Knight Foundation

The Emergence of Civic Tech: Investments in a Growing Field

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About

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At Knight Foundation, we strive to support informed and engaged communities. With the proliferation of technology in everyday life over the past decade, Knight has increasingly funded new technologies designed to improve the health and vitality of cities. Since 2010, Knight has invested more than $25 million in such projects, ranging from government data access platforms to new tools for community planning to online neighborhood forums.

Over the past two years, we've witnessed through our work a groundswell of interest at the nexus of technology, civic innovation, open government and resident engagement. Though the terminology may vary, more and more funders, investors and practitioners have joined this emerging "civic tech" field. We began to wonder: *How can practitioners supporting civic tech form stronger connections, and how can we gather better insights into the trends in the field?*

Knight embarked on an analysis earlier this year to examine clusters of innovation and investment within the field of civic tech. Rather than performing a run-of-the-mill landscape review with stakeholder interviews, we decided to experiment with a new set of research tools. We partnered with Quid, a firm that specializes in data analytics and network analysis, to map the field of civic tech through semantic analysis and private and philanthropic investment data.

This report summarizes key findings and implications from the analysis. We hope this experiment will be valuable to those interested in the field of civic tech as well as organizations looking to advance the use of big data in the social sector. This study is a first foray into analyzing the civic tech landscape but is certainly not an exhaustive analysis. We look forward to continued partnerships with others to advance learning and practice in this field.

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MAPPING THE FIELD
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Strategic Implications & Next Steps

This section examines:

OBJECTIVES
What are the main questions explored in the study?

DEFINITION
What is "civic tech"?

SCOPE
What types of organizations and investment are included in the analysis?

Overview

Objectives

The analysis was designed to address the following questions:

- HOW MUCH MONEY is being invested in civic tech projects?

- What are the DIFFERENT CLUSTERS of civic tech innovation?

- How does INVESTMENT VARY across these clusters of innovation?

- Which organizations are attracting THE MOST INVESTMENT?

- WHO IS INVESTING in civic tech?

- What is the BALANCE OF PRIVATE AND PHILANTHROPIC investment?

Civic Tech: A Convergence of Fields

This review incorporates tech companies and projects from several fields of work. Only projects primarily focused on promoting civic outcomes were included.

COLLABORATIVE CONSUMPTION

Tools for procuring paid services from local vendors and sharing of corporate-owned assets

Peer-to-peer sharing of resident-owned goods and services

GOVERNMENT DATA

Internal performance and analytics software

Public data access and transparency

CIVIC TECH

Funding for projects that enhance public services and spaces

CROWD FUNDING

Funding for consumer and commercial products

Social causes, civic engagement

Place-based networks and community forums

COMMUNITY ORGANIZING

Political campaign management tools

Virtual, professional or practice-based networks

SOCIAL NETWORKS

Criteria for Inclusion

This study focuses on organizations, including for-profit companies and nonprofits, that received funding between January 2011 and May 2013[1] to develop or scale civic technology.

The review used a set of guidelines to determine which projects should be included. The resulting analysis provides a useful initial assessment, albeit not an exhaustive examination, of the emerging field of civic tech.

- **Organizations**
  Startups, private companies and nonprofits are included. Events, loose affiliations and networks that are not legally registered entities are excluded.

- **Time Frame**
  Organizations that received funding between January 2011 and May 2013 are included. Organizations that received funding prior to January 1, 2011, are largely excluded.

- **Investment**
  Grants and investments made by foundations, corporations and private investors are included. Government and public funding for civic tech is excluded. In addition, an organization must receive funding from a third party, rather than just being financed through an organiza-tion's internal budget.

- **Technology**
  Organizations funded to support advocacy, research, events and other purposes related to civic tech but not directly tied to building tech-related projects are excluded.

- **Geography**
  The study concentrates on U.S. investments in U.S.-based civic tech projects. Some international companies that achieved significant investment and/or press also included.

[1] The analysis captures organizations that received funding during this period; some have subsequently closed operations or been acquired. Quid's investment database captures funding dating back to Jan. 1, 2011. While the review captured a handful of projects that received funding prior to this date, those data are not as comprehensive as data analyzed from this point forward.

Mapping the Field

This section examines:

APPROACH
How was the civic
tech landscape mapped?

CLUSTERS
What are different
innovation clusters
in the field?

TRENDS
How has the field
grown over time?

Approach to Mapping Civic Technology

The following steps were used to map the civic tech landscape:

1. Quid and Knight, in consultation with others in the field, seeded the analysis with a set of organizations viewed as core to civic tech innovation.

2. Key terms (e.g., "civic," "open government," "open data") were used to examine media, press and investment data to generate additional organizations to include in the landscape.

3. Quid's proprietary software generated a network map based on the level of similarity between the way organizations described the functionality and purpose of their technology.

4. Quid and Knight reviewed the resulting map and determined descriptors for different clusters of organizations that emerged from the analysis.

Network by Quid
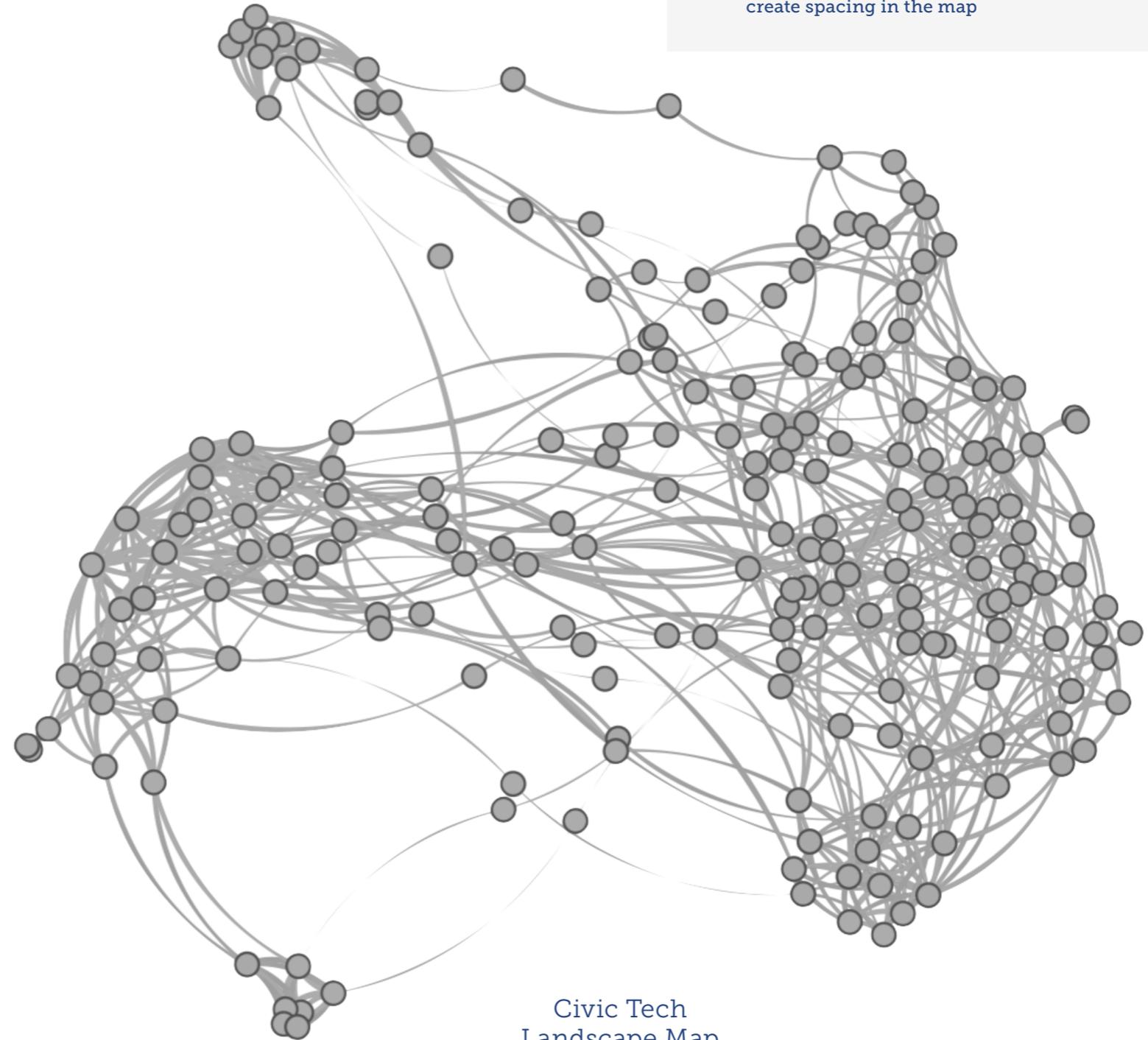
Civic Tech
Landscape Map

Landscape Themes: Open Government & Community Action

In reviewing the network map, two top-level themes were identified in relation to the organizations included in the analysis. The network map was then color-coded to highlight these two themes.

