Where energies make tomorrow ●

# Life Sciences Solutions

Delivering cutting-edge engineering services



# Key player in Life Sciences

Our Life Sciences team brings over 35 years of expertise in engineering, project management, and construction management, delivering innovative and tailored solutions to meet our clients' needs. With a proven track record of successfully designing and building more than 350 Life Sciences facilities worldwide, we are committed to safety, quality, and excellence in every project we undertake.

### 66

Experience the full potential of Life Sciences with an expert team that covers every aspect from groundbreaking studies and development to cutting-edge manufacturing with strong client care."



# Full range of services

### Getting to the heart of your concerns

From concept design to commissioning, our experience covers all types of services and contracts ranging from project management consultancy services to lump-sum contracts, plus all types of contractual relationships. We have the expertise and international know-how to execute, upgrade and revamp existing facilities as well as grassroot plants. We also support our clients in addressing merging challenges in the Industry.

### 66

1 billion euros in CapEx managed in parallel with our clients' greenfield and brownfield projects"

Early Advisory	Project Design & Procurement	
<ul><li>Site Master Plans</li><li>Feasibility Studies</li><li>Concept Design</li></ul>	<ul> <li>Basic Design</li> <li>Detailed Engineering</li> <li>Procurement</li> <li>Subcontracting</li> </ul>	• ( • ( • (

#### FULL RANGE OF CONSULTING SERVICES

GMP audits - Project maturity assessment - Constructability review BREEAM / LEED certification - Sustainable efficiency studies



- Site master plan performances
- Robust industrial organization and logistics
- Reliable cost estimates
- Strong constructability know-how
- Sustainability studies
- Focus on HSE performance
- BIM management
- High capacity to innovate and design the plants of tomorrow





Construction Management Commissioning Qualification

#### Operational Excellence

• Operations & Maintenance Services

# High-value provider

Our approach is rooted in delivering differentiated, high-quality, and essential engineering services for every project we undertake. Our teams combine the best international expertise with local project know-how to provide a robust and competitive solution.



More than 150 projects, including:

#### LFB

EPCm for plasma fractionation studies YNSECT **FPCm** for vertical insects farm

#### SPAIN

SANDOZ Studies for sterile line upgrade

#### BOEHRINGER INGELHEIM EPCm for Respimat:

sterile inhaler

RIAH EPCm for new veterinary vaccines production site studies

#### AGC EPCm for HAPI

greenfield

#### NOVARTIS

HOUSTON

FEED for amoxiciline production



ROME

ABU DHABI

### BANGKOK

SHANGAI

GERMANY

SANOFI

revamping

insulin facility



KINGDOM OF SAUDI ARABIA SANOFI SMP

#### INDIA JUBILANT ORGANOSYS

EPCm for multipurpose API plant SMP for API synthesis

THAILAND PTT Pre-FEED sodium

bicarbonate project

PARIS LONDON ROUEN 🕅 LYON



T.EN OPERATING CENTERS LIFE SCIENCES EXPERTISE CENTERS

#### GALDERMA Site master plan for production & distribution of dermatological

CANADA

MEXICO SANOFI Studies for flu

products studies

### vaccine building

BRAZIL TRBCHMEDICA

Strategic study **HEMOBRAS** FEED for plasma fractionation plant

ARGENTINA TRBCHMEDICA Site master plan

#### SENEGAL

INSTITUT PASTEUR EP for greenfield Africamaril yellow fever vaccine

SANOFI EPCm for greenfield distribution and production facility

**ASTRAZENECA** EP for Delta II project

ALGERIA

GSK Expansion and revamping of dry form production building

PFIZER New OSD production

# developments



#### BELGIUM

UCB Studies for Kilolab workshop and hydrogenation GSK Feasibility study FS for filling workshop CAF DCF Fractionation capacity PMC services for flex expansion

#### HUNGARY

CEVA BD & DD for a mycoplasma project SERVIER EPCm building and R&D

center revamping

#### CHINA SERVIER

EPCm for OC lab extension CDIBP

EPCmV for Japanese encephalitis production greenfield site

#### MINHAI CD for China vaccine industrialization

SANOFI EPCm for new vaccine production plant

#### L'OREAL

**R&D** Center Expansion of existing facilities CEVA CD for veterinary

production greenfield site ADISSEO

BD for additives for animal feed

#### SINGAPORE GALDERMA

SMP greenfield dermatological products

# A large and dynamic workforce

#### Backed by an experienced, skilled, and agile team, we have established ourselves as a trusted leader in delivering technical and regulatory solutions that are future-proof and cost-effective.

The talent and experience of our skilled workforce is one of our greatest assets. Our highly qualified experts understand the key drivers of the industry and our individual clients.

Our team boasts 50 seasoned leaders. each with more than 15 years of experience in Life Sciences. We leverage a robust network of more than 14 experts based in Paris and Lyon, encompassing a comprehensive range of technical and non-technical disciplines. They are all highly qualified in their fields with a proven record of successful projects. Experts play a prominent role in the strengthening of our capabilities and development of our technologies. They are key components of our competitiveness and differentiation.

