

# Webinar: Marketing Your Region's Brain Trust

## How to identify your community's greatest hidden assets Intellectual Property

In this webinar you'll learn how to:

- Identify intellectual property clusters,
- target opportunities to fill gaps in your region's innovation system,
- attract high-tech businesses to your region, and
- unlock a potential impact of billions of dollars in additional payroll and revenue

### *Presenters*

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Management  
Northern Kentucky University

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Senior Director  
Center for Economic Analysis & Development  
Northern Kentucky University

# Why IP matters

- ▶ “The effect of patents on growth is roughly equal to that of having a highly educated workforce. A low-patenting metro area could gain \$4,300 more per worker over a decade’s time, if it became a high-patenting metro area.”
  - ▶ Brookings Institute, *Patenting Prosperity: Invention and Economic Performance in the United States and its Metropolitan Areas*

In a metro area with a workforce of roughly 1 million that translates into **\$4.3 billion** in additional payroll every year

What is the  
next  
technology  
leap?  
Where is it  
coming from?



Steam engine



Electricity



Automobile



Computer



Robotics, AI, 3-D printing,  
genomics, fintech, ???

# Getting to “Know” is Difficult

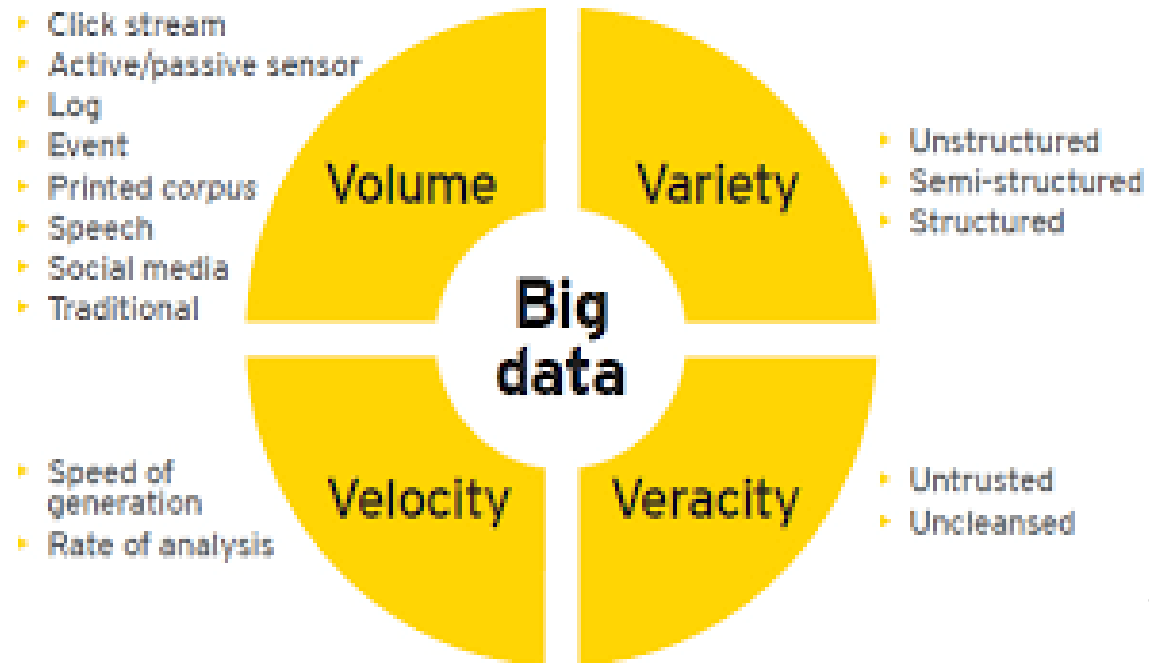
- ▶ 90% of the world's digital data has been created in last 2 years
- ▶ 80% of the world's digital data is unstructured
- ▶ US Federal Government produces 196,000 datasets annually
- ▶ 450 billion business transactions occur every day
- ▶ 6.1 billion smartphone users worldwide

**Only .5% of the data collected today is even analyzed**

# “Big Data” Universe Defined

- ▶ Huge amounts of information, easy to obtain, but so massive that they challenge current computing technologies.

- ▶ Volume
- ▶ Variety
- ▶ Velocity
- ▶ Veracity



# Most regions cannot answer two critical questions about their economy

- ▶ What are my region's IP clusters?
- ▶ How do our region's IP clusters compare to others across the nation and globe?



Poll question:

Have you identified your region's IP clusters?



Poll question:

If you answered *yes*, did you do so based strictly on patent data?

