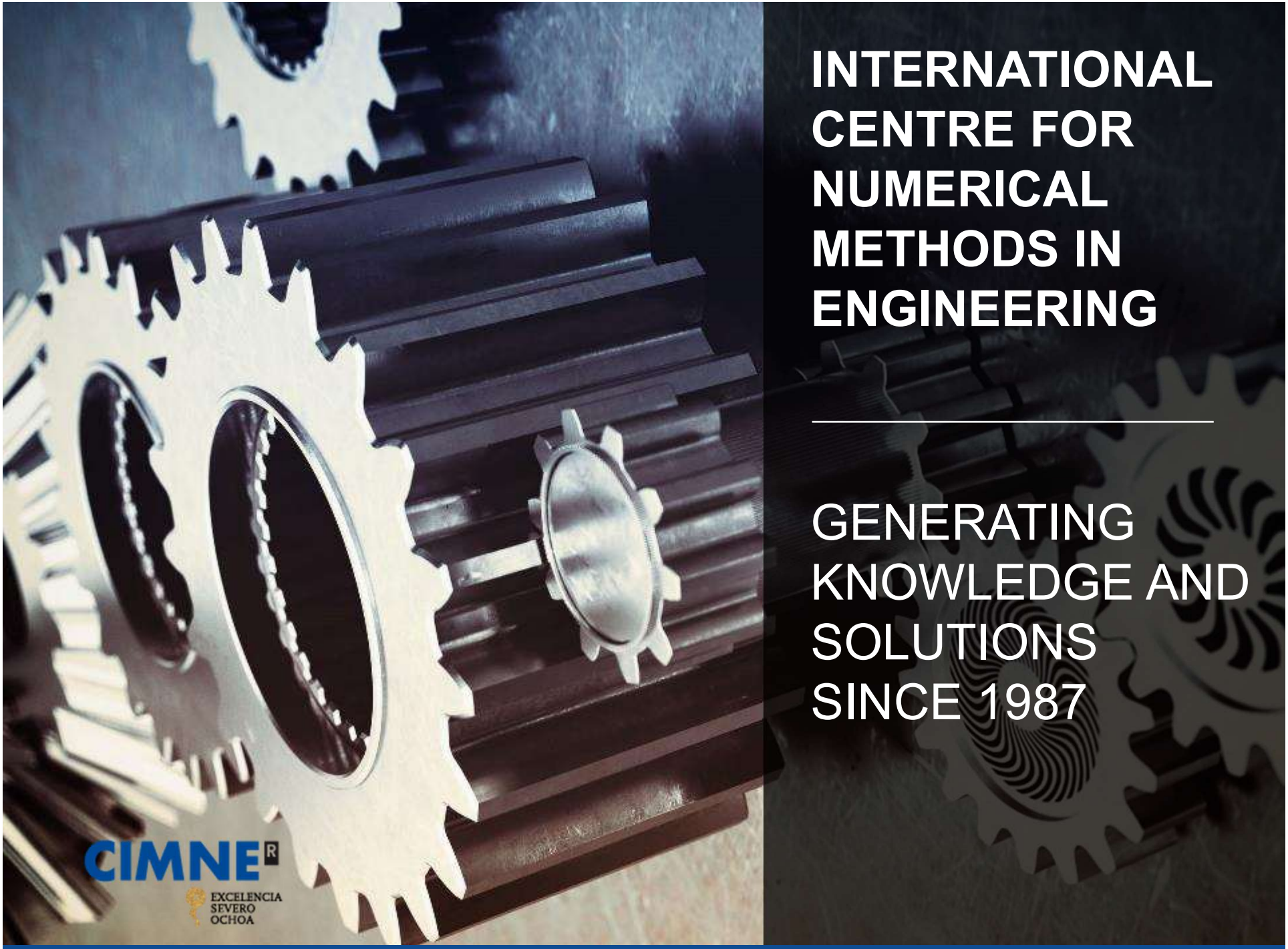


INTERNATIONAL CENTRE FOR NUMERICAL METHODS IN ENGINEERING

GENERATING KNOWLEDGE AND SOLUTIONS SINCE 1987

CIMNE

EXCELENCIA SEVERO OCHOA

RESEARCH + TRAINING + TECHNOLOGY TRANSFER

A Consortium of:

