



EMERGENCY MANAGEMENT IN A CHANGING WORLD

AGENDA

- THE WORLD TODAY (THE WHAT)
- IMPLICATIONS FOR EMERGENCY MANAGEMENT (THE SO WHAT)
- THE EVOLUTION OF EMERGENCY MANAGEMENT (THE NOW WHAT)

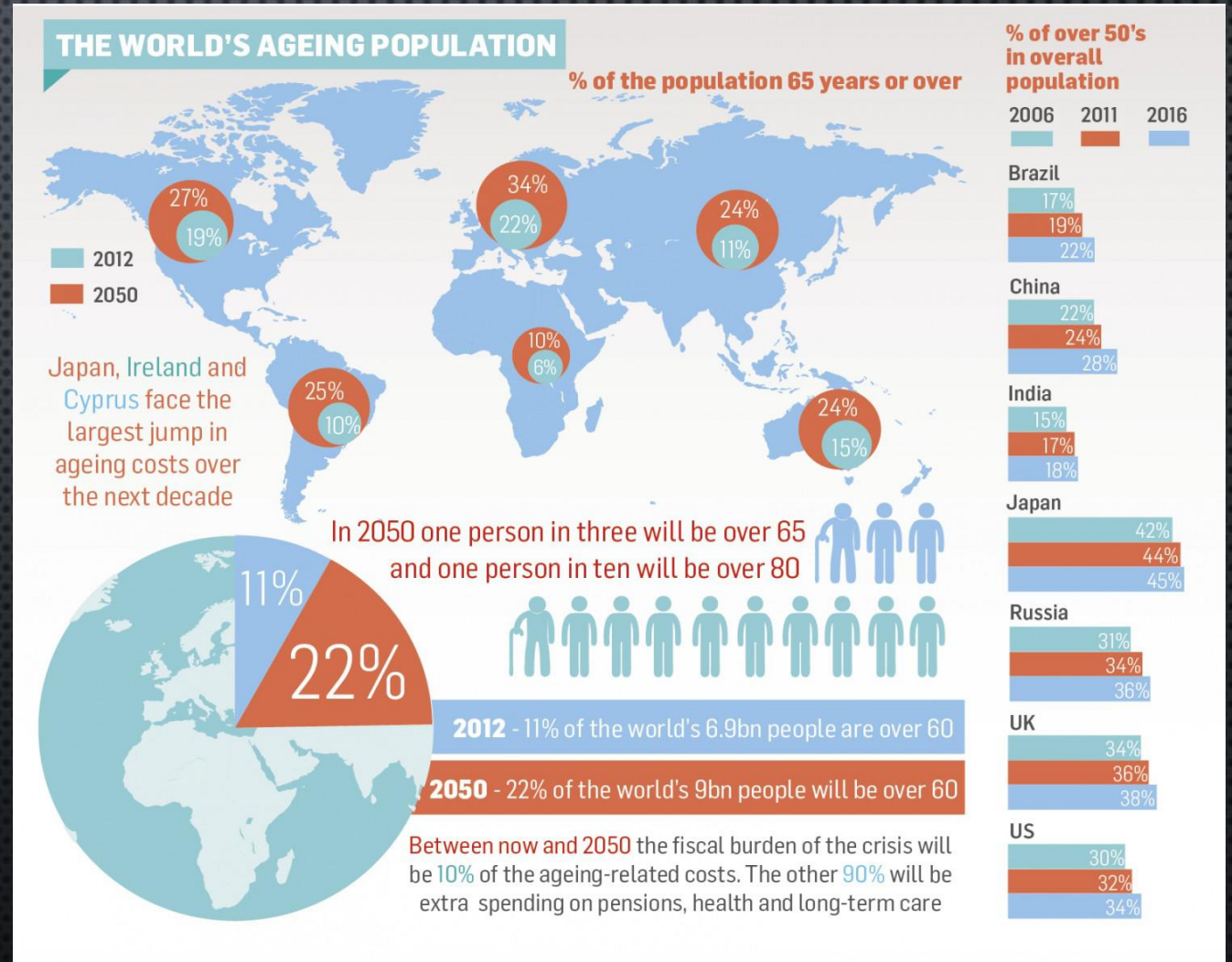
A satellite view of Earth from space, showing the Americas and the Atlantic Ocean. The Earth is a vibrant blue sphere with white clouds swirling around it. The landmasses are visible in shades of green and brown. The text "THE WORLD TODAY" is overlaid in white, sans-serif capital letters across the center of the image.

THE WORLD TODAY

THE UNITED STATES IS AGING, DIVERSIFYING, AND URBANIZING

1.5 million people are added to the global urban population **every week**

Source: PwC analysis (United Nations Population Division (2014))



LANGUAGE SPOKEN IN REGION III



Top Spoken Languages in Pennsylvania		
English	10,773,301	84.4%
Spanish	541,221	4.2%
German	78,148	0.6%
Chinese	48,433	0.3%
Italian	43,948	0.3%

Top Spoken Languages in Virginia		
English	6,508,919	79.5%
Spanish	517,946	6.3%
Korean	56,189	0.6%
Chinese	52,749	0.6%
Vietnamese	47,949	0.5%

Top Spoken Languages in DC		
English	497,255	78.5%
Spanish	47,496	7.49%
African Langs.	9,529	1.5%
French	9,500	1.49%
Chinese	5,164	0.81%

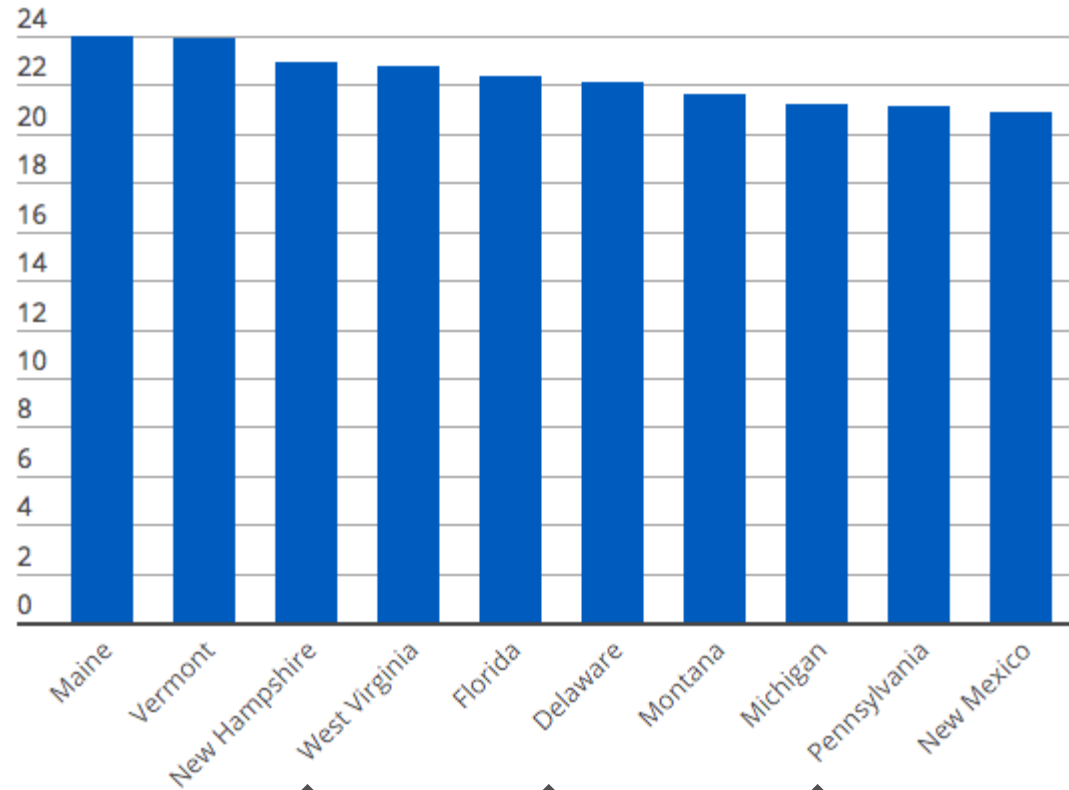
Top Spoken Languages in Maryland		
English	4,587,997	77.9%
Spanish	388,382	6.5%
African Langs.	72,020	1.2%
French	64,758	1.1%
Chinese	64,574	1.1%

Top Spoken Languages in Delaware		
English	751,689	82%
Spanish	59,204	6.46%
Chinese	6,291	0.68%
French	6,264	0.68%
African Langs.	4,115	0.45%

Top Spoken Languages in West Virginia		
English	1,709,300	92.2%
Spanish	17,931	0.97%
German	3,000	0.16%
French	2,941	0.15%
Chinese	2,662	0.14%

