



Fundacion  
Chile:

29 years  
innovating

# Fundación Chile

Fundación Chile is a privately owned, non-profit institution, created in 1976 through an agreement between the Government of Chile and ITT Corporation.



1986

1996

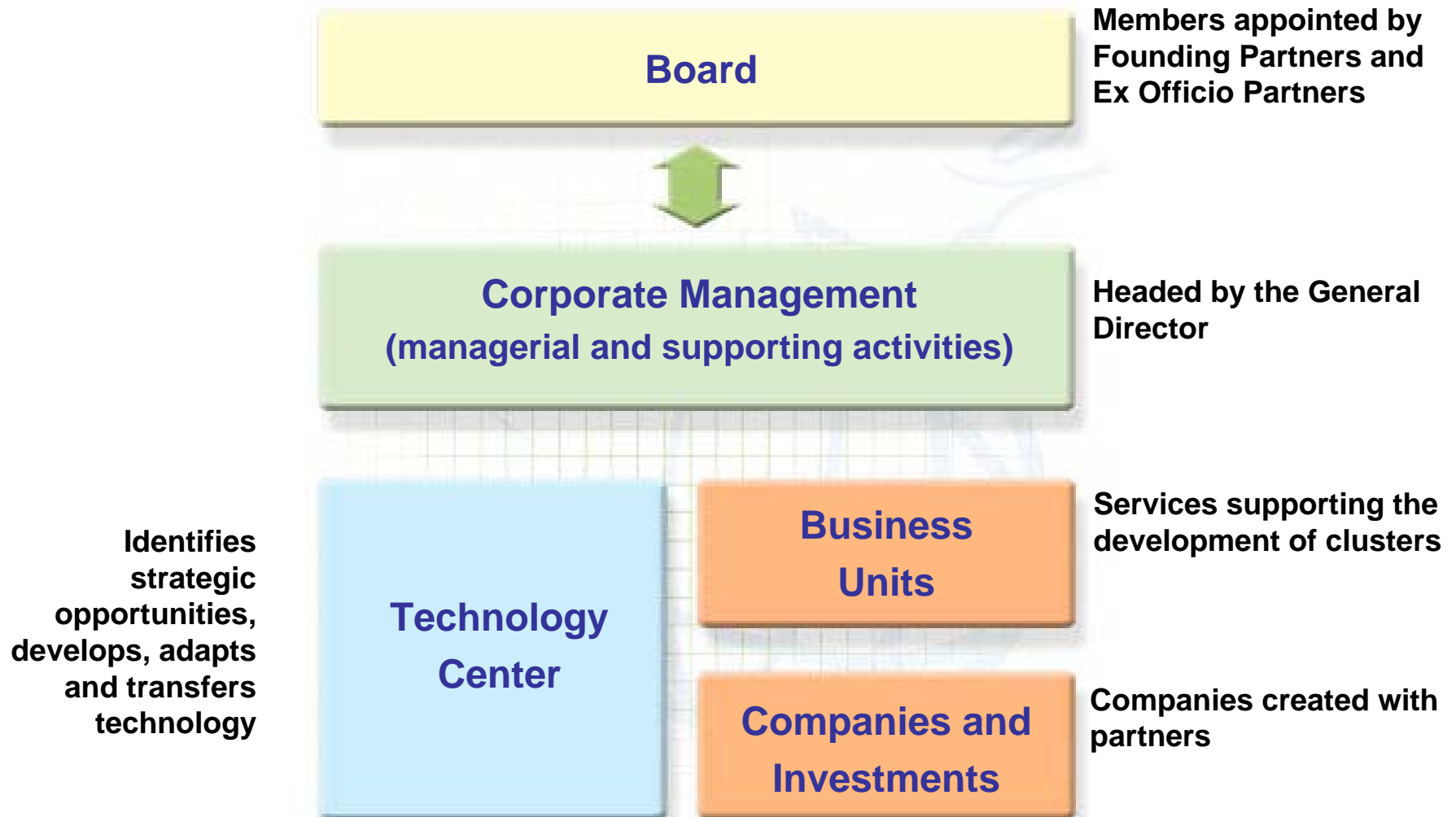
1976

## *Mission*

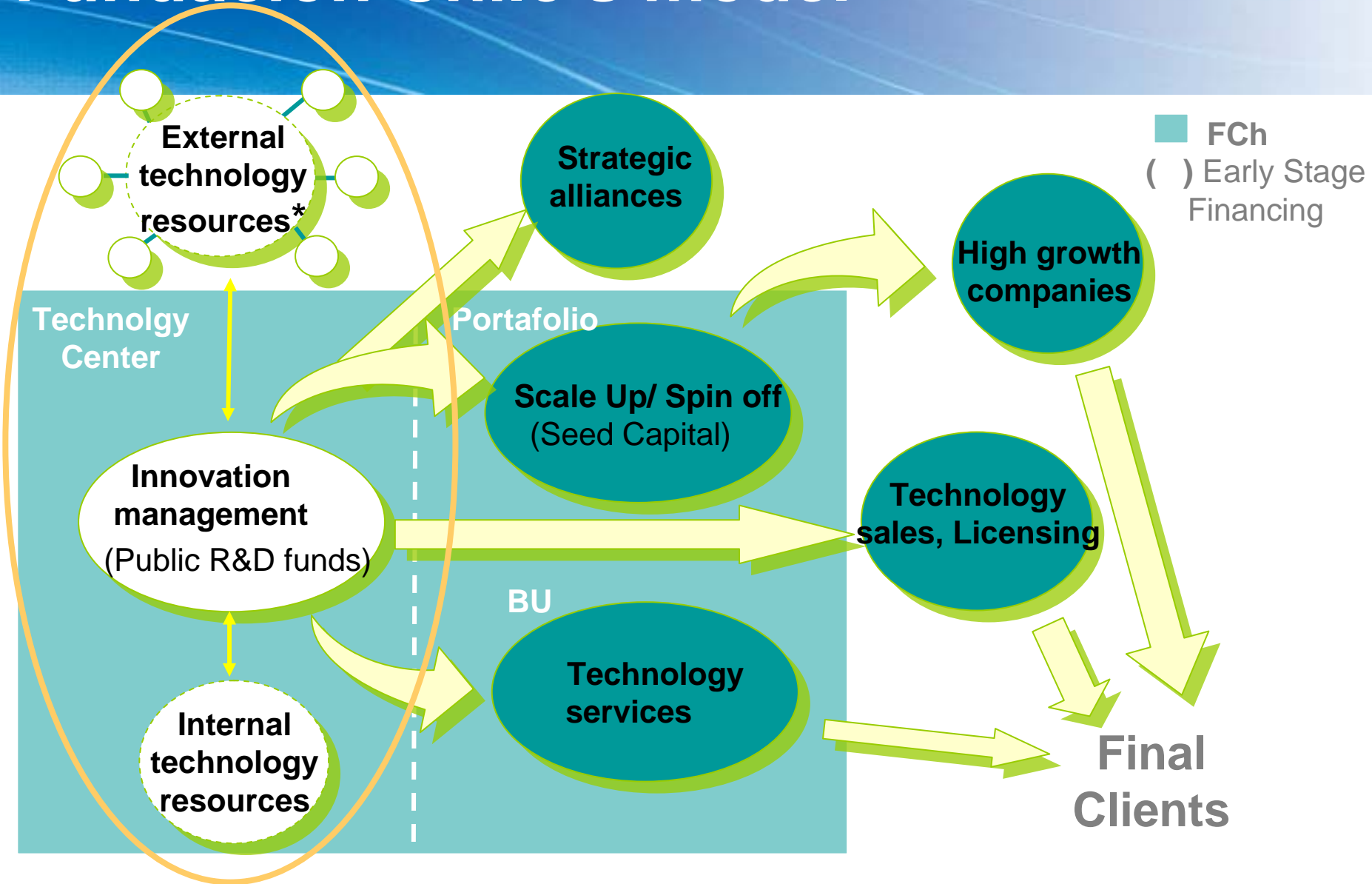
To add economic value to Chile's products and services by promoting innovation and technology transfer activities, aimed at taking better advantage of Chile's natural resources and productive capacity.

# Fundacion Chile

## Structure



# Fundación Chile's model



# Identification of Opportunities and Technological antenna

1

**Transfer & adaptation**

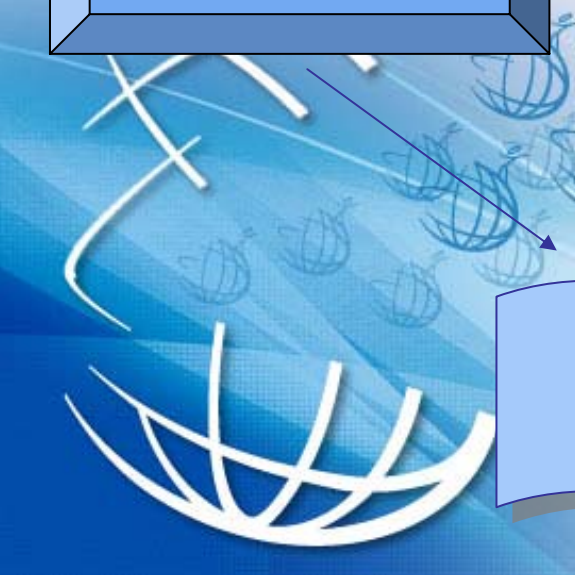
2

**Transference and internal R&D**  
With national and international scientific support

3

**Managing R&D Networks**  
Technology centers, Universities, R&D department and companies

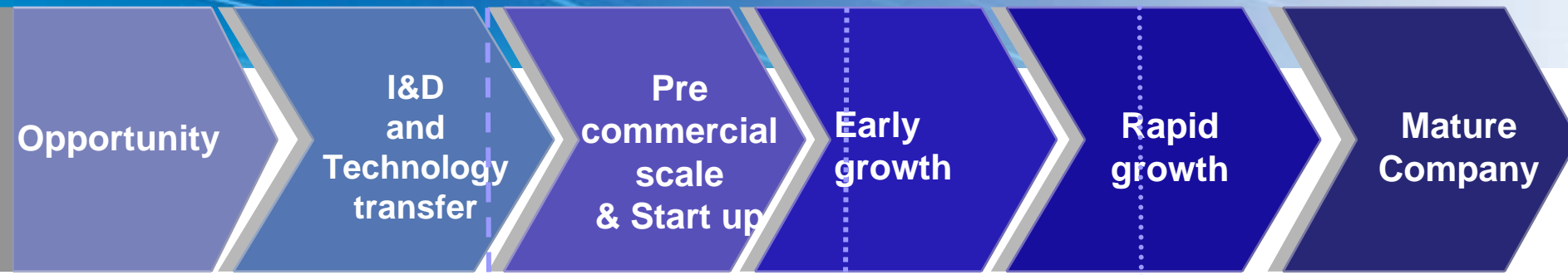
**Scale up and Licensing**



# What we do in selected cluster of Chilean Economy: identifying, dominating and transferring the technology

- Opportunity identification
- Technology Domination
- Technology Transfer
- Supporting the development of the sector

