

“The Growth and Evaluation of U.S. Research/Science Parks”

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Initial Observations

- Is “it” a *research park* or is “it” a *science park*?
- What is “it”?
- What does “it” look like?
- Who is in “it”?
- What does “it” do, and who benefits?

Is “it” a *research park* or is “it” a *science park*?

- Term *research park* more common in the United States, and the term *science park* more common in Europe, and the term *technology park* more common in Asia
- Also see the terms and names, *bioscience park* and *innovation park*

What is “it”?

- A university research park is a cluster of technology-based organizations that locate on or near a university campus in order to benefit from the university’s knowledge base and ongoing research. The university not only transfers knowledge but expects to develop knowledge more effectively given the association with the tenants in the research park.
- The university – park relationship - **URPs**

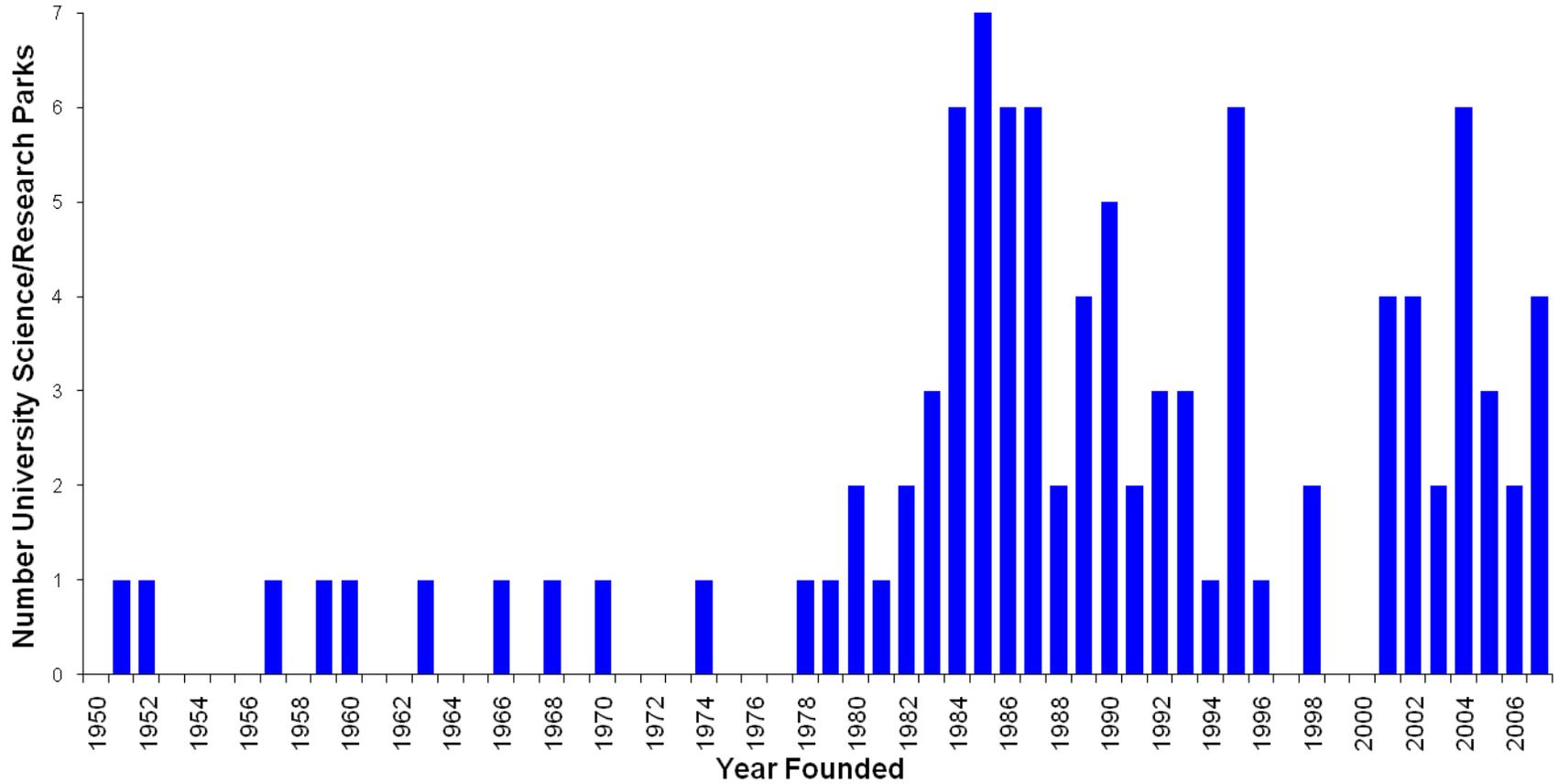
What does “it” look like?