Open Government

Projects focused on advancing government transparency, accessibility of government data and services, and civic involvement in democratic processes

Community Action

Projects catalyzing peer-to-peer information sharing, civic crowdfunding and collaboration to address civic issues

Network by Quid
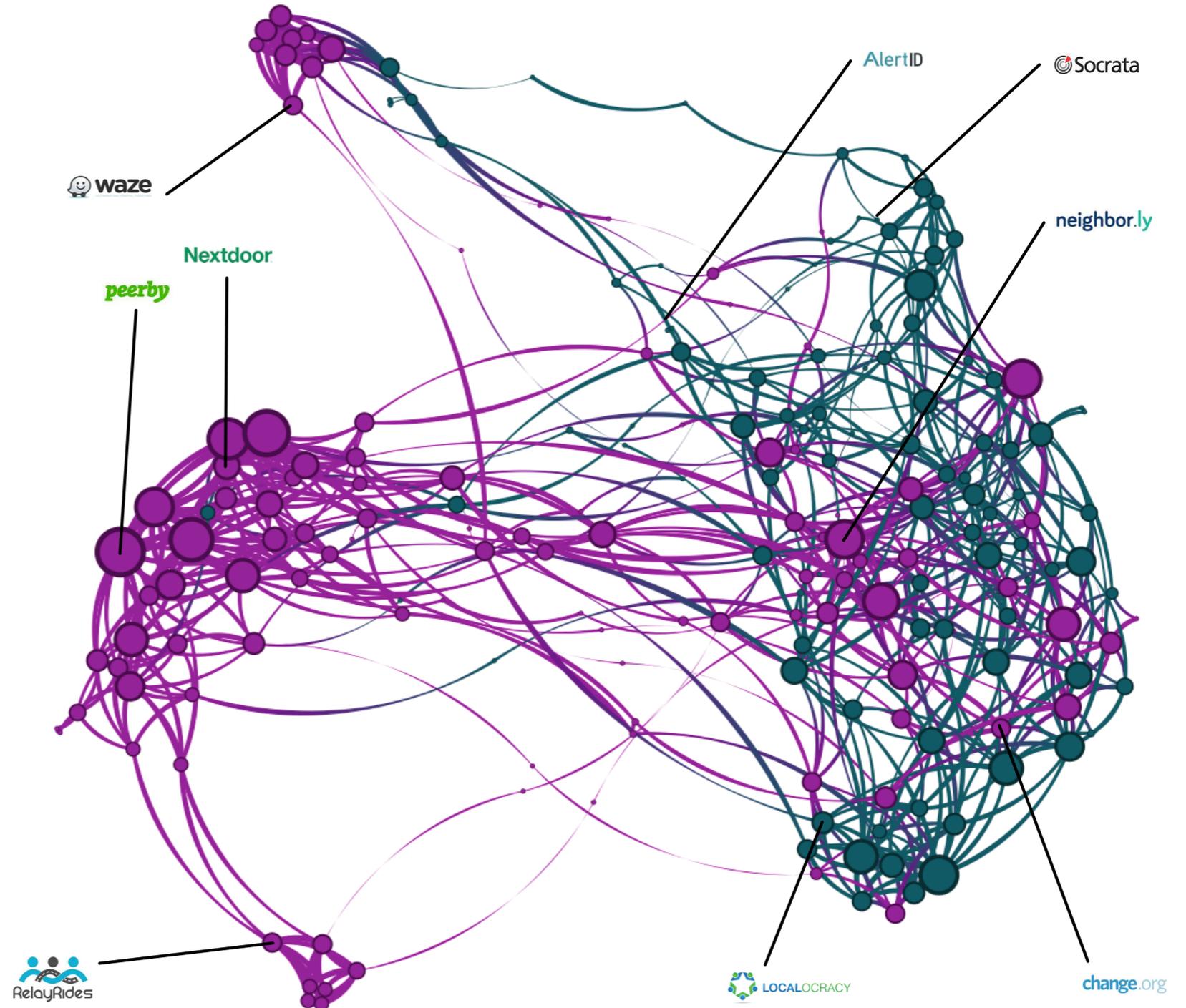
Innovation Clusters

Within the two overarching themes, 11 clusters of civic tech innovation were identified:

Open Government

1   Data Access & Transparency
2   Data Utility
3   Public Decision Making
4   Resident Feedback
5   Visualization & Mapping
6   Voting

Community Action

7   Civic Crowdfunding
8   Community Organizing
9   Information Crowdsourcing
10   Neighborhood Forums
11   Peer-to-Peer Sharing

Network by Quid

Open Government Innovation Clusters

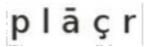| CLUSTER	EXAMPLE ORGANIZATIONS	DESCRIPTION
Data Access & Transparency	Socrata, plāçr	Promote government data availability, transparency and accountability
Data Utility	AlertID, mySociety	Empower users to analyze government data and leverage data to improve public service delivery
Public Decision Making	LOCALOCRACY, our SAY	Encourage resident participation in large-scale deliberative democracy and community planning efforts
Resident Feedback	SeeClickFix, PUBLICSTUFF	Provide residents with opportunities to interact with government officials and give feedback about public service delivery
Visualization & Mapping	azavea, PublicEngines	Enable users to make sense of and gain actionable insight from civic data sources, specifically through the visualization and mapping of that information
Voting	TurboVote, VOTIZEN	Support voter participation and fair election processes

Community Action Innovation Clusters

CLUSTER	EXAMPLE ORGANIZATIONS	DESCRIPTION
Civic Crowdfunding	neighbor.ly / Citizinvestor	Suport local projects and organizations that generate a public benefit through peer-to-peer lending and crowdfunding
Community Organizing	change.org / Bang The Table	Manage social campaigns and initiatives
Information Crowdsourcing	waze / NoiseTube	Collect data from a large number of individuals to inform and address civic issues
Neighborhood Forums	Nextdoor / front porch forum — HELPING NEIGHBORS CONNECT	Power local groups of people to connect, share information and collaborate
Peer-to-Peer (P2P) Sharing	acts of sharing BETA / lyft	Promote resident-driven sharing of goods and services

Growth of Civic Tech

The analysis of civic tech organizations launched each year since 2000 reveals consistent, high growth rates in the field. From 2008 to 2012, the field of civic tech grew at an annual rate of 23%.

