

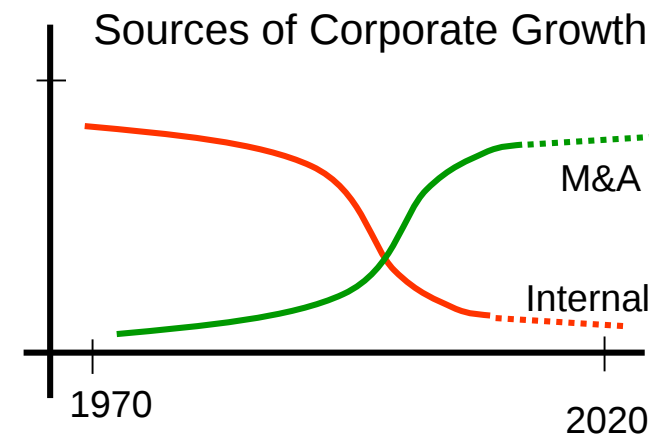
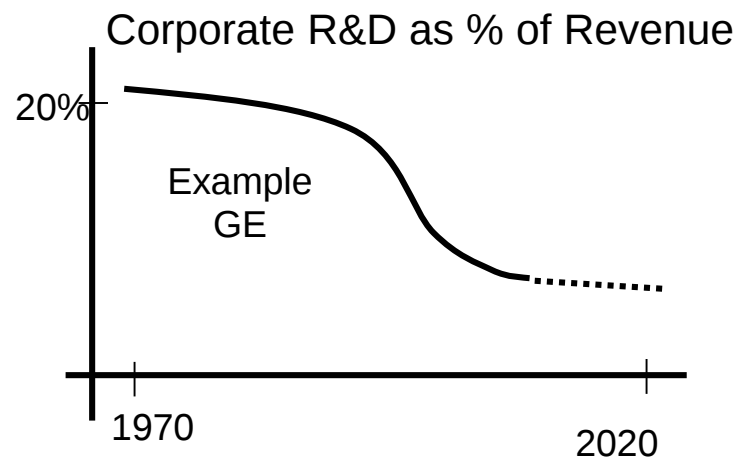
Entrepreneurship Programs for Latin America

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Sources of Innovation

- Global economic conditions and competition, along with accelerating technology alter where innovations occur.
- Large enterprises no longer produce most revolutionary innovations internally but instead acquire companies.

Competitive conditions for technology & life science startups are especially attractive today.



Small Business Concern

- **Applicant should be a small business concern**
 - **Set up as a for-profit organization**
 - **With 500 or fewer employees**
 - **Located in the US**
 - **>51% owned and controlled by US individuals**

Where we are now

- The era of fast and innovative technology development is allowing countries, and regions within countries, to fight economic stagnation by creating jobs and improving the economy.
- Intellectual prowess is not limited to any country, so all countries can take advantage of their homegrown talent.
- Many countries have been successful, to varying degrees, in developing entrepreneurship and enhancing economic performance.

Internationally

- Talent is everywhere
- Skills are present but sometimes lack critical mass
 - Needs developing
- What is missing is the right environment to make talent and skills grow so they can then help their countries
 - Government policies to encourage entrepreneurship and of course investment
- We should all see ourselves as called to participate in this process

How to Proceed

- In developing a viable and sustainable strategy, it is important not to simply copy what has worked in other places, but to adapt those successes to the countries' unique environments in Latin America.
- A supportive national strategy is essential on the issues of entrepreneurship and the commercialization of innovative technologies.
 - The next step is then to take on a proactive entrepreneurial role to create jobs and wealth



Two Ways - Accelerate Entrepreneurship

Both ways will create jobs and train the next generation of entrepreneurs

- Investing in innovative technologies
 - Is it commercially?
 - 4-8 years
 - More if in life sciences
- Investing in innovative applications
 - Platform Technology Entrepreneurship - PTE
 - 3-5 years

