

How Louisville can become a stronger and more equitable hub for AI and data economy jobs



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Louisville Metro Council Committee on Equity and Inclusion | June 3, 2021

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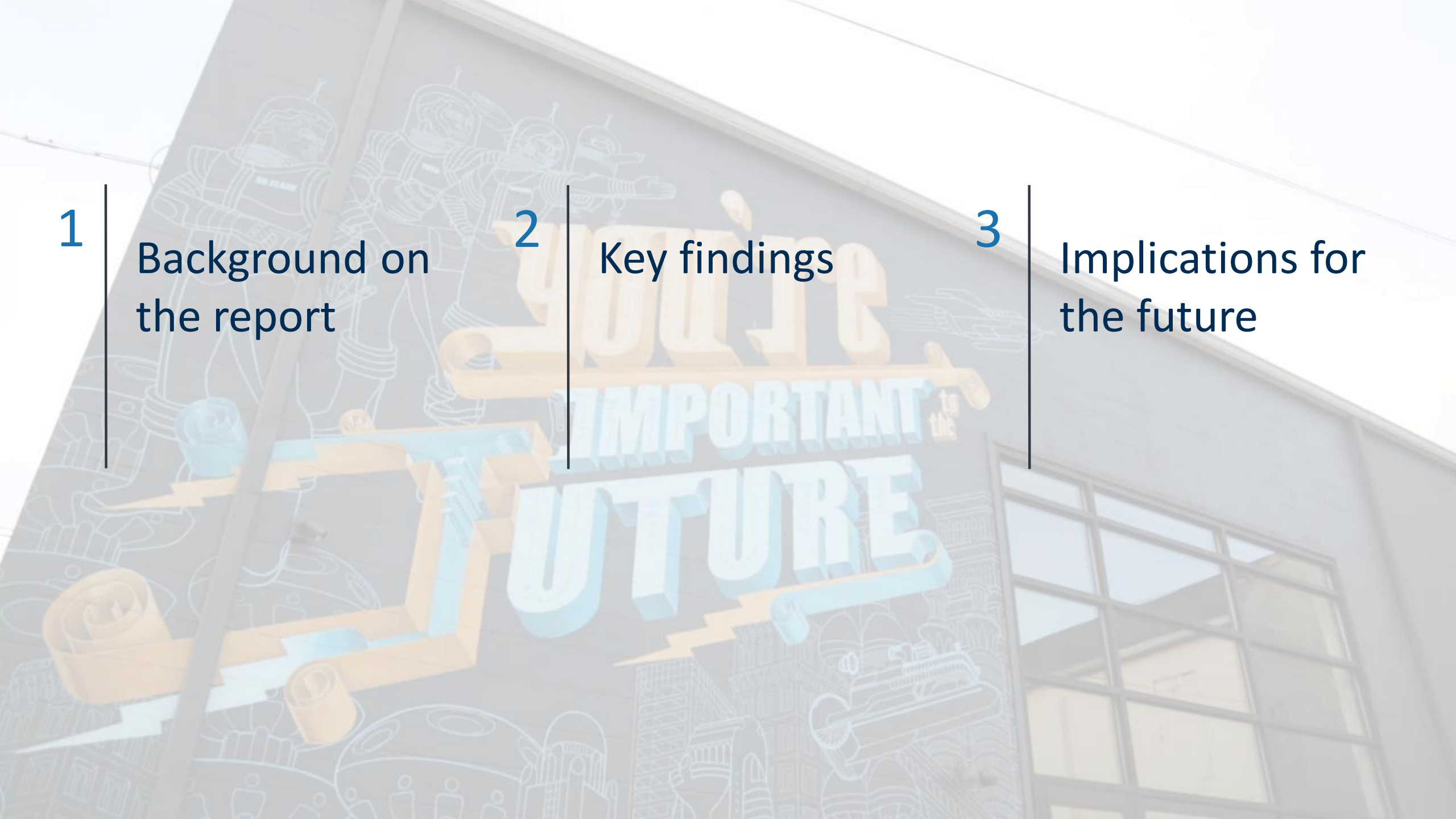
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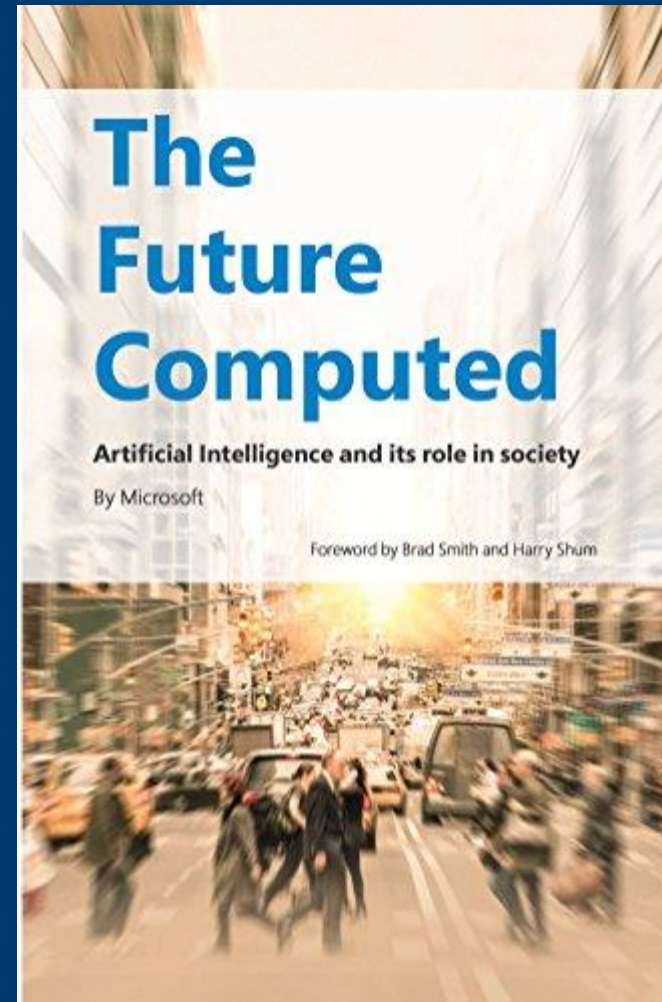
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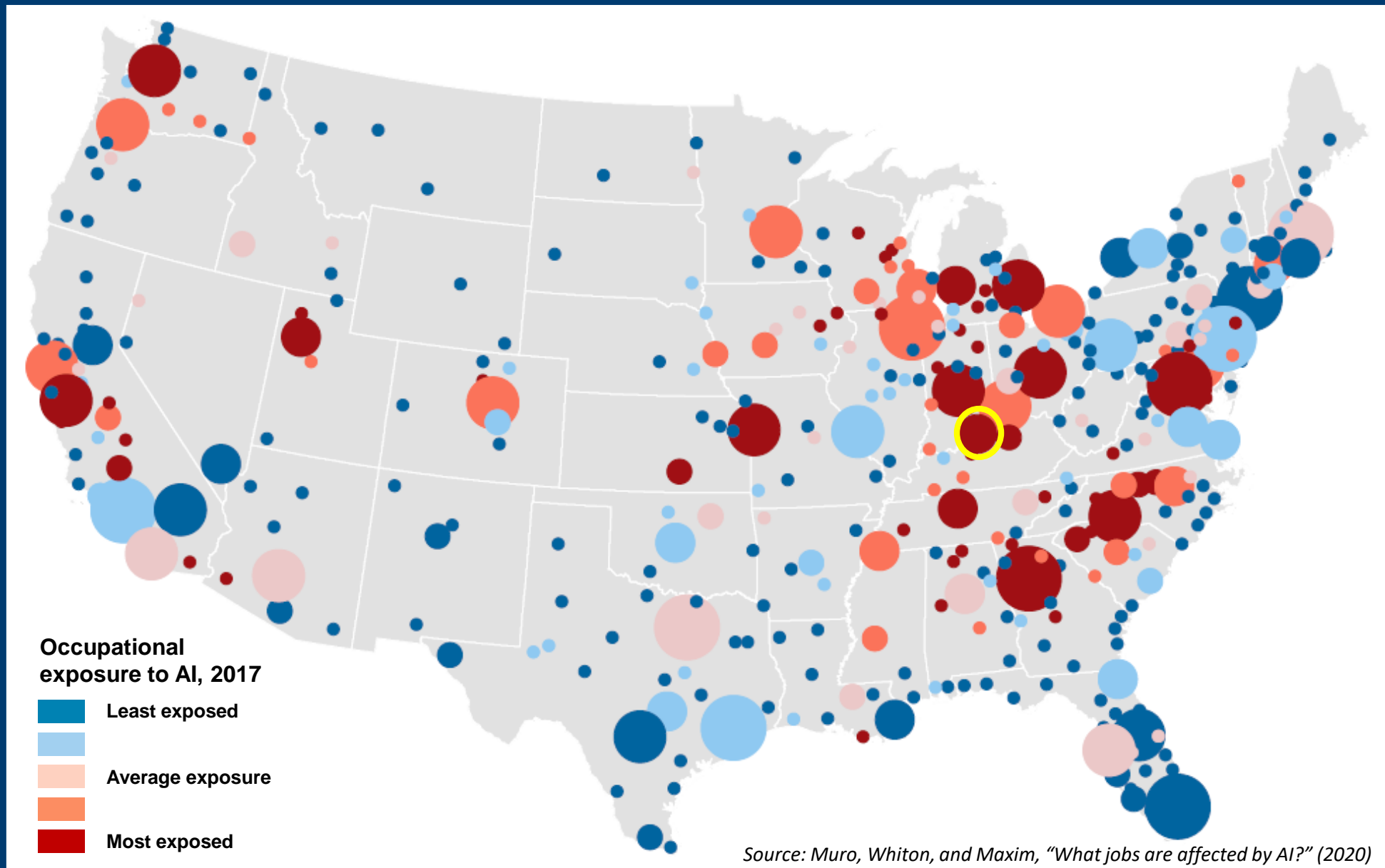