2012
121 companies

2008
83 companies

2004
34 companies

2000

16 civic tech companies founded

2000–2004	2004–2008	2008–2012
21%	**25%**	**23%**
COMPOUND ANNUAL GROWTH RATE (CAGR)	CAGR	CAGR
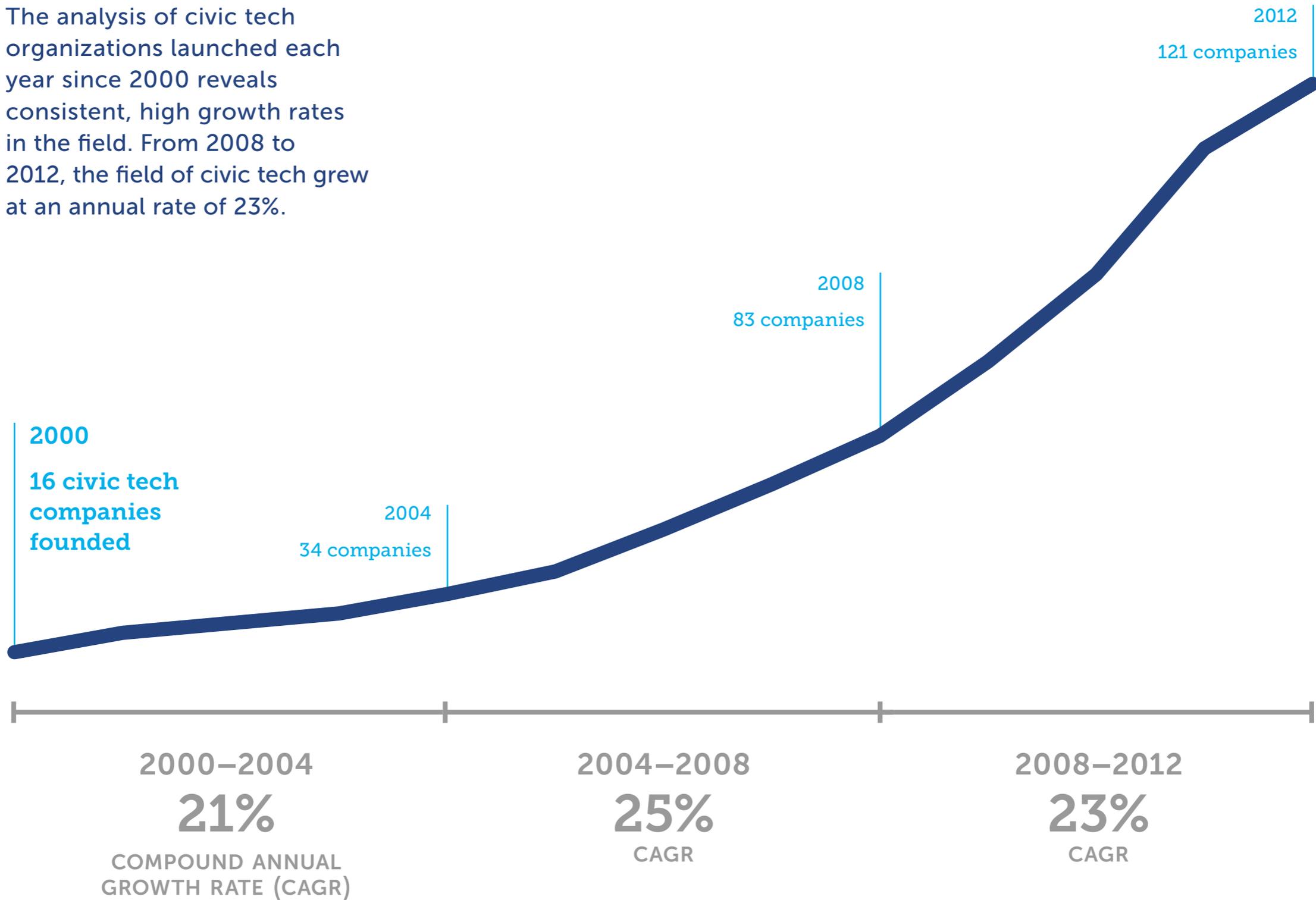
Growth Trends by Cluster

Growth has varied across innovation clusters within civic tech, with Community Action clusters growing at a faster rate than those in Open Government. The fastest growth has been among organizations focused on Peer-to-Peer Sharing (36% annually from 2009 to 2012).

43 Peer-to-Peer Sharing Organizations

32 Community Organizing

40

30

20

18 Resident Feedback
16 Public Decision Making
16 Data Access & Transparency
15 Neighborhood Forums
14 Visualization & Mapping
12 Information Crowdsourcing
11 Data Utility

8 Voting
7 Civic Crowdfunding

10
organizations

2000   2005   2010   2012

Cumulative growth (in number of organizations)
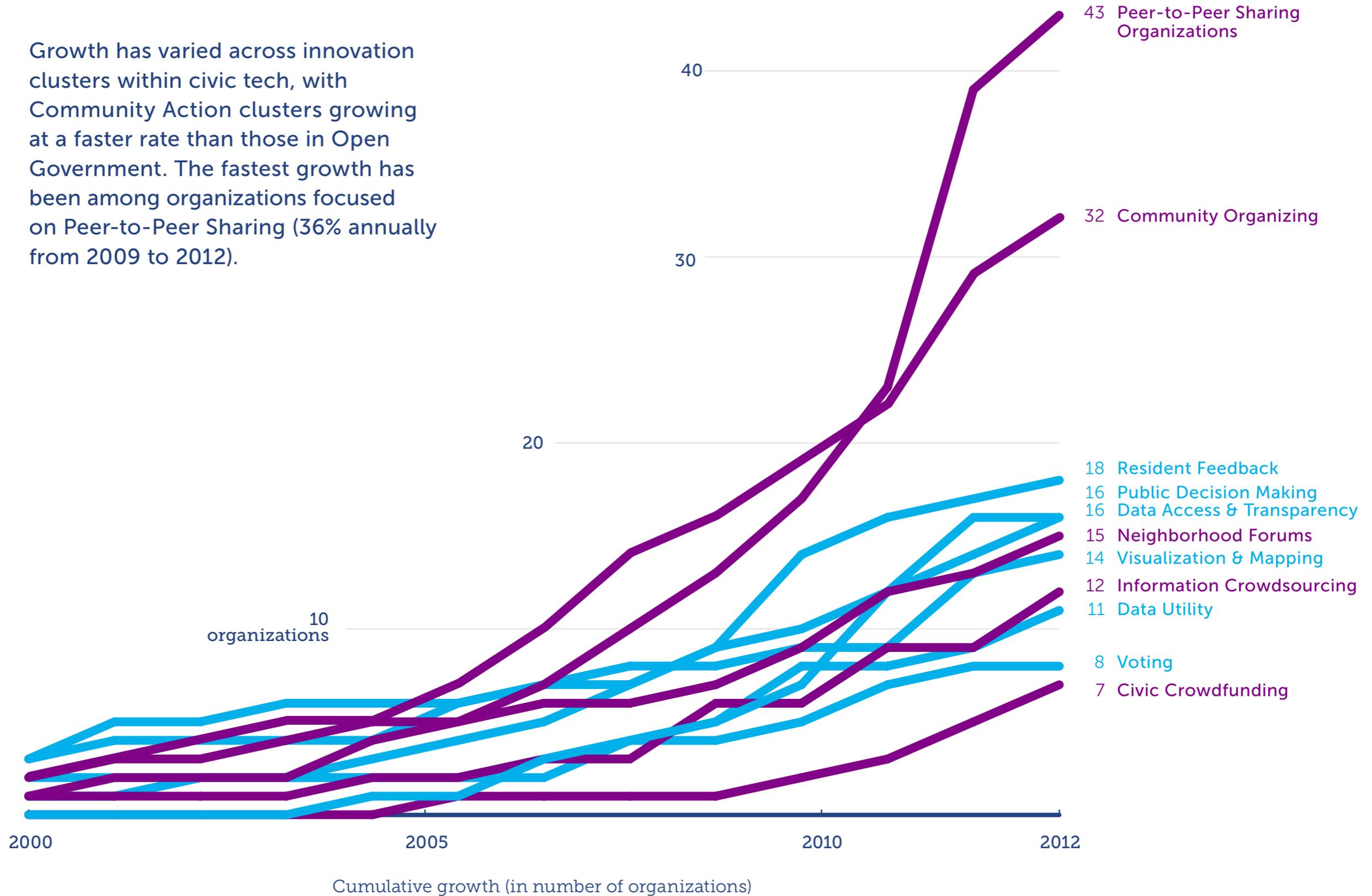
Innovation Clusters

This section examines:

TOTAL INVESTMENT
How much money has been invested in civic tech projects?

FUNDING DISTRIBUTION
How has investment varied across different themes and innovation clusters in the landscape?

CLUSTER CHARACTERISTICS
What are the primary characteristics of the organizations in each innovation cluster?

Total Investment Summary

209 ➝ **102**

civic tech projects identified in the civic tech landscape

of the 209 organizations received investment from Jan 2011 to May 2013

$431M

invested in these civic tech organizations

237

**different investors provided funding to civic tech organizations**

177

investments made in civic tech organizations[1]

[1] *Instances where multiple investors participated in the same funding round are counted as a single investment*

Funding Distribution

The analysis reviewed the number of investments and amount invested in each innovation cluster from January 2011 to May 2013.

