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Supporting Innovation-Led Growth in Nebraska

Governor's Economic Summit

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Overview

- Why is innovation important for growth?
- Gap analysis of Nebraska's innovation ecosystem
- Recommendations

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- Why is innovation important for growth?

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What is innovation?
OECD Oslo Manual

The commercial introduction or implementation of a new or significantly improved product or process

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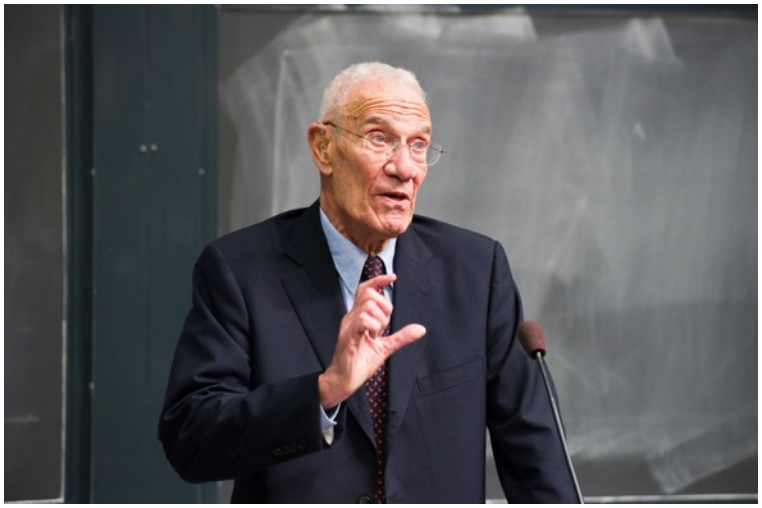
Innovation and Economic Growth

Robert M. Solow – Growth Theory

- Analysis of U.S. economic growth:
  - 7/8 due to “technical change in the largest sense”
  - 1/8 due to conventional increase in capital intensity



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How does innovation drive growth at the firm level?

New goods or services that generates sales

Adoption of new technologies that enhance productivity growth and lowers costs

Impacts:

- Competitiveness of existing industry base
- Type of locally-grown companies supported
- Wage level of new jobs being created

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Question:

If innovation increases sales, why don’t all firms do this?

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U.S. mfg innovation: 49% identify external source

Points to potential challenges

Innovation source	% using this source
Supplier	13%
Customer (mainly B2B)	**26%**
Other firm in industry	8%
Consultant/Commercial Lab/Service Provider	8%
Independent inventor	8%
University/Government lab	5%
Any External Source	**49%**

Source: A. Arora, W. Cohen and J. Walsh (2010). Acquisition and Commercialization of Invention in the American Economy. N=1,180 New-to-Market innovators

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- Gap analysis of Nebraska’s innovation ecosystem

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Innovation Ecosystem Framework

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Three key innovation ecosystem challenges: risk capital, market access and talent

Category	Common challenge	Nebraska
Idea Generation	Innovation rates among existing and startup companies	+/—
	Tech transfer by research institutions	+/—
Talent	Experienced entrepreneurs	—
	Excess demand for mid-career managers and director-level talent	—
Risk Capital	Pre-seed/seed capital	+/—
	Series A venture capital rounds	—
Networks	Connections among in-state actors	+/—
	Connections to out-of-state actors	—
Market Access	Information gaps	—
	Regional networks	—

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Idea generation: corporate innovation performance mixed

Existing industry

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Bryan Health

First Data

Startup creation rate
per 1,000 establishments

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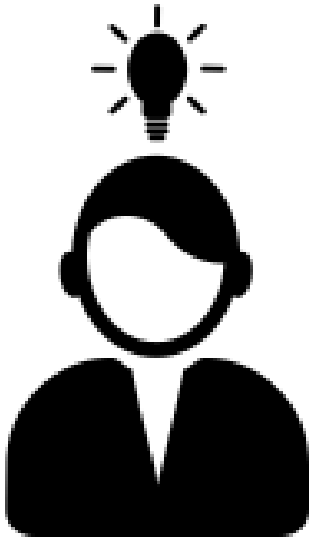
Talent: More experienced entrepreneurs needed
Who are Nebraska's entrepreneurs?



