Keynote Address
Rebecca A. Fannin

Silicon Heartland: Transforming the Midwest From Rust Belt to Tech Belt
TRACKING Tech Innovation and VC for 20+ years
NYC > Silicon Valley > Asia > China > Heartland
Appalachian Roots: Southern Ohio, Northern KY
Career > Dayton > NYC > CA > Asia > China > Heartland
Make the Heartland Great Again
COMEBACK ISSUES: From Rust Belt to Tech Belt

Diversify Economy
Build on Core Strengths
Train Workforce in New Economy Jobs
Attract & Retain Millennials
Narrow Opportunity Gap
Rebuild Infrastructure
Improve Lifestyle Amenities
Build Out Tech Ecosystem: Talent, Mentors, Accelerators
Change Mindset: Confidence, Bold Thinking
Get Flywheel Going: A Steve Jobs, Elon Musk or Jack Ma?
Heartland Journeys

20 cities
Rust Belt Road Trip /Flint - Vehicle City, GM
Poverty rate: 37%
Population: 190,000 to 81,000
Rust Belt Industries
Glass, Grain, Steel
Oil, Coal
Rust Belt Road Trip - Steel
Braddock, PA / Bethlehem, PA
Many Industrial Cities lost half their population as factories closed over 50 years.
The Backdrop: US-CHINA TENSIONS

China > #1 in patents #2 in VC
Fast / Aggressive / Copy to Innovate Today
Decoupling
Made in America
Reshore > 350,000 new US jobs in 2022, +365,000 in 2023

Jeff Liu
Fuyao Glass
Rebuild Challenge: New Jobs, Reshore

Factories > 8% of jobs today from 1/3 in 1950s
5M Manufacturing jobs lost since 1997
CHIP production > 25% to 12% today
Training: need 50K engineering grads for CHIP jobs
REBUILD CHALLENGE: Societal Issues

- Blight
- Crime
- Drug addiction
- Poverty
- Lagging Infrastructure
- Weak Internet Access
- Diminished Expectations
US Industrial Policy

$1B > Investing in America

$1T > Rebuilding Infrastructure plan
  $500B+ > Transportation, Net, Utilities

$280B, CHIPS & Science Act (2022, over 10 years)
  $200B > R&D: AI, quantum computing, energy, biotech
  $53B > US semiconductor production

$10B > State Small Business Credit Initiative: grants, $

$10B > regional tech hubs over 5 years
  bottom up, middle out
Regional Tech Hubs
31 Finalists from 400 in overlooked communities
12 Tech Hubs: $504 million, up to $51M each

- Elevate Quantum, Colo, NMx (quantum)
- Headwaters Hub, Montana (smart photoic remote sensors)
- Heartland BioWorks, Indianapolis, Indiana (agritech)
- iFAB Tech Hub, Champaign-Urbana Illinois (biomanufacturing)
- Nevada Tech Hub, Carson City Reno (lithium)
- NY Smart 1, western update New York (semiconductors)
- ReGen Valley, Manchester, Nashua New Hampshire (biofabrication)
- SC Nexus, SC & Ga (advanced energy)
- South Florida ClimateReady, Miami Dade (sustainable infrastructure)
- Sustainable Polymers, Akron (environmental rubber/plastics)
- Tulsa Hub, Greater Tulsa (autonomous systems - transport industry cases)
- Wisconsin Biohealth, Madison/Milwaukee (personalized medicine)
INNOVATION CATALYSTS: Silicon Valley Spreads

Entrepreneurial culture
Entrepreneurial Resources
Innovation hubs
Tech Future Outlook
Capital – VC, Gov’t, Give Back
Community Leadership
New Jobs Training
Remote Working
Diversity
Cities Getting It Right Face the Future

University Anchors
Retraining
Mentorship
Liveability
Opportunity Zones
Entertainment
Affordable Housing
Public Transit
Entrepreneurial culture, GRIT
<table>
<thead>
<tr>
<th>City</th>
<th>Industry Focus</th>
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</thead>
<tbody>
<tr>
<td>Columbus</td>
<td>Insuretech, Meds, CHIPS</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>Supply Chain, Sustainability</td>
</tr>
<tr>
<td>Cleveland</td>
<td>Biotech</td>
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<tr>
<td>Pittsburgh</td>
<td>AI, Robotics</td>
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<tr>
<td>Dayton</td>
<td>Military Apps, Aviation</td>
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<tr>
<td>Indianapolis</td>
<td>SaaS</td>
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<tr>
<td>Detroit</td>
<td>Industry 4.0, EVs / Mobility</td>
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<tr>
<td>Youngstown</td>
<td>3D Printing</td>
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<tr>
<td>Milwaukee</td>
<td>Tooling Engineering</td>
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<tr>
<td>NE Ohio</td>
<td>Semiconductor manufacturing</td>
</tr>
</tbody>
</table>
Tech Talent Gains in Heartland, Top 50