# Current statistical system designed to track industries not technologies

- ▶ NAICS do not exist for:
  - ▶ Bio Health
  - ▶ 3D Printing or Additive manufacturing
  - ▶ Nanosensors
  - ▶ Recyclable thermoset plastics

# Limitations of Traditional IP Tracking Solutions

- ▶ Software that tracks a single IP channel such as grants or patents provides an incomplete and often “too late” picture of a region’s IP.
- ▶ Opportunities are gone before they are even identified!
- ▶ As a result communities are potentially leaving a lot of money on the table.

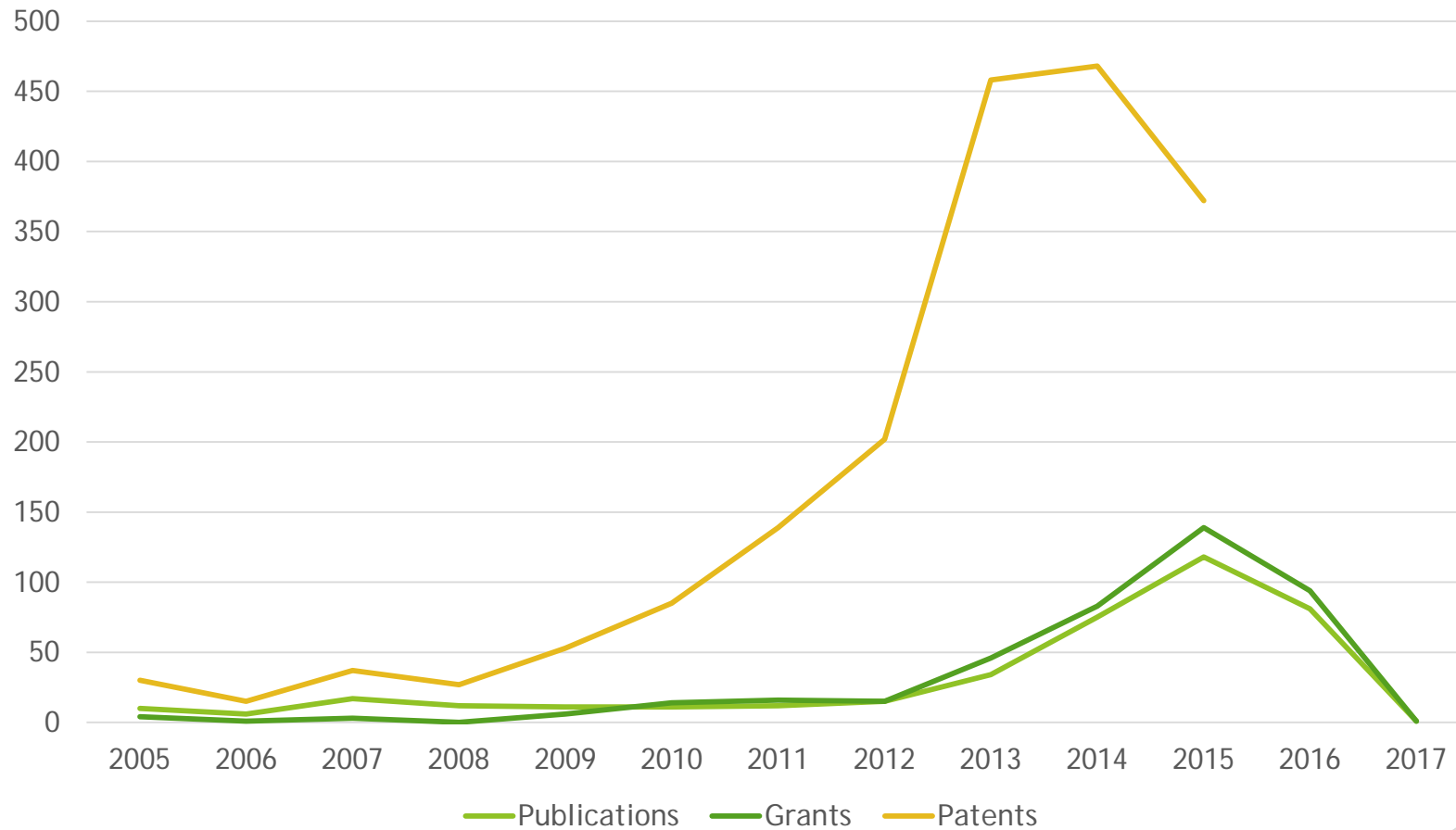
# The IP Chain: It's more than just patents

- ▶ Identify clusters based on technological innovation throughout the development and implementation process
  - ▶ Publications
  - ▶ Patents
  - ▶ Grants
  - ▶ Venture Capital
  - ▶ Start Ups/Corporate Expansions/Corporate Spinoffs

# Case Study: 3D Printing is the next disruptive technology in manufacturing

- ▶ Which metros are leading in 3D Printing IP activity?
- ▶ What is the market potential for 3D Printing?
- ▶ **RESULTS:** Using massive open data sources focused on IP provides better indicators of where the new epicenters of activity are located ahead of more traditional indicators of economic activity such as employment or occupational activity.

