Your challenge is ours
We are here to help the industry, government and society to face the challenges of our time
Our challenges

- to go and to come
- to protect
- to renovate
- to live well
- to make it happen
to go and to come

to create systems and conditions for the safe and efficient movement for people, goods and information
IPT developed a **highway monitoring system** for Artesp* which provides access to traffic occurrences and equipment information for São Paulo highways.

* (Public Regulatory Agency for Public Transport Services of the State of São Paulo)
An online system developed by IPT for the Public Defender Office of the State of São Paulo integrates all the information relative to its users. Deployed throughout the state, the system speeds up all services and internal processes.
With an eye to the future, IPT set up a large laboratory to develop lightweight structures made of composite materials, whose usage for aircraft production will be able to revolutionize the energy efficiency of aviation.
Many lives depend on the safe transportation of medical products, such as blood bags, medications, or vaccines. IPT **tests and evaluates** packaging to ensure the integrity of such sensitive cargo throughout the logistic chains.
to protect to ensure the safety for people, equipment and structures in all productive and human activities
IPT inaugurated a unique installation in the southern hemisphere to test anchorage elements. The test bench allows developing and qualifying the heavy equipment used in the offshore oil exploitation e.g. moorings, umbilicals and risers.
With more than 40 years of experience in documentation and prevention of risks of natural disasters, IPT works with civil defense assisting emergencies in any affected region.
In its wind tunnel, IPT studied the effects of wind on the models of several stadiums in Brazil, such as the Castelão (photo). The structural design was optimized to improve the visitors’ thermal comfort and safety.
At the request of Petrobras, IPT verified the effectiveness of the NACE TM0172 test and **proposed improvements** for the method. The revised test method is used internationally to assess the internal corrosion of oil pipelines and similar products and thus to control it.
In order to guarantee the safety of buildings and their users, 40 of the Community Centers (SESC) in the State of São Paulo contracted the support of IPT to examine in detail their facilities and to assess measures to protect against fires.
to renew [to make production and management more economical, more efficient and more sustainable]
IPT developed a new niobium pyrometallurgical refining process for CBMM, reducing costs and waste. As a result, the mining company was the first in the world to obtain the ISO 14.001 certificate.
IPT is investigating the management of urban solid waste in the coastal region of Santos. The project will select the best technology and processes in order to reduce waste and to transform it into energy and other resources.
IPT developed for Natura a biotechnological process to transform a production residue into a cosmetic ingredient. The result was a biodegradable surfactant made from Amazonian plants. Natura awarded IPT for the outstanding results in 2015.
For InterCement, IPT developed, in partnership with BNDES, a cement using Construction and Demolition Debris (CDD). In addition to reducing the transport volume of CDDs to landfills, the new cement will have lower costs and less impact on the environment.
IPT worked with Dersa (Road Authority) to improve the route of the highway under construction at the northern coast of São Paulo. The new plan *mitigates the environmental impact* regarding the Serra do Mar area and reduces risks for the workers and future users.
to live well [to improve the health, well-being and quality of life for people]
Trees influence the microclimate of cities and the health of their inhabitants. Consequently, IPT offers the municipalities a patented method to plan and to manage their afforestation adequately.
to live well + smart textiles

IPT is using nanotechnology to create textile at low cost with UV protection and neutralization of odors. The aim is to increase the quality of life for laborers who work in the open.
Based on the concept of **Internet of things** (IoT), an IPT project mapped the air quality of Paulista Avenue using movable sensors installed in vehicles which transmit their data in real time and extend the coverage of the existing nonmovable monitoring stations.
In partnership with the University of São Paulo (USP), IPT is developing nano capsules for the **controlled release** of a cancer drug. The goal is to focus its action on the tumor, minimizing side effects.
A partnership between IPT, CBMM, AACD, Fapesp and Embrapii enabled a project to develop special metal alloys for orthopedic prostheses. “Printed” by additive manufacturing, the prostheses will be tailor made for each patient.
to make it happen [...]
to solve complex problems by matching competences, resources and partnerships.
HUMAN CAPITAL + INFRASTRUCTURE + FUNDING = SOLUTION
to make it happen + human capital

engineers - biologists - geologists - chemists - physicists - pharmacists - environmental managers - economists - researchers - technicians - administrators - masters - doctors - students - experience
to make it happen + funding

Mobilizing public and private resources through partnerships, public offerings, special funding programs.
but what is IPT?
we are a state-owned research company

51% comes from the Government of the State of São Paulo

US$52 million in 2017

49% comes from the sales of services and projects for the public and private sectors
quick facts

120 years of operation
37 laboratories
12 business units
1000+ professionals

2900 customers served*
20500 technical documents issued*
4000+ news articles published*
35% of the revenue from innovation projects

*in 2018
where we are

São Paulo Campus
103500 m²
built area

Interior

Franca
Lab for Footwear and Individual Protection Products

S. José dos Campos
Lab for Lightweight Structures
how we work

1. To understand the problem
   To communicate with the client using preliminary studies if necessary.

2. To develop the solution
   To select ideas, to define skills and partnerships, to mobilize resources.

3. To execute and implement
   To put teams and facilities into action. To transfer solutions, results and technologies for the client.
what we do

Advisory and consulting

Solutions for management and planning

Metrology and calibration

Inspections and monitoring

Research and development

Quality assurance and certification

Tests, trials and analysis

Investigation and diagnosis

Courses and trainings
IPT differences

from the bench to the pilot
Laboratory infrastructure and experience to develop and to scale processes

multidisciplinary approach
we combine diverse areas of expertise and skills to devise innovative and effective solutions

full administrative and management support
dedicated teams for managing the entire project life cycle including procurement, reporting, IT, HR, IP

training researchers
ongoing investment in the personnel ensures the continuous creation of pioneering solutions for the market

engagement flexibility
all contractual arrangements are fully adjustable to protect the intellectual property for each project

Embrapii
we are accredited by Embrapii (Brazilian Industrial Research and Innovation Company) for the development of new materials and biotechnology processes
who are our clients?
companies of any size in need of R&D projects, pilot-scale testing and scaling-uping
small businesses intending to export, to improve their production processes, and to increase their competitiveness
manufacturers that want to prove the quality of their products
companies that need to gauge and to calibrate their instruments
city halls and governments that need technological support for management and public policies
public companies and regulatory bodies that seek to ensure better products and services for the population
professionals looking for technological specialization in our master degree courses
your challenge is ours

IPT is your best partner to innovate
Let’s work together

www.ipt.br