# Innovation cycle and financing sources

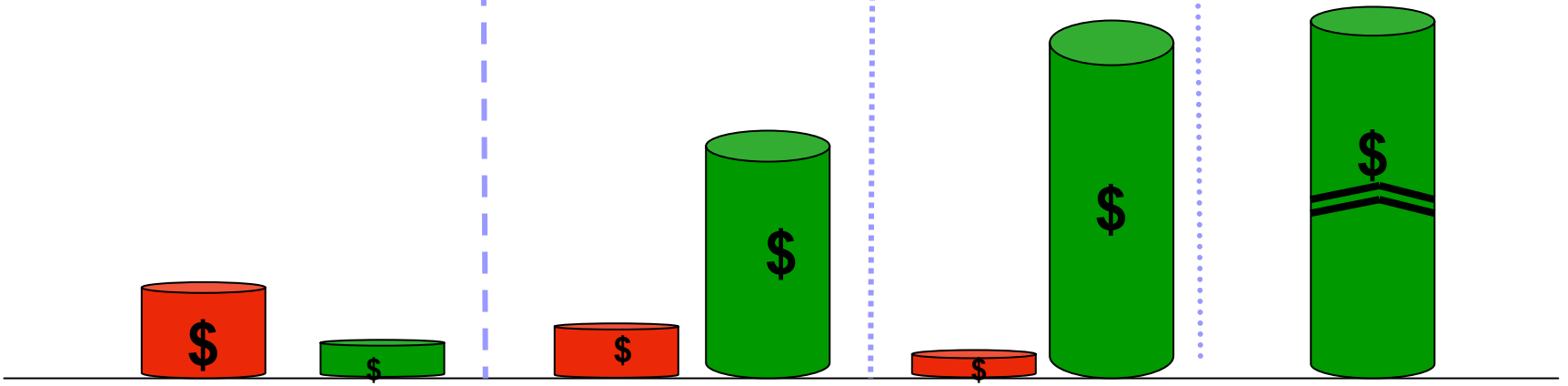




R & D Grants

Seed Capital

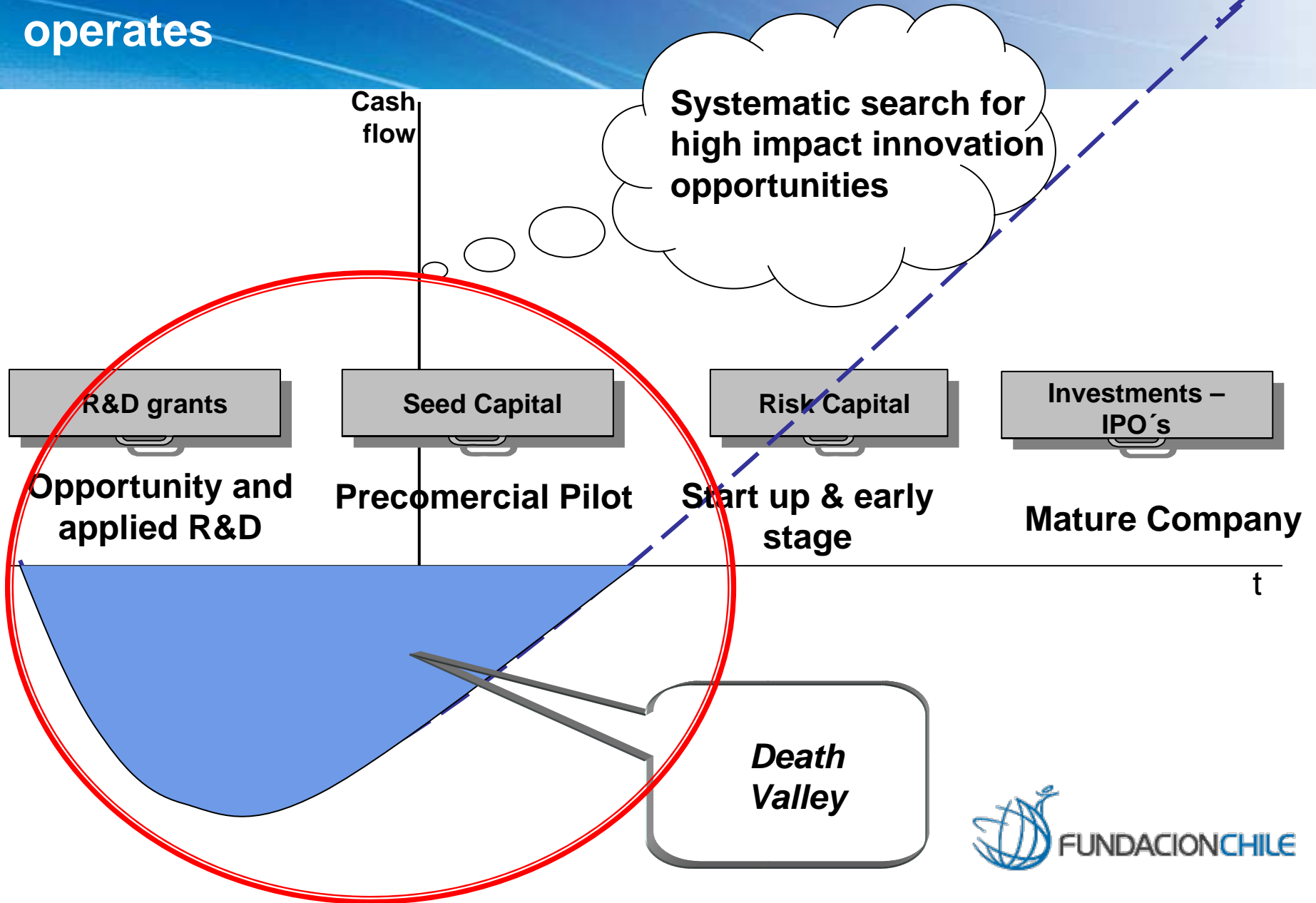
Risk Capital

IPO's Investors



-  Private Financing
-  Public Subsidy

# Where Fundacion Chile operates



## Key Areas and operational model

FCh is currently promoting the development of companies and clusters

### Technologies

- Biotechnology
- Environmental Technology
- Certification and standards
- Information Technology & Human Capital
- Financial Engineering
- Food Technology
- Management Technology

### Sectors

- Agribusiness
- Aquaculture
- Forest and Industry
- Information and Communication Technology
- Human capital
- Environmental

■ Creates **innovative enterprises**, almost always in association with companies or individuals.

■ **Develops, adapts and sells technologies** to clients in the productive and public sectors, in the country and abroad.

■ Fosters **institutional innovations**.

■ **Captures and disseminates technologies to multiple users** (as a technological antenna) through seminars, specialized magazines, internet portals, and technical assistance.

■ **Develops standards and certification** systems.





# Fundacion Chile

## History of Innovation

# Fundacion Chile

## History of Innovation



- Developed quality control and certification of export fruit, the cornerstone of this sector which generates over US\$1.9 billion in exports (2003-2004 season).
- Developed berry crops in Chile, which represent US\$200 million in exports for 2003.

# Fundacion Chile

## History of Innovation

Development of an Internet Educational Portal which is being launched through out Latin America. In Chile it is among the five most visited portals. 16 countries in LA share contents and technology

Development of national vocational qualification system for Chile

Standards for Labor Competencies have been developed for 11 sectors in chilean economy with more than 20,000 workers certified

Development of the software for a tag tariff for urban road concession network

Development of standards and certification system for school management practices

# Fundacion Chile

## History of Innovation



- Created technology transfer groups in Chile's forestry sector.
- Introduced securitization financing for forestry assets.
- Developed certification standards for forestry product exports which totaled US\$2.6 billion in 2003.

