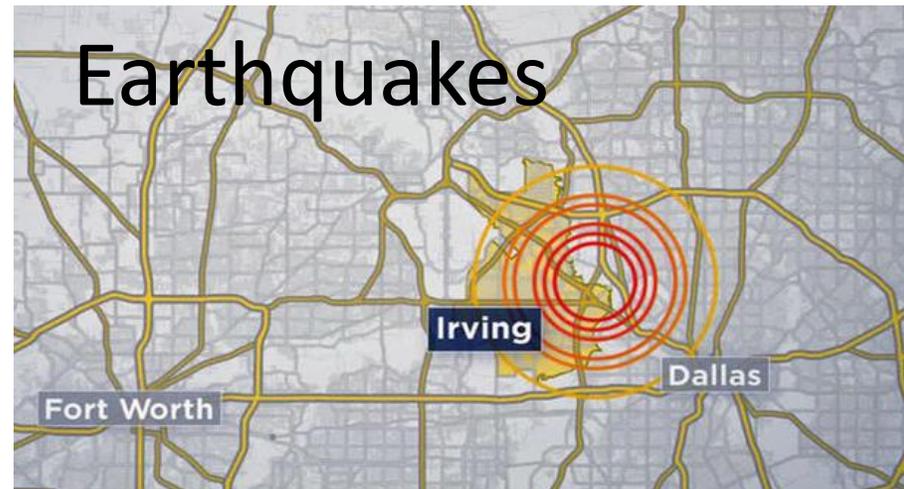
Preliminary Resilience Assessment



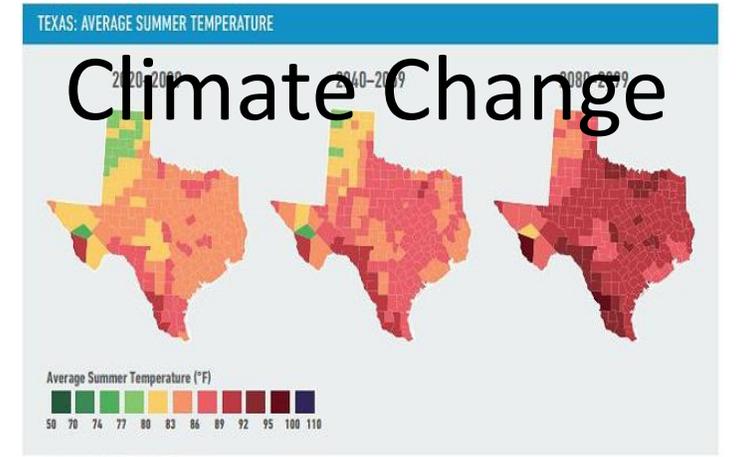
Overview of progress to date

- Stakeholder committee meetings
- Stakeholder interviews
- Dallas Resilience Website
- City Context (data collected, analysis complete this month)
- Actions Inventory (final draft)
- Perceptions Survey (in progress, draft community survey)
- Physical Asset Scan (complete. validation by Stakeholder Committee)
- Qualitative Shocks and Stresses Assessment. (complete. validation by Stakeholder Committee)
- Scenario Planning (complete, validation by Stakeholder Committee)

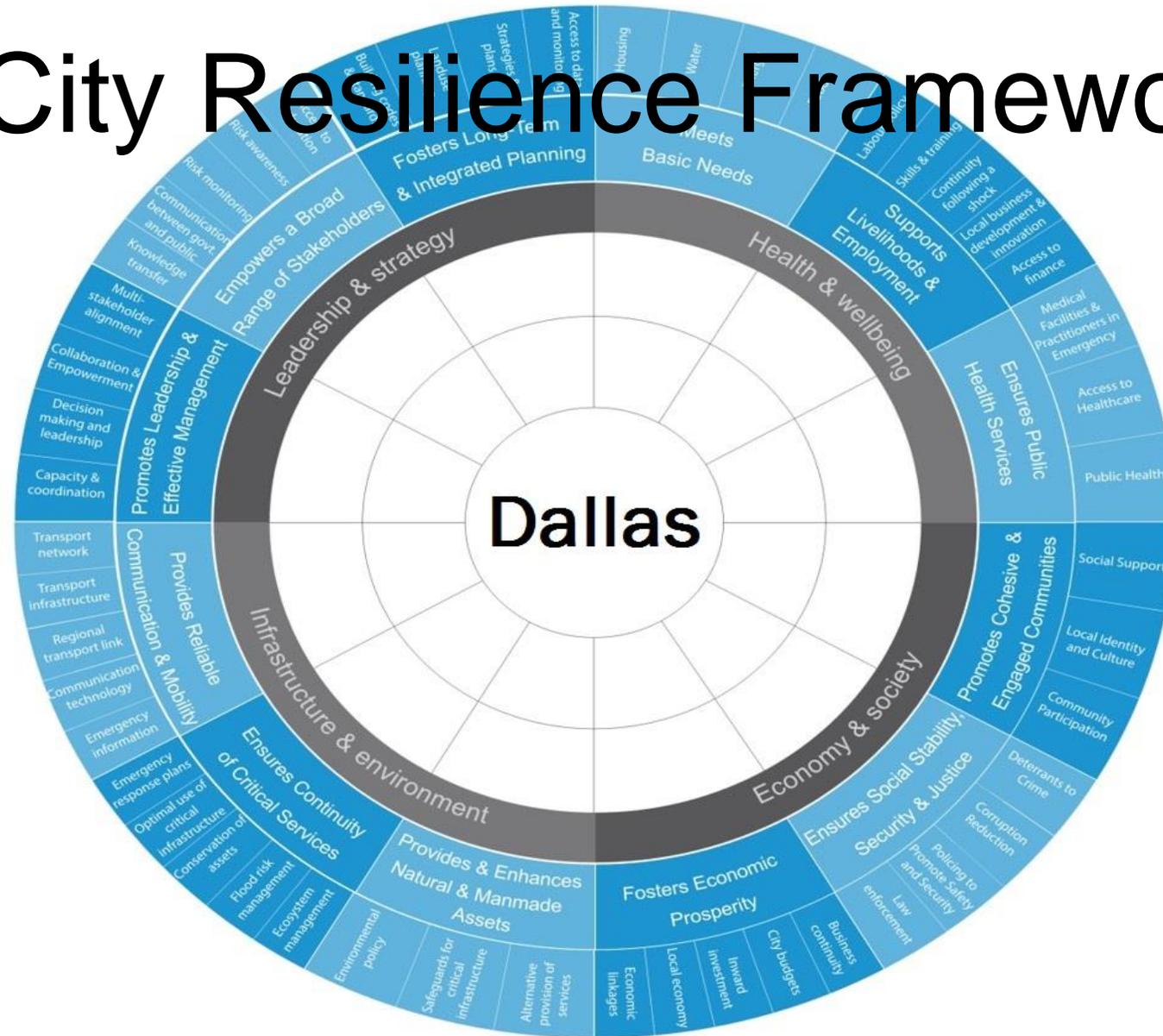
Top Shocks for Dallas



Top Stresses for Dallas



City Resilience Framework



Considerations during Phase I

Discussions during Phase I that inform and shape Phase II

- What are the important linkages between shocks and stresses?
- What existing strengths and successful actions should we build on?
- Does the public's perception of the city's preparedness and performance match the plans and actions currently underway?
- What aspects of resilience is the city not yet addressing?