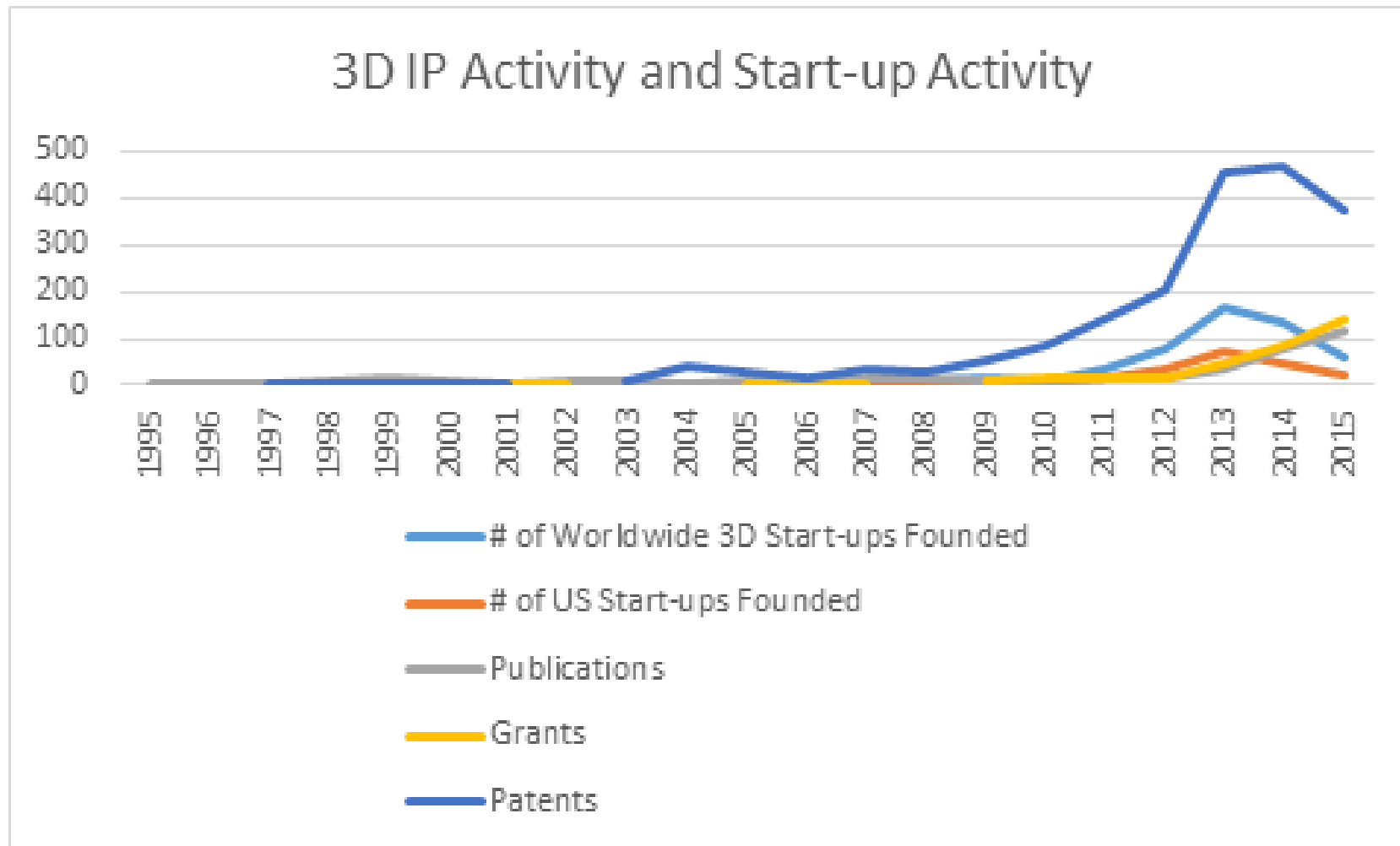
# United States 3D Printing IP Activity 2005 to present



