



UNIVERSIDAD TECNICA  
FEDERICO SANTA MARIA

# SEMINARIO REINO UNIDO ALIANZA DEL PACÍFICO

PANEL PLENARIO 2:  
DEL CONOCIMIENTO A LA INNOVACIÓN:  
PERSPECTIVAS DE LA EDUCACIÓN SUPERIOR  
Y LÍDERES EMPRESARIALES.

# 5 CAMPUS IN CHILE



Valparaíso



Concepción



Vitacura



Viña del Mar



San Joaquín

**1<sup>st</sup>**

**Chilean University on the  
world university ranking**



**17<sup>th</sup>**

**in the ranking  
World Top University  
Business Incubator and  
Accelerator 2015**







**18.113**

**Undergraduate  
Students**

**1.223**

**Graduate  
Students**





12

Science  
Master's  
Programs

8

Professional  
Master's  
Programs

8

PhD  
Programs

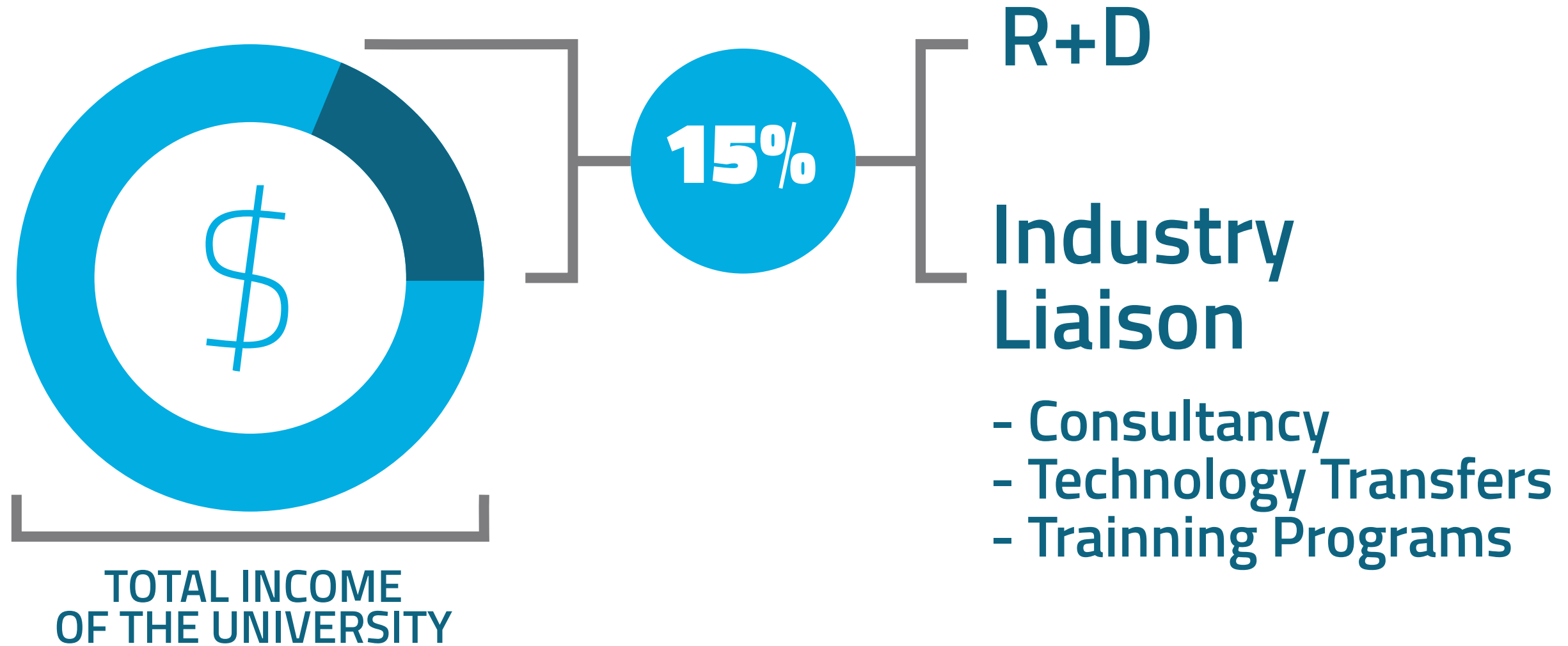


UNIVERSIDAD TÉCNICA  
FEDERICO SANTA MARÍA



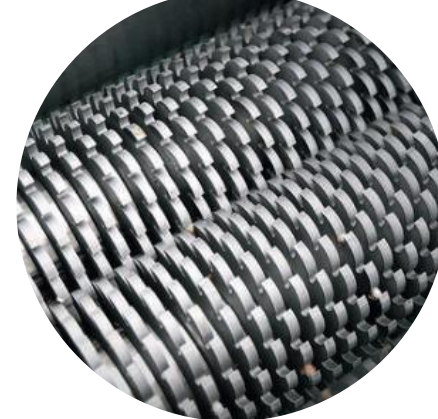
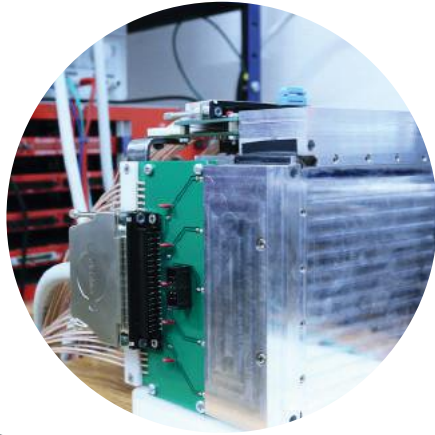
# INNOVATION STRUCTURE

Institute/project	Funding
3iE	CORFO
The clover 2030 Enginnering Strategy, Pillar 1 and 5	CORFO
Management of Research and innovation Projects (DP11)	USM
AC3E	CONICYT
CCTVal	CONICYT
PMI InES	Mineduc





# INNOVATION EXAMPLES





# USM CHALLENGES

Improve and strengthen push and pull innovation based in the requirements of the industry.

Establish a more effective and collaborative University-Industry relationship.

The industry does not develop innovation (but it consumes it), nor gives priority to working with universities to provide or develop innovation according to their priorities.

