Comercialización de Innovaciones

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Agenda

- Introducción
- Conceptos pertinentes
- Proceso de Comercialización
- Ecosistemas empresariales
- Herramientas:
  - Business Model Canvas
  - Technology Driven Marketing Intelligence

Introducción

Innovación Colegial

"…to accelerate the commercialization of products and services by UPRM scientists, derived from either patent protected intellectual property and/or innovations to existing products or services."

INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE
Research and Development Center, University of Puerto Rico at Mayagüez

OBJETIVOS INSTRUCCIONALES

Al finalizar del taller el participante podrá:

- Ampliar sus conocimientos sobre la comercialización de innovaciones.
- Utilizar técnicas de investigación empresarial para conceptualizar productos o servicios, analizar mercados y desarrollar planes de negocio.
- Integrar en sus cursos metodologías de investigación para apoyar la comercialización de innovaciones.

Quienes somos y que conocemos…

- Presentaciones-Recursos
- Participantes
- Pre Prueba ZIP

ZIPGRADE

Conceptos pertinentes

Como se define innovación?

- Reflexione y escriba su respuesta.
- Compárela con la de su vecino.
- Desarrollen una respuesta común.
- Tienen 3 minutos.
- Compartan su definición con el grupo.

Innovación: algunas definiciones

- Actividad imaginativa que produce resultados que son originales y tienen valor comercial. **Institute for Innovation and Productivity**

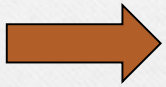
- Proceso que persigue comercializar o extraer valor de las ideas. **Rogers**

- Cambio que añade valor. **La Salle**

Tipos de Innovación:

- Incrementales
- Radicales o disruptivas (game changer)

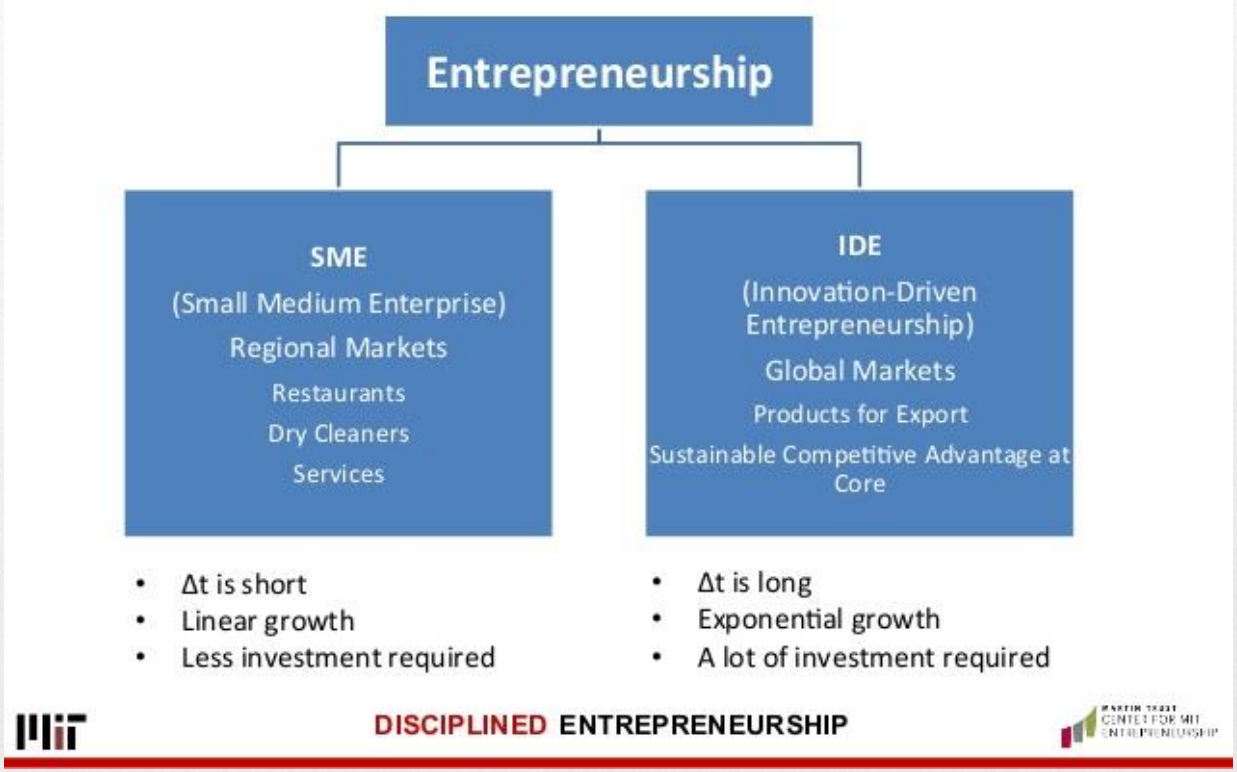
Innovaciones

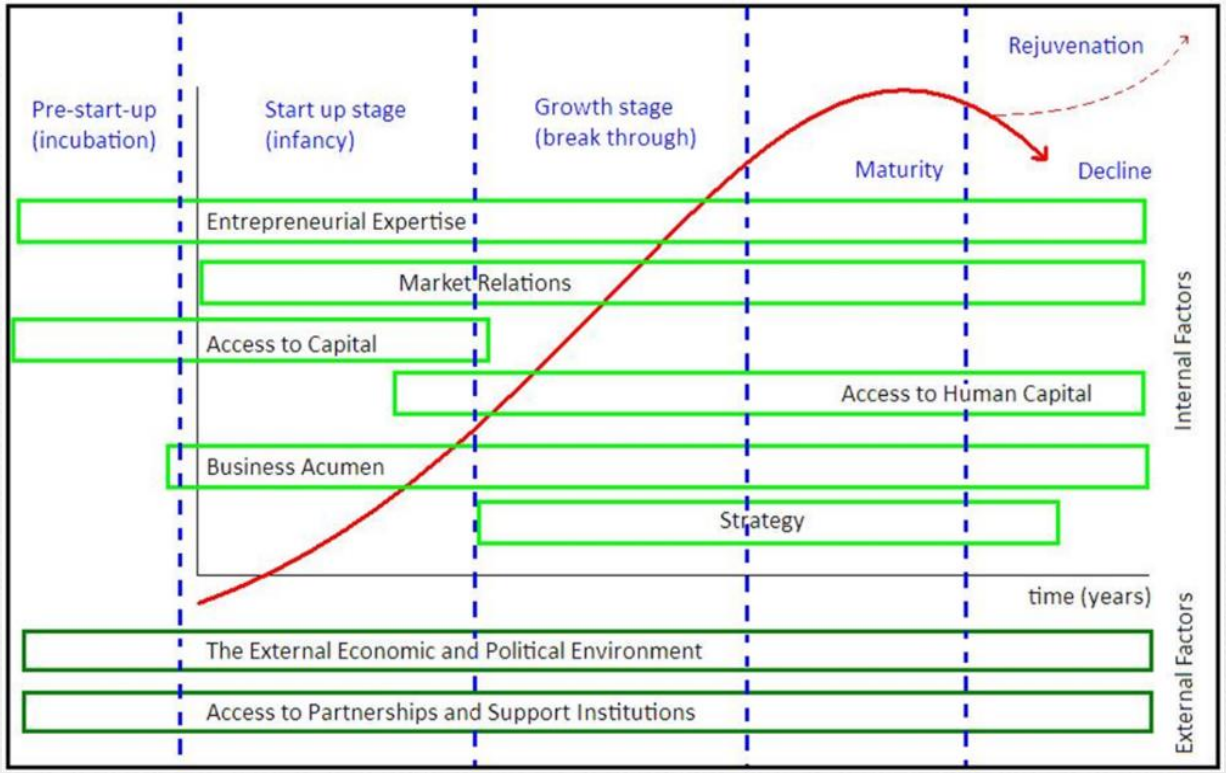


What's next?