# Top Metros in 3D Printing IP

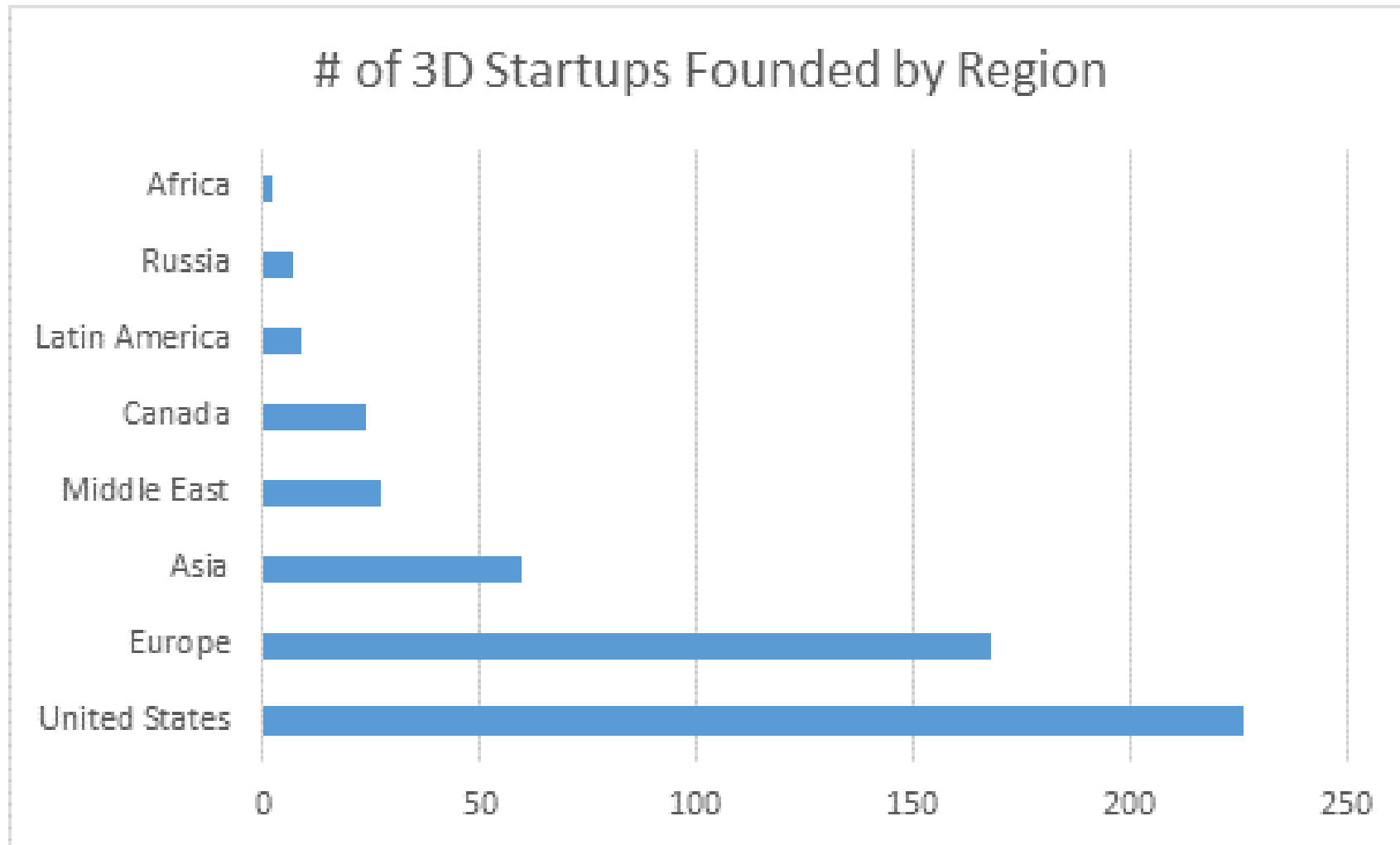
	Grants	Publications	Patents	TOTAL	Rank
Boston, MA	25	25	69	119	1
Los Angeles, CA	16	15	87	118	2
New York, NY	17	10	38	65	3
Washington, DC	18	7	25	50	4
San Francisco, CA	5	6	50	61	5
Pittsburgh, PA	13	7	9	29	6
Albany, NY	6	5	19	30	7
San Jose, CA	4	13	18	35	8
Philadelphia, PA	7	12	6	25	9
Seattle, WA	4	6	17	27	10