Investing in innovative technologies

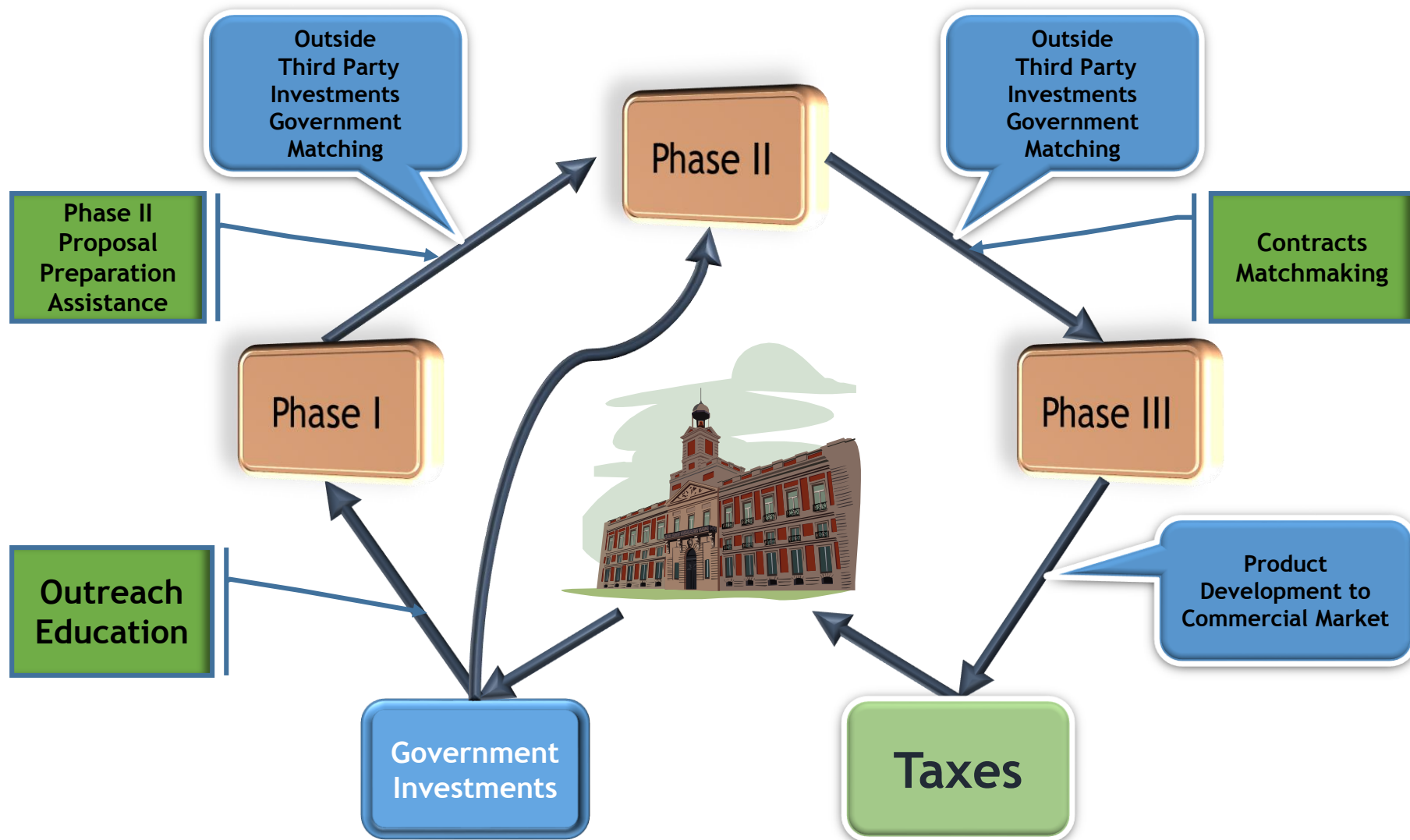
- A model in the US (and worthy of being replicated) that has been successful in bringing innovative technologies to market, while creating high paying jobs and contributing to the local and national economy is the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) program.
- This program has been in place in the United States since the 1980s.
 - Thirty years HEAD START

Who can participate

- This funding is available exclusively to small high-tech companies working towards the commercialization of their innovative technologies through non-dilutive grants or contracts dependent on the specific agency.
- This is a highly competitive program that can be attributed to the requisite of the challenging combination of developing innovative technology, while having a strong commitment to commercialization.
- Participating agencies do so by setting aside a percentage of their budgets for the program; e.g. 2-3% at participating agencies