TESLA

Innovation Driven vs SMEs

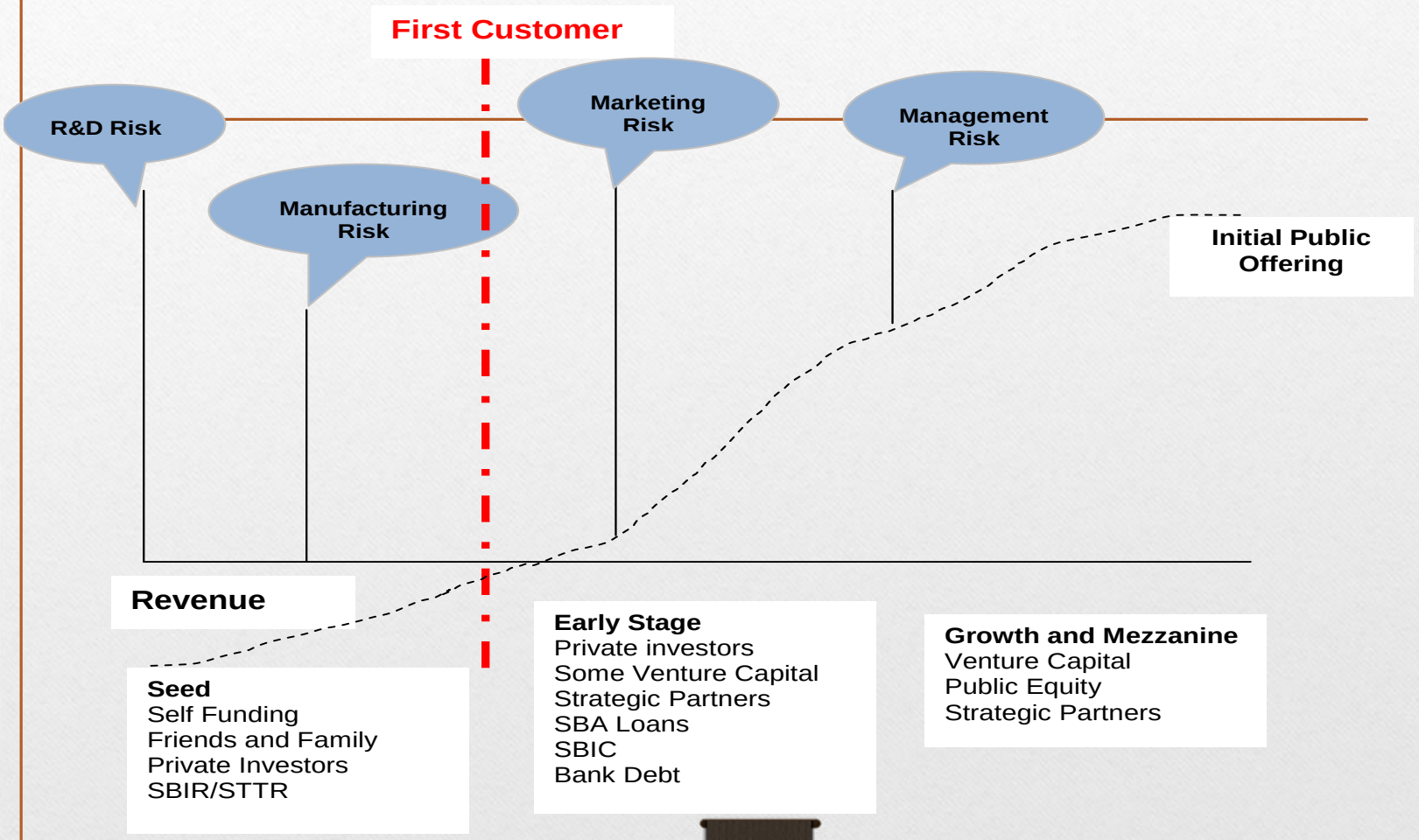




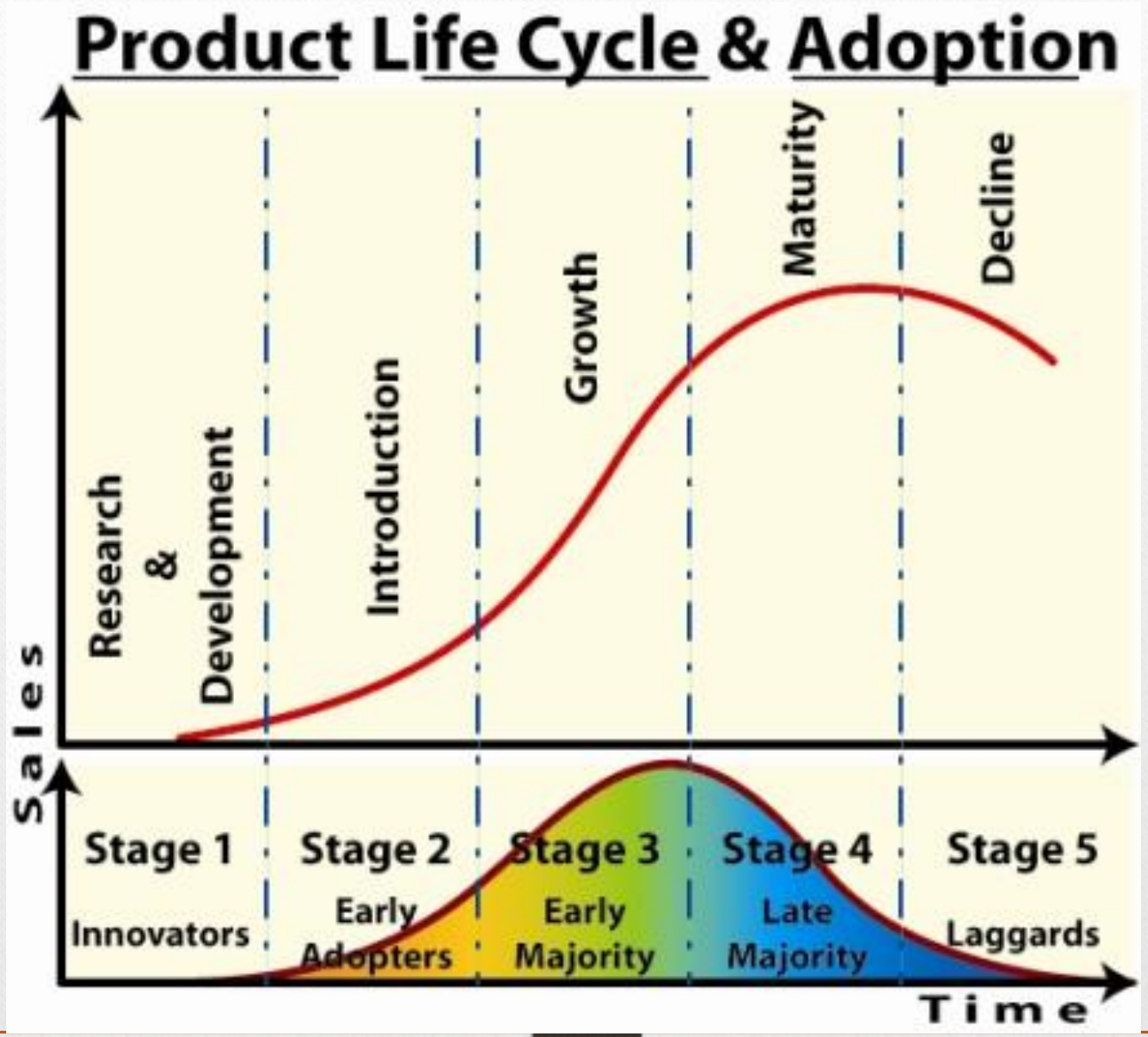
Ciclo de vida de la Empresa

Source: Entrepreneurship for Scientists & Engineers

Risks and Stages of Funding



Product Life Cycle & Adoption



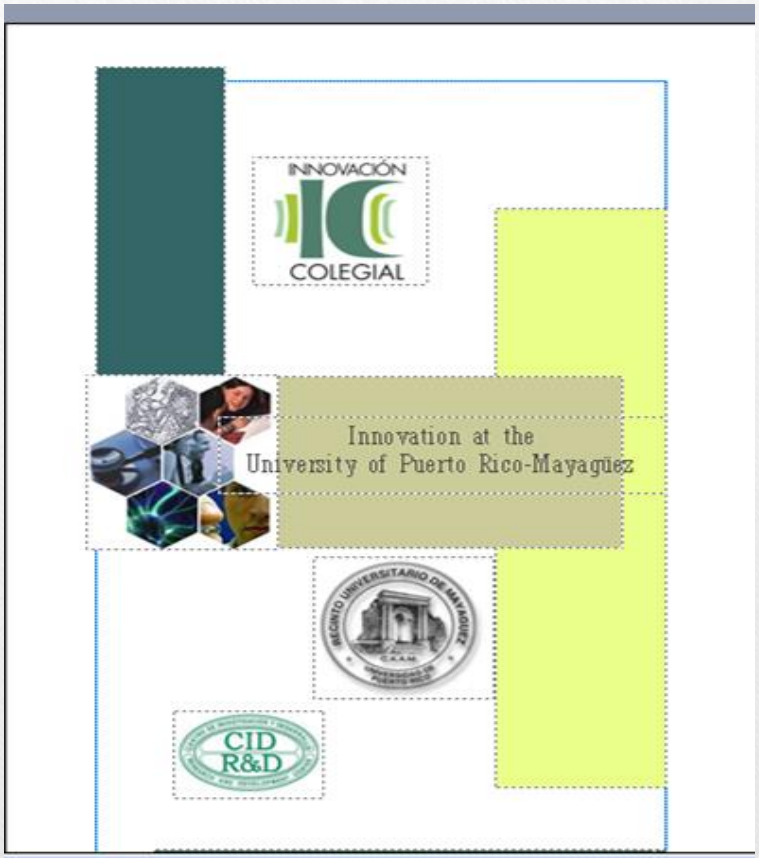
What is Intellectual Property?