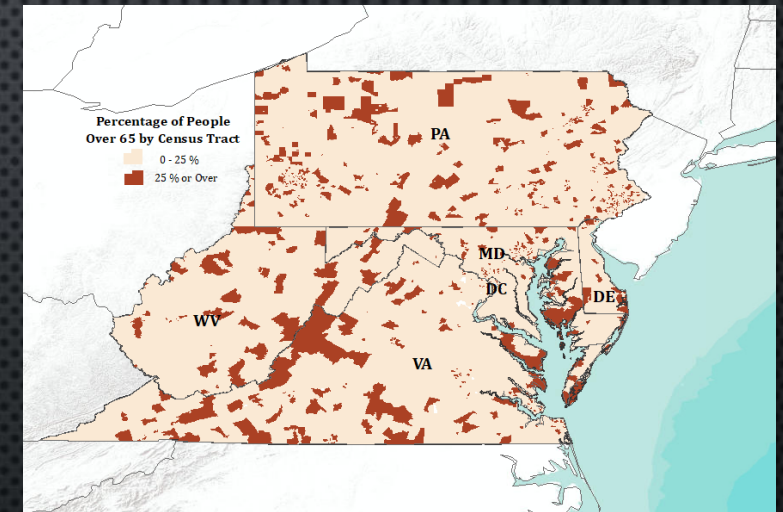
2026 Most Aged States

% of Population Over 65 in 2026 According to Census Bureau Forecast

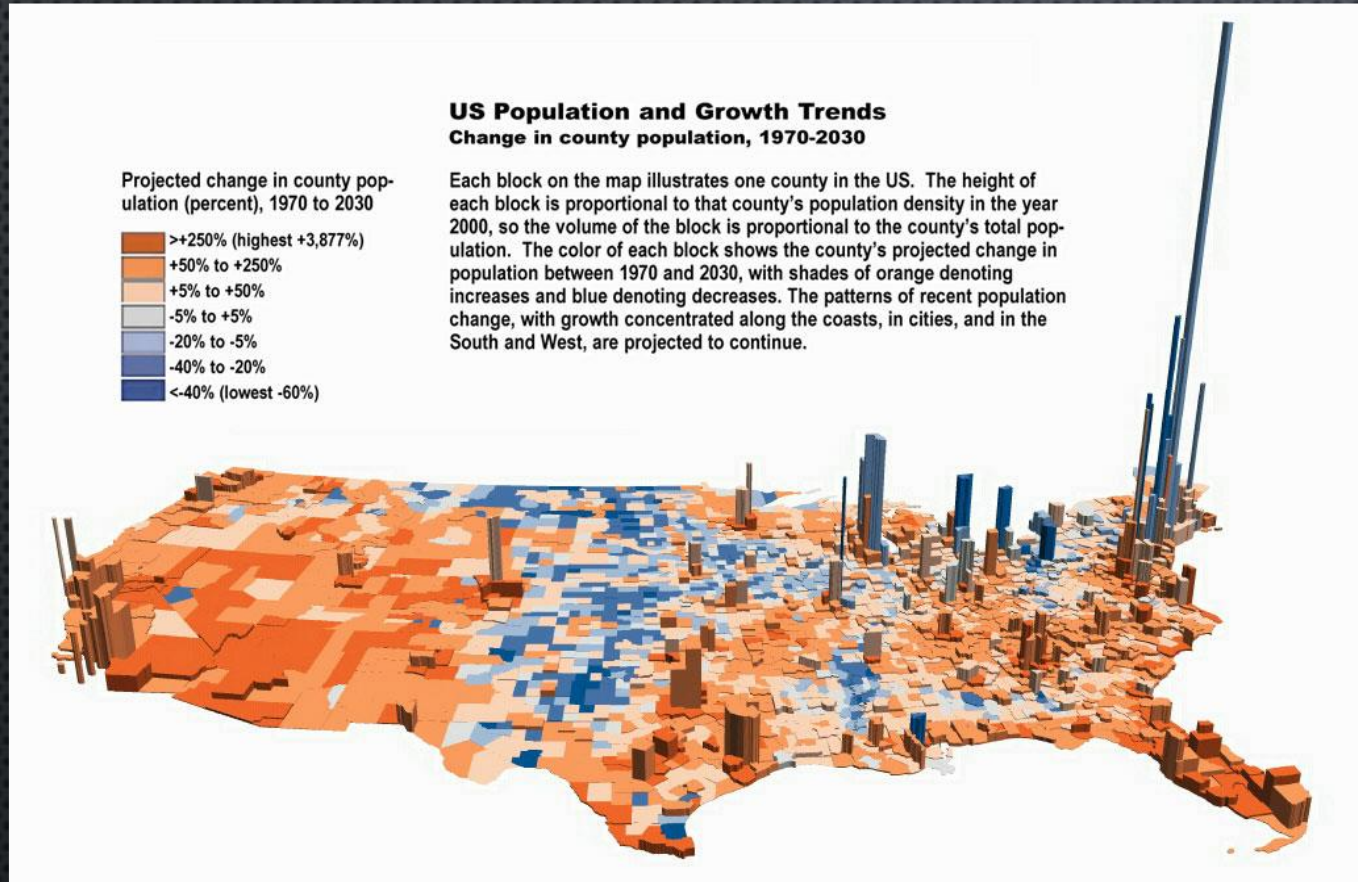


Source: Fitch Ratings, U.S. Census Bureau

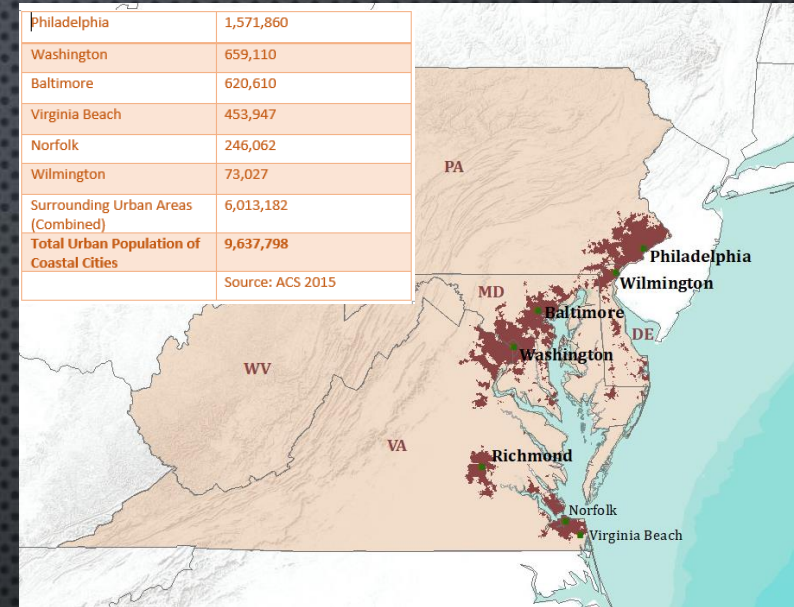
PERCENTAGE OF
PEOPLE OVER THE
AGE OF 65



AMERICANS ARE CONCENTRATING ON COASTS



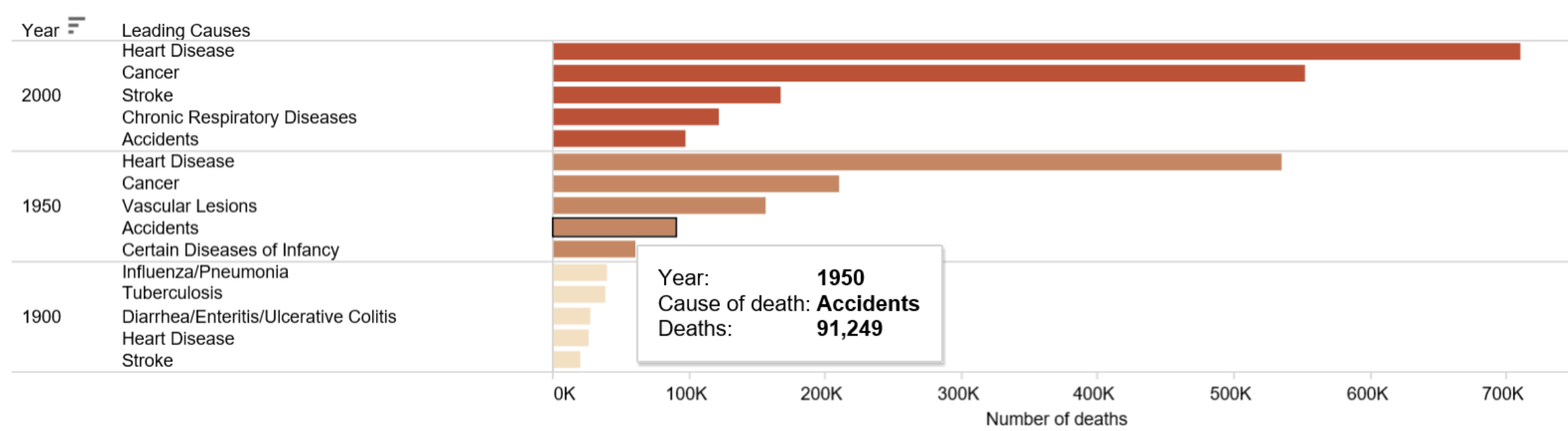
Mean location of the US population has shifted south and southwest