# Patent activity is leading indicator of economic activity

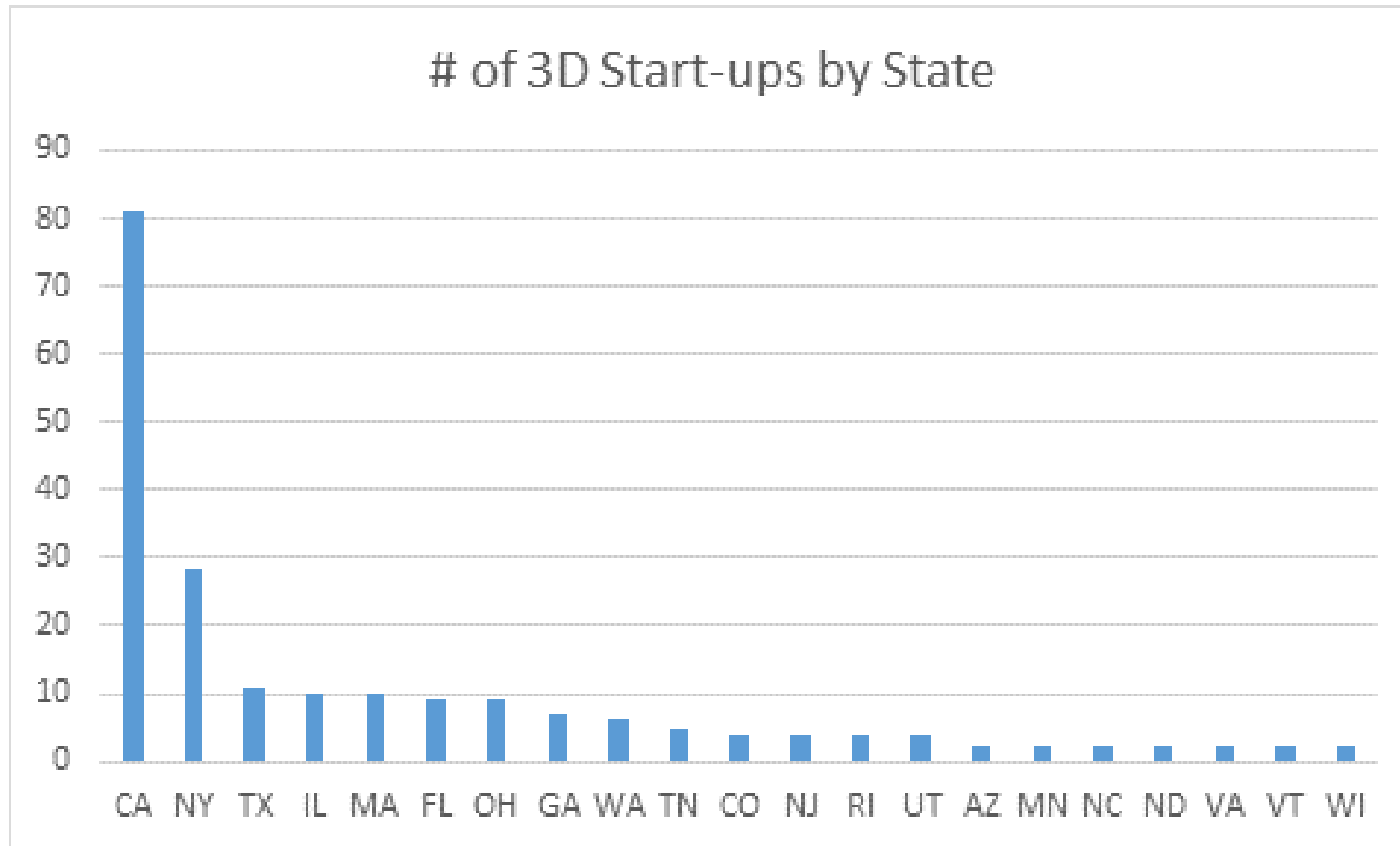




# U.S. Leads in 3D