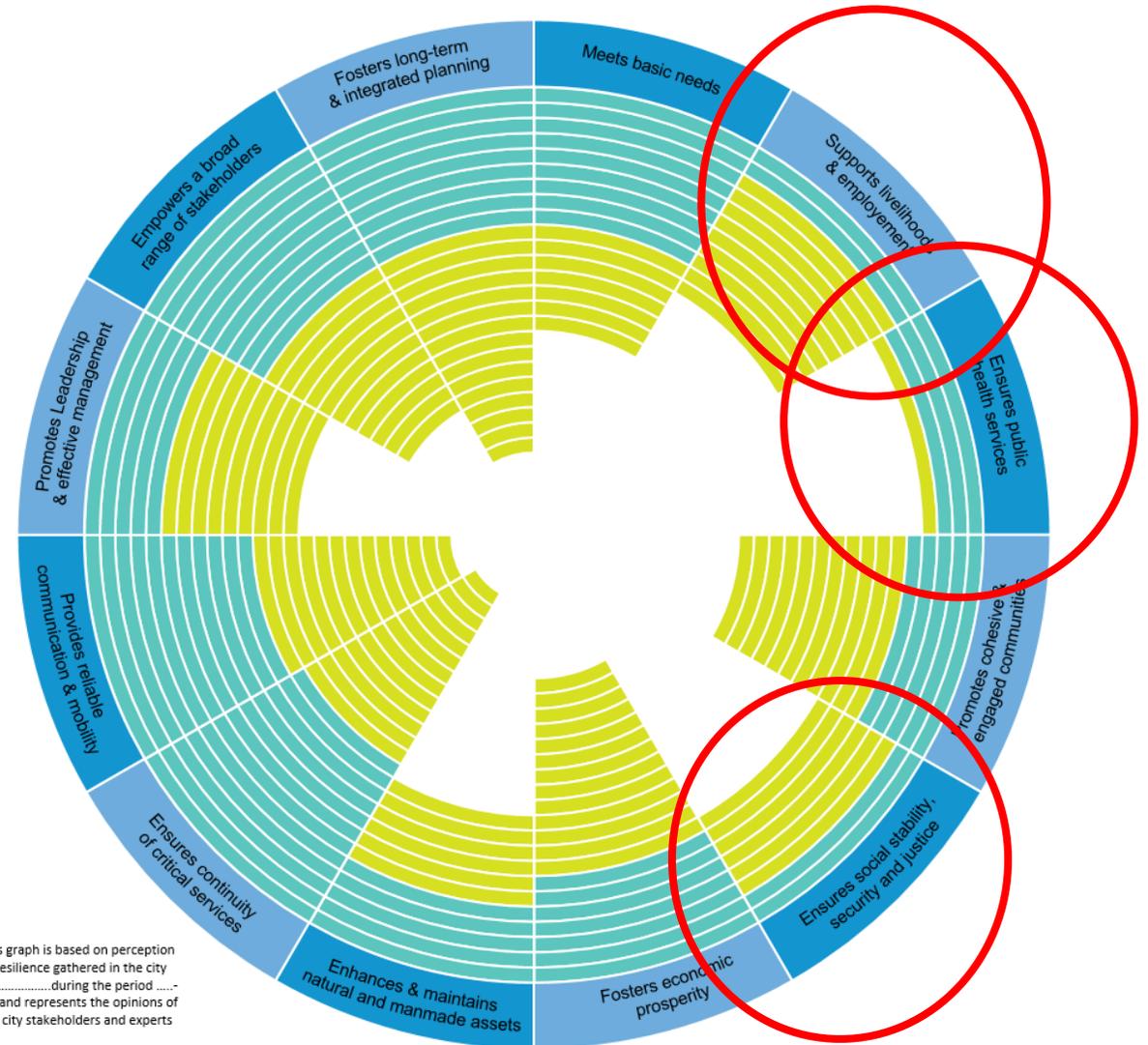
Actions

Significant number of actions

- Leadership
- Long-term, integrated planning
- Empowering Stakeholders
- Communications
- Continuity of Critical Services
- Mobility
- Meeting basic needs

Lack actions

- Supporting Livelihoods
- Public Health
- Social Justice and Community Stability



Perceptions

Strengths

- Economic Prosperity
- Continuity of Critical Services

Areas for Improvement

- Lots of red!