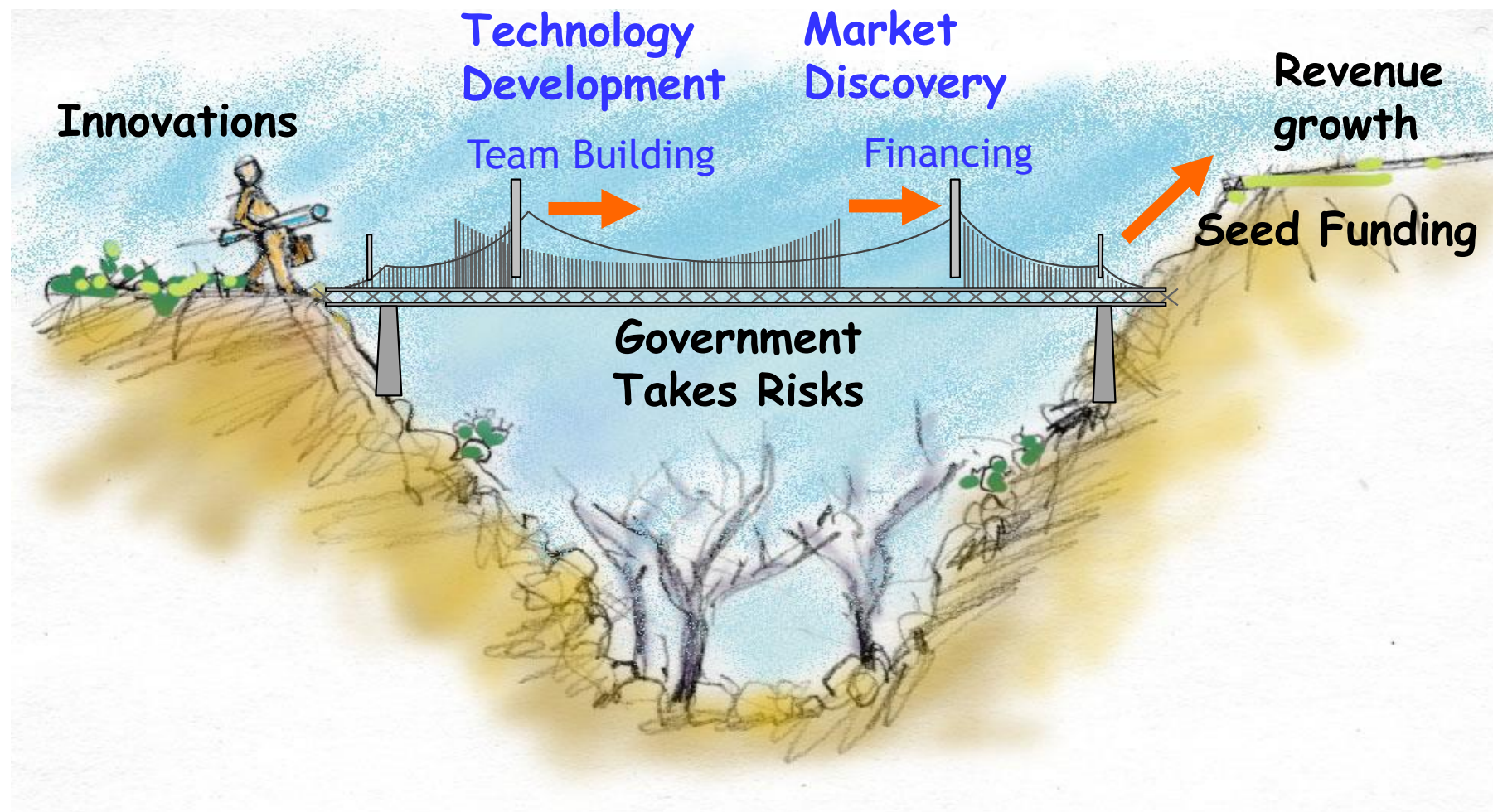


Concept Depiction





Bridge the “Valley of Death” -Help Mitigate Risks

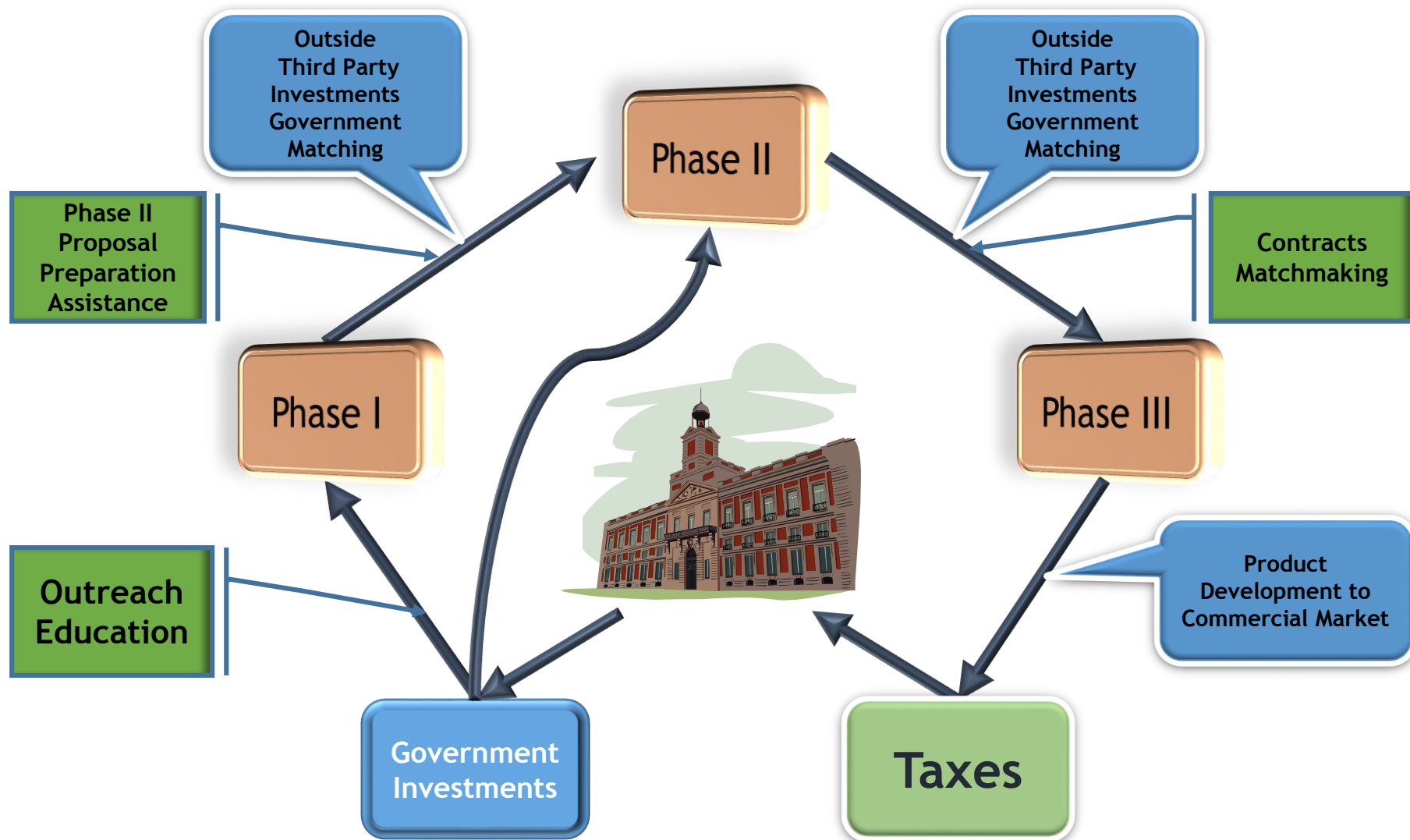


Role of the Government

- The Governments role is thus to de-risk the technology and spark the nascent entrepreneurship part of the society.
- The constantly morphing Venture capital industry has become more and more risk averse and is more focused on larger, less risky investments than funding innovative technology projects.
- By providing support to innovative technologies based in companies, Governments are also providing a technology "seal-of-approval" to their participants giving the investment community more peace of mind to move them forward and create jobs and wealth.



Concept Depiction



The Program

- **SBIR Phase I:** this funding is typically for a feasibility study. The company should work on overcoming the technical hurdles that could prevent a successful commercialization. This study is usually six months long ending with a final report that will be part of a Phase II submission where the company asks for additional funds towards commercializing the idea.
- **SBIR Phase II:** with funding mostly about five times what the feasibility study phase provides it funds the development of a commercial prototype. The prototype development should be completed within two years. The level of success in the company's Phase I effort and a good commercialization plan will be key in the decision to fund this commercialization phase.

