

annual report 2022



Message from our President

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Office network

Message from our President

Throughout 2022, the world has continued on the path of economic recovery which had already commenced the previous year, following the pandemic. However, this growth has been conditioned by various factors, and thus slowing its pace. As a result, the global economy has experienced a modest growth of only 3.4% (IMF), marginally surpassing its pre-Covid-19 levels.

The demand for engineering services from our clients has remained steady during 2022, which has allowed TYPSA to achieve very good results in this fiscal year. Revenue has exceeded 325 million euros, with an increase of 22% compared to 2021. Contracts awarded have reached over 350 million euros. Earnings reached a record high in the history of the TYPSE Group and the backlog surpasses 362 million euros at year end. The Group's own funds, after the distribution of dividends, reach 154 million euros, which allows for continued growth without incurring in any debt.

Over 3,300 professionals form the Group, and whose dedication and skills have been crucial in making such results possible. Our activity has grown in almost every region where we operate. Particularly note-worthy is the recovery in profitability in the Middle East, where we have achieved good results. However, Spain presents a contrasting scenario as the only region in the world where we have had losses, despite accounting for 19% of our revenue.

As in the previous year, we have been engaged in a greater proportion of design-related activities compared to services associated with construction. Our focus on mobility and transportation remains significant, particularly in Northern Europe, Asia, and Australia where we have strengthened our capabilities with the incorporation of EDG. Further highlights include significant hydraulic projects in Latin America and a substantial increase in our involvement in the field of renewable energies, extending beyond generation, also encompassing storage and transmission, especially in Europe, North America, and the Middle East.



Our R&D activity has continued to focus on projects related to digitalization and collaborative work, as well as on the design of new consulting, engineering, and architecture services through the combination of technical knowledge and new technologies. We have also increased our investments to ensure information security. In January 2022, we presented a Sustainability Operational Plan for the Group that has materialised in multiple actions, among which we can highlight the development of the TYPSE Guide for Sustainable Design and the creation of a Sustainability Coordination Area. During the year we have consolidated the TYPSE Digital Accelerator, with the mission of facilitating the development of innovation and digitalization processes and for which over 50% of its activity is already directly for our clients.



Works of the V3 viaduct of the Tamoios Highway, in Brazil. FIDIC Outstanding Project of the Year

“ We continue to grow and, with the commitment and professionalism of everyone who is part of the TYPSE Group, we deal with the challenges faced by our sector ”

We have increased our investment in training, placing a strong emphasis on achieving excellence in our performance for the benefit of our clients. Among the many recognitions received during the year, it is worth highlighting the Outstanding Project of the Year award presented by FIDIC to the V3 Viaduct project on the Tamoios Highway in Brazil, carried out by our subsidiary Engecorps. Being honoured by the International Federation of Consulting Engineers with its top award, serves as further recognition of the excellence and quality of our work.

We maintain our status as a *Signatory member* of the United Nations Global Compact and are intensifying our commitment to achieving the Sustainable Development Goals, being recognised with a further 3 new business practices by the Global Compact, relating to energy, accessibility in buildings and digital control tools to extend infrastructure lifespan. With these additions, we have now been acknowledged for a total of 16 best practices. The TYPSE Foundation for Development continues to collaborate in improving living conditions of the most disadvantaged communities, generating local capacity to ensure that their development is sustainable.

The war in Ukraine has led to an acceleration of inflationary drivers that were already beginning to manifest after years of cheap or even free debt in many places. The application of restrictive measures in monetary policy to reduce inflation is resulting in a significant increase in interest rates, making the debt of individuals and public administrations more expensive. Hence, a slowing down in our activity in the coming months, especially in those heavily indebted countries, is not to be ruled out. As we enter 2023, we observe how in some countries, infrastructure investment plans are being decelerated or postponed, affecting the engineering market.

We continue to face many other challenges. The oligopoly of software companies, which results in increased costs and limitations on interoperability, makes it of utmost importance to incentivise the use of standard formats and open-source code that facilitate competition and innovation. The difficulty that our sector has in attracting talent, legal uncertainty, tariff policies or bureaucracy in many countries, are also barriers that must be overcome in our activity at a global level.

Our track record of recent years, our procedures and systems, our experience and the results achieved in 2022 constitute a solid basis to face all these challenges, and above all, we have the attitude, commitment and professionalism of all those who make up the TYPSE Group.

PABLO BUENO TOMÁS
TYPSE Group President and CEO



Management report

Highlights of the year

MARKET ACTIVITY

This year, the Group's activity has grown:

Revenue:

22%

Contracts Awarded:

25%

Backlog:

10%

“We participate in the planning, design, construction, maintenance, management and operation of all types of infrastructure to improve the quality of life for people”

“

”



UNITED STATES AND CANADA

Delays in the implementation of the Infrastructure Plan approved in the USA. The administrations are currently studying the implementation of more collaborative contracting models.

10%

of the Group's revenue

173

people

4

offices in USA

1

office in Canada

New opportunities with the Toronto metro expansion.

SPANISH-SPEAKING LATIN AMERICA

Recovery of private investment in the short-medium term in Mexico, and continuity of projects associated with Government-Government Agreements (GTG) in Peru.

23%

of the Group's revenue

829

people

8

offices

1

laboratory (Peru)

Strengthening our presence in Panama with new contracts awarded.

BRAZIL

Election year with some slowdown in public tenders and concessional programmes.

5%

of the Group's revenue

287

people

2

offices

Improvements in the legal framework regulating sanitation will drive new investments in this field.

SPAIN

Increase in public tender, especially in the field of transport, due to the application of European Recovery Funds after the pandemic.

19%

of the Group's revenue

1,455

people

16

offices

3

environmental laboratories

1

materials laboratory

1

harbour laboratory

Decline in the profitability of our activity in public contracts, mainly due to the restrictive nature of the legal framework regulating the contracting and implementation of our services.

Oslo, Norway

**REST OF EUROPE**

Continuity of our major railway projects and entry into new sectors: water engineering, ports, building and strategic infrastructure consulting.

17%
of the Group's revenue

152
people

6
offices

New opportunities in high-speed railway projects in Portugal and Sweden.

Dar es-Salaam, Tanzania

**AFRICA**

High interest in renewable energy with significant contracts in this field and continuity of projects in Tunisia, Madagascar and Uganda, in the areas of water, roads and railways.

5%
of the Group's revenue

62
people

3
offices

Our presence in the East African market increases with a large rail contract in Tanzania.

Riyadh, Saudi Arabia

**MIDDLE EAST**

New projects in the renewable energy sector in Saudi Arabia. We continue our participation in important water treatment plant projects and in the development of NEOM.

9%
of the Group's revenue

159
people

2
offices

Diversification of the client portfolio with a significant increase in contracts, and opportunities for important projects in Israel.

Brisbane, Australia

**ASIA AND AUSTRALASIA**

Continuity of our major projects in the field of mobility.

12%
of the Group's revenue

200
people

5
offices

Our presence is strengthened in Australia with the addition of the Australian engineering firm EDG Consulting. Important opportunities are identified in the field of water and transport engineering in India.

Key figures

Consolidated data and Group figures (in € million).

REVENUE						
	2018	2019	2020	2021	2022	2022(USD)
Total	213.82	219.40	239.44	266.93	325.13	346.78
USA and Canada	26.30	21.11	21.18	34.34	31.48	33.58
Spanish-Speaking Latin America	37.33	41.20	45.23	56.79	75.59	80.62
Brazil	10.30	11.68	8.72	10.00	15.37	16.39
Spain	42.63	47.03	52.10	53.36	60.55	64.58
Rest of Europe	25.85	29.48	36.13	38.55	55.27	58.95
Africa	15.14	15.48	12.67	14.89	17.65	18.83
Middle East	50.80	37.65	40.00	30.60	28.68	30.59
Asia and Australasia	5.47	15.77	23.41	28.40	40.54	43.24

CONTRACT AWARDS						
	2018	2019	2020	2021	2022	2022(USD)
Total	230.11	250.62	267.79	280.14	350.91	374.28
USA and Canada	23.18	18.90	28.76	41.99	35.05	37.38
Spanish-Speaking Latin America	45.03	36.03	49.37	69.11	65.62	69.99
Brazil	29.00	16.71	15.09	7.15	16.04	17.11
Spain	59.52	59.78	49.49	59.49	72.56	77.39
Rest of Europe	18.94	28.74	55.89	29.98	60.31	64.33
Africa	17.93	17.82	13.34	13.22	23.04	24.58
Middle East	17.91	34.42	27.67	19.08	46.72	49.83
Asia and Australasia	18.60	38.22	28.18	40.12	31.57	33.67

BACKLOG						
	2018	2019	2020	2021	2022	2022(USD)
Total	283.71	316.86	320.77	330.37	362.77	386.93
USA and Canada	11.40	8.54	15.46	24.47	28.77	30.69
Spanish-Speaking Latin America	47.23	43.67	42.52	56.11	50.97	54.36
Brazil	38.23	42.36	35.92	22.95	26.30	28.05
Spain	55.83	68.53	65.93	72.35	84.25	89.86
Rest of Europe	20.77	17.28	37.13	29.56	33.85	36.10
Africa	37.93	40.33	40.66	37.63	42.64	45.48
Middle East	5.11	53.58	37.46	27.88	47.69	50.87
Asia and Australasia	19.21	42.57	45.69	59.42	48.30	51.52

Exchange rate December 31 2022: 1 EUR = 1,0666 USD.

Equity						
	2018	2019	2020	2021	2022	2022(USD)
	106.25	112.07	119.51	132.33	154.30	164.57
Total equity						
	2018	2019	2020	2021	2022	2022(USD)
	105.19	110.30	115.39	130.10	153.71	163.95
Earnings before taxes						
	2018	2019	2020	2021	2022	2022(USD)
	15.90	16.04	21.00	28.95	47.64	50.81
Earnings after taxes*						
	2018	2019	2020	2021	2022	2022(USD)
	10.97	11.07	14.12	19.39	35.13	37.47

* Attributed to the parent company

People						
	2018	2019	2020	2021	2022	
No of people (at Dec. 31)	2,562	2,818	2,845	3,126	3,317	
No of people (yearly average)	2,504	2,665	2,831	2,974	3,222	

Equity / Total assets						
	2018	2019	2020	2021	2022	
	0.59	0.61	0.59	0.55	0.55	

Current assets / Current liabilities						
	2018	2019	2020	2021	2022	
	2.46	2.58	2.36	2.10	2.20	

% Earnings after taxes / Initial net equity						
	2018	2019	2020	2021	2022	
	11.9%	10.8%	13.3%	17.0%	27.4%	

% Earnings before taxes / Revenue						
	2018	2019	2020	2021	2022	
	7.4%	7.3%	8.8%	10.8%	14.7%	

% Earnings after taxes / Revenue						
	2018	2019	2020	2021	2022	
	5.4%	5.2%	6.1%	7.3%	11.0%	

Revenue per person (in euros thousand)						
	2018	2019	2020	2021	2022	
	85.39	82.33	84.58	89.75	100.91	

Financial review

CONSOLIDATED ASSETS (in euros)	2022	2021
A) NON-CURRENT ASSETS	39,811,730.11	36,892,212.52
I. Intangible assets	3,875,786.11	4,738,386.88
II. Plant and equipment	23,571,282.85	19,861,256.20
III. Long-term investments in subsidiaries	7,582.70	2,713.33
IV. Long-term financial investments	4,410,862.61	4,100,949.98
V. Deferred tax assets	7,946,215.84	8,188,906.13
B) CURRENT ASSETS	238,538,068.78	202,360,597.72
I. Non-current assets held for sale	68,822.27	68,822.27
II. Inventories	12,829,809.55	8,189,874.56
III. Accounts receivable, work in progress and others	94,534,929.21	83,290,289.20
IV. Short-term investments in Group companies and associates	3,290.13	35,785.50
V. Short-term investments	8,728,400.37	1,359,360.75
VI. Prepaid expenses and other current assets	3,201,262.01	2,473,103.04
VII. Cash and cash equivalents	119,171,555.24	106,943,362.40
TOTAL ASSETS (A+B)	278,349,798.89	239,252,810.24

CONSOLIDATED EQUITY AND LIABILITIES (in euros)	2022	2021
A) TOTAL EQUITY	153,710,039.41	130,102,061.57
A-1) Equity	154,297,991.42	132,332,659.50
I. Share capital	2,400,000.00	2,400,000.00
II. Retained earnings	126,763,642.59	116,455,204.88
III. (Treasury stock)	-	(435,936.74)
IV. Net income attributable to the parent company	35,134,348.83	19,391,996.36
V. (Interim dividend)	(10,000,000.00)	(5,478,605.00)
A-2) Currency translation adjustments	(1,852,262.66)	(3,703,825.10)
A-3) Minority interests	1,264,310.65	1,473,227.17
B) NON-CURRENT LIABILITIES	16,299,231.04	12,561,744.64
I. Long-term provisions	9,468,639.05	5,259,900.11
II. Long-term debt	3,663,346.24	3,244,357.50
III. Billing in excess of cost (long-term)	2,092,346.60	3,365,668.95
IV. Deferred tax liability	1,074,899.15	691,818.08
C) CURRENT LIABILITIES	108,340,528.44	96,589,004.03
I. Short-term provisions	2,638,654.24	806,785.44
II. Short-term debt	10,188,203.80	180,914.09
III. Billing in excess of cost	41,081,586.81	43,364,277.92
IV. Trade accounts payable and advanced billing	53,918,233.32	51,928,618.68
V. Accrued expenses and other current liabilities	513,850.27	308,407.90
TOTAL EQUITY AND LIABILITIES (A+B+C)	278,349,798.89	239,252,810.24