ARTIFICIAL INTELLIGENCE

A set of technologies that enable computers to perceive, learn, reason, and assist in decision-making to solve problems in ways that are similar to what people do.

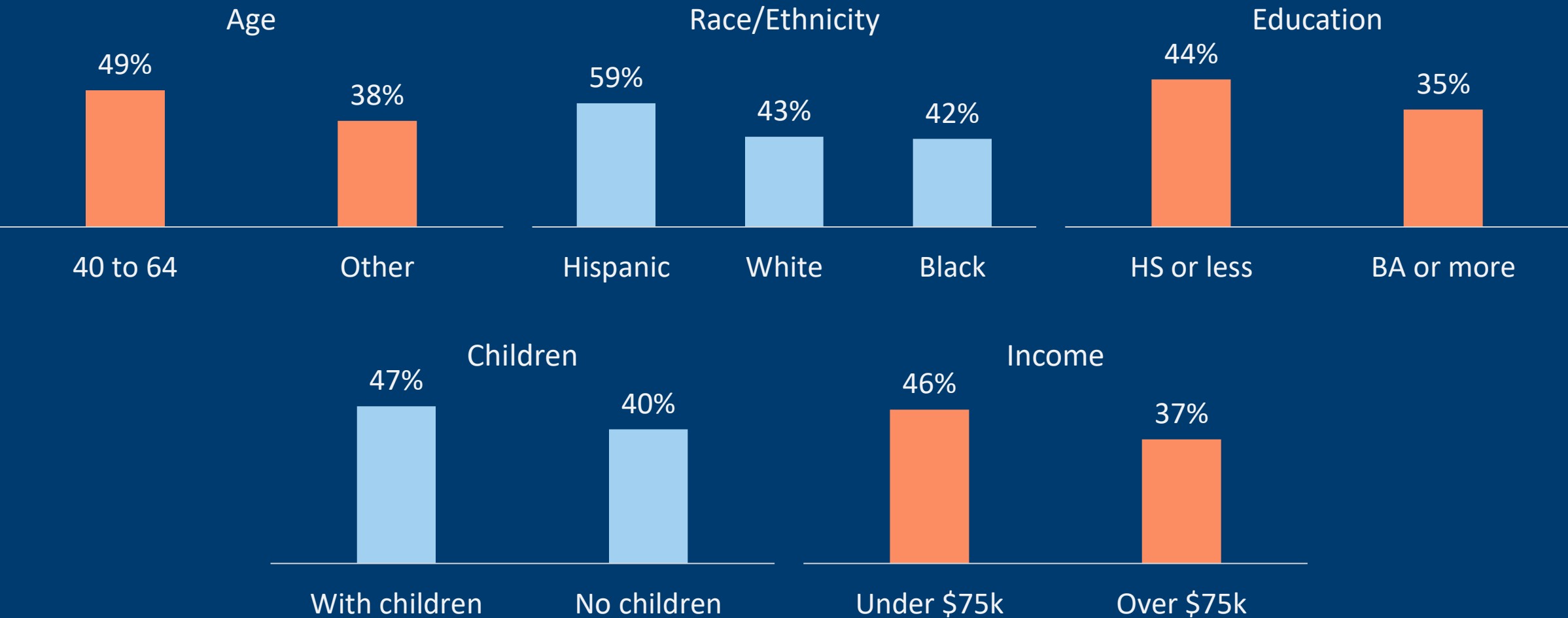


Jobs in the Louisville region are more exposed to the impacts of AI than those elsewhere

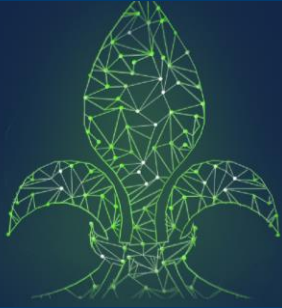


Workers in KY who lost jobs over the past year were more likely to be middle-aged, Hispanic, less educated, lower-income, with kids

Share of households affected by pandemic-related job loss by characteristic, Kentucky



Source: Census Household Pulse Survey



LOUISVILLE

FUTURE OF WORK INITIATIVE

POWERED BY MICROSOFT AND LOUISVILLE METRO GOVERNMENT

Workforce transformation

Preparing Louisville's workforce for the next tech revolution with a focus on inclusion

Industry development

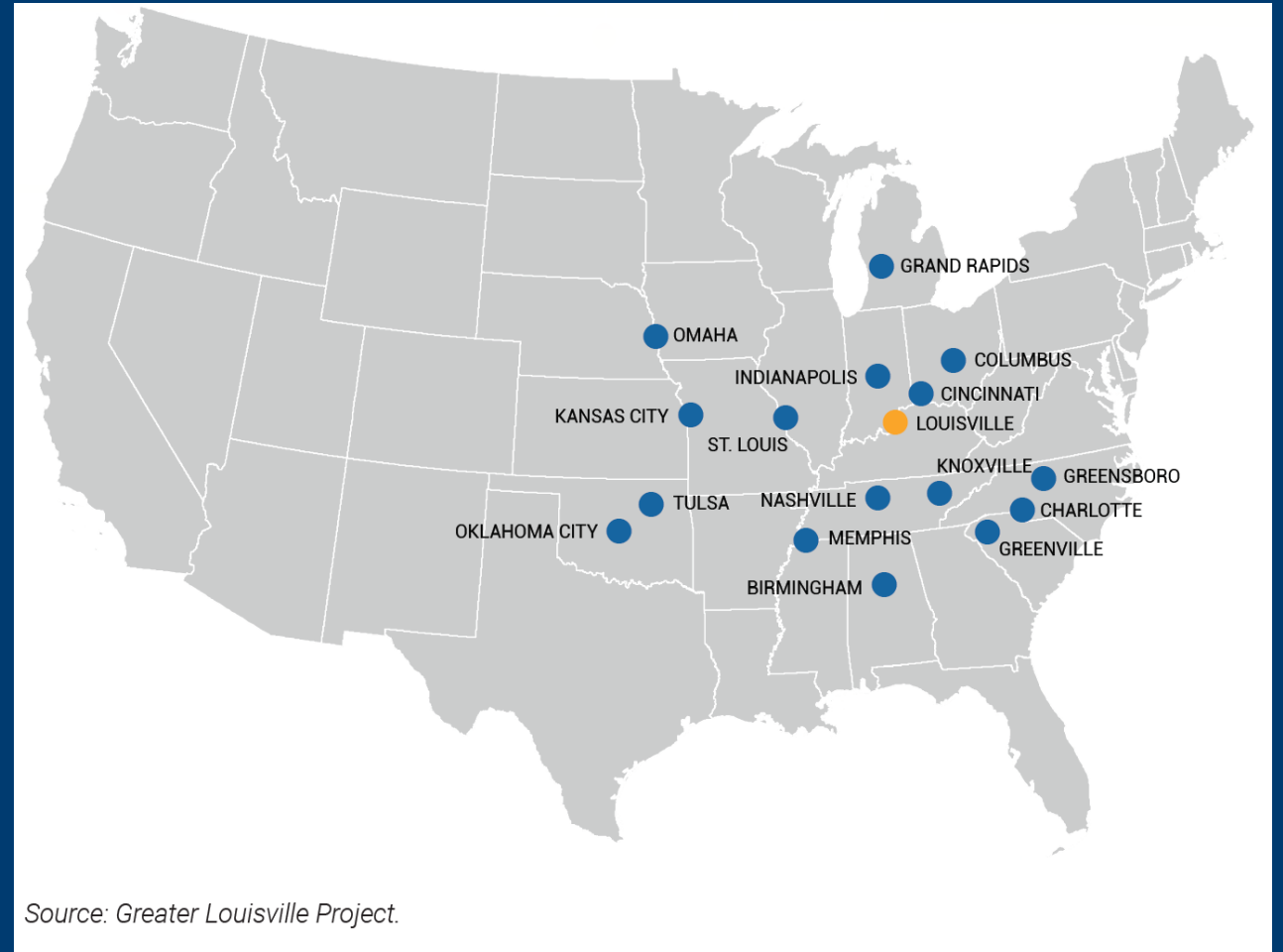
Strengthening Louisville's clusters by driving innovation and supporting application of AI/data science/IoT