### Leading examples of FCh's track record of innovation:

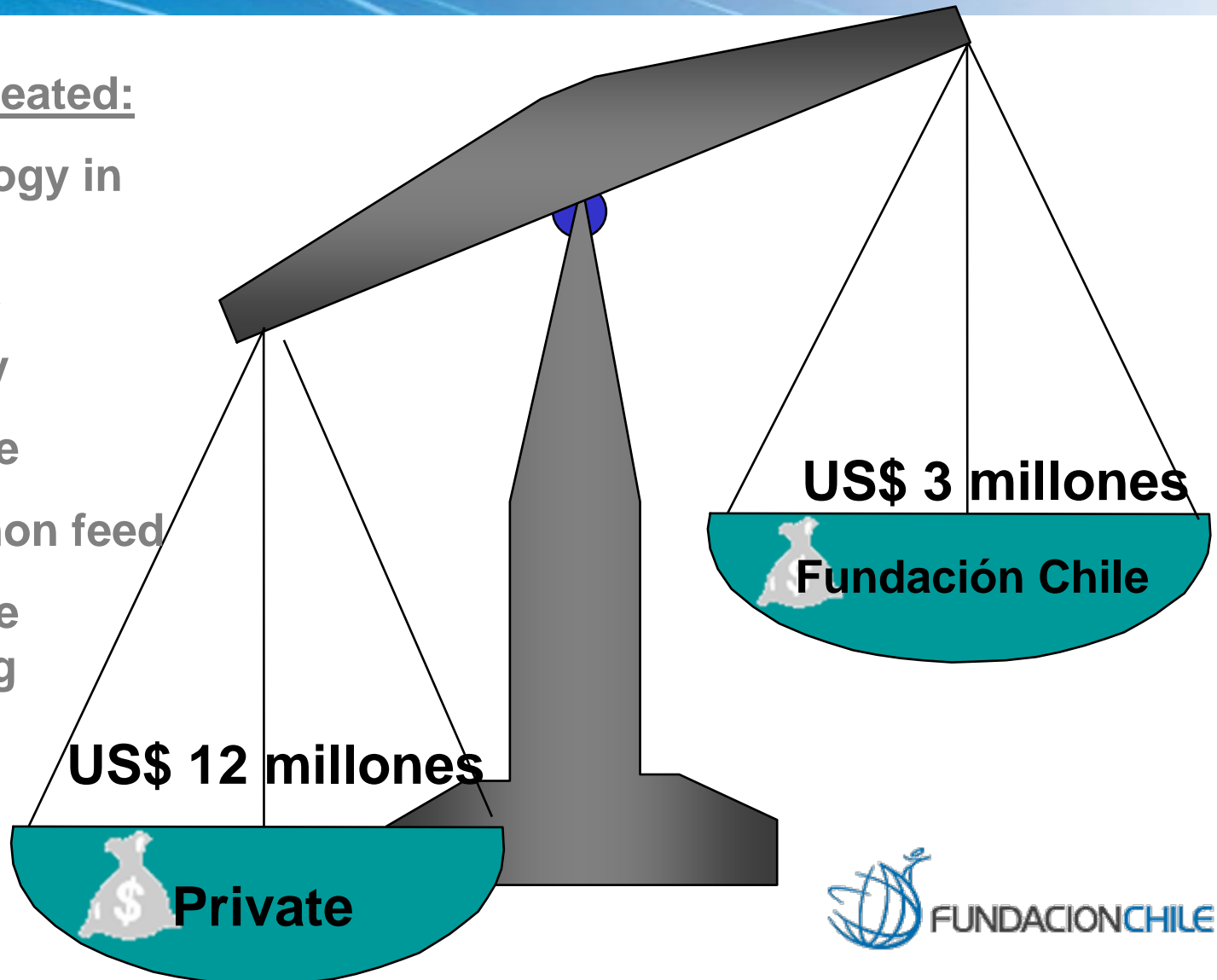
- Pioneered the salmon farming industry in Chile, representing US\$1.4 billion or 5.4% of Chile exports during 2003 (fourth exporting sector in Chile and second largest exporter in the world).
- Introduced vacuum-packed beef, centralized processing and the sale of boxed meat.



# Leverage of Private Resources: 2003 al 2004

## Companies Created:

- Biotechnology in Flowers
- Gamma ray Technology
- Sea abalone
- Oil for salmon feed
- Aquaculture Engineering



# The Salmon Cluster

# HOW DID CHILE GET HERE?

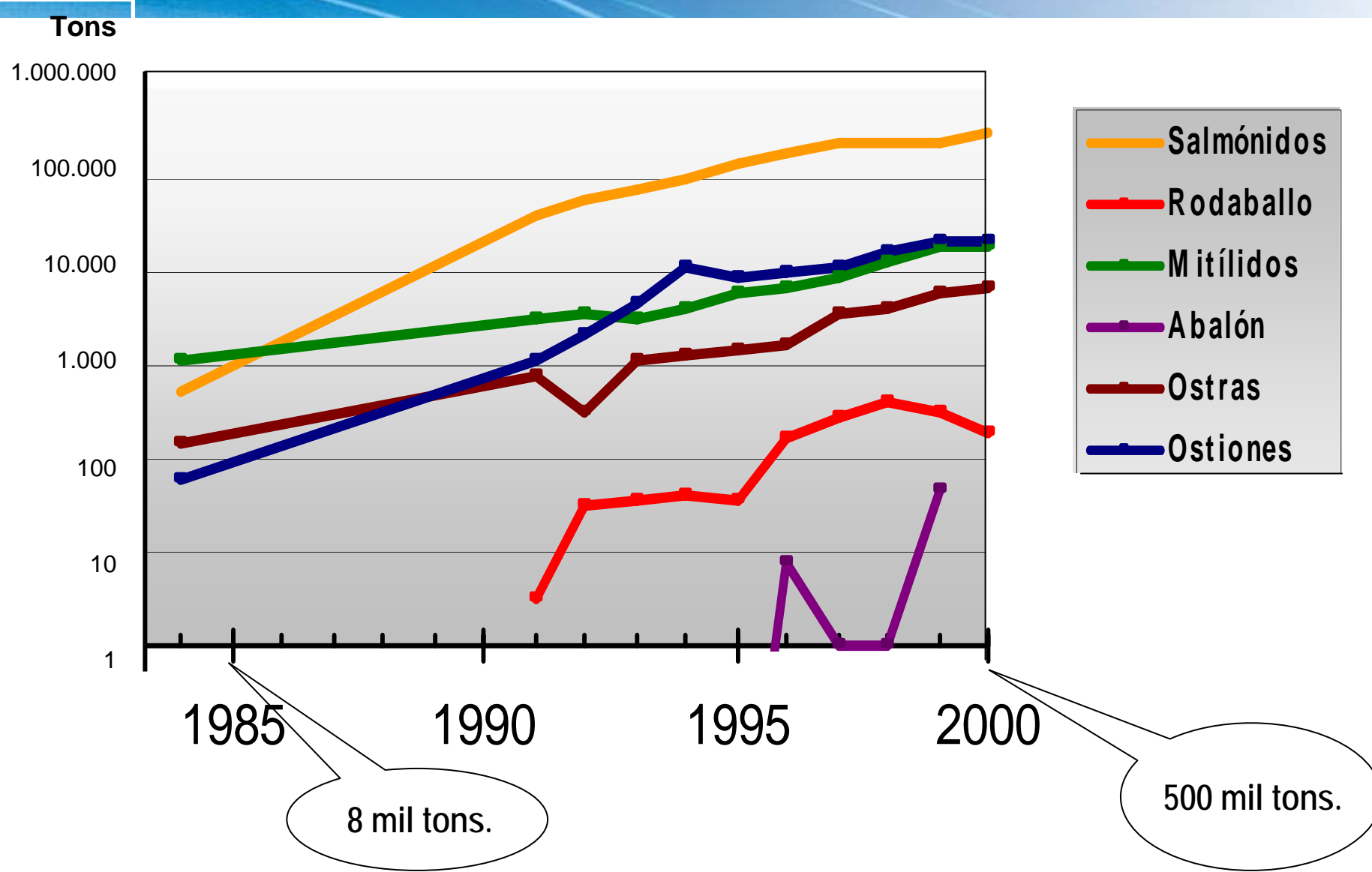


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# Chilean Acuaculture: Growth

(en base logarítmica)



# The case of Salmon in Chile

**1980** Fundacion obtains the technology from USA

**1982** Fundación creates its first company: Salmones Antártica





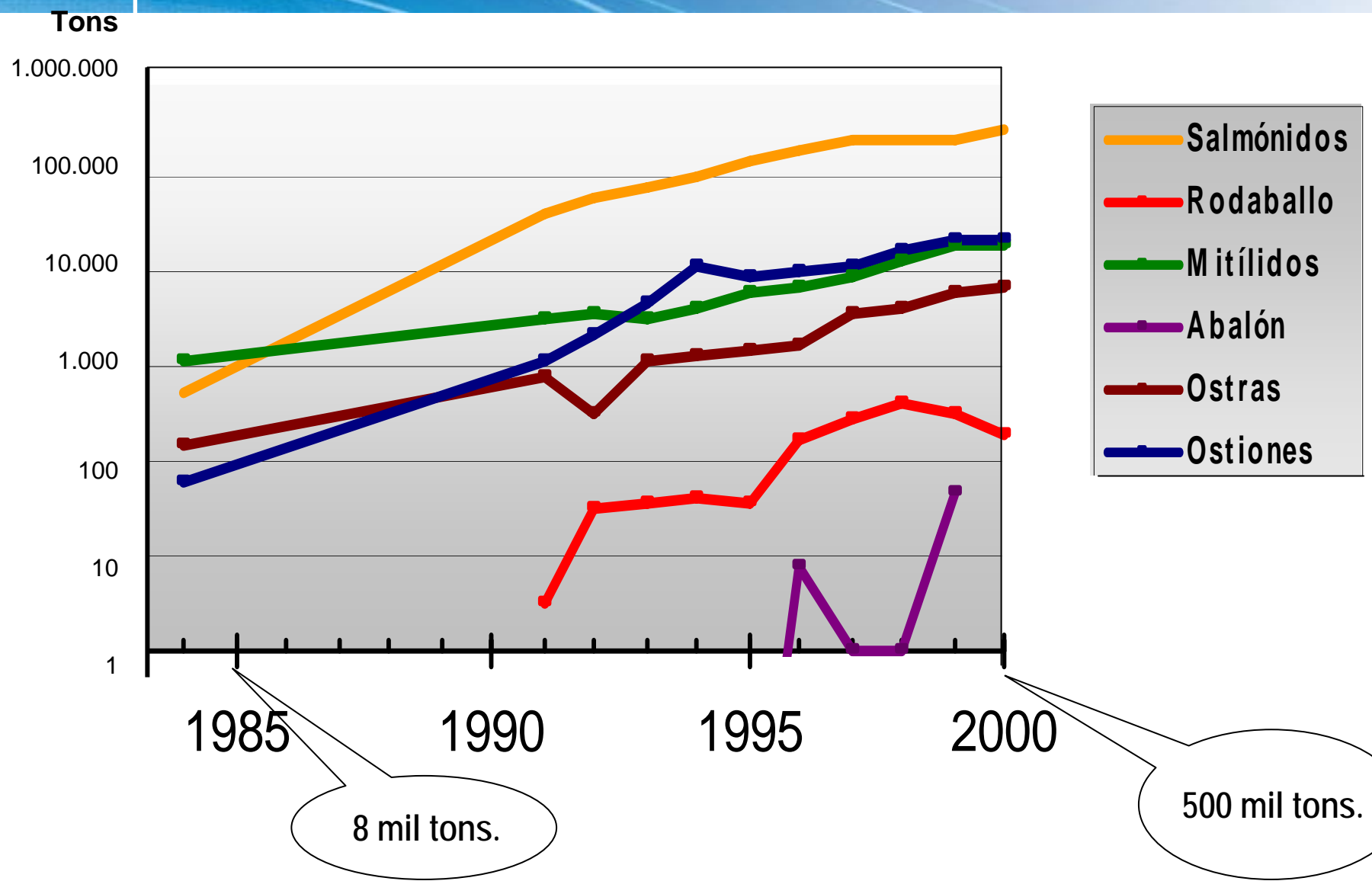
**1985 - 1987** Fundación  
creates 3 other companies:

- Salmones Huillinco S.A.
- Salmotec S.A.
- Finamar S.A.