- In 2016, there were more than 3.6 times as many homes in states that border the Gulf of Mexico and the Atlantic Ocean as in 1940, according to the Census Bureau.
- The value of insured property along the Gulf and Atlantic coasts has nearly doubled to \$13 trillion

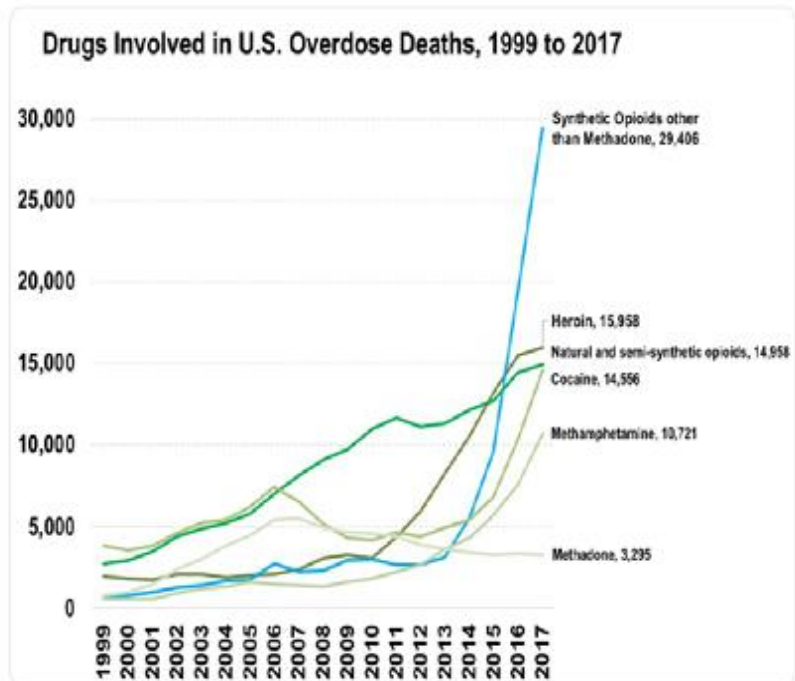
LEADING CAUSES OF DEATH ARE INCREASINGLY DUE TO CHRONIC NON-COMMUNICABLE DISEASES

Five Leading Causes of Death: United States, 1900, 1950, and 2000



NEW HEALTH RISKS CONTINUE TO EMERGE

THE US IS EXPERIENCING AN OPIOID ADDICTION CRISIS



ANTIMICROBIAL RESISTANCE

National Antibiotic Use At A Glance

2006-2007

This map from *Extending the Cure* shows wide disparities in consumption of antibiotics across the United States. Antibiotic overuse is a serious problem because the more these drugs are used, the faster bacteria can become resistant to antibiotics, rendering them useless to fight infections. To find out how your state stacks up on antibiotic use, check out *ResistanceMap* (www.cddep.org/resistancemap), an online interactive tool created by *Extending the Cure* with funding from the Robert Wood Johnson Foundation's Pioneer Portfolio.

ALASKA: LOWEST

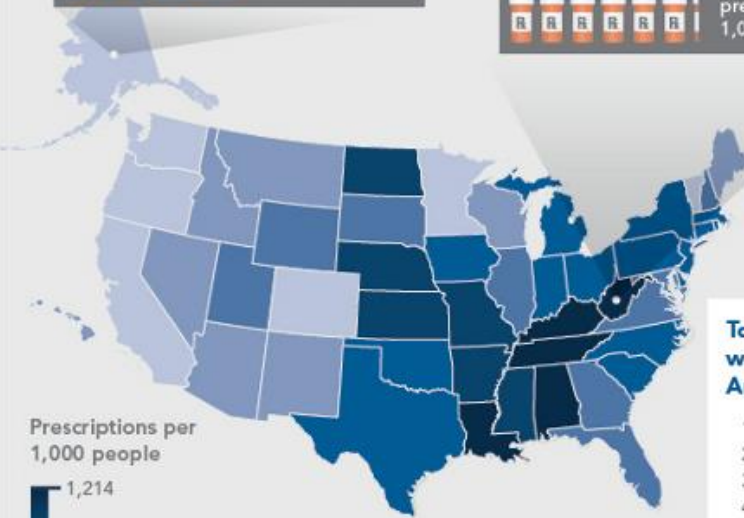


533
prescriptions per
1,000 people

WEST VIRGINIA: HIGHEST



1,214
prescriptions per
1,000 people



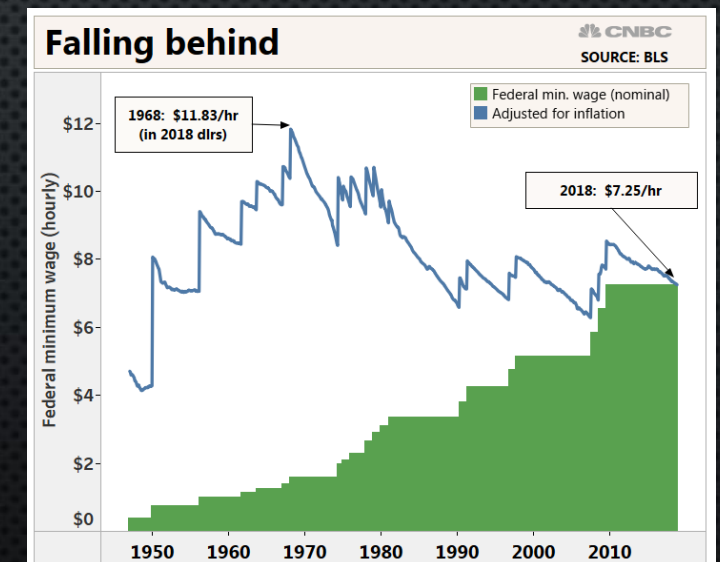
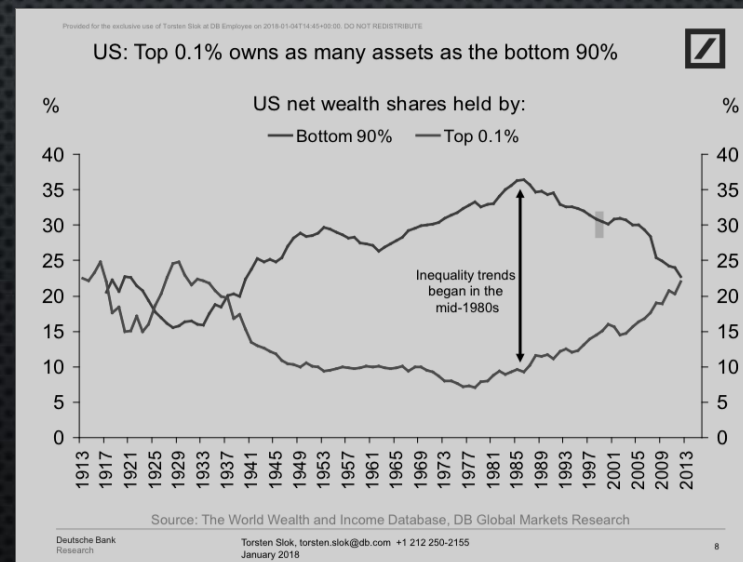
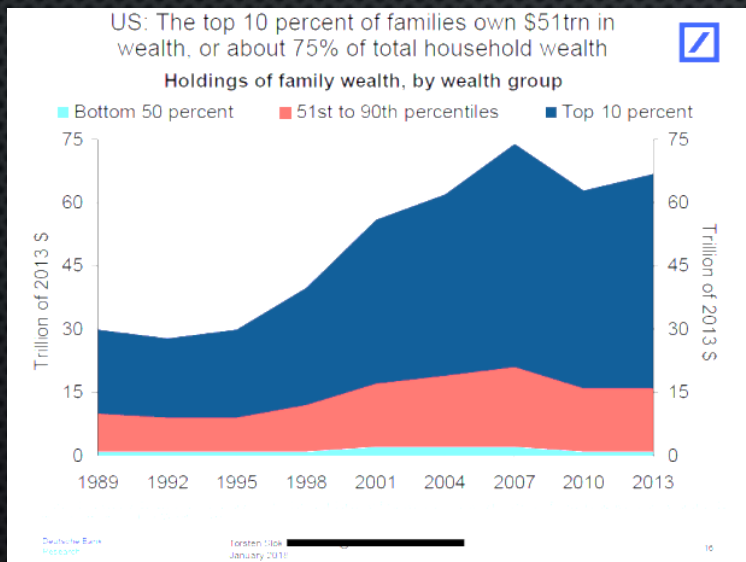
Top 5 States with the Highest Antibiotic Use

1. West Virginia
2. Kentucky
3. Tennessee
4. Louisiana
5. Alabama

Source: Based on data obtained under license from IMS Health Xponent™ (Jan. 2006–Dec. 2007). IMS Health Incorporated. All Rights Reserved. The findings, conclusions, and views expressed do not necessarily reflect those of IMS Health or any of its affiliated or subsidiary entities.