AI for good

Demonstrating the power of data and AI to solve social issues to increase awareness/adoption

We benchmarked Greater Louisville among its peer regions on five drivers of technological success

1. Innovation
2. Talent
3. Industry specialization
4. Financial capital and startup ecosystem
5. Collaboration



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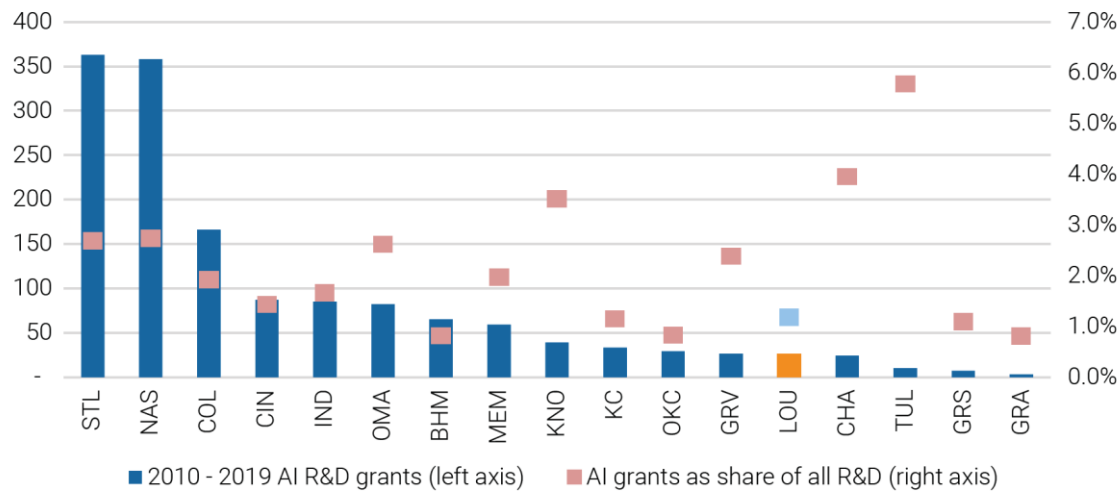
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Innovation: Louisville lags most peer metro areas in simple measures of AI innovation capacity

Figure 1. Louisville has received relatively few AI-related federal research grants

AI-related federal R&D, 2010-19

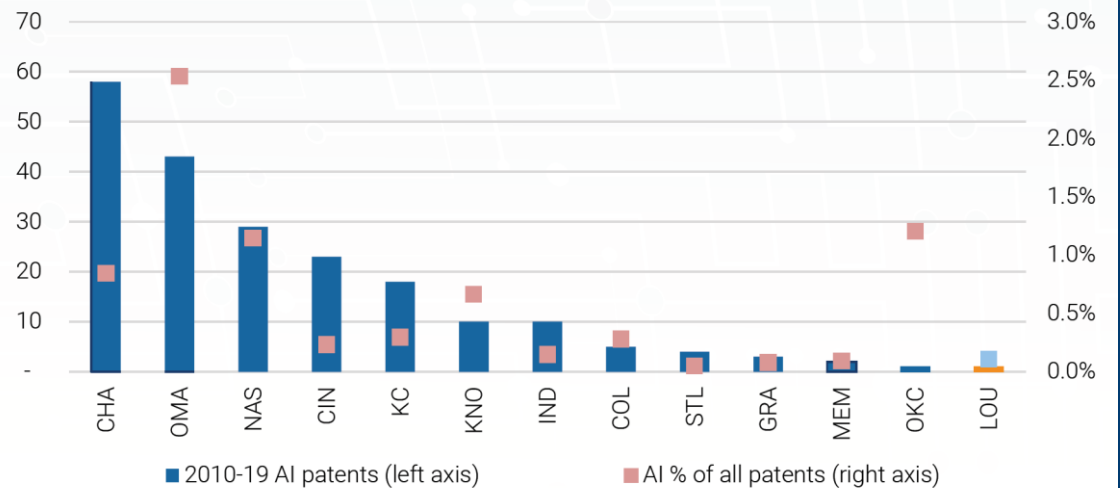


Source: Brookings Analysis of USPTO.

