Focus on Economic Development & Commercialization

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Short statements:
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Focus on Economic Development & Commercialization – Mike Moradi, Charlesson Pharmaceuticals

- **What are the needs for successful economic development and commercialization of nanotechnology? Please provide any helpful examples of clever models for nanotechnology commercialization and collaboration.**

- **Needs**
  - Capital
  - Talent
  - Facilities
  - R&D-friendly policies and environment

- **Clever Examples from Other Industries**
  - Kentucky 1:1 SBIR matching (though ran out of $$$)
  - MINDLAB – Oklahoma City biopharma community's *"Multidisciplinary IND-enabling LABoratory"*
  - Massachusetts Life Science Initiative (LSI) – $1B for 10 years, creates 5 clusters, workforce, capital
  - San Jose Bio Center – office + wet lab for startups. Cluster has grown 28%/year since 2002

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- **What has to be done in the immediate future to meet these needs, and at what level (federal, regional, state, local)?**

- **Federal**
  - Senate: NNI Reauthorization
  - NIH, NSF, DOD, DOE – continue to fund basic and translational research

- **Regional**
  - Cluster – Build upon strengths where industrial base exists

- **State**
  - Tax Incentives, “cluster” facilities built around natural strengths
  - Support commercialization-oriented professors, serial entrepreneurs, etc

- **Local**
  - Talent!!!! Capital formation within communities
  - Marshall resources to capture stimulus funds, seek short-term opportunities where possible

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- **Four regional initiatives I'm familiar with**
  - Texas: Emerging Technology Fund: $200M/2 yrs + $185M/2 yrs
    - Research Superiority Acquisition; Research Matching; Commercialization
  - Ohio: Third Frontier: $1.6B/10 yrs; numerous sub-programs
  - South Dakota: Governor's Office of Economic Development
  - Singapore: EDB, SPRING, et al
- **Similarities**
  - Focus on job creation in targeted fields
  - Try to fill in for lack of early stage capital
  - Use leverage from federal & private sources
  - Most require partnerships with universities, can be defocusing
- **Differences**
  - Equity vs. non-equity

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- **The backdrop**
  - Early stage capital is scarce
  - Exits are few, and IPO exits unlikely
  - Few companies have commercially viable models today
  - Launching takes longer due to headwinds of economy, NGOs
- **Helping**
  - Capital is important, but infrastructure matters (business climate, talent, access to equipment, partners, communication & transportation)
  - Government money has strings – or more accurately, tangled nanotubes, and often arrives too little, too late, with too many hours of reporting
  - Companies have to do their part by getting profitable sooner, on fewer $$
    - VC model is in hibernation, may be defunct in USA
    - Era of hypergrowth & sell-out via IPO is over (at least for a decade)
    - Private equity buyout for leveraged cash flow can be exit target, if PE survives the expected Congressional overreaction to the financial crisis