# Chilean Acuaculture: Growth

(en base logarítmica)



# LA INDUSTRIA DEL SALMÓN

## Los 90s: (1991-2000)

- Crecimiento Rápido (22%pa)
- Consolidación de tecnologías básicas
  - Granjas y Unidades de cultivo más grandes
  - Mejoras de Alimentos y Alimentación
  - Producción propia de Ova
- Desarrollo de mercados y productos
  - De pescado entero a filetes sin piel deshuesado
  - Crecimiento y desarrollo de mercado USA (Atlánticos)
  - Crecimiento y desarrollo de mercado Japonés (Coho)

- Economía de escala
- Bajo costo de alimento
- Reducida vulnerabilidad

- Reducción de costo de transporte
- Productos Chilenos Imponen estándares
- Desarrollo de canales De distribución

# LA INDUSTRIA DEL SALMÓN

## 2000-2010

■ Crecimiento Estable (10-12%pa)

■ Consolidación de Empresas

■ Empresas grandes absorben a las pequeñas.

■ Empresa Chilenas compran instalaciones en el extranjero

■ Desarrollos

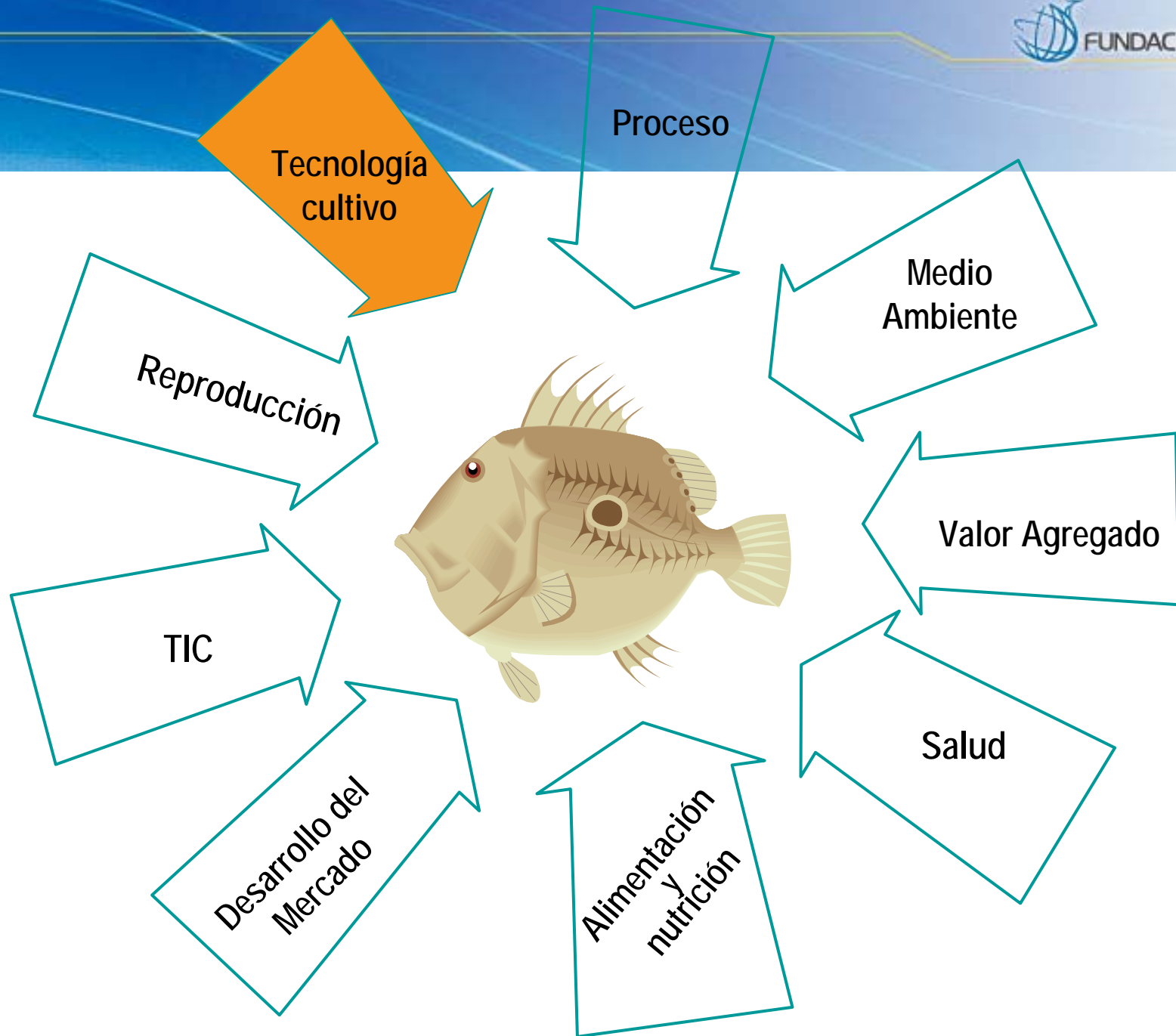
■ Productos con valor agregado (conviniencia)

■ Reemplazo de antibióticos por vacunas.

■ Certificación medio ambiental.

■ Nuevas materias primas

■ Envases para una mayor vida útil



# ESTADOS DE LA PRODUCCIÓN DE JUVENILES MERLUZA



# Réplica en Corvina

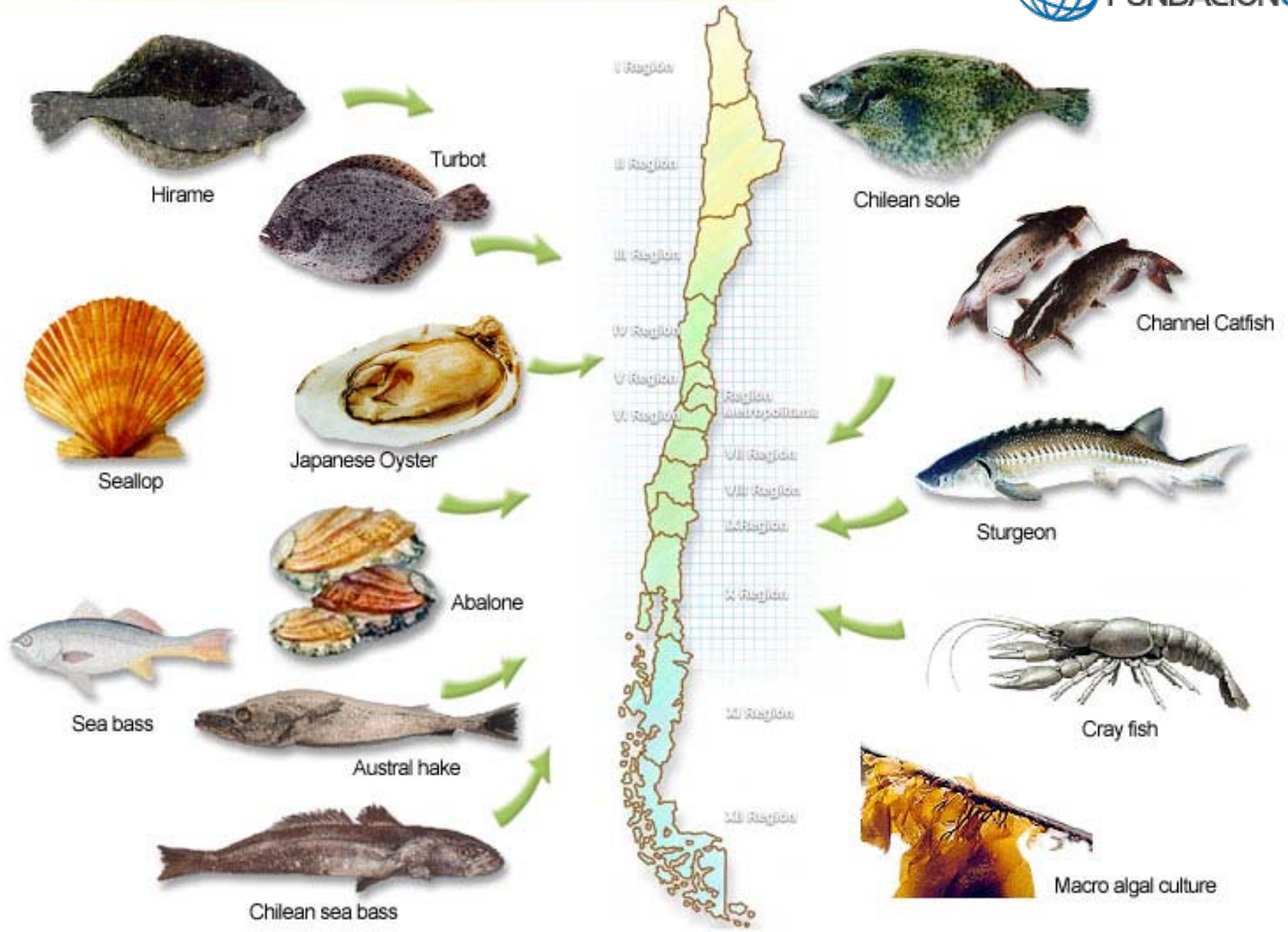


# *merluccius australis*: The new Salmon



**US\$ 1.500 millones in 20 years**  
(Neil Bass, experto inglés)

# Diversificación de la Acuicultura



# Advantages of focusing in the Clusters

- Any new development is of lower risk and of lower cost due to
  - skills,
    - Critical mass of capacities and
    - Scale economies
- You may create innovation dynamics that can generate exports based in knowledge.