Peer-to-Peer Sharing attracted the vast majority of total investment in the landscape (close to $240M), followed by three clusters that each received close to $40M: Neighborhood Forums, Community Organizing and Information Crowdsourcing.
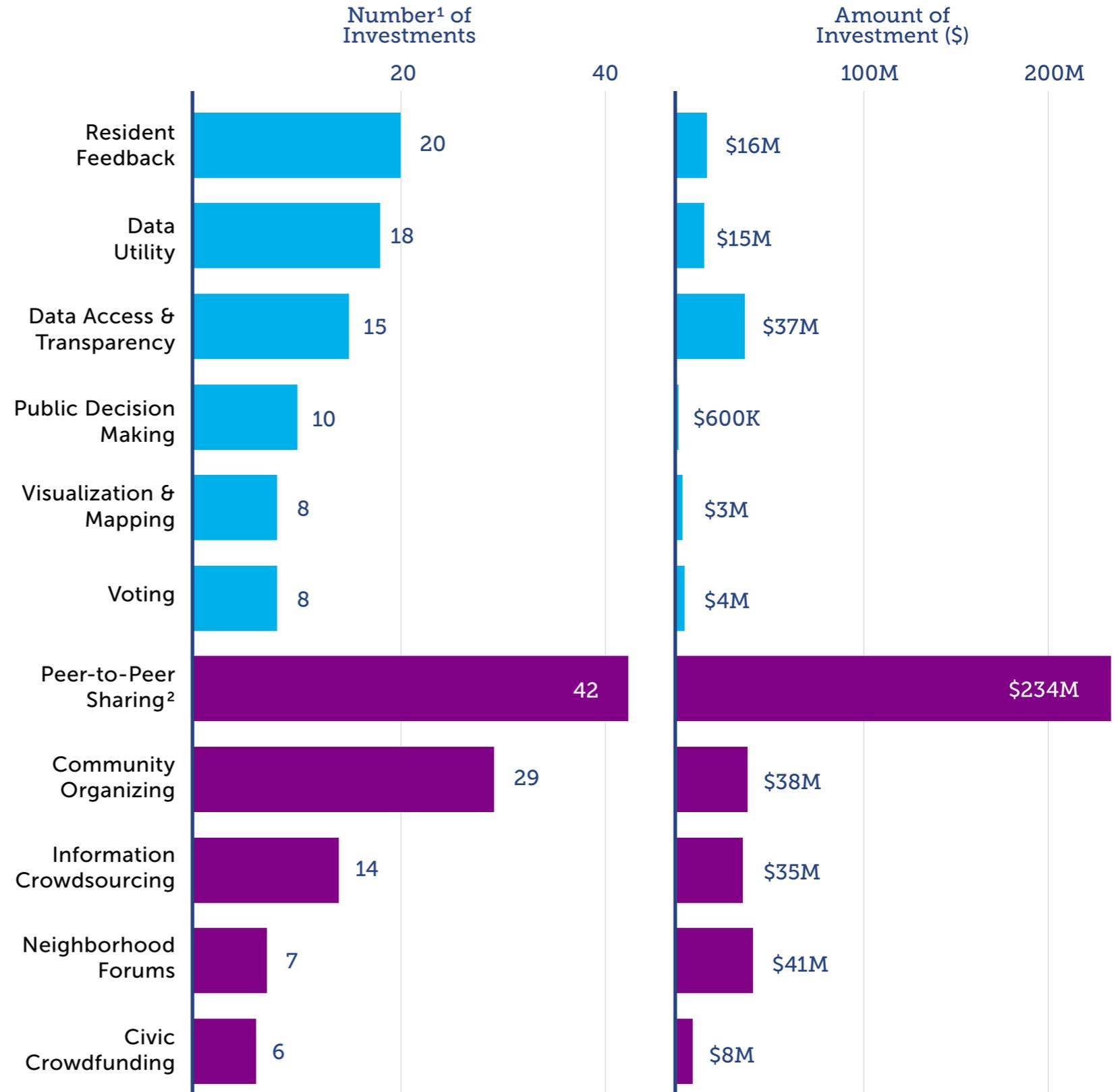
[1] *Includes grants and private investments from 1 Jan 2011 to 31 May 2013*

[2] *Peer-to-Peer Sharing includes a $119M round for Airbnb*

Number[1] of Investments

Amount of Investment ($)

Cluster	Number of Investments	Amount of Investment
Resident Feedback	20	$16M
Data Utility	18	$15M
Data Access & Transparency	15	$37M
Public Decision Making	10	$600K
Visualization & Mapping	8	$3M
Voting	8	$4M
Peer-to-Peer Sharing[2]	42	$234M
Community Organizing	29	$38M
Information Crowdsourcing	14	$35M
Neighborhood Forums	7	$41M
Civic Crowdfunding	6	$8M

Innovation Cluster Maturity

The analysis examined the median age of organizations in each civic tech cluster.

Compared to the tech industry as a whole, civic tech organizations are relatively young. Civic Crowd-funding projects have a median age of just two years, while the average age of organizations in the most mature clusters—Voting, Public Decision Making and Visualization & Mapping—was five to seven years.

50 investments

P2P Sharing

Community Organizing

Data Utility

Resident Feedback

Data Access & Transparency

Information Crowdsourcing

Public Decision Making

Voting

Visualization & Mapping

Civic Crowdfunding

Neighborhood Forums

40

30

20

10

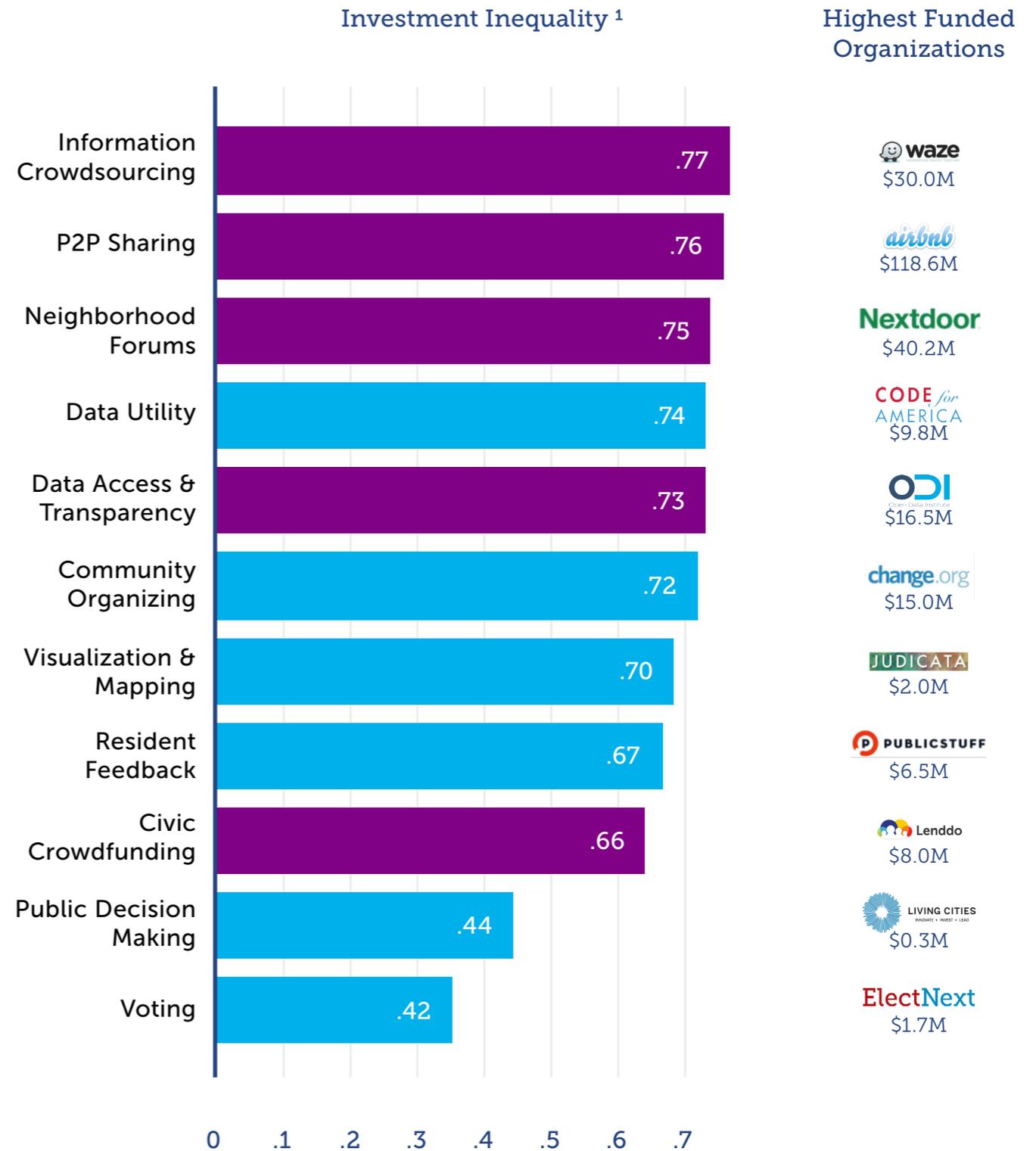1 2 3 4 5 6 7

Median Company Age

Investment Concentration within Clusters

The analysis examined the distribution of investments within each cluster to highlight emerging market leaders and competitive dynamics at play in each area. The diagram ranks the "investment inequality" of clusters by measuring the extent to which a handful of organizations have secured a dominant share of capital to the cluster.