THE ECONOMY IS EVOLVING & WEALTH IS CONCENTRATING

- BETWEEN 2009 AND 2012 THE INCOME OF THE TOP 1% GREW 30% WHILE THE INCOME OF EVERYONE ELSE GREW .5%
- THE TOP 10% OF FAMILIES OWN ABOUT 75% OF TOTAL WEALTH
- THE TOP .1% OWNS AS MANY ASSETS AS THE BOTTOM 90%
- THE U.S. MINIMUM WAGE HIT ITS HIGH IN 1968 AT \$11.83 PER HOUR IN 2018 DOLLARS, AND HAS NOT APPROACHED THAT LEVEL IN DECADES.



INFRASTRUCTURE IS NEGLECTED

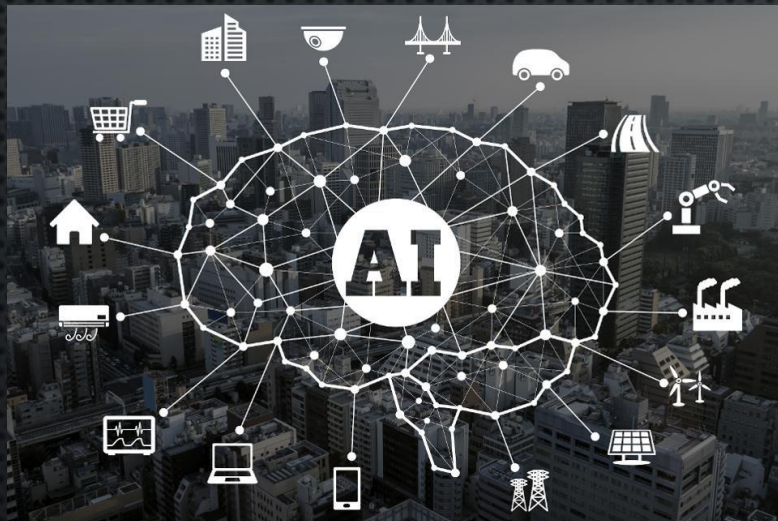
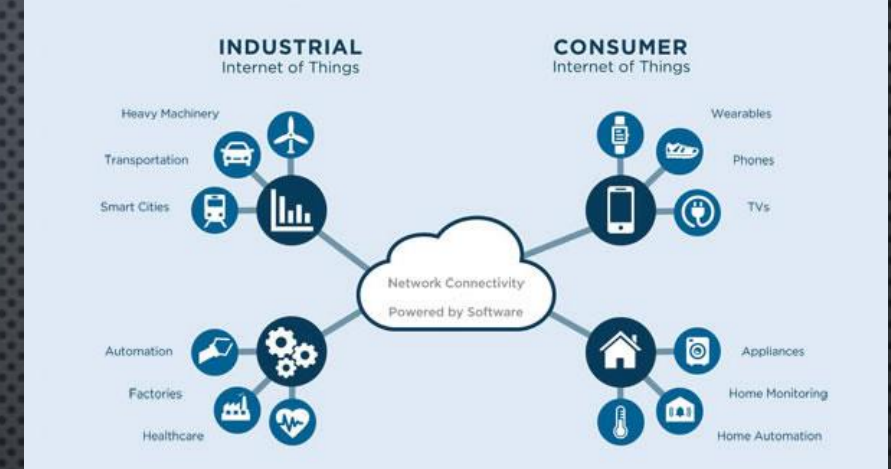


- 1 OUT OF EVERY 11 BRIDGES IN THE US IS STRUCTURALLY DEFICIENT
- AN ESTIMATED INVESTMENT OF \$45 BILLION IS REQUIRED TO RETROFIT EXISTING US DAMS
- PRICE TAG FOR WASTEWATER INFRASTRUCTURE: \$271 BILLION
- STATE AND LOCAL INFRASTRUCTURE SPENDING FELL TO 1.87% OF GDP IN 2017, THE LOWEST POINT SINCE 1948.

State	# of Bridges	2017 # Deficient Bridges	2017 deficient bridges as % of total bridges	2017 Structurally deficient bridges ranked by total # of deficient bridges	% Structurally Deficient Bridges 2017
DC	245	8	3.3%	51	46
DE	879	39	4.4%	49	45
MD	5,335	300	5.6%	39	37
PA	22,215	4173	18.8%	2	5
VA	13,932	825	5.9%	24	35
WV	7,288	1245	17.1%	15	3

Source: American Road & Transportation Builders Association

TECHNOLOGY IS ADVANCING RAPIDLY



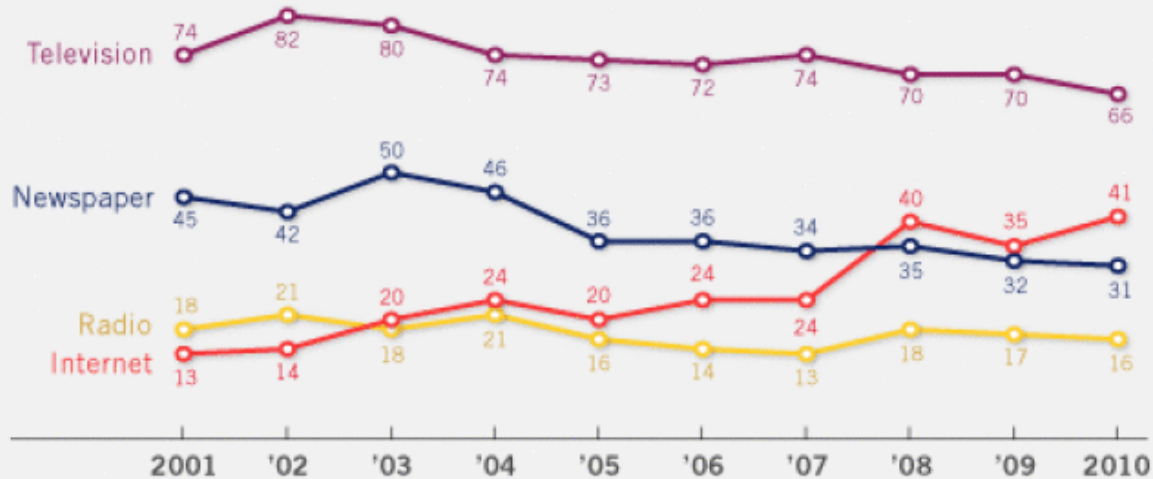
WE LIVE IN A HYPER CONNECTED GLOBALIZED WORLD



INFORMATION CONSUMPTION HAS CHANGED SIGNIFICANTLY

Reliable Sources

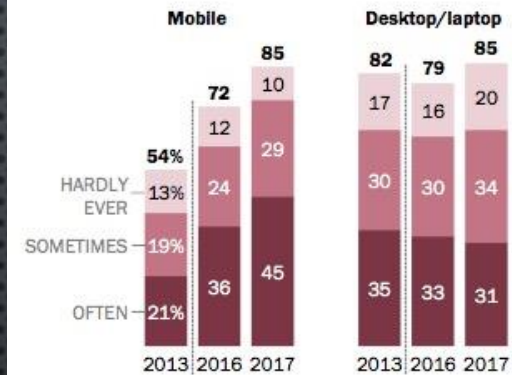
The percentage of Americans who get most of their national and international news from each medium:



Source: Pew Research Center

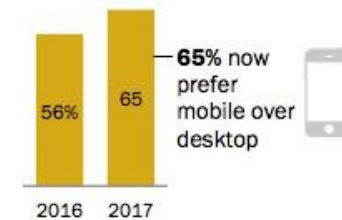
Use of mobile devices for news continues to grow

% of U.S. adults who get news from ...