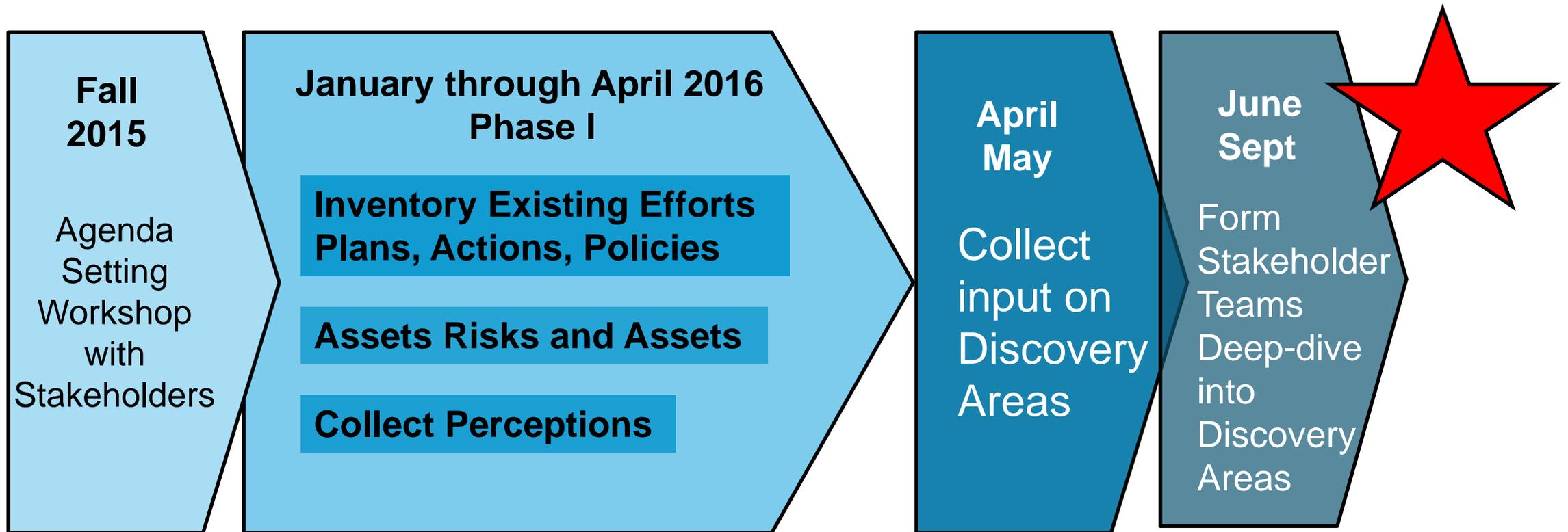
Asset and Shocks Matrix

Physical asset type	Current overall condition	Future score considering vulnerability to shocks	Screened shocks - if this shock event were to occur, what would be the consequence for this asset type? (consider the worst case scenario shock event)									
	Total score (from RA1)	Total score (auto-calculated)	River flood (fluvial flood)	Drought	Icestorm	Earthquake	Power Grid Failure	Tornado	Disease outbreak	Heatwave	Riot / Civil Unrest	Terrorism
Water Sources	1.3	16.3	Low	High	Low	Medium	Low	Low	High	High	Low	High
Water Distribution/Delivery	1.3	18.8	Low	Low	Medium	High	High	Medium	Low	Low	Low	High
Water Production	1.5	25.5	Medium	High	Low	High	High	High	High	High	Low	High
Waste Water Collection System	1.3	16.3	Low	Low	Low	High	Medium	High	High	Low	Low	High
Water Reuse	2.0	32.0	Low	High	Low	High	High	High	High	Medium	Low	High
Waste Water Treatment plants	1.3	17.5	Low	Low	Low	High	High	High	High	Low	Low	High
Storm Water Drainage assets	2.3	36.0	High	Low	High	High	Low	Low	Low	Low	Low	Low
Electricity generation	1.0	17.0	High	Low	Medium	High	High	High	Low	High	Low	High
Electricity transmission	1.0	18.0	High	Low	High	High	High	High	Low	Low	Low	High
Natural gas distribution	2.0	10.0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Main roads	2.5	40.0	High	Low	High	High	Low	Medium	Low	Low	Medium	High
Railways	2.0	36.0	High	Low	High	High	High	Medium	Low	Low	Low	High
Tunnels	0.0	0.0	High	Low	High	High	Low	Medium	Low	Low	Low	High
Bridges	1.8	28.0	High	Low	High	High	Low	Medium	Low	Low	Medium	High
Airports	1.0	18.0	Low	High	High	High	High	High	High	High	Medium	High

Assets most vulnerable to shocks

- Main Roads
- Storm water Drainage Assets
- Railways
- Bridges
- Water Infrastructure

Process timeline



A resilience approach to identifying Discovery Areas

- Understand and consider the interrelationship of shocks and the long-term stresses that increase Dallas' vulnerability
- Integrated, cross-cutting approach that involves multiple stakeholders
- Leverage assets and strengths of a broad range of partners and stakeholders
- Consider the long term impacts as well as the immediate benefits
- Cognizant of equity issues and a diversity our population

Proposed Discovery Areas

- Harnessing the power of the robust North Central Texas economy to expand inclusiveness and create economic resilience for Dallas residents
- Exploring opportunities for partnerships and collaborations to improve Public Health outcomes
- Assessing the infrastructure in Dallas neighborhoods and the impacts of climate change on the natural and built environment
- Leveraging the region's transportation investments to improve mobility options and transit equity for residents

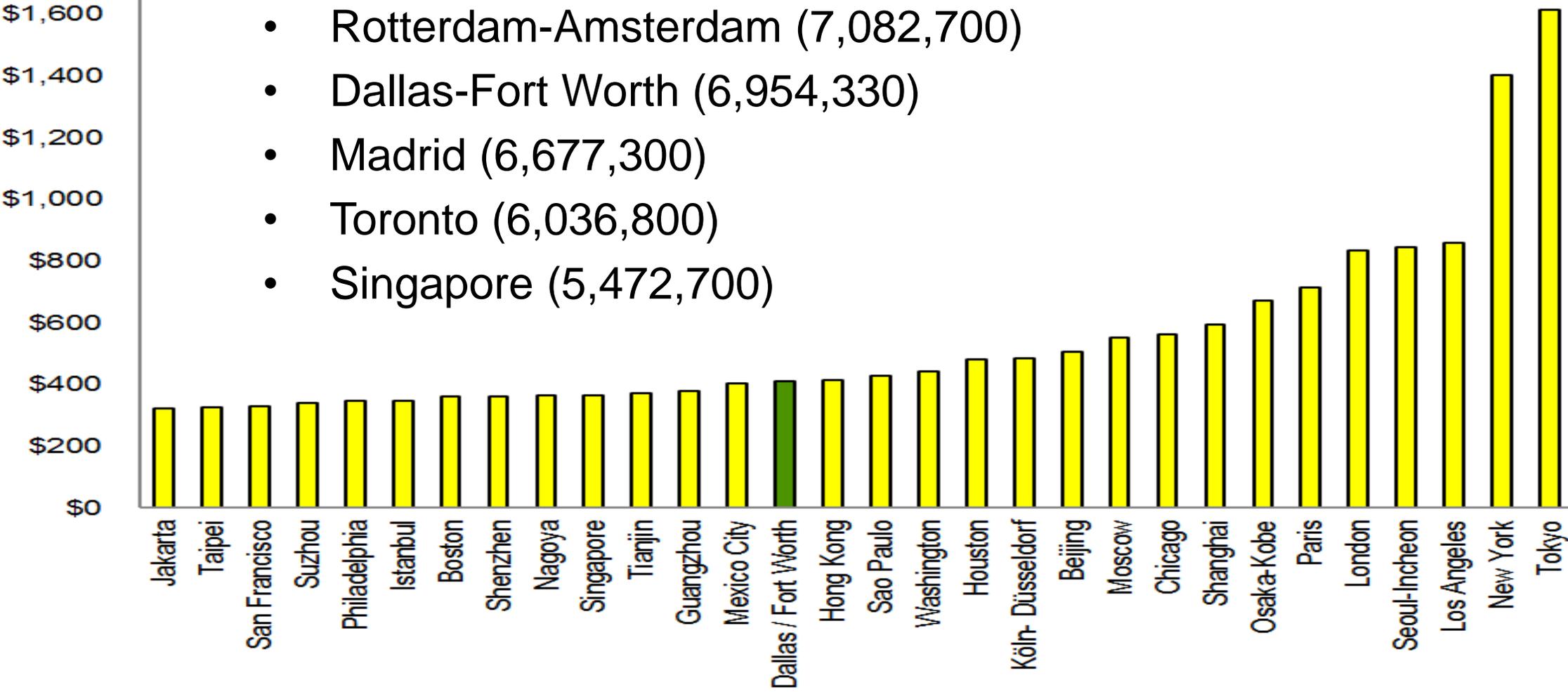
Inclusive Economy

DFW Economic Overview

- 4th largest population in U.S.
- 6th largest economy by output (2013)
- 5th largest by personal income (2012)
- 5th largest employment market
- Unemployment rate of 3.7%