# Dinámica de Clusters Chilenos

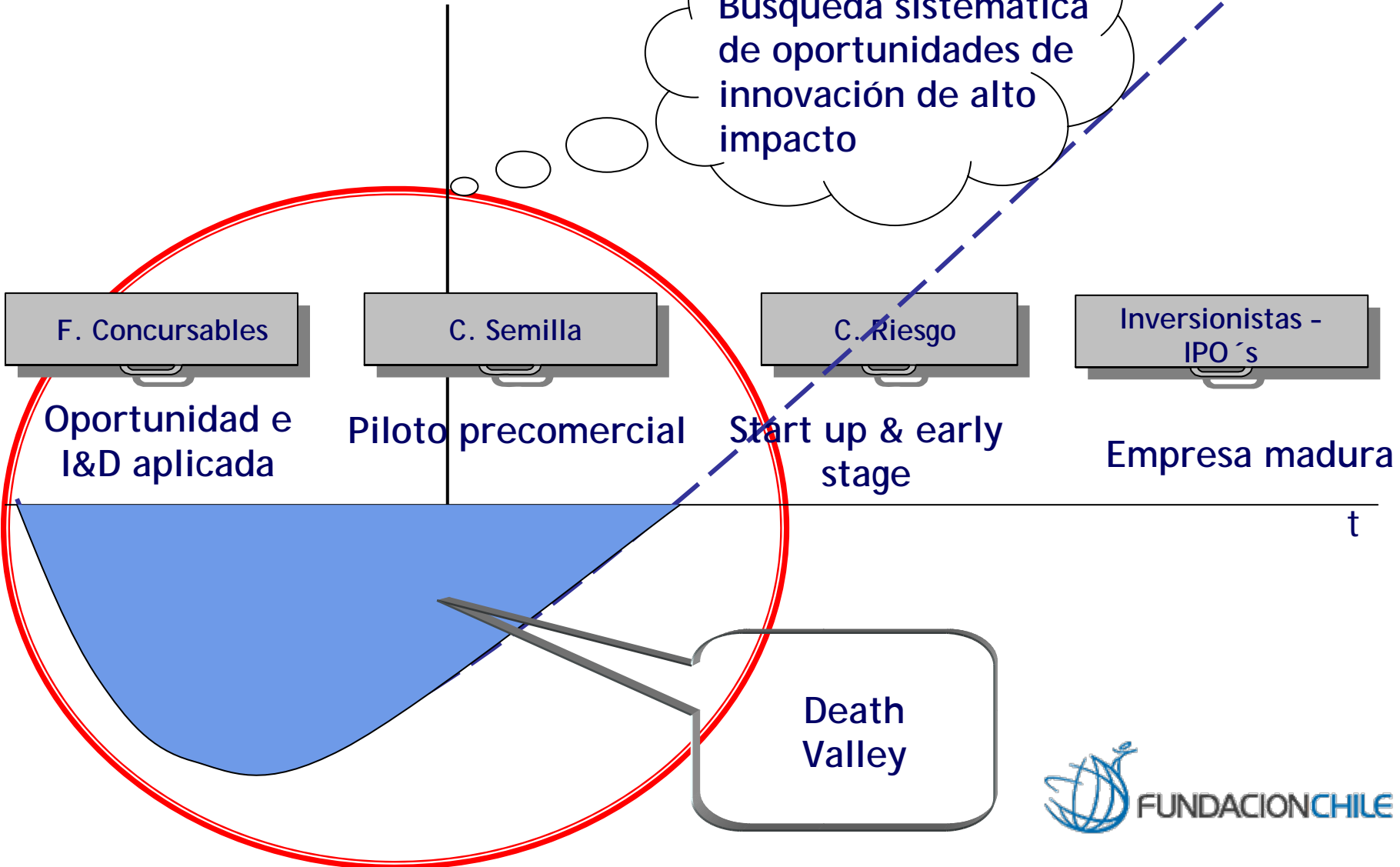


# How do we select projects

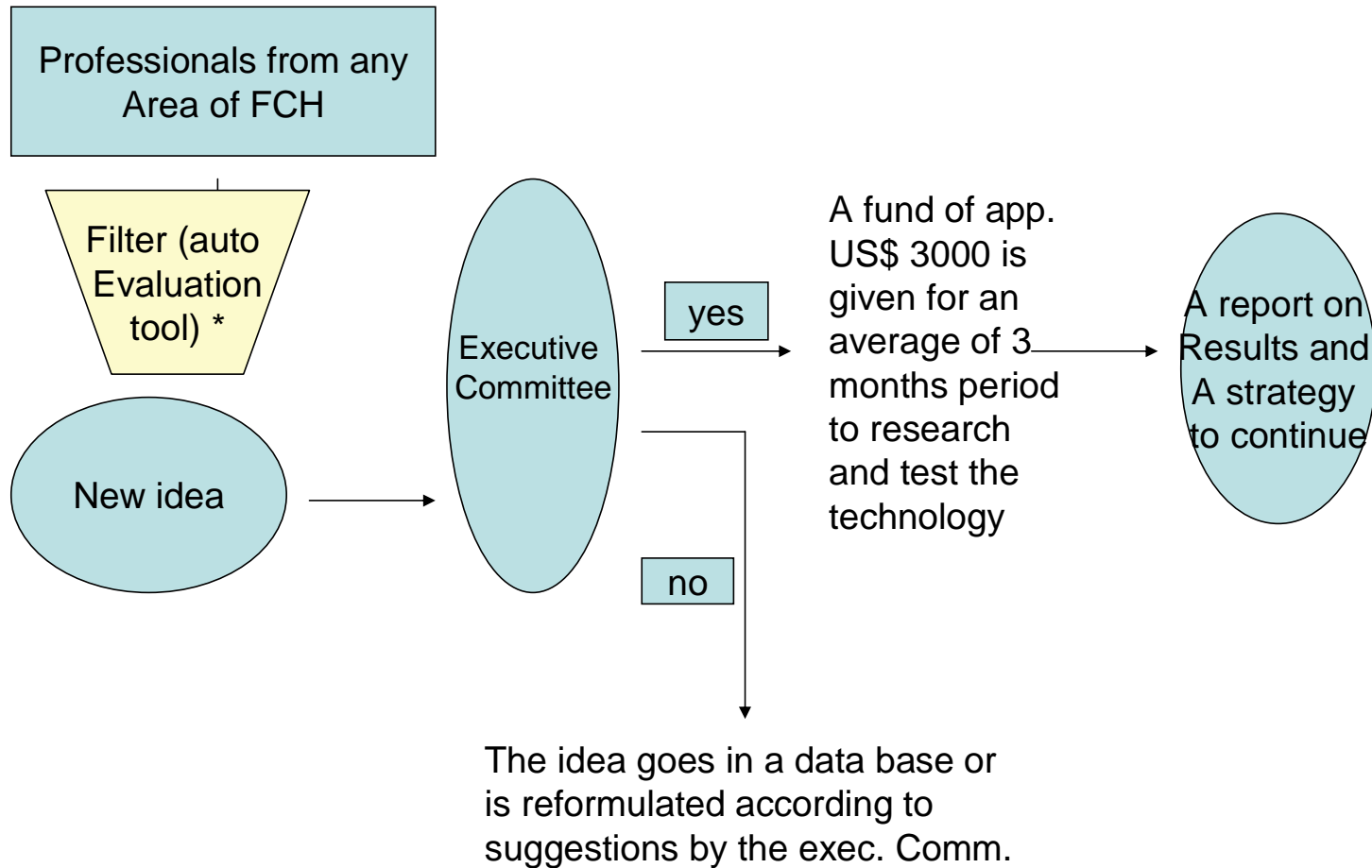
Fundacion Chile's approach

Rentabilidad

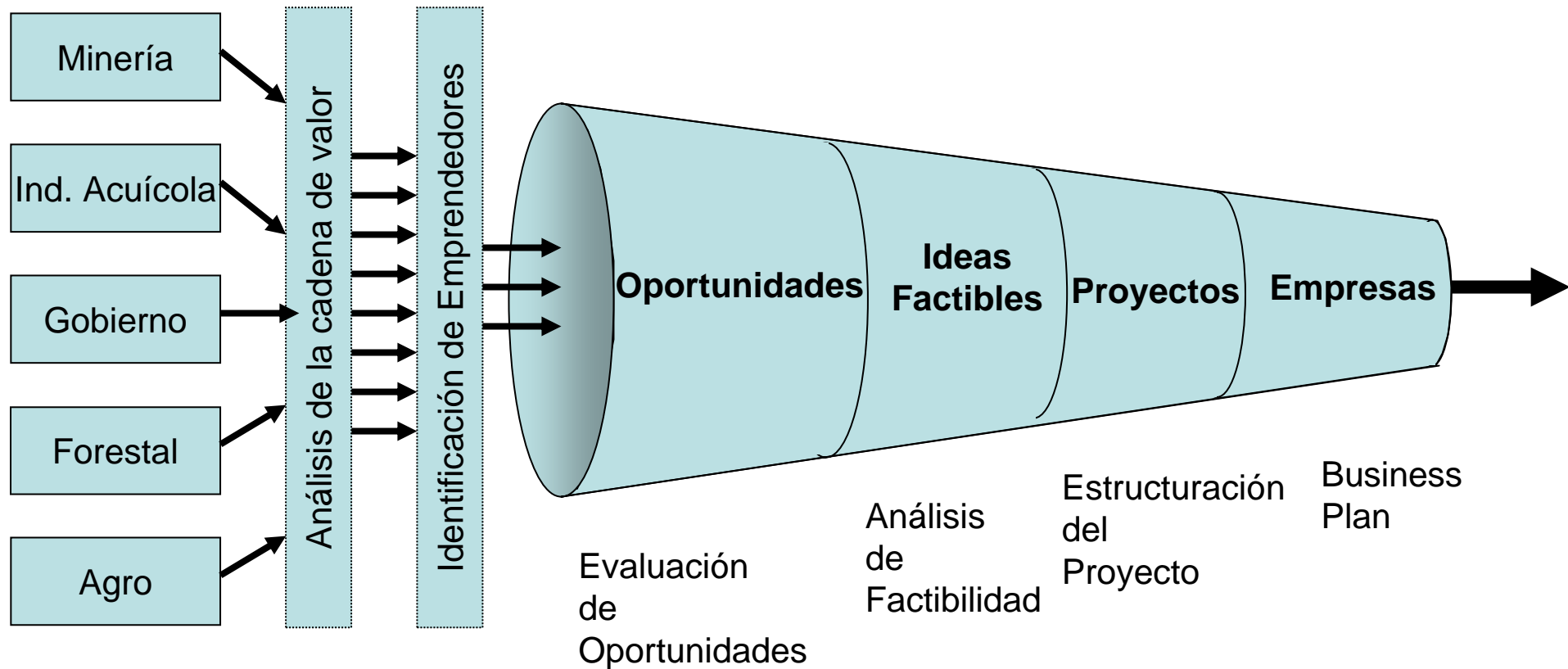
Búsqueda sistemática de oportunidades de innovación de alto impacto



