



Moving from Emergency Mode into the New Normal

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President
High-Ground Cyber



When We Last Left Our Heroes...

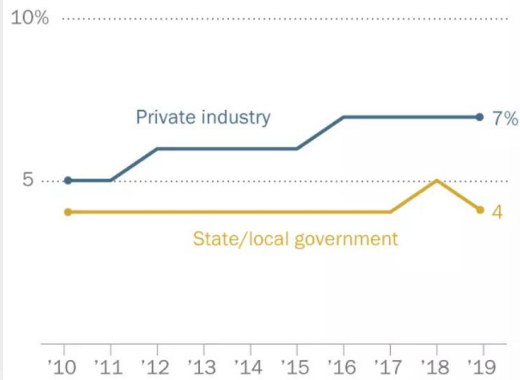
6.30.2020



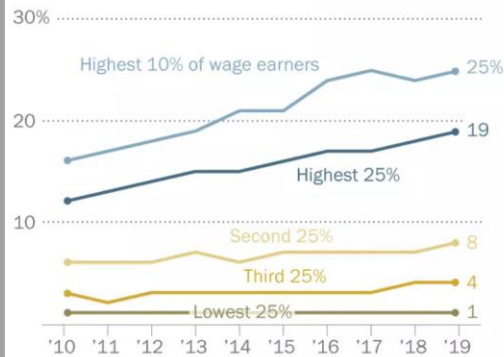
Remote Workers Prior To COVID-19 – 6.30.2020

Not many Americans can work remotely...

Share of U.S. workers in _____ with access to "flexible workplace" (telework) benefit



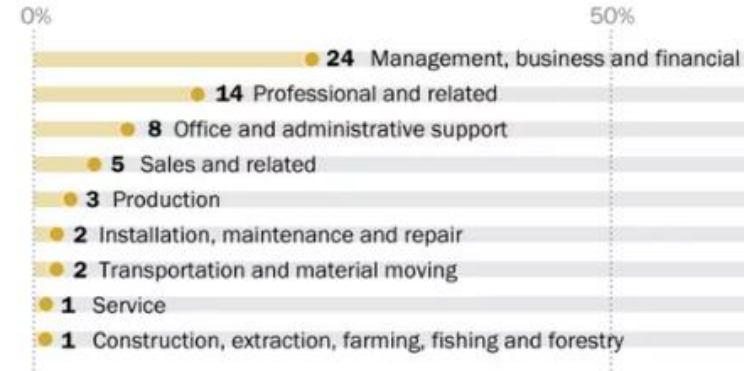
Share of U.S. private-sector workers with access to telework, by average wage level



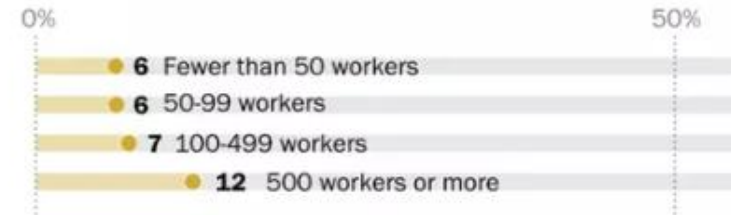
Source: 2019 National Compensation Survey, U.S. Bureau of Labor Statistics.

PEW RESEARCH CENTER

In 2019, by selected occupational groups



In 2019, by number of employees











Infrastructure Support for Remote Workers has been traditionally limited due to the small population of users allowed to use the Tele-presence due to high cost per person.



Moving From Emergency Mode To The “New Normal” – 6.30.2020

Regardless, results from numerous studies looking into employees who work from home don't lie. Let's take a look at more working from home statistics related to productivity.

-  65% of workers said they would be more productive in a home office than in a traditional office space. — **FlexJobs**
-  75% of people say they are more productive working remotely due to fewer distractions. — **FlexJobs**
-  77% of millennials report that flexible work would make them more productive. — **Regus**
-  Nearly 2 in 3 survey respondents who work remotely say they are more productive now than when they worked onsite at a company. — **SHRM**
-  62% of remote workers say they're afraid that their onsite colleagues don't think they are working as hard as them. — **SHRM**
-  Around 69% of workers believe technology has made them more productive, but nearly 25% believe technology will replace them in their jobs; and 83% of workers use technology to collaborate in real time, but 78% said technical problems disrupt the collaborative experience. — **HR Dive**
-  83% of employees feel they do not need an office to be productive. — **Fuze**
-  Two-thirds of employers report increased productivity for remote workers compared to in-office workers. — **TECLA**



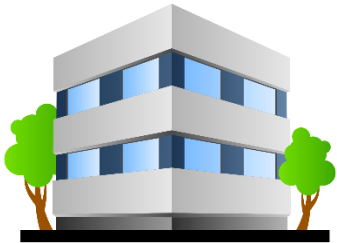
83%



Of Employees feel they do not need to go to an office environment to be productive.



Moving From Emergency Mode To The “New Normal” – 6.30.2020



Investment Groups and Fund Managers are shifting capital away from real estate dependent companies to those with a robust remote worker capability which is reshaping companies market valuation.

-JP Morgan Analyst



*The shift of
knowledge work
from
offices to home offices
represents the
Single Greatest*

INCREASE

Of The
Cyber Attack Surface
In History!