The screenshot shows a web browser displaying an article on The National Interest website. The browser's address bar shows the URL: nationalinterest.org/feature/texas-americas-economic-miracle-11410. The page features a dark header with the site's logo and navigation links. The main content area is titled "Texas: America's Economic Miracle?" and includes a large image of a "Welcome to Texas" sign with the state flag and the text "Drive Friendly-The Texas Way" and "Proud Home Of President George W. Bush". Below the image is a quote: "The shale revolution—and the services necessary—is primarily responsible for the boom in Texas. So—does Texas really deserve all the praise it receives for its economy?". To the right of the main article is a sidebar with several smaller articles, including "People You Won't Believe Actually Exist", "Homeowners Who Have Not Missed A Payment in 3 Years Are In For A Big Surprise...", "Brett Favre's Net Worth Will Absolutely Drop Your Jaw!", and "Bill Cosby's Net Worth Will Blow You Away!". At the bottom right, there is a "Latest Issue" section for "THE NATIONAL INTEREST" featuring a cover with the word "CHINESE".

Similarly-Sized Global Metropolitan Areas

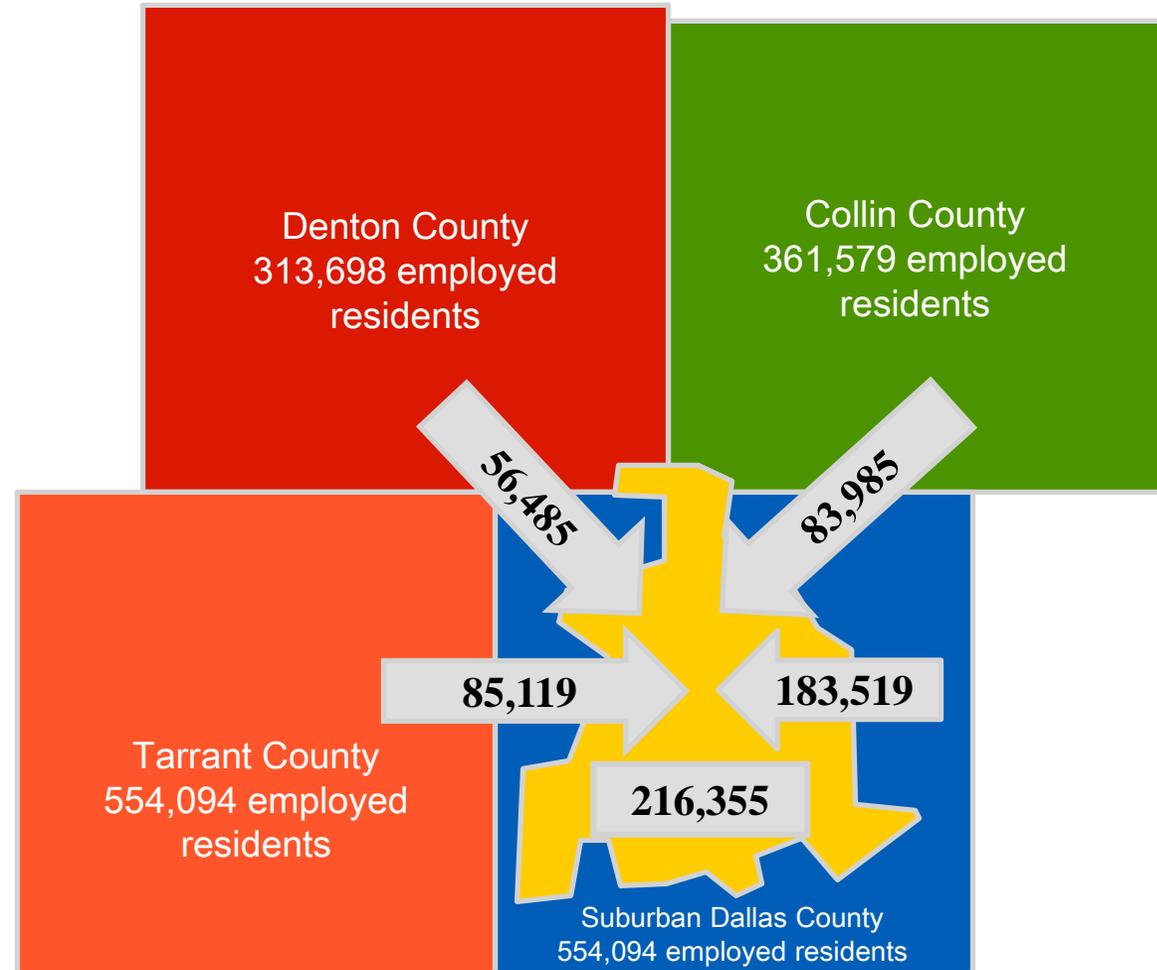


Dallas is the vibrant urban core



Inbound commuters in the Dallas labor force

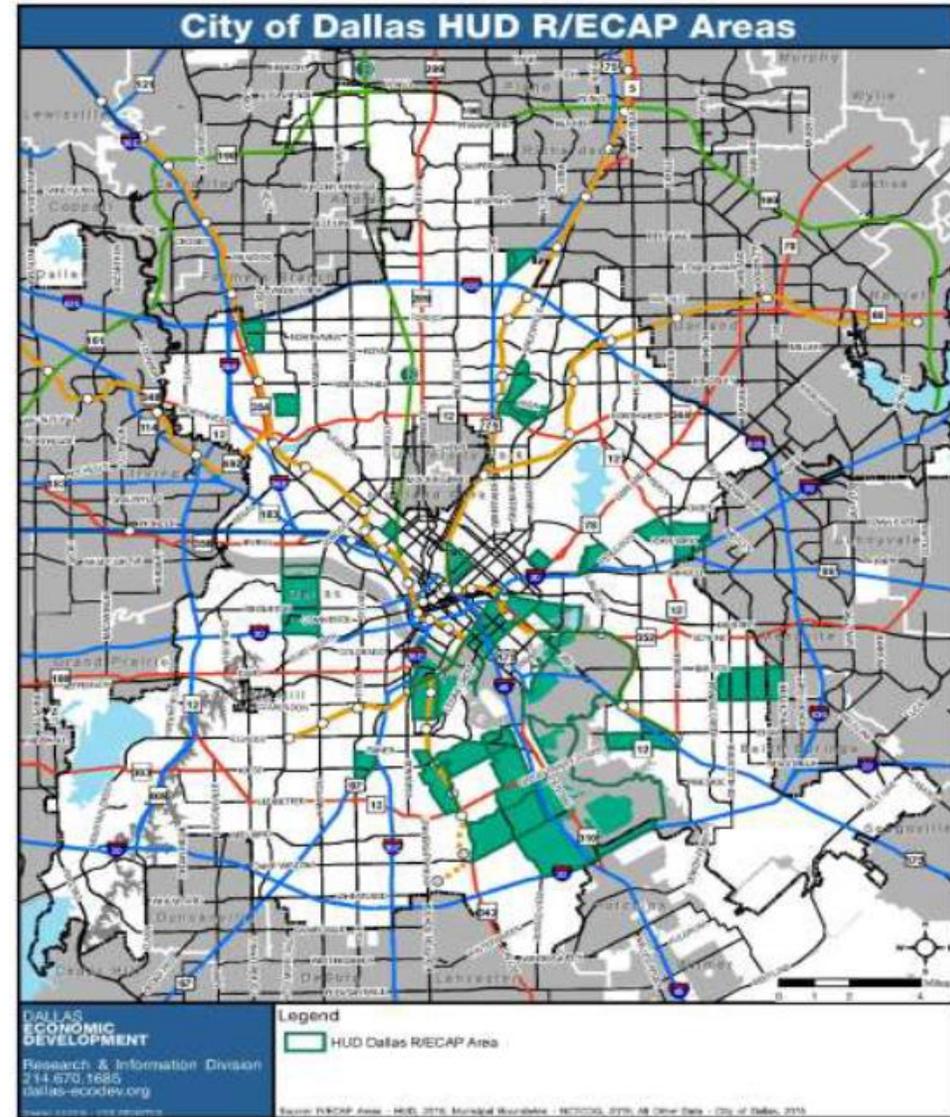