# Internal IDEA – ANTENNA



# How we identify opportunities in a Sector: Information Technologies example





*TrazaChile*  
SERVICIOS DE TRAZABILIDAD



TRAZA  
CHILE

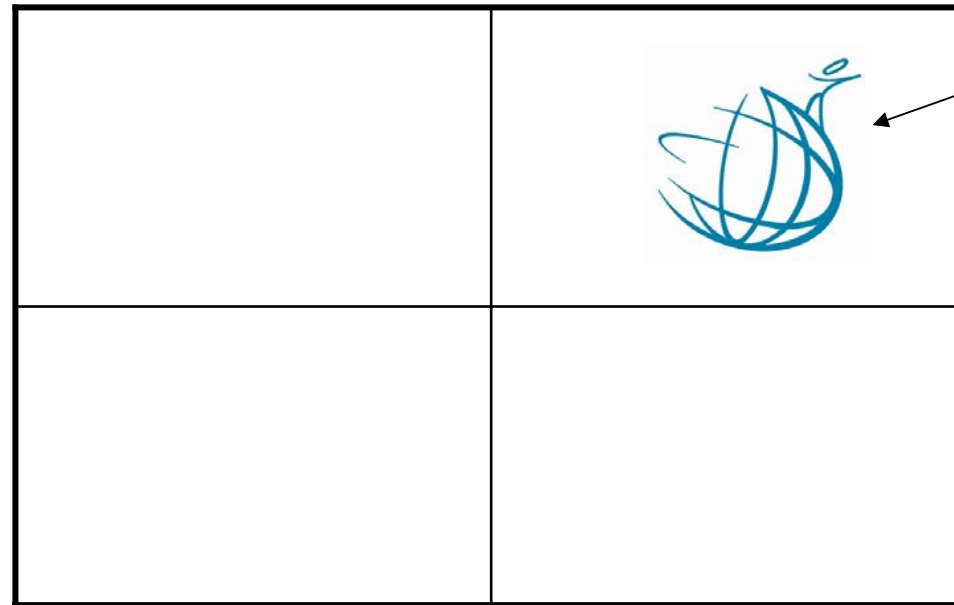
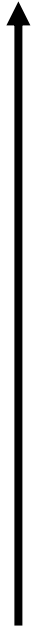


1. **Area:** Tecnologías de Información
2. **Descripción:** Plataforma de servicios para un Sistema Nacional de interconexión nacional, internacional y multisectorial de información de Trazabilidad para Alimentos. Trazabilidad de los sectores exportadores de alimentos: frutas, vinos, recursos marinos y carnes.
3. **Socios:** Cámara Nacional de Comercio, Fondo Capital de Riesgo, Fundación Chile, **Oracle, Megasoft.**



# INNOVACIONES EXITOSAS

**CREATIVIDAD Y CALIDAD DE IDEAS**  
(Creatividad y Conoc. Consumidor)

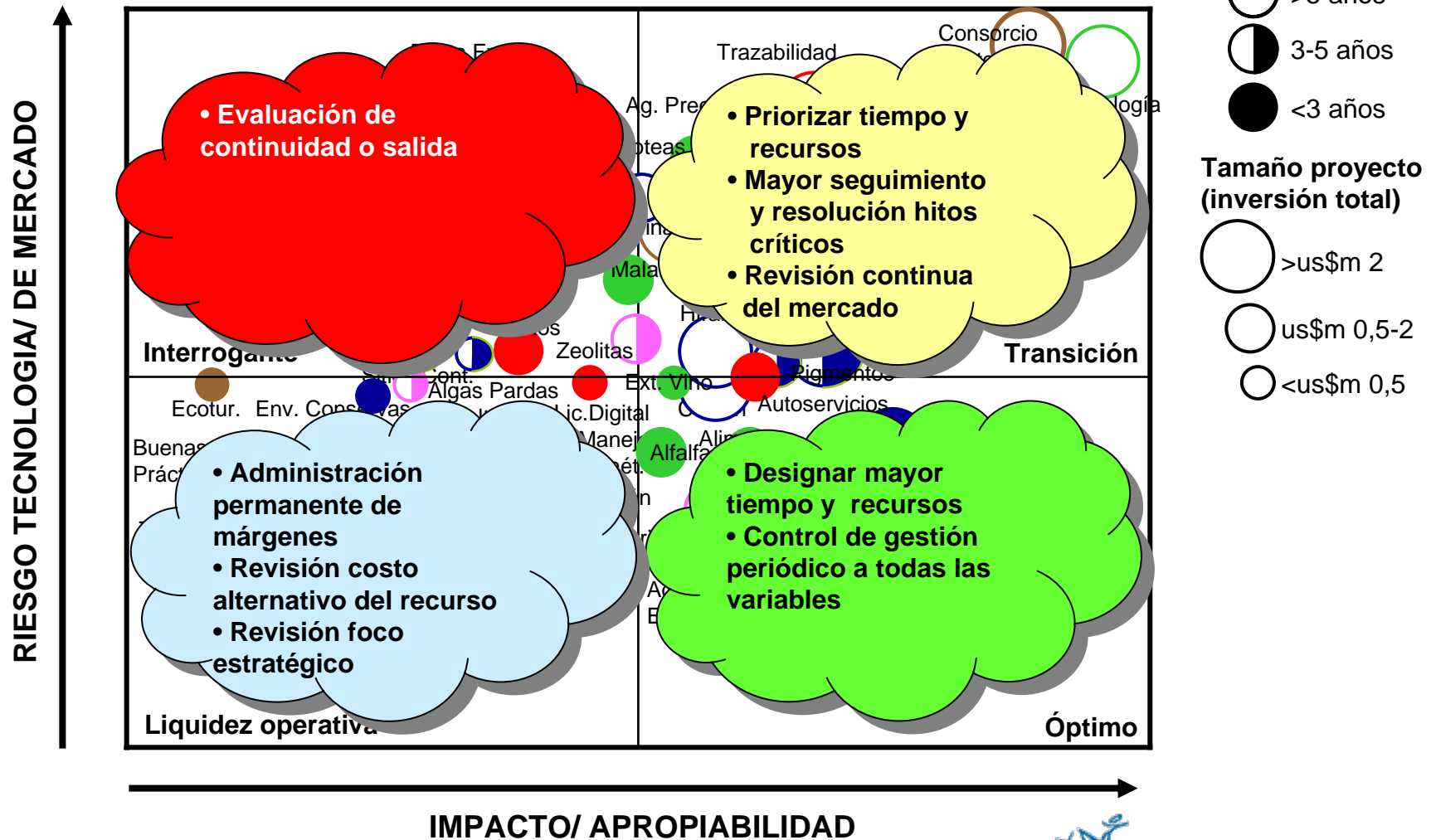


**Innovaciones exitosas**

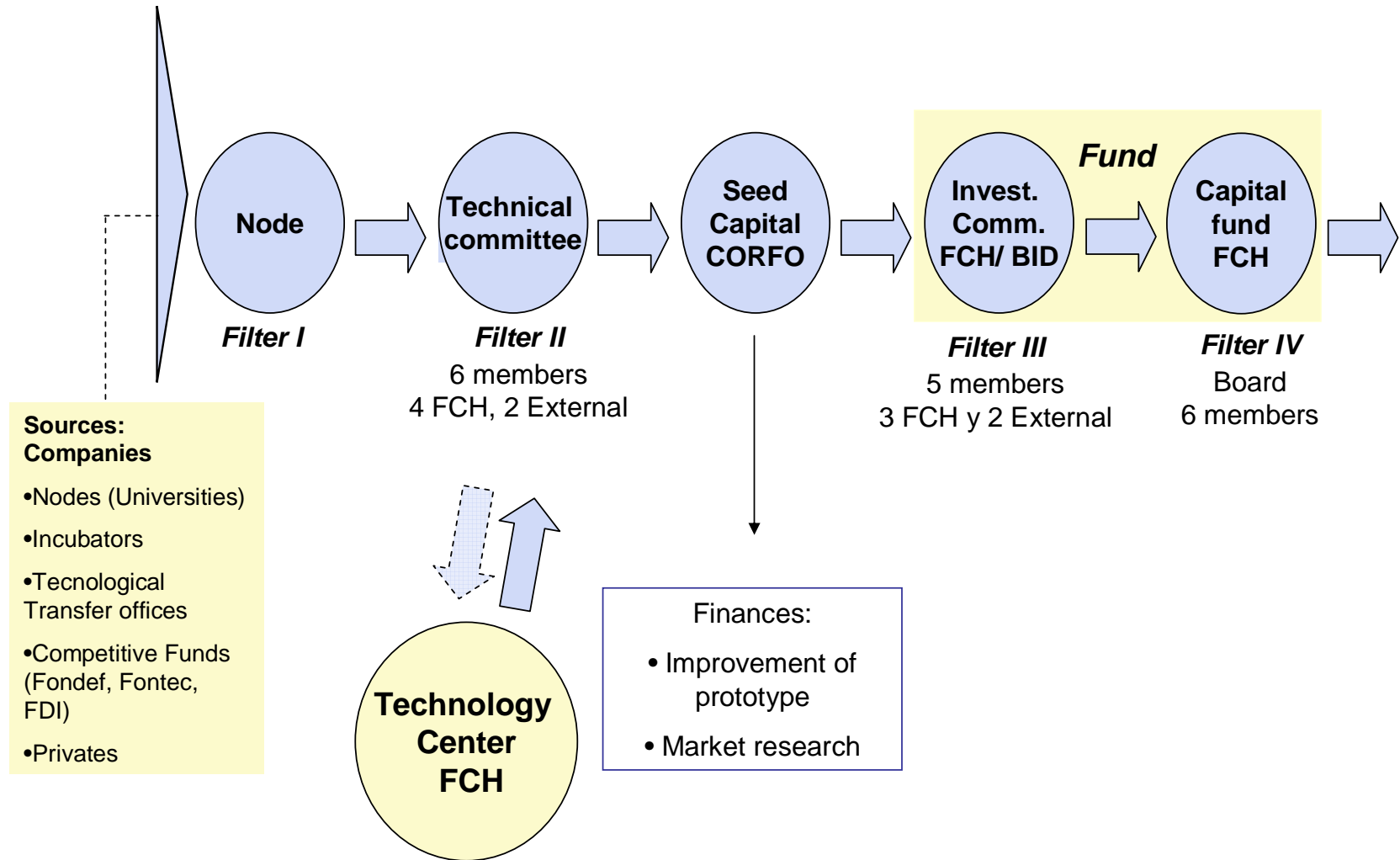
**EFFECTIVIDAD Y EFICIENCIA EN IMPLEMENTACIÓN**  
(Procesos rigurosos y Control)