CONSOLIDATED PROFIT AND LOSS ACCOUNT (in euros)	2022	2021
A) CONTINUING OPERATIONS		
Operating revenue	325,129,706.08	266,930,476.98
Changes in inventories of developments in progress	4,636,376.73	8,140,369.16
Capitalised in-house work on fixed assets	53,248.05	55,811.33
Materials, services of third parties and subcontractors	(90,885,825.58)	(72,646,550.42)
Other operating revenues	2,402,962.58	1,972,431.38
Personnel costs	(155,943,758.86)	(131,056,078.42)
Other operating costs	(35,221,463.38)	(45,171,022.71)
Depreciation and amortisation	(4,191,295.70)	(3,639,275.06)
Surplus	15,746.69	7,335.93
Income from sale of assets	(99.54)	96,412.50
A-1) Operating income	45,995,597.07	24,689,910.67
A-2) Financial income	1,640,892.58	4,255,811.53
Share in the profits (losses) of companies accounted for using the equity method	4,181.22	1,015.06
A-3) Earnings before taxes	47,640,670.87	28,946,737.26
Income taxes	(11,927,324.39)	(9,382,320.79)
A-4) Net income from continuing operations	35,713,346.48	19,564,416.47
A-5) Consolidated net income for the year	35,713,346.48	19,564,416.47
NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	578,997.65	172,420.11
NET INCOME FOR THE PERIOD ATTRIBUTABLE TO THE PARENT COMPANY	35,134,348.83	19,391,996.36



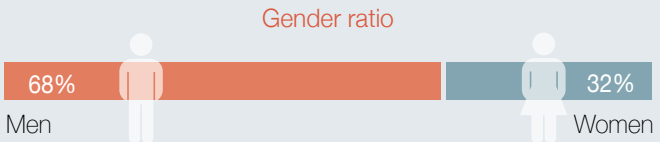
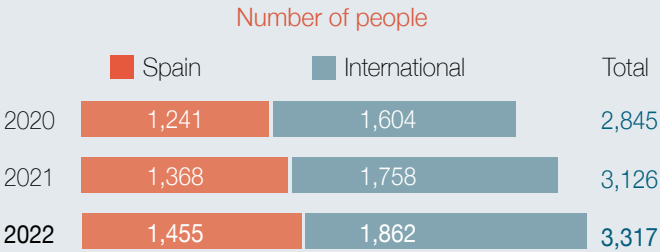
Corporate sustainability

1. Our team

OUR PEOPLE: Our most valuable asset.

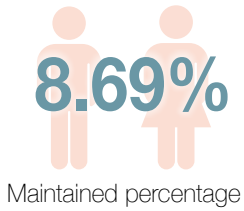
We base our strategy on pursuing engagement and wellbeing, paying special attention to career development.

ANALYSIS AND INDICATORS

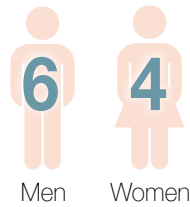


“ We attract and retain the industry’s top people ”

Staff turnover in 2022



Board of directors



People by region

USA and Canada		173	5%
Spanish-Speaking Latin America		829	25%
Brazil		287	8%
Spain		1,455	44%
Rest of Europe		152	5%
Africa		62	2%
Middle East		159	5%
Asia and Australasia		200	6%
Total		3,317	100%

EMPLOYEE BENEFITS

CUSTOMISABLE EMPLOYEE REWARDS PROGRAMME -TYPSA BENEFITS-

An opportunity for non-salary benefits (dining cards, childcare vouchers, private health insurance, travel cards and training). Benefits can be adapted to suit personal requirements, generating significant savings.



People across the entire Group can enjoy the same compensation and benefit scheme in each of the countries where we operate, without discrimination or limitations and regardless of gender.

LIFE AND PERMANENT DISABILITY INSURANCE

New this year, TYPsa has made available an optional life and permanent disability insurance to the Group employees in Spain, paid in full by the company for those who choose to opt in.

EMPLOYEE SERVICES



RELOCATION POLICY

Providing competitive packages for expats:

- In line with market practices in the sector.
- In line with local costs of living.
- In line with our international office conditions.

We manage the paperwork (visas, flights, tax relief, etc.).

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

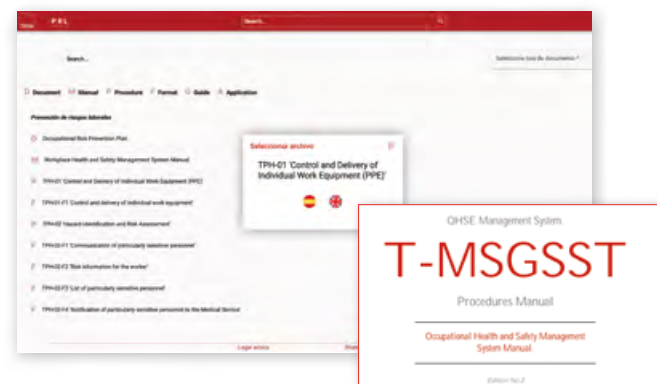
IN-HOUSE HEALTH AND SAFETY SERVICE

TYP SA has the technical expertise to manage occupational safety, ergonomics and applied psychosociology, while outsourcing industrial hygiene and health monitoring.

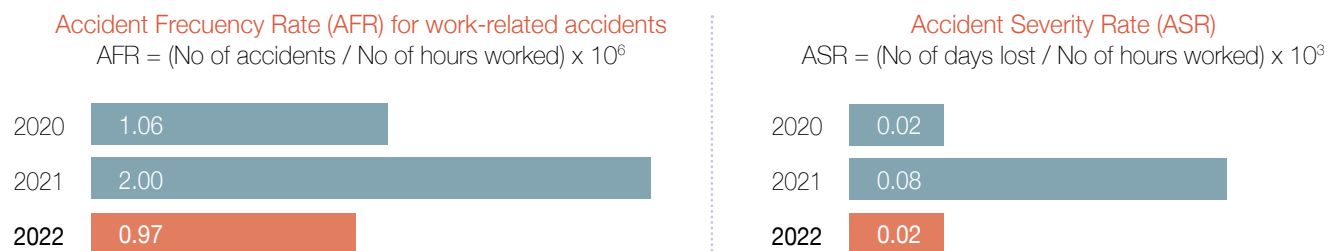
Health and safety are managed in line with local practice in the Group's international management areas, offices and subsidiaries.

SYSTEM IMPROVEMENTS

- Renewal of certification ISO 4500:2018 for occupational health and safety management systems, incorporating, in the scope in 2022, TYP SA's office in UAE and its subsidiary TYP SA for Engineering Services (TES) in Saudi Arabia.
- We continue to use the Corporate Occupational Health and Safety application for management and SharePoint for agile and fast access to the same documents across Group companies anywhere at any time. In 2022 MEXTYP SA and RAUROS MX started using both digital tools.
- We have developed a Health and Safety mobile telephone application to improve operational control in our working centres, and we have kicked-off implementation in TYP SA's head office.



ACCIDENT RATE STATISTICS



TRAINING

STRENGTHENING OUR INTELLECTUAL CAPITAL

- One of the Group's firmest commitments to its people.
- Essential for career progression and motivation.
- Annual and specific training plans including new providers.
- Consolidating the TYP SA Learning platform to promote internal training and knowledge sharing amongst employees.



“ Always at the forefront of new technologies ”

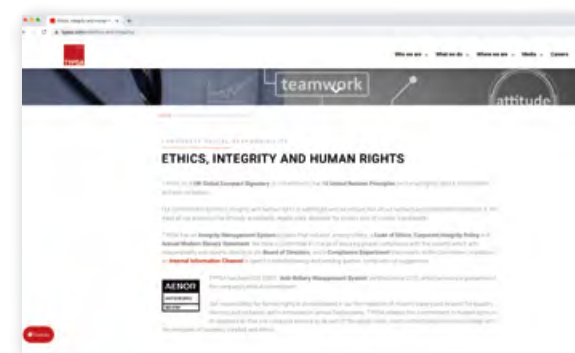
PRIORITY TRAINING IN:

- Advanced algorithms in consulting, architecture and engineering:
 - Constitutive models and geotechnical engineering.
 - Tunnel design and underground works.
 - Flood risk analysis and management, and dam safety.
 - Fire safety.
 - Coastal and port engineering.
 - Technology for sustainable building and seismic engineering.
 - Offshore wind engineering.
 - Optimisation of PV power stations and electricity networks.
- Digitalisation and implementation of new technologies:
 - Digital twins. Augmented virtual reality.
 - Use of drones in consulting, architecture and engineering.
 - Advanced BIM processes and tools. Collaboration platforms.
 - Data Governance and Artificial Intelligence (AI).
- Sustainability of buildings, infrastructures and cities:
 - Carbon footprint and BIM-6D methodologies.
 - Climate change adaptation.
 - Circular economy.
 - Energy efficiency.
 - Nature-based solutions.
 - Cost-benefit analysis, including social, environmental and economic factors.
 - Operation and maintainance.



2. The fight against corruption

Our **INTEGRITY MANAGEMENT SYSTEM (IMS)** enables us to pursue and consolidate an ethical corporate culture, based on regulatory compliance, and encouraging transparency and integrity in our business practices.



COMMITMENT TO ETHICS AND INTEGRITY

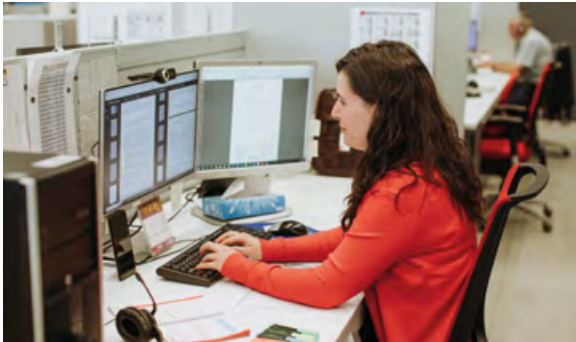
Supported by our:

- Code of Ethics containing mandatory guiding principles for everyone in the Group.
- Corporate Integrity policy and gift policy.
- Integrity management manual.
- Financial and non-financial control procedures.
- ISO 37001 anti-bribery certification.
- Compliance Committee, working independently and reporting directly to the Board of Directors, enhanced by our Compliance Team reporting to the Committee.
- Annual modern slavery statement and equality, diversity and inclusion statement.

“ We maintain a strong commitment to integrity and transparency, improving our internal management procedures every year ”

SYSTEM IMPROVEMENTS

- 100% of staff trained on the updates of the Integrity Management System.
- Improvements in the internal management tools:
 - Due diligence forms for partners, appropriately stored in a dedicated space.
 - Incorporation, in the self-assessment platform, of an exemptions section for a more efficient management of the staff pending to complete the training.
 - Inclusion, in the providers platform, of a section to indicate the completion of due diligence.
- Improvement of operational procedures in coordination with the Management System's Directorate: Updating the partners due diligence form and creating an abridged sub-contract model for external collaborators which includes a commitment to compliance in terms of integrity.



3. Society

CLIENTS

SERVICE EXCELLENCE: We aim to be a trusted partner.

COMMITMENT TO SERVICE EXCELLENCE

- We identify client requirements and needs.
- Our service goes beyond initial expectations.

IMPROVEMENT TOOLS

- Client satisfaction surveys.
- Interactive client communication channels to keep track of projects.

CLIENT MANAGEMENT

Client satisfaction survey score



Number of clients who will, or who are very likely to, work with the Group again



Clients who rated the Group's work as good or very good



Number of incidents dealt with and resolved



SUPPLIERS

SUPPLIER APPROVAL: We guarantee that collaborators and subcontractors work to our standards.



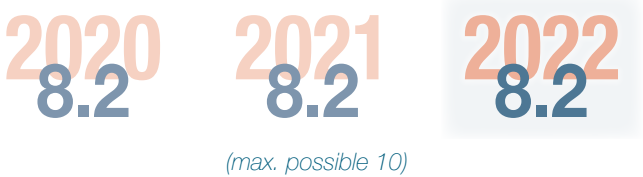
IMPROVEMENT TOOLS

An interactive database, fed with dynamic questionnaires containing all the available records on both suppliers and subcontractors, is the main control and selection tool for choosing the right supplier.

SYSTEM IMPROVEMENTS

We have expanded our system of automated orders and bills to our Regional Areas of Arabia, Peru and Chile.

