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Draper Innovation Index US Quarterly Review Executive Summary-- Q3 2022

DII US Q3 2022 Key Takeaways

1. ***States with beneficial regulatory environments and business friendly policies see impressive gains***

Florida (1st), **Texas** (2nd) and **Utah** (3rd) take the top spots in the Q3 2022 Draper Innovation Index US (DII US) update. Business-friendly tax-rates, supportive small business and investor policies, and strong entrepreneurial and innovation support environments all helped push these states to the top of the rankings. Other states benefitting from emphasizing improving business climates include **Colorado**, **North Carolina**, **Arizona**, **Delaware**, and **Georgia**.

2. ***States need more than tech and innovation to be successful and attractive to entrepreneurs***

California fell from 11th to 14thin the overall rankings despite finishing 1st in IT Infrastructure. Similarly, **Massachusetts** dropped from 5th to 16th despite finishing 1st in Tech Workforce. California was dragged lower in the overall rankings due to finishing last in Small Business Environment and 48th in Tax Environment; Massachusetts ranked 44th in Small Business, 40th in Entrepreneurship and 34th in Tax Environment.

3. **As exemplified by changes in the DII US Top 10 rankings, post-COVID competition between states is volatile and intensifying**

The competition between states for entrepreneurs, talent, emerging industries, and venture capital investors is exhibiting increased competition. The pandemic served to shift traditional labor trends and has resulted in dramatic migration shifts in the U.S. as entrepreneurs are no longer geographically tethered to either their place of work or traditional entrepreneurial "hotspots". As such, states have had to rethink traditional economic policy operational practices and reinvent products and services to better appeal to shifting social, economic, regulatory, and technological preferences. These trends will continue to transform start-up markets across the nation, as evidenced by the ascent of **Utah**, **Colorado**, **North Carolina**, **Arizona**, and **Georgia** in the latest rankings

4. ***Entrepreneurs, Investors, and Tech Talent in a Post-COVID economy – A Whole New Ballgame***

The world of work's ongoing transformation, as exemplified by the increasing prevalence of remote work, requires quick adaptation and flexibility from employers and employees. The approximately 40% of the workforce who can work remotely is now less tethered to high cost areas – creating potential opportunity in states which may not have been considered innovation hubs in the past. With the ability to work from anywhere in the nation, state leaders and policymakers will also need to adapt. This starts with better understand how best to attract and retain residents and workers in this

emerging world. This is especially important in the context of inflation and an overall skyrocketing cost of living – remote workers are now less tethered to traditional – but increasingly expensive -- innovation and entrepreneurial hotspots such as **Silicon Valley**.

5. The DII-US helps to highlight states' competitive advantages and pitfalls

In a corollary to Key Takeaway #4, Governors, state elected officials, and other state leaders should note that business leaders analyze a broad variety of metrics when studying different markets; the DII-US provides a quick snapshot of how states perform across a number of categories, enabling entrepreneurs and investors to quickly gain an understanding of the current business, social, entrepreneurial, regulatory, and tax environments they may have to contend with and take action in terms of their location-based strategies.

Florida, Texas, Utah (+4), and Colorado (+4) Take Top Spots in DII US Rankings
North Carolina, Arizona, Delaware, and Georgia move into the Top 10
Washington, Wyoming, Massachusetts, and Alaska Fall Out of Top 10, California Declines
Illinois, Wyoming, Massachusetts, New York, North Dakota, and Oregon See Biggest Declines
Maine, Tennessee, Arizona, and Iowa See Biggest Improvements

San Mateo, California, September 26, 2022 – The Draper Hero Institute (DHI) is proud to announce its 3rd Quarter 2022 Update of the United States Draper Innovation Index (DII US). In this quarterly Executive Summary, DII US datasets have been updated to the most recent data available, some have been replaced with more up-to-date metrics, and the DII US algorithm has been refined to provide the most accurate snapshot of not only innovation and entrepreneurship but for economic opportunity as well, with increased emphasis on weighting the importance of small business policy and regulatory environment.