# DIAGNOSTICO PORTAFOLIO PROYECTOS FCH



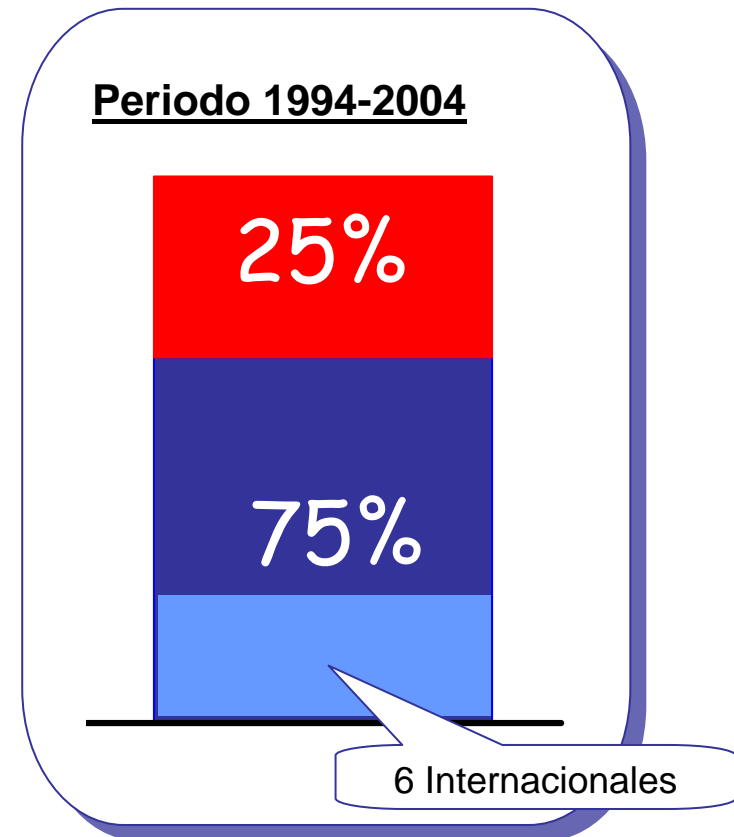
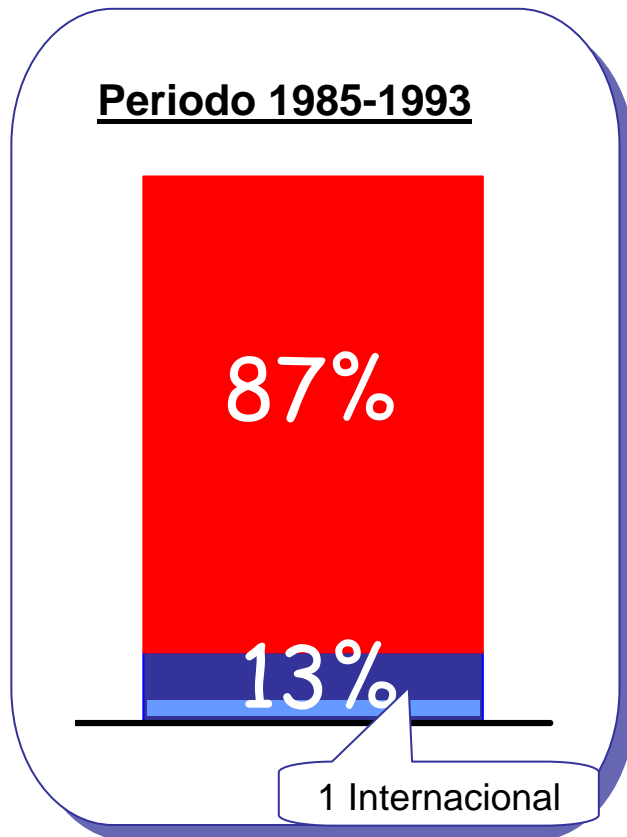
# Seed Capital role





# En la creación de empresas la Fundación Chile ha cambiado su estrategia

■ Sin Socio  
■ Con Socio







## SECOND LESSON

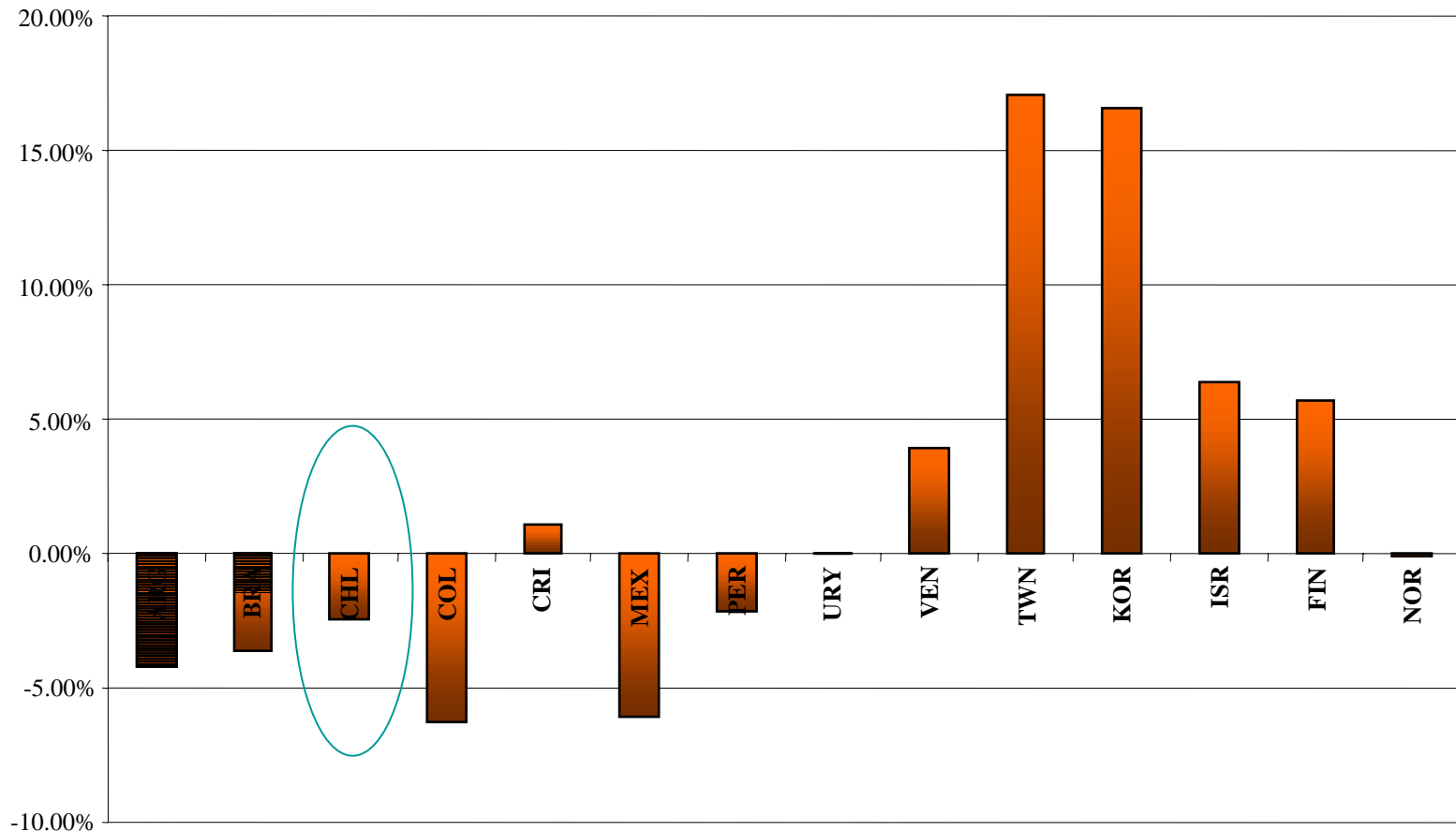
COPYING ISN'T  
THAT EASY  
ANYMORE

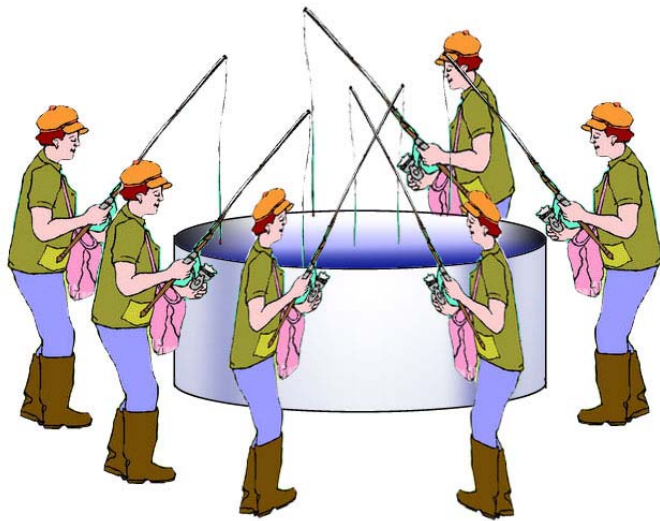
## 2. Propiedad intelectual

1. 1980 la tecnología del salmón le fue entregada a la Fundación Chile sin condiciones y a costo marginal
2. 90's la propiedad intelectual se vuelve crucial para obtener "libertad de operación". Cada vez será un tema de mayor exigencia para la innovación.
  - i. Propiedad está fragmentada
  - ii. Se deben tener competencias específicas para negociar bien
  - iii. Las alianzas internacionales son factor clave
  - iv. Proteger la PI