The Two Schools Of Thought On Threat Intelligence



Businesses Closed



*Explosive growth
at*

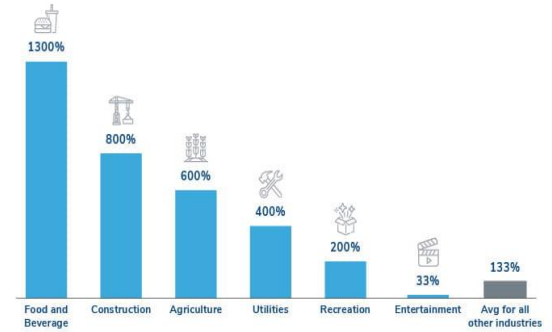
amazon



Industries “Allowed” to Operate

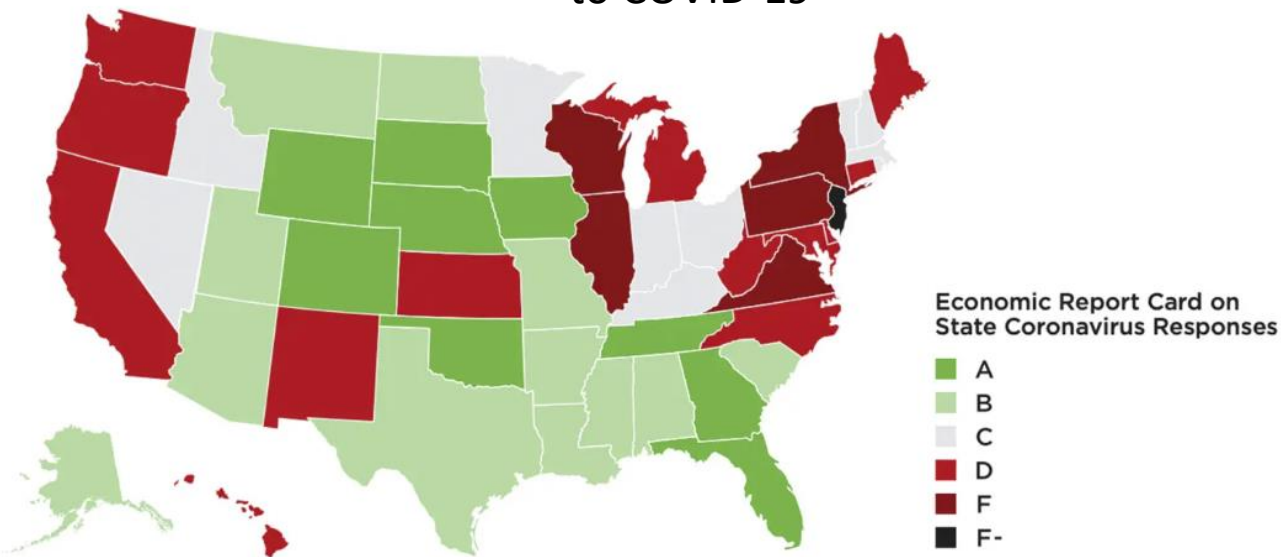


PERCENTAGE GROWTH IN 2020 DATA BREACHES COMPARED TO 2019



Largest A/B Test in US Political History

National Bureau of Economic Research A Final Report Card on the States' Response to COVID-19



Phil Kerpen, Stephen Moore, and Casey B. Mulligan
NBER Working Paper No. 29928 April 2022 JEL No. E01, I18, J28 A

Overall, the bottom 10 on the study's "report card" were dominated by states that had the most severe pandemic lockdowns and were among the last to finally reopen schools.

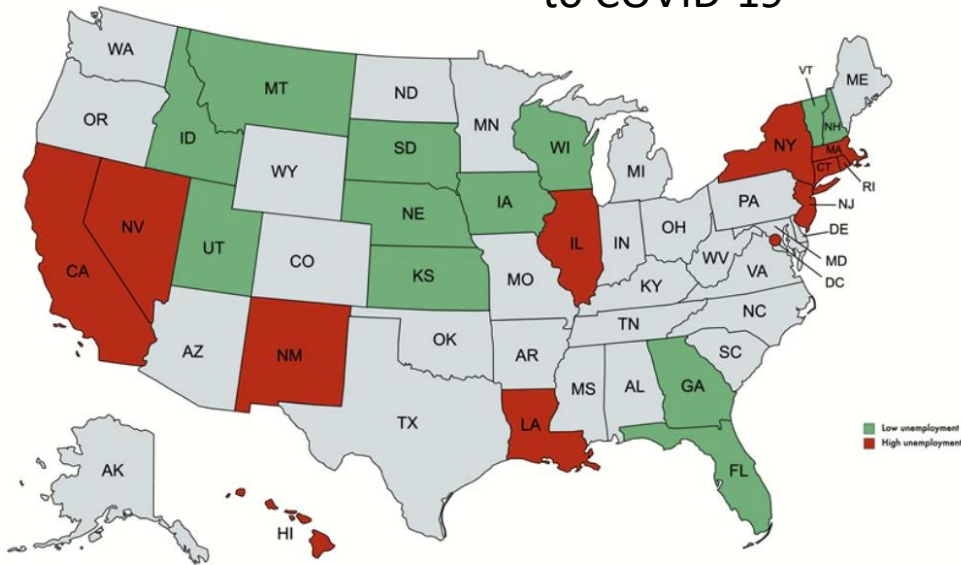
"Shutting down their economies and schools was by far the biggest mistake governors and state officials made during COVID,"

-Stephen Moore, one of the study's authors.



Largest A/B Test in US Political History

National Bureau of Economic Research
A Final Report Card on the States' Response
to COVID-19



**“Open States” Faring Far Better
Than Lockdown States in
Unemployment Stats**

*The results are in and they overwhelmingly
vindicate the Open states over the
authoritarian “lockdown” experiments.*