Funding Criteria

- NSF funds high-risk, high-payback innovations
 - with the potential for commercialization
 - to small businesses that demonstrate strategic partnerships with research collaborators, customers and equity investors
- NSF does NOT fund
 - *evolutionary* optimization of existing products and processes or modifications to broaden the scope of an existing product, process or application
 - analytical or “market” studies of technologies

Review Criteria

Intellectual Merit

- ✓ A sound approach to establish technical & commercial feasibility
- ✓ Qualified technical team
- ✓ Sufficient access to resources
- ✓ Reflects “state-of-the-art”

Reviewing Process

- When evaluating proposals in the US system, they typically go through a peer-review process with representatives from academia, industry and commercial. This makes the technology, as well as the commercial potential, the guiding factors in supporting a company and its technology. To that end, evaluators are asked to assess all proposals against two criteria:
-
- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

Unique Features of the NSF SBIR/STTR Program

- NSF is not the final customer
- NSF does not buy product/process or claim the intellectual property (the government does have royalty-free rights)
- NSF wants grantees to successfully commercialize their technologies
- Investment **dollars** beyond SBIR are needed

Strong Ties to Universities

- STTR: **Subcontract to universities is mandatory**
- SBIR: Subcontract to universities is optional
- Phase II projects*
 - 37% involves faculty members
 - 27% involves graduate students
 - 25% rents university facilities
 - 17% subcontract to universities

* Assessment performed by the National Academies (2007)