- If you've seen *one* research park
you've seen *one* research park

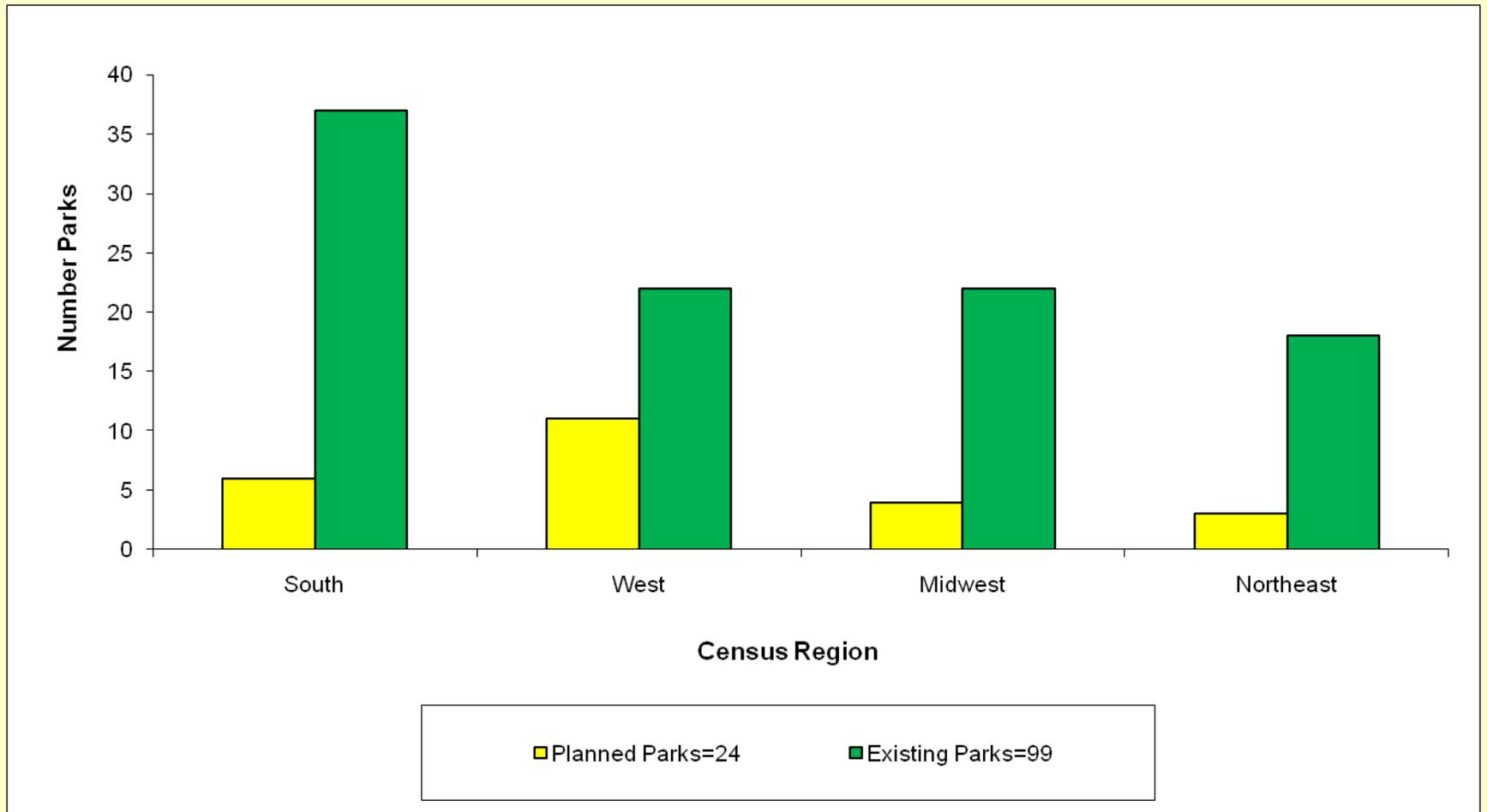
Centennial Campus



Population of U.S. URPs



Regional Distribution of URPs



Who is in “it”?

- Very little research into the composition of tenants of parks
- Evidence to date confirms the obvious. It suggests that the more R&D active the company the greater the probability that it will locate in a research park.

What does “it” do, and who benefits?

- Growth of URPs
- University impact of URPs
- Regional impact of URPs
- Value of public investments in URPs

Growth of URPs

- Annual rate of employment growth in parks is:
 - Greater the closer the park is to the university
 - Greater in specialized parks (IT or bioscience)
 - Greater if park not operated/managed by the university
 - Slower in parks with incubators
 - Equal between public and private universities

University Impact of URPs

- According to university provosts, since their park opened:
 - University research output (publications and patents) has increased
 - Extramural research has increased
 - Ability to hire eminent scholars unaffected
 - Placement of doctoral students unaffected
 - University curriculum becomes more applied

Regional Impact of URPs

- A few systematic studies of this important issue:
 - URPs enrich the knowledge base of a region
 - URPs leverage the academic output of the university → enhanced reputation of the university
 - Parks provide home for university spin-offs (~10% URP tenants are university spin-offs)
 - Park tenants have greater research output

Value of Public Investments in URPs

- This is not a question intended to directly relate to S. 1373.
- Roughly one-third of parks self report that they have received public moneys.

Value of Public Investments (cont.)

- Relevant evaluation question:
What proportion of the benefit stream generated by the park and university from these moneys are captured by the tenants and university compared to the proportion captured by others that use the knowledge generated by the URP to produce competing products for the social good?
- No studies of this type to date.

Research Questions to Address

(given an accepted definition)

- How do URPs enhance the market process?
 - Need for a first US matched pair study
- How do URPs affect regional growth and development?
 - Need for longitudinal case studies
- What are the social benefits from public investments in URPs?
 - Need for a first systematic evaluation of spillover benefits (perhaps as case studies)

Metrics to Consider

(given an accepted definition)

- Count of URPs by year of founding
- Employment and R&D within URPs
- University R&D allocated to joint projects with park tenants
- % of university R&D from in-park and out-of-park companies
- Company R&D between in-park and out-of-park laboratories/units

Thank you.