OCAST

Oklahoma Center for the Advancement of Science and Technology

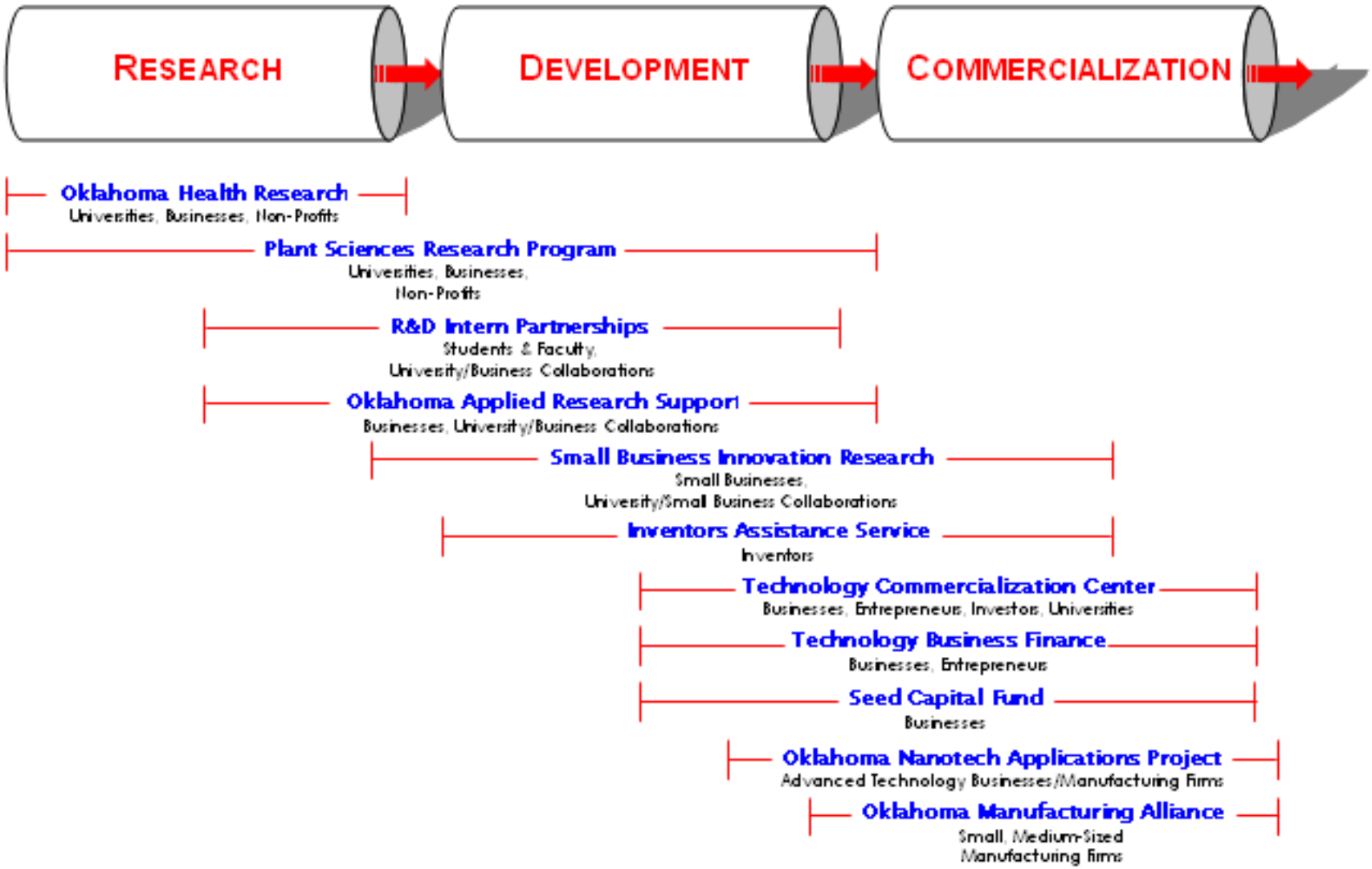
Michael Carolina

OCAST

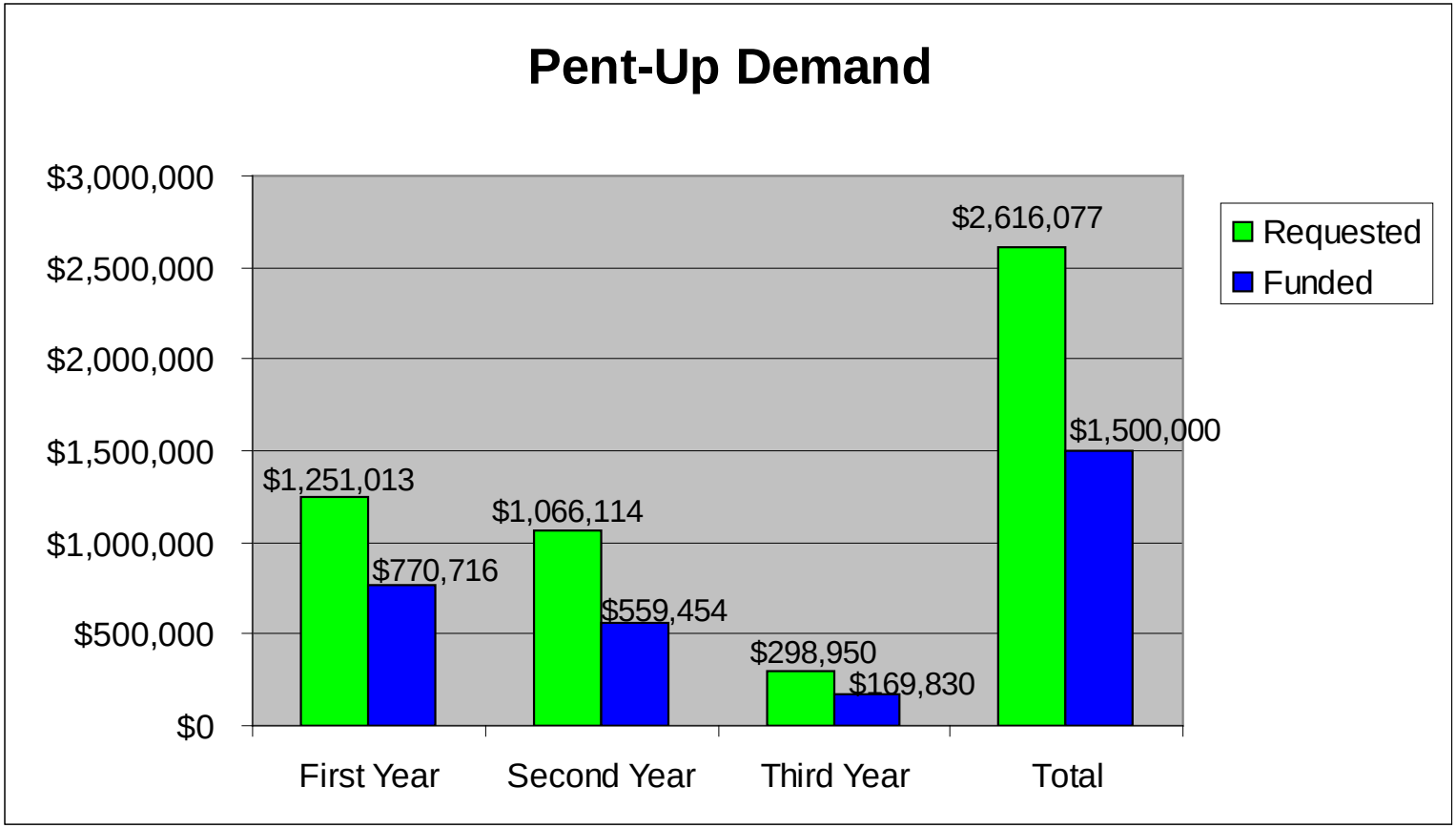
Since 1987, the state's agency and engine for technology development, transfer and commercialization.

OCAST Programs/Initiatives and the Technology Pipeline

from concept to commercialization



	Requested	Funded
First Year	$1,251,013	$ 770,716
Second Year	$1,066,114	$ 559,454
Third Year	$ 298,950	$ 169,830
Total	$2,616,077	$1,500,000



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Needs:

- Start-ups need more than $ (E.g. business advice and coaching)
- Commercialization of Nano longer – need to provide longer term support before VC investment
- Is existing SBIR/STTR model adequate for Nano? (E.g. what does commercialization mean for carbon nanotubes?)

Clever Models:

- PA Nano Commercialization Center Model – emphasis on partnerships and customized support
- Leverage successful Open Innovation models of large corporations to provide commercialization resources and support.

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- What has to be done in the immediate future to meet these needs, and at what level (federal, regional, state, local)?

- NNI Act: more specific language and funding to support commercialization

- Prototype a national network of public-private partnerships which are market driven (not tech push) , and focused on exploiting nano commercialization opportunities. Model this on the successful NIST MEP model (e.g. 1/3 federal, 1/3 state, 1/3 industry)

- Provide support for more flexible (i.e. consulting) approaches to funding nano commercialization projects (I.e. minimize "one size fits all" models like SBIR/STTR)