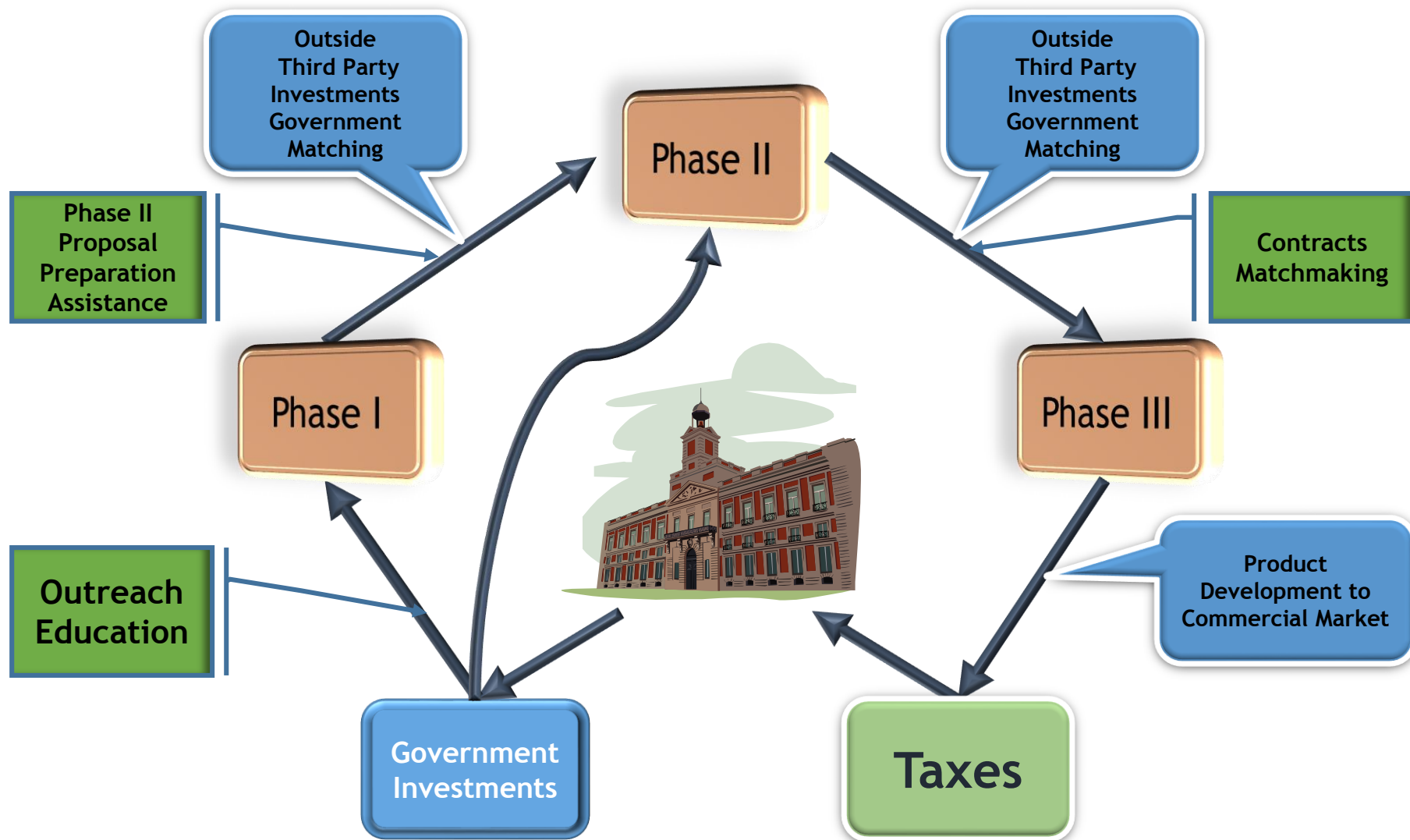
Cultivate Entrepreneurial Culture

- FY2012 Phase I awardees
 - ✓ 73% - no prior Phase II award
 - ✓ 86% - 10 and fewer employees
 - ✓ 90% - 5 years old or younger

- Phase II supplemental opportunities
 - ✓ Phase IIB: Encourage fundraising through private sector
 - ✓ TECP: Stimulate the formation of strategic partnerships