"Today's entrepreneurs, investors, and business leaders are overwhelmed with information," said Tim Draper, founder of the Draper Hero Institute. "Big data is growing bigger every day and the problem isn't finding information, it's sifting through it and making it actionable. In this context, the Draper Innovation Index provides a vital service: an up-to-date, curated picture of each state's business climate which is comprehensive without being overwhelming."

While **Florida** and **Texas** remained in first and second place in the September 2022 DII US update, much more dramatic movements happened throughout the rest of the top ten. **Utah** jumped from 7th in May 2022 to 3rd, followed by **Colorado** improving from 8th to 4th and **North Carolina** from 14th to 5th. **Utah** scored highly across nearly all categories -- appearing in the top ten for Tech R&D and Workforce, IT Infrastructure and Economic, Small Business Policy and Tax Environment – while **Colorado's** Tech R&D and Workforce, IT Infrastructure and Economic and Entrepreneur/Start-Up Environment scores pushed it up in the rankings. **North Carolina's** Small Business Policy category ranked 5th while also registering decent scores in Tax Environment and Entrepreneur/Start-Up Environment. The table below highlights the change in ranks for the Top 10 states in the September 2022 DII US:

May 2022 Top Ten		September 2022 Top Ten		Change
Florida	1	Florida	1	-
Texas	2	Texas	2	-
Washington	3	Utah	3	
South Dakota	4	Colorado	4	
Wyoming	5	North Carolina	5	
Massachusetts	6	South Dakota	6	
Utah	7	Arizona	7	
Colorado	8	Delaware	8	
Virginia	9	Georgia	9	
Alaska	10	Virginia	10	

Georgia and Virginia round out the top 10. **Washington**, on the other hand, fell out of the top 10 due to its poor performance in Small Business Policy and softness in its Overall Business Health Index (OBHI) and

Small Business Health Index (SBHI) rankings. **Delaware** saw a decent boost from its cryptocurrency/blockchain investments as well as comparative strong performance in its OBHI ranks helping to push it from 15th to 8th overall. **Georgia** registered a significant jump in its Entrepreneur/Start-Up category while **North Carolina's** Small Business Policy score boosted it into the Top 10.

States increasing the most in the DII US rankings included:

- **Maine (+16)**
- **Tennessee (+14)**
- **Iowa (+12)**
- **Arizona (+11)**
- **Georgia (+10)**
- **Ohio (+10)**

Maine registered the single largest increase over the last 3 months in the overall rankings, improving by 16 places thanks to a significant increase in overall capital investments and improvements in its Entrepreneur/Start-Up environment. **Tennessee** (+14), **Iowa** (+12) and **Arizona** (+11) saw the next highest increases. **Tennessee** benefitted from its Small Business Policy, while Iowa performed well in Social Environment and **Arizona** had a good performance in Small Business Policy and improvements in cryptocurrency/blockchain investments.

States declining the most in the DII US rankings included:

- **Illinois (-14)**
- **Wyoming (-14)**
- **Massachusetts (-10)**
- **New York (-10)**
- **North Dakota (-10)**
- **Oregon (-10)**

Illinois' ranking was brought down by poor performance in Small Business Policy, where it ranked 48th, as well as in Tax Environment, where it ranked 36th. It saw only small improvements in both overall and cryptocurrency/blockchain investments as well as poor performance in its OBHI scores. Despite ranking 1st in Tax Environment, **Wyoming's** overall score was dragged lower due to sinking Social Environment scores and poor performance in its IT Infrastructure and Economic category. **Massachusetts**, despite ranking 1st in Tech R&D and Workforce and 2nd in IT Infrastructure and Economic, continues to struggle with Small Business Policy, Entrepreneurship and Tax Environments.

California is in a similar situation as Massachusetts. It ranks extremely well in Tech R&D and Workforce, IT Infrastructure and Economic, as well as Entrepreneur/Start-Up categories thanks to its significant workforce talent, specialized industry clusters, and high-tech concentrations in the Silicon Valley and Southern California. However, continued comparative unfriendliness towards small businesses and a prohibitive tax environment serves to offset those significant advantages. In this latest quarterly update, California has overtaken Massachusetts in the DII's Tech Environment scenario.