- Have at least one degree from a Nebraska college or university
- Have left the state for 10-30 years
- Have significant industry domain expertise
- Attracted back to Nebraska by cost of living, quality of life, and Business Innovation Act programs

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Risk capital: Current level of Nebraska support for early-stage capital

Talent and Innovation Initiative			
Intern Nebraska $1.5M	Business Innovation Act $7M	Angel Investment Tax Credit $3M	Site and Development Fund $2.5M

Business Innovation Act				
SBIR/STTR Match	R&D Grants	Prototype Grants	Commercialization (Invest Nebraska)	Microenterprise Assistance
Includes Value-Added Ag				
$6M				$1M

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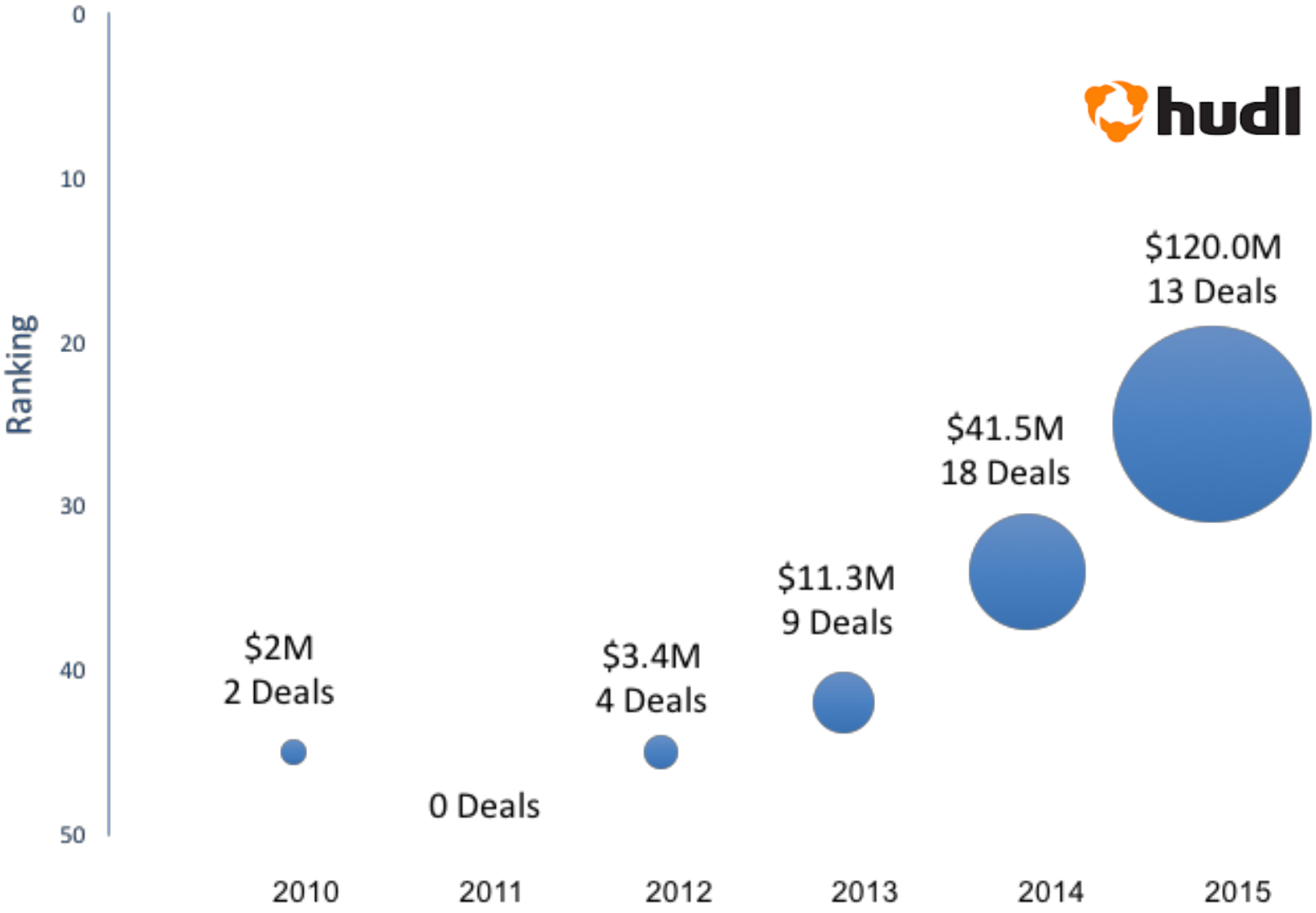
Risk capital: VC expanding in line with deals, but Nebraska VCs with industry domain expertise limited in some sectors