- Dallas has well over 1 million jobs
- 625,000 + workers commute into Dallas every day to work
- 638,792 Dallas residents in the labor force



HUD R/ECAP

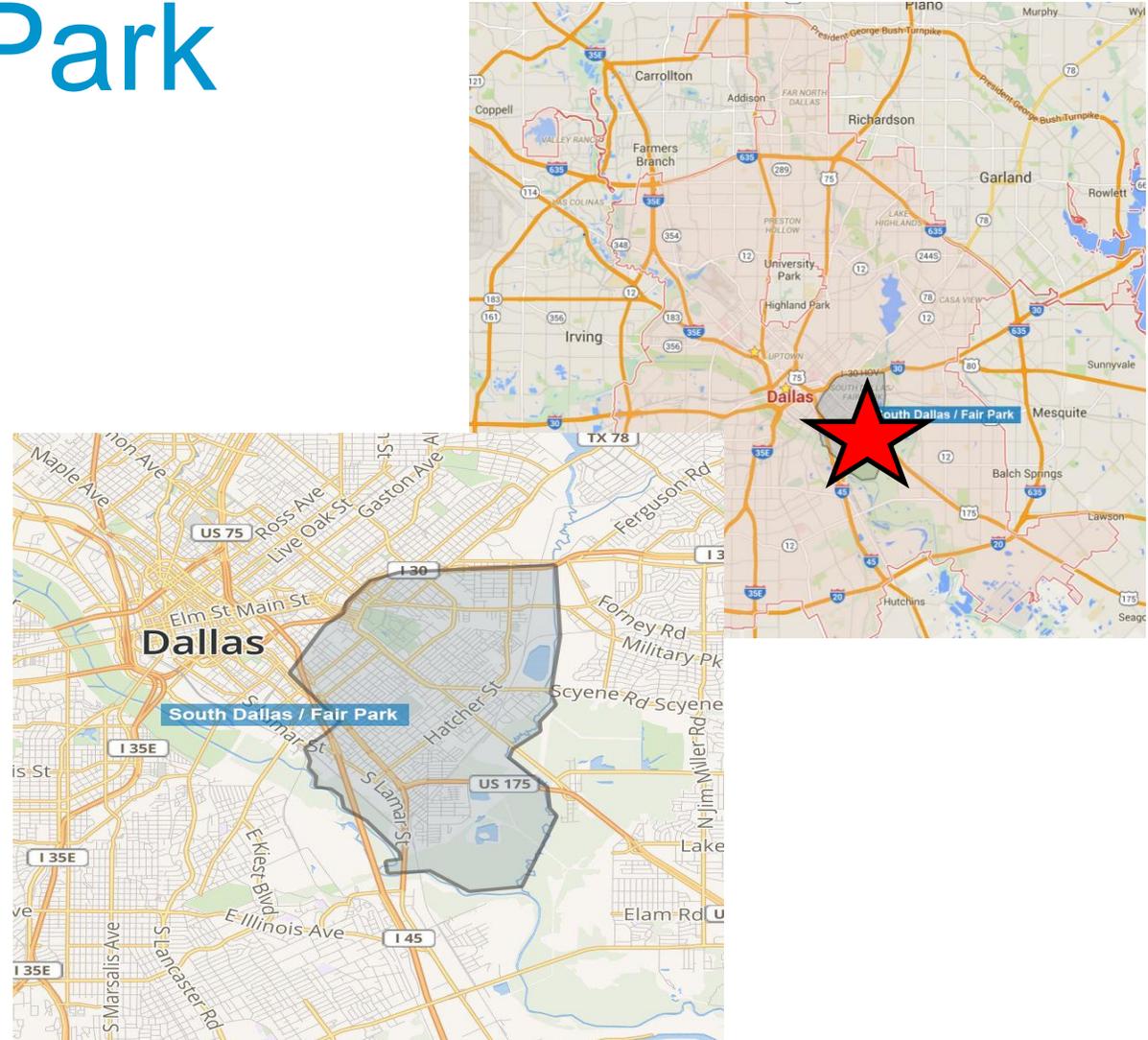
- 122,330 people, 55% are families
- Unemployment rate is 13%
- Adults not in the workforce can exceed 30% in some census tracts
- Per capita income is \$12,291

Challenges of education attainment, skills gap, language barriers, limited transportation options, and childcare costs have left many Dallas residents behind



South Dallas Fair Park

- Unemployment rate of 19%
- Over 70% of Adults are not currently unemployed
- 43% of Families with children live below the poverty level
- Per capita income is \$12,500
- Population decline of 19% from 2000 - 2010



Discovery Area – 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.

Proposed Diagnostic Questions

- What are proven, best practices for Dallas to consider for building an expanded and inclusive economy?
- What are the barriers and impediments that prevent some Dallas residents from finding employment?
- How can we improve or adjust our existing practices, policies and funding priorities to expand economic opportunity and build economic resilience for Dallas residents?
- What role can the City play to ensure quality education and skills training opportunities are available to all city residents?

