



CIRIEC
COSTA RICA

From Science to a better life

How to create a promising ecosystem to promote innovation.

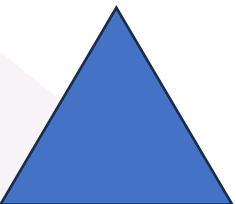
Pascal LIZIN – Board Member of Innovative Biopharma Companies –
Belgium 

Could you imagine ? only a few decades ago

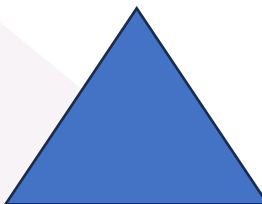


A powerful symbol of a fight against major health issue.

*Rancho Los Amigos National
Rehabilitation Center in
Downey, California, USA*



Paul Alexander, (1946 – 2024) who spent the vast majority of the past 70 years in an iron lung.



When Researchers meet Public Institutions and Private Partners !

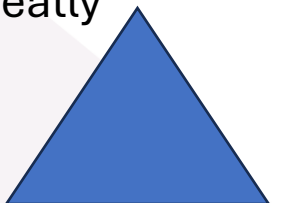
Polio, is a viral disease that primarily affects children. It can cause paralysis and, in severe cases, death

From Iron Lung ...

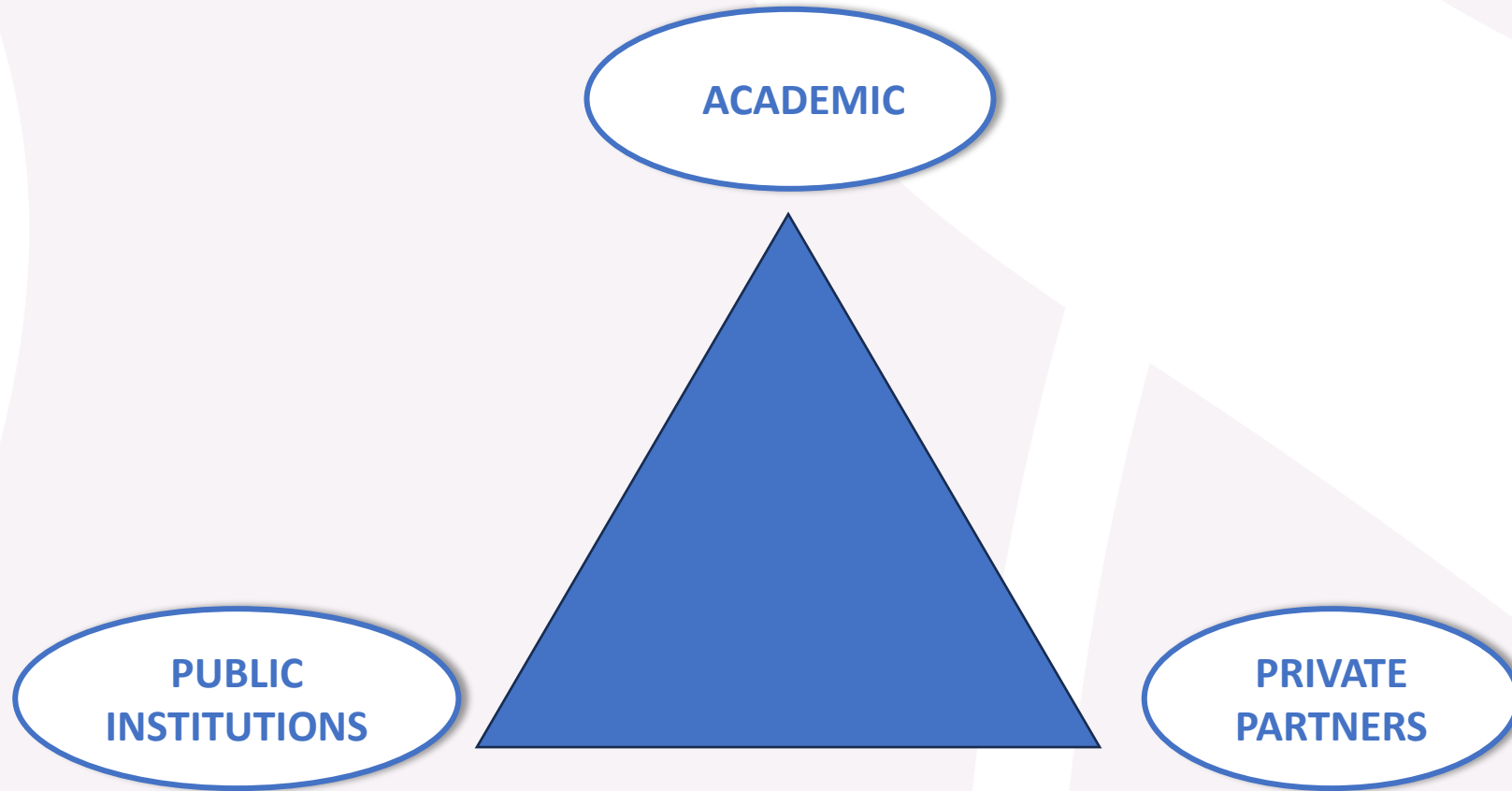
- a breathing machine used from the 1920s to the 1960s to help patients with respiratory paralysis caused by polio invented in 1928 by **Philip Drinker and Louis Agassiz Shaw at Harvard University**.
- allowed patients whose respiratory muscles were paralyzed due to polio to breathe.