Nashville  + 36.1%, 41
Madison + 31.9%, 24

**Louisville**  + 31%, NEXT 25
**DAYTON** + 31%, NEXT 25

Indianapolis + 23.1%, 36
Tulsa  + 19%, NEXT 25
Cleveland + 14.1%, 44
St. Louis + 9.9%, 35
Cincinnati + 9.6%, 42

Kansas City  + 8.0%, 30
Minneapolis  + 5.3%, 22
Columbus + 5.1%, 31

Detroit  + 4.5%, 25
Chicago  + 4.6%, 23
Buffalo  + 3%, NEXT 25
Pittsburgh  + 2.7%, 29
Birmingham + 1%, NEXT 25
Milwaukee – 4.2%, 49

Talent % Increase, Rank

**Tops:** SF, Seattle, DC, Toronto, NY, Boston

CBRE: % change in 5 years
Intel CHIP plant > $28B  $20B grants, loans
3,000 manufacturing jobs/ 7,000 construction jobs
US produces only 10% of global chip supply

Honda, LG JV: EV batteries, $3.5B, 2200 jobs
VC Still A Gap!

2/3rds of VC $ > NY, CA, Mass.

6 Great Lakes States
8% of US deals 9% of $ (2023)
1,200 deals
+ 63% in 10 years

25 Middle States
1,800 startup deals
4x growth in 10 years
ASK A VC!

SILICON HEARTLAND ONLINE SERIES 2022 - 2024

High Alpha, Indianapolis / Sept 20
Magarac Ventures (MVP), Pittsburgh / Oct 5
Comeback Capital, Cleveland / Oct 12
Rev1 Ventures, Columbus / Oct 26
Atento Capital, Tulsa / Nov 3
Mountain State Capital, Morgantown / Nov 1
Cintrifuse, Cincinnati / Dec 1
Louisville, Endeavor Midwest, Amplify / Jan 25
Elevate Ventures Indiana / Feb 15
Refinery Ventures Cincinnati / Feb 23
Jumpstart, Cleveland / March 2
Revolution / Rise of the Rest/ March 7
SXSW 2023 / 2024 March
ATX Venture, Austin April 11
S3 VC, Austin April 26

Rebecca Fannin, CNBC
Author/host, Silicon Heartland
amzn.to/3rmQZEt

Silicon Global
Online
Catalysts: Midwest Boomtowns

VC CATALYSTS

Drive Capital: $1.2B
High Alpha: $215M

Population gain in 10 years

Columbus +15%
Indianapolis +8.2
Catalysts:
Community Colleges
Catalysts: Success Stories

- Recycling in Flint
- Parking app in Pittsburgh
- Defense software dev in Dayton
Tech Future: Youngstown
Technology Specialization
3D Printing
Tech Future Youngstown Incubator Advanced Manufacturing
Tech Future: from Coal & Steel
BioTech in WVa, Cleveland
Tech Future: Pittsburgh
From Steel to AI & Robotics & Aerospace
Tech Future: Ironton to Sustainability
P&G innovation > startup PureCycle
FINALLY! Heartland Change-Makers

Phil Hagerman, Flint

Albert Ratner, Mr. CLE

Dave Mawhinney, CMU
Mayors Make the Difference

Pittsburgh
Bill Peduto

Dayton
Nan Whaley

Flint
Sheldon Neeley

Cleveland
Justin Bibb

Milwaukee
Cavalier Johnson

Lancaster
David Scheffler
From Fly *Over* Country to Fly *To* Places
Focus on Core Strengths
Rely on Anchors
Diversify Economy to New Jobs
Workforce Development
Increase VC / Angel $ / Govt
Attract & Retain Talent, Millennials, GenZ
Encourage Risk-taking, No Fear of Failure
Glorify Change-maker Leaders
Create a blueprint: “rinse and repeat”
Reverse Culture of Diminished Expectations
The Courage to Change

“Disrupt or Be Disrupted”
“Explores the tech innovation frontier that was once a center for commerce but got left behind when it didn’t adapt.”

John Chambers, Cisco / JC2 Ventures
“This short but meaty travelogue packs a punch.”
—Publishers Weekly

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www.imaginebooks.net/SiliconHeartland

www.SiliconDragonVentures.com