Health care 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.



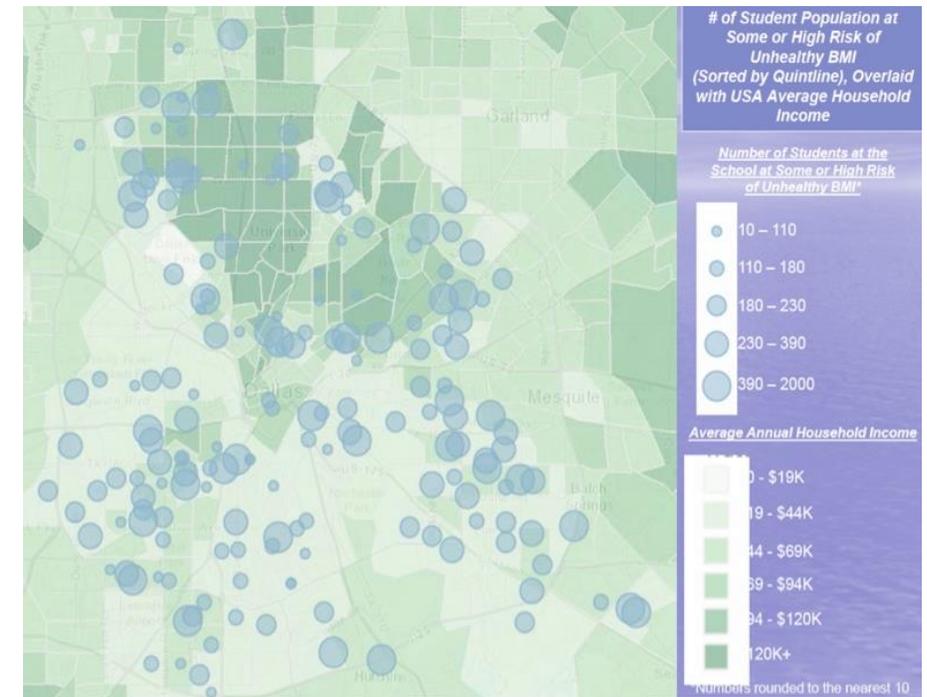
Learn more: <http://bit.ly/1ZvblUz>

Community Need Index Aggregates a number of socioeconomic risk factors

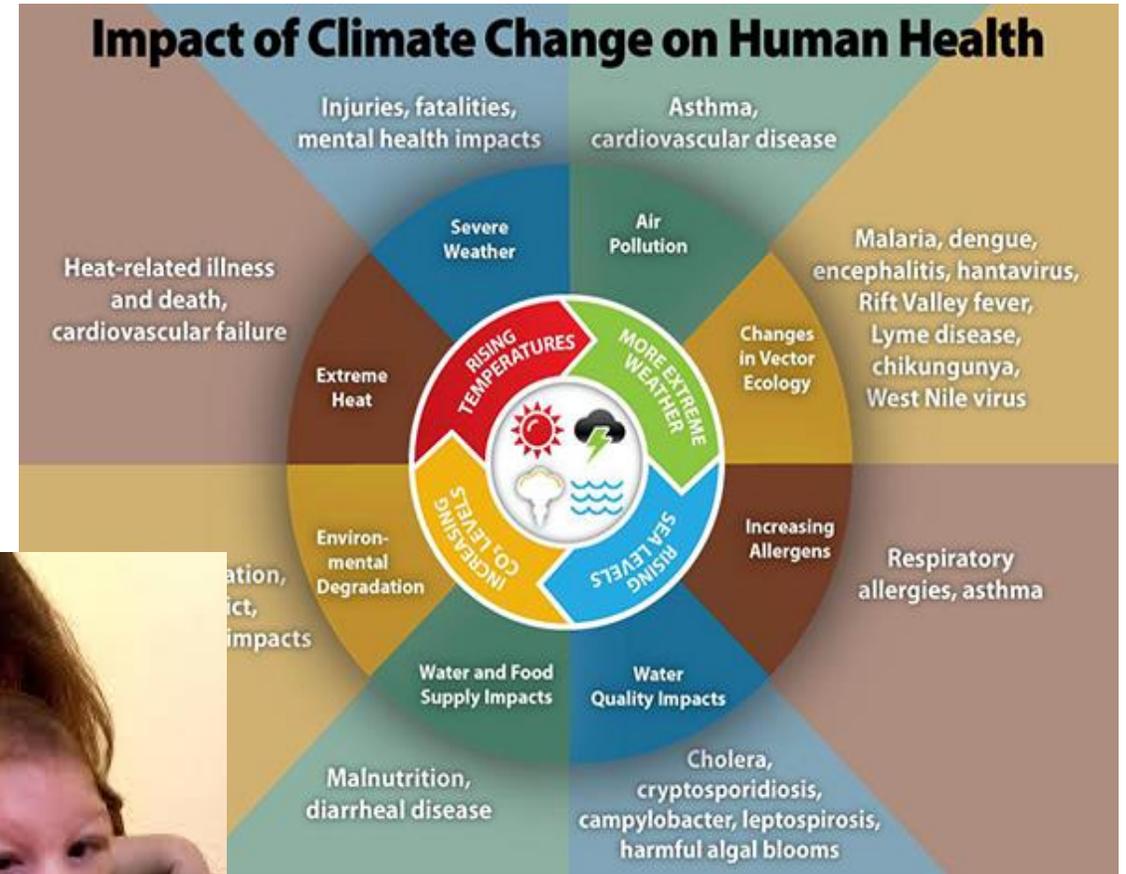
- **Poverty**
- **Educational attainment**
- **Racial/ethnic minorities**
- **Limited English proficiency**
- **Unemployment**
- **Lack of health insurance**

Growing up poor in Dallas

- 38% of Dallas children live in poverty
- 20% don't have health insurance
- 28% have inadequate food and nutrition
- 35% live in a single-parent home
- Infant mortality is increasing



Is Dallas vulnerable to a disease outbreak?



Discovery Area – Public Health

How can Dallas make a meaningful contribution to improving public health outcomes for Dallas residents?

Proposed Diagnostic Questions

- What are the gaps in health literacy, health care service provision and coordination among health providers?
- What are the existing assets and resources that could be leveraged to improve public health outcomes?
- How can those assets and resources be used to provide health care services and improve health literacy in neighborhoods with inadequate health care services?
- How can emerging best practices, such as those in telemedicine and virtual care, be utilized in areas with inadequate health care services?