Printing Startups

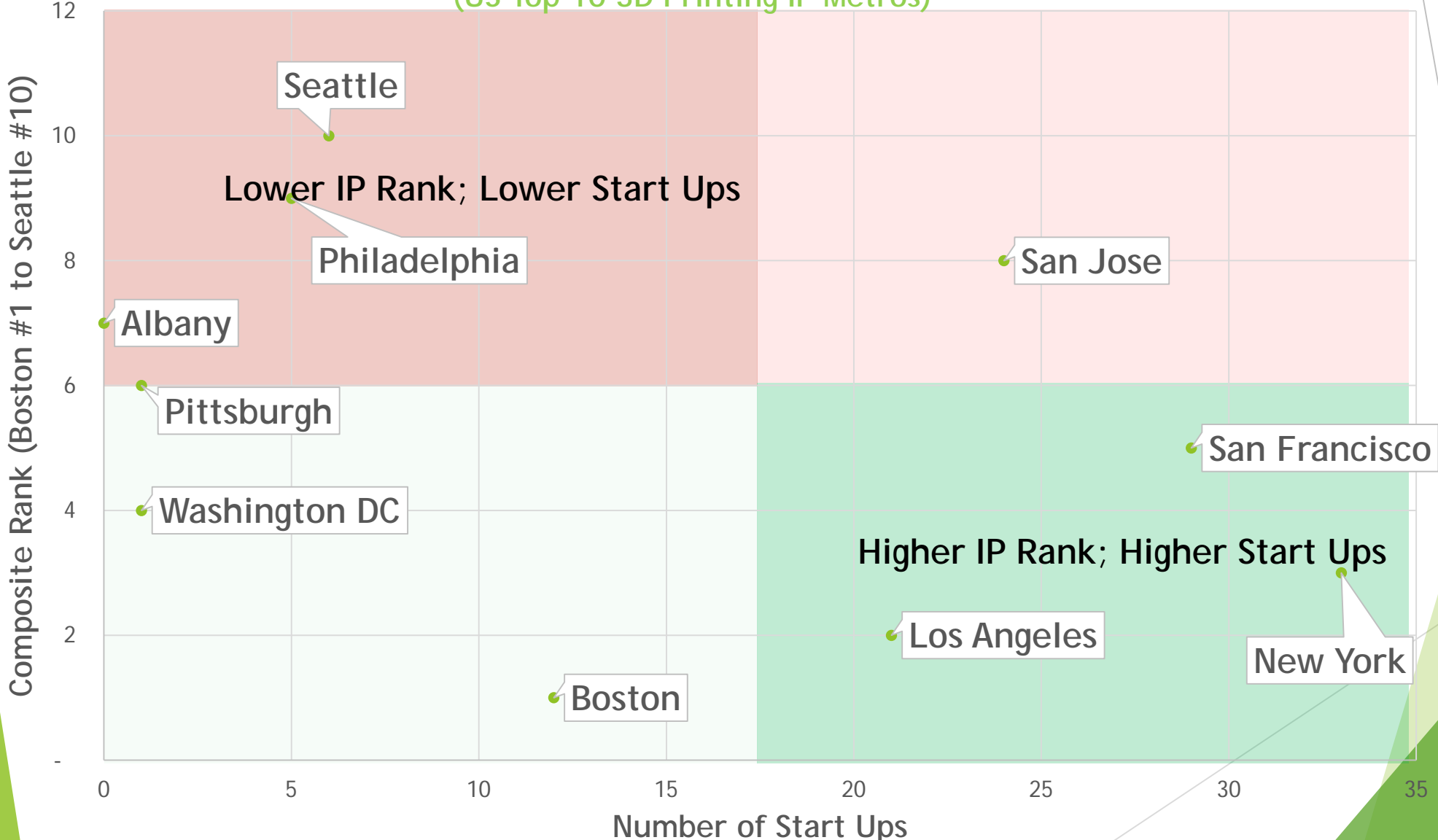


# California leading start-ups

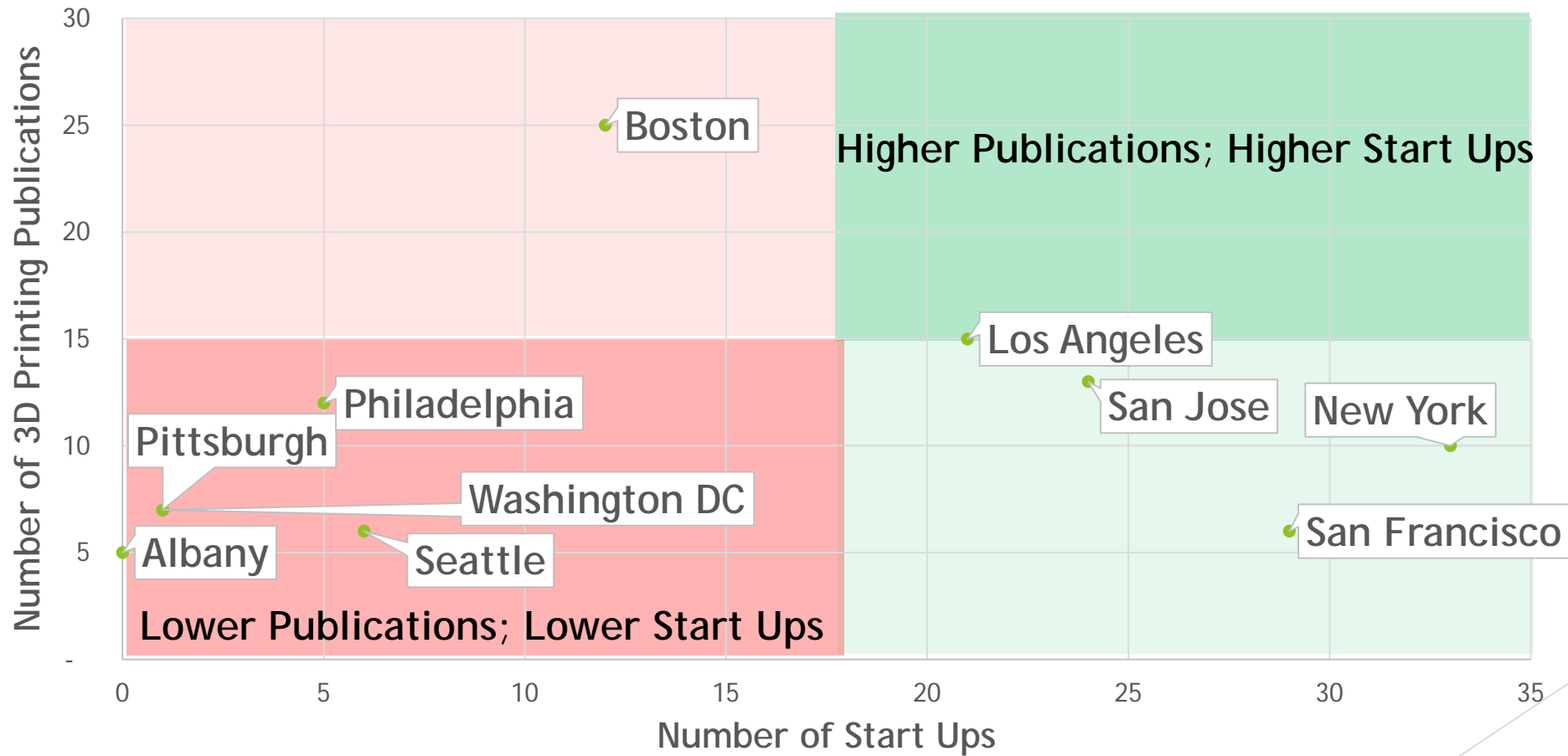