#### Subject Matter 20 撤款 Experts

- Pharma regulation
- Industrial organization
- & logistics
- Sustainable energies • Water treatment

#### Procurement 20 撤 Services

- Buyers
- Subcontracting leads
- Inspection
- Expediting

#### Construction Management 30 🗰

- Constructability
- managers
- HSE managers
- Construction supervisors

### 250-plus employees\* dedicated to Life Sciences

\*reinforced by 17.000 group employees

#### Project Management 30 🕍

- Project directors/ managers/ engineers
- Schedulers
- Cost controllers • Cost estimate engineers
  - Doc controllers

#### Engineering 150 🛗

- Process equipment experts
- Clean & black utilities
- Civil / Building engineers
- Electrical engineers
- Automation engineers
- CAD designers
- Bim model administrator

### Process and clean utilities portfolio

• Biotech process: Vaccines, mAbs, plasma derivatives protein, with all unit process operations such as bioreactors, buffer and media preparation, chromatography, fermentation, ultrafiltration, nanofiltration, using single use or stainless steel equipment, fill and finish.

Technology

expertise

- Active pharmaceutical Ingredients
- Oral solid dosage, medical devices
- Clean utilities, CIP/SIP system, WFI, PW, clean gas, pure steam, H<sub>2</sub>O<sub>2</sub> decontamination
- Sterile and non-sterile filling; assembly and packaging

Technip Energies' mindset of continuous improvement means we constructively challenge our processes framework. We work in close collaboration with our clients' innovations.



- Process engineers
- Process safety engineers
- HVAC engineers
- engineers



#### Solid Process

- Oral solide dosage
- Raw materials preparation
- Compounding
- Insects

#### Synthesis & Extraction

- Plasma derivatives
- Vaccines
- Proteins
- Active pharmaceuticals ingredients (API)



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#### Sterile & Non-Sterile

- Sterile (formulation. Fill & Finish, ATMP)
- Non-sterile liquids and creams

#### Warehousing

- Warehousing
- Packaging

#### Laboratories

- R&D center
- QC and microbiology laboratory



## **Unmatched skills**

CLIENT

FOCUSED

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SKILLED

RESOURCES FULL EXPERTISE

PROJECT FOCUS

COST AND TIME EFFECTIVE

## tomorrow's plants

When designing and constructing biopharma facilities, we bring together our know-how and expertise in process engineering, construction management, commissioning, and qualification. We are able to serve our clients with fully integrated projects from design to validation. Our recognized expertise is a strategic asset that drives our competitiveness from small- to large-scale projects.

### Well-versed in GMP regulations

and constraints.

We have extensive experience in designing plants and facilities that are compliant with European, U.S, Brazilian and WHO GMPs. All of our projects include a GMP risk assessment review. Our experts also are involved in various industry associations such as ISPE and A3P that allow us to share best practices and prepare for emerging regulations. \*GPM (Good Manufacturing Practice)





### Leading design and construction of

Leveraging our in-depth expertise in global GMP\* regulations, we deliver fully compliant facilities tailored to our clients' needs

# Excellence in QHSE

Technip Energies is committed to protecting our teams and projects by meeting the highest QHSE\* standards. The way we deliver our strategy is determined by our culture, processes, systems and data.

Client success is at the center of Impact Quality, our leadership program designed to help us deliver quality work on time and on budget.

Quality strengthens the links between learning, continuous improvement and success. It emphasizes that everyone at Technip Energies has a role to play in achieving excellence and advancing sustainable innovation.

Promoting a culture of health, safety and well-being, Pulse is Technip Energies' global HSE program. Through training, self-assessment and communication, it enables our teams to develop skills and behaviors to maintain and strengthen our HSE commitment. Pulse gives us the means to create an incident-free work environment



#### Climate and environment

At Technip Energies, we are committed to:

- Operating in a way that protects the environment and minimizes our impact on climate, water and biodiversity. We support our clients and entrepreneurs in implementing better standards and technologies that can help reduce impacts.
- Considering all possible actions to conserve resources and reduce the risk of pollution throughout the lifecycle of each facility and activity.

#### Protecting our employees

We adopt the highest standards of vigilance, wherever we are, to ensure the safety of our employees, projects and assets. We continuously monitor the environments in which we operate by assessing risks and taking appropriate countermeasures in compliance with applicable legislation.

We are implementing a three-tier response system designed to contain emergencies and incidents and prevent complications. This system is based on a wide network of highly qualified contributors within our company.

\*QHSE (Quality, Health, Safety and Environment)



# **Our main references**





SANOFI Largest complex of production and distribution of OSD medicines in Africa

COSMETICS

GALDERMA, Site expansion







AGRITECH **YNSECT - Ynception** vertical insects farm

PHARMACEUTICALS Boehringer plant to produce the sterile inhaler Respimar®



#### 00 SOUND PROJECT EXECUTION PLAN

Ś RELIABLE CAPEX ESTIMATE

### LFB project of human plasma fractionation plant

BIOTECH

EPCm



#### INHALER

Astrazeneca, New assembly lines SMP - CD, BD, DD



ANIMAL HEALTH BIAH production site of viral animal antigens EPCm

Insulin facilities

SANOFI



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