Intellectual Property (IP) refers to creations of the mind:

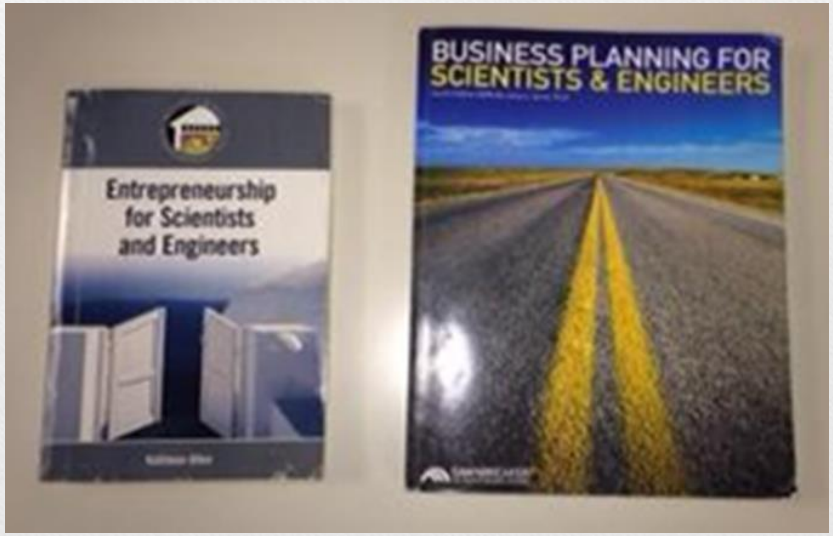
- Inventions and discoveries;
- Literary and artistic works;
- Symbols, names, images, and designs used in commerce; and
- Any type information that has economic value and competitive advantage to its owner, while is kept secret.