"While traditional tech hotspots such as Silicon Valley have significant advantages, they also have growing downsides, and not only from a regulatory and business policy standpoint" said Dr. Wallace Walrod, DHI's Chief Economic Advisor. "Other downsides include high housing costs, high general cost of living, and major traffic congestion. Remote work becoming mainstream has opened up the competition for entrepreneurs and workforce talent, with investment following, lower-cost states could see their lower costs become a major competitive advantage."

The DII US will continue to be updated each month and can be accessed here.

About the Monthly DII-US Data Methodology

The DII US aggregates six sub-indices that reflect key aspects of state-level business and innovation environments:

- Technology R&D and Workforce Environment;
- Global Economic and IT Infrastructure;
- Entrepreneurs/Startup Environment;
- Small Business Policy Environment;
- Tax Environment; and
- Social Environment.

As of September 2022, the DII-US updated a number of its base metrics as well as replaced ones which have been discontinued due to disruptions in data aggregation and reporting caused by the COVID-19 Pandemic. Metrics which have been updated include:

- Kauffman Indicators of Entrepreneurship
- Tax Foundation Tax Rates for 2022,
- PitchBook Overall capital investments,
- PitchBook Crypto/Blockchain investments
- Dun & Bradstreet Overall Business Health Index (OBHI)
- Dun & Bradstreet Small Business Health Index (SBHI).

One metric – Opportunity Nation's Opportunity Index - has been replaced with the U.S. News State Opportunity Rankings as Opportunity Nation's Opportunity Index has yet to be updated past 2019 measures.

About Draper Hero Institute

Founded by legendary Silicon Valley venture capitalist and entrepreneur Timothy C. Draper, Draper Hero Institute (DHI) provides applicable and modern resources for future entrepreneurs globally and ensures inclusiveness and opportunities for all. As an action-based research institution, DHI focuses its efforts on non-traditional pathways to guide future entrepreneurs in the new economy. Through programs that ignite innovative research; united through connectivity and networking; and mentoring efforts through applied education, DHI provides a portal for creative thinking and ultimately driving change to better prepare future entrepreneurs to take on heroic endeavors.

https://www.draperhero.org/

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DII US METHODOLOGY

Data Sources and Metric Definitions

A more complete listing and description of DII US's data inputs is available on the DHI/DII website, along with weightings for each factor in the 3 DII US scenarios.

1) **Bloomberg Annual State Innovation Index**

The Bloomberg Annual State Innovation Index measures 6 equally weighted categories representing innovation concentration and potential: R&D Intensity, Productivity, Tech Company Density, STEM Professional Concentration, Science and Engineering Degree Holders and Patent Activity. This ranking gives the highest scores to states with established technology sectors, strong university systems and a large number of high-tech employers, such as California, Massachusetts, and Washington.

a. Metrics Included:

i. R&D Intensity
ii. Productivity
iii. Tech Company Density
iv. STEM Professional Concentration
v. Science and Engineering Degree Holders
vi. Patent Activity

2) Information Technology & Innovation Foundation: New State Economy Index

The Information Technology and Innovation Foundation's New State Economy Index aggregates 25 indicators across five categories in order to determine each state's ability to successfully manage an economy driven by technological innovation. These metrics provide a snapshot of each state's knowledge base, globalization, entrepreneurship, IT, and innovation efforts.

a. Metrics included:

i. Knowledge Jobs: Indicators measure employment of IT professionals outside the IT industry; jobs held by managers, professionals, and technicians; the educational attainment of the entire workforce; immigration of knowledge workers; migration of domestic knowledge workers; worker productivity in the manufacturing sector; and employment in high-wage traded services.
ii. Globalization: Foreign Direct Investment (FDI), export orientation of manufacturing, and the share of each state's output that goes to high-tech goods and services exports.
iii. Economic Dynamism: Indicators measure the degree of business churn (i.e., the percentage of new business start-ups and failures); the number of fast-growing firms (businesses listed in the "Inc. 5000" index); the number and value of initial

public stock offerings (IPOs) by companies; and the number of individual inventor patents granted.

iv. The Digital Economy: Indicators measure Internet and computer use by farmers; the degree to which state governments use information technologies to deliver services; adoption rates and speed of broadband telecommunications; and use of IT in the health care system.

v. Innovation Capacity: Indicators measure the number of jobs in high-tech industries such as electronics manufacturing, telecommunications, and biomedical industries; the number of scientists and engineers in the workforce; the number of patents granted; industry investment in research and development (R&D); non-industry investment in R&D; movement toward a clean energy economy; and venture capital (VC) investment.