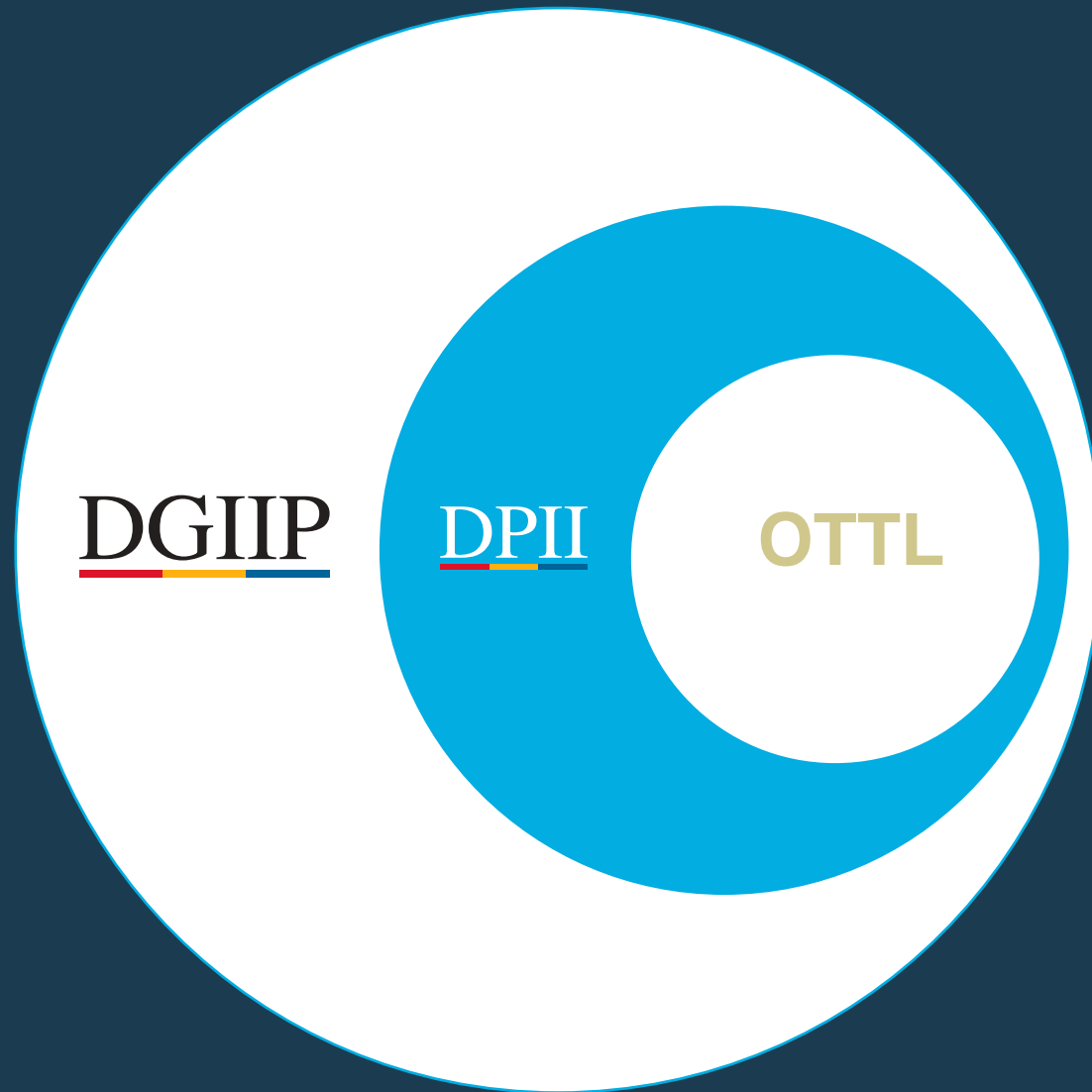


# FACING THE CHALLENGE





# Institutional Commitment



# DOCTORAL PROGRAM IN APPLIED ENGINEERING

Dirección de Postgrado y Programas



This new doctoral program is rooted in four basic concepts:

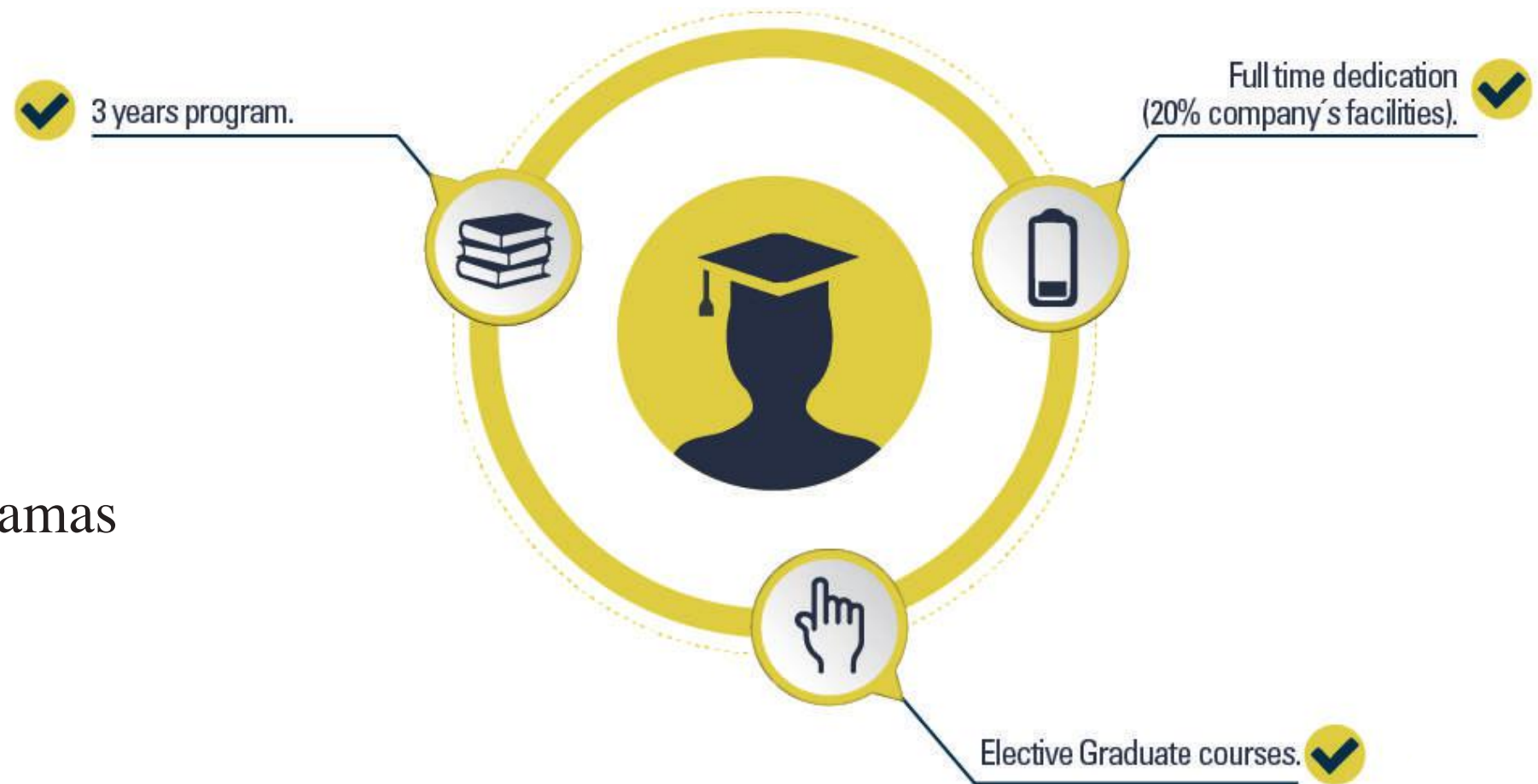
- The outcomes of every single thesis work must have a balance between companies« and university« requirements;
- All research and technological developments must have a multidisciplinary approach in different fields of engineering
- The doctoral program must be recognized as a world class program
- The students are required to start their thesis work at the beginning of the academic program.