Of those who get news on both desktop and mobile, most prefer mobile

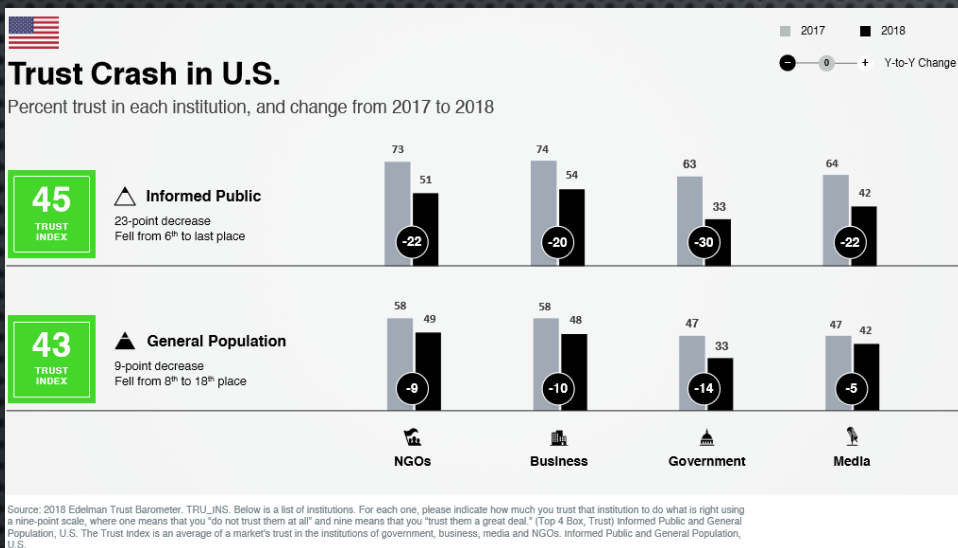
% of those who get news on both desktop and mobile who prefer mobile



Source: Survey conducted March 13-27, 2017.
"Americans' Attitudes About the News Media Deeply Divided Along Partisan Lines"

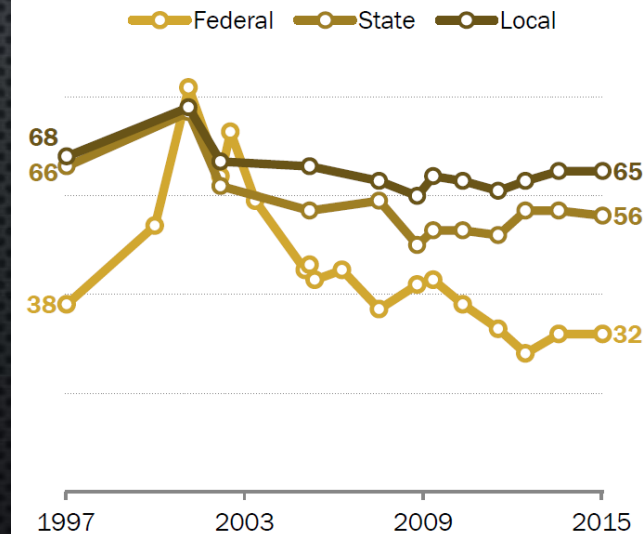
PEW RESEARCH CENTER

WE ARE LESS TRUSTWORTHY OF INSTITUTIONS



Federal government viewed less favorably than state, local governments

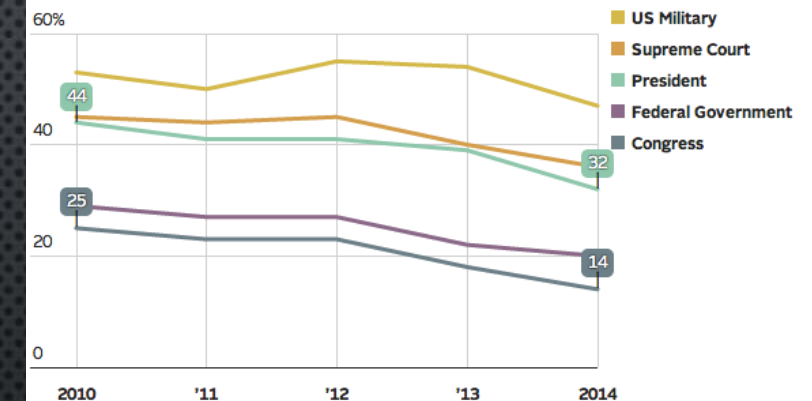
% saying they have a favorable view of ___ govt ...



Survey conducted Oct. 16-20, 2015. Q10.

PEW RESEARCH CENTER

18-29 year olds' trust in US institutions



Source: Institute of Politics, Harvard University

POWER & INFLUENCE OF INDIVIDUALS AND GROUPS IS GROWING



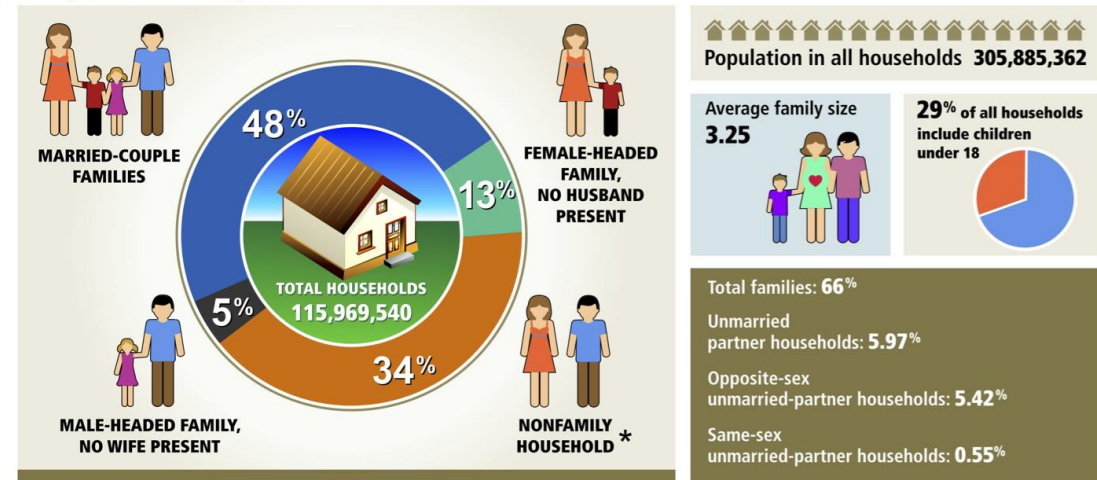
A satellite view of Earth from space, showing the Americas and surrounding oceans. The Earth is a vibrant blue sphere with white clouds and green landmasses. The text "IMPLICATIONS FOR EMERGENCY MANAGEMENT" is overlaid in white, bold, sans-serif capital letters across the center of the image.

IMPLICATIONS FOR EMERGENCY MANAGEMENT

FAMILIES & HOUSEHOLDS

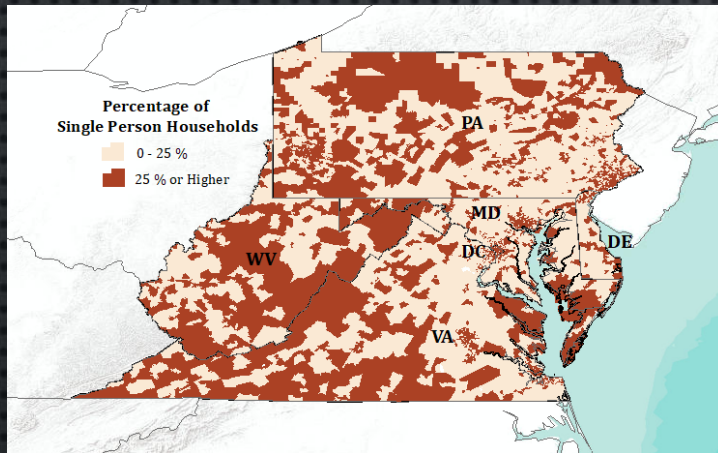
HOUSEHOLDS IN AMERICA

A snapshot of the family in the United States

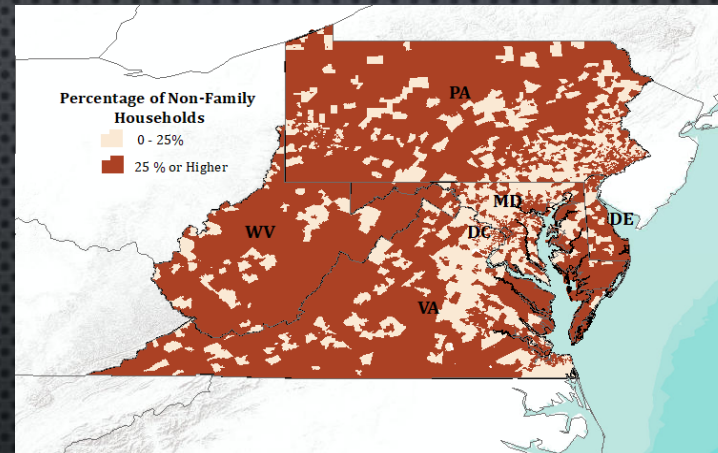


- SMALLER HOUSEHOLDS
- FEWER HOUSEHOLDS WITH CHILDREN
- POTENTIAL INCREASE IN THE NUMBER OF MULTI-GENERATIONAL HOUSEHOLDS
- LIKELY INCREASE IN SINGLE PERSON HOUSEHOLDS