Few federal AI research grants

Figure 2. Louisville is not a major source of AI-related patents

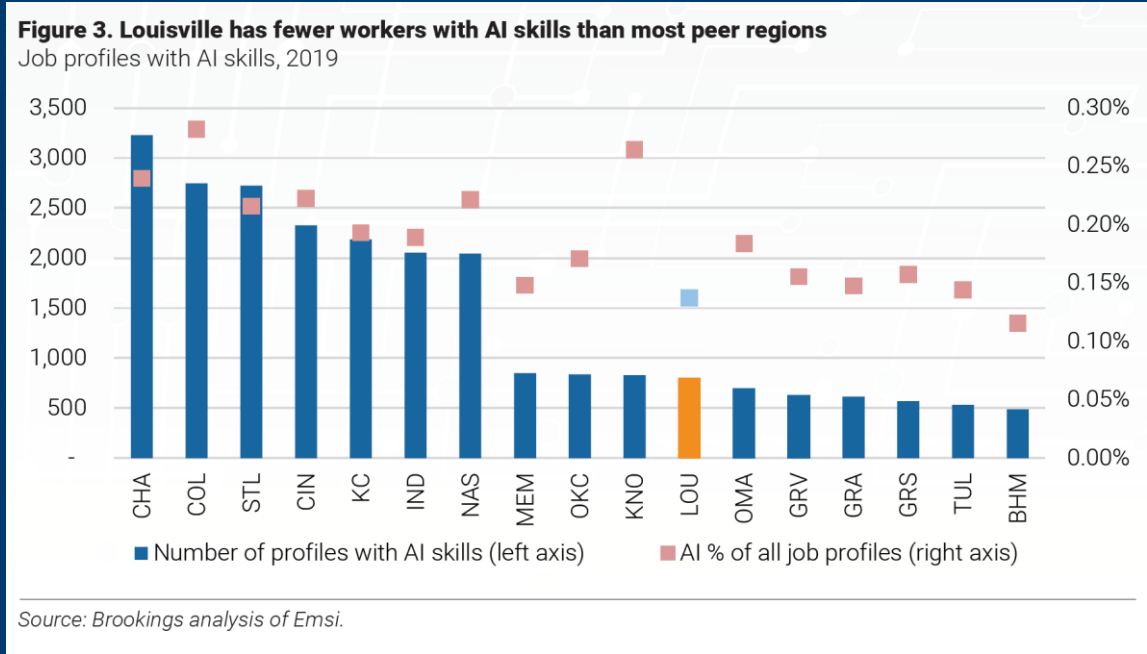
AI patents, 2010-19



Source: Brookings analysis of STAR Metrics data. Data unavailable for BHM, GRS, GRV, TUL.

Limited AI patenting activity

Talent: Louisville has yet to cultivate a deep supply of AI-specific talent



Limited pool of workers with AI skills

Figure 4. Top firms in Louisville employing workers with AI skills, since 2015

Firms	AI job profiles	% of total AI talent
Humana, Inc.	72	9.9%
University of Louisville	66	9.1%
Samtec, Inc.	9	1.2%
Material Handling Systems Inc	8	1.1%
Indiana State University	7	1.0%
General Electric Company	7	1.0%
Norton Healthcare, Inc.	6	0.8%
Cognizant Technology Solutions Corp.	6	0.8%
Tata Consultancy Services, Ltd.	5	0.7%
Kindred Healthcare, Inc.	5	0.7%
Jefferson County Public Schools	5	0.7%

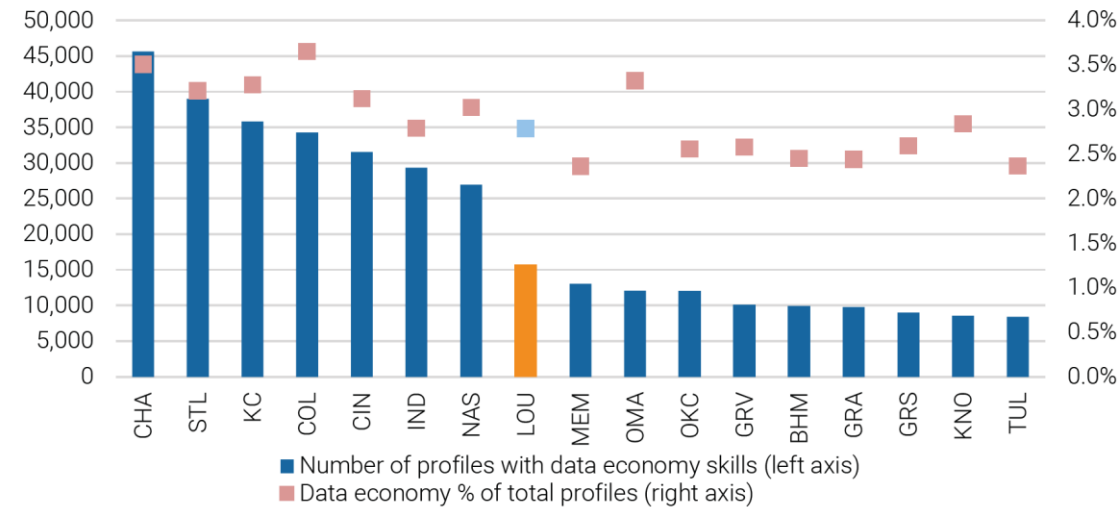
Source: Brookings analysis of Emsi.