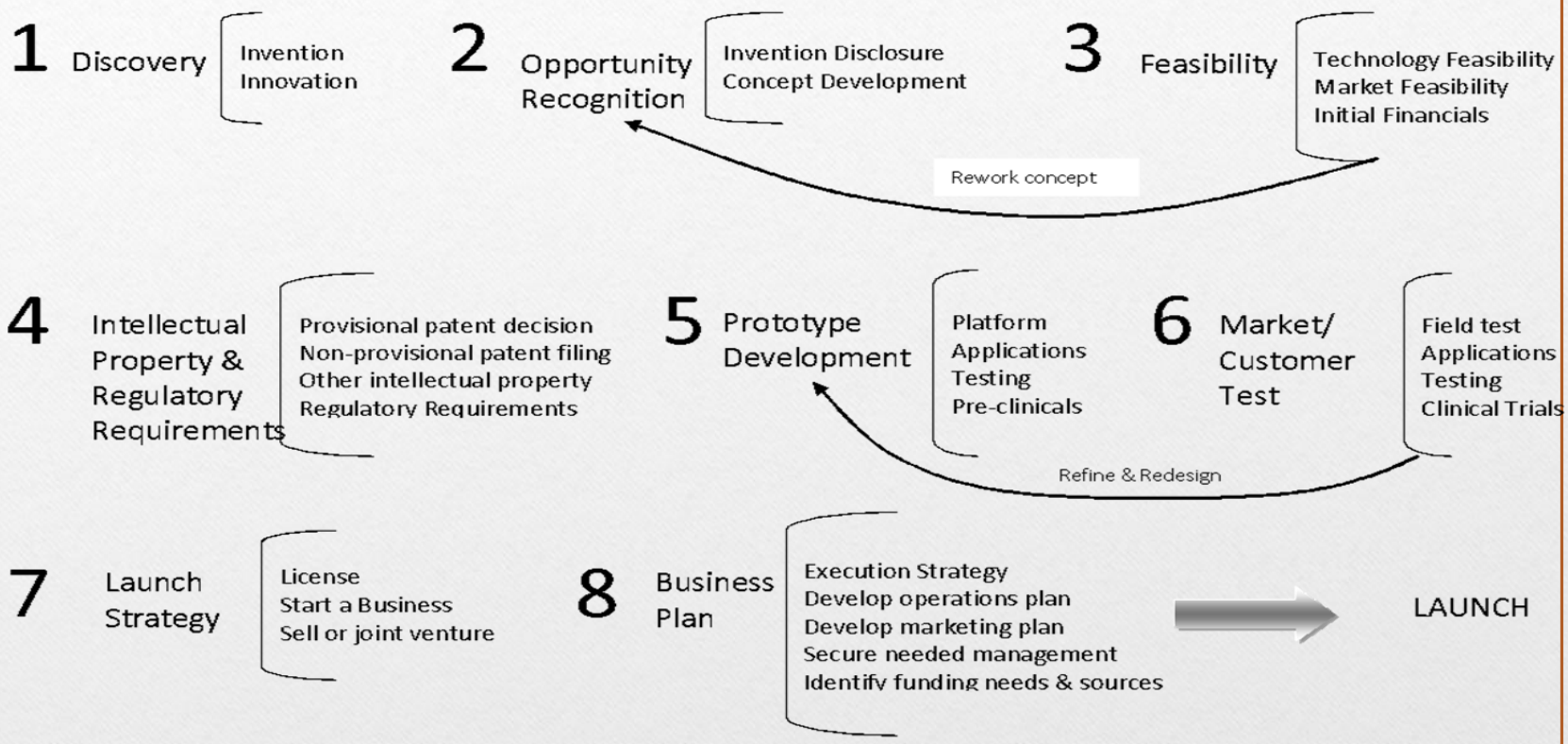
Type of IP	Rights covered
Patents	The use, manufacture or the sale of inventions
Copyrights	Use or performance of original works of art, literature, music, drama or any other type of expression
Trademarks	The use of symbols, words, names, pictures, designs or a combination thereof used to identify particular products, brands or services.
Trade Secrets	The privacy of data, documents, formulas or anything that is to be maintained as confidential information.

El IP que es útil para atender un "dolor" en el mercado hace posible la comercialización.