Generalitat de Catalunya

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

In cooperation with:

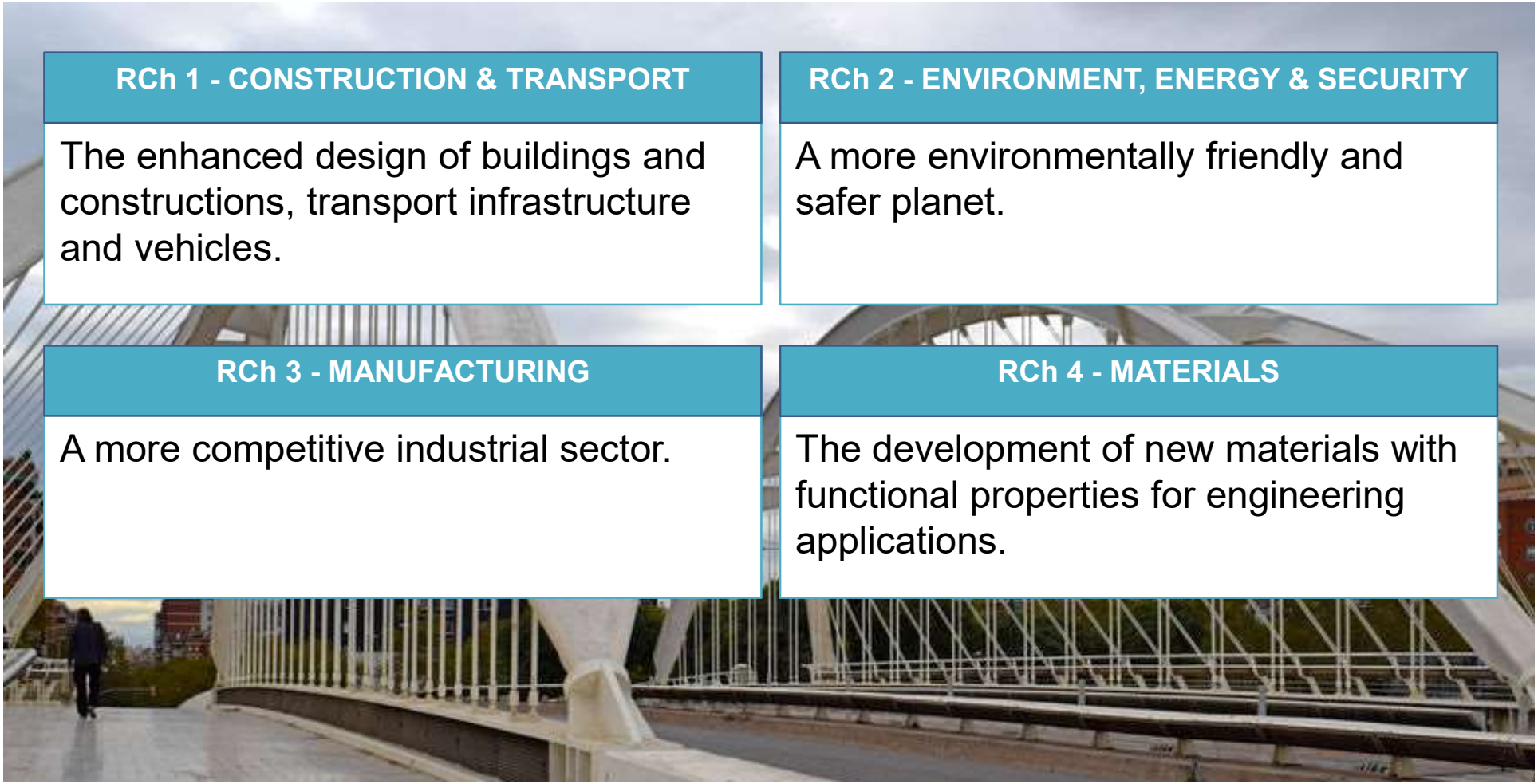
UNESCO

CENTRE CERCA Centres de Recerca de Catalunya

1) ORGANIZATION

SEVERO OCHOA PROGRAMME

4 RESEARCH CHALLENGES & GOALS



RCh 1 - CONSTRUCTION & TRANSPORT	RCh 2 - ENVIRONMENT, ENERGY & SECURITY
The enhanced design of buildings and constructions, transport infrastructure and vehicles.	A more environmentally friendly and safer planet.