Proposed Diagnostic Questions

- What role should the City of Dallas play in developing a county-wide, comprehensive public health emergency plan for an infectious disease outbreak?
- What are the critical communications gaps that currently exist between government agencies, hospitals, healthcare providers, non-profits, and the public? How can technology bridge those gaps?

Discovery Area – Infrastructure

Ensuring adequate public infrastructure. Understanding the impacts deferred maintenance, the costs of neighborhood decline, and the impacts of climate change on the built environment and our natural assets.

How does Dallas ensure adequate infrastructure provision in an equitable way?

Infrastructure



Proposed Diagnostic Questions

- What is the 21st century standard for basic infrastructure in Dallas neighborhoods?
- What are the long-term financial commitments, funding mechanisms, and policies necessary to build and maintain a 21st century Neighborhood Standard?
- How can city resources be prioritized and strategically deployed to serve as a catalyst for private investment and development?

Proposed Diagnostic Questions

- How does climate change affect our most significant natural resources and other critical infrastructure, such as the Great Trinity Forest, flood control systems and water resource supply?
- What are the latest studies, best practices, and emerging technologies that Dallas can examine to understand how our natural and built environment must adapt to the changing climate?



Mobility options and transportation equity

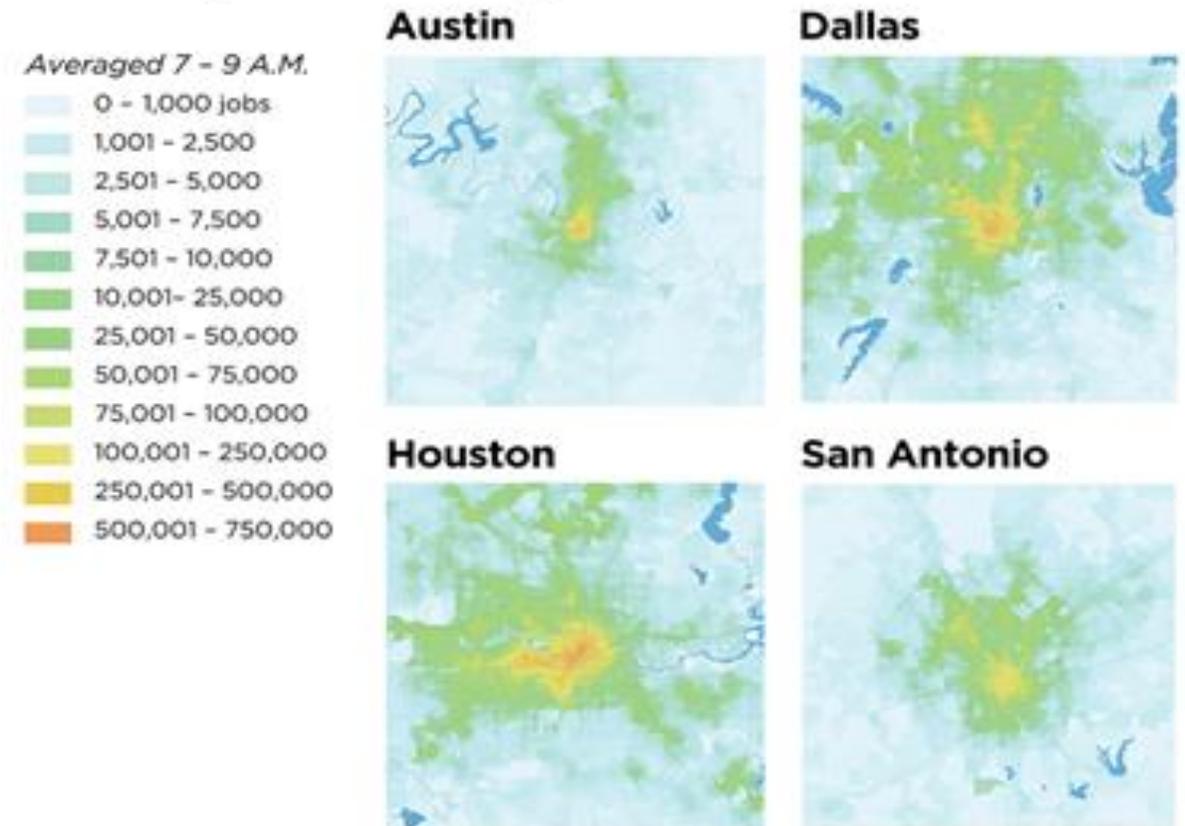


Mobility, Jobs and Housing

- 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.



Discovery Area – Transportation Equity

How can Dallas leverage the regional transportation investments to expand mobility options, improve transportation equity, and build social and economic resilience for City residents?

Proposed Diagnostic Questions

- What is the current state of transportation equity in the Metroplex and what are the policies, funding constraints, or organizational structures that impact transportation equity for Dallas residents?

Proposed Diagnostic Questions

- How can transit networks be improved to ensure transit dependent populations have equitable and efficient access to employment, education, healthcare and basic retail services while also enticing life-style riders?