# IP Density vs Number of Start Ups

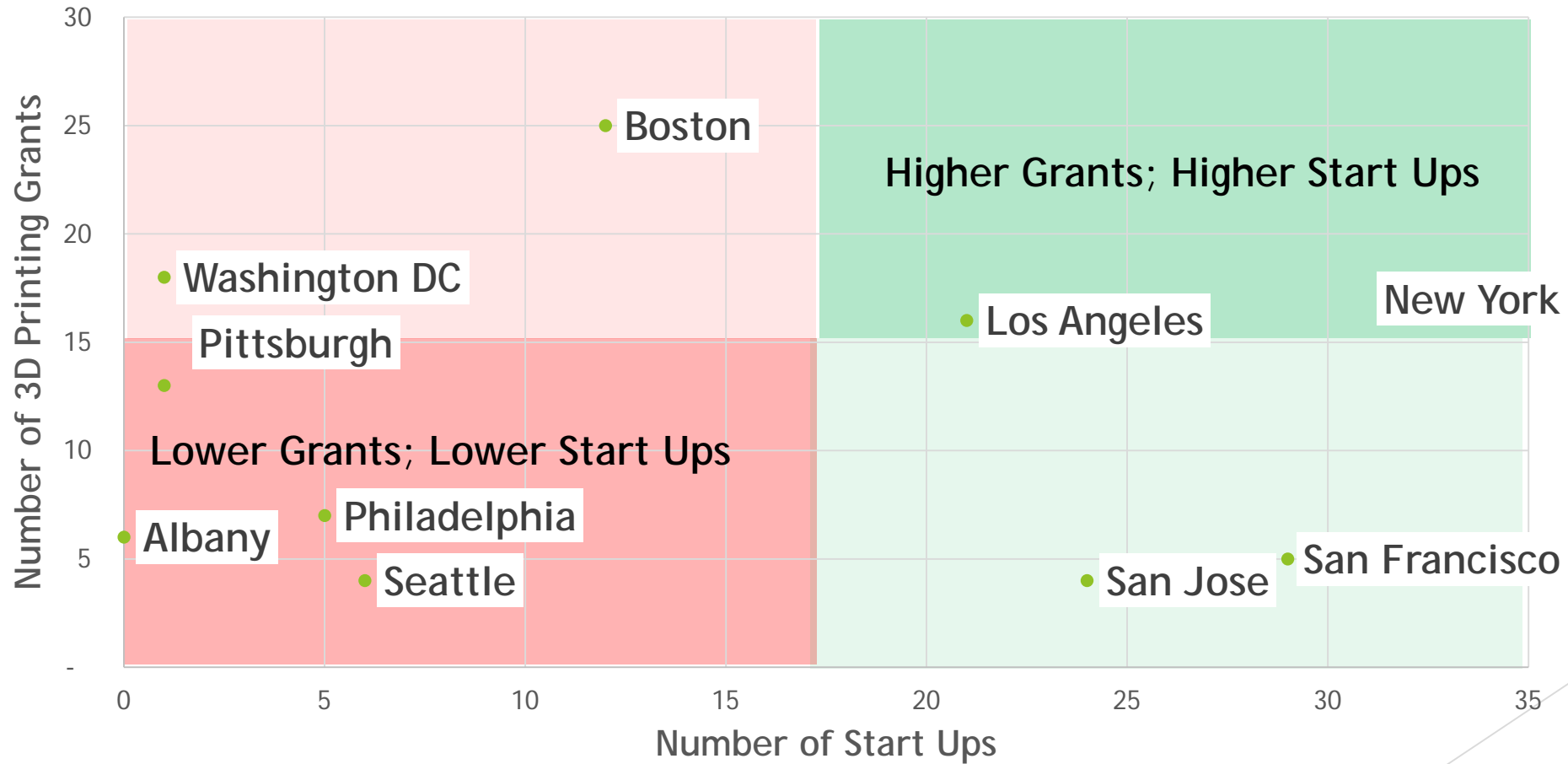
(US Top 10 3D Printing IP Metros)