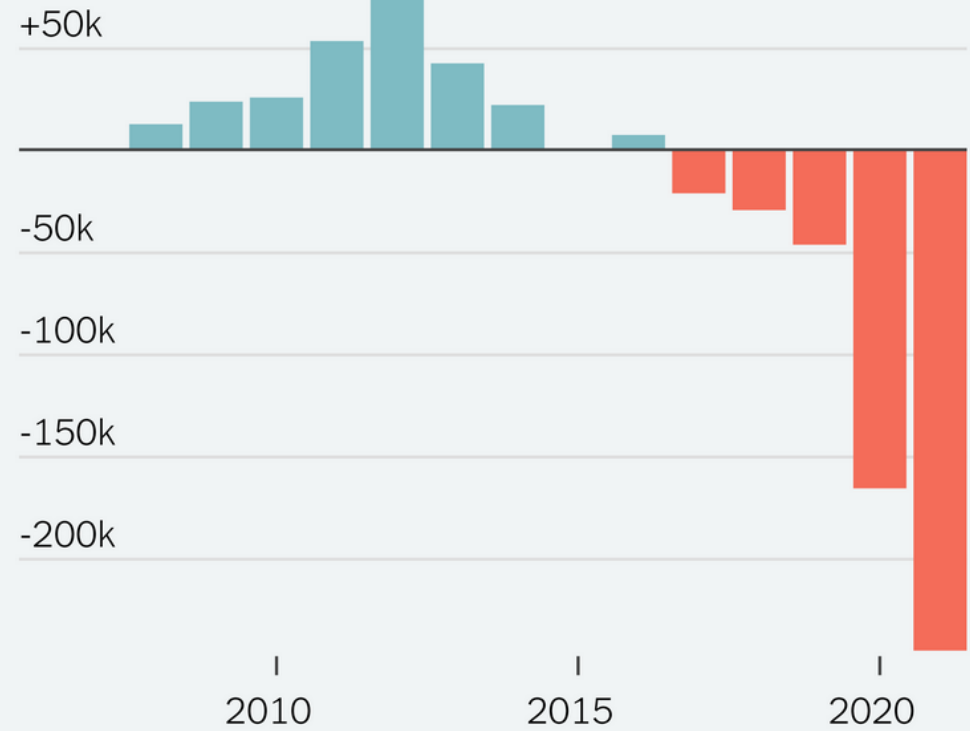
■ Low
Unemployment
■ High Unemployment



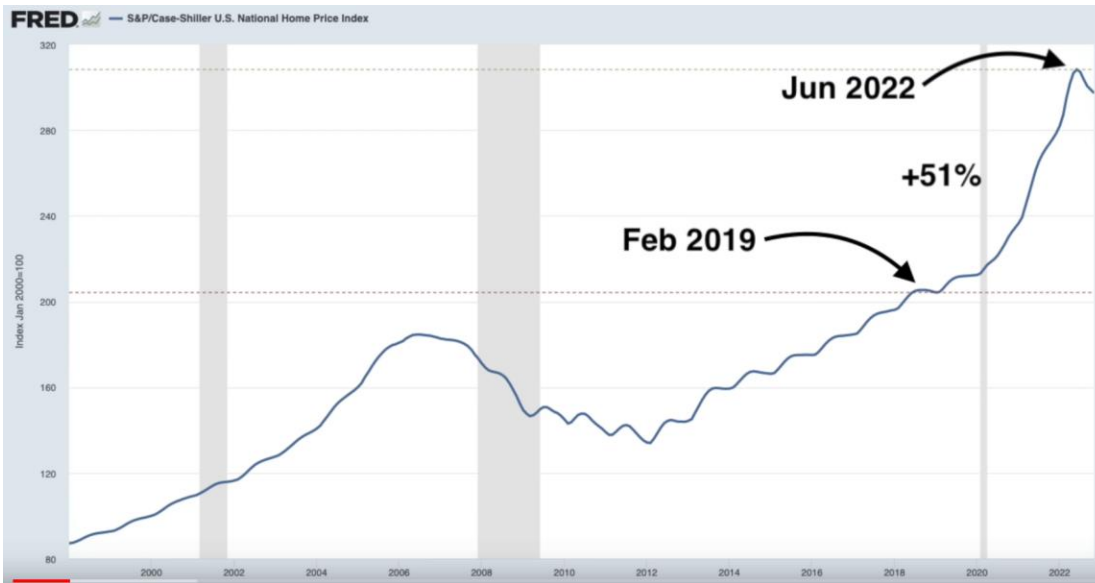
People Began to Vote With Their Feet

Net migration of college-educated workers in America's **12 most expensive major metro areas**

We saw the first massive migration of young well college educated workers out of the Urban centers for the first time in 25 years.



Everyone Has To Buy A House Right Now



51%



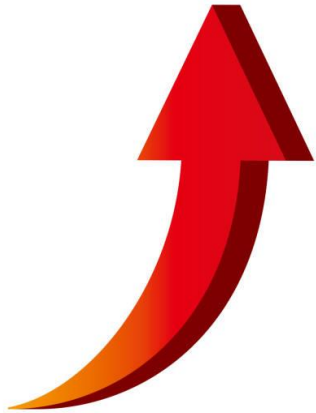
Unprecedented rise in home prices as people fled urban living for suburban and rural lifestyles with more square footage, yards and less restrictions.



Everyone Has To Buy A House Right Now

Massive Spike
in

Wire Transfer Fraud



51%



Unprecedented rise in home prices as people fled urban living for suburban and rural lifestyles with more square footage, yards and less restrictions.