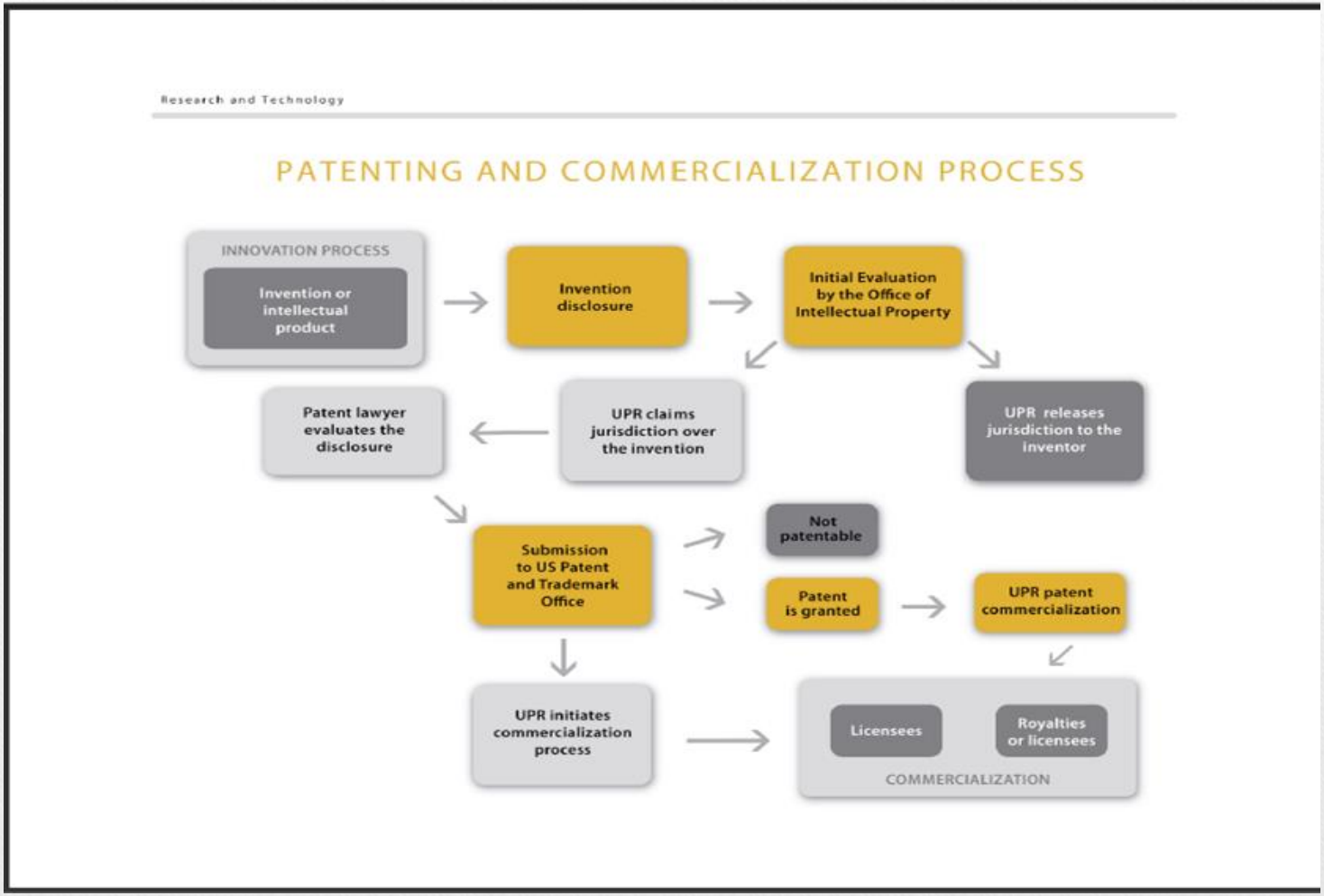
Proceso de Comercialización





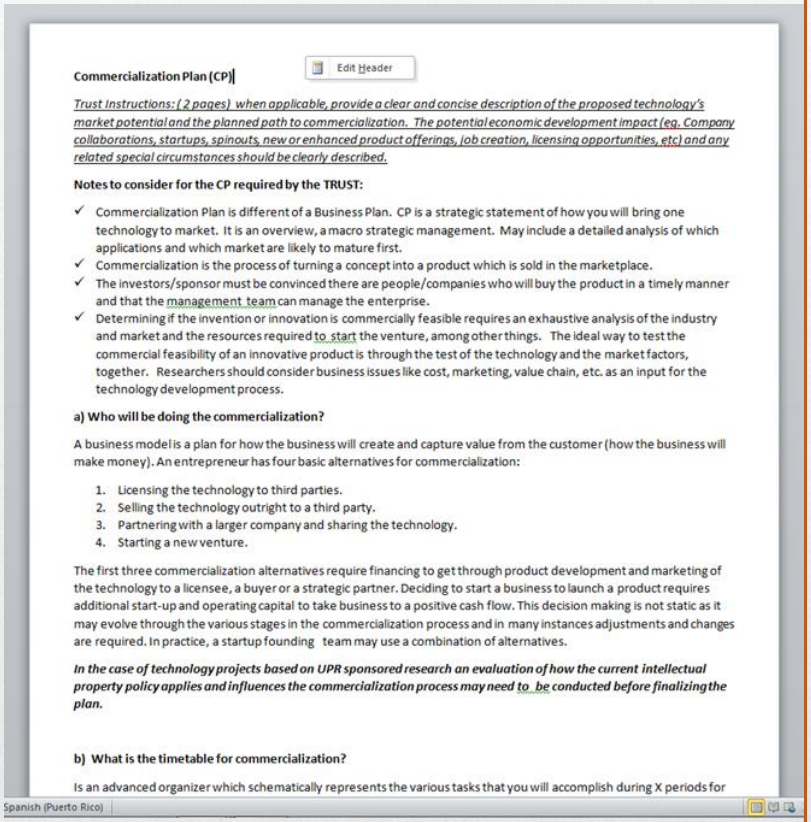
Source: Entrepreneurship for Scientists & Engineers

En la UPR…


Research and Technology
PATENTING AND COMMERCIALIZATION PROCESS
INNOVATION PROCESS
Invention or intellectual product
Invention disclosure
Initial Evaluation by the Office of Intellectual Property
UPR releases jurisdiction to the inventor
UPR claims jurisdiction over the invention
Patent lawyer evaluates the disclosure
Submission to US Patent and Trademark Office
Not patentable
Patent is granted
UPR patent commercialization
UPR initiates commercialization process
Licensees
Royalties or licensees
COMMERCIALIZATION

Innovación Colegial

Plan de Comercialización



Commercialization Plan (CP)

Edit Header

Trust Instructions: (2 pages) when applicable, provide a clear and concise description of the proposed technology's market potential and the planned path to commercialization. The potential economic development impact (eg. Company collaborations, startups, spinouts, new or enhanced product offerings, job creation, licensing opportunities, etc) and any related special circumstances should be clearly described.

Notes to consider for the CP required by the TRUST:

- ✓ Commercialization Plan is different of a Business Plan. CP is a strategic statement of how you will bring one technology to market. It is an overview, a macro strategic management. May include a detailed analysis of which applications and which market are likely to mature first.
- ✓ Commercialization is the process of turning a concept into a product which is sold in the marketplace.
- ✓ The investors/sponsor must be convinced there are people/companies who will buy the product in a timely manner and that the management team can manage the enterprise.
- ✓ Determining if the invention or innovation is commercially feasible requires an exhaustive analysis of the industry and market and the resources required to start the venture, among other things. The ideal way to test the commercial feasibility of an innovative product is through the test of the technology and the market factors, together. Researchers should consider business issues like cost, marketing, value chain, etc. as an input for the technology development process.

a) Who will be doing the commercialization?

A business model is a plan for how the business will create and capture value from the customer (how the business will make money). An entrepreneur has four basic alternatives for commercialization:

1. Licensing the technology to third parties.
2. Selling the technology outright to a third party.
3. Partnering with a larger company and sharing the technology.
4. Starting a new venture.

The first three commercialization alternatives require financing to get through product development and marketing of the technology to a licensee, a buyer or a strategic partner. Deciding to start a business to launch a product requires additional start-up and operating capital to take business to a positive cash flow. This decision making is not static as it may evolve through the various stages in the commercialization process and in many instances adjustments and changes are required. In practice, a startup founding team may use a combination of alternatives.

In the case of technology projects based on UPR sponsored research an evaluation of how the current intellectual property policy applies and influences the commercialization process may need to be conducted before finalizing the plan.

b) What is the timetable for commercialization?

Is an advanced organizer which schematically represents the various tasks that you will accomplish during X periods for

Spanish (Puerto Rico)