Supplier and subcontractor evaluation scores



TYP SA'S MANAGEMENT SYSTEM

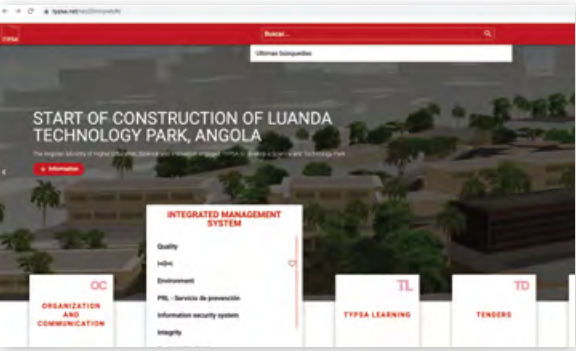
WE OPERATE AS ONE COMPANY FROM ANYWHERE IN THE WORLD

TYP SA's ISO 9001 certified quality system has been in place for 27 years and is a common reference for all branches and subsidiaries.

Our ISO 14001 certified Management System has assured correct environmental performance for over 16 years.

SYSTEM IMPROVEMENTS

- The scope of the environmental management certification ISO1400 has been expanded to include TYP SA UK in the United Kingdom, TYP SA AB in Sweden, MEXTYP SA in Mexico, Engecorps in Brazil and RAUROS in Spain.
- Modification of the Management System requirements for short-range design tasks. New procedure specific to this particular type of contracts.



Number of internal quality and environment audits



Internal quality and environment audit scores



THE COMMUNITY

COMMITMENT TO SOCIETY: Acting responsibly and playing our part in improving society wherever we are.

OUR PRESENCE IN THE INDUSTRY

Involvement in Business and Professional Organisations

Leading the sector's positioning for the opportunities offered by the European funds for economic recovery and transformation, and to address new regulations on climate change and sustainable energy, international mobility, digital transformation, sustainable cities, international development and development financing.

- Important representation in the main Spanish, European and international industry organisations: FIDIC, EFCA (Presidency), TECNIBERIA (Presidency), CEOE, MAFEX and AEDIP.
- We are active in Spain's Professional Associations (Caminos Foundation; Spanish Institution of Civil Engineers, Agustín de Betancourt Foundation and the Engineering Institute of Spain).
- Presence in the main discipline-related technical organisations, such as: the Spanish and International Committees on Large Dams (SPANCOLD and ICOLD), Tunnelling Association of Canada (TAC), Spanish Association of Tunnels and Underground Works (AETOS), World Road Association (PIARC), International Federation for Structural Concrete (FIB), and the Water Environment Federation (WEF).



Inés Ferguson, EFCA's President, at the Business Summit Spain-Serbia in Belgrade

WORKING WITH UNIVERSITIES

- Collaboration with almost all Spanish universities that offer technical degrees and some universities in the United Kingdom and Sweden; 67 interns a year.
- The Group is a Member of the School of Civil Engineering Advisory Board at the Universidad Politécnica de Valencia.
- Collaboration with the Climate Change Professorship at the Universidad Politécnica de Valencia to work together on new simulation algorithms of climate-change effects on infrastructure.
- Collaboration through an Industry PhD programme with the Universitat Politècnica de Catalunya.
- Our Agreement with the Madrid School of Civil Engineering Harbour Laboratory is still in place, continuing the 15 years of teaching and innovation support through the TYP SA - Pablo Bueno Harbour Research Unit. This agreement strengthens plans to improve and modernise the laboratory's facilities. More than 200 students visited the unit during the year.
- Collaboration with the Madrid School of Architecture to deliver the University master's degree MEDIP (Comprehensive Project Management).
- Collaboration agreements with the Universidad Politécnica de Madrid, teaching at the Schools of Civil Engineering, Industrial Engineering and Aeronautical Engineering.
- Collaboration with the UNED distance learning university to organise and teach the AETOS Master's Degree in Tunnels and Underground Works.



Francisco Martín Carrasco, director of the Escuela de Caminos, together with Pablo Bueno Tomás. Collaboration agreement signing between TYP SA and the Universidad Politécnica de Madrid



- Our Branch in Sweden, TYP SA AB, collaborates with the University of Stockholm (KTH -Royal Institute of Technology) by delivering lectures to the Bridges department and with a mentoring programme to provide career advice to final year students.
- Collaborations with the California State University, Los Angeles (USA) giving classes on detailed design at the School of Engineering.

AWARDS AND HONOURS

- Honour Award in the Transport category at the Excellence Awards 2022, awarded by the American Council of Engineering Companies of California (ACEC CA).
- National Recognition Award 2022 for engineering excellence awarded by ACEC.
- "Highest Excellence" Award in the Transport category awarded by the Design Build Institute of America (DBIA).

I-15 Express Lanes in California, USA

The project, carried out by AZTEC in the modality design-build, consists of the creation of two new 24 km toll fast lanes in each direction, in the Riverside County.

The work, which entails the expansion of 11 structures, was implemented without interrupting the traffic on one of the busiest roads in California and became the first intersection in California connecting several toll fast lanes.



Sukumar Kolli collects the Rail Analysis Innovation & Excellence Summit Award for the Kanpur Metro, India



Álvaro Serrano at the awards ceremony of Structural Engineering ACHE, for the Rande Bridge in Vigo, Spain



Alejandro Masip collects the Best Catalan Infrastructure Award for the L'Albagés Dam in Lleida, Spain

- International Award at the 3rd Edition Rail Analysis Innovation & Excellence Summit in India, in the Project management Consultancy Excellence category.
Kanpur Metro, India
International Award at the 3rd Edition Rail Analysis Innovation & Excellence Summit in India, in the Project Management Consultancy Excellence category.
- Structural Engineering ACHE Awards VI Edition (Spanish Association of Structural Engineering).
Civitas Metropolitan Stadium, Madrid, Buildings category.
Capacity expansion of Rande Bridge -AP9, Vigo, in the Innovation category.
Both by the Group subsidiary MC2 Estudio de Ingeniería.
- Best Catalan Infrastructure Award, 6th Edition, awarded by Catalunya's Infrastructure Council.
L'Albagés Dam, Lleida, Spain
Awarded best infrastructure and symbol of the improved water transformation in the region. TYP SA received this award for construction management and supervision, technical assistance, environmental vigilance, as well as writing an Emergency Plan, a Filling Plan and elaborating a technical file of the dam.

■ **FIDIC Awards 2022. Outstanding Project of the Year (Medium).**

Viaduct V3 of the Duplication of the Tamoios Highway in Parque Estatal Serra do Mar, Brazil

The International Federation of Consulting Engineers (FIDIC), at its yearly conference held in Geneva, awarded Engecorps Typsa Group with this recognition for the design and engineering support services for the 310m long curved viaduct and central span of 125 m clear span, built using successive cantilevers, with a pre-stressed concrete box section deck. A cable crane was used, which meant there was no need for a service road and therefore drastically reducing the environmental impact in an area of difficult access.

■ **FIDIC Awards 2022. Special Recognition.**

Wiwili Bridge on the Coco river, Nicaragua

TYP SA Group received this award at The International Federation of Consulting Engineers (FIDIC) yearly conference held in Geneva, as author of the detailed designs and construction engineering services for this bridge that facilitates further development and improved transportation conditions on the roads of Central America. This is a prestressed concrete bridge built on site using successive cantilevers in a high-seismicity area, with a length of 312.5 m and main span of 125 m. At the time of its inauguration, it is the bridge with the largest span in Nicaragua and the second longest in total length.

■ **Irish Infrastructure Association Best Infrastructure Award.**

N22 Highway Sullane and Laney River Bridges, Ireland

The S26 viaduct – Laney Riverbridge has single-span beams of 49.90 m, currently the longest ever used in Ireland and the United Kingdom. The S28 viaduct – Sullane Riverbridge has two spans with similar beam lengths (48.75 m) and brings the added challenge of being an almost 100 m long integral bridge. TYP SA participates in this award, together with constructors and developers, as author of the detailed designs.



Pablo Bueno and Inés Ferguson collect the Outstanding Project of the Year Award at the FIDIC Awards 2022



S26 Viaduct – Laney Riverbridge, awarded Best Infrastructure by the Irish Concrete Association



Wiwili Bridge on the Coco River, Nicaragua, Special Recognition Award at the FIDIC Awards 2022



Aitor Ezquerro with Elena Jiménez at Middle East Rail, in Abu Dhabi



Pablo Bueno with José Miguel Atienza, director of the Escuela de Caminos, at the III TYP SA Conference on Marine Engineering and Sustainability, in Madrid



Eugenio Pérez at the IDA Desalination World Congress 2022, in Sydney

- 16th Spanish Conference of Coastal and Port Engineering, Vigo, May 22.
- Asia Pacific Rail, Bangkok, May 22.
- European Bank for Reconstruction and Development Annual Meeting and Business Forum, Marrakech, May 22.
- 11th National Symposium of Geotechnical Engineering and 7th Spanish-Portuguese Geotechnical Conference, May 22.
- Spanish-Saudi Business Forum, Riyadh, June 22.
- Coastal and Port Technical Association (ATPYC) XVIII Conference for Young Professionals, Malaga, June 22.
- 23rd edition of PROJECT 2022 forum, Madrid, September 22.
- Mediterranean Institute of Water (IME) 40th Anniversary Conference, Valencia, September 22.
- Multilateral Partnership Conference for Development in Egypt, Cairo, September 2022.
- InnoTrans Trade Fair, Berlin, September 22.
- British Tunnelling Society Conference & Exhibition. London, September 22.
- 10th National Symposium on Unstable Slopes and Hillsides, Granada, September 22.
- FIDIC Global Infrastructure Conference, Geneva, September 22.
- 24th Informative Conference on The Risks of The Alto Aragon Region, Huesca, October 22.
- IDA Desalination World Congress (International Desalination Association), Sydney, October 22.
- Business Summit Spain – Dominican Republic, Santo Domingo, October 22.
- 5th Cross-Border Congress on Climate and Coastal Change, Gipuzkoa, November 22.
- Business Summit Spain – Serbia, Belgrade November 22.
- Business Summit Spain – Paraguay, Madrid, November 22.
- Technical Seminar on Transport Infrastructure in Greece, Athens, November 22.
- Rail Live Congress. Malaga, November-December 22.
- 3rd TYP SA Seminar: Maritime Engineering and Sustainability, at the Ports Laboratory of the School of Civil Engineering in Madrid, December 22.

FORUMS

As consulting engineering experts, we actively participate in forums, conferences and seminars to draw attention to the new challenges we face in our areas of expertise.

Some of the most important include:

- Webinar of the 5th Congress of Underground Structures Design Experts. JRC (Joint Research Centre of the European Commission), February 22.
- 3rd Session "Metros in America and Europe: London underground" and "Andalusian Metros: sustainable solution for city transport", AETOS- Junta de Andalucía, Sevilla, March 22.
- Swedish Rock Engineering Conference, Stockholm, March 22.
- 21st Conference on Safety in Maintenance Operations, Madrid, April 22.
- Wind Europe yearly congress, Bilbao, April 22.
- IABSE Annual Symposium (International Association of Bridge and Structural Engineering), Prague, May 22.
- ICOLD-CIGB Congress (International Commission on Large Dams), Marseille, May 22.
- Middle East Rai, Abu Dhabi, May 22.

4. Environment

ENVIRONMENTAL MANAGEMENT SYSTEM: committed to minimising environmental impacts generated directly or indirectly by civil works.

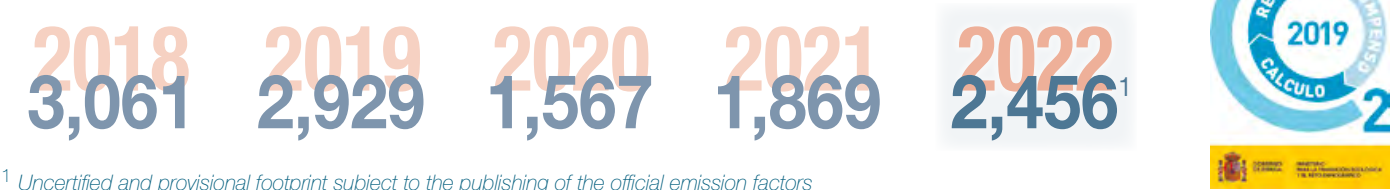
LINES OF ACTION

- Priority given to all environmental aspects in our work.
- Responsible use of resources.
- Proper waste management.
- Staff and suppliers required to observe correct environmental practices.

EMISSIONS CONTROL

- TYP SA has two main strategies to combat climate change:
- A **company strategy**, measuring and verifying the corporate carbon footprint since 2013, each year's footprint being registered in the National Carbon Footprint Registry at the Ministry for Ecological Transition, achieving not only recognition for footprint calculation, but also for reduction over the years.
 - A **project strategy** developed by our Environmental Consulting and Assessment division, integrating climate change variables in all project phases that mitigate GHG emissions, incorporate climate change adaptation measures into our projects, and achieve resilient infrastructure.

Our carbon footprint in Spain in last five years (tCO₂eq.):



TYP SA is currently in the administrative process of registering its carbon footprint for years 2020 and 2021 and foresees maintaining the seal of achievement both for calculation and reduction on both years.

Regarding the data on the footprint for 2022, it is worth mentioning that the predicted increase in comparison with the previous two years is due to the exceptional situation of the global health crisis of the COVID Pandemic, which affected the 2020 and 2021 results when there was a significant reduction of staff presence in the offices, and hence commuting and business travel.