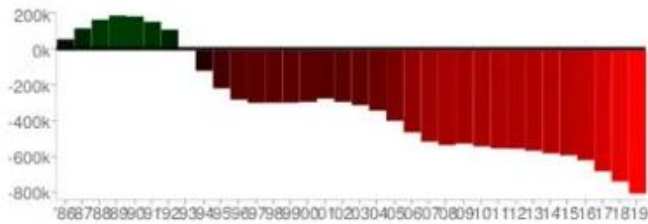


People Began to Vote With Their Feet

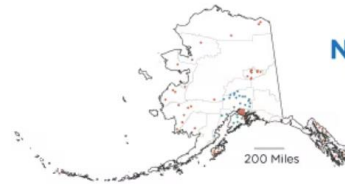
wealth mode

California
Lost 844,497 people

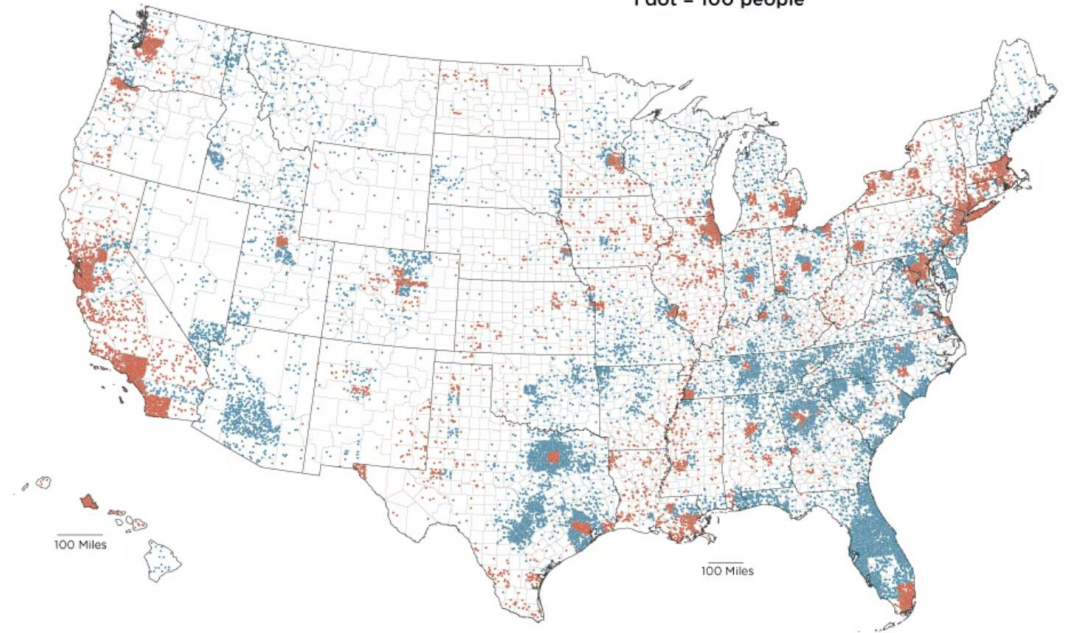
Population Migration 1985-2019



Net Domestic Migration by County: 2021-2022



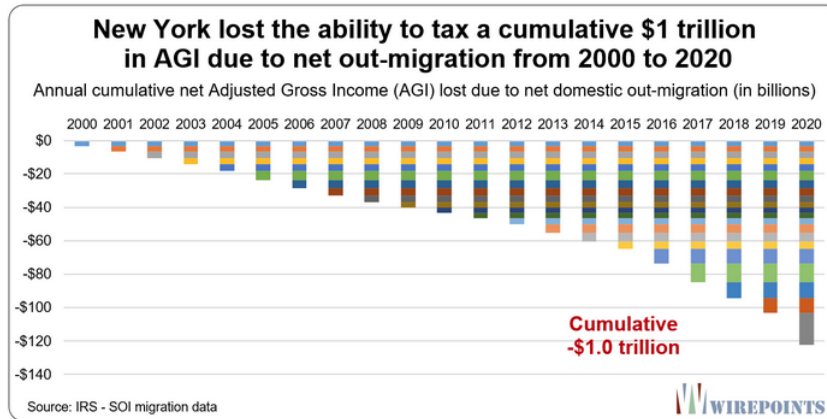
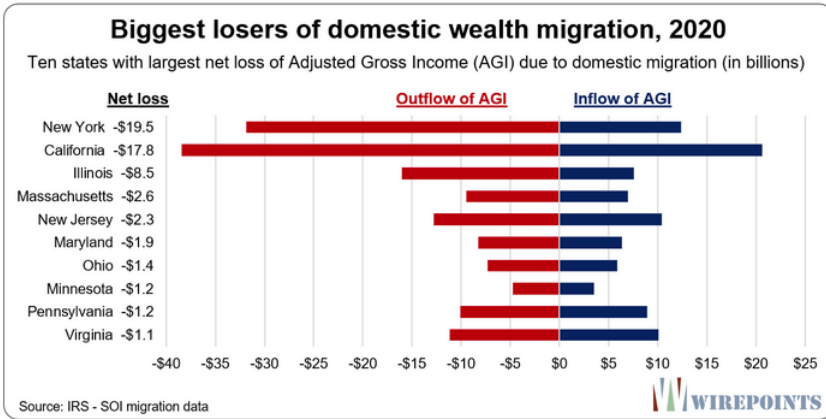
- Positive net domestic migration
 - Negative net domestic migration
- 1 dot = 100 people



Source: U.S. Census Bureau, Vintage 2022 Population Estimates.



People Began to Vote With Their Feet



Who's On the Move?

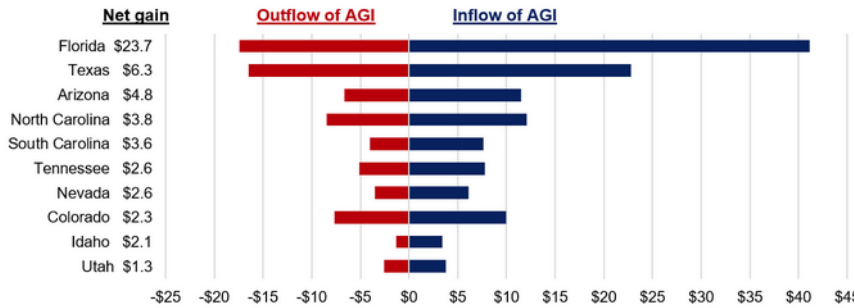
250K to 500K
AGI earners



People Began to Vote With Their Feet

Biggest winners of domestic wealth migration, 2020

Ten states with largest net gain of Adjusted Gross Income (AGI) due to domestic migration (in billions)