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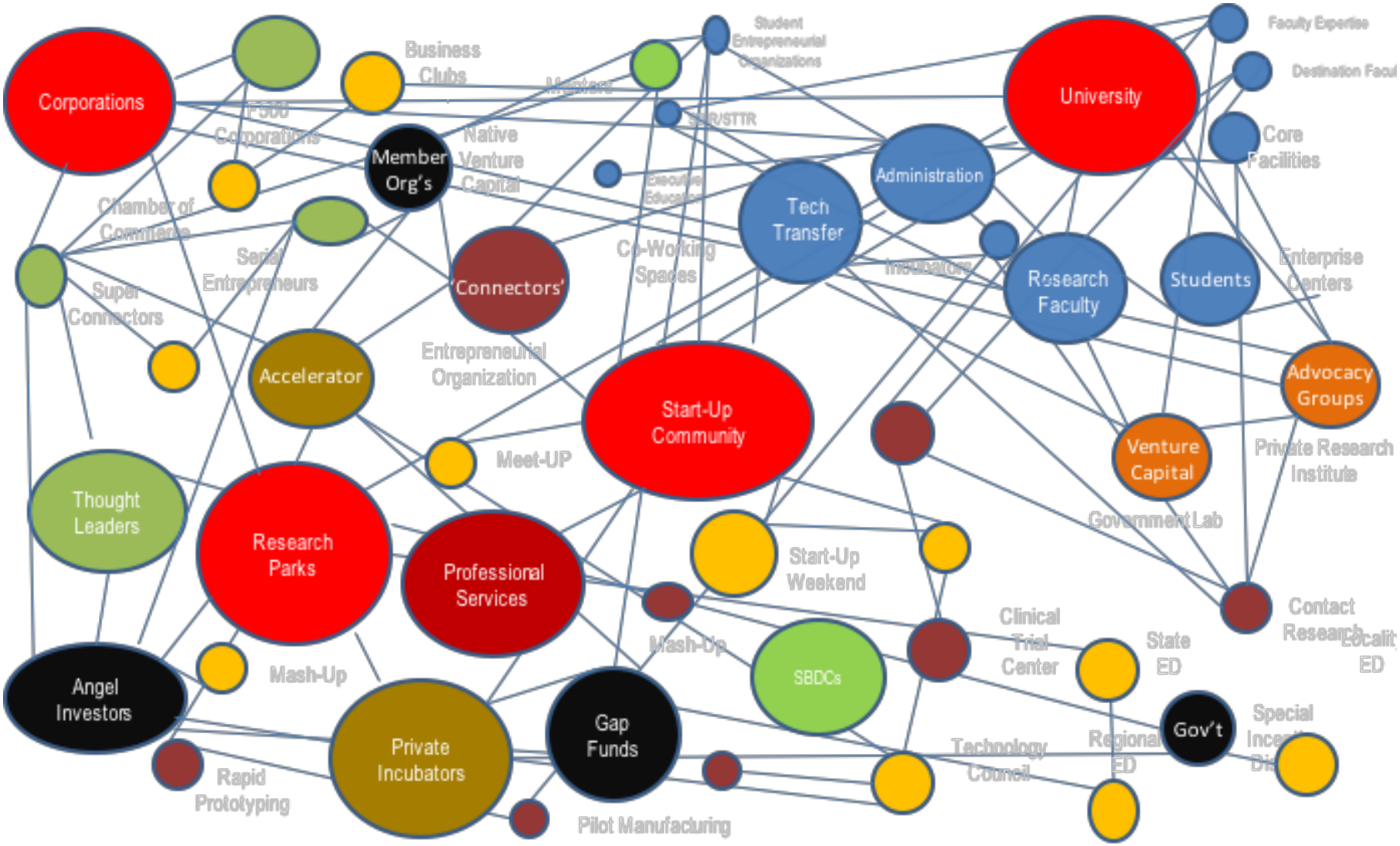
Networks: In-state connections are strong but focus on productivity of these relationships; expand out-of-state