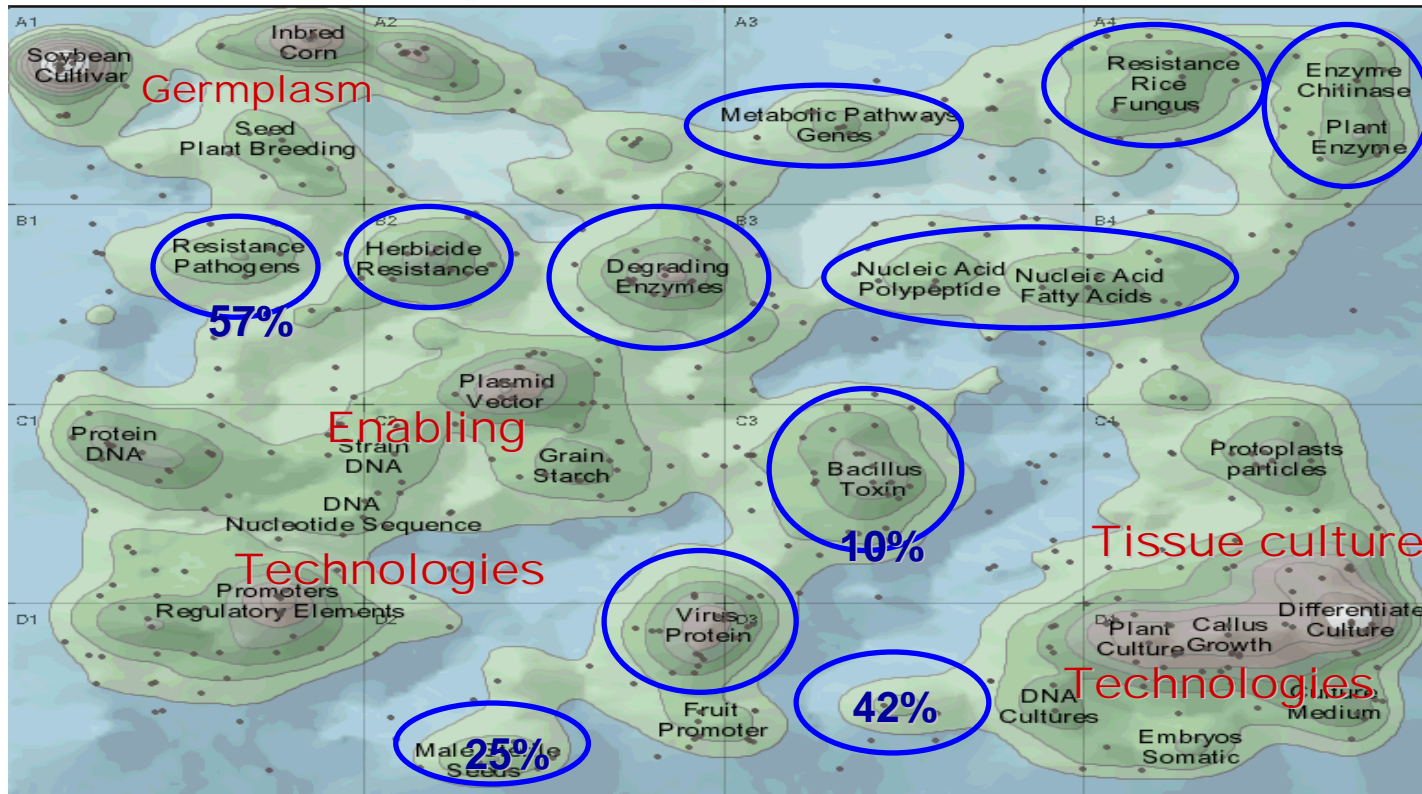
# La eficiencia de países de AL para convertir I&D en patentes

$$\text{Patents} = B_1 \text{R\&D} + B_p \text{ country} * \text{R\&D}$$





**The tragedy of the commons:  
Free access**



**The case of the uncommons:  
need to obtain freedom of operation**

## Third lesson: have exit strategies implemented from the beginning of the innovation cycle



# Fourth lesson



# Competencias Identificadas



✓ Generación de ideas

✓ Análisis estratégico y evaluación

**Emprendedor**



✓ La gestión de proyectos

✓ Negociar y gestionar alianzas

✓ Gestionar redes de apoyo globales

**banquero**



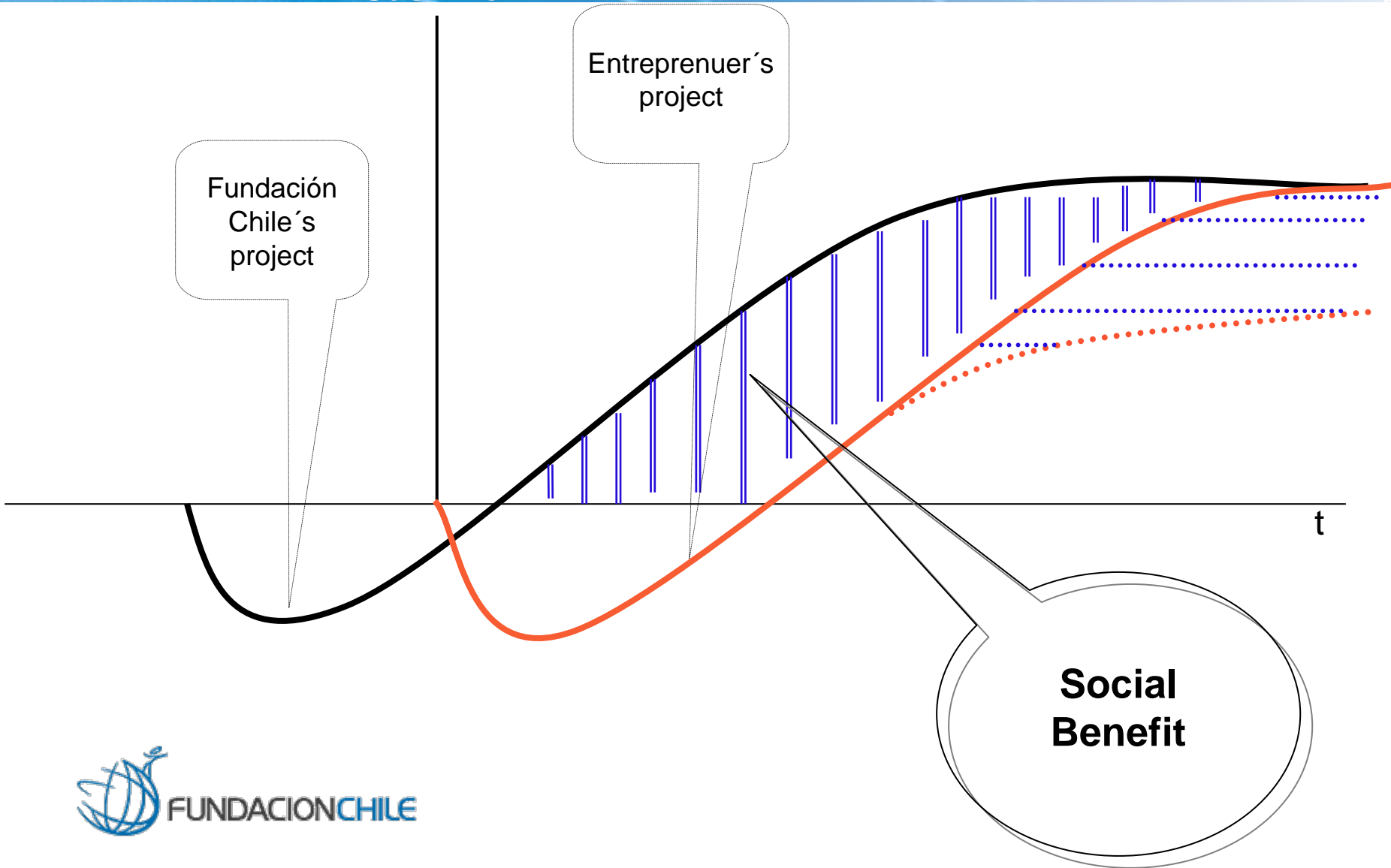
✓ El Padrino



Summarizing.....

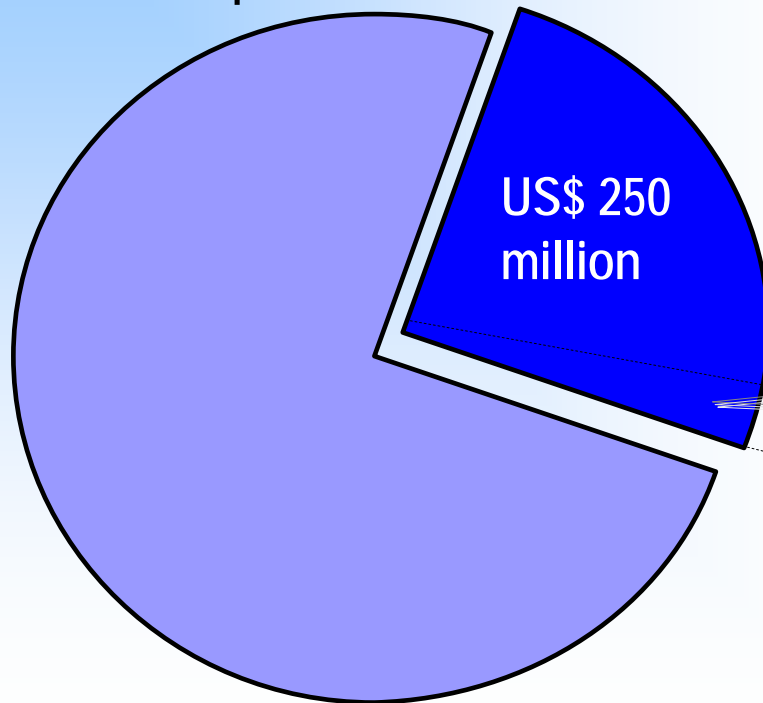
# Fundacion Chile brings the future nearer

Cash flow



## 6 projects

Social benefit of  
US\$ 750 million



Fundación  
appropriated  
only US\$ 25  
million

**It is fundamental to have catalyst agents in the process of innovative business creation and in the development of human capital and key clusters of our economy.**