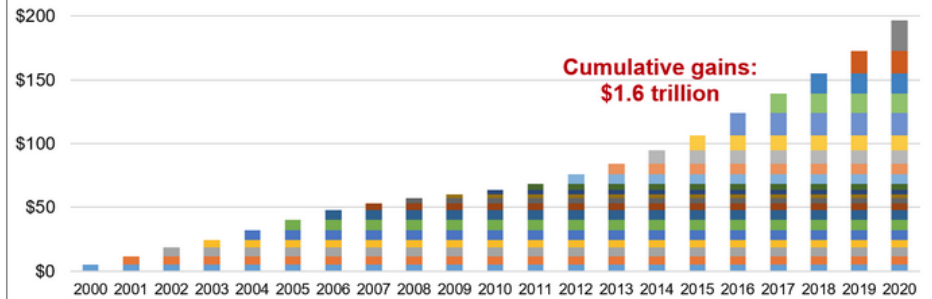


Source: IRS - SOI migration data



Florida gained the ability to tax a cumulative \$1.6 trillion in AGI due to net in-migration from 2000 to 2020

Annual cumulative net Adjusted Gross Income (AGI) gained due to net domestic in-migration (in billions)

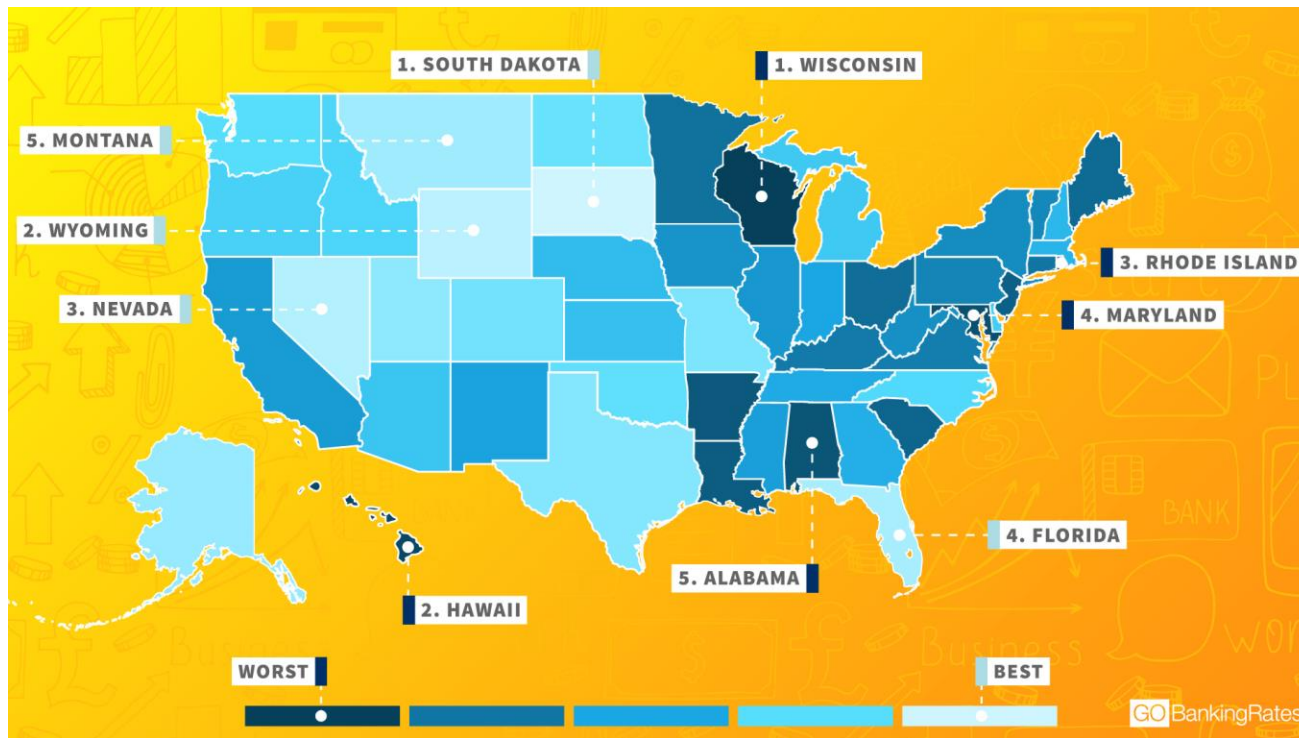


Source: IRS - SOI migration data



What are These People Doing After They Move?

Starting Businesses.