# DOCTORAL PROGRAM IN APPLIED ENGINEERING

Dirección de Postgrado y Programas

THE CLOVER  
2030 ENGINEERING STRATEGY  
AN ENGINE TO SURF THE WAVES FOR  
CHILE'S DEVELOPMENT



# DOCTORAL PROGRAM IN APPLIED ENGINEERING

Dirección de Postgrado y Programas

## COMPANIES THAT INTEND TO PARTICIPATE







THE CLOVER

2030 ENGINEERING STRATEGY

AN ENGINE TO SURF THE WAVES FOR  
CHILE'S DEVELOPMENT

# OBJECTIVES

- Enhance and promote in students entrepreneurship and innovation skills, along with other transversal competences that are fundamental for their future.
- Promote, generate and strengthen the University - Business - Government link.
- Promote the development of products and services with high technological impact at national and international level.
- Facilitate the opportunity for all students to generate their own entrepreneurship from the development of a technology related product or service with low risk.
- Promote a turning point in the seal of the UTFSM student, moving to a profile with new opportunities of development, either at the professional or business level, without reducing the technical skills characteristic of the student of this University.

# MEMORIAS MULTIDISCIPLINARIAS

THE CLOVER

2030 ENGINEERING STRATEGY

AN ENGINE TO SURF THE WAVES FOR  
CHILE'S DEVELOPMENT







How can we build work scenarios or digital entertainment through applications that work together by coordinating two or more devices simultaneously?



Use of delictual information delivered by users to improve security services offer



How can we identify basic service meters that are measuring poorly in a way that allows utility companies to reduce their losses by unregistered consumption?



Obtaining information in real time and delivering information to user against events affecting the use of the system





# OBJECTIVES

Support to the development of technological solutions to revolutionize industry.

Counseling of enterprises in early and advanced stages promoting entrepreneurship and innovation.

Dynamic net of entrepreneurs, mentors and strategic allies in pursuit of the best strategies for the new ventures.



**+23  
COMPANIES  
HAVE PARTICIPATED**

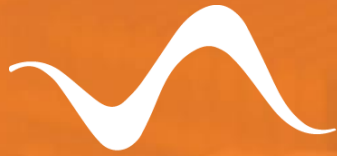
**+2.000  
APPLICATIONS  
SUBMITTED**

**+17  
INNOVATION  
CHALLENGES**

**5  
EDITIONS  
CHILE & PERÚ**

**+ CO-INNOVATION  
+ VALUE CREATION  
+ AGILE PROTOTYPING**





Advanced Center  
for Electrical and Electronic Engineering

## MISSION

To contribute to the technological development and competitiveness of the Chilean economy by achieving excellence in RESEARCH, forming advanced human resources, and fostering INNOVATION and TECHNOLOGY TRANSFER in areas of societal and industrial impact through the field of ELECTRICAL AND ELECTRONICS engineering