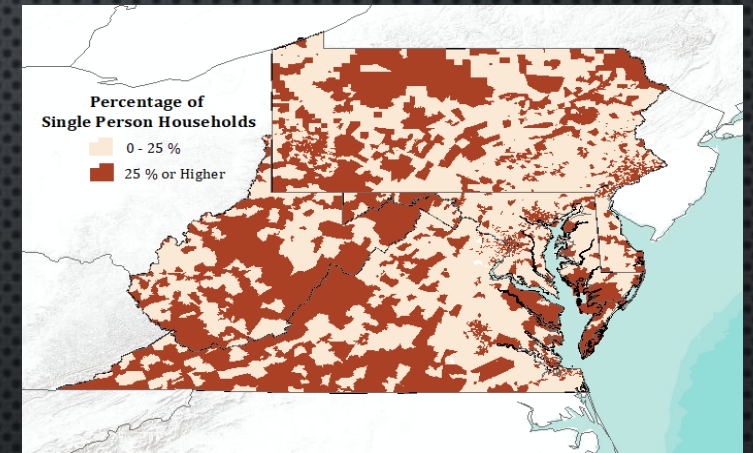
HOUSEHOLD SIZE



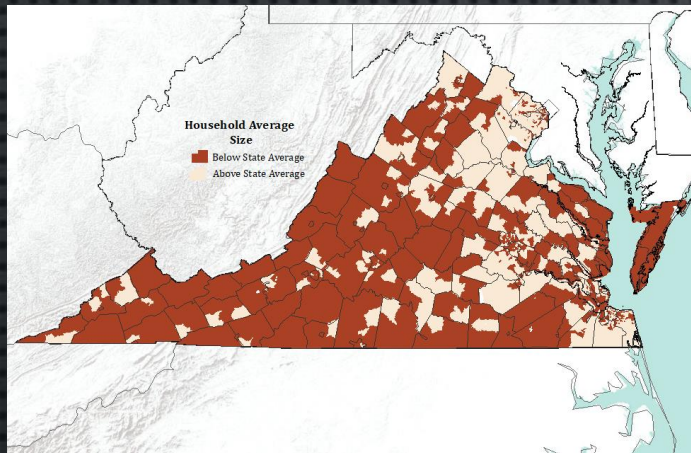
NON-FAMILY HOUSEHOLDS



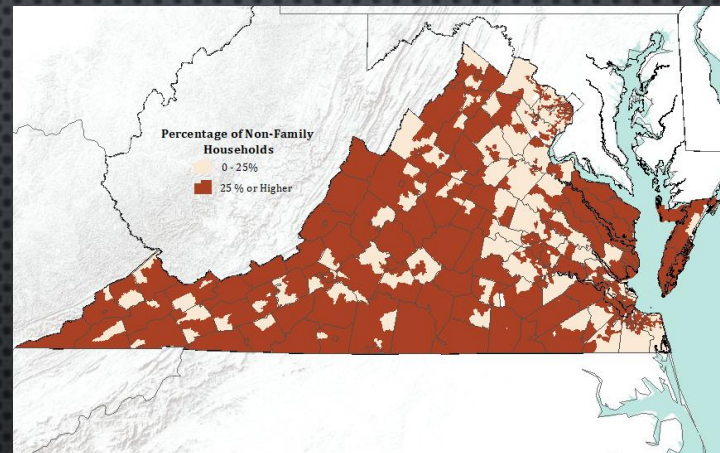
SINGLE PERSON HOUSEHOLDS



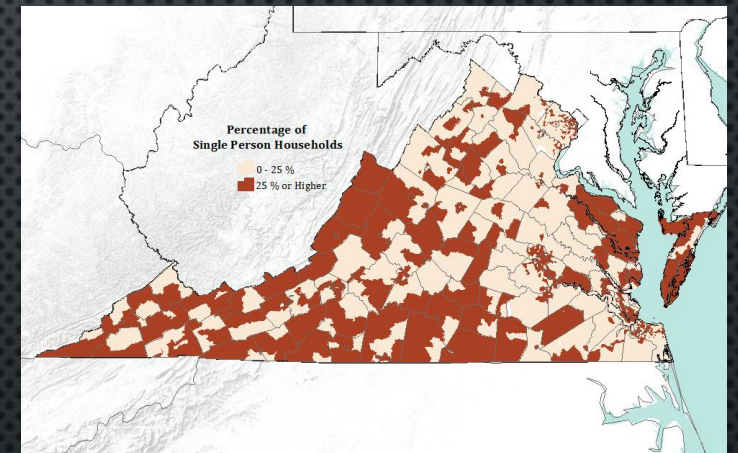
HOUSEHOLD SIZE



NON-FAMILY HOUSEHOLDS



SINGLE PERSON HOUSEHOLDS



HEALTHCARE AND HUMAN SERVICES



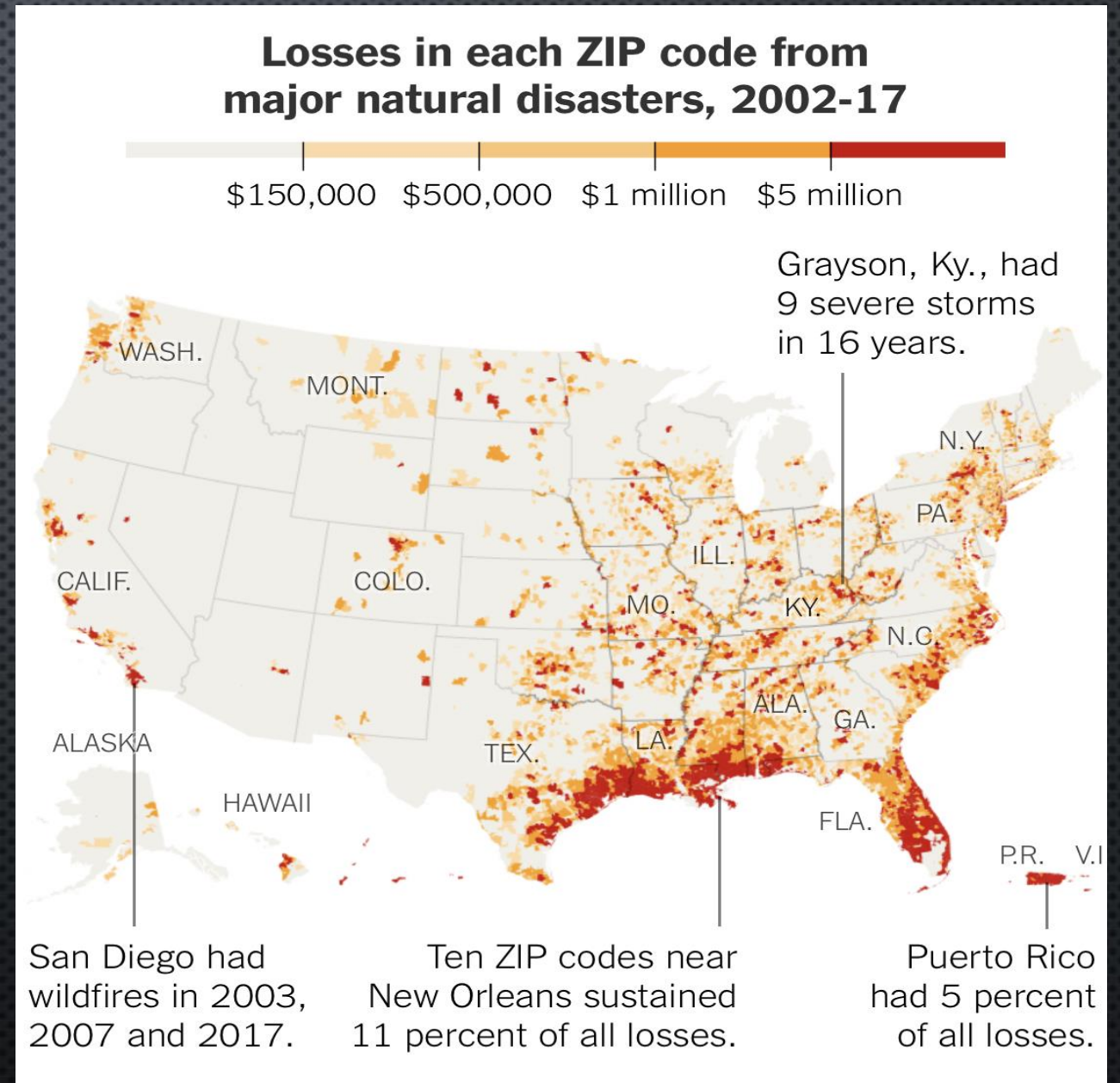
- LIKELY INCREASED DEMAND FOR:
 - HOME HEALTH CARE SERVICES
 - TRANSPORTATION SERVICES
 - ASSISTED LIVING QUARTERS
 - MEDICAL SPECIALISTS FOCUSING ON GERIATRIC NEEDS