2020

4.4 Million
new businesses

2021

5.4 Million
new businesses

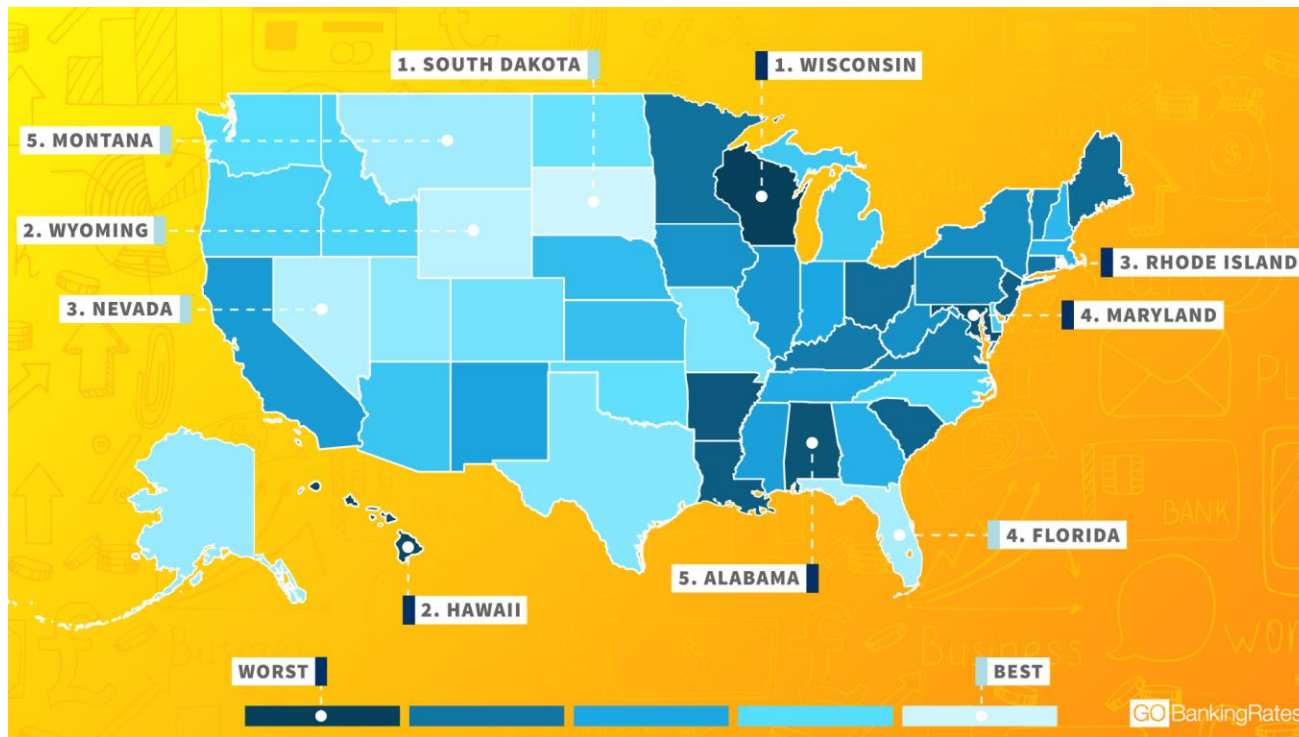
2022

5.0 Million
new businesses



What are These People Doing After They Move?

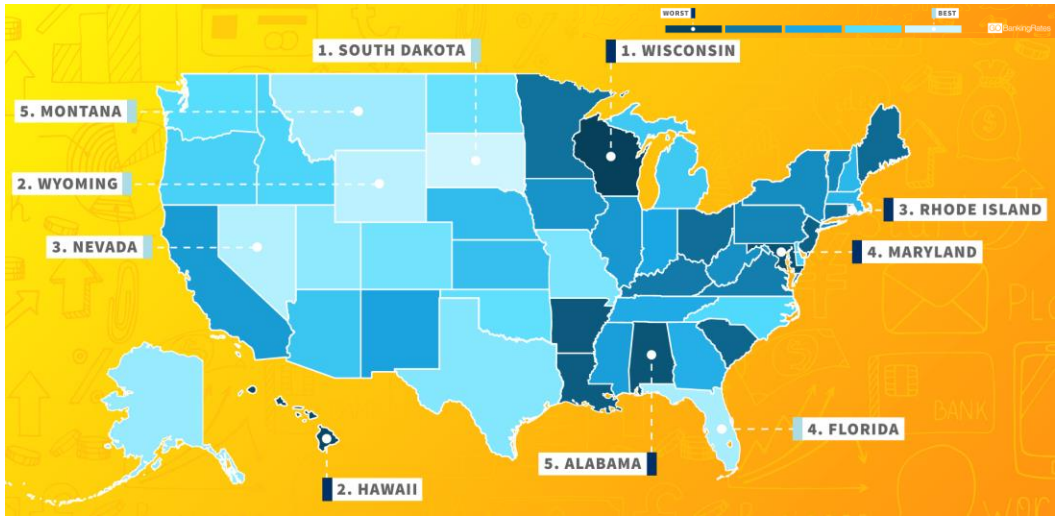
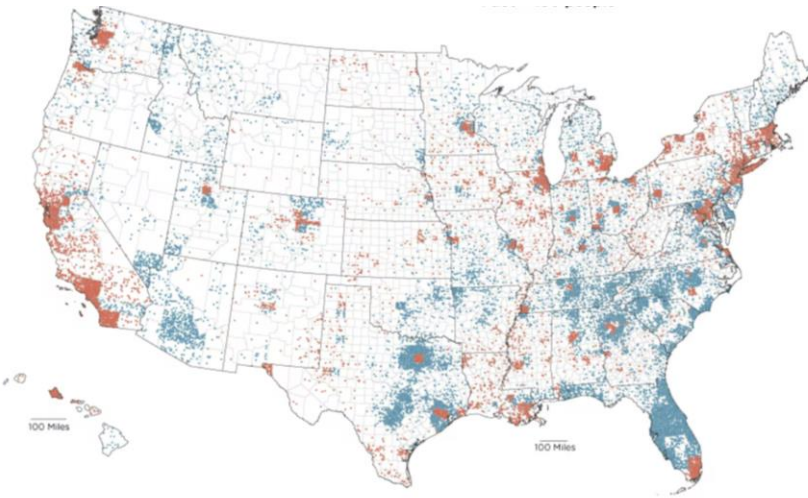
Starting Businesses.



The Small & Mid Market Business in the United States account for 50% of all Cybersecurity related Financial Losses.