RCh 3 - MANUFACTURING	RCh 4 - MATERIALS
A more competitive industrial sector.	The development of new materials with functional properties for engineering applications.

2) RESEARCH THEMES

On the basis of the above societal challenges**, CIMNE has established five key thematic areas** of research focus for the next decade:

- Adaptation to Climate Change
- Mobility, Cities and Territory
- Energy and Environment
- Industrial processes

3) RESEARCH GROUPS AND ACTIVITIES

CIVIL AND ENVIRONMENTAL ENGINEERING

Building, Energy and Environment
Leader – Jordi Cipriano

Disaster Risk and Resilience
Leader – Liliana Carreño

Geomechanics
Leader – Marcos Arroyo

Hydrogeology
Leader – Xavier Sánchez-Vila

Machine Learning in Civil Engineering
Leader – Fernando Salazar

River Dynamics and Hydrologic Engineering (FLUMEN Institute)
Leader – Ernest Bladé

Structural Mechanics
Leader – Eugenio Oñate

COMPUTATIONAL MATERIALS DESIGN & ANALYSIS

Computational Design & Analysis of Engineering Metamaterials
Leader – Xavier Oliver

Mechanics of Electroactive Materials
Leader – Irene Arias

Soft and Living Material Interfaces
Leader – Marino Arroyo

ENGINEERING MECHANICS AND PROCESSES

Bio-Medical Engineering
Leader – Eduardo Soudah

Fluid Mechanics
Leader – Ramon Codina

Industrial Manufacturing Processes
Leaders – Michele Chiumenti and Miguel Cervera

3) RESEARCH GROUPS AND ACTIVITIES

INNOVATION SUPPORT AND TECHNOLOGY TRANSFER

Information and Communication Technology
Leader – Jordi Jiménez and Ángel Priegue