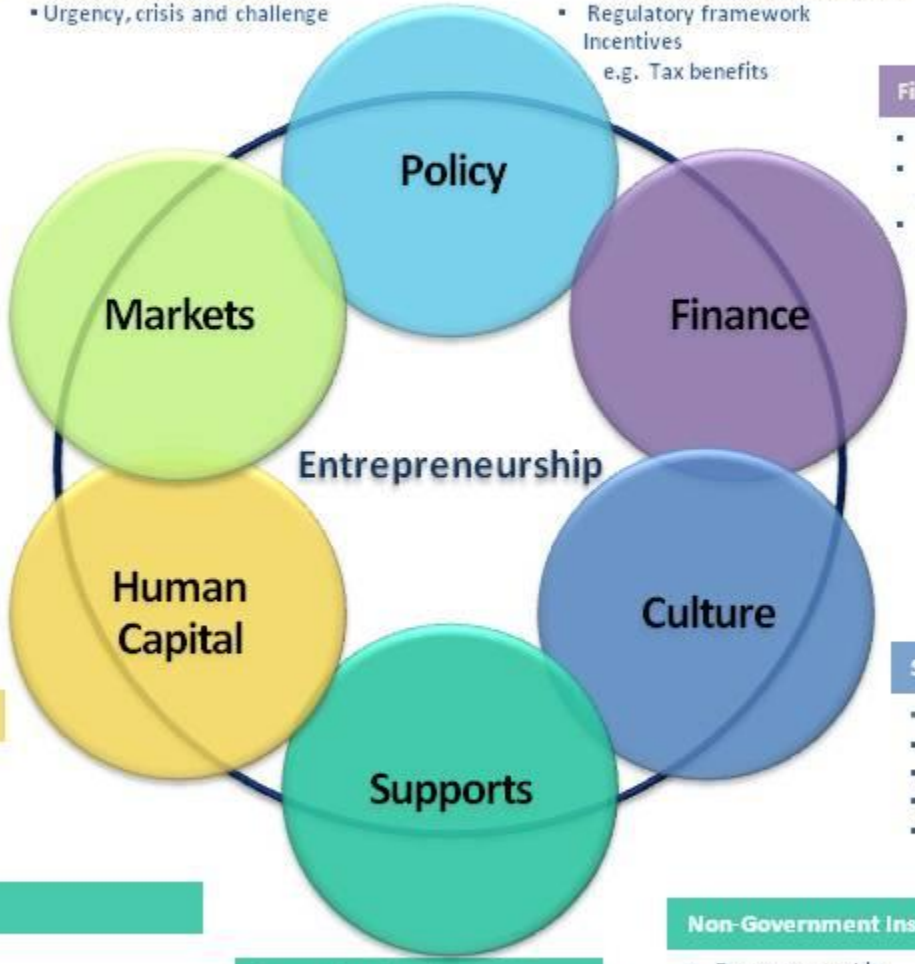
Deciding on a Launch Strategy

- License the technology
  - Transfer rights to further develop, manufacture, or distribute
- Sell the technology
  - Works if the technology does not fit the company's core capabilities or mission
  - Potential buyer is better positioned to commercialize
- Start a company
  - Good when the technology is not easily licensed or there are no companies capable of further development
- Form a strategic alliance
  - Gain access to resources, skills, and knowledge too costly to develop
  - Consider vertical alliances up and down the value chain or horizontal with companies in same position on the value chain

Ecosistemas Empresariales

BABSON GLOBAL

Domains of the Entrepreneurship Ecosystem



Leadership

- Unequivocal support
- Social legitimacy
- Open door for advocate
- Entrepreneurship strategy
- Urgency, crisis and challenge

Government

- Institutions
  e.g. Investment, support
- Financial support
  e.g. for R&D, jump start funds
- Regulatory framework
  Incentives
  e.g. Tax benefits
- Research institutes
- Venture-friendly legislation
- e.g. Bankruptcy, contract enforcement, property rights, and labor

Early Customers

- Early adopters for proof-of-concept
- Expertise in productizing
- Reference customer
- First reviews
- Distribution channels

Financial Capital

- Micro-loans
- Angel investors, friends and family
- Zero-stage venture capital
- Venture capital funds
- Private equity
- Public capital markets
- Debt

Networks

- Entrepreneur's networks
- Diaspora networks
- Multinational corporations

Success Stories

- Visible successes
- Wealth generation for founders
- International reputation

Labor

- Skilled and unskilled
- Serial entrepreneurs
- Later generation family

Societal norms

- Tolerance of risk, mistakes, failure
- Innovation, creativity, experimentation
- Social status of entrepreneur
- Wealth creation
- Ambition, drive, hunger

Educational Institutions

- General degrees (professional and academic)
- Specific entrepreneurship training

Infrastructure

- Telecommunications
- Transportation & logistics
- Energy
- Zones, incubation centers, clusters

Support professions

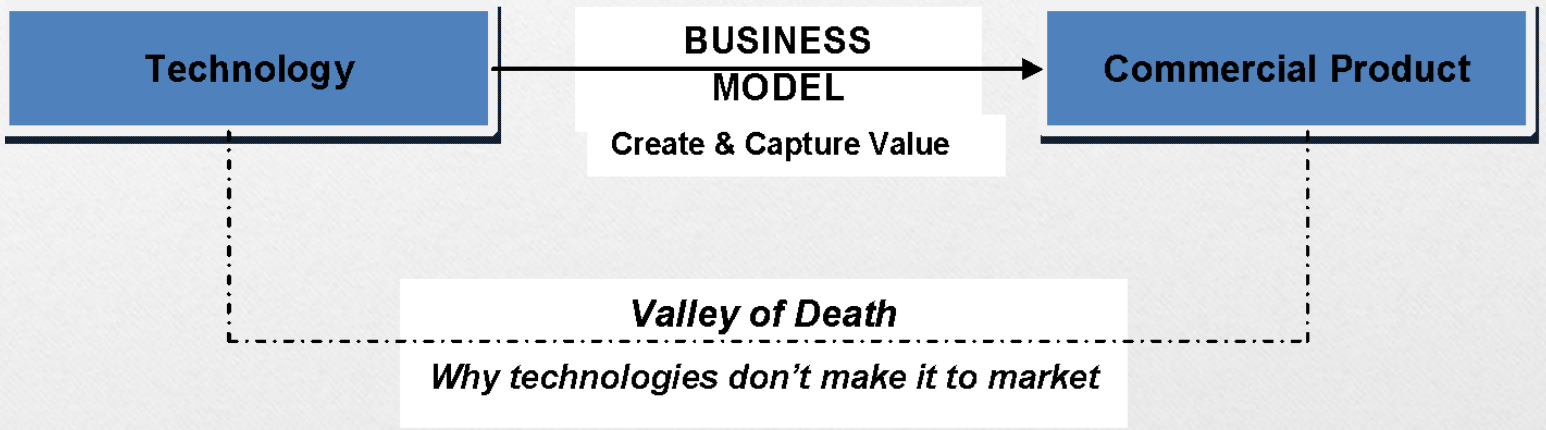
- Legal
- Accounting
- Investment bankers
- Technical experts, advisors

Non-Government Institutions

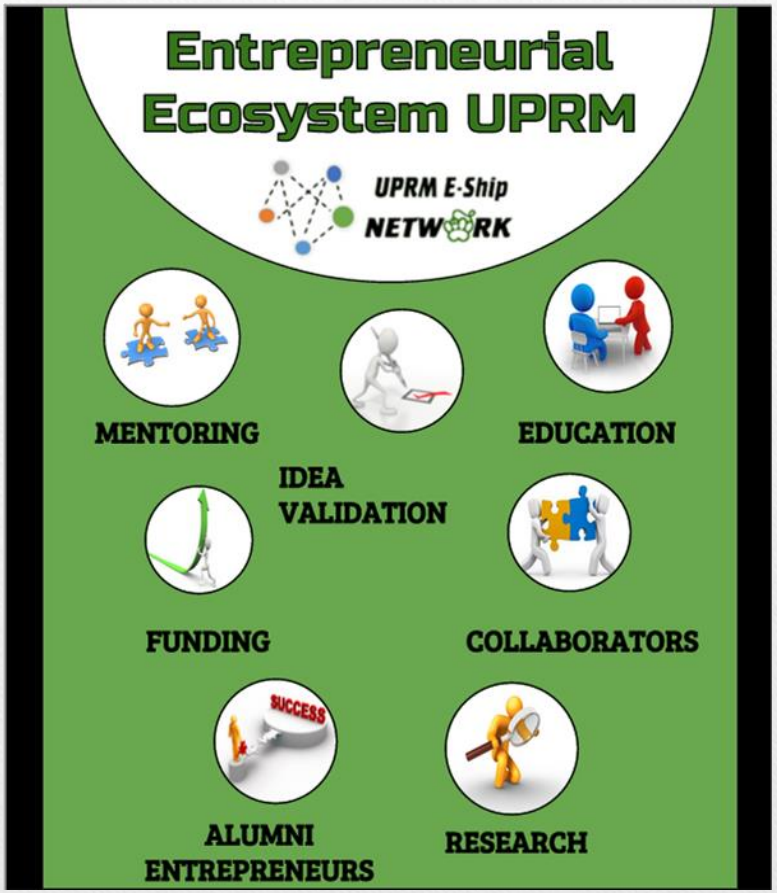
- Entrepreneurship promotion in non-profits
- Business plan contests
- Conferences
- Entrepreneur-friendly associations

5/19/2011

Del laboratorio al mercado



Ecosistema del RUM



Trivia empresarial

Mencione algunas competencias de ideas o planes de negocios para empresarios de Puerto Rico.