“ We adapt and certify our carbon footprint to the new ISO 14064 standard ”

WASTE

Selective collection of hazardous and non-hazardous waste is a priority at all our offices, to ensure all waste is treated appropriately.

Authorised managers deal with hazardous waste safely, while authorised recycling managers take charge of non-hazardous waste, such as paper.

Alongside waste management, waste reduction policies are applied such as equipment reuse.

RESOURCE CONSUMPTION

TYP SA continues to closely monitor consumption and improve its systems, thus preventing a greater impact on the depletion of natural resources, in addition to obtaining savings.

Consumption in 2021 was affected by the pandemic. It must be taken into account that Covid prevention measures forced continued social distancing and continually ventilated spaces, which meant that not all of the staff returned to the office and thus certain consumptions were favourably affected by these measures. 2020 consumption savings and increases should not be compared to those of 2021, since 2020 was an exception.



WATER consumption (m³) progress					
	2018	2019	2020	2021	2022
Spain	3,642	3,763	2,826	3,181	3,396
Peru	1,761	2,294	1,633	2,437	3,107
UAE	183	156	119	43	-
Saudi Arabia	-	-	-	-	1,294

PAPER consumption (kg) progress					
	2018	2019	2020	2021	2022
Spain	16,745	15,801	9,791	8,801	9,785
Peru	3,063	6,056	2,528	2,678	2,789
UAE	62	102	162	137	-
Saudi Arabia	-	-	-	-	32
Mexico	-	1,334	1,805	2,684	1,769
Sweden	-	-	-	-	7
United Kingdom	-	-	-	-	9

Increased consumptions in Mexico are due to the growing number of people needed for the growing number of contract awards

ELECTRIC POWER consumption (kWh) progress					
	2018	2019	2020	2021	2022
Spain	1,793,730	1,707,002	1,608,320	1,737,884	1,845,976
Peru	167,484	248,440	216,700	254,783	334,994
UAE	46,421	55,196	38,606	37,438	17,169
Saudi Arabia	-	-	-	-	49,688
Mexico	-	-	-	-	121,336

The Guarantee of Origin Certificate issued by the Spanish National Commission on Markets and Competition (CNMC), confirms that the electricity supplied to the Group's offices in Spain comes from renewable energy sources.

The origin of the electricity used by Group companies INTEMAC, MC2 and RAUIROS is also certified as renewable.

5. Innovation

A CORE MANAGEMENT VALUE: we innovate today to enhance the efficiency, sustainability, and quality of our projects for a better tomorrow.



GROWTH AND CONSOLIDATION OF OUR TEAMS IN INNOVATION

- Our Software Development Department, established 26 years ago, is achieving a 2% increase in revenue.
- The TYP SA Digital Accelerator, created two years ago and serving as a vital hub for innovation and digital transformation, catering to both our clients and internal initiatives, has successfully reached revenues of 508,000 EUR, 59% of which is client focused.
- The team of the RAUROS subsidiary is making a significant contribution to the ICARO system for infrastructure asset management with new loading and analysis procedures for road condition surveys and a thorough adaptation to fully align with Mexican regulations.



GREATER STRATEGIC FOCUS FOR INNOVATION AND DIGITALIZATION

- Focus on the design of new solutions and services, combining technique and technology.
- Implementation of a new procedure to incorporate a stronger focus on the medium and long-term goals, as well as to concentrate our efforts on projects with higher budgets within our innovation and digitalization objectives.
- Improvements in the R&D management system adapting it to the requirements of the new UNE 166002:2021, with new performance indicators to measure economic and research results, intangible assets generated and impact on sustainability.
- Precise project alignment with the three core innovation strategies, with active involvement and support of the R&D management committee.

STRATEGIC RESEARCH

GOING DIGITAL AND THE COLLABORATIVE WORKING ENVIRONMENT

- **EINFRAZERODT**: improvement of automation and standardization for the creation of the "zero model" as a starting point for infrastructure projects.
- **SERAPIS**: new strategies for common data environments and intangible assets repository, improvement of collaboration capabilities and BIM knowledge management.
- **BE-PYTHON and AP-MI--3CD**: new automation of BIM design processes in building and infrastructure models.
- **CRC-HOLOBUILDER**: collaboration between the teams from Spain and Canada to expand technological capabilities in construction supervision, conducting a testbed on technologies for 360 image capture, data management, and utilization.
- **REACTIVE**: virtual reality project for the Pediatric Intensive Care Unit at the La Paz Children's Hospital in Madrid, Spain. Through the TYP SA Foundation collaboration, this project has been launched with the aim of applying immersive experiences using virtual reality technology for the motor rehabilitation of hospitalized children.



SUSTAINABILITY OF BUILDINGS, INFRASTRUCTURES, AND CITIES

- **PVGRAd™-2**: the new generation of the photovoltaic solar plant design programme by TYP SA Group, PVGRAdTM. A BIM tool has been transformed into a true digital twin, enhancing its current powerful functionalities and adding new ones. Patent number 11,301,790 has been obtained in the USA for the Cost Optimization Device for utility-scale photovoltaic power plants, and the PVGRAdTM brand and associated logo have been protected.

- **FLOATYP-WAVE**: application of Computational Fluid Dynamics (CFD) models to the design of marine renewable energy production facilities (wave, tidal, offshore wind), solving complex fluid-structure interaction problems through physical-mathematical modeling.
- **INFRARISK**: a platform for risk analysis and decision support for investment and life cycle planning of infrastructures. A digital solution for risk analysis and resilience in critical infrastructures, using an innovative methodology.
- **SOSTR**: sustainable design of structures. A new methodology for analysing the sustainability of different structural typologies (bridges, buildings, tunnels), aimed at meeting the requirements of the international Envision certification.
- **CIRSOS**: sustainable foundations for wind turbines. New methodologies for 4D sustainable analysis throughout the entire life cycle, considering potential social, economic, and environmental impacts, as well as a multicriteria analysis that provides a sustainability indicator. Developed under an industrial doctoral agreement with the Universidad Politécnica de Valencia (pending).



CONSULTING, ENGINEERING AND ARCHITECTURAL EXCELLENCE

- **ENHANCINGFRC**: optimization of the design of fibre-reinforced concrete elements in tunnels and underground works. Project developed under an industrial doctoral agreement with the Universitat Politècnica de Catalunya.
- **py-PLAXIS y py-PERÚ**: optimization tools for the mass management of files, seismic analysis, and geotechnical-geological numerical model management. Developed in collaboration between teams from Spain and Peru.
- **PARACUS**: parametrization of recurrent structures. Application to the design and structural analysis of sound barriers and embedded frames.
- **ACOM-SR**: advanced constitutive models for soils and rocks. New technical guidelines and automations for their application.

INDUCED INNOVATION

Alongside our own innovation, we place strategic value on induced innovation, which we carry out to provide imaginative, cutting-edge technological solutions that meet the needs of our clients.



- **TYP SA-RL**: new solutions for underground works and tunnels and decarbonization of transportation. The common technological objective has been to advance the transition towards a net-zero carbon economy through excellent engineering for the design of transportation infrastructure. Some of the challenges faced have included:
 - Improvements for the use of BIM technologies under collaborative environments.
 - Compliance with complex functional requirements, such as a service life of 120 years, a speed of 400 km/h, station depths exceeding 100 m, and others.
 - Incorporation of advanced technologies and tools to support design.

6. Contribution to the SDGs

TYP SA contributes to Sustainable Development Goals (SDGs) through its policies and management systems, its business areas, and the TYP SA Foundation for Development. We are making progress towards the 2030 Agenda through knowledge and innovation, good business practices and social action inherent to a leading engineering firm, strengthened by the creation of partnerships to drive sustainability.

OUR SDGS AND MAIN TARGETS



SDG 4 - QUALITY EDUCATION
SDG 17 - PARTNERSHIPS FOR THE GOALS

TARGETS WE ARE WORKING TOWARDS

- Target 4.3
- By 2030 ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university.
- Target 4.4
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
- Target 17.17
- Encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships.

OUR COMMITMENT

Promote technical education in developing countries.

ACHIEVEMENTS

This year, the TYP SA Foundation for Development has continued to significantly promote the development of the Lago Alberto University (UNILAC) in the Democratic Republic of Congo. The main advances have been the following:

- Increase in the number of scholarships granted in all faculties.
- Construction of a teacher residence to attract qualified teachers from other regions of the country. Continuation of premiums for teachers residing in Mahagi to ensure their permanence in UNILAC.
- Installation of a server and a computer network, with permanent high-speed internet access service.
- Elaboration of a Quality Plan to ensure the proper management of the facilities.
- European mobility programme of the Universidad Politécnica de Madrid (UPM) for students and teachers of UNILAC (Erasmus+).

After the visit from representatives of the TYP SA Foundation for Development and the Universidad Politécnica de Madrid, in June 2022, the commitments of the Foundation and UPM with UNILAC have been renewed, including the signing of a new tripartite agreement that will turn UNILAC into a prestigious university in the Ituri region.

INDICATOR TRENDS

UNILAC University, Mahagi (DRC)	2019-2020	2020-2021	2021-2022
Enrolled students	343	368	416
Scholarships awarded through the Foundation	171	163	225



SDG 6 - CLEAN WATER AND SANITATION

TARGETS WE ARE WORKING TOWARDS

- Target 6.3
- By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.
- Target 6.4
- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
- Target 6.5
- By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

OUR COMMITMENT

Contribute to improving water availability, management and quality, as well as reducing the risks associated with extreme events in the countries in which we operate.

ACHIEVEMENTS

TYP SA has continued its efforts in the digitalisation of the water sector to support public administrations in improving efficiency in the management and analysis of aspects related to the life cycle of water infrastructures.

The most important technological commitment is in the expanded use of BIM and GIS tools. This year, the HYDROGIS project has been developed, which has allowed the GIS tools to be adapted to a free software-based work environment. Additionally, the IN-BIM-GIS project has begun, designed to take advantage of the great benefits offered by the combined use of both methodologies.



Collaboration with Group companies to develop digital services is being encouraged. This year, we have collaborated with RAUROS to develop iCANAL, a new infrastructure management support system for the Navarra Canal, which unifies new functionalities in a single central core to facilitate the operator's work, allowing the automation of inspection tasks and their subsequent diagnosis to optimise management.

In addition, capacities in the water sector are being strengthened, mainly in the areas of digitisation and risk management. In particular, TYP SA has committed to expanding technical capabilities in dam safety inspections and risk analysis methodologies, currently intervening in more than 300 dams in Spain. In this area, collaboration has been initiated with the Spanish Committee of Large Dams (SPANCOLD) to analyse the determinations on reservoirs contained in the documents of the third cycle of hydrological planning in the hydrographic demarcations of Spain until 2027.

New capabilities have also been incorporated for multicriteria assessment (environmental, social, economic) based on new tools for statistical analysis of extreme events. This contribution will allow administrations to implement urgent corrective measures through the fast track modality, dividing the actions by sections or prioritised sections depending on the risks they mitigate.

INDICATOR TRENDS

Teams	2019	2020	2021	2022
People trained in BIM in the water sector	28	43	48	57
People specialised in the management of dam safety and risk analysis projects	9	13	23	40



SDG 7 - AFFORDABLE AND CLEAN ENERGY

TARGETS WE ARE WORKING TOWARDS

Target 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.

OUR COMMITMENT

Back renewable and clean energy as energy generation business lines.

ACHIEVEMENTS

The technological commitment to offshore wind energy production systems continues, delving deeper into the challenges of design and implementation of offshore wind farms. This includes both those in shallow waters as well as those that rely on floating platforms to support the wind turbines and their support pillars. As way of example, the great experience acquired in the European R&D project DemoGravi3 has been continued, with new methodologies to improve the design and marine operations through a pilot project on the coasts of Normandy (France).

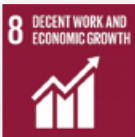
In the field of marine renewable energies, new wave simulation capabilities are being acquired through the use of complex simulation tools. This year, a pilot project has been developed in the Port of Valencia for the use of wave energy within the framework of the European R&D Matchup project. The concept belongs to the company Rotary Waves while TYP SA has overseen the design.

In addition, improvements are ongoing regarding the technological tools that play a role in the deployment of solar energy. Through collaboration with the Group company, AZTEC, the functionalities of the PVGRad platform have been improved to optimise the design of photovoltaic solar plants, adding a simulation module that allows developers a more accurate evaluation of the returns on their investment.



INDICATOR TRENDS

Renewable energy activity	2020	2021	2022
Renewables innovation projects	8	10	7
Renewable energy we design and install (in MW)	6,800	21,757	44,195



SDG 8 - DECENT WORK AND ECONOMIC GROWTH

TARGETS WE ARE WORKING TOWARDS

Target 8.2 achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors.

Target 8.5 By 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Target 8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.

OUR COMMITMENT

Ensure respect for human rights, ethical business behaviour, integrity and equality, diversity and inclusion in TYP SA and its supply chain.



ACHIEVEMENTS

TYP SA continues to make progress in the analysis, management and mitigation of risks associated with its activity and that of its subcontractors. In particular, the following improvements to its Management and Compliance Systems have been introduced:

- Update of the due diligence form that includes a commitment to compliance on integrity, equality, labour standards and human rights.
- Review of the company's risk map and adoption of the corresponding prevention and control measures.
- Incorporation in the supplier audit system of a section where the due diligence performed is documented.