ECONOMIC DEVELOPMENT

- POTENTIAL LABOR SHORTAGES FOR SOME BUSINESSES
- MORE OLDER PERSONS IN THE WORKFORCE
- STAGNANT OR LOWER INCOME TAX REVENUES
- MORE PEOPLE LESS ABLE TO AFFORD WHAT WE ASK THEM TO DO TO PREPARE, RESPOND AND RECOVER
- INCREASED DEMAND FOR BUSINESSES TO SERVE AN OLDER POPULATION



ABOUT 90 PERCENT OF THE TOTAL LOSSES ACROSS THE UNITED STATES OCCURRED IN ZIP CODES THAT CONTAIN LESS THAN 20 PERCENT OF THE NATIONAL POPULATION, ACCORDING TO AN ANALYSIS OF DATA FROM THE SMALL BUSINESS ADMINISTRATION.



LARGE SCALE EVENTS REQUIRE FEDERAL FOCUS

FY 2008-2017



Public Assistance



National Flood Insurance Program



Individual Assistance



Hazard Mitigation Grant Program

Past 13 Months



Mission Assignments for Harvey, Irma, Maria & California Wildfires



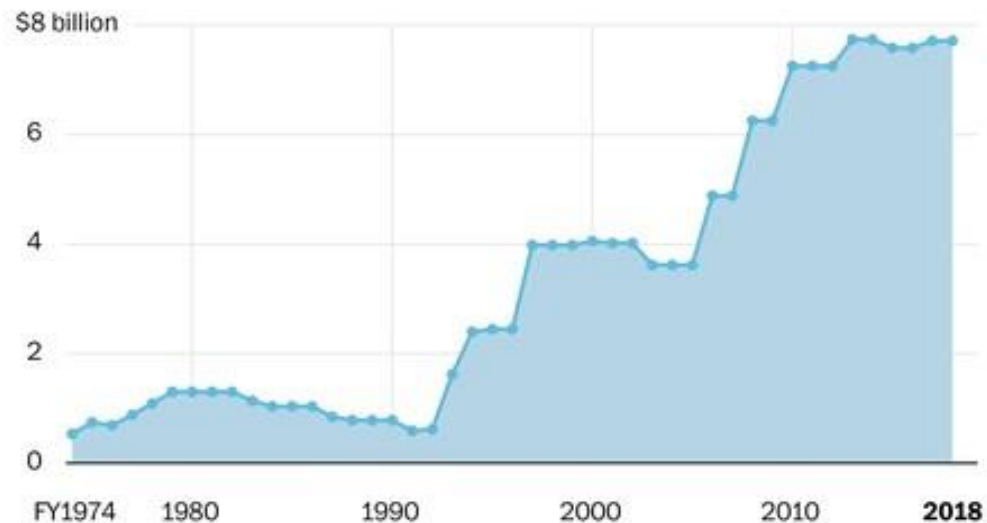
Harvey, Irma, Maria, California Wildfire Supplemental Funding



**Figures do not include multi-year non-disaster grants*

Disaster-relief appropriations, 10-year rolling median

Federal Disaster Relief Fund appropriations, adjusted for inflation; medians are for the decade ending in each fiscal year

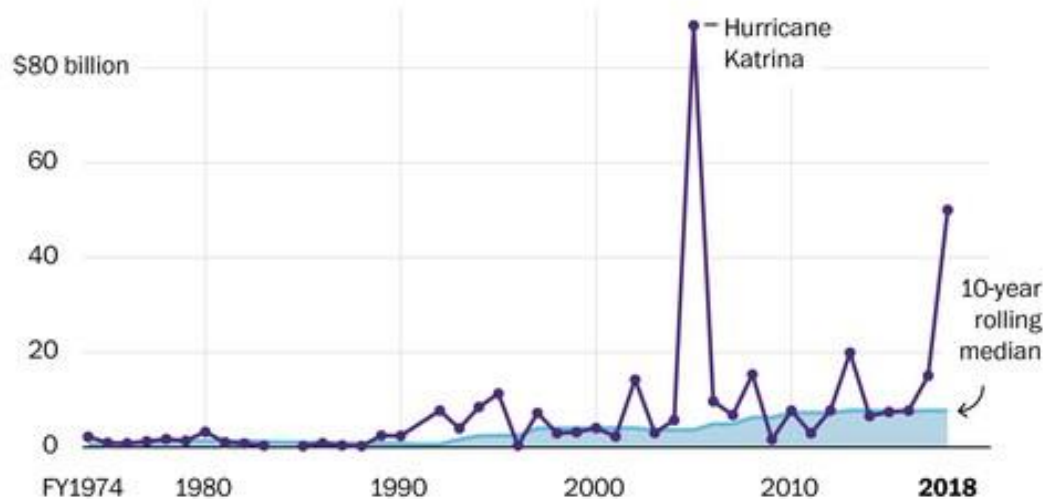


Source: Congressional Research Service; Labor Dept. (inflation)

THE WASHINGTON POST.

Disaster-relief appropriations

Figures are adjusted for inflation and include only the Federal Disaster Relief Fund, which underestimates total federal spending on disaster relief.

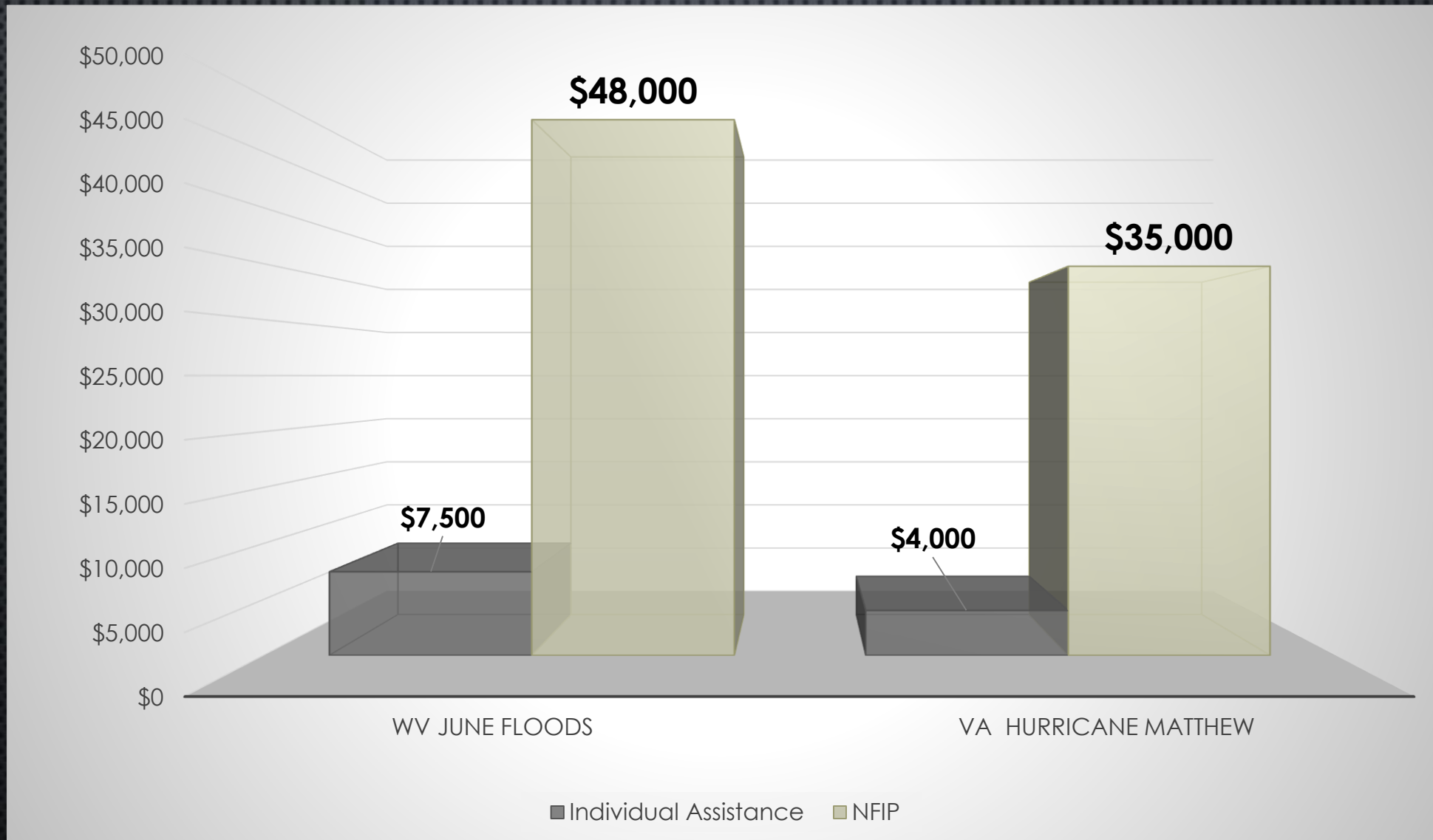


Note: Gaps in the line indicate years without positive spending.