Neighborhood Forums is an example of a civic tech cluster with a high level of investment inequality where a single firm has received the overwhelming share of investment (Nextdoor = $40.2M).

Information Crowdsourcing and Peer-to-Peer Sharing clusters have the most unequal levels of investment, but dominant firms in both areas are highly focused on particular issue verticals (e.g., Waze = transportation data, Airbnb = housing).

[1] Investment inequality is based on the Gini coefficient, which measures on a 0–1 scale the evenness of funding distribution across organizations within each cluster (0.0 = perfectly even distribution, 1.0 = single firm received entire share of funding)
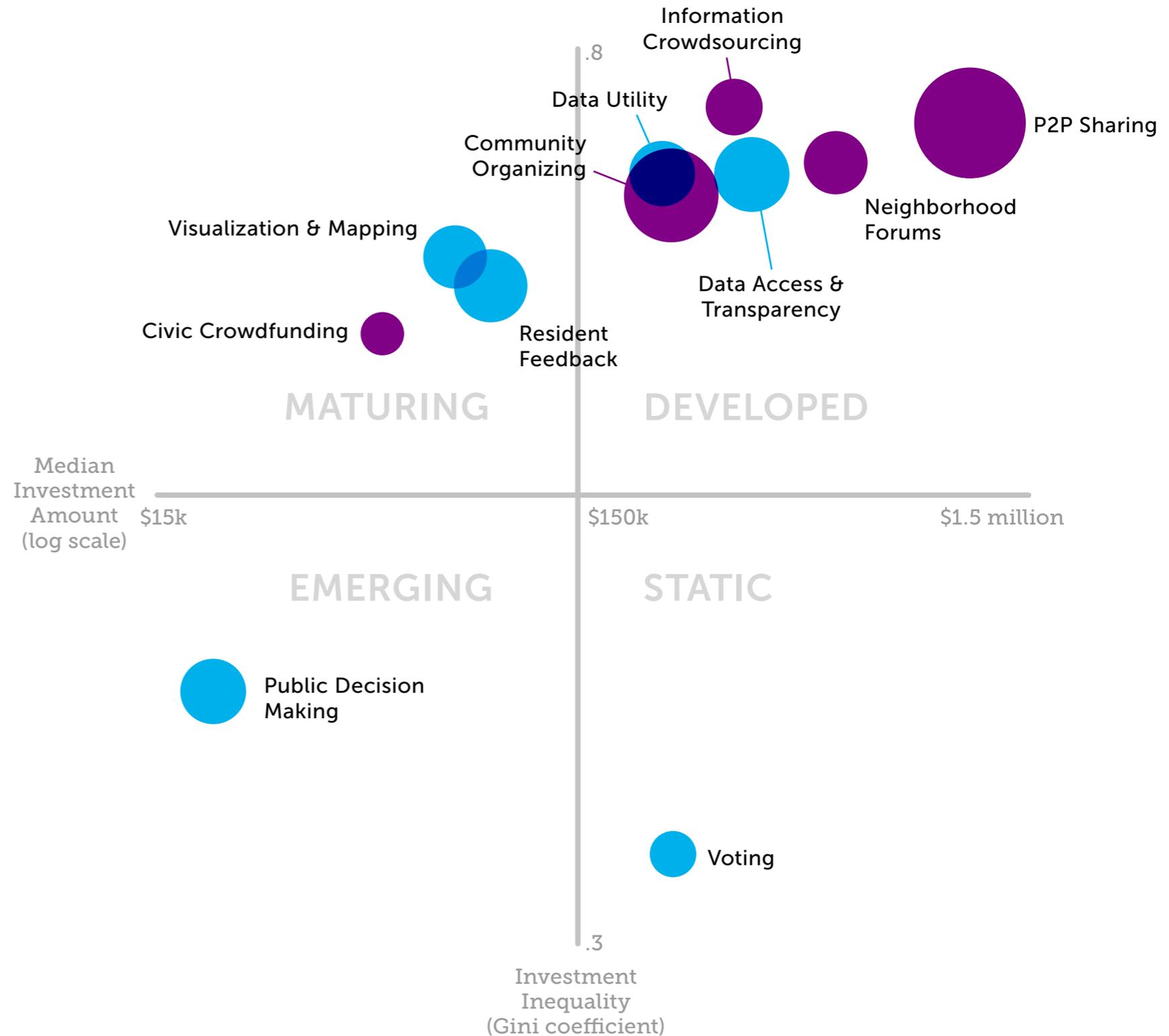
Investment Inequality [1]

Cluster	Value
Information Crowdsourcing	.77
P2P Sharing	.76
Neighborhood Forums	.75
Data Utility	.74
Data Access & Transparency	.73
Community Organizing	.72
Visualization & Mapping	.70
Resident Feedback	.67
Civic Crowdfunding	.66
Public Decision Making	.44
Voting	.42

0   .1   .2   .3   .4   .5   .6   .7

Highest Funded Organizations

waze — $30.0M
airbnb — $118.6M
Nextdoor — $40.2M
CODE for AMERICA — $9.8M
ODI — $16.5M
change.org — $15.0M
JUDICATA — $2.0M
PUBLICSTUFF — $6.5M
Lenddo — $8.0M
LIVING CITIES — $0.3M
ElectNext — $1.7M

Cluster Characteristics

Cluster investment inequality can be cross-analyzed with median investment size by cluster to help determine the competitive dynamics and impressionability of each cluster.

"Emerging" clusters of innovation have lower investment inequality and contain organizations that attract smaller average investments—these include Public Decision Making, Civic Crowdfunding and Voting.

"Developed" clusters have a high level of investment inequality (i.e., market leaders attracting the bulk of investment) and higher average investments—these include Peer-to-Peer Sharing and Neighborhood Forums.

Information Crowdsourcing

Data Utility

Community Organizing

P2P Sharing

Neighborhood Forums

Visualization & Mapping

Data Access & Transparency

Civic Crowdfunding

Resident Feedback

MATURING

DEVELOPED

Median Investment Amount (log scale)

$15k

$150k

$1.5 million

EMERGING

STATIC

Public Decision Making

Voting

.8

.3

Investment Inequality (Gini coefficient)

Investor
Analysis

This section examines:

TYPES OF CAPITAL
What is the balance between private and philanthropic capital supporting civic tech?

INVESTORS
Who is investing in civic tech?

INVESTOR NETWORKS
How are civic tech investors connected?

Types of Capital

The analysis examined the balance of private and philan-thropic investment attracted by civic tech organizations from January 2011 to May 2013.