INDICATOR TRENDS

Follow-up on supplier contracts	2020	2021	2022
Percentage of contracts that explicitly accept our Code of Ethics	71%	75%	85%



SDG 9 - INDUSTRY, INNOVATION AND INFRASTRUCTURE

TARGETS WE ARE WORKING TOWARDS

Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

OUR COMMITMENT

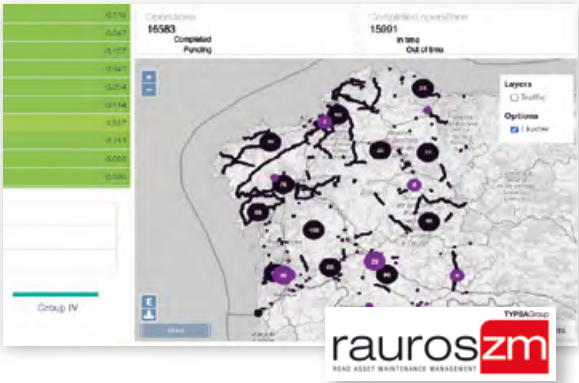
Foster innovation and digitalisation to improve the productivity, efficiency, security and sustainability of our services.

ACHIEVEMENTS

This year we have continued to drive innovation in the development of digital services. The TYP SA Digital Accelerator (ADT) already has a stable core of 16 specialists together with multiple collaborators, having worked on 113 digitisation projects and developed 59% of its production for external customers. A group of experts has been formed specialised in combining BIM models with video game programming engines for the construction of digital twins with a better visualisation in real time. In parallel, the Software Development

Department increased its production in 2022, specialising in solutions for corporate processes and strategic applications of the group such as TYP SA-BIM-PM.

Additionally, decision-making support systems are being adapted to the requirements of the countries in which we operate, to increase effectiveness and impact. As an example of this, RAUROS is adapting its ICARO digital road management platform to the Mexican regulations, to facilitate its deployment as a support tool for operation and maintenance decision-making, as well as for the corresponding conservation plans.



INDICATOR TRENDS

Innovation projects	2019	2020	2021	2022
New R&D projects approved	11	13	17	16
Digitisation projects completed by the Digital Accelerator	-	-	23	47



SDG 11 - SUSTAINABLE CITIES AND COMMUNITIES

TARGETS WE ARE WORKING TOWARDS

- Target 11.2** By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- Target 11.3** By 2030 enhance inclusive and sustainable urbanization and capacities for participatory, integrated and sustainable human settlement planning and management in all countries.

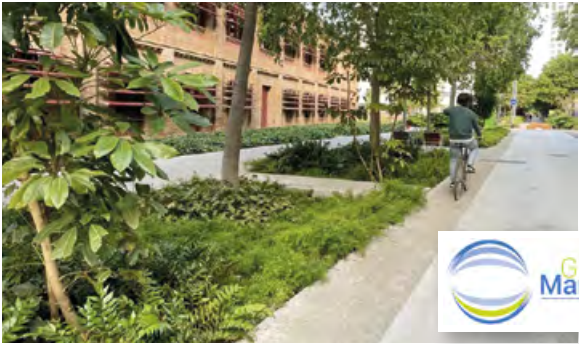
OUR COMMITMENT

Our services and capabilities contribute to making cities and settlements inclusive, safe, resilient and sustainable.

ACHIEVEMENTS

TYP SA is committed to the development of new urban mobility planning tools, ensuring optimal integration of pedestrians and vehicles. Methodologies are being generated for the combined analysis of mobility simulations, to provide the authorities with a holistic interpretation in the spaces of coexistence and investment decision making.

TYP SA is also driving improved accessibility to public buildings and stations. In addition to having virtual reality applications that evaluate and audit accessibility conditions and evacuations in emergency situations, an application for both web and mobile interfaces is being designed with the aim of facilitating technical evaluations of accessibility.



Likewise, continued contribution to the deployment of Sustainable Urban Drainage Systems (SUDS), is provided through the Group company Green Blue Management (GBM). New specific design and calculation programmes have been incorporated and a GIS tool has been generated for the selection of optimal sites for SUDS implementation. Work has also been carried out with various municipalities in Spain to develop SUDS strategies and municipal technical guides.

INDICATOR TRENDS

Sustainable urban infrastructure improvement capabilities	2019	2020	2021	2022
Sustainable city and infrastructure R&D projects	15	14	16	17
People working exclusively on SUDS	3	6	7	8



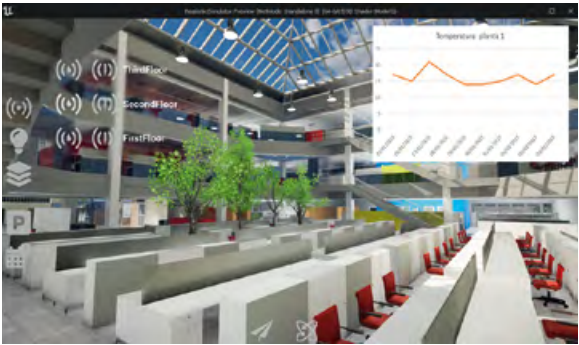
SDG 12 - RESPONSIBLE CONSUMPTION AND PRODUCTION

TARGETS WE ARE WORKING TOWARDS

- Target 12.2** By 2030, achieve the sustainable management and efficient use of natural resources.
- Target 12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

OUR COMMITMENT

Leverage our services and capabilities to help extend the useful life of built assets and encourage the use of resilient and low-emission building materials and techniques.



ACHIEVEMENTS

As a practical application of digital twins in the optimisation of asset usage, TYP SA is applying sensorisation in the digital twin of its corporate headquarters. Through two innovation projects, the sensorisation of the building is being optimised to link it to a digital platform that allows decisions on energy efficiency, user comfort level, predictive maintenance, and consumption and waste management. Additionally, the sensorisation of parking spaces has been associated with a digital IoT platform to manage parking efficiently, optimising the use of spaces and reducing emissions and congestion associated with the search for parking.

INDICATOR TRENDS

Infrastructure damage analysis	2020	2021	2022
R&D projects in IoT and sensorisation	1	2	3



SDG 13 - CLIMATE ACTION

TARGETS WE ARE WORKING TOWARDS

- Target 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- Target 13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

OUR COMMITMENT

Incorporate climate change mitigation and adaptation into our infrastructure, energy and city planning and design solutions.

ACHIEVEMENTS

Within the framework of TYP SA's Sustainability Action Plan, general training on sustainability was carried out this year, through the digital platform TYP SA Learning. Furthermore, obtaining sustainability certifications has been actively encouraged in the Group, adding 17 professionals with the Envision accreditation for sustainable infrastructure, 6 with the BREEAM Infrastructure accreditation and 23 with the first BREEAM Associate qualification.

A first version of the Basic Guide for Sustainable Design has been published with the main concepts associated with sustainability in infrastructures and buildings, especially those related to climate change mitigation and adaptation. This Basic Guide provides the context and common language to use, as well as the most representative methodologies.

Moreover, TYP SA Group has become a member of the Institute for Sustainable Infrastructure (ISI), whose headquarters is located in Washington DC (USA), and is responsible for Envision accreditation. With this partnership, TYP SA increases its commitment to sustainability and reinforces its position as a reference in the design of greener, more digital, and inclusive infrastructures in the USA, Spain and in their countries of operation.

Continuing this momentum, TYP SA has taken on a person to lead and coordinate the technical aspects of sustainability and develop the Sustainable Design Guide.



INDICATOR TRENDS

Specialised technical training courses	2020	2021	2022
People with professional sustainability qualifications (Envision, LEED, Breeam, etc.)	4	6	46



SDG 16 - PEACE, JUSTICE AND STRONG INSTITUTIONS

TARGETS WE ARE WORKING TOWARDS

- Target 16.5** Substantially reduce corruption and bribery in all its forms.

OUR COMMITMENT

Lead the way in integrity and the fight against corruption in the engineering and construction industry.

ACHIEVEMENTS

TYP SA's commitment to integrity and the fight against corruption continued to be reinforced in 2022 with the following actions:

- Renewal of the ISO 37001 Certificate for Anti-Bribery Management Systems for a new three-year period.
- Improvement of operational procedures such as updating the due diligence form to partner companies in bidding processes and adoption of a simplified sub-contract model for independent experts.
- Improvement of internal control tools through the incorporation of an exemption section in the self-assessment system for more effective control of employees pending integrity training.
- Significant advances in the implementation of the integrity management system in the controlled entities of the Group.



INDICATOR TRENDS

Average anti-corruption system self-assessment score (in % correct answers)	2019	2020	2021	2022
Assessment for directors	85.6%	89.7%	90.1%	92.6%
Assessment for staff	85.9%	86.9%	90.6%	95.8%

Featured activity

Roadway projects

Internationally, the Group's subsidiaries have commenced work on important road projects. In **Brazil**, Engecorps is carrying out design services for the widening and improvement of the Presidente Dutra Highway, in the Vale do Paraíba region, increasing capacity with two new lanes in each direction on an 18.5 km section; and functional and detailed designs for the 15 km Piracicaba ring road, State of São Paulo; and the detailed design of the 25.6 km BR-386/RS road duplication in Rio Grande do Sul.

In **Chile**, we are carrying out the study of alternatives and conceptual design for the widening to three lanes of the 135 km section of the Pan-American Highway between Rio Bueno and Puerto Montt; In **Mexico** the extension of the Mexico-Querétaro toll highway to a total length of 13 km, was carried out by MEXTYPSA; and in the **USA**, AZTEC is carrying

out major projects in Arizona, such as the extension and expansion project of the third city ring road in Phoenix (SR 303L), the expansion of the Santan Freeway (SR 202L) and the improvement of the intersection between Highways SR69 and SR169, in Prescott Valley/Dewey-Humboldt.



Presidente Dutra Highway, Brazil



Ring Road 303L, USA

In **Spain**, the main projects initiated include the layout and construction of the extension of the AP-7 motorway in a 24 km section between the Martorell and Vilafranca Centro junctions in Barcelona, the 18 km section of new motorway on the A-68 between Ventas de Valdealgofa and Alcañiz, the increase in capacity of an 11 km section of the A-7 motorway in Moncada (Valencia), and the bypass road C-37 for the towns of Les Preses and Olot, Girona, with a length of 11 km.



Pan-American Highway, Chile

Construction supervision of highways and city road works

This year has seen our continued engagement in construction supervision for communication routes and urban roadways, one of the traditional activities of the TYP SA Group. In the **Democratic Republic of Congo**, construction supervision is being carried out for National Highway 1 (NR1) rehabilitation works between the towns of Mbulungu and Kananga. The scope covers a 77 km section, which includes the main road through the city of Kananga to the airport access road. In **Santo Tomé y Príncipe**, we are carrying out construction supervision of the Vía Marginal coastal road reconstruction between the airport and the town of Pantufo, together with support services for the tender and coordination of the construction contract management.



Highway in D.R. Congo



Highway in D.R. Congo

In **Spain**, construction supervision of the A-7 motorway capacity improvements in Moncada (Valencia) has commenced. The work on the 11 km stretch includes two 3-lane service roads, 4 new bridges and the remodelling of 4 junctions. We have also been engaged to supervise the highway conservation and maintenance work for the Ministry of Transport's Western Andalusian Road network. Internac is carrying out construction supervision on the Lodosa interchange remodelling works on the AP-68 Motorway.

Within the construction supervision of roads within cities, in Barcelona we are involved in the enhancement of Avenida Meridiana to provide a greener and more sustainable space for public use and enjoyment, as well as the upgrade in Valencia of section 5 of the Metropolitan Green Ring for use by pedestrians and cyclists through La Huerta area.

“Guaranteed quality in new roadway construction and upgrades”



A-7 Motorway, Moncada, Valencia

Operation and maintenance management

The TYP SA Group, through Rauros, is an expert in road and airport pavement condition survey techniques, and in the development of expert management systems primarily based on the ICARO system, developed in-house.

Highway asset management and maintenance systems are being implemented in local and national networks across various countries. An example of such being the National Road Network in **Chile**, or Ibarra's 700 km city road network in **Ecuador**, and including a training programme for routine road maintenance micro-enterprises.

networks, data is collected using high-performance multifunction and mobile mapping monitoring equipment, customised for mobile devices through business intelligence, and also providing training, and system maintenance. This also applies to various sections of the ABERTIS concession, with a total length of 1,100 km and 93 interchanges.

“Expert systems to lengthen infrastructure life-span”

Ruta de Plata Motorway, Cáceres



Monitoring equipment

In **Spain**, participation in the condition survey programme on Spanish National Highway Network pavements, covering a total of 15,000 km, includes obtaining the International Regularity Index (IRI) and different crack indexes to determine the pavement surface condition. The results of which are incorporated into the ICARO-WEB system.

The ICARO management system is also being implemented in the Grand Canary road network, 1,500 km in length with 289 slip roads, and in the 1,650 km network in La Rioja. In these

Gran Canary Road Network



Sustainable mobility

The active involvement of TYP SA Group companies in sustainable urban mobility strategies, providing clean and energy-efficient public transport, is an accomplishment to be particularly proud of.