Sources: Congressional Research Service; Labor Dept. (inflation)

THE WASHINGTON POST.

More Money for Insured Survivors



Residential Insurance Policies in Region III

State	SFHA	State
Delaware	42%	5.5%
District of Columbia	33%	1.2%
Virginia	31%	3.4%
Maryland	28%	2.1%
Pennsylvania	16%	0.9%
West Virginia	11%	1.6%
United States	28%	4%

Percent of residential properties in the Special Flood Hazard Area (SFHA) and in the State that have a NFIP policy.

THE OPERATING ENVIRONMENT HAS CHANGED

- INCREASED EMPOWERMENT OF THE INDIVIDUAL
- CHANGES IN COMMUNICATIONS
- RAPID ADVANCES IN TECHNOLOGY
- CHANGING DEFINITION OF COMMUNITY
- CHANGING PERCEPTIONS IN AND TRUST OF INSTITUTIONS



THE OPERATING ENVIRONMENT HAS CHANGED



- INCREASING COMPLEXITY AND DECREASING PREDICTABILITY
- EVOLVING NEEDS OF AT-RISK POPULATIONS
- RESOURCE CONSTRAINTS
- FINANCIAL AND TECHNOLOGICAL ACCESS DISPARITIES
- NON-GOVERNMENT ACTORS WILL PLAY AN INCREASING ROLE



THE EVOLUTION OF EMERGENCY MANAGEMENT

I. BUILD A CULTURE OF PREPAREDNESS



1.1 Incentivize investments that reduce risk, including pre-disaster mitigation, and reduce disaster costs at all levels



1.2 Close the insurance gap



1.3 Help people prepare for disasters



1.4 Better learn from past disasters, improve continuously, and innovate

II. READY THE NATION FOR CATASTROPHIC DISASTERS



2.1 Organize the “BEST” (Build, Empower, Sustain, and Train) scalable and capable incident workforce



2.2 Enhance intergovernmental coordination through FEMA Integration Teams



2.3 Posture FEMA and the whole community to provide life-saving and life-sustaining commodities, equipment, and personnel from all available sources



2.4 Improve continuity and resilient communications capabilities

III. REDUCE THE COMPLEXITY OF FEMA



3.1 Streamline the disaster survivor and grantee experience



3.2 Mature the National Disaster Recovery Framework



3.3 Develop innovative systems and business processes that enable FEMA’s employees to rapidly and effectively deliver the agency’s mission



3.4 Strengthen grants management, increase transparency, and improve data analytics

FEMA Vision:
A prepared and resilient Nation.

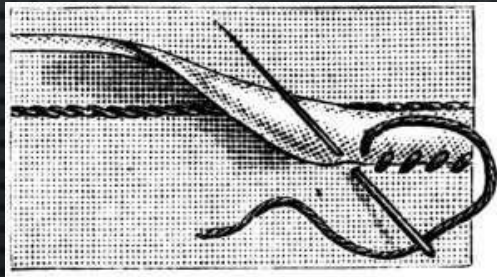


FEMA

ORIENTING YOUR EMERGENCY OPERATION



1. SCAN ENVIRONMENT FOR THREATS/HAZARDS AS EARLY AS POSSIBLE
2. ANALYZE INFORMATION TO UNDERSTAND SCOPE OF THREAT/HAZARD
3. DETERMINE & IMPLEMENT COAs
4. ASSESS COA IMPLEMENTATION & SUSTAIN OPS
5. SET CONDITIONS FOR LONG-TERM RECOVERY & TRANSITION



ORIENTING AROUND RESPONSE LIFELINES

- INDISPENSABLE SERVICE CRITICAL TO HEALTH, SAFETY AND ECONOMIC SECURITY
- ESTABLISH COMMON AREAS OF FOCUS
- AID IN PRIORITIZING, SEQUENCING AND FOCUSING RESPONSE



BEING SUCCESSFUL IN A CHANGING WORLD

- RECOGNIZE HIGH STAKES, HIGH CONSEQUENCES ENVIRONMENT
- CREDIBLE ADVICE FRAMED IN THE CONTEXT OF LEADERSHIP'S STRATEGIC GOALS
 - OFTEN STRATEGIC GOALS ARE NOT NEATLY PACKAGED
 - REVALIDATE
- BE PREPARED FOR OBJECTIVES & OPTIONS BASED DISCUSSIONS TO OCCUR SIMULTANEOUSLY
- DON'T JUST LEARN LESSONS;
INSTITUTIONALIZE LESSONS
- ENVIRONMENT IS HEAVILY NETWORKED
 - BE A CATALYST FOR FACILITATING ACTION
 - INFLUENCE & PERSUASION MOST IMPORTANT TOOLS IN YOUR TOOLBOX
 - CHALLENGE OTHERS TO DO WHAT MUST AND SHOULD BE DONE, AND NOT WHAT IS EASY TO DO.
- BE WILLING TO DRIVE SUCCESS
 - OFTEN YOU MAY BE ONLY ONE WHO CAN
 - THE MORE COMPLEX, THE MORE LIKELY YOU WILL BE NEEDED

AVOID PITFALLS

- RELATIONSHIPS MATTER
 - PUT UP A BIG TENT
- OVERLAPPING AND COMPETING AUTHORITIES TO ACT EXIST AT MULTIPLE LEVELS. IT CAN BE ALMOST IMPOSSIBLE TO DEFINE WHO IS IN CHARGE. OFTEN, NO SINGLE ENTITY IS IN CHARGE.
- MAINTAINING AWARENESS OF EXECUTING ACTIONS AGAINST OBJECTIVES CAN BE CHALLENGING AND MAY NOT OCCUR.
- LET OTHERS HELP YOU BY SHARING INFORMATION
- THERE ARE NO COWBOYS IN EMERGENCY MANAGEMENT
 - LEVERAGING SKILLS AND CAPABILITIES RESULTS IN BETTER AND MORE SUSTAINABLE SOLUTIONS
 - HARNESS THE POWER OF THE INDIVIDUAL
- EXERT LEADERSHIP AND CREATE VENUES AND OPPORTUNITIES FOR STAKEHOLDERS TO DISCUSS ISSUES
 - NUDGE THE SYSTEM TO CREATE AN ENVIRONMENT WHERE THE RIGHT DECISIONS CAN BE MADE AT THE RIGHT TIME WITH THE RIGHT INPUT FROM THE RIGHT STAKEHOLDERS

AVOID PITFALLS

- EXTERNAL AND INTERNAL PRESSURES WILL CREATE AN ENVIRONMENT WHERE 2ND AND 3RD ORDER EFFECTS ARE NOT ROBUSTLY EVALUATED AND CONSIDERED — AVOID THE PLANNING FALLACY AND RECOGNIZE THE INHERENT CHALLENGES IN ACHIEVING RESULTS IN LARGE DIVERSE GROUPS.
 - ONE OF THE HARDEST THINGS YOU DO IS GET EVERYONE ON AND KEEP EVERYONE ON THE SAME PAGE.
- TECHNOLOGY IS A TOOL, NOT A CRUTCH.
- GIVEN LIMITED RESOURCES YOU MUST CHOOSE CAREFULLY AND EXECUTE RELENTLESSLY.
- CLARITY AROUND GOALS AND OBJECTIVES COUPLED WITH A MECHANISM TO MONITOR PROGRESS ARE CRITICAL TO SUCCESS.

PLANS FOR THE THINGS THAT WILL EAT YOUR LUNCH

- LAST MILE OF LOGISTICS
- COOP
- ADMINISTRATIVE ASPECTS OF PUBLIC SECTOR MANAGEMENT
- RESTARTING COMMUNITY LIFELINES AND SERVICES
- COMPLEXITY OF LONG-TERM RECOVERY
 - MULTIPLE FEDERAL FUNDING SOURCES
 - HOUSING



QUESTIONS & DISCUSSION