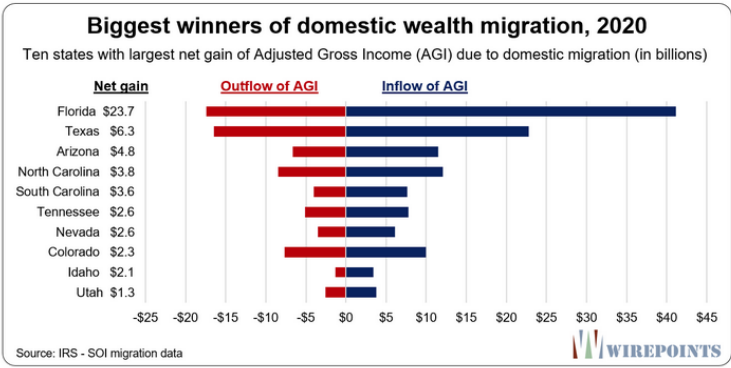


Please Note the High Correlation

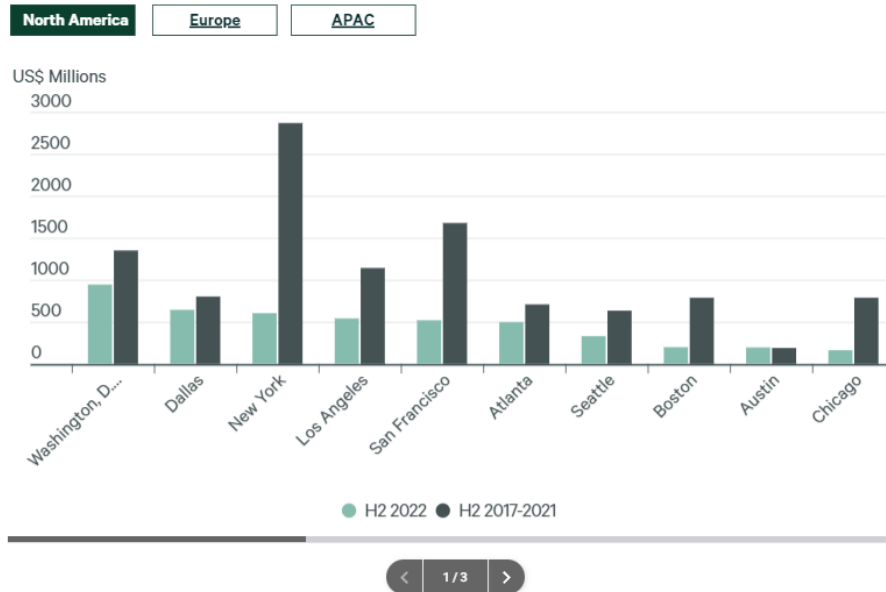


Source: U.S. Census Bureau, Vintage 2022 Population Estimates.

People with high AGI, are moving in large quantities to states that are more friendly to Small Business and they are landing in more rural areas.



Are We Going Back To The Office – NO!



There has been a noticeable drop in cross-regional investment volume to the North American office sector, largely due to still-prevalent hybrid working patterns causing less occupier demand. In the five years leading up to the COVID pandemic, 46% of cross-regional flows to North America targeted office assets. In H2 2022, this share dropped to 29%.

CBRE Global Commercial Real Estate Capital Flows report states that

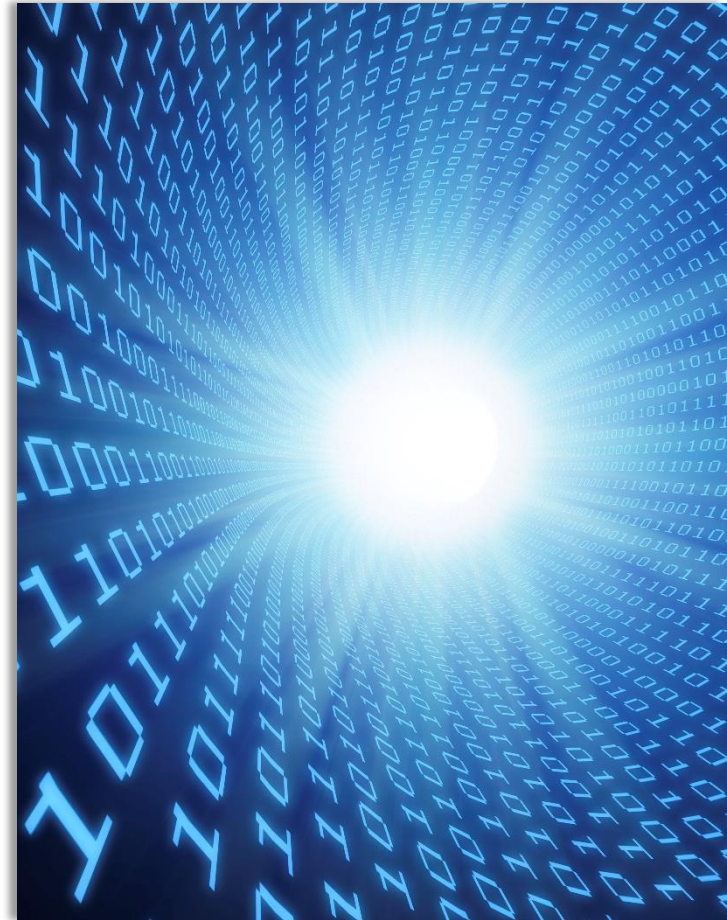
Investors withdrew \$25.6 Billion in assets in 2022.

2023 is on a pace to exceed that level of Capital Flight.



What Does This Mean For The Future Of Cyber?

- **Small Business** as a battle ground will grow exponentially.
- **Chat GPT** and normative AI will be exploited before it can be harnessed for productive purposes.
- The convergence of **Operational Technology & Information Technology** is the single greatest threat to our National Security and NOBODY is paying attention.



Rise of Chat GPT

ChatGPT Sprints to One Million Users

Time it took for selected online services to reach one million users



* one million backers ** one million nights booked *** one million downloads
Source: Company announcements via Business Insider/LinkedIn