Pre and Post Processing
Leader – Abel Coll

Valorization of Research and Technology Transfer
Leader – Jordi Jiménez

TRANSPORT

Aeronautics
Leader – Jordi Pons

CENIT – Group for Innovation in Multimodal Transport
Leader – Sergi Saurí

Naval and Marine Engineering
Leader – Borja Serván

INNOVATIVE ALGORITHMS AND HPC TECHNIQUES

Credible Data-driven Models
Leader – Pedro Díez

Kratos Multiphysics
Leader – Riccardo Rossi

Innovative Algorithmns and Fast Accurate Computing
Leader – Antonio Huerta

Large Scale Scientific Computing
Leader – Santiago Badia

9) RTD PROJECTS

OVERVIEW

71 Ongoing Projects*

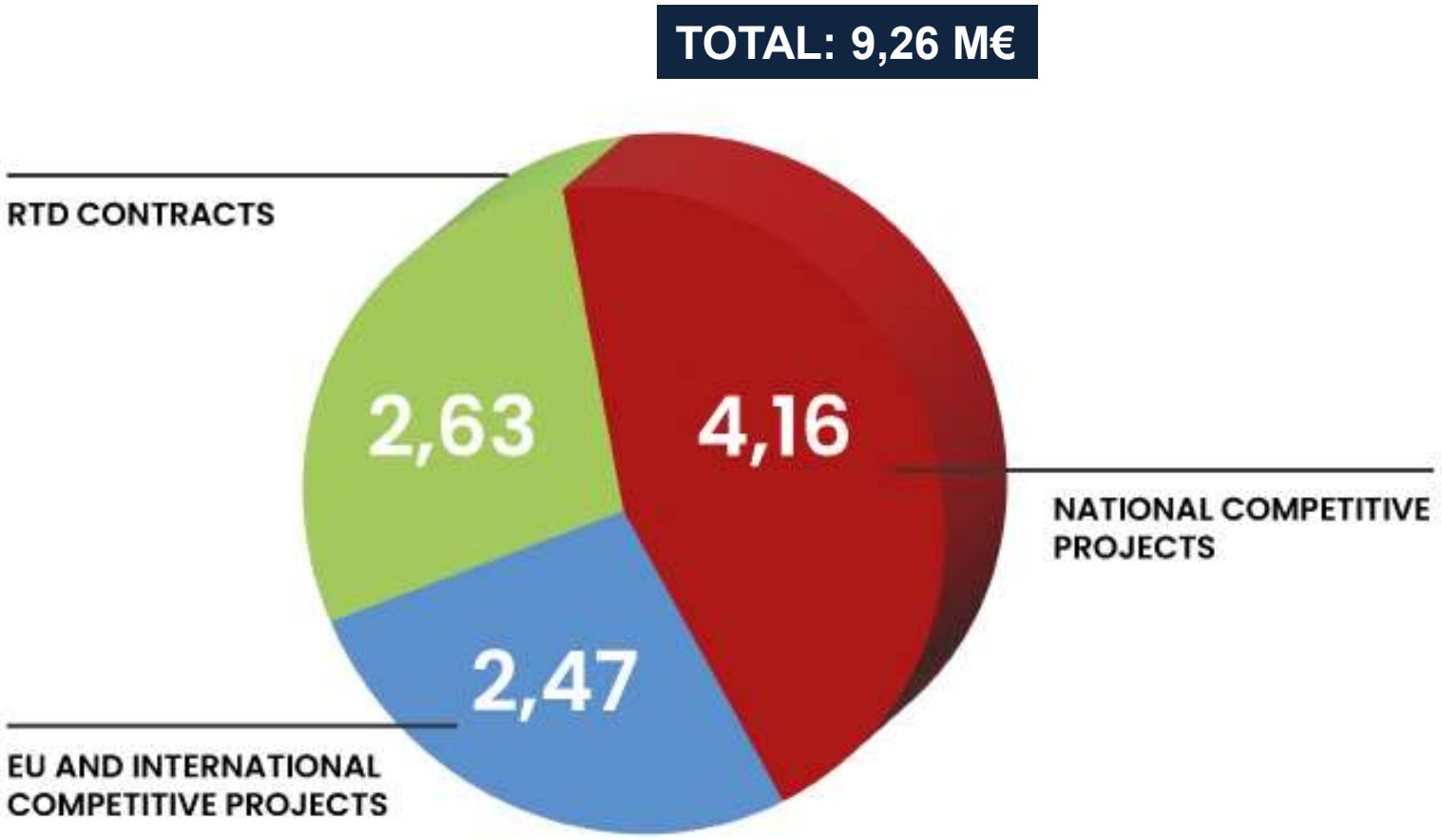
31 European Projects
29 National Projects
11 Regional Projects