Transport models incorporating urban planning and specific vehicle types, implementing non-polluting fuels and integrating technology for sustainable, digital, and connected mobility, all contribute to decarbonization, and the mitigation of the environmental impact caused by the existing transportation systems.

In **Spain**, TYP SA is involved in the definition of the strategic framework of a MAAS system (Mobility as a Service), technological innovation to integrate on a single platform all public and private transportation available in the capital city of Madrid. In Cordoba, in the implementation of a metropolitan public road transport system serviced by electric buses. In Malaga, in the planning of all the mobility of the metropolitan area, using technology from Big Data, with mobile telephony, proposing new lines of metro, BRT (Bus Rapid Transit), bus and single-person mobility systems.



Development of intermodal railway corridors in Türkiye



Implementation of the first electric BRT in Tirana, Albania



BRT in the San Fernando Valley, Los Angeles, California



National Transport Strategy in Serbia

“Clean and energy-efficient public transportation models”

In **Türkiye**, TYP SA has planned and developed an interconnected network of intermodal corridors to facilitate the seamless transfer of freight from road transportation to rail, promoting and encouraging the adoption of intermodality. In **Serbia**, the analysis and diagnosis of the transportation sector, the formulation of a guiding model, and the development of proposals concerning infrastructure and services have been conducted within a framework of sustainability.

BRT (Bus Rapid Transit) systems contribute to sustainable transportation and TYP SA involvement includes the engineering concept plan, outline design, and support services for the implementation of the first electric BRT in Tirana, **Albania**, the supervision of the implementation of the Juan Pablo II Avenue corridor in Managua, **Nicaragua**, and the detailed design of the BRT G Line improvement in the San Fernando Valley, **Los Angeles, California**.

Railway infrastructure

In the major railway and urban development project known as “Madrid Nuevo Norte”, TYP SA is achieving remarkable results, carrying out the analysis, coordination, monitoring and control of all the actions across the entire station area, to ensure technical and construction viability, and compatibility with this major urban project in Madrid, Spain. TYP SA is also carrying out the construction supervision of the expansion and remodeling works of the high-speed tracks and platforms, together with the passenger building, which houses activity in all areas of the station, lobbies, platforms, new tracks, passenger waiting rooms, and commuter connections with suburban areas, as well as a new high-speed technical building.

“Major urban developments and territorial integration through the railway”

In Europe, as part of the first phase of the HS2 high-speed project, which will both link London with the main cities in the north-west of the **United Kingdom**, and connect the country with the continent, TYP SA continues to play an outstanding role in its development. Following its successful participation since 2016 in the tunnel sections leaving London, last year TYP SA started working on the central open-air sections between London and Birmingham. In these sections, construction engineering services are designed and provided for earthworks, viaducts, drainage and auxiliary trackbed structures, as well as environmental procedures.



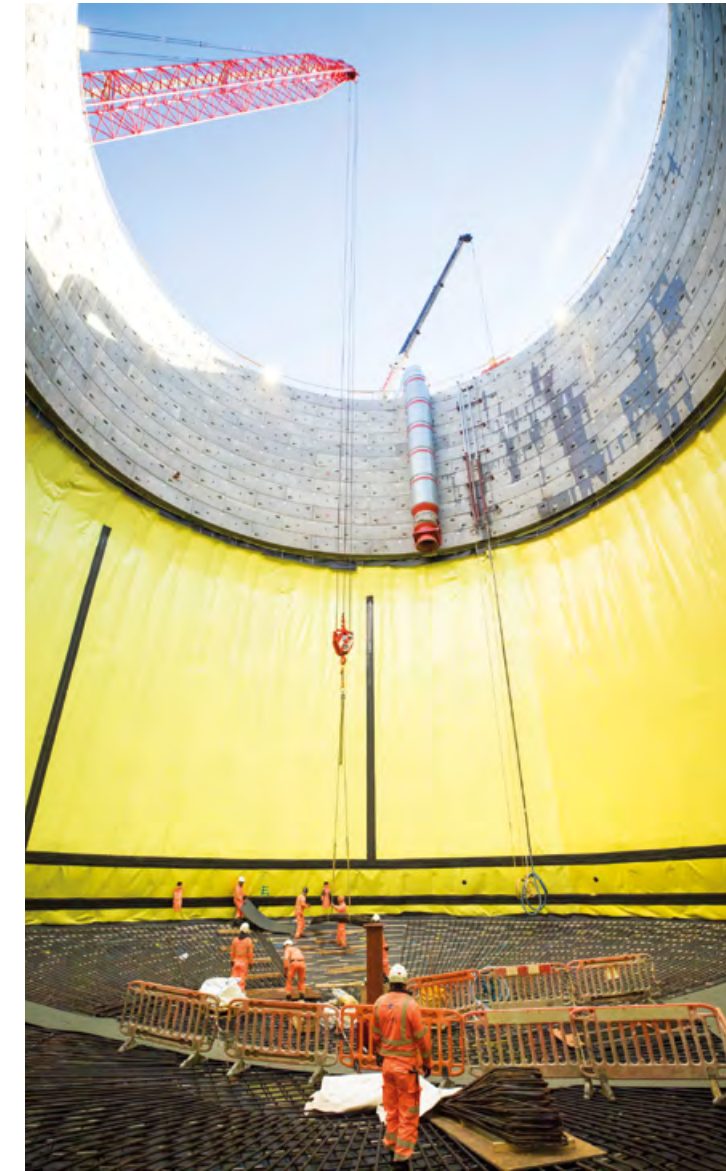
Railway line in Kyrgyzstan



HS2 works, United Kingdom



HS2 works, United Kingdom



HS2 works, United Kingdom

In **Tanzania**, TYP SA is carrying out the detailed design of the Tabora-Isaka railway section, on the electrified UIC gauge railway line between Dar es Salaam and Mwanza ; in **India**, the detailed design and construction supervision of the section between Digra and Palshi stations on the new Yavatmal-Nanded railway line in the state of Maharashtra; and in **Kyrgyzstan**, feasibility design services for the new 200 km railway line from Balykchy to Karankechenskoye, together with the upgrade of the existing 180 km railway line between Bishkek and Balykchy.



Track layout north of Madrid, Spain



Lisbon ring railway line, Portugal

In **Portugal**, Tecnofisil is participating in the design to quadruple Lisbon's ring railway line, between Rome/Areeiro and Braço de Prata, and to modernise the North line, between Braço de Prata and Sacavem.

Metropolitan systems

In line with the expansion of metropolitan transport systems around the world, TYP SA is involved in the main projects under development.

In Sydney, **Australia**, detailed design and technical support is being provided for the construction of the tunnel and the excavation sites for 5 stations, corresponding to the 11 km twin central section of the Sydney Metro West Line, between The Bays and Sydney Olympic Park stations.

In **Canada**, the detailed design is underway for the tunnels in the Eglinton Crosstown West stretch extension in Toronto, with a 6.3 km double tunnel, including the tunnel boring machine launch and extraction shafts, the cross passages between tunnels and the end walls of future stations and emergency evacuation buildings.



Sydney Metro works, Australia



Sydney Metro works, Australia



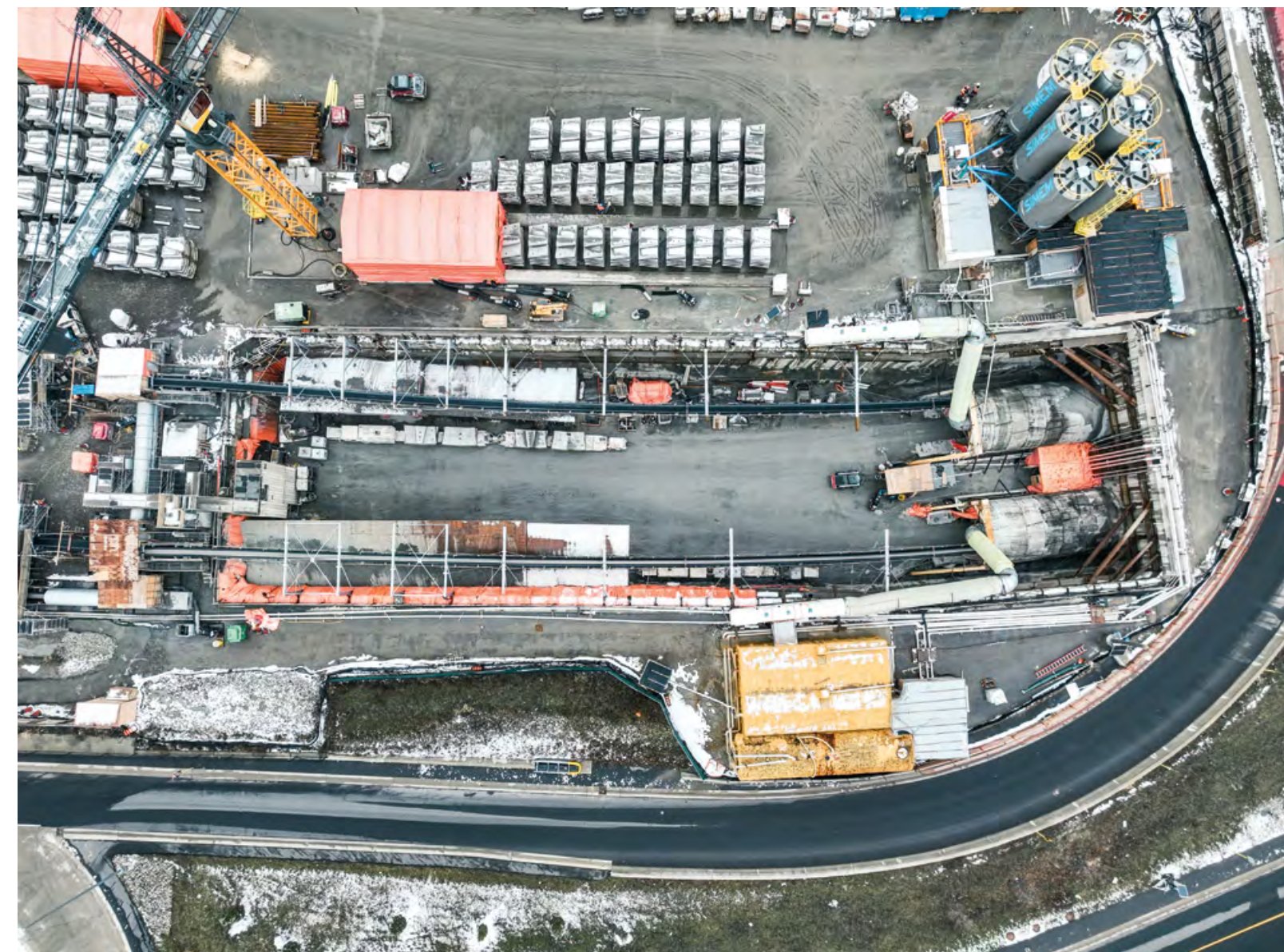
Sydney Metro works, Australia



Metro works in Toronto, Canada



Metro works in Toronto, Canada



Metro works in Toronto, Canada

“Metropolitan railways improving mobility in large cities”



Rehabilitation works of line 7b of the Madrid Metro, Spain



Rehabilitation works of line 7b of the Madrid Metro, Spain

In the **Dominican Republic**, engineering and environmental consulting is being provided for the detailed design of Santo Domingo Metro Line 2C. This 7.3 km extension of Line 2 will run for 6.4 km on viaduct and 0.9 km underground and will have 5 stations.

In **Spain**, the design of the railway systems is underway for the Seville to Alcala de Guadaira tram. The 12.5 km section between Universidad Pablo de Olavide and Montecarmelo includes architectural finishes and MEP at stations and stops, and also ongoing are the design services for the rehabilitation of infrastructure associated with Madrid Metro Line 7b in San Fernando de Henares.

Airport modernization and expansion

King Khalid International Airport in Riyadh, **Saudi Arabia**, is one of the largest in the world and major expansion efforts are under way to reach a capacity of 70 million passengers a year. TYP SA provides support services to Riyadh Airports Company for studies and preliminary and detailed designs, together with the corresponding preparation of tenders. Among them, four alternative conceptual designs have been carried out for the airport's T5 South Terminal, destined for use by low-cost airlines. The project includes a feasibility study for each of the designs, together with a technical evaluation of the existing airport services.



Mataverí Airport, Easter Island, Chile



La Florida Airport, Chile

In **Chile**, improvement and modernisation of several existing airports is under way, including updating passenger terminals and control towers, upgrading runways and taxiways, together with development of surrounding areas. These include Mataverí Airport on Easter Island, La Florida Airport in La Serena, Coquimbo region, El Tepual Airport in Puerto Montt, Los Lagos region, and Pucon Airport in the Araucanía region with designs for new buildings and improved access, ready for concession.

In **Brazil**, Engecorps is carrying out the comprehensive management of the expansion and improvement of the airports of Recife, Maceio, João Pessoa, Aracaju, Juazeiro do Norte and Campina Grande, including the preparation of contract specifications and terms, design review and construction supervision of works.