While the number of grant investments and private invest-ments was relatively even, the vast majority of total capital supporting civic tech came from private investments (84%).
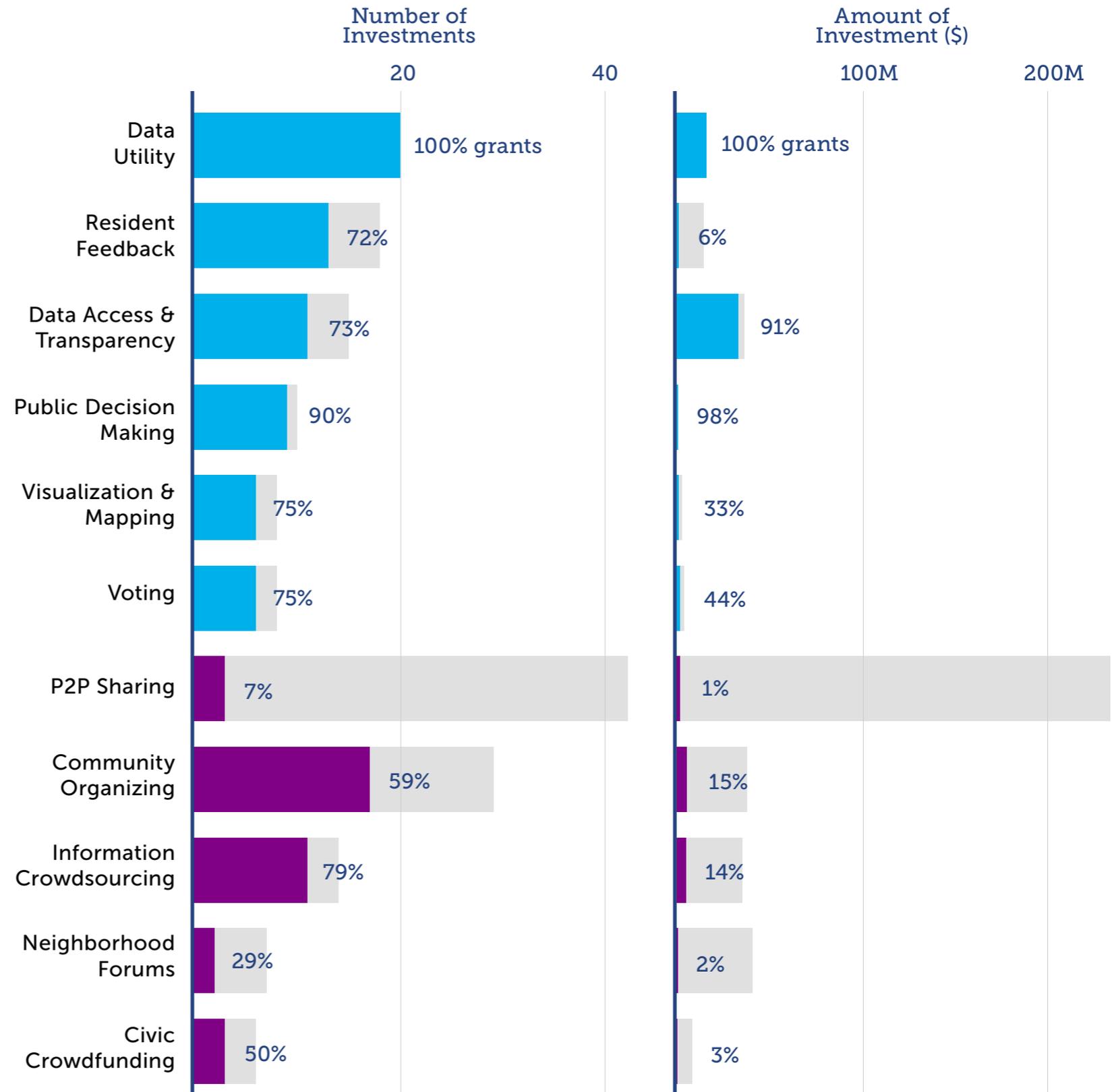

177
Total
Investments

$431M
Total Investment
Dollars

Private
Investments
76

Grants
101

$364M

$67M
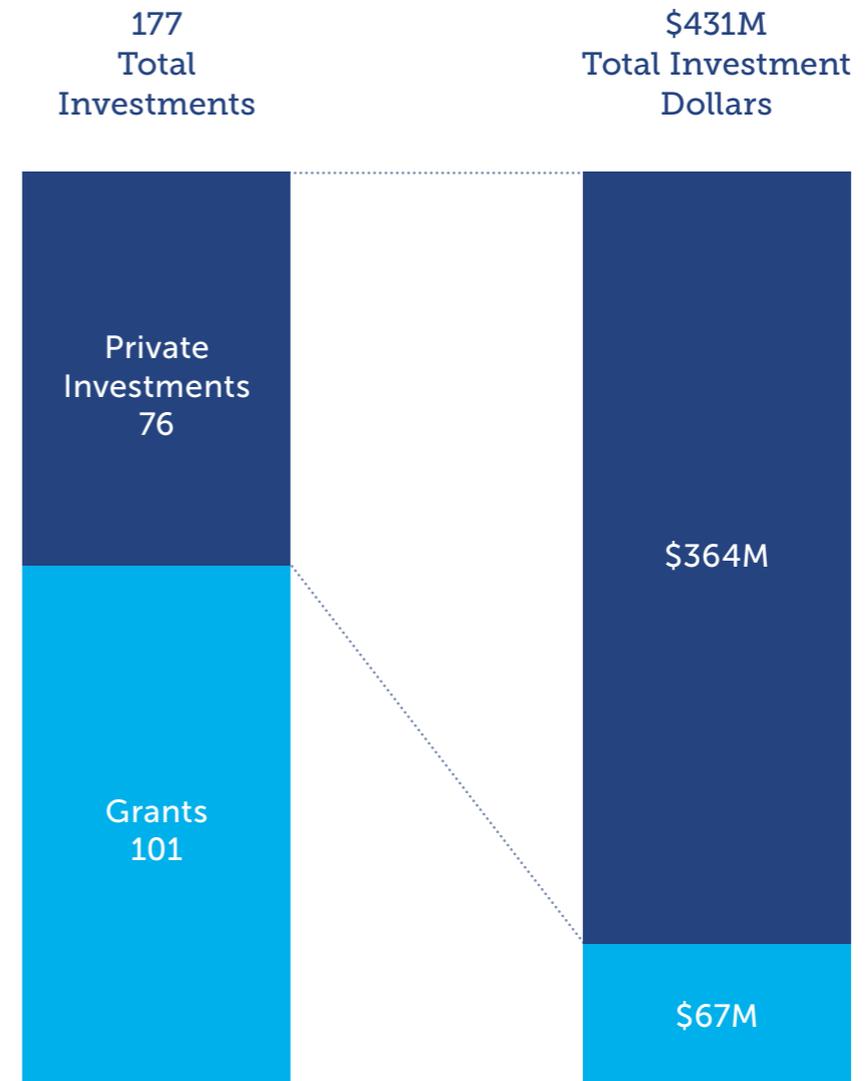
Capital Mix by Cluster

The mix of philanthropic funding and private investment from January 2011 to May 2013 varied greatly between the two themes.

Open Government innovation clusters including Data Utility, Data Access & Transparency, and Resident Feedback are mostly supported through grant funding.

Community Action clusters including Peer-to-Peer Sharing, Neighborhood Forums, Civic Crowdfunding and Information Crowdsourcing mostly attracted private capital.

Number of Investments

20   40

Amount of Investment ($)