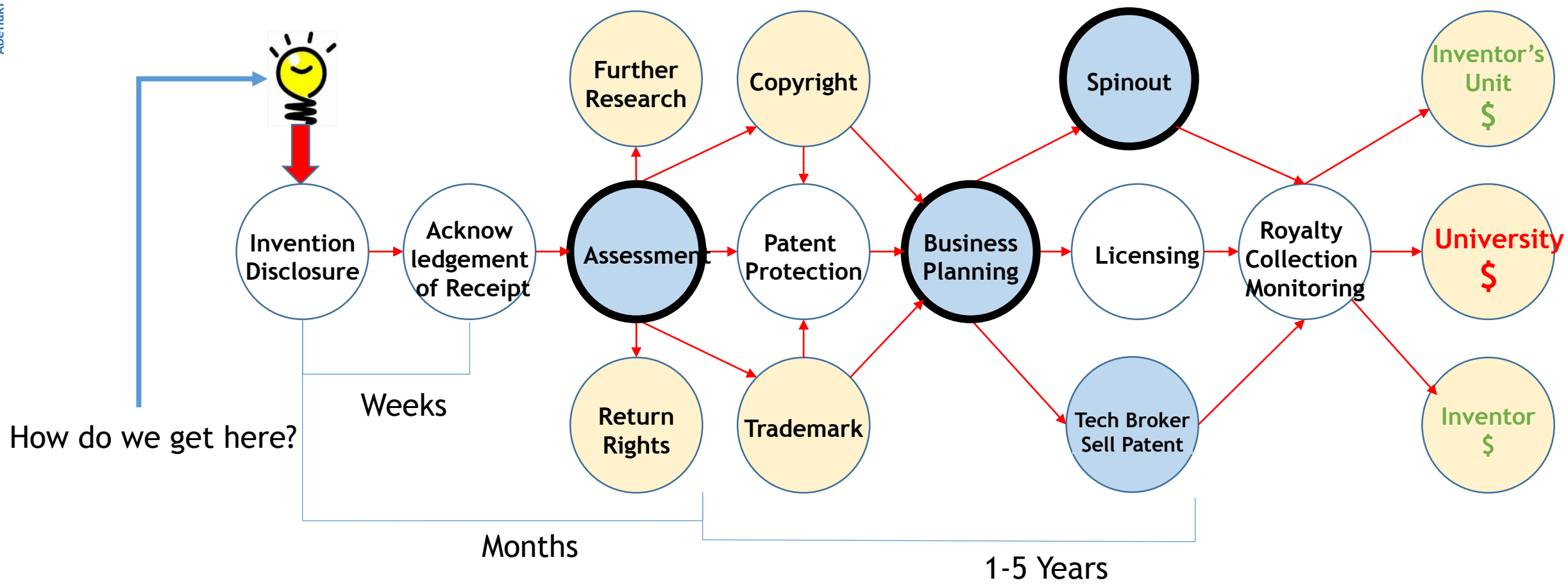


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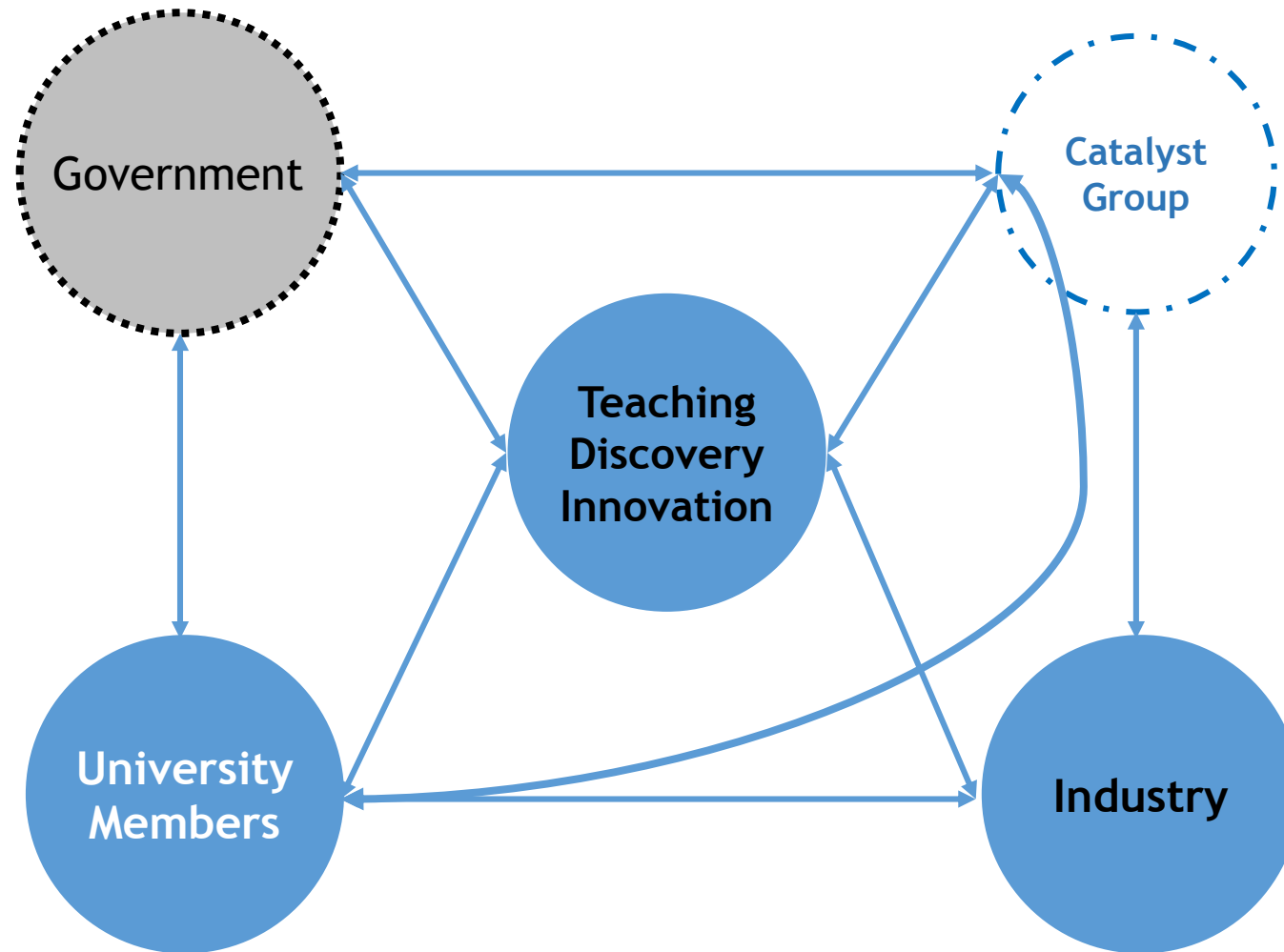


Research To Knowledge To Wealth

Building Blocks Process Flow



Enable Discoveries and Innovations Through Government-University-Industry Partnerships



Catalyst Group could be:

- Small business
- Non-profit
- *Government*

Investing In Innovative Applications

- Platform Technology Entrepreneurship - PTE
 - 3-5 years
- Some claim that inventions to solve mankind's pressing problems have already been created
- Commercialization is limited
 - Requires simultaneous combination of many elements that rarely come together

Investing In Innovative Applications

- Select an innovative platform technology and EXPLOIT IT!
 - Look at every possible application
 - Produce an agreement beneficial to all participants
 - Technology provider
 - Application provider
 - Manufacturer
 - Bring investor in
- Proposal is to develop a solicitation
 - By country
 - Across countries





Contact Information

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