Recife Airport, Brazil

“Improvements and planning for airport transportation safety and competitiveness”

Infographics of alternatives for King Khalid International Airport in Riyadh, Saudi Arabia

Expansion of docks in the largest port in Europe

The Port Authority of Rotterdam has selected TYP SA, together with a leading global company based in the Netherlands, to carry out the design and support for the tender for the redevelopment of the south quay wall structures in the Europahaven, Port of Rotterdam. The project is part of the new container terminal, and involves upgrading the existing 2.6 km quay wall, and developing a new quay wall of approximately 450 m.

The technique chosen for the main quay involves the anchoring of prefabricated caissons in front of the existing quay wall construction, to form a new parallel berthing line, with an increased draft for barge operation.



Port of Rotterdam, The Netherlands

Caissons have been selected as being more advantageous compared to more traditional alternatives in the Netherlands, such as sheet piling, piles, etc. The modular construction, with the possibility of production off-site and the speed of on-site installation, together with minimal impact on port traffic, have been key factors for its inclusion for this project.



Transport of caissons in Punta Langosteira, A Coruña, Spain

For decades, TYP SA has been involved in designs in Spain where caissons play a central role: design of dry docks in Gran Canaria, various piers in Cartagena, dolphins in Palma de Mallorca, piers at the Naval Base of Rota, the future quays of the northern container terminal in Valencia and the wharf extension in Barcelona. The presence of TYP SA in the supervision of many works based on caissons, such as Cartagena, Langosteira or Gijón, has enabled the gathering of first-rate knowledge, placing TYP SA at the forefront of the global engineering industry in this field.



Breakwater in Punta Langosteira, A Coruña, Spain

“New port infrastructure for large-scale freight transportation”

Risk governance and dam safety

Risk management is included in the Water Public Domain Regulation as a necessary and fundamental element of dam safety. In this context, TYP SA has been engaged by the Directorate General for Water to systematically assess the safety of 31 dams in Spain, owned by the Segura River Basin Authority.

Work relating to dam and reservoir safety make up an integrated security management system and include existing risk governance for each dam and associated infrastructure, climate change adaptation, capacity for mitigating potential disasters and prioritisation of the necessary investments.



Cierva Dam, Murcia, Spain



Talave Dam, Albacete, Spain



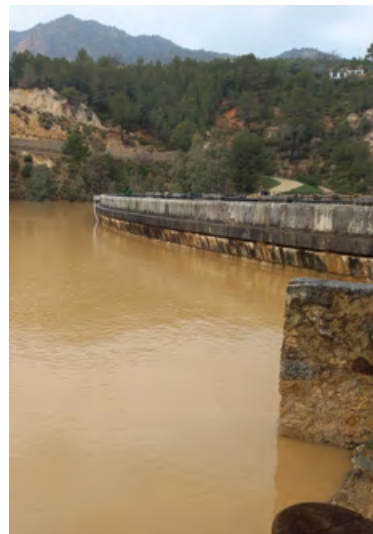
Baells Dam, Barcelona, Spain



Alfonso XII Dam, Murcia, Spain

Within this same field, TYP SA is carrying out maintenance and safety management services, emergency plans and disaster management at several Spanish dams, both state and privately owned, such as those in Conde Guadalhorce (Malaga), Buseo (Valencia), seven dams in Cadiz, owned by the Regional Government of Andalusia, and another seven managed by the Catalan Water Agency, incorporating the results in the corresponding prevention and management systems of each basin.

TYP SA is also, in Spain, preparing the documentation in accordance with the new Technical Safety Standards for Endesa at several of their Production Units, and for 44 Iberdrola dams and reservoirs.



Buseo Dam, Valencia, Spain

“Safeguarding against catastrophes: effective control and prevention systems”

Wastewater treatment plants

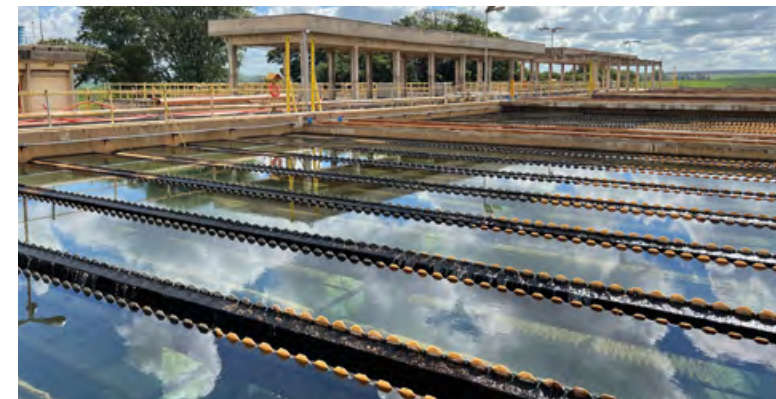
In **Saudi Arabia**, as part of the initiative led by the Saudi Water Partnership Company to guarantee drinking water supply and sanitation across the entire country, TYP SA is carrying out construction supervision of Jubail 3A, Jubail 3B, and Yanbu 4 desalination plants, using reverse osmosis technology and with a production capacity of 1,650,000 m³/day. TYP SA is also engaged in the construction supervision at Madinah-3, Tabuk-2 and Buraydah-2 wastewater treatment plants, with a treatment capacity of 450,000 m³/day. The plants use Sequential Biological Reactor (SBR) technology and solar energy to reduce electricity consumption.



Works at the Madinah-3 wastewater treatment plant, Saudi Arabia

“Breakthrough technology in high-capacity treatment and desalination plants”

In **El Salvador**, TYP SA has carried out the feasibility study for the new wastewater treatment plant and expansion of the sanitation network in the Chilama River basin, in the municipality of La Libertad.



Onça wastewater treatment plant, Belo Horizonte, Brazil



Tailings Dam, Mina do Pico, Itabirito, Brazil

In **Brazil**, Engecorps is engaged in preliminary and detailed designs for the Bangú wastewater treatment plant in Rio de Janeiro, for a target population of 350,000; and the design for the modernisation of drinking water treatment plants in the Maceio Metropolitan Region, state of Alagoas, with an affected population of 490,000; and the design of the expansion and upgrade of the Onça wastewater treatment plant in Belo Horizonte, state of Minas Gerais, increasing treatment capacity from 1,800 l/s to reach a flow rate of 2,700 l/s.

Construction engineering services, risk analysis and operation manual have also been provided for the Maravilhas II tailings dam at Pico mine in Itabirito, in the state of Minas Gerais, which has a flow of 238.5 m³/s.



Los Alcázares treatment plant, Murcia, Spain

In **Spain**, operation and control services are continuing for the SUR Zone water treatment system in the south of the Region of Murcia, which include services to oversee and control the operation and maintenance of 50 treatment plants and 2 marine outfalls, together with the assessment and monitoring of service quality provided by the operating companies and other entities in charge of managing the facilities.

Supply, sanitation, and drainage networks

In **Peru**, the government is leading the reconstruction of all infrastructure damaged or destroyed by the “El Niño” weather phenomenon, through the Authority for Reconstruction with Changes. TYP SA is delivering the consulting services for comprehensive stormwater drainage projects in cities such as Sullana and Paita, in the department of Piura, and Chiclayo, in the department of Lambayeque.

These projects, which affect a population of over 600,000, provide stormwater flood protection by adapting, improving, and expanding the existing drainage network, through the development of sustainable drainage measures, both structural and for green infrastructure. Also included are network operation and maintenance plans, together with initiatives aimed at raising awareness among citizens to support the conservation and functionality of these networks.



Stormwater flooding in Sullana, Peru

“ Optimizing networks to safeguard supply and mitigate floods ”



Drainage networks in Sullana, Peru



Stormwater flooding in Paita, Peru

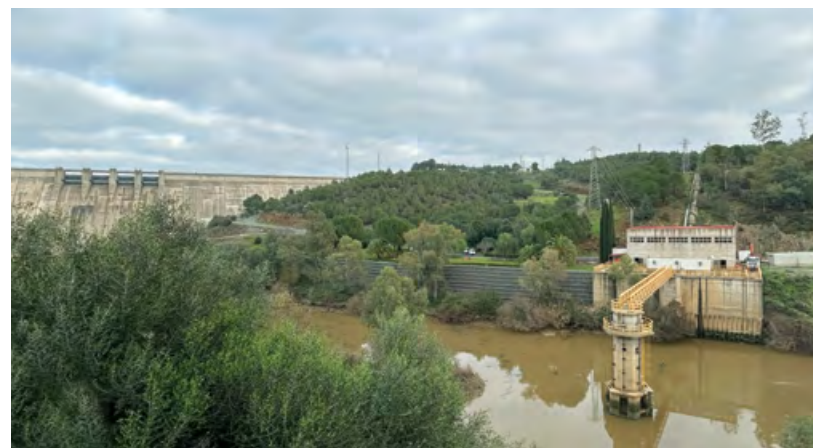


Stormwater flooding in Paita, Peru

In **Costa Rica**, TYP SA has been engaged, by the Costa Rican Institute of Aqueducts and Sewers, to lead the non-revenue water reduction and energy efficiency project, implementing an intelligent and effective management system, together with an Action Plan involving a considerable investment in design-build.

In **Brazil**, Engecorps is collaborating with the Basic Sanitation Company of the State of São Paulo in defining and optimising the Water Supply and Sanitation Investment Plan, which affects 375 municipalities, with a population of 28.6 million and investments of 24,000 million BRL over four years.

In **Spain**, TYP SA is carrying out the operation and maintenance works of the raw water pumping, transport and distribution infrastructure in the Tinto, Odiel y Piedras River Basin District, in the province



Pumping infrastructure in Spain

of Huelva. Included are 8 dams which supply the majority of the population, irrigation and industry in the province.

Hydrological planning and water management



Apodi Branch, Brazil

“ Managing resources for regional availability and integration ”

In **Brazil**, Engecorps is involved in the São Francisco River Integration Project for the river basins in the northern Nordeste region, led by the Ministry of Regional Integration and Development. Projects include the Apodi Branch, in which engineering services will be provided for 115 km of canals, aqueducts, tunnels, dams and pumping stations, benefiting 540,000 people, and the Integrated Strategic Evaluation Study and Water Intervention Planning for Sustainable Development in these basins, impacting over 1,900 municipalities in 15 states of Brazil. Also underway by Engecorps for the National Economic and Social Development Bank (BNDES), is the water management privatisation structuring in the state of Rondônia, which includes water supply and sewage services in 48 municipalities.

In **USA**, AZTEC is carrying out engineering services for the management of the flood mitigation programme in various residential areas of the Phoenix metropolitan region.



Apodi Branch, Brazil



Water Interventions for Sustainable Development in Brazil



Floods in Phoenix, USA



Pumping station for irrigation in Navarra, Spain

In **Spain**, TYP SA is carrying out the review and conclusion of cost-benefit, feasibility and prioritisation studies for the construction works involved in Flood Risk Management Plans and River Basin Management Plans. Also ongoing are the design supervision services for the state-owned company ACUAES for 60 projects at water treatment plants (WWTPs, DWTPs), canals, supply and sanitation pipelines, and power supply lines, together with those for canal maintenance in various irrigated areas.

Architecture and building

TYP SA is engaged in the comprehensive management services for the preliminary site development design and tender for Campus Oria, in Madrid, **Spain**. The Campus has 2 office buildings with a GFA of 45,000 m², a 22,000 m² hotel, student accommodation with 585 rooms, and a car park with a GFA of over 50,000 m².

Project and construction management and site supervision of a development of 708 lofts is also in progress in San Sebastián de los Reyes, Madrid, Spain. With a GFA of 51,500 m², the development includes 12 buildings, garages and communal areas.



Campus Oria infographic, Madrid, Spain



Campus Oria infographic, Madrid, Spain

Also in Spain, Intemac is carrying out the construction quality control of the new Puertollano hospital in Ciudad Real, comprising design review, construction supervision, material control and final functional testing.



Loft development construction, San Sebastián de los Reyes, Madrid, Spain



Hospital construction, Puertollano, Ciudad Real, Spain

“Design and comprehensive management of large residential complexes and public-use facilities”



Mixed-use complex, London, United Kingdom



Mixed-use complex, London, United Kingdom

In **Saudi Arabia**, structural and building services design and administrative procedures are in progress for the Mohammed Bin Salman Global Centre for Arabic Calligraphy. This cultural complex, located in Diriyah Gate, in the historic centre of Riyadh, has three buildings for different uses, including cultural, educational and administrative, and totals 10,000 m². Also underway is the technical assistance for design guardianship and shop drawing review for the construction of the Royal Arts Complex, in King Salman Park, Riyadh. This is a 50 ha cultural and museum complex, with 315,000 m² GFA.

In the **United Kingdom**, TYP SA is engaged in the preliminary and detailed design together with architectural services for a mixed-use complex in London, consisting of 99 residential units and 2,500 m² of commercial use.

In **Mexico**, TYP SA is working on the integrated architectural, structural, and building services design for the Cenit residential complex in San Jose del Cabo, Baja California Sur. The scope is for 3 x 6-storey towers sharing amenities and parking, with a total area of 23,600 m².