- Grupo Guayacán/ Enterprize Competition- www.enterprizepr.com
- HIT3001- hit3001.com
- Justas Empresariales Universitarias
- INNOVENTURE, PR Small Business & Technology Development Center, www.prsbtdc.org

Herramientas para cursos y actividades co-curriculares

Business Model Canvas

AYUDA PARA:

- Modelo de negocios
- MVP, Product Market Fit, Pitching
- Competencias Empresariales

Technology Driven Market Intelligence (TDMI)

AYUDA PARA:

- Viabilidad Comercial
- Plan de Comercialización
- Plan de Negocios
- Propuestas SBIRs/STTRs

Ejercicio de Business Model Canvas

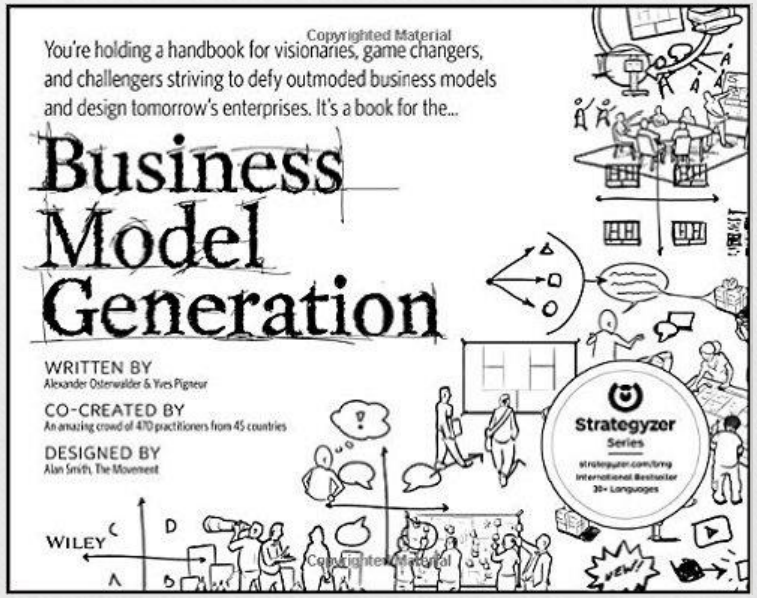
Caso: TOS Sampling Device

Tienen tres minutos para leer el caso y trabajaremos en grupos atendiendo varios aspectos del BMC para este proyecto

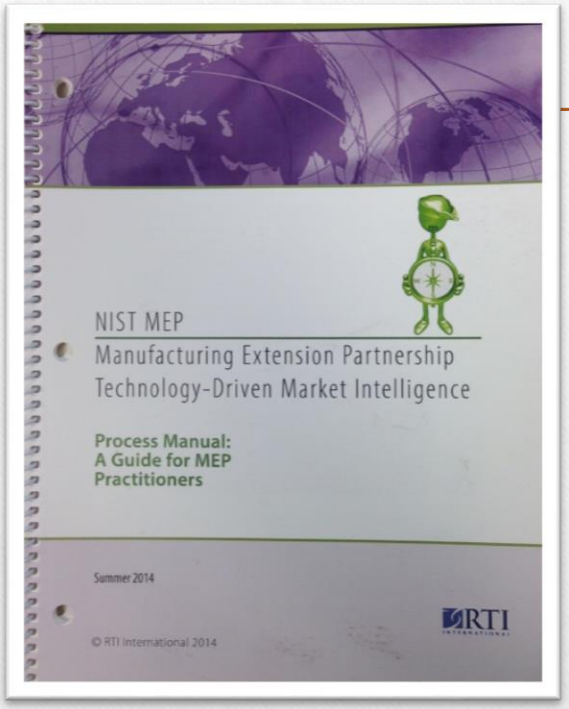
Workshop: Business Model Canvas

Based on the Book of:

Alexander Osterwalder & Yves Pigneus



Technology Driven Market Intelligence (TDMI)



NIST

RTI INTERNATIONAL
turning knowledge into practice

MEP • MANUFACTURING EXTENSION PARTNERSHIP

USES of TDMI:

Enterprize Competition Requirements: submit your participation in a maximum of 1,800 words:

- **Summary** (This section will be used for public disclosure of your business proposal) - 100 words
- **Product/Service description** - 300 words
- **Target Market and Customer** - 300 words
- **Competitive Landscape** - 200 words
- **Execution** - 300 words
- **Management Team -** 200 words
- **Risk Analysis** - 100 words
- **Financial Projections** - 300 words

USES of TDMI:

Puerto Rico
Science, Technology
& Research Trust

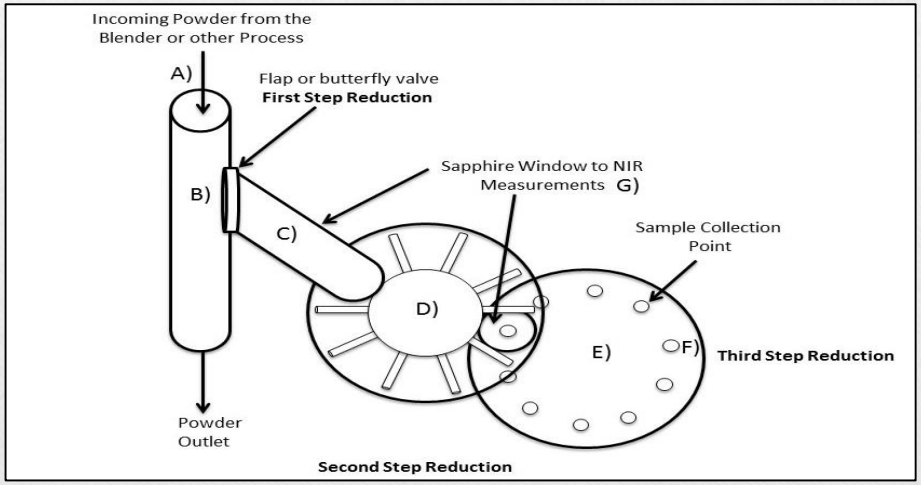
SBIR/STTR Proposal Preparation Template

The Market Opportunity (recommended length: 2 to 4 pages)

- **Describe the market and addressable market for the innovation. Discuss the business economics and market drivers in this industry.**
- **How has the market opportunity been validated?**
- **Describe your customers and your basic business model.**
- **Describe the competition. How will the competitive landscape change by the time your product/service enters the market?**
- **What are the key market risks in bringing your innovation to market?**
- **What support or resources do you envision needing from outside partners, in order to bring this innovation to market? What is the timeline and plan to secure this support?**