3) Kauffman Indicators of Entrepreneurship – Kauffman Early-Stage Entrepreneurship (KESE) Index

a. Kauffman's Early-Stage Entrepreneurship Index measures entrepreneurship in each state through four primary categories: rate of new entrepreneurs, opportunity share of new entrepreneurs, startup early job creation, and startup early survival rate. This provides crucial information on early-stage entrepreneurial efforts and activity. Metrics Included:

i. Rate of New Entrepreneurs – Percent of population that starts a new business

ii. Opportunity Share of New Entrepreneurs – Percent of new entrepreneurs who created a business by choice instead of necessity

iii. Startup Early Job Creation – Average Number of Jobs created by startups in their first year (normalized by population)

iv. Startup Early Survival Rate – Percent of startups that are still active after one year

4) Milken Institute State Technology and Science Index

This index compares each individual state's capacity for success through technological advancements and innovation. The index itself is composed of five sub-categories: research and development (R&D inputs), risk capital and entrepreneurial infrastructure, human capital investment, technology and science workforce, and technology concentration and dynamism. The STSI is intended to provide an understanding of the different forces currently impacting US states and their ability to successfully innovate using the latest available data from both government and private sector sources. It is a snapshot of how state-level science and technology economies compare to one another at a specific point in time rather than a long-term study of how individual states are changing and evolving over time.

a. Metrics included:

i. Research and Development Inputs –

ii. Risk Capital and Entrepreneurial Infrastructure –

iii. Human Capital Investment

iv. Tech and Science Workforce
v. Technology Concentration and Dynamism

5) Small Business and Entrepreneurship Council – Small Business Policy Index

The Small Business Policy Index ranks the 50 states according to 62 different policy measures, including assessments of various tax rates and regulatory and government spending. It is intended to highlight which states have made positive decisions in regard to legislation impacting small businesses, investments, entrepreneurship and economic growth and activity. In order to better attract and retain businesses into their regions, US states must have healthy regulatory environments which do not create severe headwinds for those looking to start new businesses but rather support and encourage their growth and expansion.

6) Tax Foundation – State Business Tax Climate Index

The Tax Foundation's State Business Tax Climate index provides business leaders, government policymakers and taxpayers with a better understanding of how various state tax systems compare to one another. Its five primary categories include measures of corporate taxes, individual income taxes, sale taxes, property taxes, and unemployment insurance taxes. This index is intended to show how well states structure their tax systems while providing a roadmap for improvement since states with the best tax systems can be extremely competitive in attracting new businesses and generating significant economic activity.

7) *US News* Opportunity Rankings

Opportunity rankings created by *US News* integrate three primary metrics: Affordability, Economic Opportunity, and Equality, to assess and understand the level of opportunity provided to residents of all 50 states. Recognizing that everyone has the basic right for upward mobility, the Opportunity Ranking takes into account both the current and historical impediments impacting certain demographics and ranked states in their capacity to provide various opportunities for all residents. Metrics which go into calculating the Opportunity Rankings include:

- **a) Affordability**
  - **a. Cost of Living**
  - **b. Median Home Prices**
  - **c. Median Incomes**
- **b) Economic Opportunity**
  - **a. Income Inequality**
  - **b. Median Household Income**
  - **c. Poverty Rates**
  - **d. Food Insecurity**
- **c) Equality**
  - **a. Gender Parity**
  - **b. Racial Inequality**

i. **Education Rates**
ii. **Income**
iii. **Unemployment**