AI workers concentrated in few places

Talent: Louisville has a broader pool of *data economy* talent, but it does not represent the whole community

Figure 6. Louisville has an average supply of talent in the data economy relative to its peers

Job profiles with data economy skills and % of total job profiles since 2015

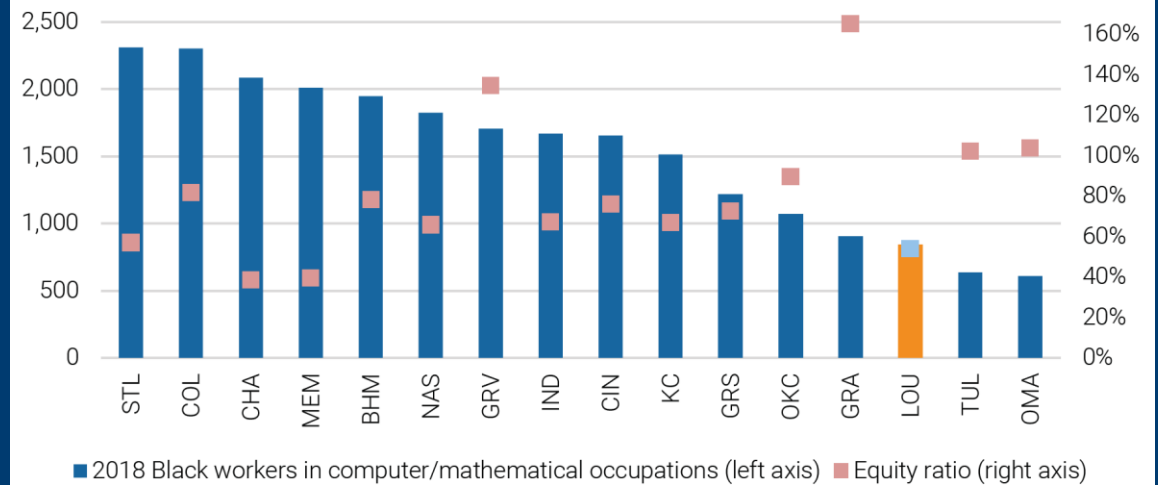


Source: Brookings analysis of Emsi.

Broader pool of data economy talent

Figure 8. Black workers are more underrepresented in Louisville's data economy than in most peer regions

Black workers in computer/math occupations and equity ratio, 2018

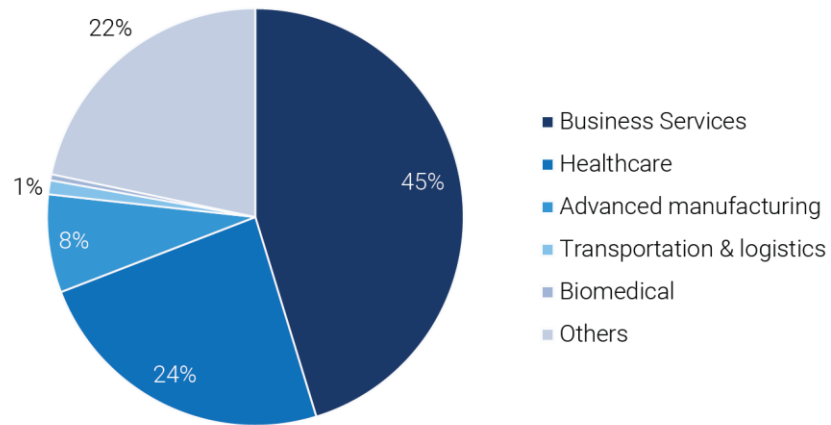


Source: Brookings Analysis of American Community Survey data. Equity ratio represents share of Black workers in computer/math occupations relative to share of all workers in those occupations. Data unavailable for KNO.

Racially unrepresentative data economy workforce

Clusters: Louisville's strong clusters differ in the intensity/growth of their AI/data economy orientation

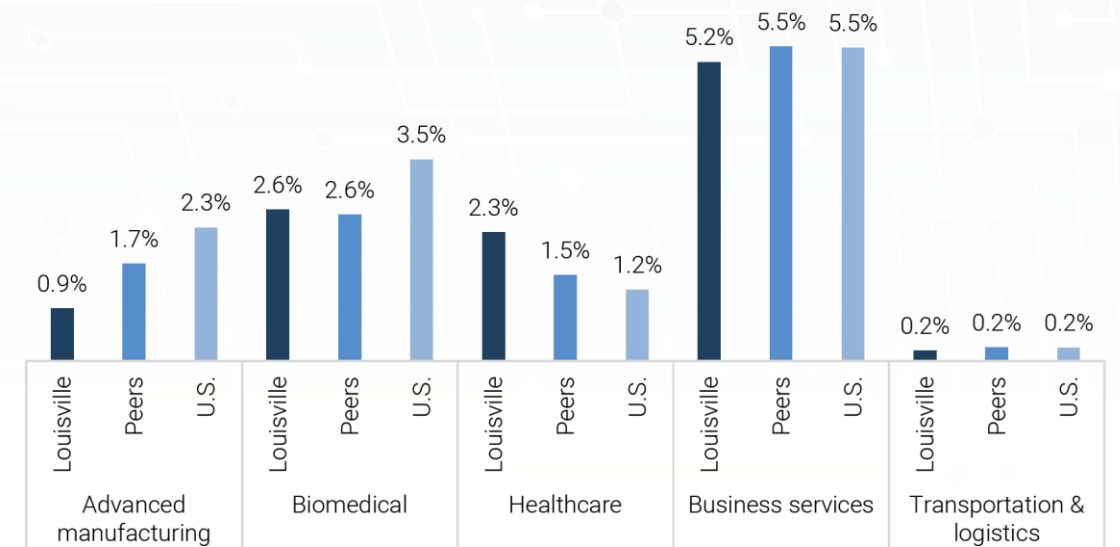
Figure 9. Nearly half of Louisville's demand for AI talent comes from the business services cluster
AI job postings by priority business cluster, 2019



Source: Brookings analysis of Emsi.