100M   200M

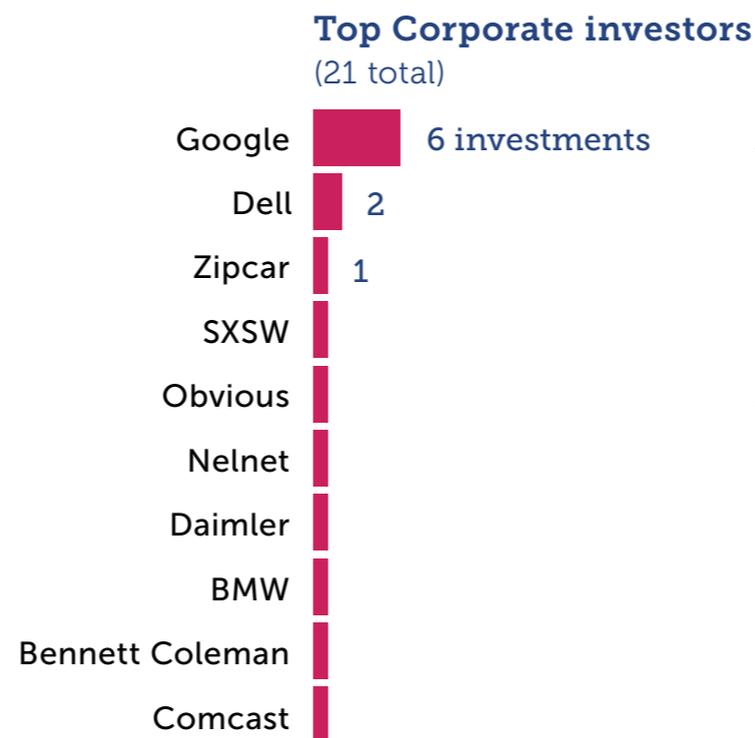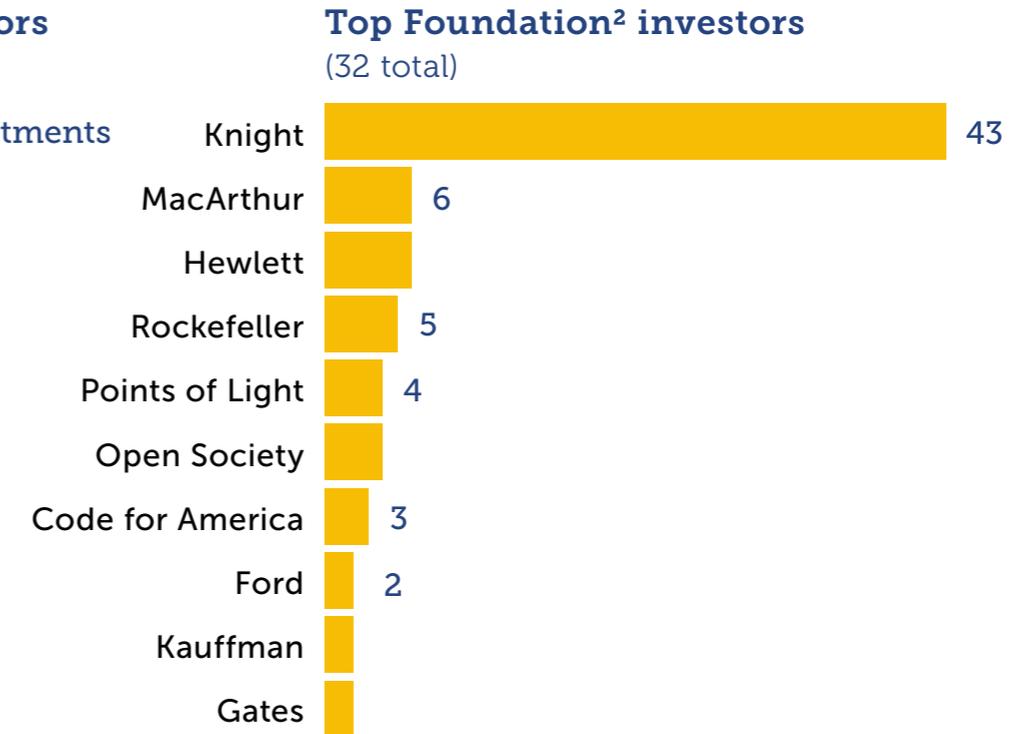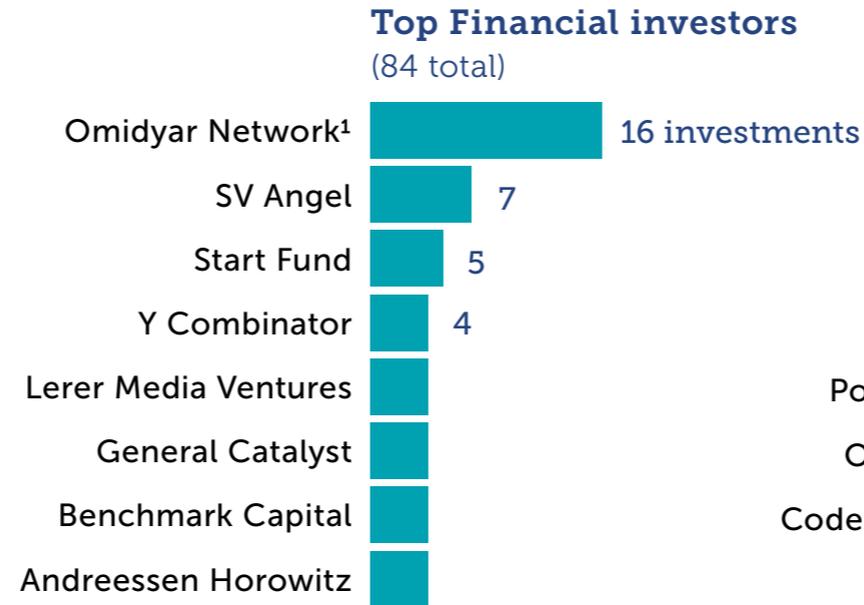| Cluster	Number of Investments	Amount of Investment
Data Utility	100% grants	100% grants
Resident Feedback	72%	6%
Data Access & Transparency	73%	91%
Public Decision Making	90%	98%
Visualization & Mapping	75%	33%
Voting	75%	44%
P2P Sharing	7%	1%
Community Organizing	59%	15%
Information Crowdsourcing	79%	14%
Neighborhood Forums	29%	2%
Civic Crowdfunding	50%	3%

Civic Tech Investors

Four types of investors are involved in supporting civic tech projects—foundations, financial investors, corporate investors and individual (often angel) investors.

Investor types and investment count of most frequent investors are based on data from January 2011 to May 2013

[1] *Omidyar Network is designated as a financial investor but operates as a philanthropic investment firm that also provides grant funding*

[2] *Foundation investors may have contributed multiple types of investments—grant funding, program-related and mission-related investments*

Code for America and Points of Light are included in this list stemming from funding they provide through their civic accelerators

Top Financial investors
(84 total)

Investor	Investments
Omidyar Network[1]	16 investments
SV Angel	7
Start Fund	5
Y Combinator	4
Lerer Media Ventures	
General Catalyst	
Benchmark Capital	
Andreessen Horowitz	

Top Foundation[2] investors
(32 total)

Investor	Investments
Knight	43
MacArthur	6
Hewlett	
Rockefeller	5
Points of Light	4
Open Society	
Code for America	3
Ford	2
Kauffman	
Gates	

Top Corporate investors
(21 total)

Investor	Investments
Google	6 investments
Dell	2
Zipcar	1
SXSW	
Obvious	
Nelnet	
Daimler	
BMW	
Bennett Coleman	
Comcast	

Top Individual investors
(101 total)

Investor	Investments
Ashton Kutcher	3 investments
Sean Parker	2
Guy Oseary	
Esther Dyson	
Aviv (Vivi) Nevo	
Alexis Ohanian	
Peter Thiel	1
Marissa Mayer	
Jeff Bezos	

Investor Analysis

Financial investors and individuals support a large share of Community Action investments. Foundations account for more than half of the number of investments in Open Government.
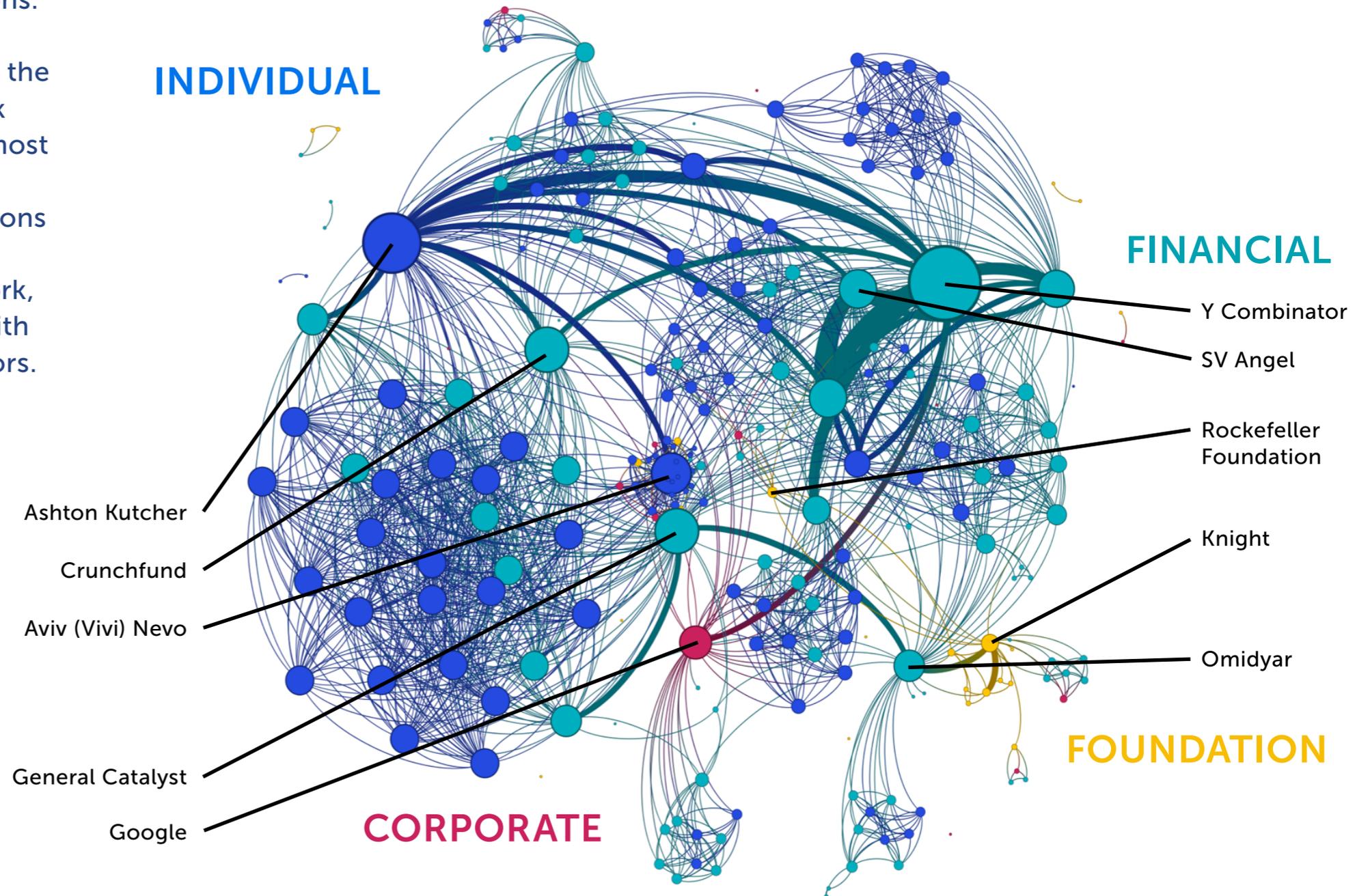