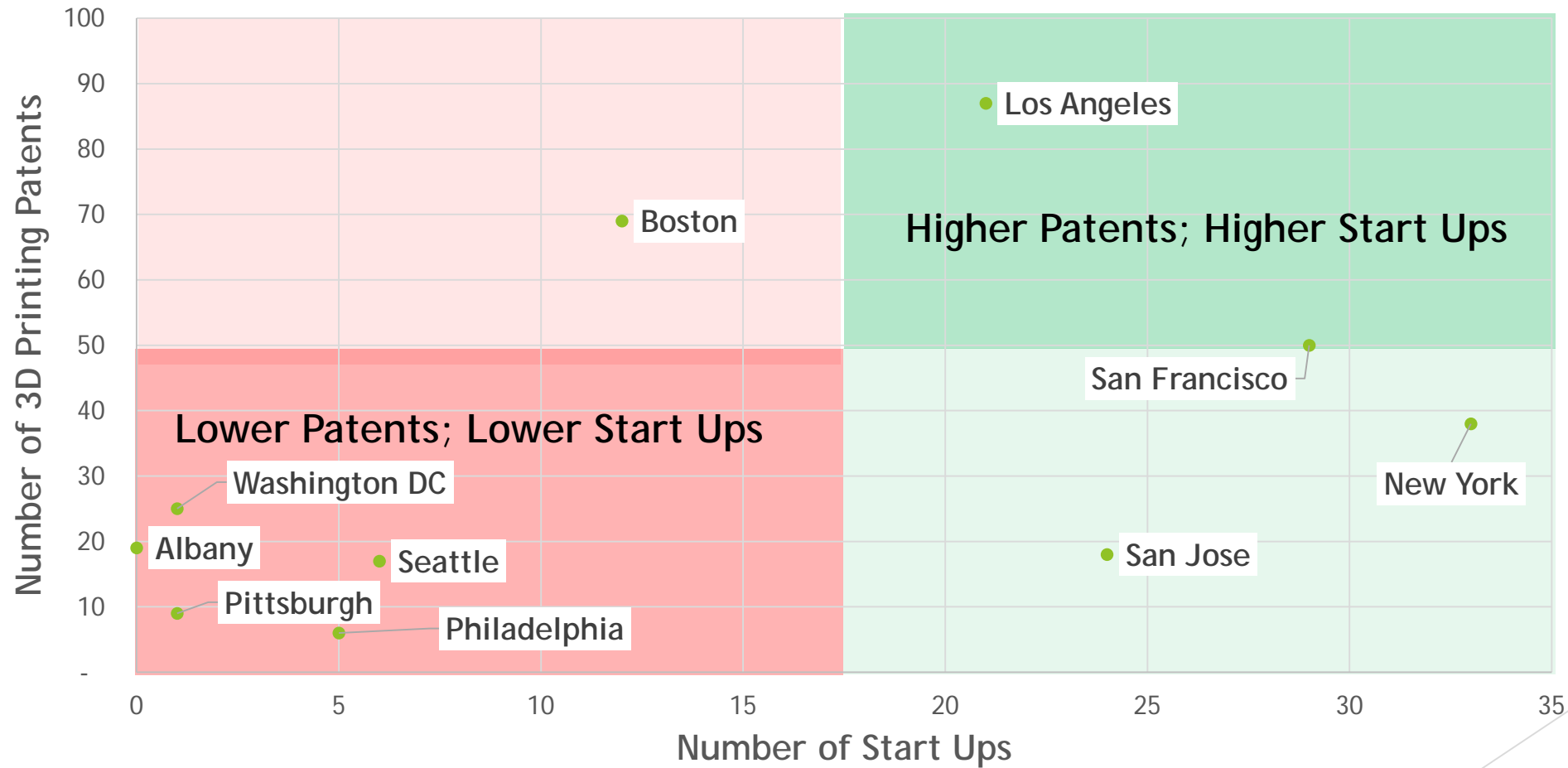
## Number of Publications vs Number of 3D Start Ups (US Top 10 3D Printing IP Metros)



## Number of Grants vs Number of 3D Printing Start Ups (US Top 10 3D Printing IP Metros)



## Number of Patents vs Number of 3D Start Ups (US Top 10 3D Printing IP Metros)



# IP Strategic Potential

- ▶ What are your community's IP clusters?
- ▶ For those IP clusters, where is the competition for VC, start-ups, and M&A activity?
- ▶ How much money is your community leaving on the table by not knowing the answers to these questions?

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- **Intellectual Property Analysis** located on the left hand side of the screen