statista



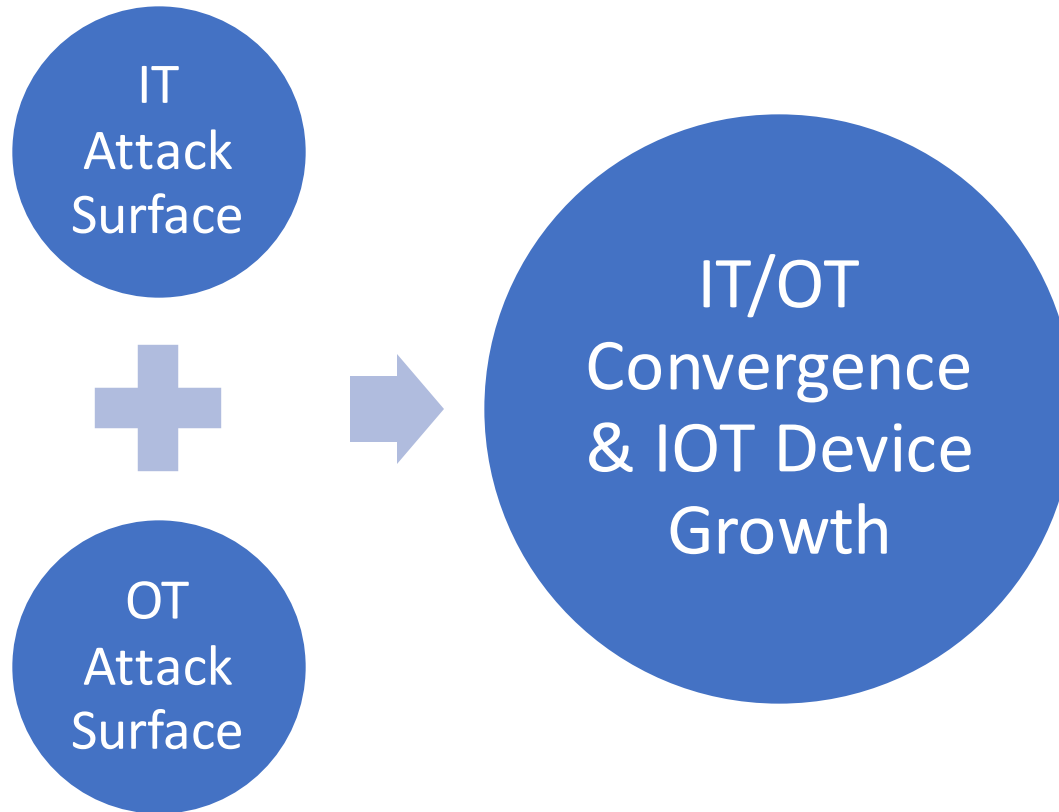
ChatGPT

2022
5 Days

To Reach
1 Million Users



IT \ OT Convergence And The Explosive Growth Of IOT



IT / OT Attack Surface

The biggest threat to OT is its convergence with traditional IT Systems and the explosive growth of the Internet of Things (IOT) devices that are integrated into ICS & OT networks.

IT Attack Surface has traditionally been targeted by cyber criminals for economic exploitation.

OT Attack Surface has traditionally been attacked by more sophisticated Nation State APT.



IT \ OT Threat Actors and Attack Volume

IT / OT Threat Actors

CONTI GROUP has increased monthly targets from 43 to over 100 with an average payout rate of 50% with an average cost of \$700K. The US Cyber Ops have placed a \$10M bounty on the leaders.

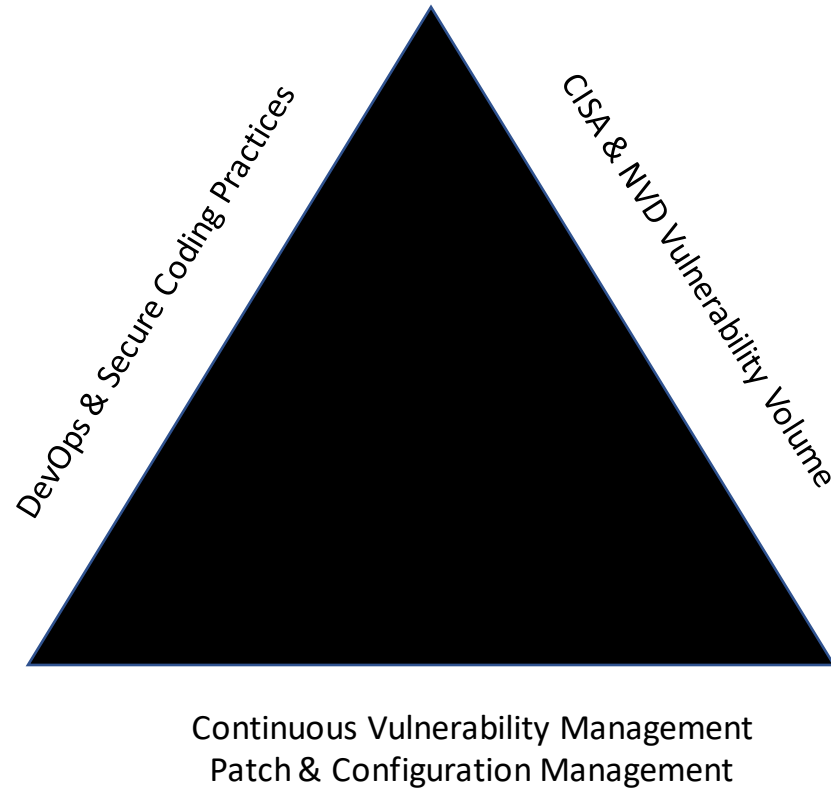
Berserker Bear targets critical Infrastructure in Energy, Transportation, Distribution, & Manufacturing.

Lazarus Group is primarily targeting energy sector in US, Canada, & Japan/

*APT 36 (Cisco Talos Group)
Primarily targets Indian owned companies and government agencies.
Use Office Docs & .Net to retrieve and run RATS*



IT / OT Security Issues = The Devils Triangle



The Devils Triangle

The DevOps & DevSec practices used by most ICS & OT Programmers is rudimentary at best. Audits reveal that most OT developers repurpose open source code in “cut & paste” and never do OWASP style testing. Most OT Dev Teams don’t even use central repositories or code hashing.

Over 80% of the OT Networks lack the CVM & and patch management systems that are common in IT Environments.

The result of the first two bullet points is that over 72% of the CISA critical vulnerabilities that result in network compromise are for ICS & OT Networks\Appliances.



What Does This Mean For The Future Of Cyber?

**If We Innovate And Collaborate
We Have A Once In A Generation
Opportunity To Set The Table
For A Totally New Future.**



Thanks for you're your time

Questions

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