To Disease Eradication....

- Discovery of the First Vaccine (1955): The first polio vaccine was developed by **Jonas Salk** in 1955.
- First production of bulk vaccine (1957) by a private pharmaceutical company (**RIT – Belgium**)
- Oral Vaccine (1961): In 1961, another vaccine, developed by **Albert Sabin**. This vaccine was easier to administer and played a major role in mass vaccination.
- Global impact and thanks to national and supranational organizations such as the **UNICEF, WHO...**, greatly reduced transmission of the disease. Today, polio is nearly eradicated.



The Golden Triangle to transform innovation into benefit for Society :

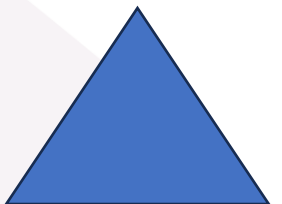


Academic

University can not only be at the forefront of innovation, but also play a key role in the economic and social development of its region or country.

How ?

1. **Culture of innovation**
2. Encourage **creativity and entrepreneurship** : Promote a culture that values new ideas and initiatives.
3. Have **well-funded research centers**, promote interdisciplinary collaborations and encourage publications and patents.
4. **Valorization of research**: Establish mechanisms to transform discoveries into marketable innovations/TTO
5. **Collaboration with the private sector** to promote technology transfer and innovation in business practices.
6. **International openness** / Participate in global research and innovation projects.
7. **Social Impact**: Focus on projects that solve real social problems and be in line with the needs of the labor market.
8. **Continuing Education**: Offer programs for professionals wishing to retrain or specialize.



Public sector

Public sector can not only be at the forefront of innovation, but also need to play a key role in the economic and social development of its region / country :

How ? :

1. Favorable **political and regulatory framework** :

policies that support innovation, with an emphasis on research and development (R&D), digitalization, and new technologies.

2. **Support for entrepreneurship**: create tax incentives or subsidies and patient capital to encourage start-ups and innovative companies to engage in projects with social impact.

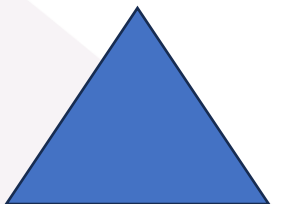
3. **Culture of innovation** and experimentation

Encourage risk-taking. Public incubators: set up internal incubators to enable public sector employees to develop new solutions.

4. **Public-private partnerships**: Collaborate with private companies, universities and research centers.

5. **Open innovation**: Encourage open innovation by allowing citizens and companies to contribute to the creation of solutions, (collaborative platforms or hackathons.)

6. **Funding and resources** : Allocate significant funds to research and development, in sectors such as health, education, energy or sustainable mobility.



Private Partner

The private sector plays a central role in innovation by contributing to the creation of solutions to social, economic and environmental challenges.

1. Investments in Research and Development (R&D)

Private companies invest massively in research and development, often more than governments. Sectors such as health, technology, energy or agriculture benefit directly from these advances.

2. Creation of new technologies

Private companies have potential to create innovative technologies in disrupted sectors such as communication, transportation (self-driving cars), health (biotechnology, artificial intelligence), or energy (renewable energies).

3. Sustainable Innovation and Social Responsibility

Increasingly, private companies are turning to innovation models that integrate social responsibility and sustainable development, or SDG's dimensions.

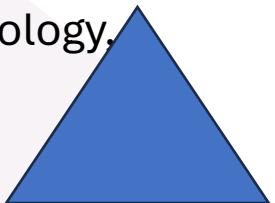
4. Public-Private Partnerships

Collaboration between private and public sectors allow for the pooling of resources, skills, and funding.

Private sector can provide technical expertise and speed of execution, while the public sector frames and directs these innovations towards priority social needs, such as education, health, or infrastructure.

5. Job creation and economic dynamism

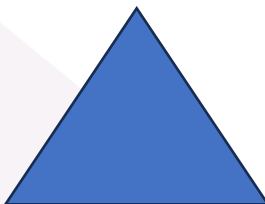
Innovation is often a driver of job creation, particularly in high-growth sectors such as information technology, renewable energy, or biotechnology.



The Golden Triangle to transform innovation into Benefit to Society :

Few conclusions :

- ✓ Scientific and technical innovation is a **critical driver of success** in today's rapidly evolving world.
- ✓ It fuels progress across industries, enhances productivity, and enables societies to **overcome complex challenges** such as climate change, public health crises, and resource scarcity.
- ✓ By pushing the boundaries of knowledge and technology, innovation **fosters economic growth, improves quality of life, and promotes sustainable development.**
- ✓ The collaboration between research organizations, public institutions, private enterprises, drastically **amplifies the impact of innovation**, ensuring that scientific advancements translate into tangible benefits for society.
- ✓ Embracing innovation is not only key to staying competitive but also essential for building a resilient, forward-thinking **future that serves the well-being of all.**





MUCHAS GRACIAS | **THANK YOU VERY MUCH!**

- Pascal LIZIN
- Non-Executive Board Member
- lizinpascal@hotmail.com
- +32476482362
- Belgium