High demand for data economy in business services and healthcare clusters

Figure 11. Louisville's health care cluster is more data-economy-oriented, and its advanced manufacturing cluster less data-economy-oriented, than clusters in peer metro areas



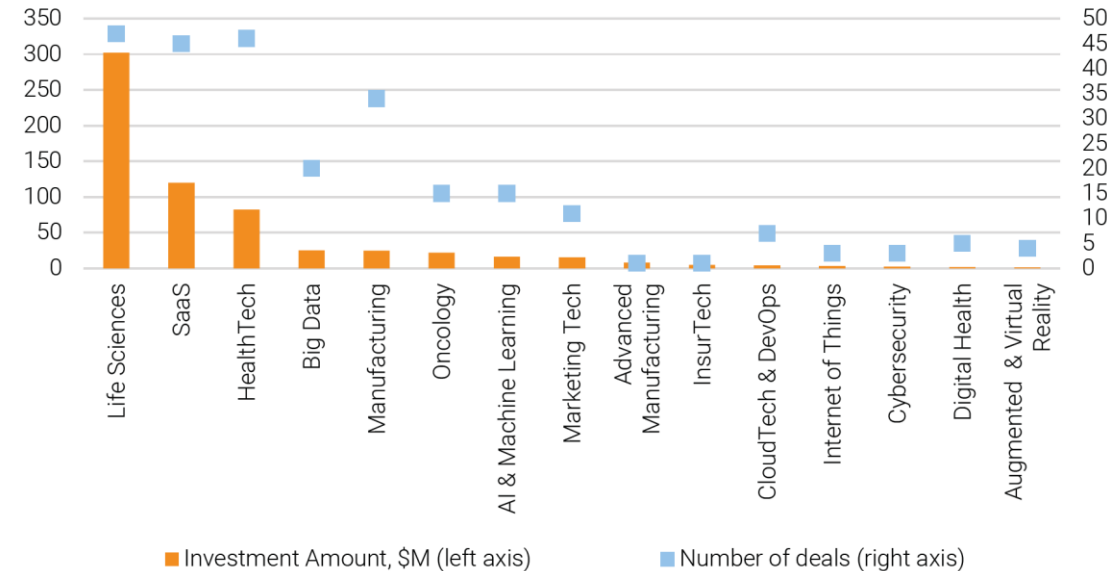
Source: Brookings analysis of Emsi.

Advanced manufacturing lags region/nation in data economy orientation

Financial capital and startup ecosystem: Louisville is growing as a magnet for investment, but its AI ecosystem remains small

Figure 15. Louisville has attracted a significant amount of venture capital investment in priority industries since 2010

Venture capital investment by industry vertical, Louisville, 2010-current

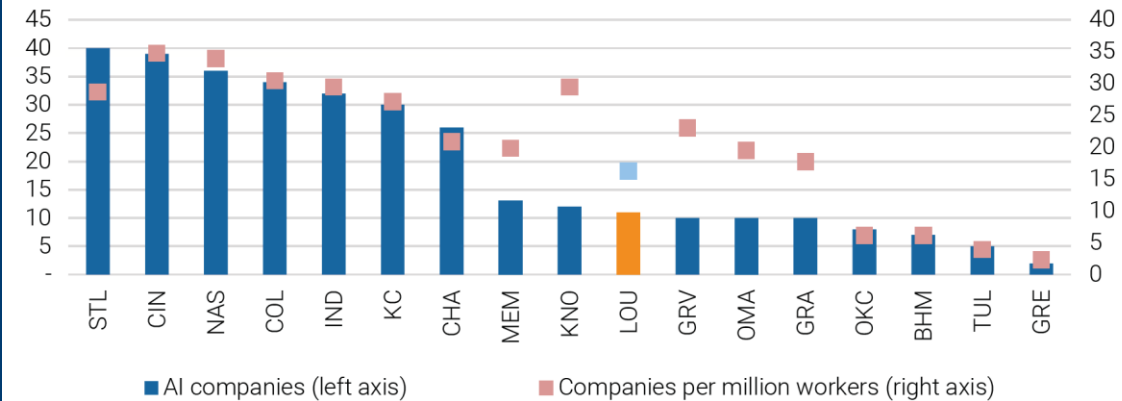


Source: Brookings analysis of Pitchbook data.

Significant VC investment in life sciences, software, and health tech industries

Figure 16. Louisville has a moderate number of AI startups

Local technology companies using AI, 2019



Source: Brookings analysis of Crunchbase data.