*Updated in May 2023

9) RTD PROJECTS

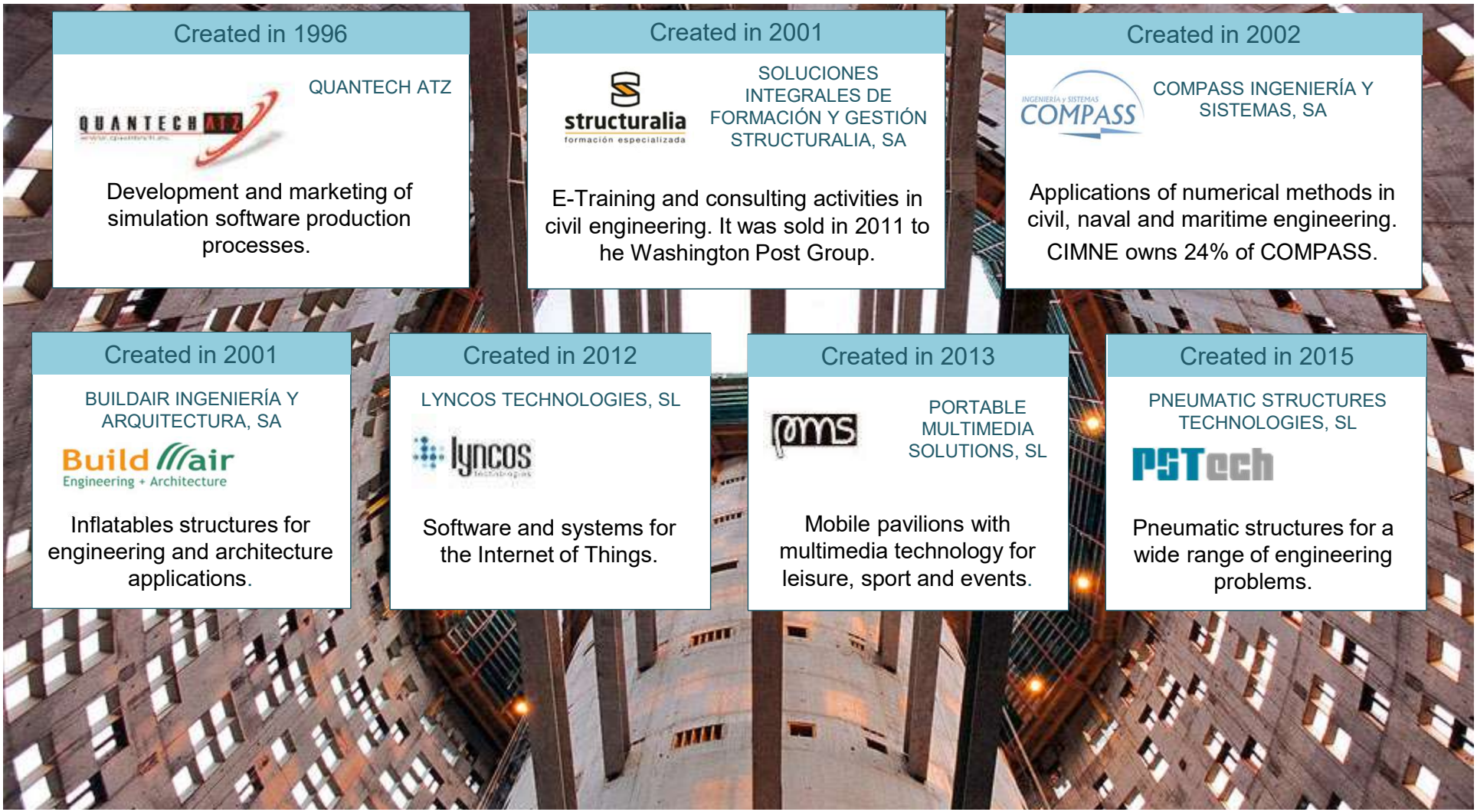
Income from contracts and competitive projects in 2022

*AMOUNTS EXPRESSED IN MILLIONS OF EUROS



10) TECH. TRANSFER

COMPANIES CREATED BY CIMNE



Created in 1996

QUANTECH ATZ

Development and marketing of simulation software production processes.

Created in 2001

SOLUCIONES INTEGRALES DE FORMACIÓN Y GESTIÓN STRUCTURALIA, SA

E-Training and consulting activities in civil engineering. It was sold in 2011 to he Washington Post Group.

Created in 2002

COMPASS INGENIERÍA Y SISTEMAS, SA

Applications of numerical methods in civil, naval and maritime engineering.

CIMNE owns 24% of COMPASS.

Created in 2001

BUILDAIR INGENIERÍA Y ARQUITECTURA, SA

Inflatables structures for engineering and architecture applications.

Created in 2012

LYNCOS TECHNOLOGIES, SL

Software and systems for the Internet of Things.

Created in 2013

PORTABLE MULTIMEDIA SOLUTIONS, SL

Mobile pavilions with multimedia technology for leisure, sport and events.

Created in 2015

PNEUMATIC STRUCTURES TECHNOLOGIES, SL

Pneumatic structures for a wide range of engineering problems.

10) TECH. TRANSFER

SPIN-OFF COMPANIES

BEEDATA ANALYTICS, SL

Mass analytical data treatment to users and business intelligence.
CIMNE Tecnología owns 36,35% of Beedata Analytics, SL since 2017.

COMPUTATIONAL AND INFORMATION TECHNOLOGIES, SA

Computational methods and information technology systems in engineering.
100% owned by CIMNE Tecnología since 2012.

FRESH WATER NATURE, SL

Solutions for obtaining fresh water from desalination and destillation of waste water.
92,99% owned by CIMNE Tecnología since 2013.

RSM GASSÓ CIMNE ENERGY, SL

Advanced engineering energy services.
50% owned by CIMNE Tecnología since 2012.

INLOC ROBOTICS, SL

Positioning and navigation solutions for mobile robots in buried environments.
6,19% owned by CIMNE Tecnología since 2015.