Cenit residential complex, San Jose del Cabo, Mexico

Loft development infographic, San Sebastián de los Reyes, Madrid, Spain



Loft development infographic, San Sebastián de los Reyes, Madrid, Spain

Sports facilities in Madrid, Spain

The Group companies actively contribute to the expansion and enhancement of sports facilities in the city of Madrid, aiming to position the city as a premier destination for hosting national and international events.

In the complete refurbishment and modernisation of the Santiago Bernabeu Stadium over the past few years, TYP SA has carried out the architectural design authoring and coordination of partial MEP, structural and technological designs. The stadium is unique in its design, boasting an innovative solution both for the structure and for the fixed and retractable roof, making it the only one in the multifunctional world able to host any type of event. The interior of the stadium is also being completely upgraded together with the creation of new commercial and hospitality areas, and the design of the ventilation system for the hipogeo, a large underground area fully automated where the grass/turf is stored when the sports field is used for other events throughout the year.



Santiago Bernabéu Stadium refurbishment infographic

The Caja Mágica Multipurpose Centre has undergone expansion to host a larger audience in tennis-related events. TYP SA has participated in the concept design for the new stadium accommodating 10,000 spectators, carrying out the preliminary design of civil works, structures, building services, sustainable drainage, evacuation and accessibility. Also included are additional areas for players and tennis staff, new commercial spaces and a pedestrian walkway from the new stadium to the Tennis Garden temporary spectator terrace.



New Sports City, Club Atlético de Madrid

MC2 has carried out the preliminary and detailed design, and structural construction support for Club Atlético de Madrid's New Sports City. The 125,000 m² development includes a municipal stadium, grandstand building, locker room building, service building, 4 sports pavilions and the first team training centre.

“Applying experience to modernising and creating great sports installations”

Urban development

As part of the Expansion Plan for the city of Madrid, Spain, TYP SA is participating in the design and construction supervision of the important developments underway. In the so-called Southeast Developments, TYP SA is engaged in the construction and site supervision of 'Los Berrocales' urban residential development area and infrastructure services. The development is located between the A3 motorway and the Ensanche de Vallecas district in Madrid. Also included is the construction supervision of the site development for the first phase of the Los Cerros residential development in Madrid, between the R3 toll road and the municipalities of Coslada and San Fernando. Also in Madrid, in the railway and urban development project known as "Madrid Nuevo Norte", TYP SA is providing engineering services and design for the urban development of the Parque Central located on the structure that covers the tracks at Chamartín Station, together with the railway works and actions across the entire station area.



Los Berrocales urban residential development, Madrid, Spain



Los Berrocales urban residential development, Madrid, Spain



Los Cerros urban residential development, Madrid, Spain

“Contributing to major urban developments; revitalizing city spaces”

Urban development on Zorrotzaurre Island, Bilbao, Spain



Urban development in Tbilisi, Georgia



Elsewhere in Spain, in **Bilbao**, TYP SA is carrying out construction supervision services for the Zorrotzaurre Island Phase C site development, a 125 ha urban regeneration project, together with the service tunnel construction under the estuary between the island and the district of Olabeaga. TYP SA is also supervising the construction works for Phase III of Larraskitu Sector site development, covering an area of 29.6 ha.

In **Castellón**, designs for the development of the Complementary Activities Zone of the airport are currently underway, a 230 ha industrial estate dedicated to industries related to the airport.

Outside of Spain, in **Georgia**, the concept design and feasibility study for the development of superblocks in Tbilisi is ongoing, with the refurbishment of historic buildings and urban regeneration of the city, following the urban planning principles of the "Superilla Barcelona" model.

Solar energy, storage, and electric transmission

TYP SA has participated in the development, detailed engineering, and construction management of the large photovoltaic clusters being installed in **Spain**, such as the 5 x 50MW plants at Vendimia, in Zaragoza, and the 120 MW San Servan plant, in Badajoz.

In **Saudi Arabia**, the transition to renewable energy is taking place, in compliance with the Vision 2030 plan. As a result of this enormous challenge, TYP SA has been engaged by the Ministry of Energy to lead the development of several macro solar plants, including those of Al Mowayh, Hadem and As Sadawi, exceeding 2 GW. TYP SA is also collaborating with the city of NEOM in the preliminary site assessments of the solar plants that will provide energy to this totally sustainable and green city project. Further to these contracts, a development study has been carried out that allows for the tender of the AirPort West, Hasma and Sharifa plants, exceeding 3 GW.



Photovoltaic clusters Andes II-B and IV, Chile

In **Mexico**, despite the slowdown in renewables, TYP SA is carrying out the detailed design of the largest plant built this year, namely the 300 MW Puerto Penasco plant, with 120 MWh battery storage capacity, together with its electrical transmission infrastructure.



Electric accumulator of San Servan, Badajoz, Spain



Photovoltaic Park of San Servan, Badajoz, Spain



Vendimia Solar Park, Zaragoza, Spain

In **USA**, TYP SA is providing services to numerous private clients in the construction management of solar plants with battery storage. Examples include the 200 MW x 4hr storage plants and substations at Condor, Peregrine and Nighthawk in California, and Townsite in Nevada.

In **Chile**, we continue to lead consulting engineering in the renewables sector, totalling 1 GW for the year, especially the Andes II-B and IV photovoltaic cluster, with 230 MW of solar power and 150 MWh of storage.



Photovoltaic plant and storage with batteries "Townsite", Nevada, USA

“ Reducing emissions and driving sustainability strategies with macro photovoltaic plants ”

Management and planning of wind power plants

Within the National Strategic Plan called Vision 2030, **Saudi Arabia** is developing the National Renewable Energy Programme and has placed its trust in TYP SA to design its wind projects. TYP SA is carrying out the master plan, environmental assessment, licensing, and the preliminary designs for the international tender of the Shaqra and Al Dawadmi plants. These plants will add an installed capacity of 2.6 GW that will supply power to over 500,000 homes and reduce the emission of CO₂ by 250,000 tons per year.

“ Technology in onshore and offshore wind farms ”



Infographic of the Shaqra wind farm, Saudi Arabia



GECAMA Wind Farm, Cuenca, Spain



Wind farm of Punta Lomitas, Peru

In **Peru**, TYP SA has developed the detailed engineering of the Punta Lomitas wind farm, which with its 57 wind turbines and 296 MW of installed capacity, becomes the largest wind farm in the country. An important role has also been played by TYP SA during construction, providing civil and electrical engineering support services.

In **Spain**, after successfully completing the construction and connection to the grid of GECAMA, the largest wind farm in Spain with 69 wind turbines and 329.2 MW of installed capacity, TYP SA is now providing asset management services for the wind farm, including maintenance contracts for wind turbines and other infrastructures, environmental monitoring, relations with the agencies involved and the administrative management of the park.

Offshore, the initial studies have been prepared for the installation of 5 offshore wind farms in Spain, with power exceeding 500 MW, and in **France**, the preliminary design of the gravity foundation of 20 MW wind turbines has been developed on the Normandy coast. The study of the logistics chain of a floating park in the port of Brest has also been carried out, to optimize maritime resources during the installation of the platforms.



Offshore wind farm infographic study

Irrigation infrastructure

The National Irrigation Commission of **Chile**, responsible for the country's irrigation planning, is addressing numerous studies, projects, and programmes to increase water availability and improve the water management of different farmers and consumer organizations. TYP SA's participation is highlighted in the design and construction supervision of the infrastructure works necessary for these purposes.

In the Nublé region, TYP SA is responsible for the control, management and monitoring of the 50 km long Laja-Diguillín canal, which irrigates 44,630 ha.



Irrigation canals for Las Vertientes-Púa, Chile



Laja-Diguillín Canal, Nublé region, Chile



Calanda-Alcaniz Canal, Zaragoza, Spain



Calanda-Alcaniz Canal, Zaragoza, Spain



Calanda-Alcaniz Canal, Zaragoza, Spain

In the Araucanía region, detailed engineering is being carried out for the improvement of the Quepe Sur Canal, 20 km long and with a capacity of 4 m³/s, together with several adjoining works. Also ongoing is the design and construction supervision of the Las Vertientes-Púa irrigation improvement works, with a 200 km network of canals and capacity of 3 m³/s, providing water for the irrigation of 8,000 ha.

In **Spain**, TYP SA participates in the maintenance of the Calanda-Alcaniz and Caspe canals, in the provinces of Zaragoza and Teruel, which serve the 12,500 ha irrigable areas of the same name in the Guadalupe river basin. Planning, engineering and support services for electromechanical equipment maintenance, repairs, and renewal are being carried out.

Rural Development

The European Union places utmost priority on providing aid contributions to the agricultural sector of the least developed countries, with a particular focus on Africa, and Agrer is actively participating in the programmes that are established for this purpose.



Agricultural work in Madagascar



Peanut production in Gabon



Rice plantations in Liberia



Crops in Gabon

In **Gabon**, agricultural advisory services are being provided to support capacity building for farmers, cooperatives, and professional agricultural organizations in the country, to improve production.

In **Liberia**, Agrer is conducting feasibility studies and actively participates in formulating strategies for the development of the country's rice production value chain, a government initiative to boost domestic production and reduce dependence on imported rice.

In **Madagascar**, as part of the Madagascar Agriculture Rural Growth and Land Management Project, Agrer offers technical assistance to the National Land Certification Programme and several regional offices to improve rural land tenure security and access to agricultural markets, together with increased capacity to provide immediate and effective crisis response.



Small farmers market in Ecuador

Technical assistance is also being provided for implementing measures for socio-economic recovery in **Ecuador**, by promoting and consolidating small and medium agricultural producers' cooperatives, launching a National Comprehensive Quality and Safety System and supporting a National Traceability System, to increase exports to international markets.

Supporting agricultural improvement strategies in developing countries

Sustainable development and climate change

The Group's companies worldwide engage in comprehensive studies, evaluations, and projects focused on addressing the effects of climate change. In **Europe**, TYP SA is participating in the implementation of policies to establish climate change mitigation and adaptation action plans. Specifically, through the updating and implementation of Nationally Determined Contributions (NDCs), in the context of the Paris agreement, establishing long-term strategies and national adaptation plans of the EU partner countries.

In **Africa**, NDCs are also to be implemented, **Liberia** being an example, where Agrer and TYP SA provide support services to the Environmental Protection Agency in its implementation at institutional, political, and social levels, incorporating climate change into national sectoral strategies and policies.



urban development projects have also embraced this vulnerability, and specific risks posed by extreme weather situations have also been addressed in projects like the Costa Verde Hospital in **Panama**, which demonstrates a proactive approach towards mitigating climate-related risks.



TYP SA provides support to the policy of developing plans and programmes that include, consider and address these effects. In this respect, in **Argentina, Bolivia, Brazil, Paraguay, and Uruguay**, TYP SA provides advisory services to FONPLATA (Financial Fund for the Development of the Countries of the La Plata basin) projects to ensure compliance with the European Investment Bank (EIB) procurement, technical, social, environmental and climate standards. In the same way, in **Ecuador**, support is provided to the Ministry of Transport and Public Works in prioritizing reconstruction and rehabilitation projects to guarantee adherence to EIB social, climate and environmental standards.



Infographic of the Costa Verde Hospital, Panama

Vulnerability to climate change is also reflected in the studies and projects being undertaken worldwide, including those focused on the development of solar energy, where TYP SA has become a reference in the fulfilment of environmental commitments. Notably, in **Saudi Arabia's** Vision 2030 strategic framework, these endeavours in energy advancements and

“ Participation in policy implementation and action plans for climate change mitigation and adaptation ”

Environmental integration of transport infrastructures

Environmental integration is of great importance in the development of transport networks, and is the focus of the Group's activity, primarily in the implementation of new railway lines and in the development of action plans to address noise-reduction. In **Spain**, TYP SA is engaged in the environmental management services for several high-speed lines requiring an Environmental Impact Statement entrusted to ADIF-AV, in sections of the LAV Vitoria-Bilbao-San Sebastian, AV access to the Basque Country, Valladolid-Leon, Venta de Baños-Burgos and Burgos-Vitoria.

In non-railway infrastructure, in **Spain** TYP SA is also carrying out impact studies and environmental design integration, such as the roadway section between Badajoz and Espiel, the stretch between

“ Designing preventive and corrective measures for mitigating negative impacts in transportation projects ”

El Callejo and La Cadena of the BI-630 highway, in Bizkaia, as well as the expansion of the terminals T4 and T4S at Adolfo Suarez airport.



Terminal T4 of Adolfo Suarez airport, Madrid, Spain

Outside of Spain, TYP SA is underway with the update of environmental and social impact assessment and providing environmental advisory services for the construction of the Santo Domingo metro line 2 in the **Dominican Republic**. Also ongoing is the Xochi-Corredor de las Flores design, a 30 km road corridor in **Guatemala**, which is highly vulnerable to the effects of climate change.

Regarding noise pollution, TYP SA is developing strategic noise maps and noise-reducing action plans, in addition to specific designs for the maintenance of noise mitigation measures such as noise barriers, low noise road surfaces, speed limits and other noise reduction systems on 8 highways of the Spanish Ministry of Transport and in the network of the Valencian Community, using the European CNOSSOS-EU method.



On-road sound absorbing screens



Sound absorbing screens on railway tracks

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