Modest number of AI startups relative to many other peer regions



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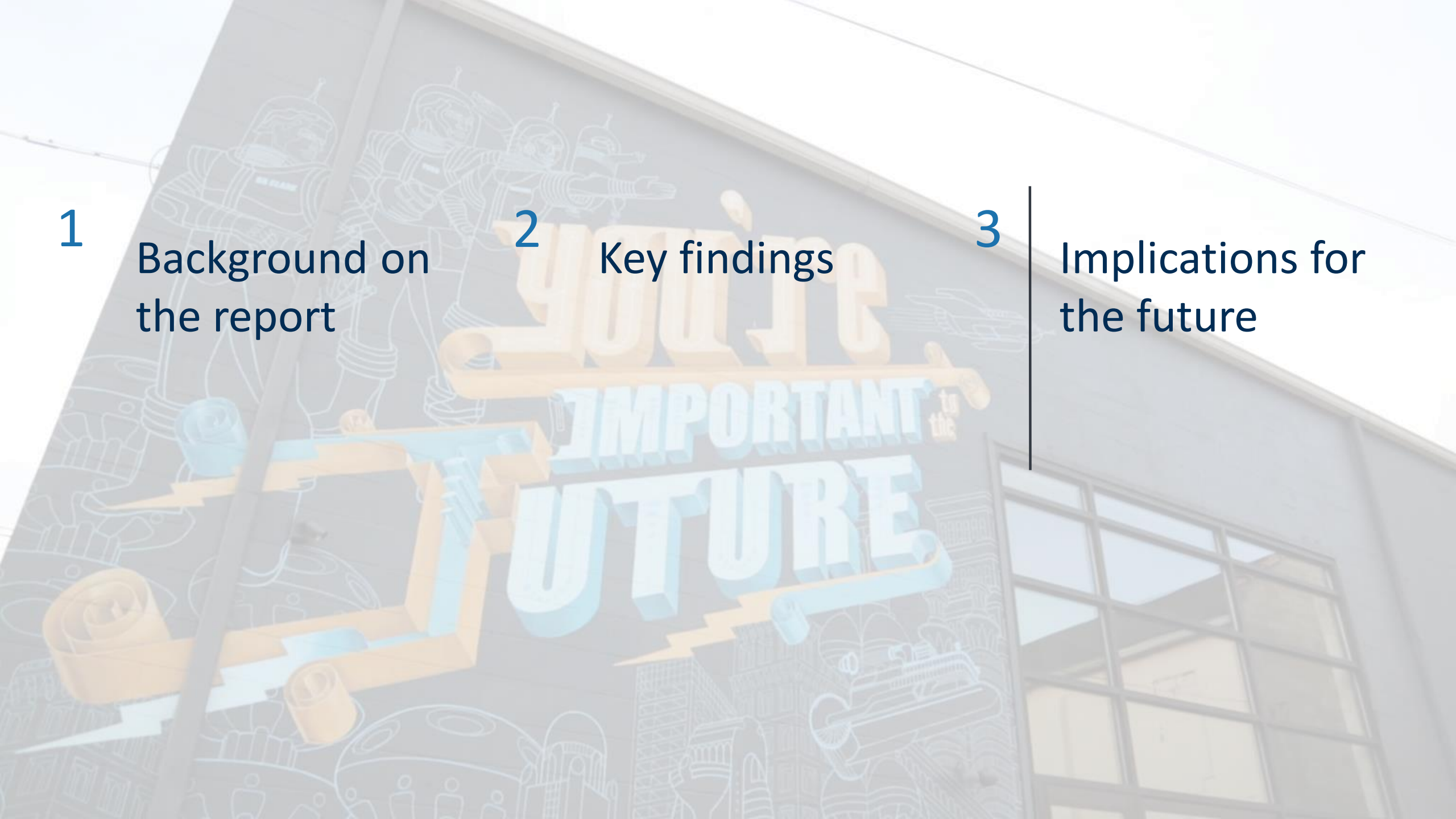
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Broaden and diversify Louisville's AI talent pipeline



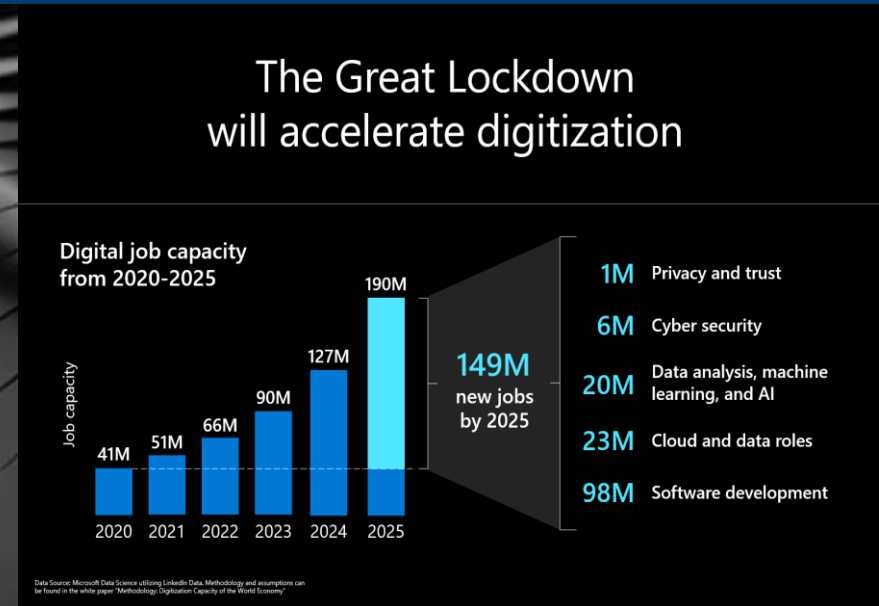
ID+ Academy
Information Design for a Better World

ID+ Academy is a new equity-focused IT pathway that combines the KDE-approved Informatics pathway with identity empowerment and industry-recognized credentials.

The Butterfly Project

Seeking Data For Justice
One Day At A Time.

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Support AI adoption and adaptation in Louisville's businesses



Develop and market Louisville's AI niche in the broader region



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