METAMATERIALS SOLUTIONS, SL

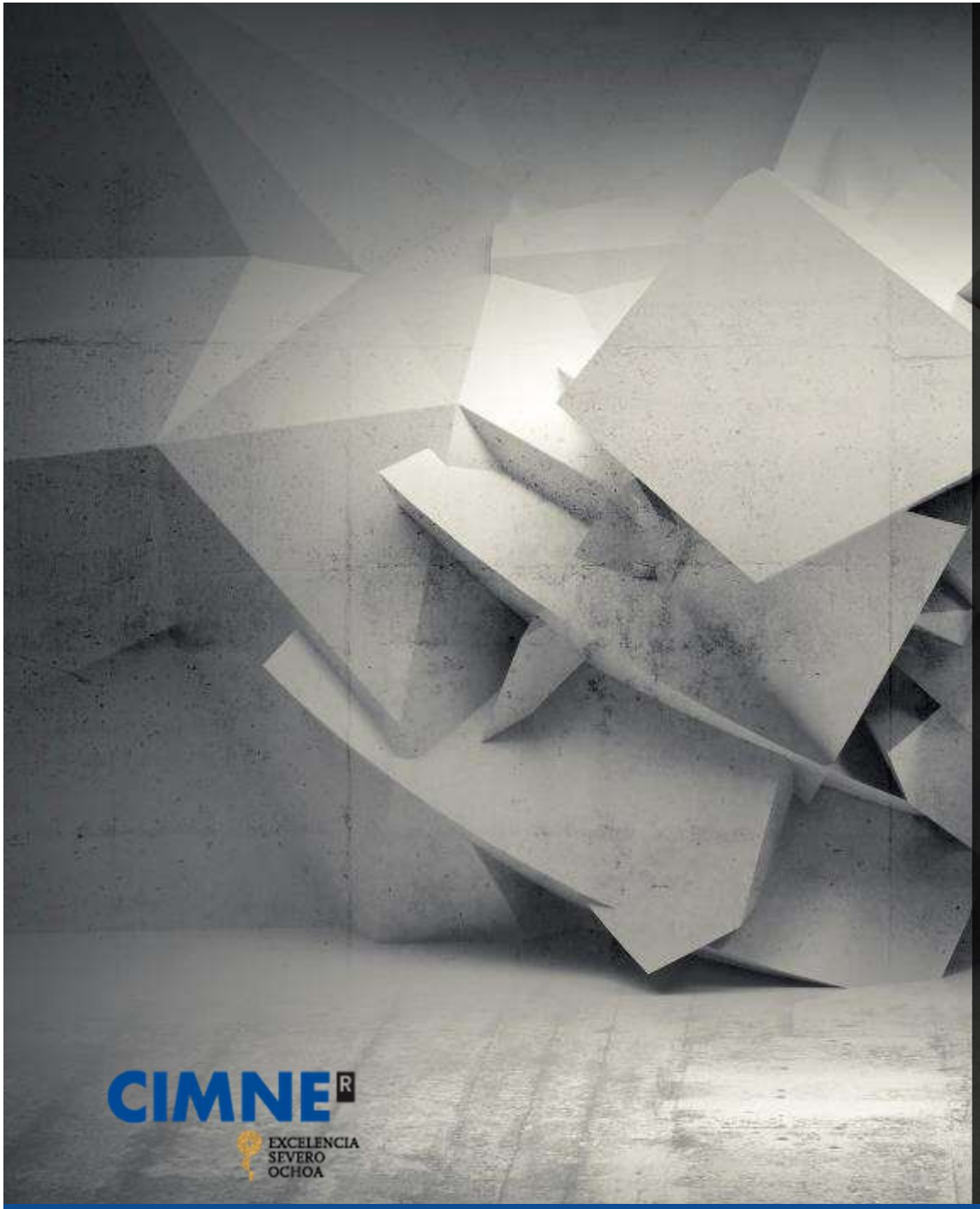
Design, develop and commercialize new meta-materials to provide new and extreme solutions to daily-life engineering problems.

OKTICS ATZ SL

Digital signal technology and devices for a variety of applications in industry.
24,5% owned by CIMNE Tecnología since 2019.

SCIPEDIA, SL

Free publishing and open access for scientific publications.
16,67% owned by CIMNE Tecnología since 2015.



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