## OPPORTUNITIES



There are niches that are not attractive for large corporations



Local companies are learning that investing in technology increases their competitiveness



Large companies require local insight and networking to develop technology for emerging applications and markets in the region



Research and development are the basic ingredients to foster a technological industry based on knowledge and innovation





# IMPACT AREAS



Advanced Center  
for Electrical and Electronic Engineering

**Health &  
Technology**

**Energy  
and  
Power  
systems**

**Smart  
industry**



UNIVERSIDAD TÉCNICA  
FEDERICO SANTA MARÍA





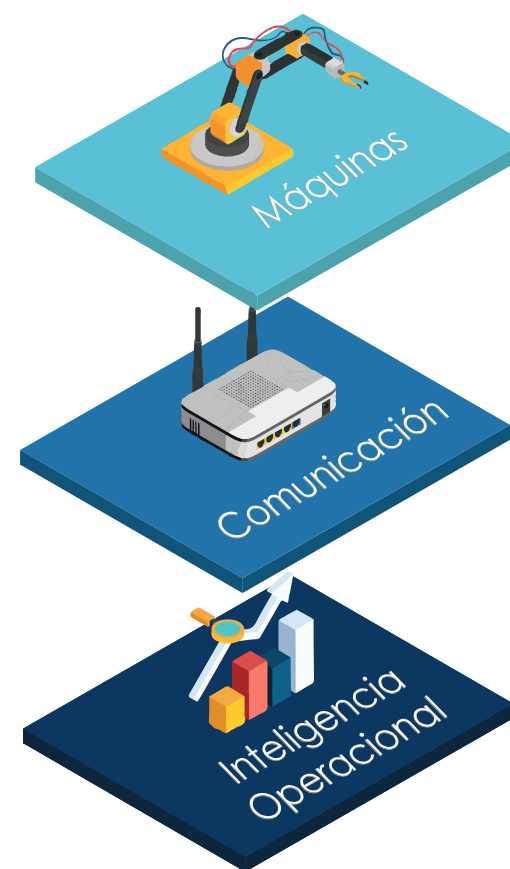
# OBJECTIVES

- Generate new knowledge at a national level in the area of Physics and in the development of High Technology Applied Engineering.
- Constant training of specialists in the areas of: Theoretical Physics of Particles, High Energy Experimental Physics, Electronics, Computer Science and Computing.
- Develop technological innovation projects that positively impact the society and industry of the country.
- To fulfill the commitment of global collaboration, strengthening the links between Chile and other research centers.
- Encourage entrepreneurship through interdisciplinary projects that seek to improve the productive capacity of national industries.

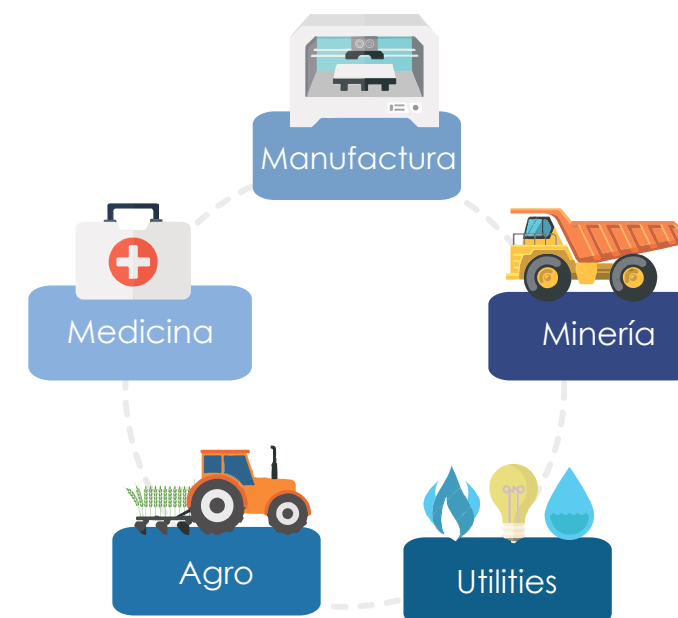




## Laboratory Model



## Focus





**“just as castles provided the source of the strength for medieval towns, and factories provided prosperity in the industrial age, universities are the source of strength in the knowledge-based economy of the twenty-first century”**

**Lord Dearing, September 2002**