Community Action

96

36

10

113

Open Government

Individual investors — 9

Foundations — 55

Corporate — 10

Financial — 31
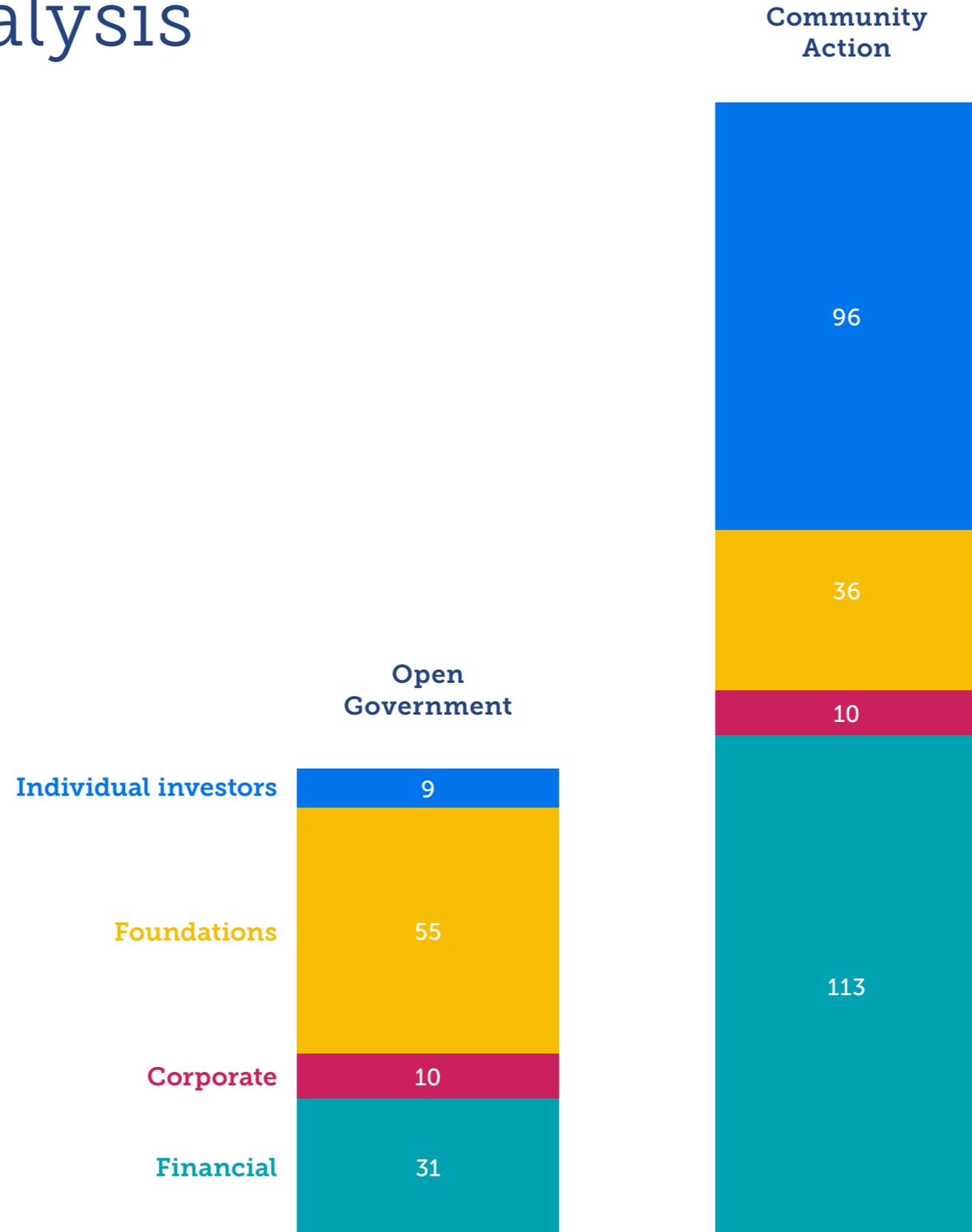
Count Of Investments By Investor Type

Investor Networks

The analysis reviewed funder relationships based on instances where they co-invested in the same civic tech organizations. Venture capital and angel investors are at the center of the network map, signaling they most frequently co-invest with others. Foundations are largely peripheral to the investor network, rarely co-investing with other types of investors.

INDIVIDUAL

FINANCIAL

Y Combinator

SV Angel

Rockefeller Foundation

Knight

Omidyar

FOUNDATION

CORPORATE

Ashton Kutcher

Crunchfund

Aviv (Vivi) Nevo

General Catalyst

Google

Network by Quid

Key
Takeaways

This section examines:

STRATEGIC IMPLICATIONS
How might foundations
continue to influence
the growth of civic tech?

NEXT STEPS
How can civic tech
funders and practitioners
build on the insights
from this initial analysis?

Strategic Implications

Findings from this initial analysis of civic tech funding raise important questions about opportunities and approaches for investors, particularly foundations, to advance this emerging field.

1

How can Open Government attract greater private capital?

Though the number of philanthropic grants far outpaces private capital investments (65 vs. 14), private capital constitutes $21M of $75M invested in open government. Examining the characteristics of open government organizations attracting private investment might help illuminate the viability of market-based initiatives in this space and be used to attract more private capital.

2

How can philanthropy support new "Tools for Democracy"?

Innovation clusters focused on civic engagement and democratic participation—Public Decision Making, Resident Feedback and Voting—are among the youngest and least funded areas in the overall landscape. At the same time, they appear most ripe to be influenced through further support based on the small average investment size and lack of a dominant market leader in each cluster.

3

How can philanthropy exert influence beyond its investments?

Philanthropy can shape the civic tech field in ways besides directly investing in organizations, especially in clusters where significant private investment already exists. For example, foundations may achieve greater impact advancing the growth of peer-to-peer sharing economies by addressing outdated regulations inhibiting the growth of this sector rather than supplying limited amounts of grant funding to a handful of tech organizations in the space.

4

### How can funders increase co-investment and collaboration?

Relatively little co-investment currently occurs in the civic tech field, especially between philanthropic institutions and other types of investors. As more foundations pursue impact investing strategies, philanthropic funders could seek out more opportunities to co-invest and partner with other types of investors.

Next Steps

This initial review was designed to provide a clearer picture of overall investment flows in civic tech, including the distribution of invest-ments across different clusters of innovation and variances between private and philanthropic support. While the boundaries of civic tech remain loosely defined, the analysis demonstrates a growing level of investment and activity in civic tech.
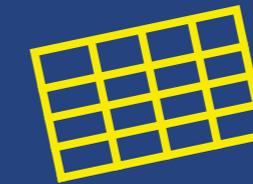
This report summarizes findings from the analysis. Additionally, two related resources exist for those interested in exploring the underlying data about civic tech organizations and investors.
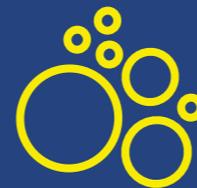
Interactive data visualization tool to explore the data

Explore

Data directory of organizations and investors captured in the analysis

Download

Share Feedback and Suggestions

Help improve the analysis and build a more robust data set of civic tech organizations and investments. We will update the report in 2014 and welcome your recommendations for other orga-nizations to include in the data.

Do you have any feedback? Share your suggestions with Jon Sotsky at the Knight Foundation.