Technology Driven Marketing Intelligence

Caso: TOS Stream Sampler Device para propuesta STTR

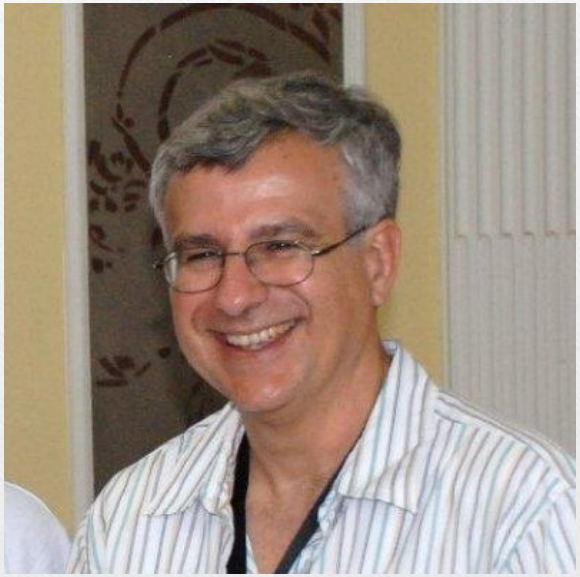


Step 1: Meeting with Client

- What questions would you ask ? At least four.
- Working in groups you have 5 minutes.
  - Technology description, visualizing product.
  - Learn about R&D timeline. How much time it takes (on average) for new products to hit market (release).
  - Identify possible benchmarks to prove business case.
  - Identifying areas where profit is more significant (other than initial product sale).
  - How FDA regulations affect R&D process.
  - Discuss commercial price.

Step 1: Meeting with Client

- Chemistry professor at UPRM.
- Site leader for the NSF Engineering Research Center on Structured Organic Particulate Systems (ERC-SOPS) at Mayagüez.
- Sampling and analysis of pharmaceutical blends.



ENGINEERING RESEARCH CENTER FOR
STRUCTURED ORGANIC PARTICULATE SYSTEMS
RUTGERS UNIVERSITY
PURDUE UNIVERSITY
NEW JERSEY INSTITUTE OF TECHNOLOGY
UNIVERSITY OF PUERTO RICO AT MAYAGÜEZ

RECINTO UNIVERSITARIO DE MAYAGÜEZ
CAAM
UNIVERSIDAD DE PUERTO RICO

Step 2: Plan your internet research

- Identify key words
- Synthesize baseline knowledge
- What tools can you/your team use? Boolean search?

Google scholar

Google Analytics

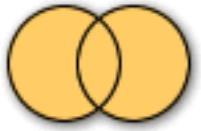
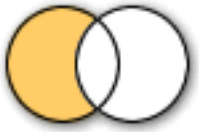
Google Finance

Google ideas

Google™ Patent Search BETA

Google Trends

Operadores boléanos

Boolean Operator	Examples	Retrieves
AND	**children and television** rodgers AND hammerstein children AND poverty	 Retrieves records containing both terms
OR	**television or television viewing** sixties OR 60s OR 1960s labor OR labour	 Retrieves records containing either one or both terms
NOT	**television not movies** caribbean NOT cuba s1 NOT s2	 Excludes records containing the second term

Keywords Search

- Powder tablet drug pharmaceutical
- Compliance powder sampling and pharmaceutical industry
- Reduce powder stream sampling errors pharmaceutical
- Powder blending technology
- Pharmaceutical companies new products 2015
- List of best selling tablet drugs 2014

Step 3: Through your internet search, identify relevant Secondary Sources

- Useful data obtained:
  - Pharmaceutical companies and sales
  - Pharmaceutical industry news
  - Drugs sales lists
  - Pharmaceutical companies research pipelines (new products to be released)
  - Pharmaceutical market reports
  - Pharmaceutical companies with presence in Puerto Rico

Step 3: Through your internet search, identify relevant Primary Sources

- Identify key players? in PR companies (Leadership team and above)?
  - PACIV: Jorge Rodríguez González, Owner & CEO
  - Janssen (?)
  - BMS (?)
  - FDA regulator (is it possible?)
  - Pharmaceutical Industry Association of PR (PIAPR)

Step 4: Interview People

- Select top three prospects.
- What to do before the interview?
  - Know more about them beforehand
  - Draft specific questions

Step 5: Summarize your Market Intelligence Data and present to team/client

- Summarize all the gathered data in two (2) slides.
- Be prepared to pivot and iterate constantly.

Estamos terminando…

- Los equipos presentan sus slides resultado del TDMI.
- Post trivia test

Market Intelligence Data Summary

- **Describe the market for the innovation**
  - Puerto Rico presents a major opportunity for adoption of the solution by market leaders with potential for international deployment in a short period of time.
  - Adopt the strategy used by PACIV in its marketing of validation services to multinational pharmaceutical companies starting with their subsidiaries in Puerto Rico.
- **Market opportunity validation**
  - Research by project team found that some of the best selling drugs (in tablet form) are proprietary to manufacturing companies with presence in Puerto Rico.
- **Describe customers and basic business model**
  - Initial customers will be pharmaceutical manufacturing companies with presence on the Island with proprietary drugs requiring powders blends.
  - Licensing of intellectual property rights to sampling devices and methodologies developed within the researchers STL in UPRM to allied companies.

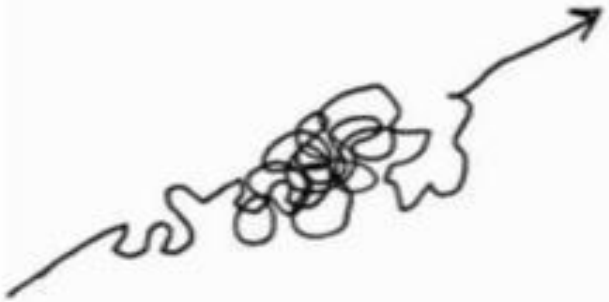
Market Intelligence Data Summary

- **Describe the competition**
  - It would compete with small companies that manufacture sample thieves such as Globe Pharma.
  - Has the potential to be disruptive to current solutions, since it would be the only scientifically justified system for sampling of powder based pharmaceutical formulations.
- **Key market risks**
  - The major risk relates to the uncertainty of the regulatory framework.
- **Support and resources**
  - Develop a strong team with technical expertise, access to Puerto Rico's pharmaceutical manufacturing industry, access to major pharmaceutical research labs, and eventually expertise in seeking venture capital.

Success

what people think
it looks like

Success



what it really
looks like

Anuncios

- ICORPS II PR en progreso
- JUSTAS EMPRESARIALES UNIVERSITARIAS en progreso
- H3 conference en noviembre

JUSTAS EMPRESARIALES™
UNIVERSITARIAS

Gracias por venir!

UPR
Universidad de Puerto Rico

Grupo de Trabajo en Emprendimiento
Universidad de Puerto Rico

Additional References

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