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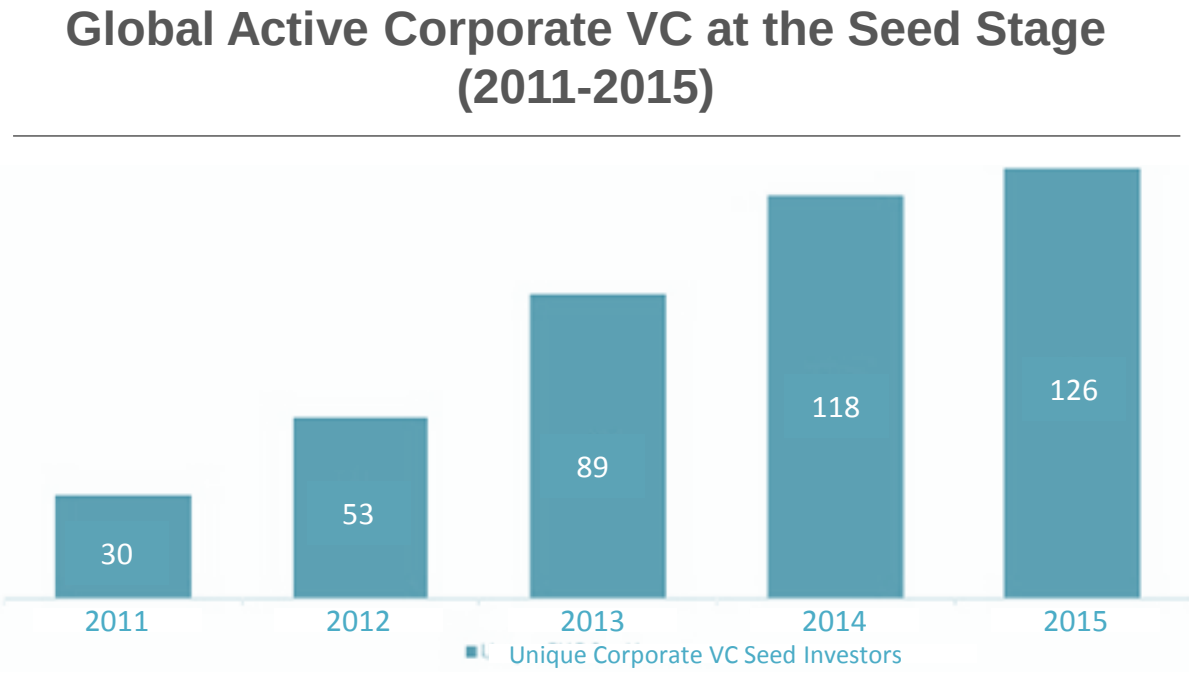
Market Access: Number one reason startups fail is lack of customers; help startups connect to existing companies

- Advisors
- Investors
- Customers
- Networks



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- Recommendations

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SRI recommendations

1. Increase appropriation for Nebraska Business Innovation Act programs
2. Pilot Nebraska Corporate Startup Challenge
3. Strengthen entrepreneurial opportunities for students at universities and community colleges
4. Strengthen university-government collaboration around economic development objectives

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1. Increase Nebraska Business Innovation Act appropriation

State Innovation Program	FY 2014 Appropriation ($)	State GDP ($)	Funding/ $1M GDP
Ohio	$132M	$585.6Bn	**$225**
Utah	$22M	$142.7Bn	**$154**
Oklahoma	$18M	$183.0Bn	**$98**
Nebraska	$7M	$113.1Bn	**$62**

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1. Increase Nebraska Business Innovation Act appropriation

Program	# of applications	# of awards/ investments	Amount requested ($M)	Amount awarded ($M)
Commercialization (Invest Nebraska)	59	18	$22.2	$5.3
Prototype Grants	143	82	$6.9	$3.8
Academic R&D Grants	52	46	$6.4	$4.7
Value-Added Ag	34	34	$3.1	$3.1
SBIR/STTR	43	41	$1.333	$1.323

Invest Nebraska CORPORATION

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2. Pilot Nebraska Corporate Startup Challenge program

- Addresses “Market Access” gap
- Builds on Nebraska’s regional efforts to connect existing companies with startups around complimentary technology needs and capabilities
- Leverages best practice model in Illinois

ILLINOIS CORPORATE STARTUP CHALLENGE

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3. Strengthen entrepreneurial opportunities for students at universities and community colleges

SBIR success rates nationally:

- 18% overall
- 60% I-Corps teams

"College of the Community" Develop strong linkages with local companies to serve on incubator, seed fund, loan program boards at community colleges

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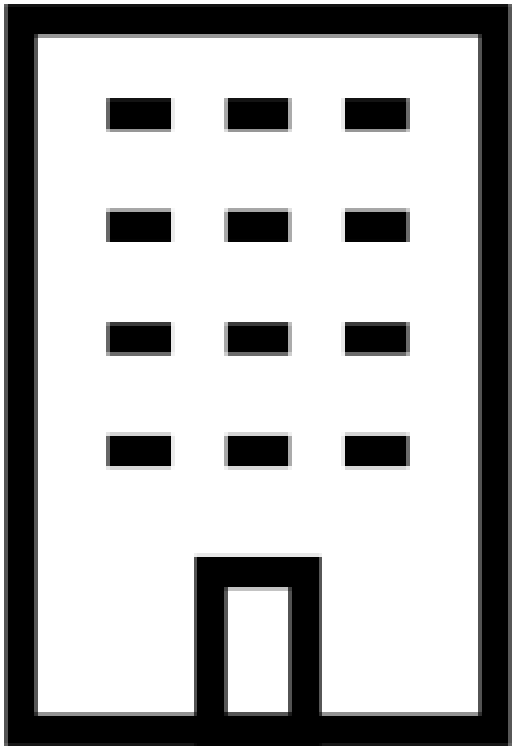
4. Strengthen university-government collaboration around economic development objectives



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