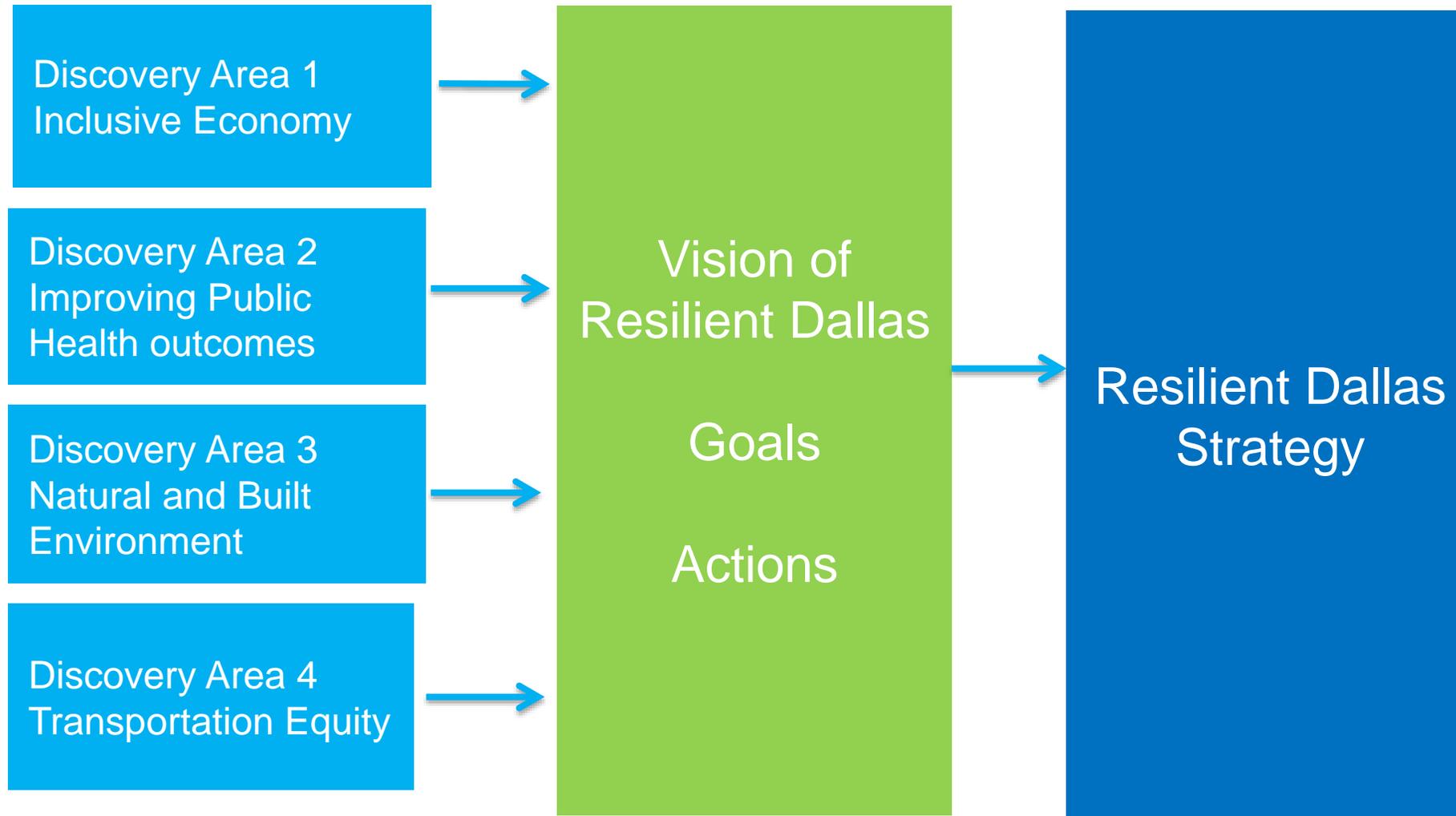
Proposed Diagnostic Questions

- Do the policies and mechanisms that allocate transportation funding in the region align with Dallas' growth and redevelopment priorities? Do current funding priorities fuel sprawl at the expense of maintaining a thriving urban core?

Proposed Diagnostic Questions

- DART is currently undertaking a Comprehensive Operations Analysis. What are the fiscal or policy impediments that may impede greater transportation equity for transit dependent riders?

What happens during Phase II?



Discovery Areas

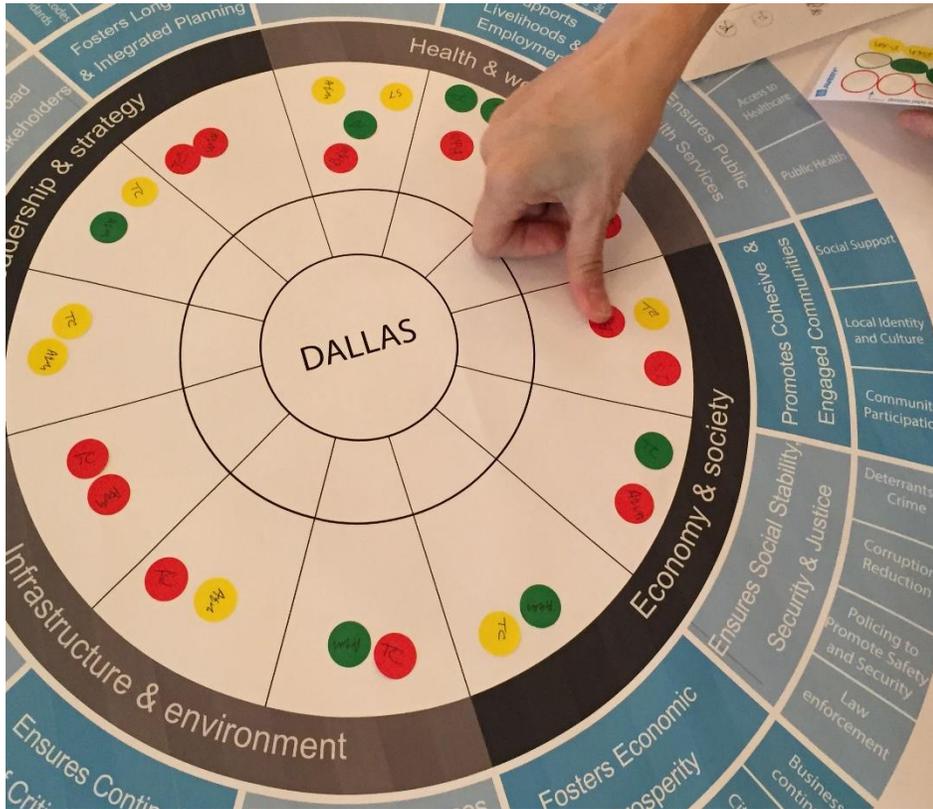
Possible methodologies and approaches



Discovery Areas may be designed to:

- **Further understand and analyze the city's vulnerability to a shock.** e.g. flooding, tornado or disease outbreak
- **Explore how shocks and stresses interact.** Reliability of public transit during an ice storm or flood
- **Integration and prioritization of existing efforts and initiatives.** Area Universities are studying inclusive economies, transportation equity and climate change
- **Focus on a specific part of a shock or stress which requires deep articulation.** Understanding the full impact of blight and disinvestment in southern Dallas neighborhoods

Diagnostic Approaches for Phase II work



- **Scenario or situational analysis.** Test a hypothesis over several iterations to refine choices
- **Comparative analysis.** Study best practices from regional or global examples
- **A time-bound study.** Longitudinal study of a risk or a hazard assessment

Goals and Actions, example from New Orleans

Redesign our regional transit system to connect people, employment, and essential services

The City will hire a Transportation Coordinator to facilitate a transit system redesign and implementation strategy to connect people, employment, and services. The City will lead by example in promoting mass transit use by providing public employees with a pre-tax transit pass.

Goals and Actions, example from New Orleans

FEATURED ACTION

Launch Downtown Energy Efficiency Challenge

The City will partner with the Downtown Development District (DDD) to launch a Downtown Energy Efficiency Challenge that will engage property owners, businesses, and employees in a one-year competition to reduce overall energy consumption in the New Orleans CBD. City Hall will lead by example by reducing its energy consumption, seeking renewable energy sources, and promoting good practices.

Next Steps

- Submit the Discovery Areas to 100 Resilient Cities staff for review and refinement
- Identify partners, research methodologies, and convene Stakeholder Groups for each Discovery Area
- Begin the diagnostic work, research and analysis for each Discovery Area

Want to help?

- If residents or organizations would like to contribute their time, resources or data to a Discovery Area, please contact us
- Help us identify other people or organizations that should be involved
- Please complete the survey

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